Environmental Assessment 24 CFR Part 58
CDBG SHOP Application Notification

Dragoo Property
Habitat for Humanity of Monroe County
Bloomington, IN 47403

Prepared for:
Ms. Doris Sims, Director
City of Bloomington, Housing and Neighborhood Development
401 North Morton Street
Bloomington, IN 47404

Prepared by:

VET Environmental Engineering, LLC
341 West Sample Road
Bloomington, Indiana 47404

Date:
December 29, 2015

Project Number:
15-17

U.S. Department of Housing and Urban Development
451 Seventh Street, SW
Washington, DC 20410
www.hud.gov

espanol.hud.gov

Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: CDBG SHOP Application Notification: Dragoo Property, Habitat for Humanity of Monroe County

Responsible Entity: Habitat for Humanity of Monroe County

Grant Recipient: Habitat for Humanity of Monroe County

State/Local Identifier: INDIANA

Preparer: VET Environmental Engineering, LLC: Reilly Taylor, Project Manager; Reviewed by Sara R. Hamidovic, PE, CHMM

Certifying Officer Name and Title: Doris Sims, Director of Housing and Neighborhood Development

Consultant: VET Environmental Engineering, LLC

Direct Comments to: Reilly Taylor, Project Manager: VET Environmental Engineering, LLC

This narrative and the narrative sent to solicit pertinent agency response letters is included in hard copy with this submittal. This entire submittal including figures and all relevant attachments are included in electronic format on a compact disc at the rear of this submittal.

Project Location: The proposed project involves one parcel of vacant land located at the end of West Chambers Drive, West Duncan Drive, and South Bernard Drive to the west of the intersection of South Rogers Street and South Rockport Road in Perry Township, Bloomington, Monroe County, Indiana (**Figure 1**).

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

The Habitat for Humanity of Monroe County (HHMC) program is a local organization with a mission to eliminate poverty by building decent and affordable homes in partnership with a volunteer workforce and the families in need. The proposed project seeks the funding of the United States Department of Housing and Urban Development (HUD) Self-help Homeownership Opportunity Program (SHOP) with the purpose of constructing a residential neighborhood in Bloomington, Indiana. VET Environmental Engineering, LLC performed this Environmental Assessment (EA) pursuant to 40 CFR 1508.9 of the National Environmental Policy Act (NEPA) for HHMC at the request of Mr. Sean Price, Business Manager for HHMC.

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**

HHMC proposes to construct a residential neighborhood on one parcel of vacant land located at the end of West Chambers Drive, West Duncan Drive, and South Bernard Drive to the west of the intersection of South Rogers Street and South Rockport Road in Perry Township, Bloomington, Monroe County, Indiana (Property). The Property is composed of one parcel (53-08-08-100-115.000-009) of land approximately 5.66 acres in area described as: 015-10185-01 PT SW NE 8-8-1W 5.40A; PLAT 27. The Property is zoned for single-family residential land use. Historical aerial photography indicates that the Property was undeveloped and/or used for agricultural purposes from at least 1939 until the present (**Attachment 5**). The Property is owned by Rosalie Dragoo.

Existing Conditions and Trends [24 CFR 58.40(a)]:

The City of Bloomington is unique in that nearly half the population is Indiana University students. The corresponding demand for housing and the relative surplus of skilled labor creates a condition where, in comparison with the county, state, and nation, Bloomington has lower average family income and greater relative housing costs. These conditions place greater importance on affordable housing for low-income families and the private and city organizations working to provide it.

The Property is located at the end of West Chambers Drive, West Duncan Drive, and Bernard Drive to the west of the intersection of South Rogers Street and South Rockport Road in Bloomington, Indiana. Presently, the Property consists of a grass field with woodland strips on the northern, western, and eastern Property boundaries. There are currently no roads on the Property; however, the Property is accessible from South Bernard Drive, West Chambers Drive, and West Duncan Drive via paved roadways. The area surrounding the Property is dominated by residential land use. Areas situated adjacent to the Property are as follows:

North: Adjacent to the north of the Property is a large vacant, wooded parcel. This area was historically used for limestone quarry operations and as an industrial facility operated by Thomson Consumer Electronics (Thomson). For the purposes of this discussion, Thomson includes RCA, its precursors, and Thomson Consumer Electronics. Thomson was an industrial electronics manufacturer that operated in Bloomington from approximately 1919 until 1998.

South: Residential homes and vacant land are located adjacent to the south of the Property.

West: Thomson Park (RCA Community Park) is directly to the west of the Property. A pedestrian walkway near the western Property edge originates from the park.

East: A residential parcel and an undeveloped parcel are located directly adjacent to the east of the Property. West Duncan Drive and West Chambers Drive dead end at the eastern Property boundary.

Funding Information

Grant Number	HUD Program	Funding Amount
SH14-001	SHOP	$115,000

Estimated Total HUD Funded Amount:

$115,000

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**:**

$179,900 – Estimated Land Cost
$500,000 – Estimated Infrastructure Cost
$1,300,000 – Estimated Home Construction Cost

$1,979,900 – Estimated Total Project Cost

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The Property is not located within 15,000 feet of a military airport or within 2,500 feet of a civilian airport (**Figure 4 – Airports Within Specified Radius of Property**).
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	The Property is not located within a coastal zone (**Figure 1** – **Area Map**).
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	The Property is not located in a Special Flood Hazard area (**Figure 3 – FEMA FIRM Map with Identified Property and Panel Extent Map Inset** and **Attachment 1 – FEMA FIRM Panel 0143D**).
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☐ No ☒	Monroe County is in attainment status for all criteria pollutants. See **Attachment 8 – Current Nonattainment Areas** provided by the Indiana Department of Environmental Management (IDEM): Office of Air Quality (OAQ).
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	No coastal zones are located near the property (**Figure 1 – Area Map**).

Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☐ No ☒	Fields Environmental, Inc. (FEI) performed a Phase II Environmental Investigation (Phase II) (**Attachment 7**) at the Property. FEI determined that no further investigations are warranted.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☐ No ☒	The letter received 10/27/2015 from the United States Department of the Interior (DOI) Fish and Wildlife Service (FWS) (**Attachment 14**) indicates that the proposed project is not likely to adversely affect endangered species.
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	FEI performed a Phase I Environmental Site Assessment (ESA) (**Attachment 5**). Based on readily ascertainable data used to perform the Phase I ESA, hazardous operations are not anticipated to negatively impact the Property.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	The letter received 10/23/2015 from the United States Department of Agriculture (USDA) (**Attachment 14**) indicates the proposed project will not cause a conversion of prime farmland (**Figure 5 – Prime Farmland Soils Map**).
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	The Property is in an area of minimal flood Hazard (**Figure 3 - FEMA FIRM Map with Identified Property and Panel Extent Map Inset** and **Attachment 1 – FEMA FIRM Panel 0143D**).
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☐ No ☒	The letter received 4/28/2015 from the Indiana State Historic Preservation Office (SHPO) (**Attachment 14**) determined a reconnaissance-level survey was required. Archeological Consultants of Ossian (Ossian) performed an archeological field reconnaissance level survey (**Attachment 3**). Ossian determined the proposed project will not affect any archeological resources.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet	Yes ☐ No ☒	VET Environmental Engineering, LLC (VET) performed a HUD Noise Assessment (**Attachment 4**) for the Property and determined that the calculated total noise level falls in the acceptable range as

Communities Act of 1978; 24 CFR Part 51 Subpart B		determined by HUD (less than or equal to 65 dB).
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	The Property is not located on a sole source aquifer (**Attachment 10 – Designated Sole Sources Aquifers in Region 5** provided by the U.S. Environmental Protection Agency (EPA)).
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☐ No ☒	VET performed a Wetland Delineation (**Attachment 6**) and determined that the Property does not contain any wetlands. The proposed project is not anticipated to adversely affect any off-site wetlands.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	The Property is not within proximity of a National Wild and Scenic Rivers System river (**Attachment 13** obtained from http://www.rivers.gov/indiana.php).
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes ☐ No ☒	VET used the EPA Environmental Justice Screening and Mapping Tool (EJSCREEN) to analyze environmental and demographic indicators within a 1-mile radius of the Property (**Attachment 12**). Greater than half of the population (54%) in the area of the Property is low-income and is located within closer proximity to National Priority List (NPL) Sites than 94% of the nation. This condition is attributed to the 6 NPL Superfund sites in Bloomington related to the historic dumping of PCB oil from Westinghouse electrical capacitors. These NPL sites are in various stages of redevelopment and are not accurate representations of the environmental condition in the area of the Property. Therefore, VET does not consider NPL site Proximity an environmental condition of concern for the Property.

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.
(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The proposed project is properly zoned and is not anticipated to pose environmental detriment to the community. **Attachment 14** – City of Bloomington Planning and Transportation Department Letter Received 11/20/2015 **Attachment 14** – Monroe County Health Department Letter Received 11/12/2015
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	Unsuitable soil, slope, erosional, drainage, or storm water runoff conditions are not anticipated to impact the proposed project. **Figure 5** – Prime Farmland Soils Map **Attachment 11** – 2010 Census - Urbanized Area Reference Map: Bloomington, IN **Attachment 14** – USDA Letter Received 10/23/2015
Hazards and Nuisances including Site Safety and Noise	2	The proposed project is not anticipated to create increased exposure to natural or man-made risks. **Attachment 4** – VET HUD Noise Assessment **Attachment 5** – FEI Phase I ESA **Attachment 7** – FEI Phase II Environmental Investigation
Energy Consumption	2	Habitat for Humanity of Monroe County homes are Energy Star Certified (http://www.monroecountyhabitat.org/). Homes with this certification are at least 15% more energy efficient than those built to the 2009 International Energy Conservation Code (https://www.energystar.gov/about).

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	2	The proposed project is not anticipated to affect employment and income patterns. **Attachment 12** – EJSCREEN Report
Demographic Character Changes, Displacement	2	The proposed project is not anticipated to cause demographic character changes or displacement. **Attachment 12** – EJSCREEN Report

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	Post-Secondary Education – Indiana University, Ivy Tech Community College Secondary Education – Bloomington High School South Elementary Education – Summit Elementary School
Commercial Facilities	2	Walnut Park Shopping Center is located approximately 1.25 miles from the Property.
Health Care and Social Services	2	Indiana University Health, Bloomington Hospital
Solid Waste Disposal / Recycling	2	City of Bloomington Sanitation Department
Waste Water / Sanitary Sewers	2	City of Bloomington Utilities
Water Supply	2	City of Bloomington Utilities
Public Safety - Police, Fire and Emergency Medical	2	Indiana University Health Bloomington Hospital is located approximately 1.15 miles from the Property. Estimated ambulance response time is 7.9 minutes (http://iuhealth.org/bloomington/emergency-services/ambulance-services/). Bloomington Police Department is located approximately 2 miles from the Property. The Bloomington Fire Department is located approximately 2 miles from the Property.

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Parks, Open Space and Recreation	2	The Property is immediately adjacent to Thomson Park. Bryan Park is located approximately 1.5 miles from the Property.
Transportation and Accessibility	2	The Property has access to city bus transportation. The closest Bloomington Transit bus stop is approximately 0.2 miles from the Property.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	FEI conducted a Karst Assessment (**Attachment 15**) at the request of the Indiana Department of Natural Resources (IDNR). One potential sinkhole was observed in a wooded area near the northern Property line. Mitigation measures in accordance with this report should be taken to ensure the potential sinkhole is not adversely impacted. The proposed project is not anticipated to impact any unique natural features and there are no anticipated surface water or ground water concerns. The Property does not include or contain any jurisdictional waters of the United States. A waterway bisects the Property from the northwest to southeast. This waterway does not have a defined channel at any location on the Property (**Attachment 16**). **Figure 3** – FEMA FIRM Map with Identified Property and Panel Extent Map Inset **Attachment 1** – FEMA FIRM Panel 0143D **Attachment 13** – (http://www.rivers.gov/indiana.php) **Attachment 15** – FEI Karst Assessment **Attachment 16** – United States Army Corps of Engineers (USACE) Jurisdictional Waters Determination

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Vegetation, Wildlife	2	The proposed project is not anticipated to have an adverse effect on endangered vegetation or wildlife. **Attachment 14** – DOI FWS Letter Received 10/27/2015
Other Factors	N/A	N/A

Additional Studies Performed:

An Archaeological Field Reconnaissance of a Proposed Habitat for Humanity Project in Bloomington, Monroe County, Indiana - Archaeological Consultants of Ossian, 5/29/2015 (Attachment 3).

HUD Noise Assessment: Habitat for Humanity of Monroe County, Dragoo Property, Bloomington Indiana - VET Environmental Engineering, LLC, 6/24/2015 (Attachment 4).

Phase I Environmental Site Assessment: Habitat for Humanity of Monroe County, Dragoo Property - Fields Environmental, Inc., 5/1/2015 (Attachment 5).

Wetland Delineation: Habitat for Humanity of Monroe County, Dragoo Property - VET Environmental Engineering, LLC, 9/2/2015 (Attachment 6).

Phase II Environmental Investigation: Habitat for Humanity of Monroe County, Dragoo Property - Fields Environmental, Inc., 5/15/2015 (Attachment 7).

Karst Assessment for Habitat for Humanity Proposed Residential Neighborhood in Bloomington, Indiana, Dragoo Property - Fields Environmental, Inc., 12/4/2015 (Attachment 15)

Jurisdictional Determination - USACE, 11/24/2015 (Attachment 16)

Field Inspections (Completed by and Date)**:**

Fields Environmental, Inc., Phase I Environmental Site Assessment (1/17/2015, 4/1/2015)

Fields Environmental, Inc., Phase II Environmental Investigation (4/30/2015)

Archaeological Consultants of Ossian, Archaeological Field Reconnaissance Survey (5/24/2015)

VET Environmental Engineering, LLC, HUD Noise Assessment (6/23/2015)

VET Environmental Engineering, LLC, Wetland Delineation (8/28/2015)

Fields Environmental, Inc., Karst Assessment (11/20/2015)

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]**:**

Mr. Mitchell K. Zoll
Indiana Department of Natural Resources
Division of Historic Preservation & Archaeology
402 W. Washington Street, Rm. W274
Indianapolis, IN 46204-2748
Phone: (317) 232 - 1646

Ms. Christie Stanifer
Department of Natural Resources Division of Fish & Wildlife
402 W. Washington Street, Rm. W273
Indianapolis, IN 46204-2781
Phone: (317) 232-4080
Fax: (317) 232-8150

Ms. Marissa Reed
US Department of Interior Fish & Wildlife Services
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334 – 4261

Mr. Thomas W. Easterly
Department of Environmental Management
Office of Water Management
100 North Senate, Rm. 1253
Indianapolis, IN 46206-6015
(317) 232 – 8603

Ms. Jane Hardesty
US Department of Agriculture Soil Conservation Services
6013 Lakeside Boulevard
Indianapolis, IN 46278
Phone: (317) 290 - 3200

Mr. G. William Monaghan, Ph.D.
Indiana Geological Survey
611 N. Walnut Grove
Bloomington, IN 47405-2208
Phone: (812) 855-7636

Mr. Michael Mettler
Indiana State Department of Health
Environmental Public Health Division
2 North Meridian Street
Indianapolis, IN 46204
Phone: (317) 233-1325

Ms. Beth Rosenbarger
City of Bloomington Planning and Transportation Department
401 North Morton Street
Bloomington, IN 47404
Phone: (812) 349-3423
Fax: (812 349-3520)

Ms. Penny Caudill
Monroe County Health Department
119 West 7th Street
Bloomington, IN 47404
Phone: (812) 349-2543
Fax: (812) 339-6481

List of Permits Obtained:

USACE Jurisdictional Determination ID No.: LRL-2015-843-pmh

Public Outreach [24 CFR 50.23 & 58.43]**:**

Recommend Finding of No Significant Impact (FONSI). No public notice has been disseminated as of the completion of this evaluation.

Cumulative Impact Analysis [24 CFR 58.32]**:**

Based on this evaluation, the cumulative impacts of the proposed project are not anticipated to cause degradation of valuable resources or to result in environmental damage.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Alternatives were evaluated based on the results of the VET Wetland Delineation. Alternatives were deemed unnecessary because the Property does not contain "waters of the United States" (USACE Jurisdictional Determination - **Attachment 16**) or wetlands (VET Wetland Delineation - **Attachment 6**). Based on this evaluation, further development of alternatives is not warranted.

No Action Alternative [24 CFR 58.40(e)]:

Under the No Action Alternative for the Property, the proposed project would not be undertaken and current land use would continue. Current land use is not significantly beneficial considering surrounding land uses and socioeconomic context. The proposed project likely represents best and highest use of the property.

Summary of Findings and Conclusions:

Recommend FONSI. See attached narrative for findings.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Mitigation #1: Per 20.05.042 EN-05 [Environmental Standards; Karst Geology] of the City of Bloomington Unified Development Ordinance (UDO), the potential sinkhole identified in the FEI Karst Assessment (**Attachment 15**) may require protection by a Karst Conservancy Easement (KCE) encompassing 25 feet horizontally from the last closed contour of the feature as identified on the City's geographic information system (GIS). No land-disturbing activity, permanent or temporary structures, or the placement of any fill material shall occur within the KCE. The outside perimeter of the KCE shall be protected with silt fencing and/or tree protection fencing during the entire period of construction. No structures shall be located within 10 feet from the KCE. Additionally, storm water discharge into the potential sinkhole should not be increased or significantly reduced from pre-development conditions. The above mitigation information is derived from 20.05.042 EN-05 [Environmental Standards; Karst Geology] the City of Bloomington UDO.

Mitigation #2: Thick vegetation made detailed observation of the ground surface difficult and a definitive assessment of all possible karst features was not possible. If karst features (caverns, springs, or sinkholes) are encountered during site clearing, all work should stop immediately and the US DOI FWS should be contacted for proper mitigation measures (**Attachment 14** – DOI FWS Letter). Ensure the measures listed in 20.05.042 EN-05 [Environmental Standards; Karst Geology] of the City of Bloomington UDO are satisfied.

Mitigation #3: The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalist*) and the federally threatened northern long-eared bat (*M. septentrionalis*). Tree clearing should not occur during the period of April 1 – September 30 to avoid incidental take from removal of an occupied roost tree (**Attachment 14 –** DOI FWS Letter).

Mitigation #4: Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon completion; low endophyte tall fescue may be used in the ditch bottom and side slopes only. Appropriately designated measures for controlling erosion and sediment must be implemented to prevent sediment from entering waterways; maintain these measures until construction is complete and all disturbed areas are stabilized. Seed and protect disturbed banks and slopes that are 3:1 or steeper with biodegradable heavy-duty erosion control blankets (follow manufacturer's recommendations for installation); seed and apply mulch on all other disturbed areas. The above mitigation information is derived from **Attachment 14 –** Indiana Department of Natural Resources (IDNR) Division of Fish and Wildlife Letter.

Mitigation #5: A waterway bisects the property from the northwest to southeast. This waterway appears to be a natural swale lacking a discernable stream bed and does not qualify as an intermittent or perennial stream according to the City of Bloomington UDO. According to the City of Bloomington UDO all intermittent or perennial streams shall be protected by a riparian buffer composed of three (3) distinct zones:

1.) Streamside Zone (Zone 1): The width of this zone shall be a minimum of twenty-five (25) feet on each side of the top of stream bank. The buffer width shall be measured perpendicular to the adjoining top of stream bank, following the natural curvature of the stream channel. All vegetative cover within this zone shall consist of undisturbed, existing vegetation.
2.) Intermediate Zone (Zone 2): The required width shall be a minimum twenty-five (25) feet on each side of Zone 1. Vegetative cover within this zone shall consist of undisturbed, existing vegetation, supplemented by native, groundcover and edge vegetation.
3.) Fringe Zone (Zone 3): The required width shall be a minimum of twenty-five (25) feet measured perpendicular from the outer boundary of Zone 2. The vegetative cover for the outer zone shall be native grasses, sedges, and forbs that perform phytofiltration.

Platted lots of record of less than one (1) acre in size shall not be subject to Intermediate Zone Design nor Fringe Zone Design. For a list of allowed disturbance activities in each riparian buffer zone refer to 20.05.041 EN-04 [Environmental Standards; Riparian Buffer] of the City of Bloomington UDO. The above mitigation information is derived from 20.05.041 EN-04 [Environmental Standards; Riparian Buffer] of the City of Bloomington UDO.

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: _____Date:_____

Name/Title/Organization: _____

_____

Certifying Officer Signature: _____Date:_____

Name/Title: _____

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Community Development Block Grant Application Notification

Dragoo Property
Habitat for Humanity of Monroe County
Bloomington, IN 47403

Prepared for:
Ms. Lisa Abbott, Director
City of Bloomington, Housing and Neighborhood Development
401 North Morton Street
Bloomington, IN 47404

Prepared by:

VET Environmental Engineering, LLC
341 West Sample Road
Bloomington, Indiana 47404

Date:
October 14, 2015

Project Number:
15-17

VET ENVIRONMENTAL ENGINEERING, LLC

341 West Sample Road, Bloomington, IN 47404
Phone: (812) 327-2838 Fax: (208) 988-7854
Email: SRHamidovic@gmail.com

October 14, 2015

Ms. Lisa Abbott
Director – Housing and Neighborhood Development
City of Bloomington
401 North Morton Street
Bloomington, IN 47402

Dear Ms. Abbott:

Proposed Residential Neighborhood in Bloomington, Indiana
Habitat for Humanity of Monroe County

Purpose

Habitat for Humanity of Monroe County (HHMC) is a local organization with the mission to eliminate poverty by building decent and affordable homes in partnership with families in need and a volunteer workforce. The proposed project seeks funding from the U. S. Department of Housing and Urban Development (HUD) to construct a residential neighborhood in Bloomington, Indiana. VET Environmental Engineering, LLC (VET) performed this Environmental Assessment (EA) pursuant to 40 CFR 1508.9 of the National Environmental Policy Act (NEPA) at the request of Mr. Sean Price, Business Manager of HHMC. This letter is intended to inform the concerned environmental agencies of the proposed residential development. VET will utilize agency responses and recommendations in determining the social, economic, and environmental impacts associated with the proposed development.

Background

HHMC proposes to construct a residential neighborhood on one parcel of vacant land located at the end of West Chambers Drive, West Duncan Drive, and South Bernard Drive to the west of the intersection of South Rogers Street and South Rockport Road in Perry Township, Bloomington, Monroe County, Indiana (Property) (**Figure 1**). The Property is composed of one parcel (53-08-08-100-115.000-009) of land approximately 5.66 acres in area described as: 015-10185-01 PT SW NE 8-8-1W 5.40A; PLAT 27 (**Figure 2**). The Property is zoned for single-family residential land use. Historical aerial photography indicates that the Property was undeveloped and/or used for agricultural purposes from at least 1939 until the present. The Property is owned by Rosalie Dragoo.

Compliance Considerations

The Property was evaluated to determine potential environmental impact based on the regulations listed below. Hard copies of all **Figures** are included with this submission. **Figures** and **Attachments** exhibiting source information for each section below are included in electronic format on the compact disc at the rear of this submission.

Coastal Barrier Resources Act as amended by the Coastal Barrier Improvement Act of 1994 [16 USC 3501]

The Property is not located on or near any coastal zones (**Figure 1**).

Floodplain Management [24 CFR 55, Executive Order 11988]

The Property is in an area of minimal flood hazard (**Figure 3**) as designated on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Number 18105C0143D effective December 17, 2010 (**Attachment 1**).

Historic Preservation [36 CFR Part 800]

Indiana State Historic Preservation Office (SHPO) did not identify any historic buildings, structures, districts, or objects listed in or eligible for inclusion in the National Register of Historic Places on or in the immediate area of the Property. According to SHPO, the Property is located in an environmental where archaeological resources my occur. SHPO therefore required a reconnaissance level archeological survey to determine the presence or absence of archeological resources (**Attachment 2**).

Archaeological Consultants of Ossian (Ossian) performed an archaeological field reconnaissance survey (**Attachment 3**). Ossian determined that the proposed project will not affect any archaeological resources eligible for listing on the National Register of Historic Places. No further archaeological work was warranted and project clearance was recommended.

Noise Abatement and Control [24 CFR 51B]

The Property is not located in a noise-impacted area. Noise levels are considered acceptable per HUD's noise standards. VET determined the aggregate day-night average sound level to be 56 decibels (**Attachment 4**). The acceptable range as determined by HUD is less than 65 decibels day-night sound level.

Hazardous Operations [24 CFR 51 C]

Fields Environmental, Inc. (FEI) performed an ASTM Phase I Environmental Site Assessment (ESA) on the Property (**Attachment 5**). The Phase I ESA included a review of agency database information compiled by Environmental Data Resources, Inc. (EDR), an information search firm that utilizes computer search techniques to query governmental database information for a specified project area. The EDR was used to review agency records of potentially hazardous conditions within a specific search radius of the Property.

The EDR identified one (1) Leaking Underground Storage Tank (LUST) site within one half (0.5) mile and three (3) Underground Storage Tank (UST) sites within one quarter (0.25) mile from the Property. One (1) of the UST sites is currently in use; the remaining UST Sites are permanently out of service. Based on review of environmental investigations, suspected hydraulic conductivity, reported groundwater flow direction, and IDEM regulatory closure documentation, FEI concluded the LUST Site to pose no significant environmental risk to the Property. No other hazardous operations were identified near the Property. Based on the Phase I ESA and readily ascertainable data, hazardous operations are not anticipated to negatively impact the Property.

Airport Hazards [24 CFR Part 51 Subpart D]

The Property is located greater than 15,000 feet from a military airport and greater than 2,500 feet from a civilian airport (**Figure 4**).

Wetland Protection [Executive Order 11990]

The Property does not contain any wetlands and will not adversely affect any off-site wetlands. VET performed a Wetland Delineation to evaluate a potential wetland area on the Property (**Attachment 6**). Three (3) soil sample locations were evaluated on or near the Property. In order for an area to be identified as wetland subject to regulatory jurisdiction under Section 404 of the Clean Water Act, it must exhibit wetland hydrology, hydrophitic vegetation, and hydric soils. All three (3) sample locations exhibited wetland hydrology and hydrophitic vegetation. Hydric soils were not observed at any of the sample locations.

Toxic Chemicals and Radioactive Materials [24 CFR Part 58.5(i)(2)]

The FEI Phase I ESA revealed potential sources of environmental concern located on the eighty-five (85) acre parcel adjacent to north of the Property. This parcel was historically part of RCA / Thomson Consumer Electronics manufacturing facility (Thomson). For the purposes of this report, Thomson includes RCA, its precursors, and Thomson Consumer Electronics. Thomson was a major industrial electronics manufacturer that

operated in Bloomington from approximately 1919 until 1998. The parcel contains former quarry pits filled with unknown fill material including reported dumping of suspected electrical capacitors and potential construction waste. The filled quarry pits are located hydraulically up-gradient of the Property. The potential migration of contamination through surface water drainage onto the Property warranted further investigation (Phase II Environmental Investigation).

FEI performed a Phase II Environmental Investigation (Phase II) at the Property (**Attachment 7**). A limited soil investigation was conducted along an intermittent surface water drainage that flows from Thomson onto the Property. Ten (10) surface soil samples were collected at approximately thirty (30) foot intervals along the drainage feature (DS-1 through DS-10) to assess for the presence or absence of polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and RCRA 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).

All analytical testing results were below Indiana Department of Environmental Management (IDEM) Remediation Closure Guide (RCG) Residential Direct Contact Screening Levels (RDCLs) with the exception of benzo(a)pyrene (BaP) and arsenic. The BaP concentration exceeded its default RDCL and Residential Migration to Groundwater (MTG) Screening Level in one sample (DS-DUP). DS-DUP is a duplicate sample extracted from the same aliquot of soil analyzed for primary sample DS-1. DS-1 did not exceed the RDCL or MTG. According to FEI, the heterogeneous nature of soil does not always provide good correlation between the primary sample and the duplicate. Because the analytical results of the ten primary samples showed no evidence of BaP, FEI concluded that no further investigation for BaP at the Property was warranted.

Arsenic was detected above its Residential MTG Screening Level at every sample location. Arsenic concentrations at the Property are consistent with natural background soil arsenic concentrations for Bloomington, Indiana. IDEM suggests a background range of arsenic concentrations from 5.1 to 15.1 milligrams per kilogram (mg/kg). The IDEM RDCL for arsenic is 9.4 mg/kg. In the professional opinion of FEI, Residential MTG criteria for arsenic are not applicable in the context of the Property. FEI determined that based on the results of its Phase II, no further investigations are warranted.

Clean Air Act [Sections 176(c), (d), and 40 CFR 6, 51, 93]

The Property is located in Monroe County which is in attainment status for all criteria pollutants. A map of the current Indiana areas of nonattainment status provided by the IDEM Office of Air Quality (OAQ) is included as **Attachment 8**.

Endangered Species Act [50 CFR 402]

The Property does not contain any critical habitats and is not likely to affect any critical habitats or any listed or proposed threatened or endangered species. The U.S. Fish and Wildlife Service (FWS) lists threatened and endangered species and their critical habitats by county (**Attachment 9)**. Monroe County is not listed as containing any critical habitats, however, there is a statewide distribution of the endangered Indiana Bat and the threatened Northern Long-Eared Bat. These bats hibernate in caves and swarm and roost in wooded areas. The Property is predominantly grassland and does not contain caves, therefore, residential development on the Property will not affect the bats' habitat.

Sole Sources Aquifers [40 CFR 402]

The Property is not located on a sole source aquifer. Indiana falls in Region 5 of EPA Designated Sole Source Aquifers (SSAs) (**Attachment 10**).

Farmland Protection Policy Act [7 CFR 658]

The Property is presently utilized for hay crop and 2.3 acres (35.2%) are designated as prime farmland (**Figure 5**). The Property meets exemption 7 CFR 658.2(a) of the Farmland Protection Policy Act (7 CFR 658) because it is already in or committed to urban development and is identified as urbanized area on the "2010 Census – Urbanized Area Reference Map: Bloomington, IN" by the United States Census Bureau (**Attachment 11**).

Environmental Justice [Executive Order 12898]

VET used the EPA Environmental Justice Screening and Mapping Tool (EJSCREEN) to analyze environmental and demographic indicators within a one (1) mile radius of the Property (**Attachment 12**). Fifty-four percent (54%) of the population in the area of the Property is low income, ranking in the eighty-second (82) percentile for the state and the eighty-first (81) percentile for the nation. This low-income population is located within closer proximity to National Priority List (NPL) Sites than ninety-two percent (92%) of the state and ninety-four percent (94%) of the nation. This condition is attributed to the high concentration of NPL sites located in and around Bloomington.

The six (6) NPL Superfund sites are related to dumping of PCB oil from Westinghouse electrical capacitors that began in the late 1950's. Experience shows that all of Bloomington's NPL sites are interrelated, are in various stages of redevelopment, and are not accurate representations of the environmental condition in the area of the Property. The number and type of NPL Sites, unique to Bloomington, makes this environmental indicator incommensurable with state and national statistics. Therefore, VET does not consider NPL Site Proximity an environmental condition of concern for the Property.

Wild and Scenic Rivers Act [16 U.S.C. 1271 et seq.]

The Property is not within proximity of a National Wild and Scenic Rivers System river. Indiana does not have any designated wild and scenic rivers (**Attachment 13**).

Conclusions

Environmental screening analysis, public outreach, and environmental reports reviewed by VET show no environmental or public issues that would prevent development of the proposed project. Please forward any questions or concerns to the undersigned at (812) 327-2838.

Respectfully submitted,

ORIGINAL SIGNED

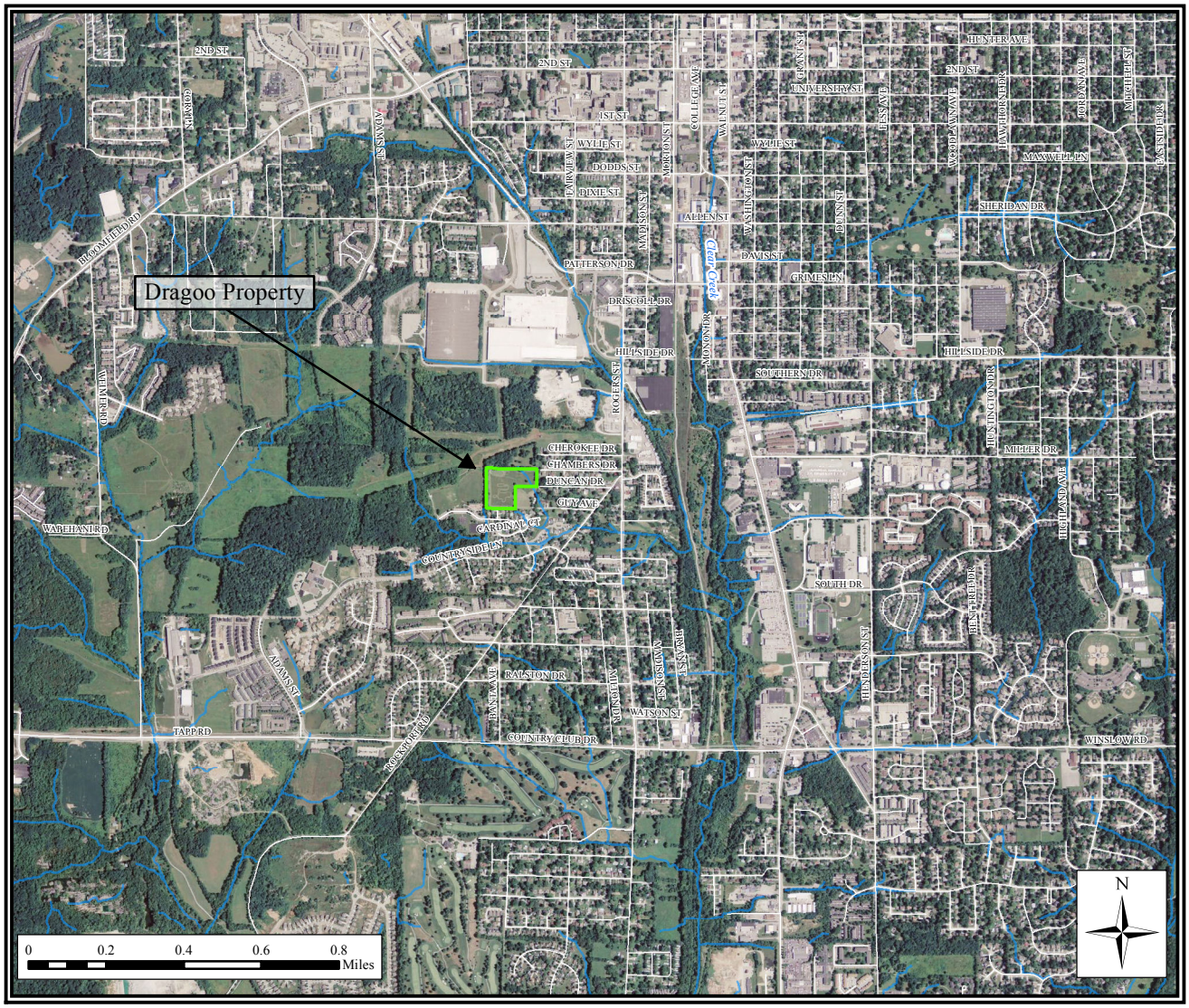
Sara R. Hamidovic, PE, CHMM
President, VET

Figure 1:

Area Map

Dragoo Property, Bloomington, Indiana

VET Environmental Engineering, LLC



Legend

Dragoo Property

Streams

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 1
Area Map
Dragoo Property, Bloomington, Indiana

For: Habitat for Humanity of Monroe County

Date: 10/11/15

Project #: 15-17

Graphics obtained from: NAIP, INDOT, NHD

Figure 2:

Aerial Photography with Parcel Identification

Dragoo Property, Bloomington, Indiana

VET Environmental Engineering, LLC

Legend

Dragoo Parcel Boundaries (Property)

Parcel Boundaries

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 2

Aerial Photography with Parcel Identification
Dragoo Property, Bloomington, Indiana

For: Habitat for Humanity of Monroe County

Date: 10/11/15

Project #: 15-17

Graphics obtained from: NAIP, IDHS

Figure 3:

FEMA FIRM Map with Identified Property and Panel Extent Map Inset

Dragoo Property, Bloomington, Indiana

VET Environmental Engineering, LLC

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 3: FEMA FIRM Map with Identified Property and Panel Extent Map Inset

Dragoo Property, Bloomington, Indiana

For: Habitat for Humanity of Monroe County | Date: 10/7/15 | Project #: 15-17

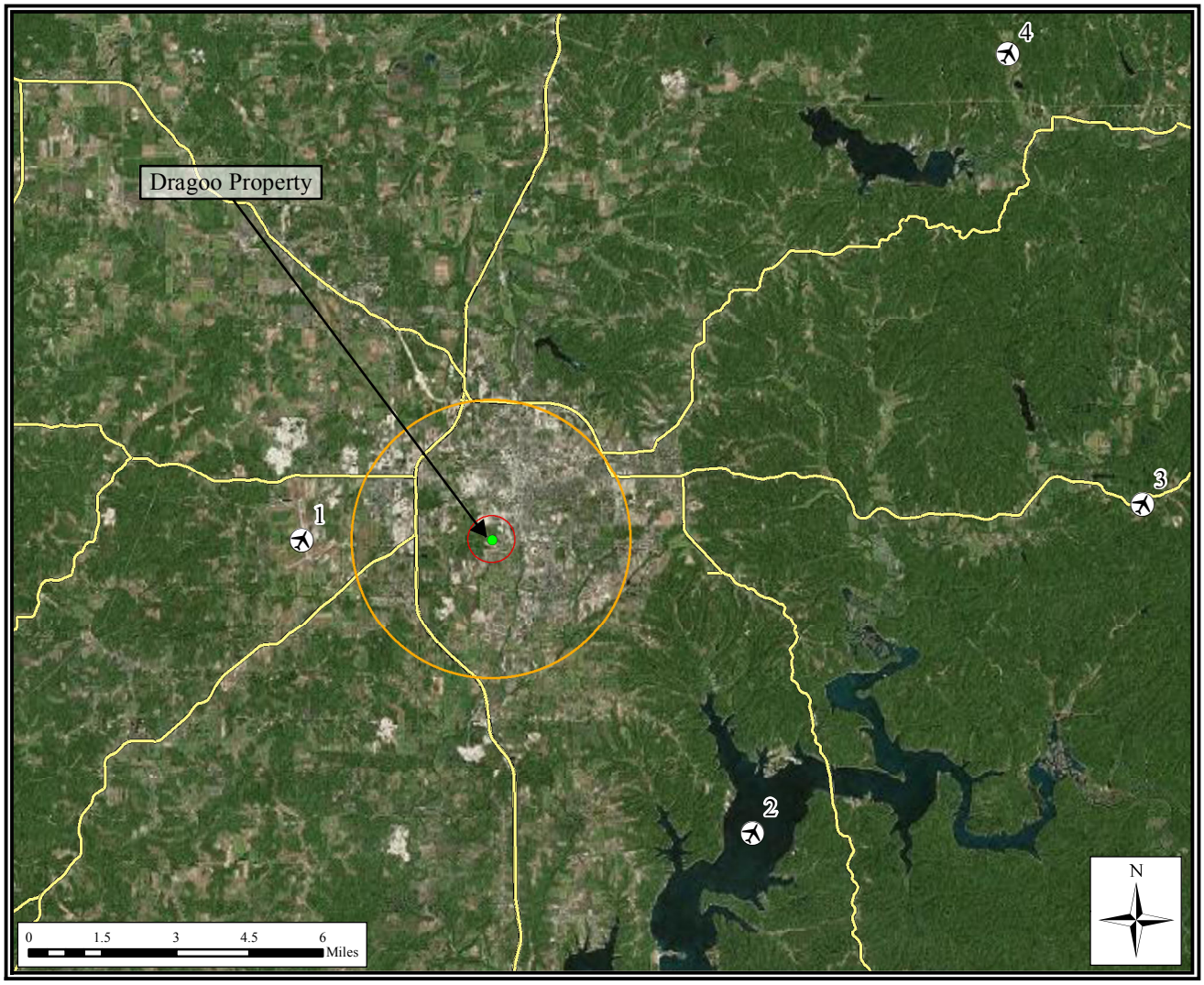
Graphics obtained from: FEMA, NHD, NAIP

Figure 4:

Airports within Specified Radius of Property

Dragoo Property, Bloomington, Indiana

VET Environmental Engineering, LLC



Legend

- Dragoo Property
- Airports
- 15,000 Feet Radius From Property
- 2,500 Feet Radius From Property
- Highways

Airport / Distance From Property (Miles)

1. Monroe County Airport / 3.85
2. Lake Monroe Seaplane Base / 8.04
3. Roto-Whirl Heliport / 13.31
4. Engdahl Farm / 14.48

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 4

Airports Within Specified Radius of Property
Dragoo Property, Bloomington, Indiana

For: Habitat for Humanity of Monroe County | Date: 10/8/15 | Project #: 15-17

Graphics obtained from: INDOT, NTAD, NAIP

Figure 5:

Prime Farmland Soils Map

Dragoo Property, Bloomington, Indiana

VET Environmental Engineering, LLC

Legend

Not Prime Farmland Soils

- CtC 1.9% Crider-Urban Land Complex, 6-12% Slopes
- CrC 62.2% Crider Silt Loam, 6-12% Slopes
- CtB 0.7% Crider-Urban Land Complex, 2-6% Slopes

Prime Farmland Soils

- CrB 33.1% Crider Silt Loam, 2-6% Slopes
- Wa 2.1% Wakeland Silt Loam, 0-2% Slopes

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 5

Prime Farmland Soils Map
Dragoo Property, Bloomington, Indiana

For: Habitat for Humanity of Monroe County | Date: 10/11/15 | Project #: 15-17

Graphics obtained from: NAIP, USDA WSS

Attachment 1:

FEMA Flood Insurance Rate Map, Panel 0143D

Federal Emergency Management Agency

U.S. Department of Homeland Security

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Indiana State Plane West Zone (FIPS zone 1302). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from the 2005 Indiana Orthophotography (IndianaMap Framework Data www.indianamap.org). This information was photogrammetrically compiled at a scale of 1:2400 from aerial photography dated spring 2005.

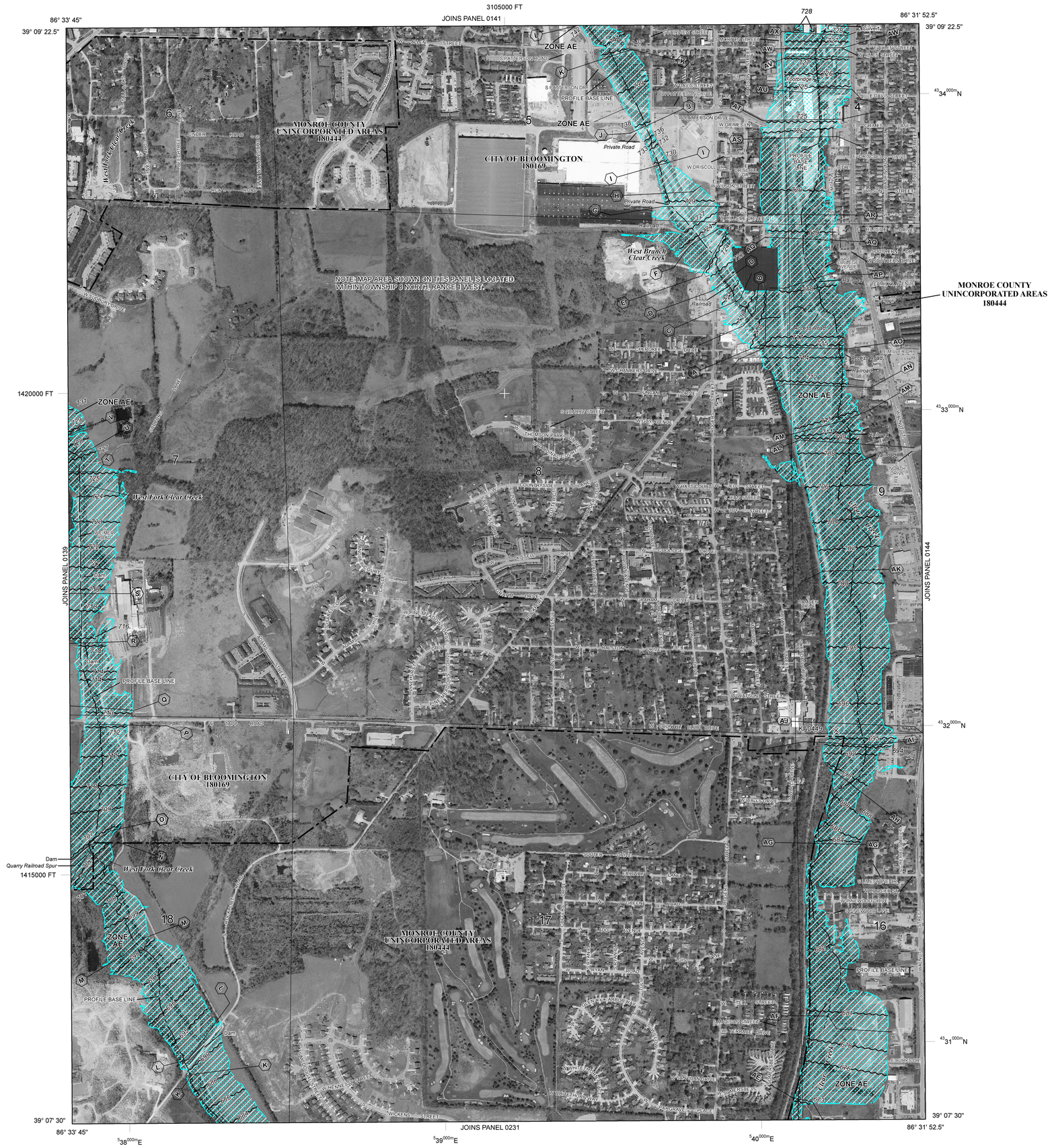
The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% Annual Chance Floodplain Boundary
	0.2% Annual Chance Floodplain Boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A — A	Cross section line
23 - - - 23	Transect line
	Culvert
	Bridge
45° 02' 08", 93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
3100000 FT	5000-foot ticks: Indiana State Plane West Zone (FIPS Zone 1302), Transverse Mercator projection
4989 000m N	1000-meter Universal Transverse Mercator grid values, zone 16
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
December 17, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0143D

FIRM

FLOOD INSURANCE RATE MAP

MONROE COUNTY, INDIANA

AND INCORPORATED AREAS

PANEL 143 OF 400

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BLOOMINGTON, CITY OF	180169	0143	D
MONROE COUNTY	180444	0143	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
18105C0143D

EFFECTIVE DATE
DECEMBER 17, 2010

Federal Emergency Management Agency

Attachment 2:

Indiana State Historic Preservation Office Correspondence

Division of Historic Preservation and Archaeology

Indiana Department of Natural Resources

Michael R. Pence, Governor
Cameron F. Clark, Director

DNR Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 · dhpa@dnr.IN.gov

April 28, 2015

Nancy Hiestand
Program Manager Historic Preservation
City of Bloomington
401 N. Morton Street
Bloomington, Indiana 47404

Federal Agency: City of Bloomington as the delegatee of the U.S. Department of Housing and Urban Development

Re: Project information and the City of Bloomington's finding of "no historic properties affected" regarding the acquisition of land and construction of 35-40 single family homes (DHPA #17505)

Dear Ms. Hiestand:

Pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated March 26, 2015 and received on March 30, 2015, for the above indicated project in Bloomington, Monroe County, Indiana.

Based upon the documentation available to the staff of the Indiana SHPO, we have not identified any historic buildings, structures, districts, or objects listed in or eligible for inclusion in the National Register of Historic Places within the probable area of potential effects.

In terms of potential impact on archaeological resources, a review of our records indicates that the proposed project area is in an environmental setting that is suitable to contain archaeological resources, but the majority of the project area has never been evaluated by a qualified archaeologist. Moreover, several archaeological sites have already been recorded within one mile of the proposed project location.

Given the above, a reconnaissance level archaeological survey will be required to determine the presence or absence of archaeological resources. A small portion of the project area appears to have been archaeologically surveyed (AR-53-00142). The reconnaissance would cover any portion of the proposed project area which has not been archaeologically surveyed or has not been previously disturbed by construction activities. The survey must be done in accordance with the "Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation" (48 F.R. 44716). A description of the survey methods and results must be submitted to the Division of Historic Preservation and Archaeology for review before we can comment further (see list of qualified professional archaeologists at the DHPA website link http://www.in.gov/dnr/historic/files/hp_archeo.pdf).

Once the indicated information is received, the Indiana SHPO will resume identification and evaluation procedures for this project. Please keep in mind that additional information may be requested in the future.

If you have questions about archaeological issues please contact Amy Johnson at (317) 232-6982 or ajohnson@dnr.IN.gov. If you have questions about buildings or structures please contact Ashley Thomas at (317) 234-7034 or asthomas@dnr.IN.gov. Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA #17505.

Very truly yours,

Mitchell K. Zoll
Deputy State Historic Preservation Officer

MKZ:ADT:ALJ:aj

Attachment 3:

Archaeological Field Reconnaissance

Archaeological Consultants of Ossian

Archaeological Consultants of Ossian

May 29, 2015

Mr. Sean Price
Habitat for Humanity of Monroe County
213 E. Kirkwood Avenue
Bloomington, IN 47408

Dear Mr. Price:

Enclosed is a report entitled *An Archaeological Field Reconnaissance of a Proposed Habitat for Humanity Project in Bloomington, Monroe County, Indiana.* Archaeological Consultants of Ossian Cultural Resource Management Report #15 FR 62. Please make a copy of the report for your records. All original documents must be forwarded to the Indiana SHPO.

As you will see from the report, Phase I survey has detected no properties that are potentially eligible for nomination to the National Register of Historic Places. Project clearance has been recommended for the remaining portions of the undertaking.

Thank you very much for the opportunity to work with you. If there is anything more I can do for you, please do not hesitate to call me at 765 281-0969 or 765 730-0524.

Sincerely,

Larry N. Stillwell
Archaeologist

Enclosures: CRM Report 15 FR 62

An Archaeological Field Reconnaissance of a Proposed Habitat for Humanity Project in Bloomington, Monroe County, Indiana

By
India Robertson
&
Larry N. Stillwell
Principal Investigator

Submitted by:

Archaeological Consultants of Ossian
P.O. Box 2374
Muncie, IN 47307

Submitted to:

Habitat for Humanity
Bloomington, IN

May 29, 2015

Archaeological Consultants of Ossian Cultural Resource Management Report 15FR62

Introduction

As a result of a request by the Habitat for Humanity of Monroe County, Archaeological Consultants of Ossian (ACO) was contracted to evaluate the effects on cultural resources of a proposed Development in Bloomington, Monroe County, Indiana (Figure 1). On May 24, 2015 personnel from Archaeological Consultants of Ossian conducted an archaeological reconnaissance survey of an approximate 10.0 acre tract selected for development. The project area is located at WGS84 coordinates latitude 39.14614° and longitude 86.54457° of Section 8, Township 8 North, Range 1 West (Perry Township) in Bloomington, Monroe County, Indiana (Figure 2). No archaeological sites were discovered as a result of the survey. This report is a summary of the background review and the results of the Phase I archaeological investigation.

Physical Environment

Monroe County has a continental climate with moderately cold winters and hot summers (average daily low in January = 23 degrees F, average daily high in July = 85 degrees F), with approximately 42 inches of precipitation per year (Thomas 1981). Almost 60% of the annual precipitation falls between the months of April and September. The average number of days per year with minimum temperatures above 32 degrees (five in ten year probability) in Monroe County is 189 (Thomas 1981).

The project area lies within the Mitchell Plain of southern Indiana (Homoya 1985; Schneider 1966). The plain is an area of low relief. However, detached rolling hills and valleys as well as areas of deeply entrenched surface streams break the plain. Thus, the topography of the Mitchell plain is loaded with karst features (Wayne 1963, 1966). Other noted features of the plain include both sinkholes and limestone outcroppings. The limestone outcroppings are important because of their direct correlation to the raw material chert within the region. The sinkholes are important because they not only served as a water source, but as many of them dried up they comprised an endless system of channels and caverns, which could be used as shelters. Bedrock geology of the project area is composed primarily of Mississippian age limestones of the Salem, St. Louis, and Ste. Genevieve formations (Gutschick 1966; Schaal 1966). Owing to the thin mantle of glacial drift (10-30 feet deep in the Mitchell Plain), the underlying bedrock has had an effect on present-day topographic features. The thin till deposits overlying bedrock have resulted in a relatively chert-rich environment. Although bedrock exposures of cherts are known to exist in the study area, many chert types are known from nearby areas. Some of the cherts known to exist in the region, but not necessarily in the county, include Allens Creek, Indian Creek, Lost River, Bryantsville, Wyandotte, Harrodsburg, Plummer, St. Genevieve, Stanford, and Dupes Cherts (Cantin 1994; Tomak 1981).

Soils in the project area fall within the Crider-Caneyville Association (Thomas 1981; Ulrich 1966). The Crider-Caneyville Association is comprised of deep and moderately deep, gently sloping to strongly sloping, well-drained soils formed in loess and residuum from limestone on uplands (Thomas 1981). Specific soils in the project area include the deep, somewhat poorly drained Wakeland silt loam, frequently flooded; the deep, well-drained Crider-Urban land complex, 2-12% slopes; and the deep, well-drained Crider silt loam, 2-12% slopes (Web Soil Survey 2015). Wakeland soils are made

in silty alluvium and can be located upon floodplains. Crider soils are created in loess over clayey residuum and are found on hills. However, the urban land component of the soils suggests that their integrity may have been compromised by development (Web Soil Survey 2015).

The hydrology of the area suggests that lack of water would not have been a concern for prehistoric and early historic occupants of the project area. Monroe County is drained by a mosaic of creeks (i.e. Indian Creek, Salt Creek, Bean Blossom Creek, etc.) that feed into either the West Fork or the East Fork of the White River. However, only the West Fork of the White River actually passes through a portion (the northwest tip) of the county. The project area is considered to be within the watershed known as the West Fork of the Lower White River. Clear Creek immediately drains the project area. Other sources of water located near the survey area include wetlands, Griffy Creek, Monroe Lake, and Jackson Creek.

Presettlement vegetation of the area was a transitional zone between western mesophytic and oak-hickory hardwood forest (Petty and Jackson 1966). The General Land Office survey notes of the township documented oak as the dominant tree species. Other tree species noted were maple, ironwood, hornbeam, cherry, buckeye, redbud, hackberry, hickory, basswood, etc. (GLO 1820). Lindsey (1965 et. al.) cites similar vegetation for the project area.

Taken as a whole, the environmental data (soils, hydrologic, and vegetation) all suggest that the area has a probability to contain archaeological sites and was likely to have been occupied and/or exploited by prehistoric Native Americans as well as Euro American settlers. The combination of well drained upland soils (i.e. Crider soils) near constant waterways (i.e. Clear Creek), in a vegetation zone that provides abundant resources has consistently yielded relatively moderate densities of archaeological sites in previous surveys (e.g., Hart and Jeske 1988, 1991; Jeske 1992, 1996). Climatological, vegetation, and edaphic variables all point to the probability that the area would have been an attractive draw to both hunter-gatherers and early horticulturalists in this portion of the Midwest.

Culture Sequence

The archaeology of Monroe County is somewhat poorly known, although some study has been conducted as a result of cultural resource management surveys and sponsored research. The following section, largely taken from data compiled by the Indiana Department of Natural Resources-Division of Historic Preservation and Archaeology's cultural resources management plan, attempts to organize certain salient information on the archaeology of the region. Because of a lack of knowledge specific to the project area, this discussion is seated within a general prehistory of Indiana. The discussion of the culture history of Indiana is not intended to be an exhaustive synthesis of past research in the area. Rather, it is meant to serve as a contextual framework for the archaeological sites discussed later in this report. The interpretations and dates given here are tentative and meant to serve as general guides.

Paleo-Indian Period (10,000— 8,000 B.C.)

The first people to reach the interior of the New World are known to archaeologists as Paleo-Indian. The Paleo-Indian peoples lived in a changing environment during the last stages of the last glacial advance on through to a time where the climate began to resemble that of today. These people produced an efficient chipped-stone tool kit, which included distinctive tools such as lanceolate spear points, fluted points, blades, and scrapers. These tools are almost always made of high quality cherts that were often imported to other parts of Indiana (Dorwin 1984; Tankersley 1987). Lanceolate blades and fluted projectile points are found throughout North America and much of South America. One of the earlier fluted points found in Indiana is the Clovis point. Other Paleo-Indian projectile point types found in the state include Folsom, Holcombe, Cumberland, Quad, Agate Basin, Beaver Lake, Hi-Lo, Plainview, and Dalton (Justice 1987; Tankersley et. al. 1990). These tools were first found at sites on the Great Plains in association with the remains of mammoths and bison, giving rise to the mistaken notion that Paleo-Indian were primarily big-game hunters. From sites found all over the continent, we now know that Paleo-Indian peoples hunted and gathered a variety of foods, including deer, small mammals, and nuts (Fagan 1991). Large mammals were most likely a rare or seasonally taken resource; in fact, there are disproportionately few sites east of the Mississippi River with evidence for the hunting of elephants or other megafauna by humans as compared to the western United States. Evidence also suggests that Paleo-Indian groups were highly mobile, and traveled across large territories in order to exploit resources when and where they became available. Population size was small, and local groups were likely no larger than 25 or 30 related individuals with a relatively simple social structure. One consequence of this highly mobile lifestyle is that little trash accumulated in one spot, making the location and identification of Paleo-Indian sites very difficult. Identification of intact Paleo-Indian materials have been further compromised by almost 150 years of often intensive agricultural activity that has taken place within the state and has disturbed the context of the shallow deposits. Paleo-Indian sites are usually located on high river terraces or in upland areas on wetland edges (Haynes 1983). These locations did not flood, offered easy access to aquatic plant and animal resources and served as vantage points for locating larger game. An example of one these sites is the Magnet or Alton site located in southern Indiana (Smith 1984). The site is situated on a terrace of the Ohio River near a high quality (Wyandotte) chert resource.

Archaic Period (8,000— 700 B.C.)

The Archaic is a long period of time during which important long-term trends in Indiana prehistory are begun. One of these trends is increasing regional specialization/stabilization brought on by a post-glacial environment. Archaeologists usually divide the Archaic into three parts (Kellar 1993).

The Early Archaic (8,000-6,000 B.C.) is separated from the preceding Paleo-Indian period primarily by a marked shift in tool technology and a more intensive exploitation of the land. Projectile points from the Early Archaic period exhibit a different hafting technology from their predecessors through either notching or through the use of bifurcate bases. This change in technology may have been born out of necessity as the large Pleistocene megafauna from the glacial period began to be replaced by modern

woodland fauna (Collins 1979). Many of the spear points or knives from the period contain beveled edges from tool resharpening and may exhibit pronounced blade serration (Broyles 1969; Justice 1987; Springer, Karch, and Harrison 1978). Early Archaic tool kits not only included projectile points and scrapers, but also saw the introduction of the atlatl as well as grinding slabs and pitted stone. These later tools are significant in that they demonstrate an increased utilization of plant species within the environment (Bailey 1972; Binford 1980). Specific projectile points from the Early Archaic include: St. Charles, Thebes, Lost Lake, Big Sandy, Charleston, Kirk, MacCorkle, St. Albans, LeCroy, Stilwell, etc. (DeRegnaucourt 1992; Justice 1987). Sites from this time period are commonly found throughout the state as well as the rest of the Midwest (Springer 1985). In fact, Early Archaic sites have been found on virtually every type of topography within the state. Division of Historic Preservation site records indicate at least two Early Archaic ceremonial/mortuary sites are present within the state. This indicates growing prehistoric populations within the region as well as growing reverence for the dead.

The Middle Archaic (6,000-3,500 B.C.) is a period of continued population growth in Indiana. New projectile point forms appear such as Matanzas, Godar, and Radditz (Justice 1987). Many of the point types of the period tend to be manufactured with side notches and straight bases. T-shaped drills are also common. In addition, a wide variety of polished and ground stone tools such as milling stones, pestles and grooved axes are found from this period. During the Middle Archaic, a long-term warming and drying period, called the hypsithermal, reached its peak. This warming and drying trend led to the eastward expansion of the prairie in the state. In the northern and eastern portions of Indiana this climatic change caused the growth of savannah dotted with stands of oak (Williams 1974). Previously pine dominated forests were replaced by deciduous forests dominated by oak, hickory, and elm, which is more productive for human needs. In addition, all of the major rivers and their associated floodplains in the region were established by this time. Because of the rich resources available on river floodplains, people settled into larger, more permanent villages. Also, there is increased evidence of mortuary activities (or at least more sites are known). Evidence of at least some of these trends can be found at the Bluegrass site in Indiana, where Anslinger (1988) noted human and dog burials as well as sustained trash pits and hearths. Foods utilized during the Middle Archaic included deer, small mammals, fish, migratory waterfowl, a wide variety of nuts, and some domesticated plants such as squash.

Shell middens also appear during the Middle Archaic period. It is also during this period of increased sedentism and regional diversification that two distinct influences appear to emerge within the state that may have had their roots in the Early Archaic period. These influences are associated with the Ohio River Valley and the Lake Erie Basin. In fact, Matanzas points appear to be indicative of the growing western Ohio River Valley Tradition in southern Indiana, while the manufacture of bifurcate points from the Early Archaic period appear to be influenced by the Lake Erie Basin Tradition in northern Indiana.

The Late Archaic (3,500-1,500 B.C.) is a period in which a number of trends (e.g., increased population, decreased mobility, domestication of plants) initiated in the Middle Archaic period are refined to more efficient subsistence strategies. The Late Archaic period in Indiana is related to the Midcontinental Archaic Tradition. This tradition is characterized by grave offerings, mortuary or cemetery sites, dog burials, shell middens, large semi-permanent camps, and trade of exotic goods. The trade network developed during the Late Archaic in Indiana exchanged resources such as galena and copper. These traded materials often were deposited in burials (Fagan 1991; Kellar 1993). Late Archaic phases in the state include French Lick, Stalcup, Scherschel, Bluegrass, Maple Creek, Glacial Kame, and Early Red Ochre. These latter two complexes appear to be directly influenced by Great Lakes cultures and appear to continue a divisional trend between the Lake Erie Basin Tradition in northern Indiana and traditions emerging in the Ohio River Valley (Cunningham 1948; Faulkner 1966; Lilly 1942; Mason 1981). Several technological innovations were introduced during the Late Archaic period. Most notably the manufacture of pottery (which is still disputed) as well as a proliferation of tools (i.e. axes, adzes, pestles, celts, mortars, etc.). There is also increased emphasis on ornamental items such as beads (manufactured from shell, copper, or pearl), gorgets, hairpins, and pendants. Tool kits also include specialized items made of bone and antler. Typical projectile points from the period include Lamoka, Brewerton, and McWhinney (DeRegnaucourt 1992; Justice 1987). Generally, projectile points from the period lack the sophisticated craftsmanship seen in previous periods of Indiana prehistory, and the raw materials from which they are manufactured consist of inferior or lower quality cherts.

Resources utilized during the Late Archaic include all those mentioned for the Middle Archaic, with an increasing utilization of seed plants such as goosefoot (lamb's quarters) and sumpweed. The Late Archaic is probably best described as a period marking the transition from a hunting-gathering way of life to one where subsistence is at least partially dependent upon agriculture. The Late Archaic is well represented in Indiana, with sites located on virtually every topographic landform (i.e. flood plain, lake plains, till plains, moraines, etc.). Late Archaic sites tend to be larger and contain more tools and debris than sites of any preceding time period. They are usually located on well-drained soil near water. The McCain site in Dubois County is a notable Late Archaic site (Miller 1941).

The Terminal Late Archaic (ca. 1,500-700 B.C.) is best described as a transitional period between the Late Archaic period and the Early Woodland periods in Indiana. However, the Terminal Late Archaic period in Indiana appears to be a phase of the Late Archaic period which is restricted to portions of the southern half of the state. The period is marked by the use of Terminal Archaic Barbed projectile points (i.e. Buck Creek Barbed) as well as larger more ornate forms such as Turkeytail points. Perhaps the best represented culture of the Terminal Late Archaic period in Indiana is that of the Riverton (Anslinger 1988; Winters 1967). The Riverton Culture is described as a riverine-based complex with small projectile points (i.e. Merom and Trimble points) that was predominantly situated within the Lower Wabash River Valley, the Ohio River Valley, and the East and West Forks of the White River Valley. Although point types from the

period can be found in northern Indiana, they are not found in the same density or frequency as in the Lower Wabash River drainage. Examination of burials by Winters (1967) at a Riverton site also noted trauma to human skeletons most likely caused by warfare.

Woodland Period (700 B.C.—1,200 A.D.)

The Woodland period was a time of major changes in food choices and social organization in the Midwest. Like the Archaic, the Woodland period is divided into three parts. Until recently, one of the defining characteristics that separated the Archaic period from the Woodland period was the use of pottery. However, in the southern Midwest, pottery is now known to have been utilized as early as 2550 B.C. (well within the Late Archaic period) (Reid 1984). Another ongoing excavation taking place on Stallings Island in Georgia has also carbon dated pottery sherds to 2500 B.C.

The Early Woodland (700-200 B.C.) period in Indiana coincides with a shift from a hunter-gatherer way of life to a more agriculturally based economy. Large bladed projectile point forms also appear during this period. Some of these point types include Adena, Kramer, Motley, and Meadowood (Justice 1987). Pottery of the period tends to be thick and porous manufactured with fiber or course grit temper. Pottery types of the period include Marion Thick, Fayette Thick, and Early Crab Orchard. It is also during this period that mortuary activities first included the building of earthen mounds (some that contain log tombs) with grave goods (Kellar 1993). Other earthworks such as large rectangular or circular enclosures are constructed during this period, and the people who built these structures are referred to as Adena. Adena culture is well represented in Indiana with numerous structures and mounds located along the Ohio, White, and Whitewater River Valleys (Kolbe 1992).

There is little doubt that Adena peoples channeled significant resources and labor into the construction of their mounds and enclosures as well as into the cult of the dead. This is reflected by the remnants of earthworks located in New Castle, Cambridge City, and Anderson. Until recently, these large complexes were thought to be primarily ceremonial. However, recent evidence suggests that these earthworks were much more. Cochran (1992) notes that mounds and other earthworks of the period were laid out along various astrological alignments. These alignments were not only important in Adena (and Hopewell) cosmology, but they also served as markers for seasonal change. This latter practical aspect of the earthworks would have been extremely important for a culture that was growing increasingly reliant on agriculture for stability to deal with increasing population growth.

The Middle Woodland (200 B.C.-500 A.D.) is most notable for the extensive use of large burial mounds and geometric earthworks that were more complex or were continuations of building phases that were initiated during the Early Woodland period (Cochran 1992). A widespread trading network known as the Hopewell Interaction Sphere was also established. Artifacts and raw materials such as obsidian from the Rocky Mountains, copper from northern Michigan, mica from the Appalachians, shark teeth and marine shells from the Gulf of Mexico, and a wide variety of cherts were

exchanged throughout most of the eastern United States. Some of these materials have been documented in the GE Mound site in southwestern Indiana (Tomak 1993). Centers for this activity were the Scioto River Valley in south-central Ohio, and the Illinois River Valley in west-central Illinois (Struever 1964). Specific phases that have been identified in Indiana include Crab Orchard, Mann, Allison-Lamotte, Havanna, Scioto, and Goodall (Bettarel and Smith 1973; Ruby 1993). Projectile points of the period include Snyders, Steuben, Lowe Flared, and Chesser (Justice 1987). Pottery was grit tempered, better made, and more often decorated than in the Early Woodland period. Pottery types of the period consist of Havana Hopewell, Crab Orchard, Scioto, and Mann Phase sherds (Wolforth 1996). Goosefoot, sumpweed, and sunflower were important plants which were actively cultivated during the period. Maize (corn), a tropical import, was beginning to become an important part of the diet at this time. Northern Indiana, while not a central region of the Hopewell phenomenon, has a number of Middle Woodland villages, earthworks, and mound sites (Quimby 1941).

The Late Woodland (ca. 500-1,200 A.D.) is a period of decreased emphasis on both ceremonial and mortuary activities. The Hopewell Interaction Sphere of the Middle Woodland period was no longer a part of the social and economic lives of Midwesterners. Intrusive burials can be found in mounds of the preceding period. New mounds are rare and small in size. Subsistence strategies not only rely on agricultural (increasing dependence on maize cultivation), but hunting and gathering seasonal rounds appear to become necessary and may explain why large nucleated villages shift to smaller habitation sites (McCord & Cochran 1994). Conjecture as to why this happened includes change of climate resulting in shorter growing seasons; subsistence technology could not support the increasing population size; or disease and warfare caused from increasing populations. At least six Late Woodland enclosures known in central Indiana demonstrate defensive fortifications or postures (Cochran 1980). It was also during this time period that the bow and arrow was introduced along with true arrowheads (Justice 1987). Tool kits from the period include Madison and Jack's Reef projectile points as well as Commissary knives.

Pottery was typically grit-tempered or grog-tempered, and is harder and thinner than Middle Woodland pottery (Redmond 1986). Although the Albee Phase or complex appears to be the most dominant culture in the state during the period, other phases known to be contemporary in Indiana at the time include Yankeetown, Allison-Lamotte, and Newtown.

Mississippian (ca. 1,000-1,700 A.D.)

After A.D. 1000, people in the Ohio river valley of the Midwest began to follow a lifestyle termed Mississippian. Classic Mississippian culture in Indiana is generally characterized by a dependence on agriculture which intensively cultivated corn, beans, squash, as well as lesser seed crops and tobacco; the use of shell-tempered pottery; the building of flat topped pyramid-shaped mounds; nucleated villages and towns (often palisaded) with central plaza areas; large cemeteries; public ceremonial structures; and a hierarchically ordered social structure which may have dominated over populations of several thousand (Black 1967, Kellar 1993). The settlements were permanently

established, with a population that was tied to ceremonial and/or trade centers like those found at Cahokia and Angel Mounds. The placement of these centers appears to indicate long-range planning. Unlike previous periods in prehistory, stylistic changes in artifact forms such as projectile points and pottery occur on a more rapid scale and the quantity of goods appear in greater numbers. Artifacts from this period include Nodena points, Cahokia points, ceramic ladles, trowels, balls, effigies, discs, discoidals, and balls (Black 1967; Justice 1987). However, classic Mississippian culture appears confined to southern Indiana along the Ohio and Wabash River Valleys. Classic Mississippian culture in southwestern Indiana includes the Angel Phase (1,050-1,450 A.D.), the Caborn-Welborn Phase (c.a. 1,400 A.D.-1,700 A.D.), and the Vincennes Phase (Black 1967; Munson 1995; Stafford, Anslinger, Cantin, and Pace 1988; Tomak 1970; Winters 1967).

In northern Indiana, classic Mississippian cultural manifestations evolved to a different degree and are termed "Upper Mississippian." These Upper Mississippian groups appear to live a more basic lifestyle that lack the large earthworks and mounds that are present at places like the Angel site (Brown 1961; Brown and O'Brien 1990; Faulkner 1972). Upper Mississippian groups from northwestern Indiana include Huber and Fisher. There is little archaeological evidence to suggest that Mississippian tradition was present in northeastern Indiana especially north of the St. Mary's River Valley (Jeske 1996). Instead, it appears that Native Americans in the region continued to live a basic Late Woodland lifestyle.

In central and southeastern Indiana, Fort Ancient culture is the best known of the Upper Mississippian groups. The Oliver Phase and Yankeetown Phase are part of Fort Ancient culture. Many of the Oliver Phase sites in Indiana are contained in the White River drainage (Dorwin 1971; Redmond and McCullough 1993). Oliver Phase occupations are often characterized as horticultural villages.

Historic Native Americans (c.a. 1660— A.D. 1846)

The Historic Native American Period (ca. A.D. 1660-1846) begins as European explorers, trappers, missionaries, and traders initially penetrate the region and begin to record their dealings with the Native Americans. Prior to European contact Upper Mississippian groups of the Midwest appear to have suffered a dramatic population decline. This decline may have been the result of increased warfare, the spread of European disease, and a shortened growing season caused by the Little Ice Age after A.D. 1450 (Hicks 1992). By the time of European contact in the late seventeenth century, the indigenous (?) Mississippian and Upper Mississippian groups of Indiana had been replaced by the historic Potawatomi and Miami (including Piankashaw, Wea, and Shawnee) Indians, along with smaller groups such as the Ottawa and Fox (Kinietz 1995). Shortly after encountering European culture, most native artifacts such as pottery and stone tools were abandoned in favor of trade goods such as brass kettles, crockery, and steel knives. Evidence from the "Mouth of the Wabash Site" in Posey County indicates that Mississippian material culture was starting to be impacted by European trade goods probably through trade routes to the southern United States. In 1973, Munson and Green reexamined artifacts from the site and noted that at least one brass artifact was contained within the assemblage (Higginbotham 1983).

The Potawatomi were Algonquian speakers who began expanding their control of trade and territory south from Green Bay along the western shore of Lake Michigan by 1670. In 1695, they moved around the southern end of the Lake, eventually extending their territory across all of northern Indiana and southern Michigan to Detroit (Berthrong 1974). The Miami also were Algonquian speakers with close ties to the peoples of the Illini confederacy. Widely dispersed throughout the western Great Lakes region, the Miami originally comprised at least six bands or groups: the Atchatchakonguen (Crane), Kilatika, Mengakonkia, Pepicokea, Wea and Piankashaw. By 1680, the Atchatchakonguen were referred to as the Miami by the French. Some Miami-speakers were living near Chicago/South Bend and the area around southern Lake Michigan, although other Miami-speaking groups were scattered throughout northern Indiana, Illinois, and Wisconsin. The Mengakonkia, Kilatika, and Pepicokea disappear from historical documents during the next century, probably incorporated into the Crane, Wea, and Piankashaw bands (Berthrong 1974; Goddard 1978). The Miami were displaced from the Lake Michigan area by the aggressive Potawatomi and migrated east into northern Indiana after 1695, eventually settling along the Upper Wabash River Valley and at the three rivers junction in Fort Wayne. The area is the continental divide between the Mississippi River Drainage and the Lake Erie Basin, and the Miami were able to take advantage of their control of this strategic portage area in their relationships with Europeans and other historic tribes.

Euro American westward expansion resulted in the conflict between the Native Americans and Euro American invaders. Despite the victories of Little Turtle over the American army in the late 18th century, the Miami were broken by military forces of the United States in 1795. The Wea were removed in 1805, the Piankashaw in 1820. Most of the bands of Potawatomi were removed to reservations in Wisconsin and Kansas by 1841. The last remaining bands of Miamis were resettled in Kansas in 1846, although many of the tribe evaded removal, thanks to the negotiations of Jean Baptiste de Richardville, the Miami Civil chief who engineered land grants to individual Miami families in exchange for territory. A small number of Miami retained personal reservations or reserves (i.e., Richardville, Cicott, Seek) and continued to reside in the state. Nonetheless, the settlement of Indiana after 1846 by Euro Americans was swift and complete, effectively ending a successful and rich cultural Native American tradition that spanned some 14,000 years. The Eastern Miami, those left with private landholdings, became largely assimilated into White Society, and in 1898, they were removed illegally from the Department of Interior's roll of Indian Tribes.

Euro American Historic (ca. 1660-present)

The first Europeans who came to what is known as Indiana were French traders, missionaries, and trappers. LaSalle portaged near South Bend in 1679 (Lockridge 1980). Shortly after, other Frenchmen came to the river valleys of the area to trap fur and trade with the Native Americans. Set astride the most direct link between the St. Lawrence and the Mississippi, the French had established three main centers to help control the flow of goods and people through the territory. Fort Miamis (Fort Wayne) was established at the junction of the St. Joseph, St. Mary's, and Maumee River in northeastern Indiana before

1700, while Fort Ouiatanon, on the Wabash River near modern Lafayette, was settled in 1717 (Carmony 1966). These two forts were within Canada. Fort Vincennes, established in 1732, was located on the lower Wabash, and was considered part of the Louisiana Territory. Although there was no permanent settlement at Indianapolis, it is highly likely that the French exploited the area.

The French lost control of this strategic territory to the British after the French and Indian War (1754-1763). The British never had a strong presence in the region, not occupying Vincennes until 1777 (Barnhart and Riker 1971). They lost control of the region to the American Colonists in 1783, who began to exert their power in the area. Known as the Northwest Territory, the region included all of the area which was to become Ohio, Indiana, Illinois, Michigan, Wisconsin, and eastern Minnesota. Gaining military victory and political control of the territory in 1795, the Americans began to settle the region in earnest.

The settlement of Indiana was part of a westward flow of immigrants into the valley of the Mississippi between 1792 and 1860 that resulted in 15 new states admitted to the Union (Carmony 1966). Indiana was settled initially by people from the upper south (i.e. Virginia, North Carolina, and Kentucky), along with some smaller number from the Middle Atlantic States (Hudson 1988). White settlement in Indiana generally was a northward flow from which began in the Ohio Valley. Most of the settlers of central Indiana were American-born Protestants of British descent, and moved to central Indiana from southern Indiana (Rudolph 1980).

The population grew quickly, and in 1816, Indiana entered the Union with its capitol at Corydon. Corydon was far too south for convenience, and Indianapolis, at the confluence of the White River and Fall Creek was established by commission as the new capitol in January, 1821. After 1830, non-American born immigrants began to arrive in Indiana in greater numbers, principally from Germany and Ireland. The growth of the largely Catholic immigrant population was viewed with alarm by the protestant residents from the upper south, and paved the way for the rise of the Ku Klux Klan within the state (Carmony 1966).

The Civil War impacted the state politically and economically. While considered by some an "ambiguous" state, Indiana sent over 200,000 men to the Union cause, and was a critical supplier of food and other war-related material (Rudolph 1980). Along with other impacts, the state began a long, slow transition from a strictly agricultural economy to an industrial economy.

Immigration into the state peaked during the years between the Civil War and World War I (Carmony 1966). These immigrants were still principally Germans and Irish, but included southern and eastern Europeans as well. In addition, the African American population increased. The large immigrant population and the changing economy resulted in enough fear among long-established protestant populations that the Ku Klux Klan became a dominant political force in the 1920's, but whose influence

waned shortly after (Carmony 1966). By World War II, Indiana had made the transition to an industrialized economy and the Klan was no longer a major political force.

Background Review

The archaeological site files and maps at the Indiana Department of Historic Preservation and at Archaeological Consultants of Ossian were examined as part of the background review for this project. Historical documents such as county plat maps (Anonymous 1876) and notes and maps of the General Land Office were also examined. Additional information about the region has been acquired from interviews with private collectors. Cultural resources are also known from historic sources (e.g., Guernsey 1932), while other archaeological sites have been discovered as a result of cultural resource management projects (i.e. Baltz 1984, 1986; Beard 1979, 1991; Bennett 1997, 2000; Burkett 1990; Fitting 1979; French and Smith 1990; Guendling 1976; Kearney and Bailey 1993; Meadows and Bair 1997; Munson 1976; Myers 1986; Natt 1999; Noel 1986; Pace 1979; Parmalee et. al. 1978; Purtill and Vehling 2010; Tomak 1986, 1995; Will and Pope 2004; etc.). All of these were reviewed for comparative data. Additionally, the author has also conducted numerous field survey projects within Monroe County (Stillwell 1999, 2000a, 2000b, 2001a, 2001b, 2003a, 2003b, 2004, 2005a, 2005b, 2005c, 2008, 2010a, 2010b, 2010c, 2011a, 2011b, 2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c, 2013d, 2013e, 2013f, 2013g, 2013h, 2014a, 2014b, 2014c; Stillwell and Robertson 2014a, 2014b, 2015).

The results of cultural resource management surveys conducted in the area suggest that sites contained within the region vary in size from small ephemeral lithic scatters to fairly significant prehistoric deposits often situated in either deep alluvial context or along the terraces of major drainages.

As of 2015, at least 1,473 archaeological sites had been recorded for Monroe County. Records maintained by the Indiana Division of Historic Preservation and Archaeology Office indicated that at least 43 of the known cultural resources on file for the county were located within an approximate 1.0-mile radius of the project area. The sites included 12-Mo-0060, 12-Mo-0061, 12-Mo-0076, 12-Mo-0078, 12-Mo-0164, 12-Mo-0254, 12-Mo-0255, 12-Mo-0659, 12-Mo-0665, 12-Mo-0666, 12-Mo-0710, 12-Mo-0718, 12-Mo-0719, 12-Mo-0720, 12-Mo-0769, 12-Mo-0791, 12-Mo-0792/Mo-0233, 12-Mo-0808, 12-Mo-0809, 12-Mo-0873, 12-Mo-0924, 12-Mo-0944, 12-Mo-0980, 12-Mo-0981, 12-Mo-0982, 12-Mo-0983, 12-Mo-0988, 12-Mo-0989, 12-Mo-0990, 12-Mo-0991, 12-Mo-0992, 12-Mo-0993, 12-Mo-0994, 12-Mo-0995, 12-Mo-0996, 12-Mo-0997, 12-Mo-0998, 12-Mo-0999, 12-Mo-1000, 12-Mo-1304, 12-Mo-1386, 12-Mo-1391, and 12-Mo-1392.

All periods of prehistoric occupation are represented in Monroe County, including at least 15 Paleo-Indian sites (Tankersley et. al. 1990). Other phases of prehistoric occupation are noted in Tomak's (1970) survey of neighboring Greene County with some sites like the Beehunter site showing multicomponent features. Tomak (1970) notes many archaeological manifestations during his survey of the region. They include Albee, Yankeetown, and Oliver. Many of the Albee Phase cemeteries in the region are located

in neighboring Greene County. Cantin (1991) states, "...All periods of Indiana prehistory are represented by archaeological sites in the Monroe County region, reflecting some 12,000 years of human habitation. Perhaps most frequently identified in the relatively well drained, upland interior are sites of Early Archaic (ca. 10,000-8,000 BP), Middle-Late Archaic (ca 6,000-4,500 BP), and Late Woodland/Albee (ca 1,500-1,000 BP) affiliation. Nearer to major drainages Terminal Archaic/Riverton (ca 3,500-2,700 BP), Early Woodland (ca 2,700-2,200 BP), and Middle Woodland (ca 2,200-1,500 BP) sites increase in relative frequency. Most typically occurring along former marshes are Middle-Late Archaic, Middle Woodland/Allison-Lamotte (ca 1,900-1,400 BP), and Late Woodland/Albee sites. A full range of site types from small transient camps to base camps, villages, cemeteries, mounds, lithic reduction stations, and special function camps have been documented in the counties..."

Tomak has conducted extensive archaeological studies on the prehistory of the Monroe County region. Should the reader wish to investigate the prehistoric cultural chronology of the region further, they are instructed to review Tomak (1983, 1984). Other studies conducted in the region have shown the presence of prominent Late Archaic Phases such as Mann in south-central and southwestern Indiana (Ruby 1993). Redmond and McCullough (1993) have also excavated a series of Late Woodland/Mississippian Period Oliver Phase village sites in southern and central Indiana. Additionally, recent excavations in Dubois County, Indiana, have revealed the presence of an Angel Phase Village (Pope 2003). This latter test excavation has served to extend the range of what was once thought to have been a limited Classical Mississippian phase occupation of southern Indiana.

Historically, Monroe County was named in honor of President James Monroe. It was created in 1818. However, the present county boundaries were not established until 1836. The first permanent settlement in the county is believed to have been that of David and Jonathan Riggs in the Bloomington area in 1816. Other early settlements included Detham's gristmill on Clear Creek in 1818, and Shirley's gristmill established below Shirley Springs a few years later. Also the Virginia Iron Works was established in 1839. Indiana University was founded in 1820 as a state seminary school (Barnhart and Riker 1971; Carmony 1966; Lockridge 1980; Rudolph 1980).

Historic sources such as the General Land Office survey notes for the township did not indicate any cultural resources present within the project area. Historic plat maps of Monroe County (Anonymous 1876) revealed the presence of six houses, a school, a railroad, and the City of Bloomington within an approximate 1.0 mile radius of the project area. An examination of McGregor (1987) indicated that no early Indiana rural structures of the contact and/or exploration and pioneer settlement periods were located near the current project area.

A review of the Division of Historic Preservation cemetery records for the township indicated that no known graveyards would be impacted by the project. The same records showed the presence of Dodds, Waugh, Shields, Miller, and an unnamed cemetery within an approximate 1.0-mile radius of the project.

Archaeological Survey Methods

The approximate 10.0 acre tract surveyed for the proposed Habitat for Humanity development was currently situated within portions of a grass covered field and on barren ground. Ground surface visibility within the project area was estimated to have ranged between 0-100%. Although portions of the development tract contained limited areas of ground surface visibility, the entire project area was shovel tested. Shovel probe survey consisted of small test holes, approximately 35-cm in diameter and 40-cm deep, that were excavated across the project area at intervals of 15-meters along transects spaced 15-meters apart into culturally sterile subsoils. Soil from the probes was screened through 6.4 mm mesh in an attempt to locate cultural materials. Soil conditions and the presence or absence of cultural materials were noted for each hole. In areas where shovel probes tested positive for cultural materials, additional probes were excavated at 5-meter intervals in the cardinal directions around the positive shovel test pit. Although the shovel probe technique will not find deeply buried sites, and may miss small or ephemeral sites, it is the most cost-effective, reliable form of archaeological survey in areas of low or zero surface visibility (Lightfoot 1986; Nance & Ball 1986).

If applicable, fire-cracked rock was noted but not collected during the survey. All cultural materials recovered during the course of the survey were taken to the ACO office for processing. All artifacts from the survey will be taken to Ball State University for curation.

Archaeological Reconnaissance Survey

On May 24, 2015, an archaeological reconnaissance level survey was initiated for a proposed Habitat for Humanity development. The survey area was examined by Brent Alexander (M.A.) and Dave Sherrill. Larry Stillwell served as the Principal Investigator. The project consisted of an approximate 10.0 acre area that was to be utilized as a proposed low income housing development (Figure 3). The site was located through the use of aerial maps and engineering diagrams provided by the contractor.

The proposed project area was situated within portions of a grass covered field and on barren ground (Figure 3). The project area was bordered by woods to the north, east, and west; and by a field to the south (Figure 3). Although there was limited visibility in the northwest corner of the project, the entire development area was subjected to shovel testing. Shovel testing of the project area documented an agricultural plowzone that extended up to 8.5-inches below the ground surface.

During the course of the field reconnaissance, no archaeological sites were located within the agriculturally disturbed soils. Archaeological investigation of the project noted agricultural disturbance throughout the survey area.

Stafford (et. al. 1988) suggests a probable prehistoric density within the region of one site per 12.08 acres surveyed. This density obviously fluctuates depending on the closeness of the survey area to major water resources (i.e. the White River) as demonstrated through numerous river valley surveys conducted within the state. The current survey located no archaeological sites within an approximate 10.0-acre tract. The

results of the field reconnaissance would appear to fall within the established prehistoric site densities noted above for the county.

Conclusions and Recommendations

An archaeological field reconnaissance of a proposed Habitat for Humanity development in Bloomington, Monroe County, Indiana, discovered no archaeological sites. The project area had been agriculturally disturbed. The results of the other CRM surveys conducted within the county suggest that sites contained within the region vary in size from small ephemeral lithic scatters to fairly significant prehistoric deposits. Because no archaeological resources were located during the survey, it is the opinion of the archaeologist that the proposed undertaking will not affect any archaeological properties eligible for listing on the National Register of Historic Places, and no further archaeological work is warranted. Project clearance is recommended. If human remains, features, or midden deposits are encountered during the construction of the proposed project, work must be halted and the archaeologists at the Indiana Department of Natural Resources-Division of Historic Preservation and Archaeology must be contacted for additional evaluation before work resumes.

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Figure 1. Location of Monroe County within the State.

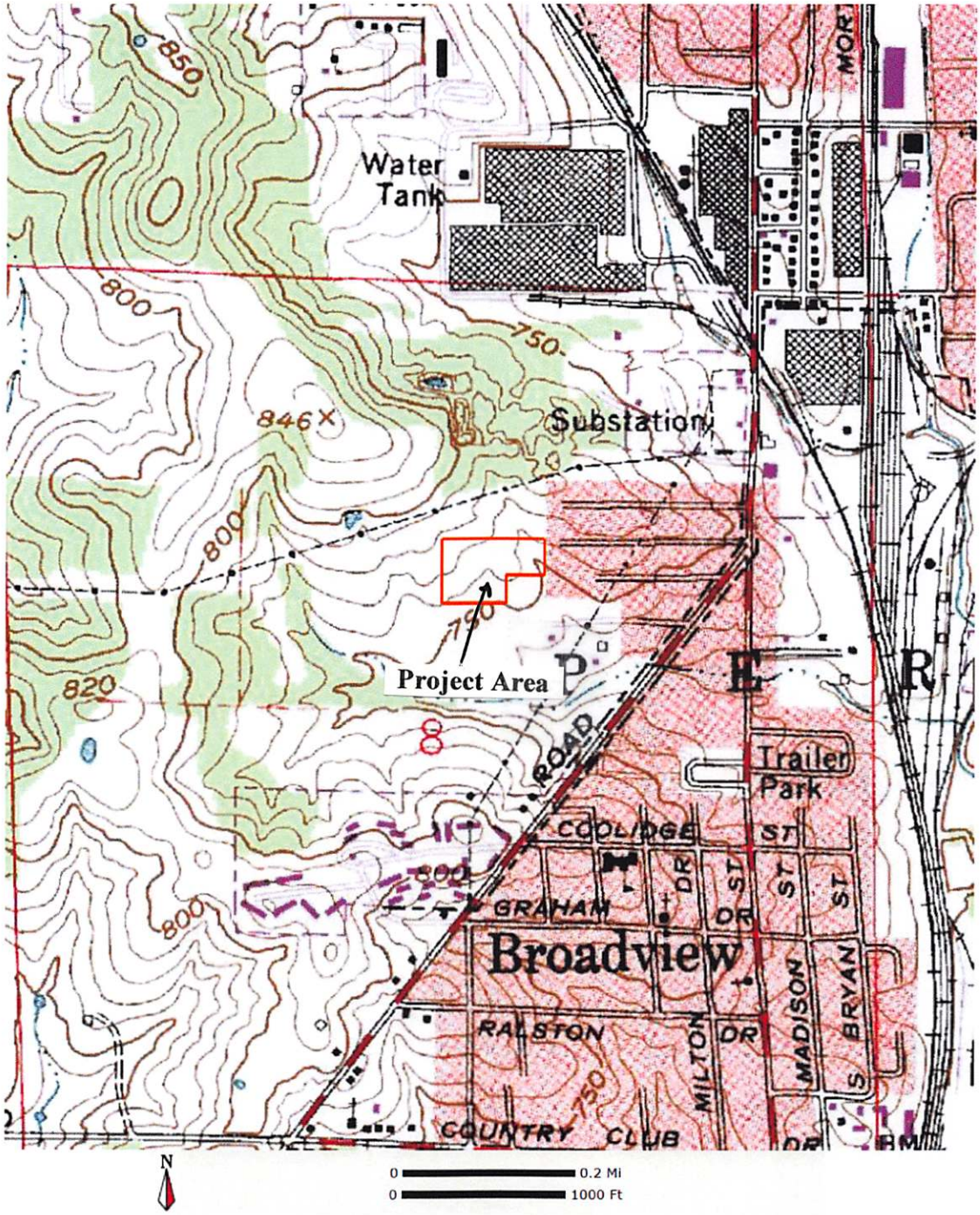


Figure 2. Portion of USGS 7.5' Bloomington, Indiana Quadrangle showing the project area.

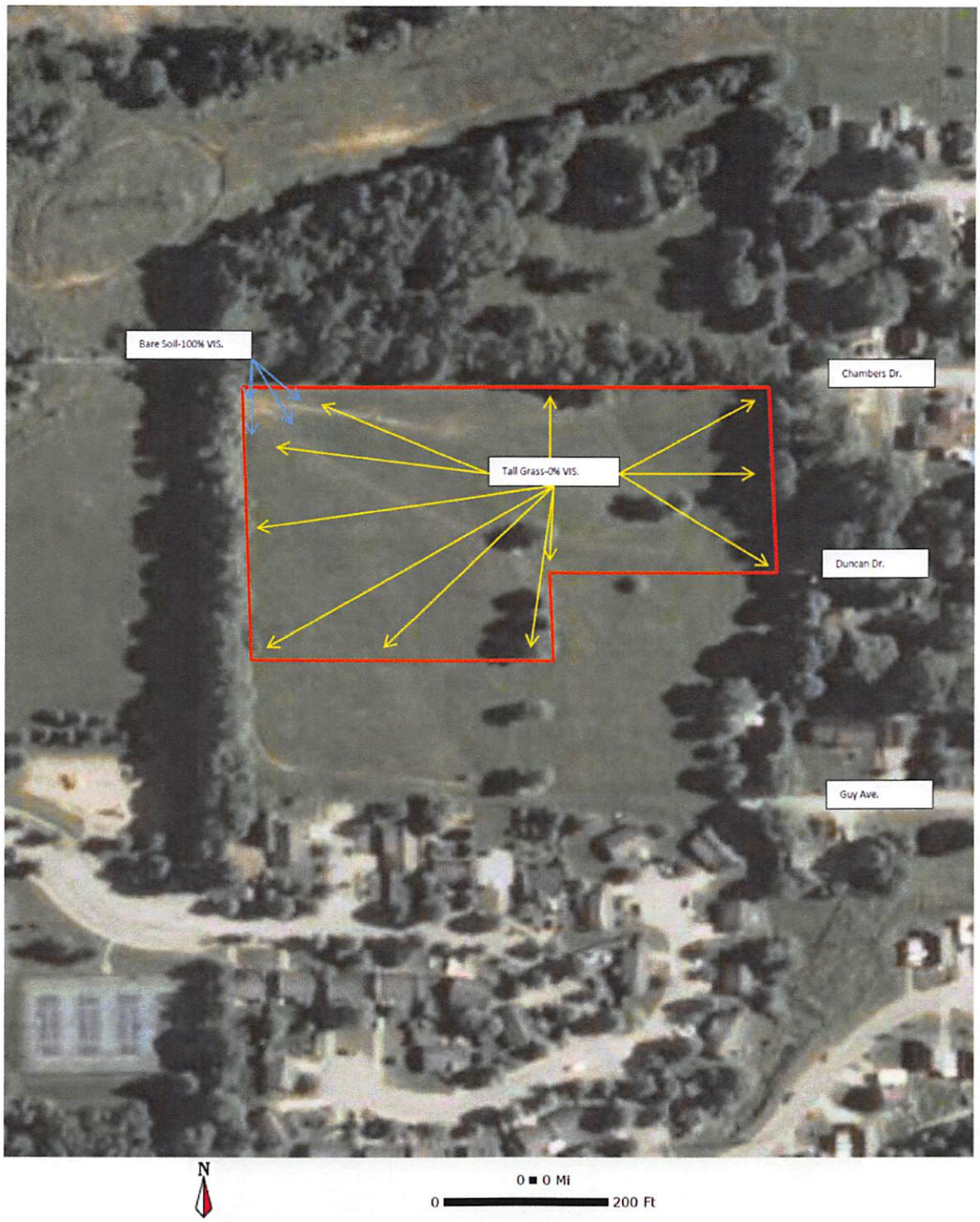


Figure 3. Aerial Map of the Project.

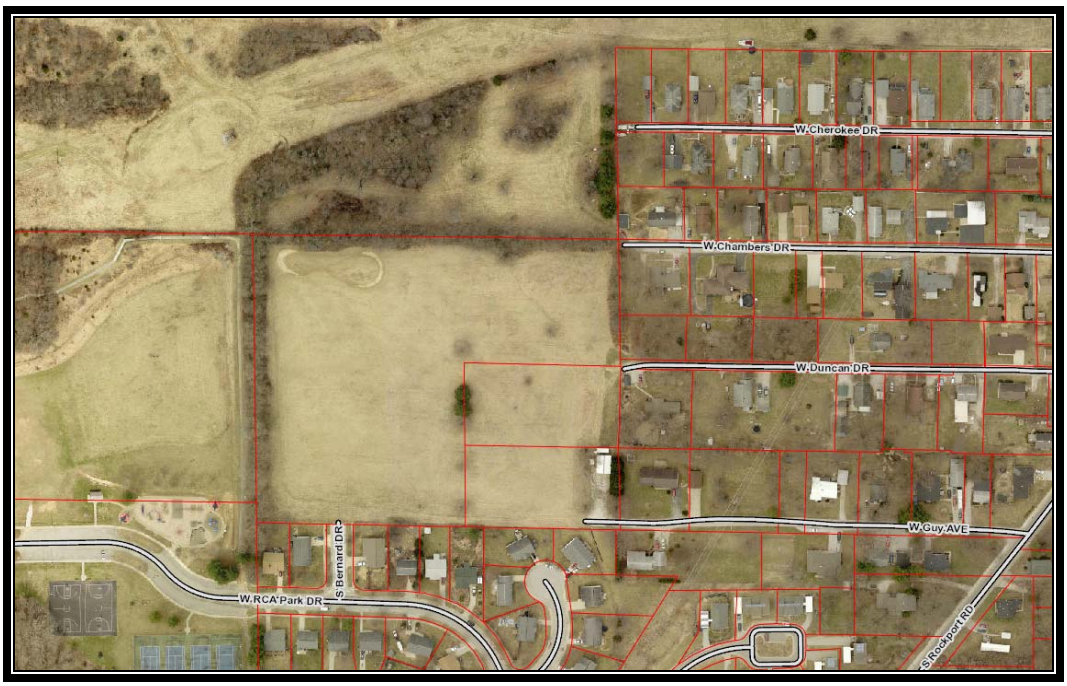
Attachment 4:

HUD Noise Assessment

VET Environmental Engineering, LLC

HUD Noise Assessment

Habitat for Humanity of Monroe County
Dragoo Property
Bloomington, Indiana



Prepared for:
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Bloomington, Indiana 47404

Prepared by:
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Bloomington, IN 47404

Date:
June 24, 2015

Project Number:
15-17

NOISE ASSESSMENT

HABITAT FOR HUMANITY OF MONROE COUNTY
DRAGOO PROPERTY
BLOOMINGTON, INDIANA

VET ENVIRONMENTAL ENGINEERING, LLC PROJECT NUMBER 15-17

INTRODUCTION

Habitat for Humanity of Monroe County (Habitat) proposes to construct a residential neighborhood on one parcel of vacant land located at the end of West Chambers Drive, West Duncan Drive, and South Bernard Drive to the west of the intersection of South Rogers Street and South Rockport Road in Perry Township, Bloomington, Monroe County, Indiana (Property). The Property is composed of one parcel (53-08-08-100-115.000-009) of land approximately 5.66 acres in area described as: 015-10185-01 PT SW NE 8-8-1W 5.40A; PLAT 27. The Property is zoned for single-family residential land use. VET Environmental Engineering, LLC (VET) was retained by Mr. Rudy Fields, President of Fields Environmental, Inc. (Fields) to conduct a Noise Assessment on the Property as required by the Noise Assessment Guidelines provided by the U.S. Department of Housing and Urban Development (HUD).

Historical aerial photography indicates that the Property was undeveloped and/or used for agricultural purposes from at least 1939 until the present. An area map demonstrating the location of the Property and topographic contouring in the area of the Property is included as **Figure 1**. **Figure 2** demonstrates the Property's location relative to adjacent properties and nearby roadways evaluated as part of this Noise Assessment. The location of the Property in relation to airports within 15 miles is included on **Figure 3**. The location of the Property in relation to railways within 3,000 feet is included on **Figure 4**.

VET representatives Sara Hamidovic, PE, CHMM and Reilly Taylor conducted a site walk on June 23, 2015. Plans for the proposed development at the Property were not available and were not utilized by VET as part of this Noise Assessment. VET utilized the distance from the nearest Property boundary line to the nearest point on the anticipated sources of noise impacts. VET believes that this approach constitutes a worst-case scenario evaluation that will adequately represent the noise impacts for the proposed development at the Property.

Based on the conclusions of this Noise Assessment, the calculated noise level falls within the acceptable range. The acceptable range as determined by HUD is less than 65 decibels (dB) day-night average sound level (DNL). The aggregate calculated day-night average sound level for this Noise Assessment is 56. All worksheets, work charts, and calculations developed as part of this assessment are included for review as **Attachment 1**. Outputs from the data sources used to gather information for this Noise Assessment are included in **Attachment 2**. A compact disc containing an electronic file of this Noise Assessment is provided in **Attachment 2**.

SUMMARY

VET conducted this Noise Assessment in accordance with the HUD Noise Assessment Guidebook, HUD-953-CPD. As part of this Noise Assessment, VET evaluated four airports within a 15-mile radius, three former rail lines, and eighteen nearby roadways. The location of the Property within the City of Bloomington is shown on **Figure 1**. The Property, adjacent properties, and nearby roadways are depicted on **Figure 2**. The location of the Property in relation to airports within 15 miles is depicted on **Figure 3**. The location of the Property in relation to railways within 3,000 feet is depicted on **Figure 4**.

AIRPORTS

In accordance with HUD Guidelines, airports within 15 miles of the Property were evaluated. Pertinent information regarding airports within 15 miles of the Property is listed in **Table 1** below.

Table 1. Airports within 15 miles of the Property

Airport	Distance	DNL	NEF
Monroe County Airport	3.85 miles	NA	NA
Lake Monroe Sea Plane Base	8.04 miles	NA	NA
Roto-Whirl Heliport	13.31 miles	NA	NA
Engdahl Farm Heliport	14.48 miles	NA	NA

NA=Not Available

VET was unable to obtain day-night average sound level (DNL) data for any of the airports within a 15-mile radius. Past interviews with the director of the Monroe County Airport indicated that there is a noise restricted area surrounding the airport. The Property is not located within the noise restricted area surrounding Monroe County Airport. Based on the relative distance of all airports within a 15-mile radius to the Property and the suspected types and volumes of use, it is anticipated that the Property is located outside of the 65 dB DNL contours for all four airports. No further evaluation of the four airports was conducted.

ROADWAYS

HUD requires analysis of heavily traveled roadways that are located within 1,000 feet of the Property. HUD defines heavily traveled roadways as Arterial (10,000-25,000 average daily traffic (ADT)), Major Arterial (25,000-40,000 ADT), and Freeways (40,000 ADT). South Rogers Street is the only roadway that qualifies as a heavily traveled roadway in the vicinity of the Property. South Rogers Street meets the criteria to be qualified as an Arterial Roadway. Where ADT values were not readily ascertainable from public databases VET relied on average annual daily traffic (AADT) values.

VET preliminarily evaluated all roadways within 1,000 feet of the Property. VET further evaluated four roadways based on experience with the area of the Property and traffic patterns: West Countryside Lane, South Rockport Road, South Rogers Street, and an unnamed roadway that serves as the driveway for two industrial operations: Irving Materials, Inc. (IMI) and Young Trucking, Inc. (Young). IMI operates a ready mix concrete plant and Young operates a holding yard for a dump truck business. Data for the unnamed roadway were gathered based on interviews with both IMI and Young. The only data available were related to truck traffic using the unnamed roadway. As truck traffic represents the worst-case scenario as it relates to noise levels the lack of automobile volume data is not considered significant to the outcome of the noise assessment.

All roadways examined as part of this noise assessment are listed in **Table 2**. Roadways lacking traffic data from readily ascertainable public databases were excluded from the calculations. West Countryside Lane and South Rockport Road are the only roadways located within 1,000 feet of the Property that had readily ascertainable traffic data. South Rogers Street and the unnamed roadway utilized by IMI and Young were included because noise impacts from these sources were potentially significant. Traffic data for South Rogers Street was obtained from public databases and traffic data for the unnamed roadway was obtained through interviews.

Table 2. Roadways near the Property					
Roadway	**ADT/AADT (Cars)**	**ADT/AADT (Trucks)**	**Date Obtained**	**No. of Lanes**	**Distance (feet)**
South Bernard Drive	NA	NA	NA	2	0
West Duncan Drive	NA	NA	NA	2	0
West Chambers Road	NA	NA	NA	2	0
West Guy Avenue	NA	NA	NA	2	0
West RCA Park Drive	NA	NA	NA	2	140
South Harmony Place	NA	NA	NA	2	152
West Cherokee Drive	NA	NA	NA	2	209
West Cardinal Court	NA	NA	NA	2	307
South Susie Street	NA	NA	NA	2	489
West Countryside Lane	1,689	91	2012	2	640
South Boulder Court	NA	NA	NA	2	648
South Cutter Court	NA	NA	NA	2	680
South Zona Court	NA	NA	NA	2	729
South Rockport Road	5,991	224	2014	2	788
South Strong Drive	NA	NA	NA	2	866
South Peoples Court	NA	NA	NA	2	963
South Rogers Street	10,403	485 (2009)	2014	2	1,140
Unnamed Roadway (IMI and Young Trucking Driveway)	NA NA	60 - IMI 100 - Young	2015	2	1,277

NA=Not Available

West Countryside Lane runs generally east to west in the area south of the Property with one eastbound and one westbound lane. The nearest lane of traffic is approximately 654 feet from the nearest Property boundary with an effective distance of approximately 666 feet. VET acquired the ADT for West Countryside Lane from the City of Bloomington Roadway Traffic database recorded in 2012 for the section of West Countryside Lane between South Zona Court and South Cutter Court. The ADT for this portion of West Countryside Lane represents 1,689 cars and 91 (assumed heavy) trucks.

South Rockport Road runs northeast to southwest through Bloomington and to east of the property with two lanes of traffic in opposite directions. The nearest lane of traffic is approximately 788 feet from the Property with an effective distance of approximately 816 feet. VET evaluated the AADT for South Rockport Road according to the Indiana Department of Transportation (INDOT) Interactive Traffic Count Map recorded in 2014 for the section of South Rockport Road between West Countryside Lane and West Graham Drive. The AADT for this portion of South Rockport Road represents 5,991 cars and 224 (assumed heavy) trucks. Outputs from the INDOT Interactive Traffic Count Map for South Rockport Road are included in **Attachment 2**.

South Rogers Street runs north to south through Bloomington to the east of the Property with two lanes of traffic in opposite directions. The nearest lane of traffic is approximately 1,145 feet from the Property with an effective distance of approximately 1,178 feet VET evaluated the AADT for South Rogers Street according to the INDOT Interactive Traffic Count Map recorded in 2014 for the section of South Rogers Street between West Wilson Drive and West Hillside Drive. The AADT for this portion of South Rogers Street represents 10,403 cars. AADT truck data were obtained from the City of Bloomington Roadway Traffic Database recorded in 2009 for the section of South Rogers Street between West Coolidge Drive and West Joy Street. The AADT for trucks on this portion of South Rogers Street 485. Outputs from the INDOT Interactive Traffic Count Map for South Rogers Street are included in **Attachment 2**.

The unnamed roadway utilized as a driveway for IMI and Young was evaluated based on interviews with representatives of both businesses. IMI indicated that truck traffic from this location is limited to the winter months, specifically from November to March. During those months ten trucks make, on average, three trips each per day. VET input 60 for the AADT associated with IMI's trucks. This conservative

approach assumes that the traffic includes 30 truck trips into the facility and 30 trips out of the facility each day, year round. Interviews with Young indicated that there are 48-50 dump trucks stationed at this facility. Each truck leaves the facility in the morning and returns at the end of the work day. VET assumed that 50 dump trucks leave every day and return every evening. In total, 160 was input for the AADT associated with heavy trucks on the unnamed roadway.

RAILWAYS

There are no active railways within 3,000 feet of the Property. Aerial photography and railway data indicate that three former railways were located to the east within 3,000 feet of the Property. A former railway converted into a walking trail known as the B-Line Trail is 1,923 feet from the Property. Immediately adjacent to the west of the B-line Trail and 1,712 feet from the Property is an abandoned railway formerly owned by Illinois Central Railroad. Adjacent to the east of the B-Line Trail and 2,245 feet from the Property is an abandoned rail line formerly owned by Louisville & Nashville Railroad. The locations of the B-Line Trail, the former Illinois Central Railroad, and the former Louisville & Nashville Railroad relative to the location of the Property are depicted on **Figure 4**.

Necessary railway data were obtained from the Indiana Department of Transportation (INDOT), the Federal Railroad Administration, and the National Transportation Atlas Database (NTAD). All railways examined as part of this Noise Assessment are listed in **Table 3**. Outputs from the Federal Railroad Administration Office of Safety Analysis are included in **Attachment 2**. The absence of active railways within 3,000 feet of the property precluded evaluation of railway data in the calculations.

Table 3. Railways within 3,000 feet of the Property

Railway	Distance to Former Track	Daily Trains	Horn/Whistle	Distance to Former Crossing
Former Railroad – B-Line Trail	1,923 feet	0	No	3,360 feet
Abandoned Railroad –Illinois Central Railroad	1,712 feet	0	No	1,888 feet
Abandoned Railroad – Louisville & Nashville Railroad	2,245 feet	0	No	2,994 feet

NOISE ASSESSMENT PROCESS

This noise assessment was prepared in accordance with the HUD Noise Assessment Guidelines. Site specific data that were available to VET were used in the applicable calculations. Where data was unavailable VET utilized assumed values as set forth in the guidance. Where assumptions were required, VET assumed the worst-case scenario for potential noise level. This conservative approach ensures that the calculated numbers are adequately protective of residents that will ultimately inhabit the proposed development. Assumptions were required when determining which traffic count data should be used (based on locations), the number of trucks that use the unnamed driveway to IMI and Young, and the number of heavy trucks that use South Rogers Street. All worksheets and work charts developed as part of this assessment are included for review in **Attachment 1**.

CONCLUSIONS

Table 4 summarizes the findings of this Noise Assessment:

Table 4. Noise Assessment Summary		
Noise Source	**Specifics of Noise Source**	**Level (dB)**
Airports	No site specific data available	Not Evaluated
	Airports Total	**Not Evaluated**
Roadways	West Countryside Lane	43.66
	South Rockport Road	51.6
	South Rogers Street	52.6
	Unnamed Roadway (driveway to IMI/Young)	46.34
	Roadways Total	**56**
Railways	All former railroad locations abandoned	Not Evaluated
	Railways Total	**Not Evaluated**
Total Noise Level		**56**

The total noise level calculated is 56 dB. Only the roadways in the area contributed to the overall noise level at the Property. Noise impacts from airports in a 15-mile radius around the Property were not considered as part of this assessment because each is projected to be outside the 65 dB DNL contour in accordance with HUD guidance. Noise impacts from former rail lines in the area were not considered because all former rail lines are now abandoned.

The calculated total noise level falls in the acceptable range as determined by HUD (less than or equal to 65 dB). No noise attenuation barriers or construction modifications are required to reduce the noise level inside the structures that are proposed at the Property. Standard wall construction is projected to reduce the noise level inside structures by 20 dB. The goal of the HUD Noise Guidelines is for the total noise level inside structures not to exceed 45 dB. Based on the Noise Assessment conducted by VET it is anticipated that the noise levels inside the structures proposed at the Property will be 36 dB, in the worst case scenario, and therefore meets the HUD noise level goals.

VET appreciates the opportunity to conduct this Noise Assessment for Fields. Please direct any questions or comments pertaining to this document to Sara Hamidovic at (812) 327-2838.

Respectfully submitted,

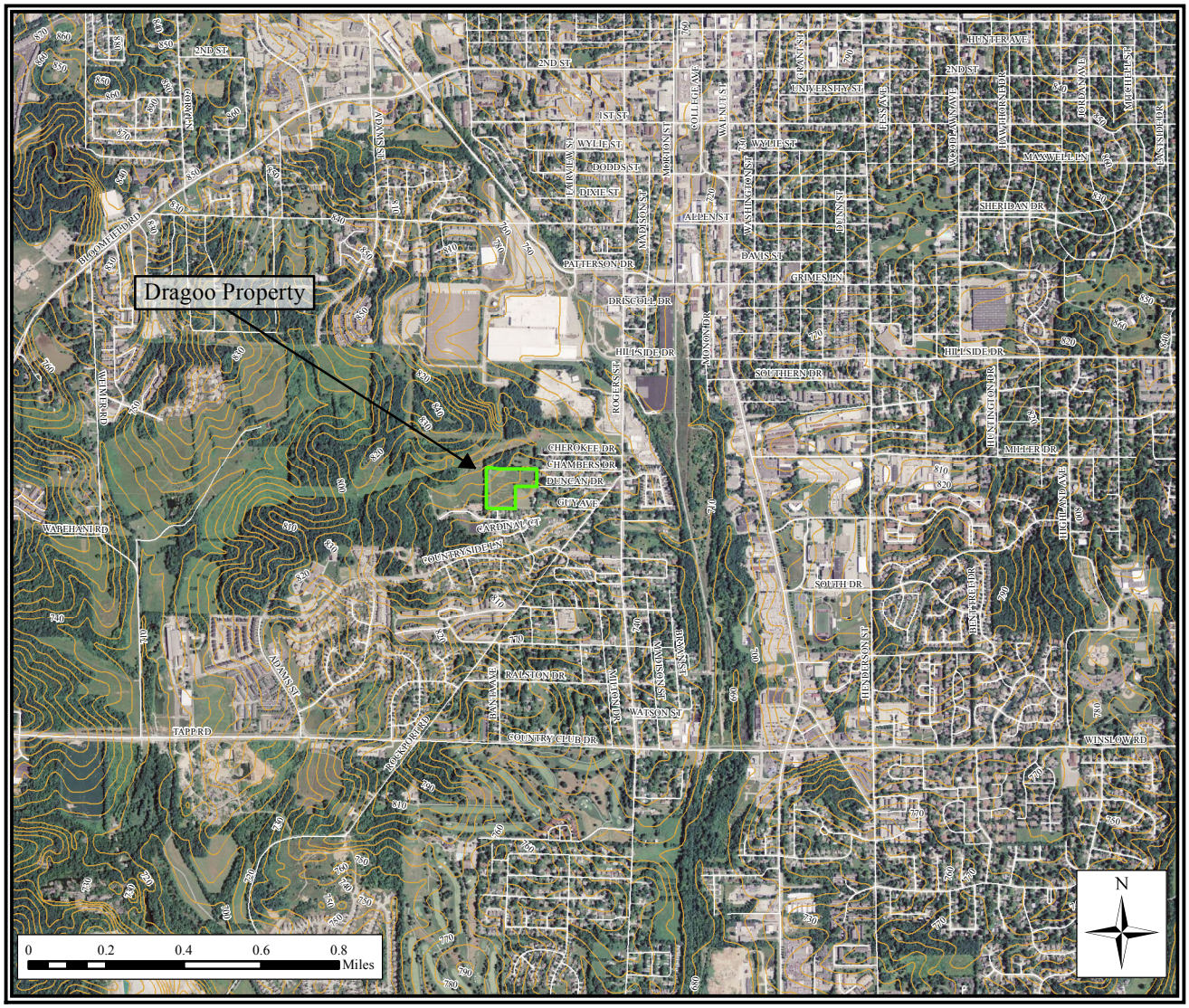
Original Signed

Sara R. Hamidovic, PE, CHMM
VET Environmental Engineering, LLC

Data Sources

VET utilized the following sources to collect the appropriate data to perform this Noise Assessment:

- Bloomington Transit http://bloomingtontransit.com/maps-and-schedules/
- Indiana Department of Transportation Interactive Traffic Count Map https://entapps.indot.in.gov/TrafficCounts/
- City of Bloomington, Indiana Roadway Traffic Database http://bloomington.in.gov/documents/viewDocument.php?document_id=3327
- Federal Railroad Administration Railway Database http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/crossing/xingqryloc.aspx
- IndianaMap.org http://indianamap.org/index.php
- Indiana University's Spatial Data Portal http://gis.iu.edu/
- Interviews with the Director of the Monroe County Airport (Personal Communication)
- U.S. Department of Housing and Urban Development (HUD) Site DNL Calculator http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/dnlcalculatortool
- U.S. Department of HUD Noise Assessment Guidelines provided by OneCPD Resource Exchange https://www.onecpd.info/resource/313/hud-noise-guidebook/
- Interview: Representative of Irving Materials, Inc.
- Interview: Representative of Young Trucking, Inc.



Legend

Dragoo Property

10 Foot Topographic Contours

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 1
Area Map
Dragoo Property, Bloomington, Indiana

For: Dragoo Property | Date: 6/23/15 | Project #: 15-17

Graphics obtained from: NAIP, INDOT, USGS

Legend

Dragoo Parcel Boundaries (Property)

Parcel Boundaries

VET Environmental Engineering, LLC

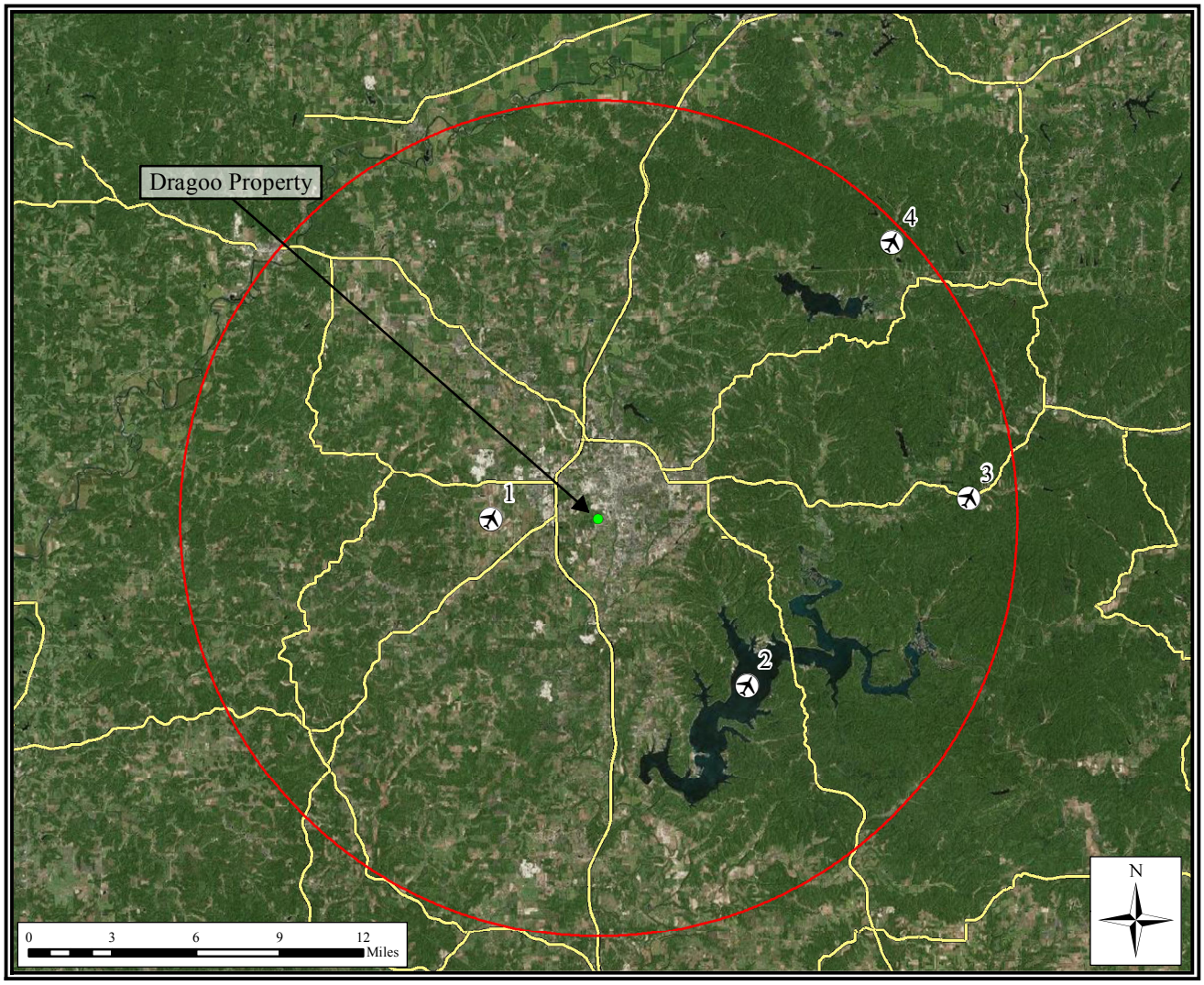
341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 2

Aerial Photography with Parcel Identification
Dragoo Property, Bloomington, Indiana

For: Dragoo Property | Date: 6/23/15 | Project #: 15-17

Graphics obtained from: ESRI, IDHS



Legend

- Dragoo Property
- Airports
- 15 Mile Radius From Property
- Highways

Airport / Distance From Property (Miles)

1. Monroe County Airport / 3.85
2. Lake Monroe Seaplane Base / 8.04
3. Roto-Whirl Heliport / 13.31
4. Engdahl Farm / 14.48

VET Environmental Engineering, LLC

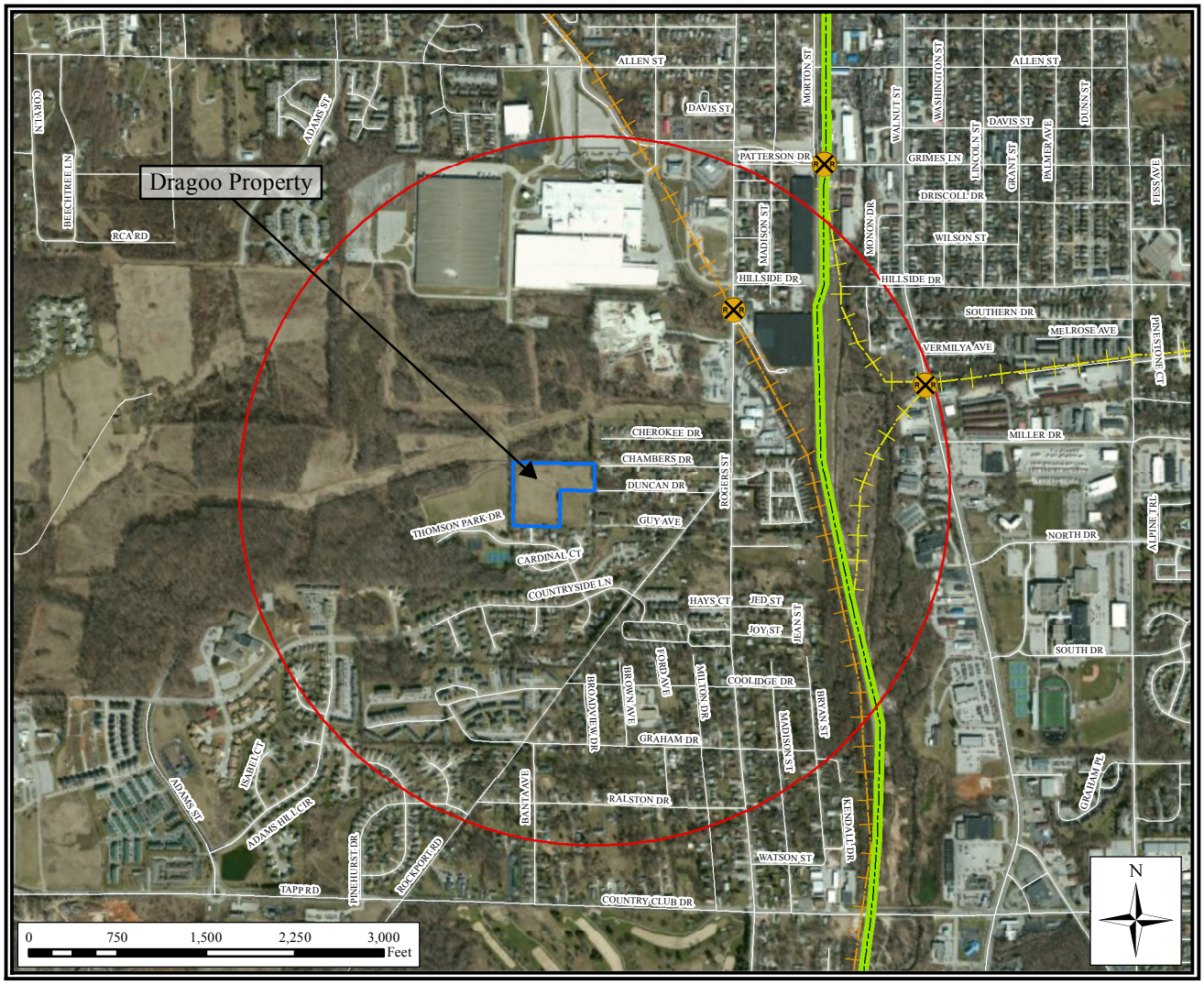
341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 3

Airports Within 15 Mile Radius of Property
Dragoo Property, Bloomington, Indiana

For: Dragoo Property | Date: 6/23/15 | Project #: 15-17

Graphics obtained from: ESRI, INDOT, NTAD



Legend

- Railroad Crossing
- B-Line Trail
- Louisville & Nashville Railroad
- Illinois Central Railroad
- 3,000 Foot Radius From Property
- Dragoo Property

Railroad / Distance From Property (Feet)

1. Illinois Central Railroad / 1,712
2. B-Line Trail / 1,923
3. Louisville & Nashville Railroad / 2,245

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

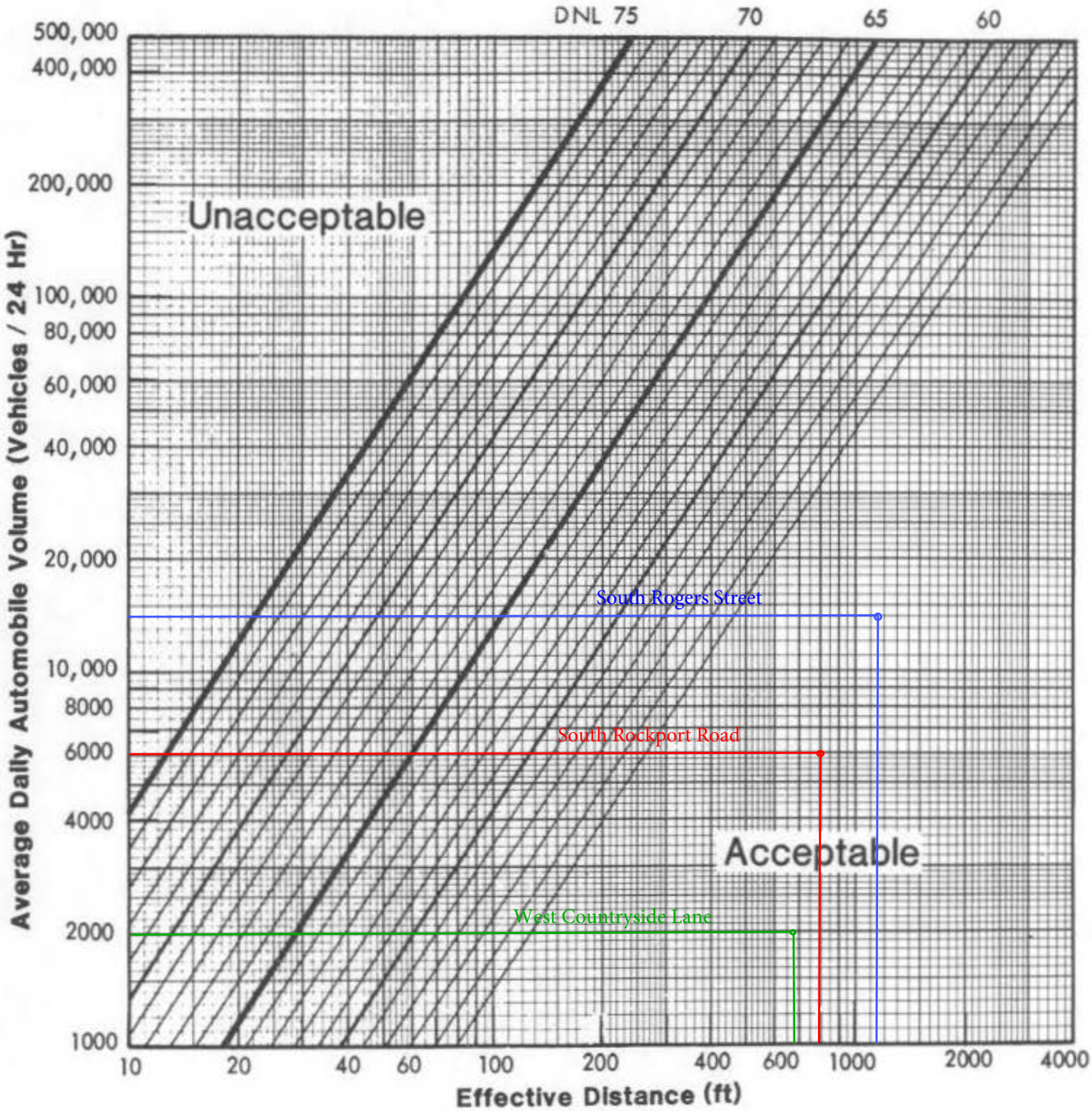
Figure 4

Railroads Within 3,000 Foot Radius
Dragoo Property, Bloomington, Indiana

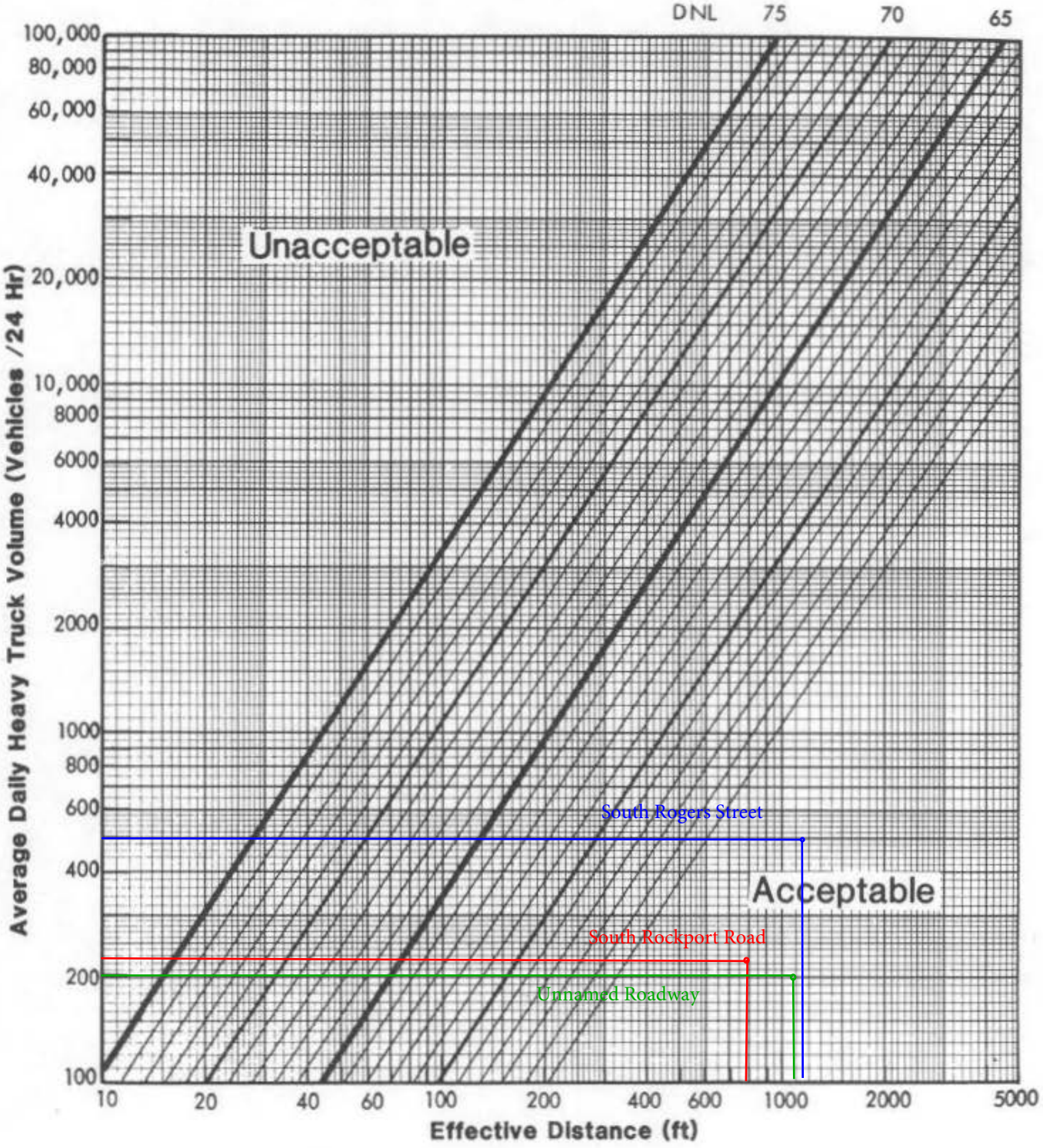
For: Dragoo Property | Date: 6/23/15 | Project #: 15-17

Graphics obtained from: ESRI, INDOT, NTAD

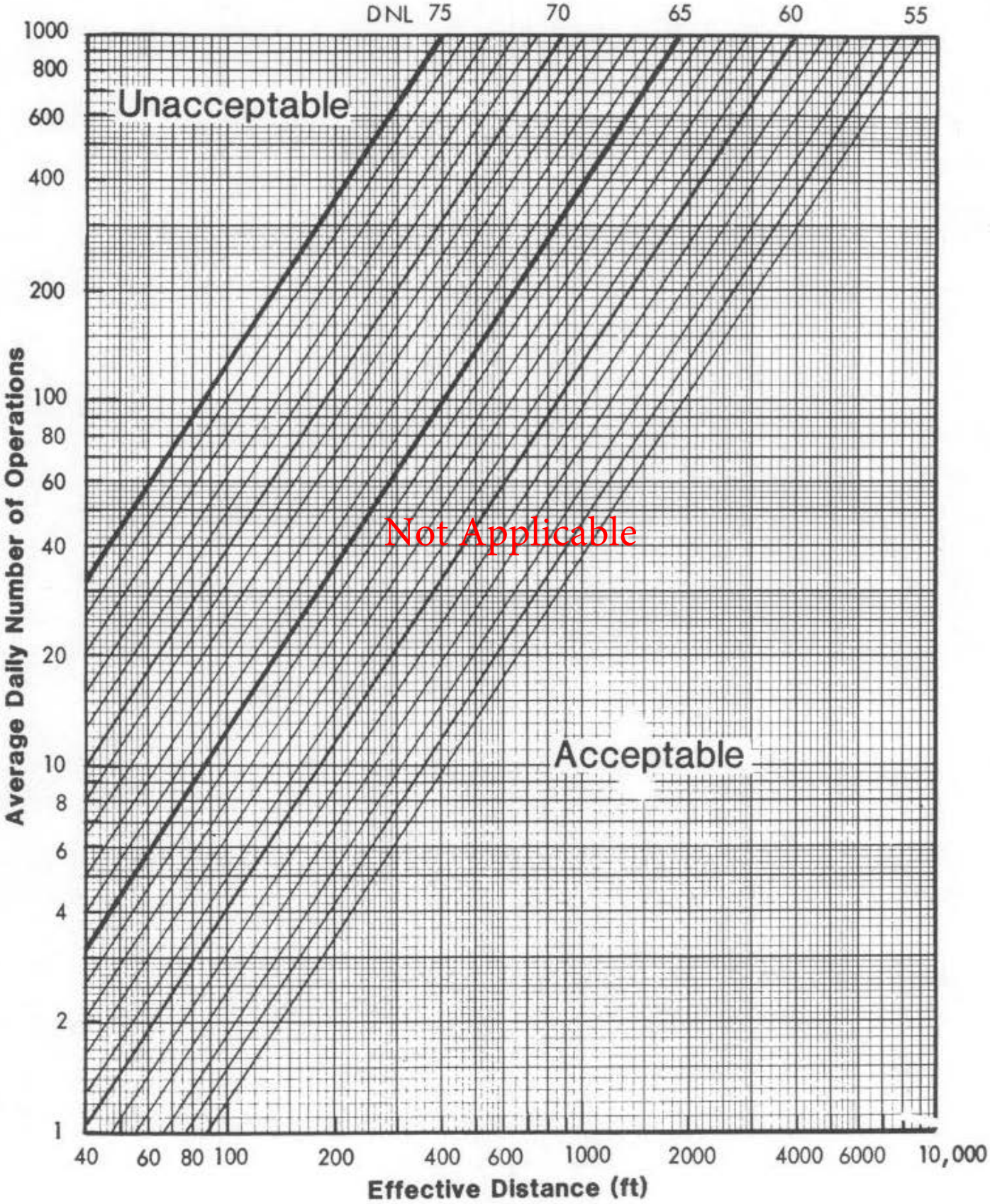
Workchart 1
Autos (55 mph)



Workchart 2
Heavy Trucks (55 mph)

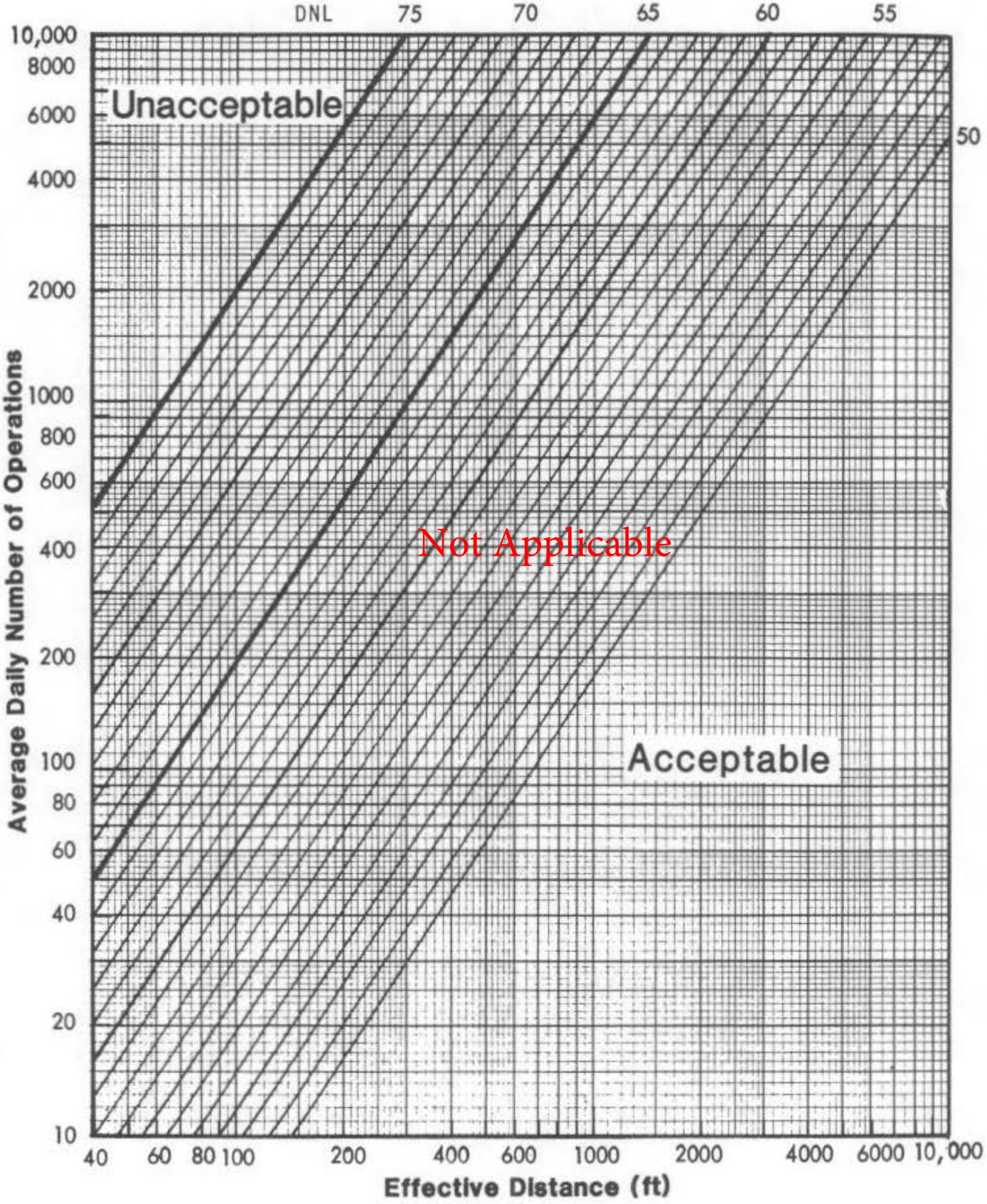


Workchart 3
Railroads - Diesel Locomotives



21

Workchart 4
Railroads - Cars and Rapid Transit



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Worksheet A
Site Evaluation

Noise Assessment Guidelines

Dragoo Property, Habitat for Humanity of Monroe County, Bloomington, IN

Site Location

Habitat for Humanity of Monroe County

Program

Dragoo Property

Project Name

Bloomington, Monroe County, Indiana

Locality

VET Environmental Engineering , LLC (Project No.15-17)

File Number

Mr. Sean Price , Business Manager for Habitat for Humanity Monroe County (812) 331-4069

Sponsor's Name Phone

213 East Kirkwood Avenue Bloomington, IN

Street Address City, State

	Acceptability Category	DNL	Predicted for Operations in Year
1. Roadway Noise	Acceptable	56	2012, 2014, 2015
2. Aircraft Noise	N/A	N/A	N/A
3. Railway Noise	N/A	N/A	N/A

Value of DNL for all noise sources: (see page 3 for combination procedure) 56

Final Site Evaluation (circle one)

Acceptable

Normally Unacceptable

Unacceptable

Signature Original Signed Date

Clip this worksheet to the top of a package containing Worksheets B-E and Workcharts 1-7 that are used in the site evaluations

Worksheet B
Aircraft Noise

List all airports within 15 miles of the site:

1. _____

2. _____

3. _____

Necessary Information:	Airport 1	Airport 2	Airport 3
1. Are DNL, NEF or CNR contours available? (yes/no)			
2. Any supersonic aircraft operations? (yes/no)			
3. Estimating approximate contours from Figure 3:			
a. number of nighttime jet operations			
b. number of daytime jet operations			
c. effective number of operations (10 times a + b)			
d. distance A for 65 dB			
70dB			
75 dB			
e. distance B for 65 dB			
70 dB			
75 dB			
4. Estimating DNL from Table 2:			
a. distance from 65 dB contour to flight path, D^1			
b. distance from NAL to flight path, D^2			
c. D^2 divided by D^1			
d. DNL			
5. Operations projected for what year?			
6. Total DNL from all airports			

Not Evaluated
See Narrative

Signed Original Signed

Date

List all major roads within 1000 feet of the site:

1. West Countryside Lane
2. South Rockport Road
3. South Rogers Street
4. Unnamed Roadway (Driveway to IMI and Young)

Necessary Information	Road 1	Road 2	Road 3	Road 4
1. Distance in feet from the NAL to the edge of the road				
a. nearest lane	654	788	1145	1245
b. farthest lane	677	816	1,178	1,270
c. average (effective distance)	666	802	1,161	1,258
2. Distance to stop sign	1,168	1,150	3,183	1,541
3. Road gradient in percent	1%	1.5%	2%	2%
4. Average speed in mph				
a. Automobiles	30	30	30	20
b. heavy trucks - uphill	30	30	30	20
c. heavy trucks - downhill	30	30	30	20
5. 24 hour average number of automobiles and medium trucks in both directions (ADT)				
a. automobiles	1,689	5,991	10,403	N/A
b. medium trucks	91	224	485	160
c. effective ADT (a + (10xb))	2,599	8,231	15,253	1,600
6. 24 hour average number of heavy trucks				
a. uphill	46	112	340	112
b. downhill	46	112	243	80
c. total	92	224	583	192
7. Fraction of nighttime traffic (10 p.m. to 7 a.m.)	0.15	0.15	0.15	--
8. Traffic projected for what year?	2012	2014	2009, 2014	2015

Adjustments for Automobile Traffic

	9 Stop and-go Table 3		10 Average Speed Table 4		11 Night-Time Table 5		12 Auto ADT (line 5c)		13 Adjusted Auto ADT		14 DNL (Workchart 1)		15 Barrier Attenuation		16 Partial DNL
Road No. 1	1.00	x	0.3	x	1.00	x	2,599	=	780		43.66	–	N/A	=	43.66
Road No. 2	1.00	x	0.3	x	1.00	x	8,231	=	2,469		47.34	–	N/A	=	47.34
Road No. 3	1.00	x	0.3	x	1.00	x	15,253	=	4,576		48.66	–	N/A	=	48.66
Road No. 4	1.00	x	0.13	x	1.00	x	1,600	=	208		N/A	–	N/A	=	N/A

Adjustments for Heavy Truck Traffic

	17 Gradient Table 6		18 Average Speed Table 7		19 Truck ADT / 2		20		21		22 Stop and-go Table 8		23 Night-Time Table 5		24 Adjusted Truck ADT		25 DNL (Work-chart 2)		26 Barrier Attn.		27 Partial DNL
Uphill	--	x	0.81	x	46	=	37.26														
Road No. 1									Add	74.52	x	1.8	x	1.00	=	134.14	--	–	N/A	=	--
Downhill			0.81	x	46	=	37.26														
Uphill	--	x	0.81	x	112	=	90.72														
Road No. 2									Add	181.44	x	1.8	x	1.00	=	326.59	49.5	–	N/A	=	49.5
Downhill			0.81	x	112	=	90.72														
Uphill	1.4	x	0.81	x	243	=	275.56														
Road No. 3									Add	472.39	x	1.8	x	1.00	=	850.30	50.5	–	N/A	=	50.5
Downhill			0.81	x	243	=	196.83														
Uphill	1.4	x	0.81	x	80	=	90.72														
Road No. 4									Add	155.52	x	1.8	x	--	=	279.93	46.34	–	N/A	=	46.34
Downhill			0.81	x	80	=	64.8														

Combined Automobile & Heavy Truck DNL

Road No. 1 43.66 Road No. 2 51.6 Road No. 3 52.6 Road No. 4 46.34 Total DNL for All Roads 56

Signature Original Signed Date

List All Railways within 3000 feet of the site:

1. _____

2. _____

3. _____

Necessary Information:	**Railway No. 1**	**Railway No. 2**	**Railway No. 3**
1. Distance in feet from the NAL to the railway track:	_____	_____	_____
2. Number of trains in 24 hours:			
a. diesel	_____	_____	_____
b. electrified	_____	_____	_____
3. Fraction of operations occuring at night (10 p.m. – 7 a.m.):	_____	_____	_____
4. Number of diesel locomotives per train:	_____	_____	_____
5. Number of rail cars per train:			
a. diesel trains	_____	_____	_____
b. electrified trains	_____	_____	_____
6. Average train speed:	_____	_____	_____
7. Is track welded or bolted?	_____	_____	_____
8. Are whistles or horns required for grade crossings?	_____	_____	_____

Not Evaluated
See Narrative

Adjustments for Diesel Locomotives

	9 No. of Locomotives / 2	10 Average Speed Table 9	11 Horns (enter 10)	12 Night-time Table 5	13 No. of Trains (line 2a)	14 Adj. No. of Opns.	15 DNL Workchart 3	16 Barrier Attn.	17 Partial DNL
Railway No. 1	_____ X	_____ X	_____ X	_____ X	_____ =	_____	_____ –	_____ =	_____
Railway No. 2	_____ X	_____ X	_____ X	_____ X	_____ =	_____	_____ –	_____ =	_____
Railway No. 3	_____ X	_____ X	_____ X	_____ X	_____ =	_____	_____ –	_____ =	_____

Adjustments for Railway Cars or Rapid Transit Trains

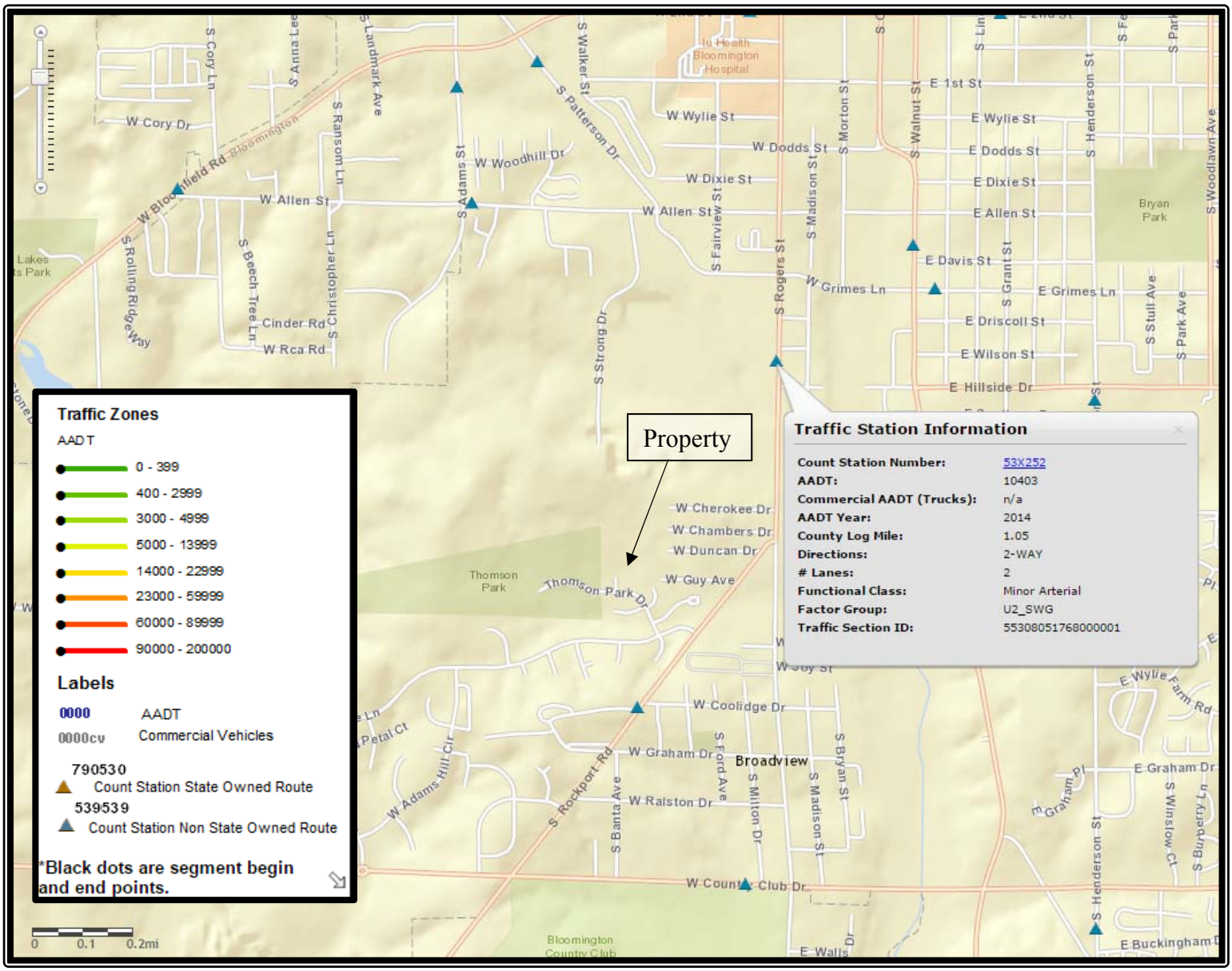
	18 Number of cars / 50	19 Average Speed Table 10	20 Bolted Rails (enter 4)	21 Night-time Table 5	22 No. of Trains (Line 2a or 2b)	23 Adj. No. of Opns.	24 DNL Work-chart 4	25 Barrier Attn.	26 Partial DNL
Railway No. 1	_____ X	_____ X	_____ X	_____ X	_____ =	_____	_____ –	_____ =	_____
Railway No. 2	_____ X	_____ X	_____ X	_____ X	_____ =	_____	_____ –	_____ =	_____
Railway No. 3	_____ X	_____ X	_____ X	_____ X	_____ =	_____	_____ –	_____ =	_____

Not Evaluated
See Narrative

Combined Locomotive and Railway Car DNL

Railway No. 1 _____ Railway No. 2 _____ Railway No. 3 _____ Total DNL for all Railways _____

Signature Original Signed _____ Date _____



Loc ID	County	Factor Group	Functional Class	Location Description	Dir	Lanes	Latest AADT	AADT Year	Last Collection Date
53X252	Monroe	U2_SWG	Minor Arterial	S ROGERS ST	2-WAY	2	10486	2014	4/15/2014

*ADT for trucks obtained from City of Bloomington Roadway Traffic Database

VET Environmental Engineering, LLC

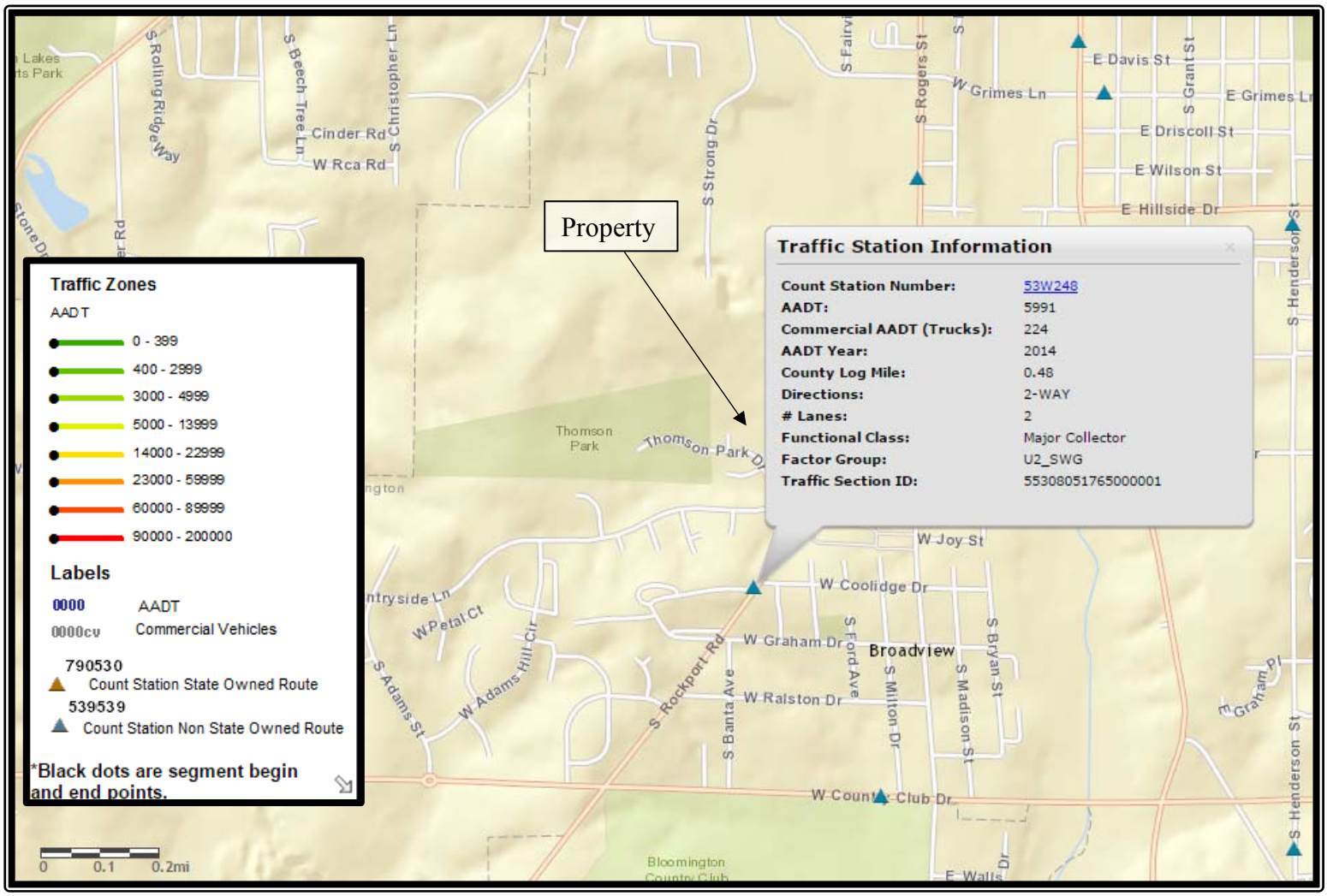
341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

South Rogers Street Traffic Station Information
Dragoo Property, Bloomington, Indiana

For: Habitat for Humanity of Monroe County

Date: 6/22/2015 Project #: 15-17

Graphics obtained from: INDOT Interactive Traffic Count Map



Loc ID	County	Factor Group	Functional Class	Location Description	Dir	Lanes	Latest AADT	AADT Year	Last Collection Date	Passenger Cars	Passenger Cars %	Commerical Vehicles
53W248	Monroe	U2_SWG	Major Collector	ROCKPORT RD	2-WAY	2	5725	2014	3/11/2014	5510	96%	214

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

South Rockport Road Traffic Station Information
Dragoo Property, Bloomington, Indiana

For: Habitat for Humanity of Monroe County

Date: 6/22/2015 Project #: 15-17

Graphics obtained from: INDOT Interactive Traffic Count Map

Federal Railroad Administration
Office of Safety Analysis

You are Visitor# 11455344

8.08 - Public Crossing Inventory Detail Report

Back to Query Page Print Version

STATE=INDIANA County=MONROE City=BLOOMINGTON - In

TYPE OF CROSSING: All Crossings
Crossing Protection: All

NOTE: Inventory reporting is voluntary for both states and railroads.
There are no legal requirements which mandate reporting.
Quiet Zone information is based upon data reported by the railroads.

PUBLIC AT GRADE MOTOR VEHICLE CROSSINGS

X-ing ID	Street Road	Type Warning	Total Tracks	Daily Trains	Avg Daily Vehicles	Reporting Railroad	Inventory Updated
292163N	WALNUT GROVE AVE	HWTS, WW ,Bells	1	3	2,248	Indiana Rail Road Co	14-12-18
292167R	UNION ST	Flashing lights	1	3	2,859	Indiana Rail Road Co	14-12-18
292169E	SR #46	9	1	3	13,528	Indiana Rail Road Co	14-12-18
292453W	3RD ST	Gates	1	3	20,007	Indiana Rail Road Co	14-12-18
292565V	PETE ELLIS DR	Flashing lights	1	2	500	Indiana Rail Road Co	14-12-18
341565G	CURRY PIKE	Gates	2	2	12,176	Indiana Rail Road Co	12-04-10
341566N	CURRY PIKE	Flashing lights	1	6	11,000	Indiana Rail Road Co	14-12-18
341579P	VERNAL PIKE	Flashing lights	1	0	3,093	Indiana Rail Road Co	13-06-28
341580J	ADAMS ST	Flashing lights	1	0	3,697	Indiana Rail Road Co	13-06-28
932846Y	PROFILE PARKWAY	Flashing lights	1	0	2,014	Indiana Rail Road Co	14-12-18
932847F	LOESCH ROAD	Flashing lights	1	0	1	Indiana Rail Road Co	14-12-18

STATE=INDIANA County=MONROE City=BLOOMINGTON - Near

TYPE OF CROSSING: All Crossings
Crossing Protection: All

NOTE: Inventory reporting is voluntary for both states and railroads.
There are no legal requirements which mandate reporting.
Quiet Zone information is based upon data reported by the railroads.

PUBLIC AT GRADE MOTOR VEHICLE CROSSINGS

X-ing ID	Street Road	Type Warning	Total Tracks	Daily Trains	Avg Daily Vehicles	Reporting Railroad	Inventory Updated
292172M	MT GILEAD RD	Stop signs	1	3	800	Indiana Rail Road Co	14-12-18
292176P	SR #45	Gates	1	2	4,950	Indiana Rail Road Co	14-12-18
292445E	GARRISON CHAPL RD	Stop signs	1	3	900	Indiana Rail Road Co	14-12-18
292448A	KIRBY RD	Flashing lights	1	3	1,196	Indiana Rail Road Co	14-12-18
292450B	ENDWRIGHT RD	Flashing lights	1	3	900	Indiana Rail Road Co	14-12-18
292451H	CURRY PIKE	Flashing lights	1	3	14,870	Indiana Rail Road Co	14-12-18
921697U	LIBERTY DRIVE	Gates	1	3	500	Indiana Rail Road Co	14-12-18

STATE=INDIANA County=MONROE City=ELLETTSVILLE - Near

TYPE OF CROSSING: All Crossings
Crossing Protection: All

NOTE: Inventory reporting is voluntary for both states and railroads.
There are no legal requirements which mandate reporting.
Quiet Zone information is based upon data reported by the railroads.

PUBLIC AT GRADE MOTOR VEHICLE CROSSINGS

X-ing ID	Street Road	Type Warning	Total Tracks	Daily Trains	Avg Daily Vehicles	Reporting Railroad	Inventory Updated
341563T	LOESCH RD	Stop signs	1	2	1,100	Indiana Rail Road Co	11-08-26
924678A	VERNAL PIKE	Flashing lights	1	0	1,000	Indiana Rail Road Co	13-06-28
924679G	HARTSTRAIGHT RD	Flashing lights	1	0	1,000	Indiana Rail Road Co	09-12-10

STATE=INDIANA County=MONROE City=UNIONVILLE - In

TYPE OF CROSSING: All Crossings
Crossing Protection: All

NOTE: Inventory reporting is voluntary for both states and railroads.
There are no legal requirements which mandate reporting.
Quiet Zone information is based upon data reported by the railroads.

PUBLIC AT GRADE MOTOR VEHICLE CROSSINGS

X-ing ID	Street Road	Type Warning	Total Tracks	Daily Trains	Avg Daily Vehicles	Reporting Railroad	Inventory Updated
292178D	BETHEL LN	Stop signs	1	3	2,300	Indiana Rail Road Co	14-12-18
292180E	EARL YOUNG RD	Stop signs	1	3	200	Indiana Rail Road Co	14-12-18

Attachment 5:

Phase I Environmental Assessment, Dragoo Property

Fields Environmental, Inc.

Fields Environmental, Inc.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

DRAGOO PROPERTY

South Rockport Road

Bloomington, Indiana 47401

April 22, 2015

Electronic File Section 1 of 1

Environmental Investigations

Phase I Environmental Site Assessment

Dragoo Property

South Rockport Road
Bloomington, Indiana 47401

Prepared for:
Habitat for Humanity of Monroe County
213 East Kirkwood Avenue
Bloomington, Indiana 47408

Prepared by:
Fields Environmental, Inc.
1309 West Vernal Pike
Bloomington, Indiana 47404

Date:
April 22, 2015

Project Number:
15-07.01

1.1 Executive Summary

Fields Environmental, Inc. (Fields) performed a Phase I Environmental Site Assessment (ESA) on one (1) parcel of vacant land located in Perry Township, Monroe County, Indiana, at the end of West Chambers Drive, West Duncan Drive and Bernard Drive to the west of the intersection of South Rogers Street and South Rockport in Bloomington, Indiana (Property) (**Figure 1** and **Figure 3**). The Phase I ESA was performed for Habitat for Humanity of Monroe County (HHMC), at the request of Mr. Sean Price, Business Manager for HHMC.

Investigations and interviews with persons knowledgeable of the Property revealed potential sources of environmental concern on the Property. Based upon the results of the Phase I ESA, further environmental investigations are warranted. The following Recognized Environmental Condition (REC) was observed:

- An eighty-five (85) acre parcel located adjacent to the north of the Property was historically part of the RCA / Thomson Consumer Electronics manufacturing facility (Thomson). The Thomson property contained several former quarry pits that were filled-in. Dumping in the quarry pits including suspected electrical capacitors and fill material brought onto the adjacent Thomson property during construction phases at other areas of the Thomson complex were reported. Uncertainty with the conditions at the hydraulically up-gradient Thomson property and the potential for migration of contamination through surface water drainage from the adjacent Thomson property pose a threat to the Property and constitutes a REC.

Based upon the results of the Phase I ESA further environmental investigations are warranted.

1.2 Introduction

1.2.1 Purpose

The purpose of this Phase I ESA is to evaluate the Property for current and historical sources of environmental concern, evidence of hazardous substance disposal or release from or onto the Property, evidence of environmental threats from adjacent properties, and whether further environmental testing of the Property is warranted.

1.2.2 Detailed Scope of Services

Fields performed the Phase I ESA at the Property in accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase I ESA Process E1527-13. The ASTM Standard incorporates the Federal EPA regulation of All Appropriate Inquiry (AAI) site assessment.

The scope of work for this Phase I ESA included a historical review of the Property's ownership and operations, a walk-through inspection of the Property, a walk-through or drive-through reconnaissance of adjacent properties and a review of selected agency records and databases. Interviews of appropriate contacts familiar with the Property included the owner, adjacent landowners, and others knowledgeable with the history of the area. A list of persons interviewed is included as **Attachment 1**.

This Phase I included a vapor encroachment screen (VES). The VES utilized within this investigation generally adheres to the Tier 1 Screening process as defined in the *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, ASTM Designation: E2600-10*. VES is intended to evaluate the potential for vapors to migrate on, or close to the Property from on-site or off-site contaminated groundwater or soil.

Fields utilizes areas of concern (AOC) as defined by the E2600 standard. Approximate minimum search distances utilized are 0.10 mile for petroleum sites and 0.33 mile for other volatile COCs. The minimum search distances are further utilized in cases where final closure status of potential historic sources of contaminants is unknown.

It is Fields' professional judgment that the scope of this investigation was sufficient to determine if further investigation is warranted, given the nature and specific circumstances of the Property. The opinions rendered herein are based upon Fields' best professional efforts in determining the environmental status of the Property and, as such, are not a guarantee. Fields' professional efforts embody the highest standards for assessing potential adverse environmental conditions at the time of this investigation.

1.2.3 Significant Assumptions

Fields Environmental, Inc. conducted this ESA with the goal of assessing environmental conditions pertaining to suitability for residential land uses at the Property. This investigation does not evaluate or address all conceivable environmental conditions.

1.2.4 Limitations and Exceptions

The ESA was conducted using the highest standard of diligence, care, and skill that experienced professionals in the field relevant to the ESA would use in performing the ESA under similar circumstances, as of the period of time the ESA was performed.

Fields relied on the information provided to it except to the extent that Fields had actual knowledge that certain information was incorrect based on other information obtained in performing the ESA or otherwise actually known to the consultant. Fields makes no representation concerning the legal significance of its findings or the value of the property investigated.

The Property is located in the Mitchell Plateau physiographic region. The presence of karst topography features (sinkholes, swallow holes, sinking streams, etc.) is documented within the Mitchell Plateau physiographic region (Gray, 2000, p.8).

The scope of the Phase I ESA did not include an inventory, detailed mapping or the evaluation of engineering or other considerations associated with karst topography features. There are reportedly six (6) karst sinkholes within 0.25 miles of the northern Property border (Indiana Map, 2015). Potential karst features were not observed during the site-walk.

The scope of the Phase I ESA did not include an assessment of potential subsidence issues on the Property.

The scope of the Phase I ESA did not include an assessment of potential wetland issues on the Property nor did it include a wetland determination/delineation. The Property was not reported or identified as being in a flood zone based upon review of the Flood Insurance Rate Map (FIRM). The scope of the Phase I ESA did not include an in-depth assessment of potential flood issues on the Property, nor did it include a flood zone determination from FEMA.

This report does not constitute legal advice, nor does Fields Environmental, Inc. purport to give legal advice. Certain information contained in this report may be provided by agencies and/or personal interviews. Fields will make no representations or warranties that such information is accurate or that any independent investigation, beyond the agreed-upon scope of services, has been or will be made to verify the accuracy of such information.

1.2.5 User Reliance

This report is prepared for the HHMC, a prospective buyer of the Property, and their lenders. No third party is entitled to rely upon any information or opinions contained in this report.

1.3 Site Description

1.3.1 Location and Legal Description

The Property is located in Perry Township, Monroe County, Indiana, located at the end of West Chambers Drive, West Duncan Drive and Bernard Drive to the west of the intersection of South Rogers Street and South Rockport Road (Property) in Bloomington, Indiana (**Figure 1**). Photographic documentation is provided in **Attachment 2**.

The Property is comprised of one (1) parcel (approximately 5.66 acres) of land located and described as:

Parcel 1: 53-08-08-100-115.000-009

Legal: 015-10185-01 PT SW NE 8-8-1W 5.40A; PLAT 27

A Monroe County GIS Report Card including a legal description summary of the Property was provided to Fields by Mr. Sean Price. The legal description summary is included as **Attachment 3**. The Title Records for the Property can be found in section 1.4.1 of this report. A numerical Property address was not provided by the client although conversations with the City of Bloomington Planning Department indicated that there has never been a numerical address given for the Property. The Property is owned by Rosalie Dragoo. The title records reviewed list the owner as George E. Dragoo and Rosalie Dragoo. Mr. George E. Dragoo is deceased.

1.3.2 Site and Vicinity General Characteristics

The Property occurs in the Mitchell Plateau physiographic region of Indiana (Fenelon and Bobay, 1994, p.138) at an approximate elevation of 762 feet above mean sea level (EDR Radius Map Report, 2015). The Mitchell Plateau is a famous karst topography region with abundant sinkholes and other karst features in some areas. Drainage in the karst areas is mostly underground through solution channels. The Property is mapped in an area where drainage is mostly through solution channels (Hartke and Gray, 1989, p.4).

Soils in this area are mapped as 69.3% Crider silt loam (CrC) with 6 to 12 percent slopes, 25.5% Crider silt loam (CrB) with 2 to 6 percent slopes, 2.7% Wakeland silt loam (Wa), 1.8% Crider-Urban land complex (CtC) with 6 to 12 percent slopes, and 0.8% Crider-Urban land complex (CtB) with 2 to 6 percent slopes (US Department of Agriculture, 2015). CrC consists of moderately sloping, deep, well drained soil located on narrow and broad convex ridge tops (Thomas, 1981, p.20). CrB consists of gently sloping, deep, well drained soil on narrow and broad convex ridgetops uplands (Thomas, 1981, p.20). Wa consists of strongly nearly level, deep, somewhat poorly drained soil on broad flats on bottom land and in narrow areas along streams (Thomas, 1981, p.54).

CtC consists of moderately sloping, deep, well drained Crider soil and areas of urban land on narrow and broad convex ridgetops of the uplands (Thomas, 1981, p.24). CtB consists of gently sloping, deep, well drained Crider soil and areas of urban land on narrow and broad convex ridgetops of the uplands (Thomas, 1981, p.23).

Bedrock is mapped as Mississippian Age, Sanders Group containing mostly dolomite, shale, and cherty limestone (Indiana Map, 2015). Bedrock is shallow in this area and expected to be less than 50 feet below ground surface (Fenelon and Bobay, 1994, p.142).

The ground surface of the Property slopes from the northwest corner of the Property line towards the southeast and south sections of the Property. The western Property edge slopes directly to the south. The Property also slopes gently from the center of the Property and from the eastern Property edge to the relative center of the eastern half of the Property where a drainage feature is present. The drainage feature drains to the adjacent parcel to the southeast of the Property into manmade drainage infrastructure (**Figure 3**).

The Property is located within the Clear Creek watershed. Surface water drainage for the Property is primarily as surface runoff to an unnamed tributary of Clear Creek.

1.3.3 Current Use of the Property

The Property is currently vacant/undeveloped land.

1.3.4 Descriptions of Structures, Roads, Other Improvements on the Site

There are currently no structures on the Property. The Property has historically and currently been utilized for agricultural purposes. Currently, the Property consists of a grass field with woodland strips present on the western, northern, and eastern Property boundaries.

There are currently no roads on the Property. The Property is accessible from South Bernard Drive, West Chambers Drive or West Duncan Drive via paved drives.

Residential homes are located adjacent to the east and south of the Property. Vacant/undeveloped land is located to the north, and south of the Property. RCA Community Park (**Figure 3**), part of the former Thomson property is located adjacent to the west of the Property.

The Property does not have electric, gas, water, and sanitary sewer service. The City of Bloomington Utilities (CBU) provides drinking water for the surrounding area. CBU obtains water from Lake Monroe. Lake Monroe is a surface water reservoir located southeast of Bloomington. Groundwater is not utilized for drinking water in this area of Bloomington.

1.3.5 Current Uses of Adjoining Properties

The investigation included a reconnaissance of the adjacent properties to identify any potential environmental problems that might adversely affect the Property. Adjacent properties were visually inspected during walkovers from readily accessible public right-of-ways and the subject Property. The Property and adjacent properties are shown on **Figure 3**.

Immediately adjacent properties are as follows:

North: A large vacant and wooded parcel is located directly adjacent to the north of the Property. The property was historically utilized by limestone quarry operations and Thomson. Thomson for purposes of this discussion includes RCA, its precursor's and ultimately Thomson Consumer Electronics. Thomson was a major industrial electronics manufacturer that operated in Bloomington from approximately 1919 until 1998. Areas formerly utilized by Thomson are shown on **Figure 2**.

South: Two (2) vacant parcels of land and residential homes are located adjacent to the south of the Property.

West: RCA Community Park (**Figure 3**) is located directly adjacent to the west of the Property. A pedestrian walkway is located near the western Property edge originating from the park.

East: A residential parcel and a parcel of undeveloped land are located directly adjacent to the east of the Property. The terminus of West Duncan Drive and West Chambers Drive are also located directly adjacent to the east of the Property.

1.4 User Provided Information

1.4.1 Title Records

A title search as outlined in the ASTM standard was conducted. Title information is utilized to help determine historic land use and to give guidance in locating persons knowledgeable about the Property. The Property transfer records were examined and the title was reviewed for a period of approximately eighty-one (81) years for the Property.

The nature of the Property ownership does not suggest the potential for adverse environmental effects based upon previous ownership.

The available title record and city directory information is as follows:

Parcel #1:	53-08-08-100-115.000-009	**South Rockport Road**
Legal:	015-10185-01 PT SW NE 8-8-1W 5.40A; PLAT 27	**Phone:** N/A
City Directory	**No Address Listed**	**Notes:** Reviewed City Directories did not list the Property. Monroe County GIS does not list an address other than S Rockport Road.
Current:	No Current Listing	
Historic:	No Historic Listings	
Chain of Title		
	Sold By:	**Sold To:**
Current:	George E & Rosalie Dragoo	
07-02-1992	David Scott Davis	George E & Rosalie Dragoo
07-20-1990	Edgar L. Elkins	David Scott Davis
09-01-1955	Sarah Elkins	Edgar L. Elkins
09-01-1955	Elisha Elkins	Sarah Elkins
11-04-1944	Robert E. Guy	Elisha Elkins
01-24-1934	David R Guy	Robert E. Guy

Title records list the current Property owner as George E. & Rosalie Dragoo. The records do not reflect that Mr. George E. Dragoo is deceased. Fields' personnel and personnel within the Monroe County Recorder's and Auditor's Offices were not able to locate title records prior to the above-referenced dates. All information pertaining to the transfer of title for the Property recorded in the tables above was obtained from the Monroe County Recorder's and Auditor's Offices.

Evaluation of Property ownership of the Property prior to 1934 was not possible.

1.4.2 Environmental Liens or Activity and Use Limitations

No environmental liens were observed during the title search and none were reported during interviews. Fields' search for environmental liens did not include any liens that may not be recorded.

1.4.3 Specialized Knowledge

The user has no specialized knowledge of the subject Property.

1.4.4 Commonly Known or Reasonably Ascertainable Information

City and County Directories for the Property were examined at the Monroe County Public Library. City Directories from 1965 until 2013 were examined at a minimum of five-year intervals. The 1964 County Directory was also reviewed. Neither City nor County Directories had coverage of the Property for any of the reviewed years. See Section 1.4.1 for a table summarizing City Directory information.

1.4.5 Valuation Reduction for Environmental Issues

Not Applicable.

1.4.6 Owner, Property Manager, and Occupant Information

The Property is owned and managed by Rosalie Dragoo and not currently occupied. See section 1.7.3 for a summary of the interview with Mrs. Rosalie Dragoo. No structures are present on the Property.

1.4.7 Reason for Performing Phase I

HHMC commissioned this Phase I ESA as part of a due diligence investigation pursuant to a purchase of the Property.

1.4.8 Other

Not applicable.

1.5 Records Review

1.5.1 Standard Environmental Search Sources

Databases maintained by various state and federal agencies were reviewed. This included a review of agency database information compiled by Environmental Data Resources, Inc. (EDR), an information search firm that utilizes computer search techniques to query governmental agency database information for a specified geocoded area. The EDR report, dated March 06, 2015 was used to review agency records for sites geocoded within a specified radius of the Property. Abbreviations and acronyms utilized in this section are defined in the EDR report (**Attachment 4**).

The EDR report includes a review of the following databases with the search radius and indicated no responses:

TP = Target Property		
Database	**Search Radius (miles)**	**Responses**
National Priorities List (NPL)	1.0	0
NPL LIENS	TP	0
Proposed NPL	1.0	0
Delisted NPL	1.0	0
CERCLIS	0.5	0
Federal Facility	1.0	0
CERC-NFRAP	0.5	0
LIENS 2	TP	0
RCRA-TSDF	0.5	0
RCRA-LQG	0.25	0
RCRA-SQG	0.25	0
RCRA-CESQG	0.25	0
RCRA-NonGen	0.25	0
ERNS	TP	0
US ENG CONTROLS	0.5	0
US INST CONTROL	0.5	0
DOT OPS	TP	0
DOD	1.0	0
FUDS	1.0	0
PCB TRANSFORMER	TP	0
CONSENT	1.0	0
ROD	1.0	0
UMTRA	0.5	0
ODI	0.5	0
FINANCIAL ASSURANCE	TP	0
DEBRIS REGION 9	0.5	0
SWRCY	0.5	2
FTTS	TP	0
SSTS	TP	0

Database	Search Radius (miles)	Responses
LUCIS	0.5	0
DOT OPS	TP	0
ICIS	TP	0
RMP	TP	0
OISC	0.25	0
UIC	TP	0
HIST FTTS	TP	0
PRP	TP	0
US CDL	TP	0
US HIST CDL	TP	0
CDL	TP	0
RADINFO	TP	0
PADS	TP	0
MLTS	TP	0
US MINES	0.25	0
FINDS	TP	0
RAATS	TP	0

State and Local Review	**TP = Target Property**	
Database	**Search Radius (miles)**	**Responses**
NPDES	TP	0
LUST	0.5	1
UST	0.25	3
BULK	0.25	0
FEMA UST	0.25	0
MANIFEST	0.25	0
DRYCLEANERS	0.25	0
SCP	0.5	0
HMIRS	TP	0
SPILLS	TP	0

Database	Search Radius (miles)	Responses
SPILLS 80	TP	0
SPILLS 90	TP	0
AUL	0.5	1
VCP	0.5	0
SCRD DRYCLEANERS	0.5	0
BROWNFIELDS	0.5	0
US BROWNFIELDS	0.5	0
AIRS	TP	0
SHWS	1.0	0
SWF/LF	0.5	0
2020 COR ACTION	0.25	0
EPA WATCH LIST	TP	0
US FIN ASSUR	TP	0
LEAD SMELTERS	TP	0

1.5.2 Additional Environmental Record Sources

Tribal Review		
Database	**Search Radius (miles)**	**Responses**
INDIAN RESERV	1.0	0
INDIAN LUST	0.5	0
INDIAN UST	0.25	0
INDIAN VCP	0.5	0
INDIAN ODI	0.5	0
EDR Proprietary Review		
Database	**Search Radius (miles)**	**Responses**
Manufactured Gas Plants	1.0	0
EDR US Hist Auto Stat	0.25	2
EDR US Hist Cleaners	0.25	0

Based upon the location and geological and topographic context of the sites identified in the EDR Radius Map relative to the location of the Property and supporting documentation, no RECs were identified; however, uncertainty with regard to groundwater flow conditions cannot rule out the potential for the migration of groundwater from contaminated sites toward the Property.

Leaking Underground Storage Tank (LUST) Sites

Leaking Underground Storage Tank (LUST) Sites	***Facility ID***	***Status***	***Distance / Direction***	***Relative Elevation***
EMRO Marketing United #2027 2011 S Rogers Street Bloomington, IN 47402	15884	NFA- Conditional Closure	0.219 mi East	Lower

Underground Storage Tank (UST) Sites

Underground Storage Tank (UST) Sites	***Facility ID***	***USTs***	***Status***	***Distance / Direction***	***Relative Elevation***
Bloomington Mini Mart 2002 S Rogers Street Bloomington, IN 47403	24887	2-Gasoline	2-Currently In Use	0.218 mi East	Lower
EMRO Marketing United #2027 2011 S Rogers Street Bloomington, IN 47402	15884	4-Gasoline 1-Kerosene	5-Permanently Out of Service	0.219 mi East	Lower
Triple C Corp/Albert Clemens South Rogers Street Bloomington, Indiana 47401	17907	2-Unknown 1-Gasoline 1-Diesel 1-Used Oil	5-Permanently Out of Service	0.249 mi East by Northeast	Lower

The EDR Report identifies one (1) LUST site in close proximity and down-gradient from the Property. Fields reviewed documents on the Indiana Department of Environmental Management's (IDEM) Virtual File Cabinet (VFC) concerning petroleum contamination at these properties to make a determination whether or not they constitute a threat to the subject Property.

EMRO Marketing United #2027 – 2011 S Rogers Street – Bloomington, Indiana

The EDR Radius Map report indicated that the EMRO Marketing United #2027 (EMU) property near the intersection of South Rogers Street and South Rockport Road to the east of the Property is a LUST site. This site was utilized as a retail fuel sales facility from 1962 until 1990 when USTs were removed from the site.

Fields reviewed documents on the IDEMs VFC concerning petroleum contamination at these properties to make a determination whether or not they constitute a threat to the subject Property.

Documents Reviewed:

- *No Further Action with Environmental Restrictive Covenant, Former United Station #6012, 2011 S Rogers Street. Indiana Department of Environmental Management. November 22, 2004.*
- *Environmental Restrictive Covenant & No Further Action Request, Former United Station #6012, 2011 S Rogers Street. Aegis Environmental, Inc. October 19, 2004.*
- *Additional Investigation, Former United Station #6012, 2011 S Rogers Street. Indiana Department of Environmental Management. December 27, 1993*

Based upon environmental investigative document review, suspected hydraulic conductivity, reported groundwater flow direction, and IDEM regulatory closure documentation this site does not pose a significant environmental risk to the Property.

1.5.3 Physical Setting Sources

US Geological Survey, Bloomington, IND, 1: 24,000 Topographic Map, 2013

Aerial photographs were reviewed from the Monroe County GIS website, IndianaMap.org, the Indiana Spatial Data Service, the Indiana Historical Aerial Photo Index website (IHAPI), and Google Earth are dated 1939, 1946, 1949, 1954, 1958, 1961, 1967, 1972, 1975, 1980, 1998, 2003, 2005, 2006, 2007, 2008, 2010, 2011, 2012, and 2014 (1.13, References).

All of the above mentioned aerial photographs were analyzed and copies of select historic aerial photographs are included in **Attachment 2**. Photographs were reviewed in conjunction with other sources to provide understanding with regard to observed land uses.

1939: The photograph quality is very poor. South Rockport Road and South Rogers Street are visible to the east of the Property. West Cherokee Drive, West Chambers Drive and West Duncan Drive are visible to the east of the Property. The Property appears to be undeveloped land.

A drainage feature appears to be visible running through the Property from the northern Property edge to the southeast. Discerning further detail is not possible on this photograph.

1949: The photograph quality is fair. The Property appears to be undeveloped land. A drainage feature is clearly visible through the Property from the adjacent parcel to the north to the southeast corner of the Property. A circular discoloration is visible near the drainage feature on the eastern half of the Property. The adjacent parcel to the north of the Property appears to be either undeveloped or vacant land that has visible soil disturbance. Soil disturbance typical of vehicular traffic is visible on the adjacent parcel to the north of the Property. A quarry operation is visible on the adjacent parcel to the north of the Property. Conversations with a local limestone historian indicated that this quarry was associated with a mill that was under various names including the McDoel Mill, Oolitic Mill, and Hoosier Stone Company. West Duncan Drive and West Guy Avenue are clearly visible to the east and southeast of the Property, respectively. Multiple structures are visible on the adjacent parcel to the east of the Property. Numerous residential structures are visible along West Duncan Drive and West Chambers Dive to the east and northeast of the Property. The parcel of land to the south of the Property is vacant land that appears plowed and potentially used for agricultural purposes. The adjacent parcel of land to the west of the Property appears to be either undeveloped land with numerous areas of soil disturbance including what appears to be a dirt road. A minor amount of trees are located on the adjacent parcel to the west of the Property.

1954: The photograph quality is very poor. There appear to be no visible changes. Discerning detail is not possible on this photograph.

1958: The photograph quality is very poor. There appear to be no visible changes to the Property although discerning detail at this resolution is difficult.

1961: The photograph quality is good. The Property appears to be plowed and converted to agricultural land and is similar in coloration to the adjacent properties to the north, south, and west. Numerous trees are now present along the entire western and northern Property edges. Numerous dark colored “specks” are present near the center of the Property that may objects or results of the photograph development process. A quarry pit directly west of the northwest corner of the Property on the adjacent parcel has numerous limestone blocks piled surrounding the pit and appears inundated.

The adjacent parcel of land to the north of the Property appears to have been plowed for agricultural purposes and is similar in coloration to the Property. A power line, oriented from the northeast to the southwest, is located on the adjacent parcels to the north and west. Soil disturbance on the adjacent parcel to the north appears to be smaller in size, although numerous tire tracks remain visible and appear to be originating or associated with the quarry operation further to the north. The adjacent parcel to the west of the Property that was formerly undeveloped land with now appears to have been plowed for agricultural purposes.

1967: The photograph quality is good. There do not appear to be any changes to the Property. There are a series of small, undiscernable objects in a northeast to southwest orientation located near a wooded section on the adjacent parcel to the north of the Property. A dark discoloration is located on the adjacent parcel to the west, directly west of the northwestern Property corner. New residential structures are located on a parcel of land located directly adjacent to the east of the Property and on a parcel located to the northeast of the Property. There now appears to be a pair of mobile homes located on a parcel to the southeast of the Property. The parcels of land adjacent to the south of the Property appear unchanged. No other changes are noted for the Property or adjacent properties. The suspected quarry pit identified in the previous aerial photograph directly west of the northwest corner of the Property appears to have less limestone blocks and debris surrounding the pit.

1972: The photograph quality is good. There do not appear to be any changes to the Property with the exception of additional tree cover along the eastern Property edge. One (1) of the two (2) previously identified mobile homes located on a parcel to the southeast of the Property has been removed, and the remaining mobile home has been moved into an east to west orientation. Guy Road, located further to the southeast of the Property has expanded in length towards the west. No further changes are noted for the adjacent properties to the south, and north of the Property.

1975: The photograph quality is good. There do not appear to be any changes to the Property with the exception of an indiscernible light discoloration near the center of the western Property edge. No further changes are noted for the adjacent properties.

1980: The photograph quality is very poor. The Property does not appear to have changed. Discerning further detail at this resolution is difficult.

1998: The photograph quality is good. The Property still appears as undeveloped. The tree lines along the western and northern Property edges appear further developed in size. West Guy Avenue has extended further to the west and at least two (2) new residences are present on the north and south sides of West Guy Avenue, respectively. Previously undeveloped parcels adjacent to the south of the Property have been developed into a residential neighborhood. Three (3) additional roads that service the residential development are present to the south of the Property including West RCA Park Drive, South Harmony Place, and South Bernard Drive. The adjacent parcel to the west of the Property has been developed into a recreational park (RCA Community Park). The majority of the adjacent parcel to the west of the Property consists of grass cover, a walkway for recreational purposes, and woodland. The quarry pit located directly to the west of the northwest corner of the Property is no visible. A pile of what appears to be limestone rock debris is still present near the former site of the quarry pit. The adjacent parcel to the north of the Property appears to have increased tree cover, and less tire tracks. An irregular ellipse shaped soil disturbance is visible located directly adjacent to the north of the Property near the northwest corner of the Property.

2003: The photograph quality is fair. Increased tree cover is visible along the western and northern Property edges. A few additional trees are now present near the southeastern corner of the Property. Minor signs of soil disturbance from minor vehicular traffic are present from the western side of the Property to the southeastern corner of the Property. The irregular ellipse shaped soil disturbance visible in the previous aerial photograph on the adjacent parcel to the north of the Property is no longer visible. The adjacent parcel to the north of the Property now has increased tree and grass cover. A dirt track / access road is visible originating from a house on West Guy Drive and connects to West Duncan Drive near the southeast corner of the Property. No other visible changes are noted for the Property or adjacent properties.

2005: The photograph quality is good. The signs of soil disturbance from vehicular traffic are no longer visible. No other visible changes are noted for the Property or adjacent properties.

2006: The photograph quality is good. There do not appear to be any visible changes to the Property or adjacent properties.

2007: The photograph quality is fair. The Property appears to be entirely composed of grass cover. There do not appear to be any visible changes to the adjacent properties.

2008: The photograph quality is fair. There are visible soil disturbances typical of minor vehicular traffic on the Property from the northwest corner to the southeast corner of the Property. The southeastern section of the adjacent parcel to the north of the Property appears to consist of an area of soil disturbance. A dirt access road and additional areas of soil disturbance are present further to the north on the adjacent parcel to the north of the Property. No other visible changes are apparent on the remaining adjacent properties.

2010: The photograph quality is good. The Property appears to be covered with tall grass. The visible signs of minor vehicular traffic noted in the previous aerial photograph are still present. The area of disturbed soils on the adjacent parcel to the north of the Property appears to have diminished and resembles the surrounding ground surface in coloration. The property to the southeast appears to be No other visible changes are apparent on the remaining adjacent properties.

2011: The photograph quality is good. Numerous tire tracks from vehicular traffic are now present throughout the Property. The area of disturbed soils from vehicular traffic noted in previous aerial photography is clearly visible and appears to have slightly increased in size. Additional dirt access roads are present in the adjacent parcel to the north of the Property. No other visible changes are apparent on the remaining adjacent properties.

2012: The photograph quality is fair. The Property appears to consist largely of grass cover. Minor visible signs of soil disturbance from minor vehicular traffic is still present, but appears vastly less disturbed than the previous aerial photograph. No other visible changes are apparent on the remaining adjacent properties.

2014: The photograph quality is good. The Property appears to consist largely of grass cover. The soil disturbance on the Property via vehicular traffic appears minimized since the previous aerial photograph. A figure-eight shaped soil disturbance, reportedly a dirt bike race-track, is visible near the northwestern corner of the Property. No other visible changes are apparent on the remaining adjacent properties.

1.5.4 Historical Use Information on the Property

The Property has been historically utilized for agricultural land purposes since at least 1949 to the present. Available city and county directories did not have coverage of the Property for any years. Sanborn Maps were not available for the Property.

1.5.5 Historical Use Information on Adjoining Properties

The adjacent property to the north was utilized as primarily industrial property including a limestone quarry that was reportedly started around 1915. The limestone quarry had an associated mill located on a parcel of land further to the northwest of the adjacent parcel to the north of the Property. The mill and quarry operated under various names including McDoel Mill, Oolitic Mil, and Hoosier Stone Company. The mill and quarry operations ceased in approximately the early 1970's according to local limestone historian, Mr. Timothy Fagan. See Section 1.7.4 for a summary of Fields interview with Mr. Fagan. The adjacent parcel to the north or the Property has been vacant since sometime in the early 1970's until the present, with the exception of electrical utility line infrastructure development.

The Thomson property (**Figure 2**) is located adjacent to the North of the Property. This eighty-five (85) acre parcel directly adjacent was part of a larger tract of land utilized by Thomson (**Figure 2**). The RCA facility historically operated an incinerator and had an on-site landfill. The incinerator was located west of the RCA buildings. The Thomson property contained several former quarry pits that were reportedly filled-in in the early 1990's. There are reports of dumping including suspected electrical capacitors in the quarry pits and reported fill material brought onto the Thomson property during previous construction phases at other former areas of RCA. A railroad spur historically crossed the Thomson property and portions of the rail bed are still present (**Figure 3**). Surficial drainage from the Thomson property runs from the northwest and bisects the former railroad spur bed before crossing the crossing the Property from the northwest to southeast. Fields obtained copies of previous environmental investigations on the Thomson property from the Monroe County Board of Commissioners. Fields also reviewed the available documents on IDEMs VFC concerning the Thomson property.

Documents Reviewed:

- *Soil Remediation Old Incinerator Site Thomson Consumer Electronics Bloomington, Indiana, Hoosier Environmental Services, Inc., Project #91100, July 9, 1991.*
- *Phase I Environmental Site Assessment and Phase II Subsurface Investigation Reports, Thomson Consumer Electronics Facility, 1300 South Rogers Bloomington, Indiana, Dames & Moore Project No. 25158-005-194, March 4, 1999.*
- *Phase I Environmental Site Assessment for the New Asset Subsidiary, LLC Property Located in Portions of Section 8, T8N, RIW Bloomington, Indiana, Earth Tech, April 17, 2002.*
- *Results of a Phase II Environmental Site Assessment for the New Asset Subsidiary, LLC Property, Located in Portions of Section 8, T8N, R1W Bloomington, Indiana, Earth Tech, September 2002.*
- *Randy Carmichael Memorandum, Office of the Monroe County Attorney , May 6 2002.*
- *Various notes, memos and letters in the Monroe County Health Department's file for the Thomson Property*

The above referenced Dames and Moore Phase I Environmental Site Assessment reported three (3) RECs at the RCA site. One of the RECs concerned two (2) former USTs (spent solvent and acids) and chlorinated solvent contamination on the northwest portion of the RCA site. The second REC concerned the identification and removal of impacted soil associated with a former incinerator located at the RCA site. The third REC concerned potential asbestos containing material (ACM) located within two (2) buildings on the RCA site. The report appendices including the Phase II Subsurface investigation report were missing. The report includes the Property as Parcel 2 and none of the RECs were located on Parcel 2. Based on the proximity to the Property and suspected hydraulic conductivity in the area it is not suspected that potential contamination associated with USTs or potential ACM identified in the Dames and Moore Phase I ESA have the potential to migrate to the Property.

The above referenced Earth Tech Phase I ESA dated April 17, 2002 did not identify any RECs associated with the Thomson property located adjacent to the north of the Property. The report stated that the quarry pits on the Thomson property were filled in with limestone spoil, blocks and soil stockpiled from previous quarry operations and from cuts made during an expansion at the RCA (Thomson) facility farther to the North.

The Phase I ESA did include an oral allegation of potential historical dumping of capacitors into old quarry pits on the property in the 1970's. The Phase I ESA concluded by stating no additional environmental testing is warranted.

The above referenced Earth Tech Phase II ESA dated September 6, 2002 was performed to investigate alleged dumping of Poly Chlorinated Biphenyl (PCB) containing electrical equipment (i.e. capacitors, transformers) on the Thomson property in the 1970's prior to the time that the quarry pits were backfilled in the early 1990's. The Phase II ESA was conducted at the request of the Monroe County Commissioners & the Monroe County Council. Investigative activities conducted during the Phase II ESA included an electromagnetic survey (EM), soil borings, a trench excavation, and associated soil sampling. Portions of the Phase II ESA report including the EM survey were missing. Soil samples were taken from areas where the consultant thought capacitor dumping would have most likely occurred and submitted for PCB analysis. PCBs were not detected in the soil samples (**Figure 3**) and no further investigations were recommended.

Fields reviewed a memorandum by Mr. William K. Steger, a former Monroe County Attorney, from the Office of the Monroe County Attorney dated May 6, 2002 concerning a conversation that Mr. Steger had with Dr. Randy Carmichael. The conversation was about Dr. Carmichael's account of witnessing the systematic weekly dumping of suspected capacitors and insulators over a year into the quarry holes on the Thomson property. The memo indicates that a former unknown caretaker of the Thomson property would "break open the capacitors and allow the oil to scum the surface of the quarry holes to prevent swimming". The memo also mentions that three automobiles were reportedly dumped into one of the quarry holes.

Uncertainty with the conditions at the hydraulically up-gradient Thomson site and the potential for migration of contamination through surface water drainage from the adjacent Thomson property could pose a threat to the Property and constitutes a REC.

Adjacent properties to the east were utilized for residential purposes from at least 1967 until the present.

Adjacent properties to the south were utilized as agricultural land from at least 1949 until the present.

Adjacent properties to the west were undeveloped/vacant land from at least 1949 until the Property was donated to the City of Bloomington in 1991 by RCA. The park was partially developed in 1992 and the remaining park infrastructure including the tennis and basketball courts, picnic area, playground, and walking trail was completed in 1994. The adjacent property to the west of the Property has been utilized as a recreational park since at least the early 1990's until the present.

1.6 Site Reconnaissance

1.6.1 Methodology and Limiting Conditions

Fields Environmental, Inc. representatives, Mr. Aaron Norton and Mr. Richard Creek conducted site inspections on April 1, 2015 and on January 17, 2015. Fields looked for indications of environmental conditions on the Property and adjacent properties. Photographs taken during Fields' site inspection are included in **Attachment 2**.

1.6.2 General Site Setting

The Property is located on the south side of Bloomington, Indiana at the dead ends of West Chambers Drive and West Duncan Drive near the intersection of South Rockport Road and South Rogers Street. The Property is undeveloped land bordered by residential and undeveloped land to the south, RCA Community Park to the west, residential housing to the east, and vacant land to the north. A surface water drainage outfall is located on the adjacent parcel to the southeast of the Property. Woodland rows are located along the northern and western Property edges.

1.6.3 Exterior Observations

The Phase I included a walkthrough inspection of the land and adjacent areas. This phase of the investigation included a search for stressed vegetation, or other signs of environmental concern or land use that would pose a threat to the Property. Signs of conditions that may indicate environmental impacts were not observed.

Fields' investigation was not restricted by weather conditions. Fields looked for indications of problematic environmental conditions on the Property and adjacent properties. The Property is almost entirely composed of a grass field with woodland strips located on the western, northern, and eastern Property edges. The land on the Property was most recently utilized for producing hay and has been used for other agricultural purposes in the past. A drainage feature is present crossing the Property from the adjacent parcel to the north through the eastern half of the Property to an outfall located on the adjacent parcel of land to the southeast of the Property (**Figure 3**). Fields did not observe karst features on the Property.

Certain sections of the Property have been mowed into what appears to be access ways for various vehicles onto the Property. Evidence of soil erosion with visible tire tracks was present primarily in the northwestern corner of the Property and near the center of the Property where off-road motorcycles from the neighboring residences have reportedly been utilizing the Property for recreational purposes.

Piles of what appeared to be organic yard debris were present near the northwest corner of the Property. Minor household debris and trash materials were present within the trees and vegetation along the northern Property boundary. A damaged barbed-wire fence line was present along the western edge of the Property. Two (2) pole-mounted transformers were present on two (2) separate parcels located adjacent to the east of the Property (**Figure 3**). Given the age and condition of the transformers, the presence of PCBs is not suspected. Fields observed rock cores on the edge of the road by the northeast corner of the Property. Mr. Larry Haywood, a local landowner did not know the source of the rock cores. See Section 1.7.4 for a summary of Fields interview with Mr. Haywood. Signs of conditions that may indicate environmental impacts were not observed.

1.6.4 Interior Observations

There are currently no buildings or structures on the Property.

Signs of conditions that may indicate environmental impacts were not observed.

1.7 Interviews

A list of persons interviewed is included in **Attachment 1**.

1.7.1 Interview with the Owner

Ms. Rosalie Dragoo, the owner and manager of the Property, was interviewed by Fields. She has been familiar with the Property since at least 1961. She said that she and her late husband, Mr. George Dragoo, purchased the Property from her Stepfather. She said that the Property was owned by her family since at least 1934. Ms. Dragoo said that the Property was utilized by her family as pasture for cattle and horses and later to grow corn and soybeans. She said there were never any structures, utilities, wells or septic systems on the Property. She said her nephew and his son utilized a dirt track on the Property for riding dirt bikes. Ms. Dragoo was not aware of any businesses ever being located on the Property or any of the adjacent properties. She said that historically people referred to the adjacent properties to the west and north as quarry land but that she never saw a quarry operation on the properties.

Ms. Dragoo was not aware of any adverse environmental conditions that could pose a threat to the Property or adjacent properties.

1.7.2 Interview with Site Manager

See Section 1.7.1 for interview with Ms. Rosalie Dragoo, the site manager and owner.

1.7.3 Interview with Occupants

The Property is unoccupied and for sale.

1.7.4 Interviews with Others

Fields interviewed Mr. Sean Price, the business manager and representative of HHMC, the prospective purchaser of the Property. Mr. Price stated that he was only familar with the Property for two to three

months and that Mr. Tom Boudreau was the most knowledgle representative at HHMC concerning the Property. Mr. Tom Boudreau, a real estate consultant currently working for HHMC and a former construction manager for HHMC, was interviewed by Fields. Mr. Boudrea has been familiar with the Property for approximately one and half years. He said that he was not aware of any previous environmental investigations on the Property or the adjacent properties. He stated that he thought the Property was dormant for the past two to three years and that he didn't know of any historical industrial or commercial operations on the Property. Mr. Boudreau was not aware of any advese environmental conditions on the Property or any of the adjacent properties.

Fields interviewed Mr. Ernest Dixon, a landowner of a residential parcel in close vicinity to the southeast of the Property.
Mr. Dixon said that he had been familiar with the Property for approximately ten (10) to twelve (12) years. He said that during the time he has be familiar with the Property, it has remained vacant land. He said that he has no knowledge of any structures historically being located on the Property. Mr. Dixon said that nearby residents occasionally utilized the Property for recreational off-road motorcycle racing. He said that the grass on the Property had been cut multiple times in the past and baled for hay. Mr. Dixon was not aware of any adverse environmental conditions on the Property or adjacent properties.

Fields interviewed Mr. Larry Haywood, a landowner of a residential parcel adjacent to the east of the Property. Mr. Haywood has been familiar with the Property and the surrounding area since approximately 1970. He said that the Property has always been utilized for agriculture since he has lived in the area. Mr. Haywood stated that he was not aware of any businesses ever being located on the Property. He said that RCA, former television manufacturing company, historically owned the adjacent properties to the west and north of the Property. He said that there is a large hill on the large property adjacent to the northwest of the Property that was formed by dirt excavated during the construction of one of the large warehouses at RCA. Mr. Haywood said that he worked at the former RCA plant for thirty five years. He stated that he was not aware of RCA dumping on the Property. He said that there were a few quarry holes on the adjacent former RCA property that have been filled in. He said that a quarry hole to the north of the Property was utilized as a residential dump before RCA cleaned it out and filled it in, prior to RCA selling the property (**Figure 3**). Mr. Haywood said he watched RCA pump out the water from the quarry holes before filling them in. He said the other

quarry holes did not have debris in them when they were pumped dry. He said that had heard that a local roofer historically dumped old roofing material on the adjacent former RCA property but he did not know where. Mr. Haywood was asked about rock cores that were found on the edge of the road by the northeast corner of the Property. He said he was not aware of any drilling activities in the area.

Mr. Timothy Fagan, a local limestone quarry historian, was interviewed. Mr. Timothy Fagan was questioned about the adjacent parcel to the north and further parcels to the north associated with potential limestone quarry and milling operations. The observed quarry on the adjacent parcel to the north was associated with a mill that was under various names including the McDoel Mill, Oolitic Mill, and Hoosier Stone Company that reportedly operated since approximately the early 1920's. Mr. Timothy Fagan was not aware of any adverse environmental conditions on the Property or adjacent properties.

Fields' interview with Mr. Larry Haywood indicated the dumping had occurred in one of the quarry pits and that fill material was brought onto the Thomson property during previous construction phases at other areas of the RCA Thomson manufacturing facility. Uncertainty with the conditions at the hydraulically up-gradient Thomson site and the potential for migration of contamination through surface water drainage from the adjacent Thomson property could pose a threat to the Property and constitutes a REC.

Monroe County Health Department (MCHD):

Fields submitted an information request to the MCHD regarding the Property. Mr. Simeon Baker, MCHD Environmental Health Specialist, did not find or possess any records for the Property.

1.8 Findings

Phase I ESA investigation findings and interviews with persons knowledgeable of the Property revealed potential sources of environmental concern on the adjacent properties that could have an adverse effect on the Property.

- An eighty-five (85) acre parcel located adjacent and to the north of the Property historically was part of the Thomson property. The Thomson property contained several former quarry pits that were filled-in. There are reports of dumping including suspected electrical capacitors in the quarry pits and reported fill material brought onto the Thomson site during previous construction phases at other former areas of the RCA Thomson manufacturing facility. Uncertainty with the conditions at the hydraulically up-gradient Thomson site and the potential for migration of contamination through surface water drainage from the adjacent Thomson property could pose a threat to the Property and constitutes a REC.

1.9 Opinion

Based upon the Phase I Environmental Site Assessment environmental conditions exist that could pose a threat to the Property. It is Fields' professional opinion that further investigation is warranted at this time.

1.10 Conclusions

Fields performed this Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13. Any exceptions to, or deletions from this practice are described in specific sections within this report. Based upon the results of this Phase I ESA further environmental investigation is warranted.

1.11 Deviations

No deviations were encountered during the completion of the Phase I ESA.

1.12 Additional Services

No additional services were performed during the completion of the Phase I ESA.

1.13 References

Fenelon, Joseph M. and Bobay, Keith E. 1994, Hydrogeologic Atlas of Aquifers in Indiana, US Geological Survey, Water-Resources Investigations Report 92-4142, 197 p.

Gray, Henry H., 2000, Physiographic Division of Indiana, Indiana University; Indiana Geological Survey Special Report 61, 8 p.

Google Earth, Bloomington, IN, 39°08'31.98" N and 86°34'57.16" W, Historic Aerial Imagery, March, 2015.

Hartke, Edwin J. and Gray, Henry H., 1989, Geology for Environmental Planning in Monroe County, Indiana: Indiana Geological Survey Special Report 47, 38 p.

Indiana Department of Environmental Management, Virtual File Cabinet, http://12.186.81.89/Pages/Public/Search.aspx, March, 2015.

Indiana Historical Aerial Photo Index, http://129.79.145.7/arcims/IHAPI/viewer.htm, March, 2015.

IndianaMap, http://inmap.indiana.edu/viewer.htmr, March, 2015.

Monroe County GIS, http://gis.co.monroe.in.us/egisv2b/# March, 2015.

Thomas, Jerry A. (1981). Indiana Department of Natural Resources: Soil Survey of Monroe County, Indiana. March, 2015.

US Geological Survey, Bloomington, IND, 1: 24,000 Topographic Map, 2013

US Department of Agriculture, http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx, March, 2015.

1.14 Signature of Environmental Professional

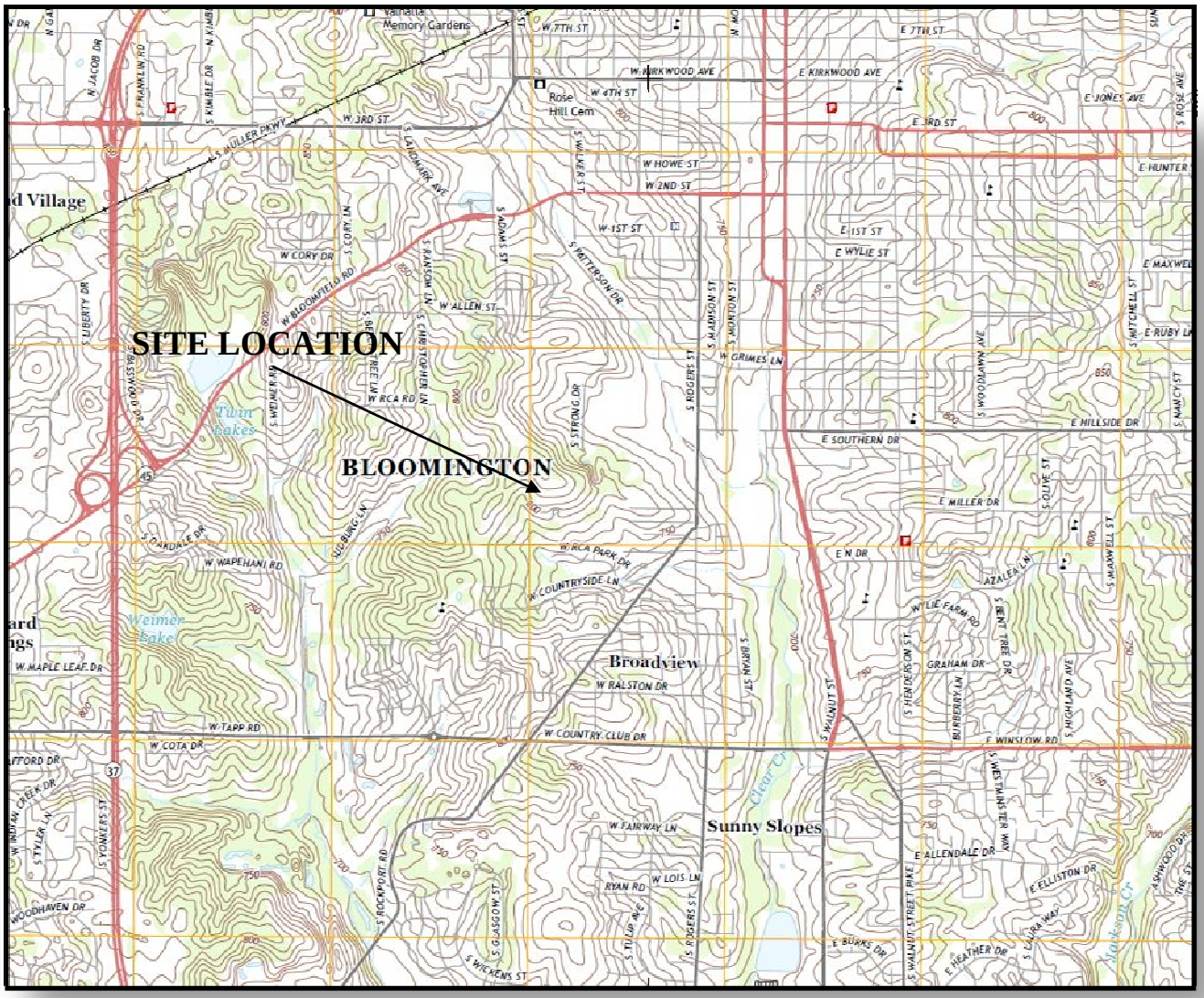
Rudy D. Fields, LPG, CHMM

1.15 Qualifications of Environmental Professional

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of this part [40 CFR Part 312]. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Rudy D. Fields is a Licensed Professional Geologist (LPG- Certification Number #1511) in the State of Indiana and a Certified Hazardous Materials Manager (CHMM #15646) (**Attachment 5**). Mr. Fields has worked as a professional geologist since 1982 and is a former employee of the Indiana Department of Environmental Management (IDEM) and Earth Tech. Mr. Fields has owned and operated Fields Environmental, Inc. since 1998.

FIGURES



SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2

1000 500 0 METERS 1000 2000

1 0.5 0 1

MILES

FROM BLOOMINGTON QUADRANGLE
BLOOMINGTON, INDIANA
1:24,000 TOPOGRAPHIC QUADRANGLE 2013

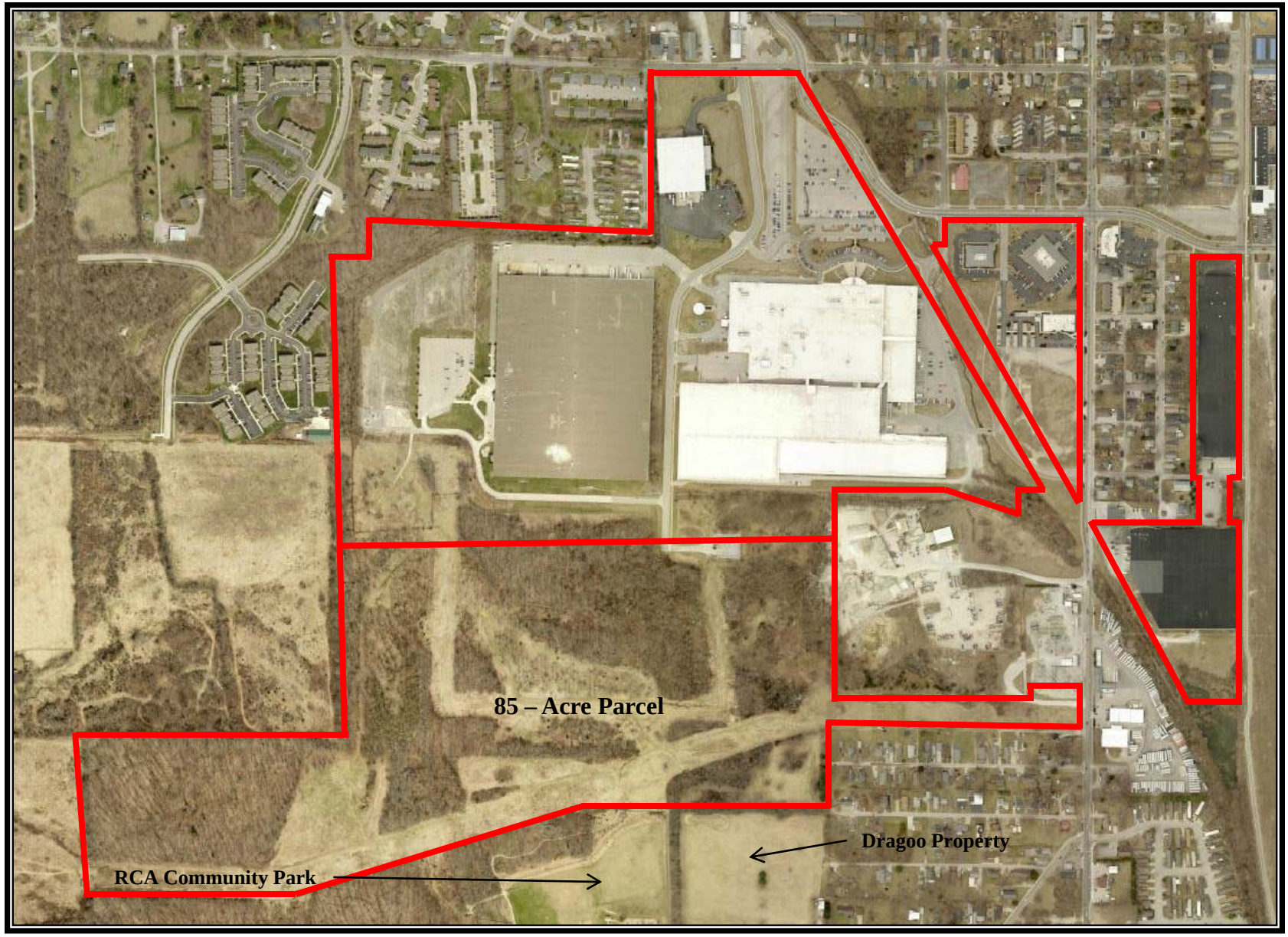
NORTH

FIELDS ENVIRONMENTAL INC
1309 West Vernal Pike
Bloomington, IN 47404
Phone: 812-333-5333
www.fieldsenvironmentalinc.com

Figure 1
REGIONAL TOPOGRAPHIC MAP

For: HABITAT FOR HUMANITY OF MONROE COUNTY

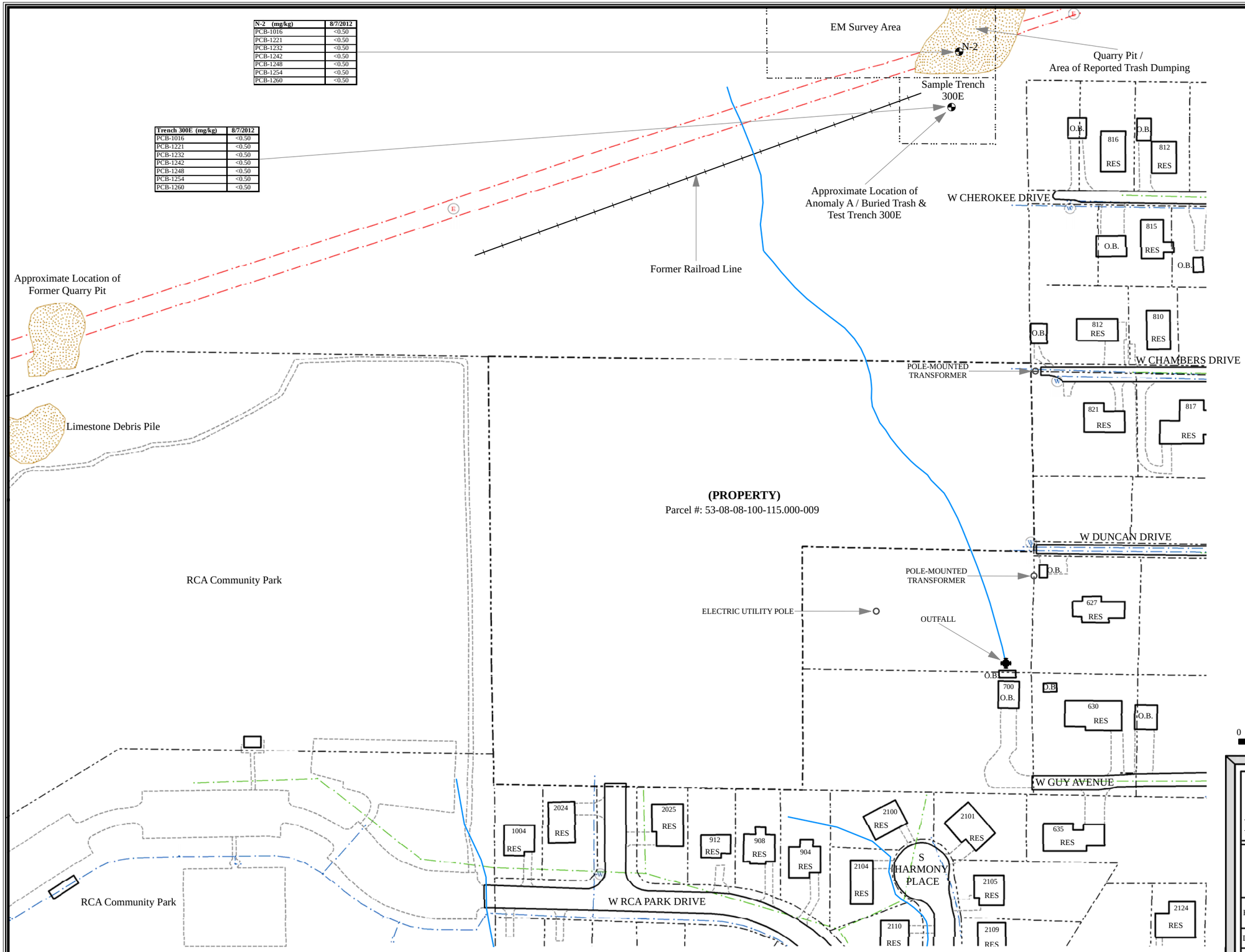
Date: 03 – 12 - 2015	BLOOMINGTON, INDIANA	
Project # 15-07.01	Drawn By: R. Creek	Scale: 1:24,000



Fields Environmental, Inc.
Figure 2: Thomson Property **Monroe County GIS 2014 Aerial Imagery**
Thomson Property - Bloomington, Indiana

N-2 (mg/kg)	8/7/2012
PCB-1016	<0.50
PCB-1221	<0.50
PCB-1232	<0.50
PCB-1242	<0.50
PCB-1248	<0.50
PCB-1254	<0.50
PCB-1260	<0.50

Trench 300E (mg/kg)	8/7/2012
PCB-1016	<0.50
PCB-1221	<0.50
PCB-1232	<0.50
PCB-1242	<0.50
PCB-1248	<0.50
PCB-1254	<0.50
PCB-1260	<0.50



Legend

- = PROPERTY LINE
- = SAMPLE LOCATIONS
- = OUTFALL
- = FIRE HYDRANTS
- = DRAINAGE FEATURE
- = FORMER RAIL LINE
- = ELECTRICAL LINES
- = SANITARY SEWER LINES
- = WATER LINES
- RES = RESIDENTIAL
- O.B. = OUTBUILDING
- <0.00 = CONSTITUENT NOT DETECTED & BELOW REPORTING LIMIT

N

0 30 60 120 180 240 300 360 Feet

Fields Environmental Inc.
1309 West Vernal Pike
Bloomington, IN 47404
Phone: 812-333-5333
www.fieldsenvironmentalinc.com

Figure 3
SITE MAP AND ADJACENT PROPERTIES
& PCB SOIL SAMPLING RESULTS

For: HABITAT FOR HUMANITY OF MONROE COUNTY

Date: 04 - 12 - 2015 | BLOOMINGTON, INDIANA

Project# 15-07.01 | Drawn By: R. Creek | Scale: 1" = 120'

ATTACHMENT 1

Interview List
Dragoo Property
South Rockport Road
Bloomington, Indiana 47401
Phase I Environmental Site Assessment

Ms. Rosalie Dragoo	Current Owner of the Property	(812) 330-9930
Mr. Sean Price	Business Manager of Habitat for Humanity of Monroe County	(812) 331-4069
Mr. Tom Boudreau	Real Estate Consultant for Habitat for Humanity of Monroe County	(812) 606-5519
Mr. Ernest Dixon	Land Owner in Close Vicinity to Property	(812) 336-6965
Mr. Larry Haywood	Land Owner in Close Vicinity to Property	(812) 219-3136
Mr. Timothy Fagan	Local Limestone Quarry Historian	(812) 824-9479
Mr. Simeon Baker	Environmental Sanitarian / Monroe County Health Department	(812) 349-2543

ATTACHMENT 2

Dragoo Property Phase I Site Photographs

The large field that occupies the majority of the Property surface area. View to the southwest.

The northern Property edge. View to the west.

Areas of soil erosion from off-road motorcycle riding on the Property and view along the western Property edge. View to the south.

Electrical utility pole located on the adjacent parcel to the south of the Property. View to the northeast.

Dragoo Property Phase I Site Photographs

The terminus of W Duncan Drive, residential properties, and fire hydrant located adjacent to the east of the Property. View to the east.

Pole-mounted transformer and outbuilding located in close vicinity to the southeast Property corner. View to the southeast.

The terminus of W Chambers Drive, residential properties, and fire hydrant located adjacent to the east of the Property. View to the northeast.

An outfall located on a parcel of land adjacent to the south of the Property for a drainage feature running through the Property.

Dragoo Property Phase I Site Photographs

RCA Community Park and recreational walkway located on the adjacent parcel to the west of the Property. View to the south.

Vacant parcel of land followed by a residential development located to the south of the Property. View to the south

The parcel of land adjacent to the north of the Property currently utilized as an electrical utility corridor. View to the north.

An abandoned elevated rail bed formerly associated with limestone quarry and mill operations located on the parcel of land adjacent to the north of the Property. View to the west.

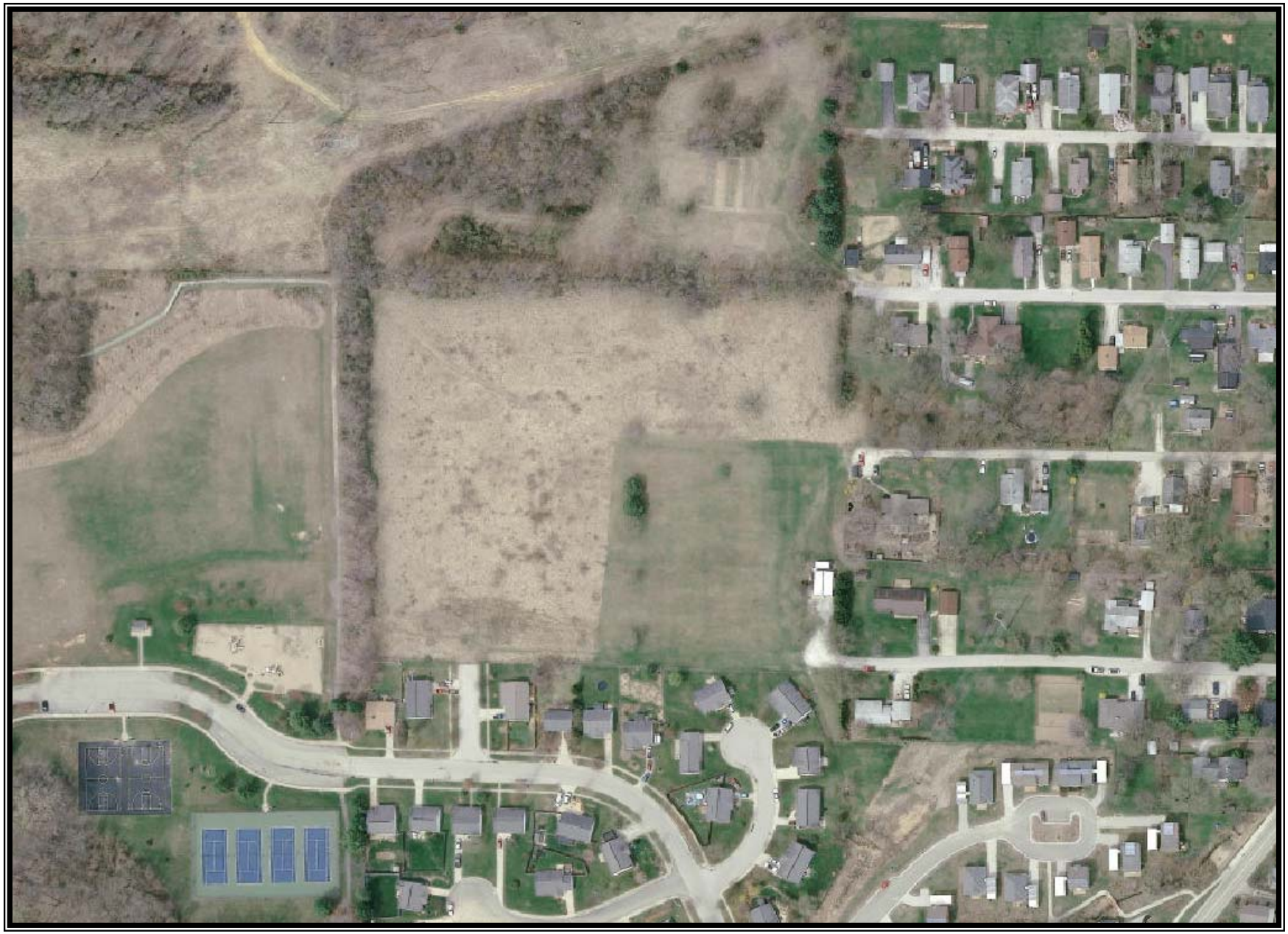
Historical Aerial Photographs

2014 Aerial Photograph

Image: Monroe County GIS

2011 Aerial Photograph

Image: Monroe County GIS



2010 Aerial Photograph

Image: Monroe County GIS

2005 Aerial Photograph

Image: Monroe County GIS

2003 Aerial Photograph

Image: Indiana Spatial Data Portal

1998 Aerial Photograph

Image: Indiana Spatial Data Portal

1975 Aerial Photograph

Image: Indiana Spatial Data Portal

1972 Aerial Photograph

Image: Indiana Spatial Data Portal

1967 Aerial Photograph

Image: Indiana Spatial Data Portal

1961 Aerial Photograph

Image: Indiana Spatial Data Portal

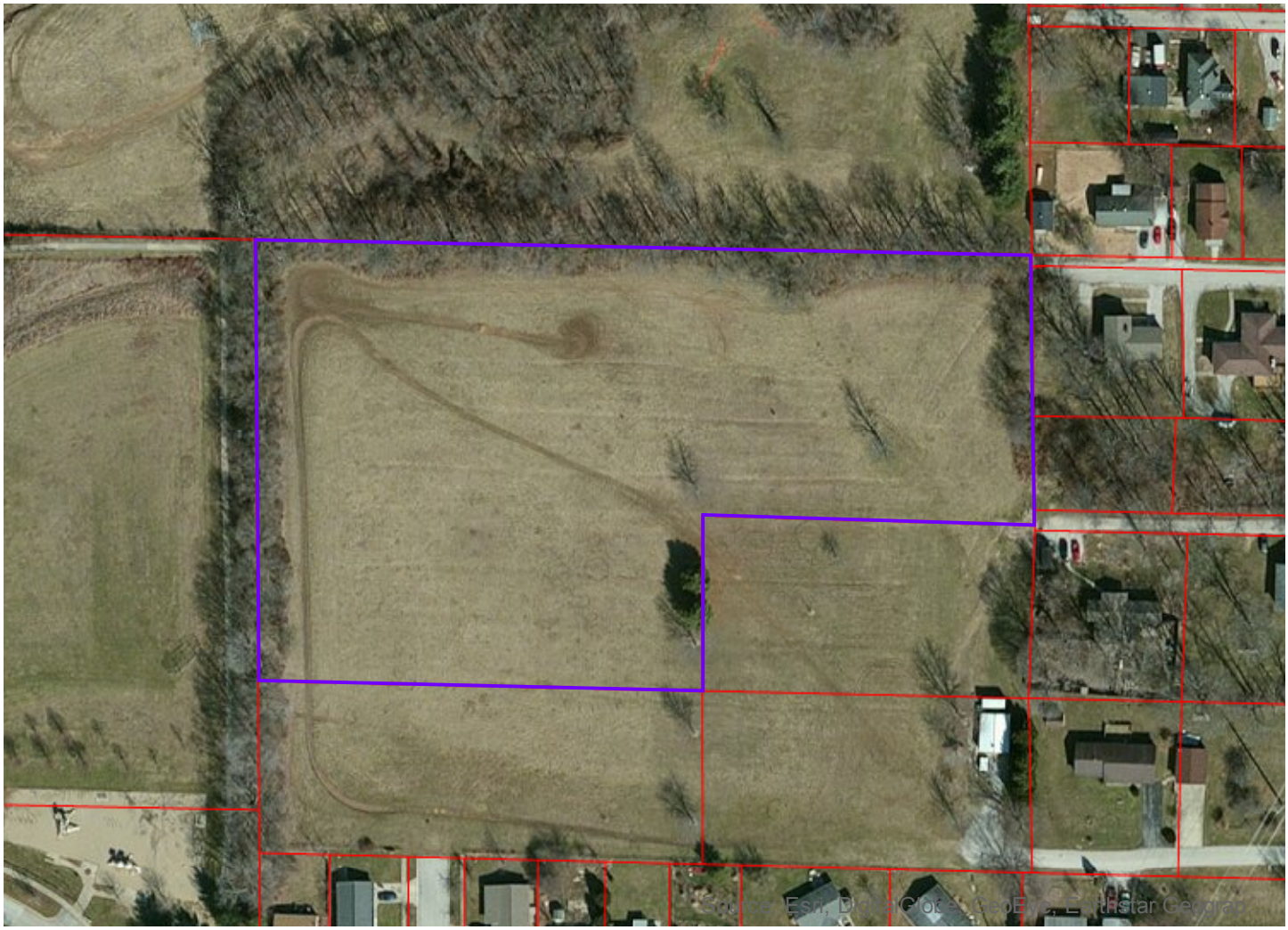
1949 Aerial Photograph

Image: Indiana Spatial Data Portal

ATTACHMENT 3

Monroe County, IN

Property Assessment Detail Report
Parcel Number: 53-08-08-100-115.000-009
39°North- 855.GIS.3939



Parcel Information

Parcel Number:	53-08-08-100-115.000-009
Alt Parcel Number:	015-10185-01
Property Address:	S Rockport RD Bloomington, IN 47401
Neighborhood:	Rockport Road - PC - A
Property Class:	Vacant - Unplatted (0 to 9.99 Acres)
Legal Description:	015-10185-01 PT SW NE 8-8-1W 5.40A; PLAT 27
Owner Name:	Dragoo, George E. & Rosalie
Owner Address:	1600 N Willis Dr Trlr 37 Bloomington IN 47404-2168

Taxing District

Township:	PERRY TOWNSHIP
Corporation:	MONROE COUNTY COMMUNITY

Land Description

Land Type	Acreage	Dimensions
9rr	1.0000	
91rr	4.6600	

Transfer Of Ownership

Date	Name	Buyer	Document	Deed Type	Sale Price

ATTACHMENT 4

Habitat For Humanity Dragoo Phase I
South Rockport Road
Bloomington, IN 47403

Inquiry Number: 4226811.2s
March 06, 2015

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

SOUTH ROCKPORT ROAD
MONROE County, IN 47403

COORDINATES

Latitude (North):	39.1460000 - 39˚ 8' 45.60''
Longitude (West):	86.5445000 - 86˚ 32' 40.20''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	539362.4
UTM Y (Meters):	4332869.0
Elevation:	762 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	39086-B5 BLOOMINGTON, IN
Most Recent Revision:	1998

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120607, 20120613
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls
LUCIS ..... Land Use Control Information System

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS ..... List of Hazardous Waste Response Sites Scored Using the Indiana Scoring Model

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Permitted Solid Waste Facilities
OPEN DUMPS ..... Open Dump Waste Sites

State and tribal leaking storage tank lists

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

INDIAN UST ..... Underground Storage Tanks on Indian Land

EXECUTIVE SUMMARY

FEMA UST ..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Voluntary Remediation Program Site List

State and tribal Brownfields sites

BROWNFIELDS ..... Brownfields Site List

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
SWTIRE ..... Waste Tire Sites Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
DEL SHWS ..... Deleted Commissioner's Bulletin Sites List
CDL ..... Clandestine Drug Lab Listing
US HIST CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... Spills Incidents
SPILLS 80 ..... SPILLS 80 data from FirstSearch
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators / No Longer Regulated
DOT OPS ..... Incident and Accident Data
DOD ..... Department of Defense Sites
FUDS ..... Formerly Used Defense Sites
CONSENT ..... Superfund (CERCLA) Consent Decrees
ROD ..... Records Of Decision
UMTRA ..... Uranium Mill Tailings Sites
US MINES ..... Mines Master Index File
TRIS ..... Toxic Chemical Release Inventory System
TSCA ..... Toxic Substances Control Act

EXECUTIVE SUMMARY

FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
UIC	UIC Site Listing
NPDES	NPDES Permit Listing
CFO	Confined Feeding Operations
BULK	Registered Bulk Fertilizer and Pesticide Storage Facilities
MANIFEST	Hazardous Waste Manifest Data
IND WASTE	Industrial Waste Sites Listing
DRYCLEANERS	Drycleaner Facility Listing
AIRS	Permitted Sources & Emissions Listing
TIER 2	Tier 2 Facility Listing
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH DOE	Steam-Electric Plant Operation Data
PRP	Potentially Responsible Parties
2020 COR ACTION	2020 Corrective Action Program List
PCB TRANSFORMER	PCB Transformer Registration Database
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
Financial Assurance	Financial Assurance Information Listing
SCP	State Cleanup Program Sites
OISC	Office of Indiana State Chemist Database
LEAD SMELTERS	Lead Smelter Sites
COAL ASH	Coal Ash Disposal Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank
RGA LF	Recovered Government Archive Solid Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State and tribal leaking storage tank lists

LUST: Lust List.

A review of the LUST list, as provided by EDR, and dated 11/01/2014 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
EMRO MARKETING UNITED #2027 Description: NFA-Conditional Closure	***2011 S ROGERS***	***E 1/8 - 1/4 (0.219 mi.)***	***A3***	***8***

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Management's Indiana Registered Underground Storage Tanks list.

A review of the UST list, as provided by EDR, and dated 11/01/2014 has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BLOOMINGTON MINI MART	2002 S ROGERS ST	E 1/8 - 1/4 (0.218 mi.)	A2	8
EMRO MARKETING UNITED #2027	***2011 S ROGERS***	***E 1/8 - 1/4 (0.219 mi.)***	***A3***	***8***
TRIPLE C CORP/ALBERT CLEMENS	SOUTH ROGERS ST	ENE 1/8 - 1/4 (0.249 mi.)	5	11

State and tribal institutional control / engineering control registries

AUL: A listing of Comfort/Site Status Letter sites that have been issued with Institutional Controls.

A review of the AUL list, as provided by EDR, and dated 11/03/2014 has revealed that there is 1 AUL site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
EMRO MARKETING UNITED #2027	***2011 S ROGERS***	***E 1/8 - 1/4 (0.219 mi.)***	***A3***	***8***

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facilities located in the state of Indiana.

A review of the SWRCY list, as provided by EDR, and dated 05/01/2014 has revealed that there are 2 SWRCY sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BROADVIEW ELEMENTARY ECA	705 W COOLIDGE RD.	SSE 1/4 - 1/2 (0.323 mi.)	6	12
SUMMIT ELEMENTARY	1450 W. COUNTRYSIDE LN.	WSW 1/4 - 1/2 (0.448 mi.)	7	13

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 2 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

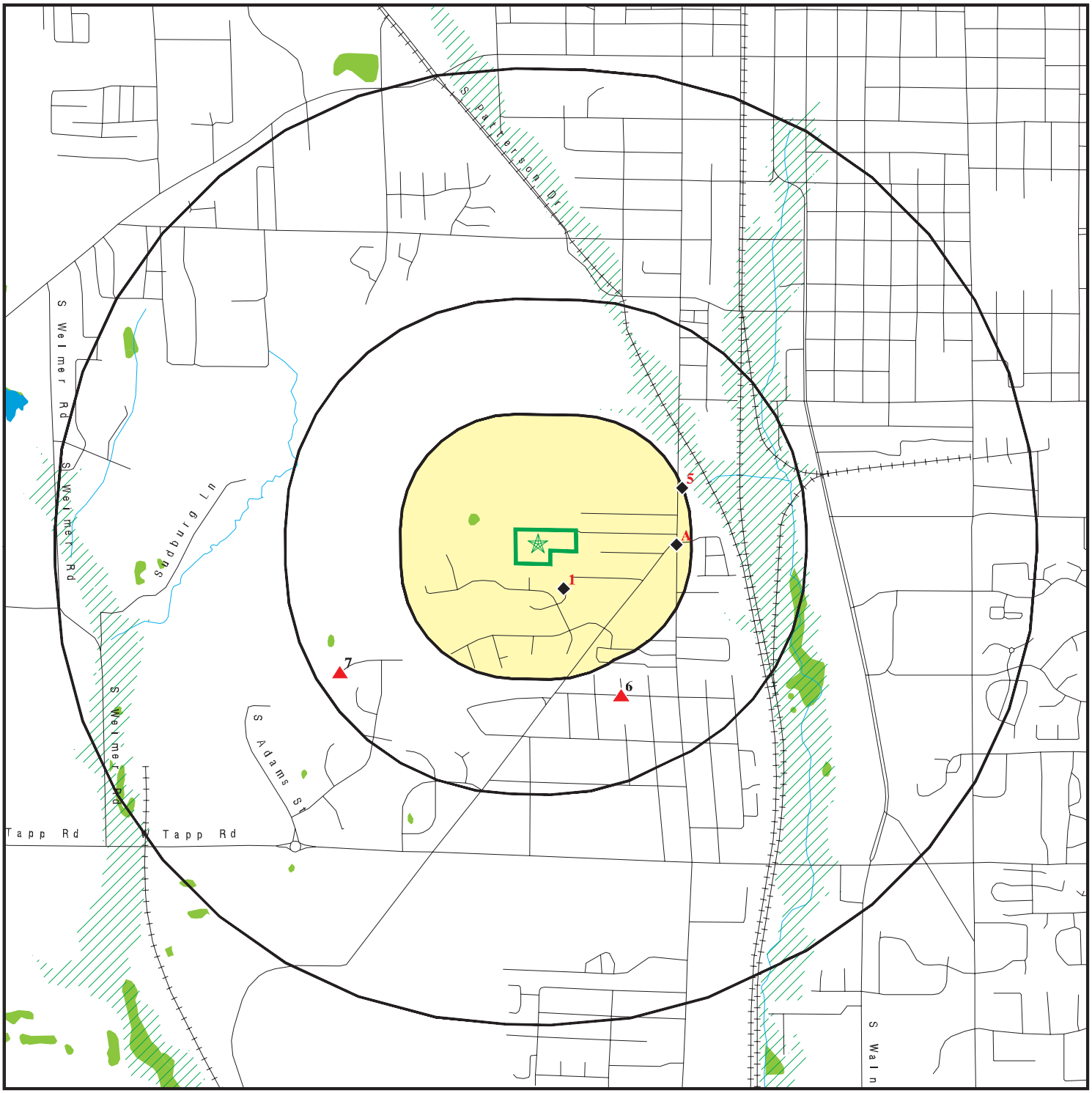
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	2104 HARMONY PL	SSE 0 - 1/8 (0.060 mi.)	1	8
Not reported	2011 S ROGERS ST	E 1/8 - 1/4 (0.219 mi.)	A4	10

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
ST SEMICONDUCTERS OF INDIANA	RCRA-TSDF, CERC-NFRAP, CORRACTS, RCRA NonGen / NLR, MANIFEST
BASTON JUNKYARD	CERC-NFRAP

OVERVIEW MAP - 4226811.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Habitat For Humanity Dragoo Phase I	CLIENT: Fields Environmental Inc
ADDRESS: South Rockport Road Bloomington IN 47403	CONTACT: Richard Creek INQUIRY #: 4226811.2s
LAT/LONG: 39.146 / 86.5445	DATE: March 06, 2015 1:00 pm

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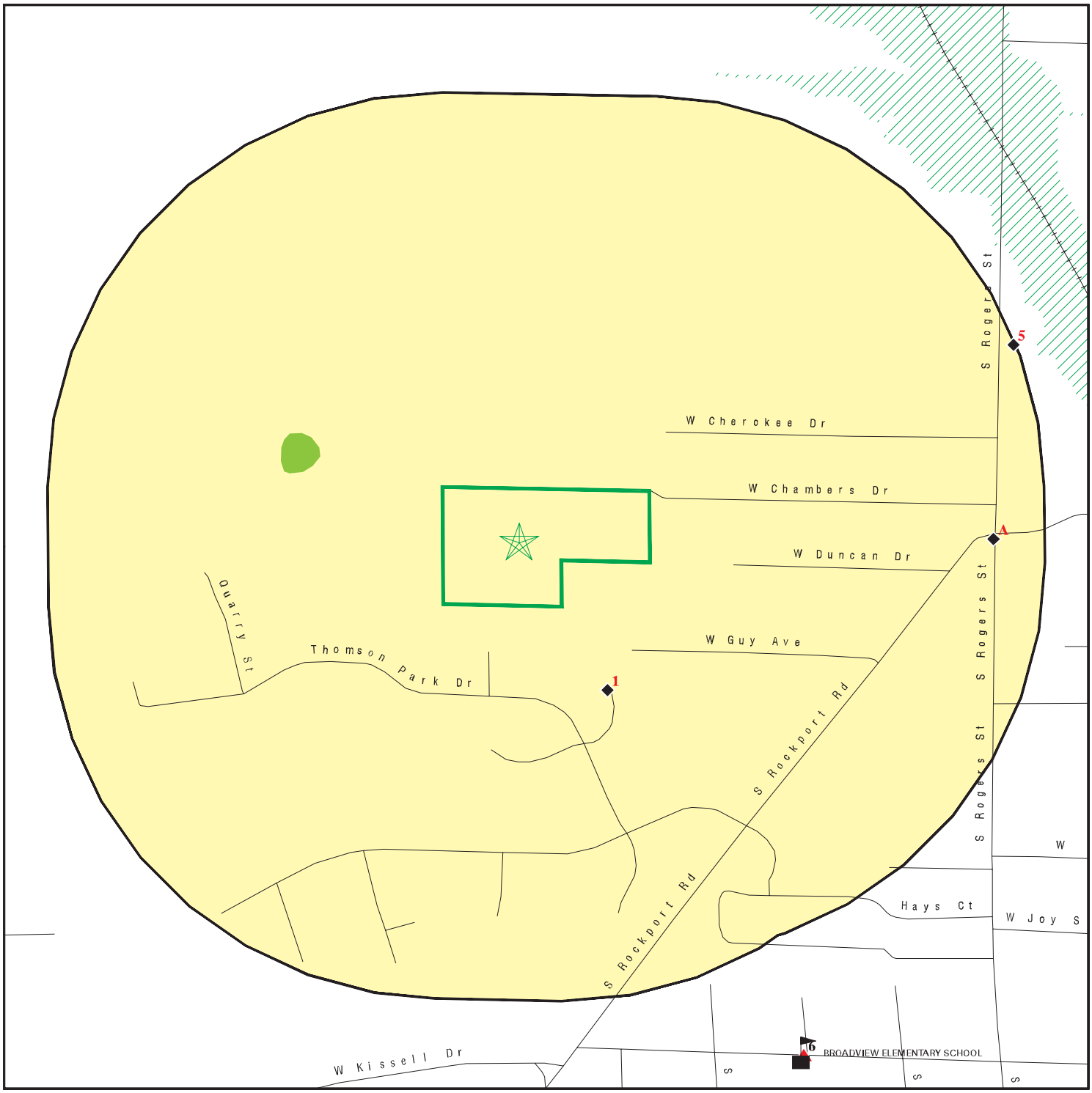
DETAIL MAP - 4226811.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Habitat For Humanity Dragoo Phase I	CLIENT: Fields Environmental Inc
ADDRESS: South Rockport Road Bloomington IN 47403	CONTACT: Richard Creek INQUIRY #: 4226811.2s
LAT/LONG: 39.146 / 86.5445	DATE: March 06, 2015 1:03 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
OPEN DUMPS	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	1	0	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	3	NR	NR	NR	3

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
AUL	0.500		0	1	0	NR	NR	1
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	2	NR	NR	2
SWTIRE	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
DEL SHWS	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
CFO	TP		NR	NR	NR	NR	NR	0
BULK	0.250		0	0	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
IND WASTE	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
SCP	0.500		0	0	0	NR	NR	0
OISC	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		1	1	NR	NR	NR	2
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
RGA LUST	TP		NR	NR	NR	NR	NR	0
RGA LF	TP		NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SSE
< 1/8
0.060 mi.
318 ft.

2104 HARMONY PL
BLOOMINGTON, IN 47403

EDR US Hist Auto Stat **1015320601**
N/A

Relative:
Lower

Actual:
739 ft.

EDR Historical Auto Stations:
Name: GW REED AUTO SERVICE
Year: 2004
Address: 2104 HARMONY PL

A2
East
1/8-1/4
0.218 mi.
1149 ft.

BLOOMINGTON MINI MART
2002 S ROGERS ST
BLOOMINGTON, IN 47403

UST **U004051505**
N/A

Site 1 of 3 in cluster A

Relative:
Lower

Actual:
745 ft.

UST:
Facility ID: 24887
Owner Id: 29701
Company Name: Ravi Pal
Mailing Address: 2002 S Rogers St
Mailing Address 2: Not reported
Mailing City,St,Zip: Bloomington, IN 47403

Tank Number: 1
Tank Status: **Currently in use**
Install Date: 08/01/1989
Tank Capacity: 10000
Substance Desc: Gasoline

Tank Number: 2
Tank Status: **Currently in use**
Install Date: 08/01/1989
Tank Capacity: 10000
Substance Desc: Gasoline

A3
East
1/8-1/4
0.219 mi.
1158 ft.

EMRO MARKETING UNITED #2027
2011 S ROGERS
BLOOMINGTON, IN 47402

LUST **U003094588**
UST **N/A**
AUL

Site 2 of 3 in cluster A

Relative:
Lower

Actual:
744 ft.

LUST:
Facility ID: 15884
Incident Number: 198911525
Affected Area: Soil
Description: NFA-Conditional Closure
Priority: High

Facility ID: 15884
Incident Number: 198911525
Affected Area: MTBE
Description: NFA-Conditional Closure
Priority: High

Facility ID: 15884

EMRO MARKETING UNITED #2027 (Continued) **U003094588**

Incident Number: 198911525
Affected Area: Groundwater
Description: NFA-Conditional Closure
Priority: High

Facility ID: 15884
Incident Number: 198911525
Affected Area: Free Product
Description: NFA-Conditional Closure
Priority: High

UST:

Facility ID: 15884
Owner Id: 107
Company Name: Speedway LLC
Mailing Address: PO Box 1500
Mailing Address 2: Not reported
Mailing City,St,Zip: Springfield, OH 45501

Tank Number: 1
Tank Status: Permanently Out of Service
Install Date: 01/01/1962
Tank Capacity: 6000
Substance Desc: Gasoline

Tank Number: 2
Tank Status: Permanently Out of Service
Install Date: 01/01/1962
Tank Capacity: 6000
Substance Desc: Gasoline

Tank Number: 3
Tank Status: Permanently Out of Service
Install Date: 01/01/1962
Tank Capacity: 6000
Substance Desc: Gasoline

Tank Number: 4
Tank Status: Permanently Out of Service
Install Date: 01/01/1962
Tank Capacity: 6000
Substance Desc: Gasoline

Tank Number: 5
Tank Status: Permanently Out of Service
Install Date: 01/01/1962
Tank Capacity: 3000
Substance Desc: Kerosene

AUL:

IC TYPE: Environmental Restrictive Covenant
Facility Id: 15884

EMRO MARKETING UNITED #2027 (Continued) **U003094588**

Program Area:	LUST
Affected Media:	SubSurface Soil; Ground Water
Date Ic Recorded:	10/13/2004
Description:	Not reported
Control Method A:	AUL - Ground Water Use Restriction
Coverage A:	Entire Property
Chemicals Of Concern A:	Petroleum (Includes BTEX and MTBE)
Comments A:	Not reported
Control Method B:	AUL - Residential Use Restriction
Coverage B:	Entire Property
Chemicals Of Concern B:	Petroleum (Includes BTEX and MTBE); TPH - Total Petroleum Hydrocarbons
Comments B:	Not reported
Control Method C:	Not reported
Coverage C:	Not reported
Chemicals Of Concern C:	Not reported
Comments C:	Not reported
Control Method D:	Not reported
Coverage D:	Not reported
Chemicals Of Concern D:	Not reported
Comments D:	Not reported
Control Method E:	Not reported
Coverage E:	Not reported
Chemicals Of Concern E:	Not reported
Comments E:	Not reported
Control Method F:	Not reported
Coverage F:	Not reported
Chemicals Of Concern F:	Not reported
Comments F:	Not reported
Control Method G:	Not reported
Coverage G:	Not reported
Chemicals Of Concern G:	Not reported
Comments G:	Not reported
Control Method H:	Not reported
Coverage H:	Not reported
Chemicals Of Concern H:	Not reported
Comments H:	Not reported
Control Method I:	Not reported
Coverage I:	Not reported
Chemicals Of Concern I:	Not reported
Comments I:	Not reported

A4 **EDR US Hist Auto Stat** **1015306334**
East **2011 S ROGERS ST** **N/A**
1/8-1/4 **BLOOMINGTON, IN 47403**
0.219 mi.
1158 ft. **Site 3 of 3 in cluster A**

Relative:
Lower

Actual:
744 ft.

EDR Historical Auto Stations:

Name:	A BA AUTO REPAIR
Year:	1999
Address:	2011 S ROGERS ST
Name:	A BA AUTO REPAIR
Year:	2000
Address:	2011 S ROGERS ST
Name:	A BA AUTO REPAIR
Year:	2001

(Continued) **1015306334**

Address: 2011 S ROGERS ST

Name: A BA AUTO REPAIR
Year: 2002
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2003
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2004
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2005
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2006
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2007
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2008
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2009
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SVC
Year: 2010
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2011
Address: 2011 S ROGERS ST

Name: ABA AUTO SALES & SERVICE
Year: 2012
Address: 2011 S ROGERS ST

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5 **TRIPLE C CORP/ALBERT CLEMENS** **UST** **U000747297**
ENE **SOUTH ROGERS ST** **N/A**
1/8-1/4 **BLOOMINGTON, IN 47401**
0.249 mi.
1313 ft.

Relative:
Lower

Actual:
729 ft.

UST:
Facility ID: 17907
Owner Id: 10171
Company Name: Triple C Corp Albert Clemens
Mailing Address: 320 Wynnedale Dr
Mailing Address 2: Not reported

TRIPLE C CORP/ALBERT CLEMENS (Continued) **U000747297**

Mailing City,St,Zip: Bloomington, IN 47401

Tank Number: 1
Tank Status: **Permanently Out of Service**
Install Date: Not reported
Tank Capacity: 10000
Substance Desc: Gasoline

Tank Number: 2
Tank Status: **Permanently Out of Service**
Install Date: Not reported
Tank Capacity: 10000
Substance Desc: Diesel

Tank Number: 3
Tank Status: **Permanently Out of Service**
Install Date: Not reported
Tank Capacity: 1000
Substance Desc: Used Oil

Tank Number: 4
Tank Status: **Permanently Out of Service**
Install Date: Not reported
Tank Capacity: 4000
Substance Desc: Unknown

Tank Number: 5
Tank Status: **Permanently Out of Service**
Install Date: Not reported
Tank Capacity: 4000
Substance Desc: Unknown

6
SSE
1/4-1/2
0.323 mi.
1705 ft.

BROADVIEW ELEMENTARY ECA **SWRCY** **S109949557**
705 W COOLIDGE RD. **N/A**
BLOOMINGTON, IN 47403

Relative:
Higher

Actual:
779 ft.

SWRCY:
Program Company: Not reported
Program Contact Name: Not reported
Address: Not reported
City: Not reported
State: Not reported
Zip: Not reported
Contact Phone: Not reported
County: Not reported
Entity Type: Not reported
Sites Notes: Not reported
Customers: Not reported
Materials Accepted: Newspaper, Magazines, Mixed Residential
Website: Not reported
Contact Name: Not reported
Manufacturer: Not reported

BROADVIEW ELEMENTARY ECA (Continued) **S109949557**

Processor:	Not reported
Broker:	Not reported
Other:	Not reported
Automotive Fluids:	Not reported
Batteries:	Not reported
Construction/Related Products:	Not reported
Electronics/Related Products:	Not reported
Glass:	Not reported
Industrial Materials:	Not reported
Metals:	Not reported
Paper:	Not reported
Plastics:	Not reported
Rubber:	Not reported
Textiles:	Not reported
Wood/Organics:	Not reported

7
WSW
1/4-1/2
0.448 mi.
2368 ft.

SUMMIT ELEMENTARY **SWRCY** **S109950847**
1450 W. COUNTRYSIDE LN. **N/A**
BLOOMINGTON, IN 47403

Relative:
Higher

Actual:
816 ft.

SWRCY:

Program Company:	Not reported
Program Contact Name:	Not reported
Address:	Not reported
City:	Not reported
State:	Not reported
Zip:	Not reported
Contact Phone:	Not reported
County:	Not reported
Entity Type:	Not reported
Sites Notes:	Not reported
Customers:	Not reported
Materials Accepted:	Newspaper, Magazines, Mixed Residential
Website:	Not reported
Contact Name:	Not reported
Manufacturer:	Not reported
Processor:	Not reported
Broker:	Not reported
Other:	Not reported
Automotive Fluids:	Not reported
Batteries:	Not reported
Construction/Related Products:	Not reported
Electronics/Related Products:	Not reported
Glass:	Not reported
Industrial Materials:	Not reported
Metals:	Not reported
Paper:	Not reported
Plastics:	Not reported
Rubber:	Not reported
Textiles:	Not reported
Wood/Organics:	Not reported

Count: 2 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BLOOMINGTON	1015733813	ST SEMICONDUCTERS OF INDIANA	415 N COLLEGE AVE	47401	RCRA-TSDF, CERC-NFRAP, CORRA RCRA NonGen / NLR, MANIFEST
BLOOMINGTON	1003872890	BASTON JUNKYARD	ROGERS STREET	47401	CERC-NFRAP

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/16/2014	Source: EPA
Date Data Arrived at EDR: 01/08/2015	Telephone: N/A
Date Made Active in Reports: 02/09/2015	Last EDR Contact: 01/08/2015
Number of Days to Update: 32	Next Scheduled EDR Contact: 04/20/2015
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: 703-412-9810
Date Made Active in Reports: 02/13/2014	Last EDR Contact: 02/27/2015
Number of Days to Update: 94	Next Scheduled EDR Contact: 06/08/2015
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/21/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/07/2014	Telephone: 703-603-8704
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 01/09/2015
Number of Days to Update: 13	Next Scheduled EDR Contact: 04/20/2015
	Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: 703-412-9810
Date Made Active in Reports: 02/13/2014	Last EDR Contact: 02/27/2015
Number of Days to Update: 94	Next Scheduled EDR Contact: 06/08/2015
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/03/2014
Date Data Arrived at EDR: 12/12/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/16/2015
Next Scheduled EDR Contact: 06/01/2015
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/29/2014
Date Data Arrived at EDR: 09/30/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 37

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: List of Hazardous Waste Response Sites Scored Using the Indiana Scoring Model

List of hazardous waste response sites scored utilizing the Indiana Scoring Model. The Indiana Scoring Model is a method of prioritizing, for state response actions, those hazardous substances response sites which are not on the National Priorities List. The ISM serves as the Commissioners management tool to address those sites which pose the most significant threat to human health and the environment in addition to assuring the departments resources are allocated accordingly.

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 08/27/2007
Date Made Active in Reports: 09/18/2007
Number of Days to Update: 22

Source: Department of Environmental Management
Telephone: 317-308-3052
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: No Update Planned

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Permitted Solid Waste Facilities
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/01/2014
Date Data Arrived at EDR: 12/18/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 39

Source: Department of Environmental Management
Telephone: 317-232-0066
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Semi-Annually

OPEN DUMPS: Open Dump Waste Sites
Open Dumps are sites that are not regulated and are illegal dump sites of solid waste, as defined by IAC 10-2-28 329 and IAC 10-2-128 of the Indiana Administrative Code.

Date of Government Version: 06/26/2009
Date Data Arrived at EDR: 12/11/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 40

Source: Department of Environmental Management
Telephone: 317-232-8726
Last EDR Contact: 12/08/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Lust Leaking Underground Storage Tank List
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 11/01/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 12/11/2014
Number of Days to Update: 10

Source: Department of Environmental Management
Telephone: 317-232-8900
Last EDR Contact: 03/04/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Annually

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 11/14/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 87

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/04/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 10

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/05/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 12

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/06/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 19

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

State and tribal registered storage tank lists

UST: Indiana Registered Underground Storage Tanks
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 11/01/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 12/16/2014
Number of Days to Update: 15

Source: Department of Environmental Management
Telephone: 317-308-3008
Last EDR Contact: 03/04/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/05/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 12

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/06/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 8

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/04/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 10

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 11/13/2014
Date Data Arrived at EDR: 11/18/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 83

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 11/14/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 87

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

AUL: Sites with Restrictions

Activity and use limitations include both engineering controls and institutional controls. A listing of Comfort/Site Status Letter sites that have been issued with controls.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 12/12/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 317-232-8603
Last EDR Contact: 03/02/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Remediation Program Site List

A current list of Voluntary Remediation Program sites that are no longer confidential.

Date of Government Version: 08/22/2014
Date Data Arrived at EDR: 08/22/2014
Date Made Active in Reports: 09/12/2014
Number of Days to Update: 21

Source: Department of Environmental Management
Telephone: 317-234-0966
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/29/2014
Date Data Arrived at EDR: 10/01/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 36

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/31/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Site List

A brownfield site is an industrial or commercial property that is abandoned, inactive, or underutilized, on which expansion or redeveloopment is complicated due to the actual or perceived environmental contamination.

Date of Government Version: 12/01/2014
Date Data Arrived at EDR: 12/04/2014
Date Made Active in Reports: 12/11/2014
Number of Days to Update: 7

Source: Department of Environmental Management
Telephone: 317-233-2570
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Semi-Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/22/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 38

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWTIRE: Waste Tire Sites Listing
This listing consists of Tire Sites - sites which contain tires - either for processing, for storage, or transport - as well as some illegal tire dumps, as defined by IC 13-11-2-251, IC 13-11-2-252, and IC 13-11-250.5 of the Indiana Code.

Date of Government Version: 09/04/2013
Date Data Arrived at EDR: 12/11/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 40

Source: Department of Environmental Management
Telephone: 317-232-8726
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

SWRCY: Recycling Facilities
A listing of recycling facilities located in the state of Indiana.

Date of Government Version: 05/01/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 09/12/2014
Number of Days to Update: 46

Source: Department of Environmental Management
Telephone: 317-234-4050
Last EDR Contact: 01/23/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 70

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/03/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Quarterly

DEL SHWS: Deleted Commissioner's Bulletin Sites List
A listing of sites deleted/removed from the Commissioner's Bulletin List

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/04/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 10

Source: Department of Environmental Management
Telephone: 317-234-0347
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Varies

CDL: Clandestine Drug Lab Listing
A listing of clandestine drub labs that have been cleaned up.

Date of Government Version: 01/05/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 18

Source: Department of Environmental Management
Telephone: 317-416-5031
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 70

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/03/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/30/2014
Date Data Arrived at EDR: 10/01/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 36

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/30/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

SPILLS: Spills Incidents

Oil, hazardous, or objectionable materials that may be released to soil and water.

Date of Government Version: 11/01/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 12/11/2014
Number of Days to Update: 10

Source: Department of Environmental Management
Telephone: 317-308-3038
Last EDR Contact: 03/04/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Semi-Annually

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 09/11/2002
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/28/2013
Number of Days to Update: 56

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 09/07/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 06/06/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 8

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 12/24/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/27/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 12/30/2014
Date Data Arrived at EDR: 12/31/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 29

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/30/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 01/29/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 02/23/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 02/23/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/31/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 33

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/16/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 12/29/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 21

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/04/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/07/2014
Date Data Arrived at EDR: 10/08/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 02/27/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/16/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: EPA
Telephone: (312) 353-2000
Last EDR Contact: 02/27/2015
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/24/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Biennially

UIC: UIC Site Listing

A listing of class II well locations

Date of Government Version: 12/08/2014
Date Data Arrived at EDR: 12/11/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 46

Source: Department of Natural Resources
Telephone: 317-232-0045
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Varies

NPDES: NPDES Permit Listing

A listing of active NPDES Permit Section facility locations.

Date of Government Version: 01/12/2015
Date Data Arrived at EDR: 01/13/2015
Date Made Active in Reports: 02/16/2015
Number of Days to Update: 34

Source: Department of Environmental Management
Telephone: 317-233-0676
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Varies

CFO: Confined Feeding Operations

This dataset consists of Confined Feeding Operations - i.e. A swine, chicken, turkey, beef or dairy agri-business that has large enough numbers of animals that IDEM regulates for environmental concerns, as defined by IC 13-18-10 of the Indiana Code.

Date of Government Version: 09/03/2013
Date Data Arrived at EDR: 12/11/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 37

Source: Department of Environmental Management
Telephone: 317-232-8726
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

BULK: Registered Bulk Fertilizer and Pesticide Storage Facilities

A listing of registered dry or liquid bulk fertilizer and pesticide storage facilities.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/13/2014
Date Made Active in Reports: 06/05/2014
Number of Days to Update: 23

Source: Office of Indiana State Chemist
Telephone: 765-494-0579
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

IN MANIFEST: Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 10/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 10

Source: Department of Environmental Management
Telephone: 317-233-4624
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Annually

IND WASTE: Industrial Waste Sites Listing

The listing contains industrial waste site locations in Indiana, provided by personnel of Indiana Department of Environmental Management, Office of Land Quality.

Date of Government Version: 09/04/2013
Date Data Arrived at EDR: 12/11/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 37

Source: Department of Environmental Management
Telephone: 317-232-8726
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Quarterly

DRYCLEANERS: Drycleaner Facility Listing

A list of drycleaners involved in the Indiana 5-Star Environmental Recognition Program. It is a voluntary program that ranks participating drycleaners on a scale of one to five stars. The program recognizes those drycleaners willing to do more for the environment and worker safety than the rules require. These drycleaners are going above and beyond the rules to protect the environment, their employees and their neighbors and customers.

Date of Government Version: 09/16/2014
Date Data Arrived at EDR: 09/18/2014
Date Made Active in Reports: 09/19/2014
Number of Days to Update: 1

Source: Department of Environmental Management
Telephone: 800-988-7901
Last EDR Contact: 12/11/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Varies

AIRS: Permitted Sources & Emissions Listing

Current permitted sources and emissions inventory information.

Date of Government Version: 02/07/2015
Date Data Arrived at EDR: 02/10/2015
Date Made Active in Reports: 02/16/2015
Number of Days to Update: 6

Source: Department of Environmental Management
Telephone: 317-233-0185
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

TIER 2: Tier 2 Facility Listing

A listing of facilities which store or manufacture hazardous materials that submit a chemical inventory report.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/27/2014
Number of Days to Update: 38

Source: Department of Environmental Management
Telephone: 317-233-0066
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/18/2015
Next Scheduled EDR Contact: 06/01/2015
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

Financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 01/01/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 18

Source: Department of Environmental Management
Telephone: 317-233-1052
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/13/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OISC: Office of Indiana State Chemist Database
Restricted use pesticide dealers and pesticide & fertilizer applicators.

Date of Government Version: 12/22/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/28/2015
Number of Days to Update: 37

Source: Office of Indiana State Chemist & Seed
Telephone: 765-494-1492
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Quarterly

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 02/13/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: N/A

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

Financial Assurance 1: Financial Assurance Information Listing
Financial assurance information.

Date of Government Version: 01/01/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 18

Source: Department of Environmental Management
Telephone: 317-233-1052
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 11/19/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 02/16/2015
Next Scheduled EDR Contact: 06/01/2015
Data Release Frequency: Quarterly

COAL ASH: Coal Ash Disposal Sites

A listing of coal ash disposal site locations.

Date of Government Version: 09/30/2014
Date Data Arrived at EDR: 12/18/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 39

Source: Department of Environmental Management
Telephone: 317-233-4624
Last EDR Contact: 12/11/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

SCP: State Cleanup Program Sites

The goals for the State Cleanup Section are to mitigate risk to human health and the environment.

Date of Government Version: 12/01/2014
Date Data Arrived at EDR: 12/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 8

Source: Department of Environmental Management
Telephone: 317-233-0068
Last EDR Contact: 02/26/2015
Next Scheduled EDR Contact: 06/15/2015
Data Release Frequency: Quarterly

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Varies

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List
The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Management in Indiana.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Management
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Management in Indiana.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Management
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Management in Indiana.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 203

Source: Department of Environmental Management
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2015
Date Data Arrived at EDR: 02/04/2015
Date Made Active in Reports: 02/27/2015
Number of Days to Update: 23

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/04/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/13/2014
Number of Days to Update: 29

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/23/2015
Next Scheduled EDR Contact: 06/08/2015
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 12/22/2014
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 02/27/2015
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 08/07/2014
Number of Days to Update: 48

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.
Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.
Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Child Care Listing
Source: Family & Social Services Administration
Telephone: 317-232-4740

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

HABITAT FOR HUMANITY DRAGOO PHASE I
SOUTH ROCKPORT ROAD
BLOOMINGTON, IN 47403

TARGET PROPERTY COORDINATES

Latitude (North):	39.146 - 39˚ 8' 45.60''
Longitude (West):	86.5445 - 86˚ 32' 40.20''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	539362.4
UTM Y (Meters):	4332869.0
Elevation:	762 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	39086-B5 BLOOMINGTON, IN
Most Recent Revision:	1998

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

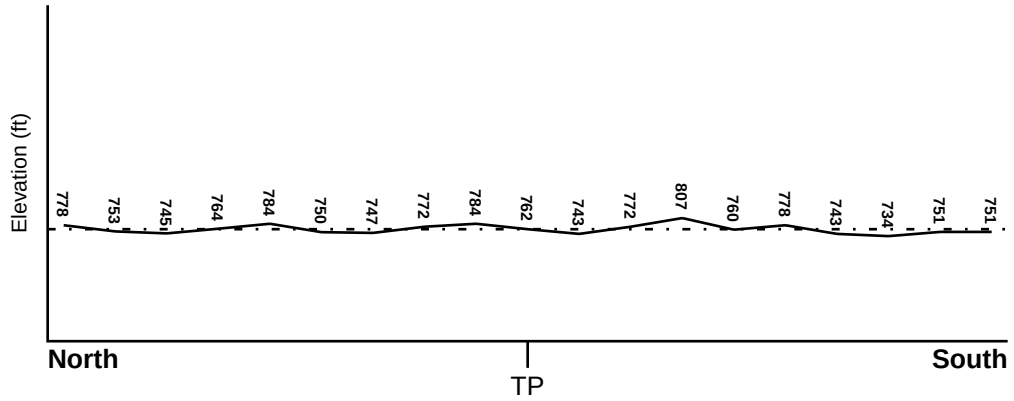
TOPOGRAPHIC INFORMATION

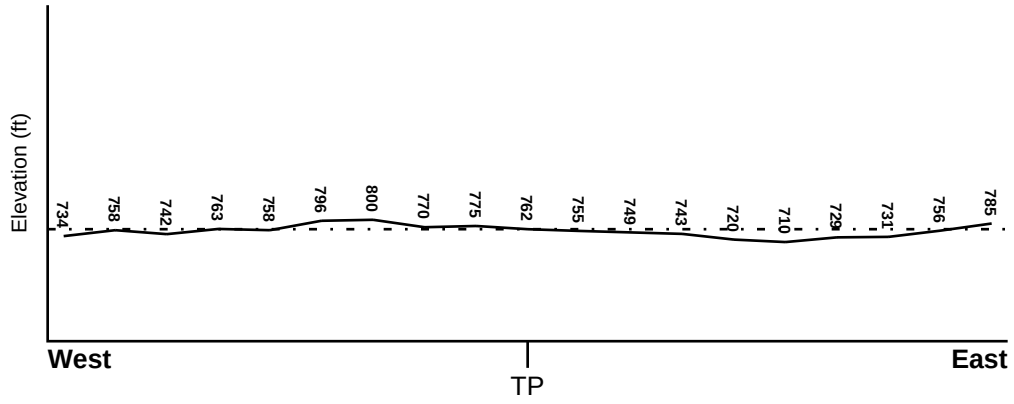
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ENE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 762 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
MONROE, IN	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 18105C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BLOOMINGTON	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

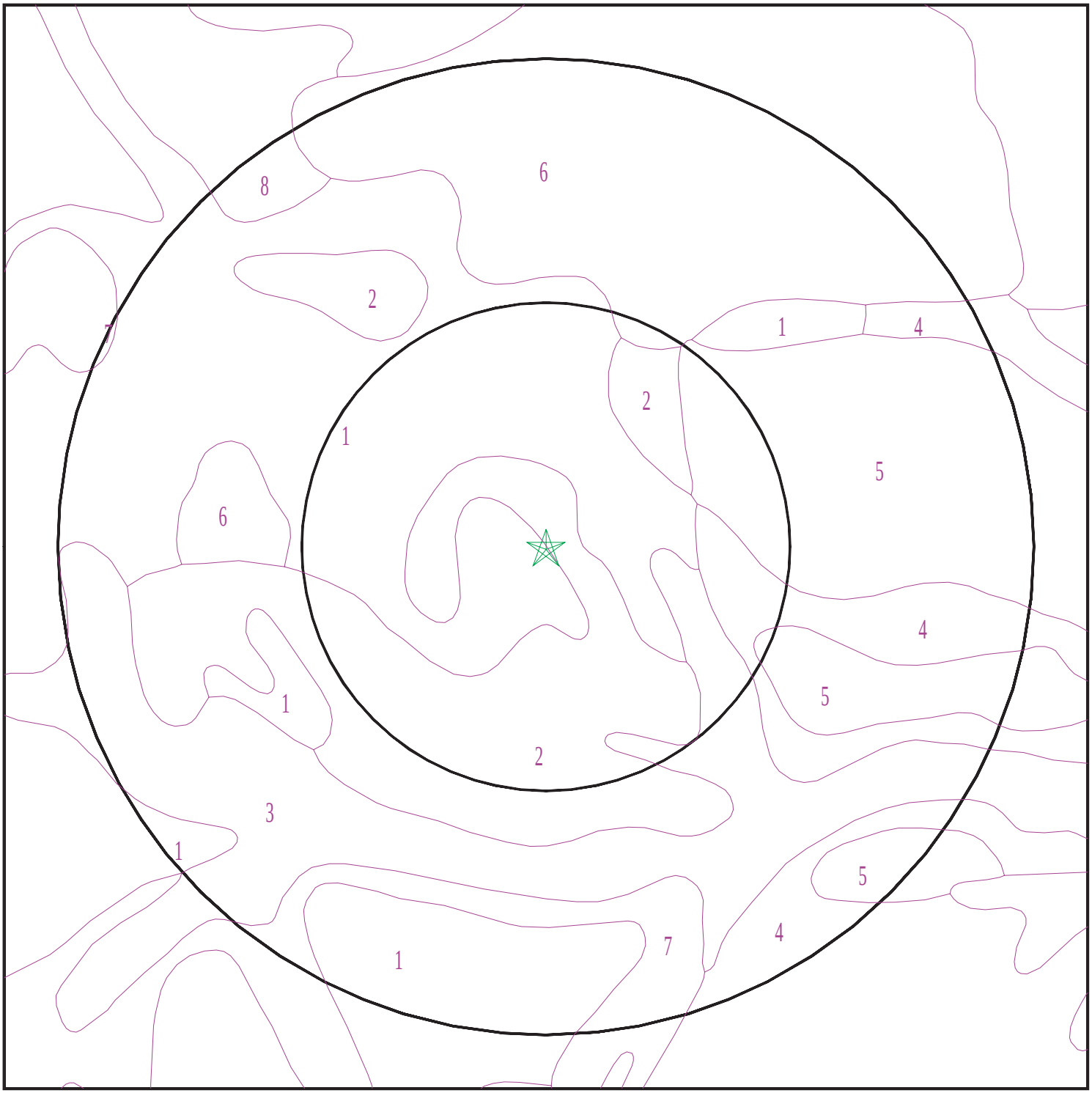
Era:	Paleozoic
System:	Mississippian
Series:	Meramecian Series
Code:	M2 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4226811.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Habitat For Humanity Dragoo Phase I	CLIENT:	Fields Environmental Inc
ADDRESS:	South Rockport Road Bloomington IN 47403	CONTACT:	Richard Creek
		INQUIRY #:	4226811.2s
LAT/LONG:	39.146 / 86.5445	DATE:	March 06, 2015 1:03 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Crider

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 250 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5
2	7 inches	35 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6 Min: 4.5
3	35 inches	79 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: Crider

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 250 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5
2	7 inches	35 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6 Min: 4.5
3	35 inches	79 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 3

Soil Component Name: Wakeland

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 5.6
2	7 inches	29 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.8 Min: 5.6
3	29 inches	59 inches	stratified silt loam to loam to sandy loam to fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.8 Min: 5.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 4

Soil Component Name: Crider

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 250 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5
2	7 inches	35 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6 Min: 4.5
3	35 inches	79 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 5

Soil Component Name: Crider

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 250 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5
2	7 inches	35 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6 Min: 4.5
3	35 inches	79 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5

Soil Map ID: 6

Soil Component Name: Udorthents

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 7

Soil Component Name: Caneyville

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 91 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	5 inches	9 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5
3	9 inches	35 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 4.23 Min: 1.41	Max: 7.8 Min: 5.1
4	35 inches	59 inches	unweathered bedrock	Not reported	Not reported	Max: 141.1 Min: 1.42	Max: Min:

Soil Map ID: 8

Soil Component Name: Crider

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 250 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	7 inches	35 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 6 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5
3	35 inches	79 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 14.11 Min: 4.23	Max: 7.3 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

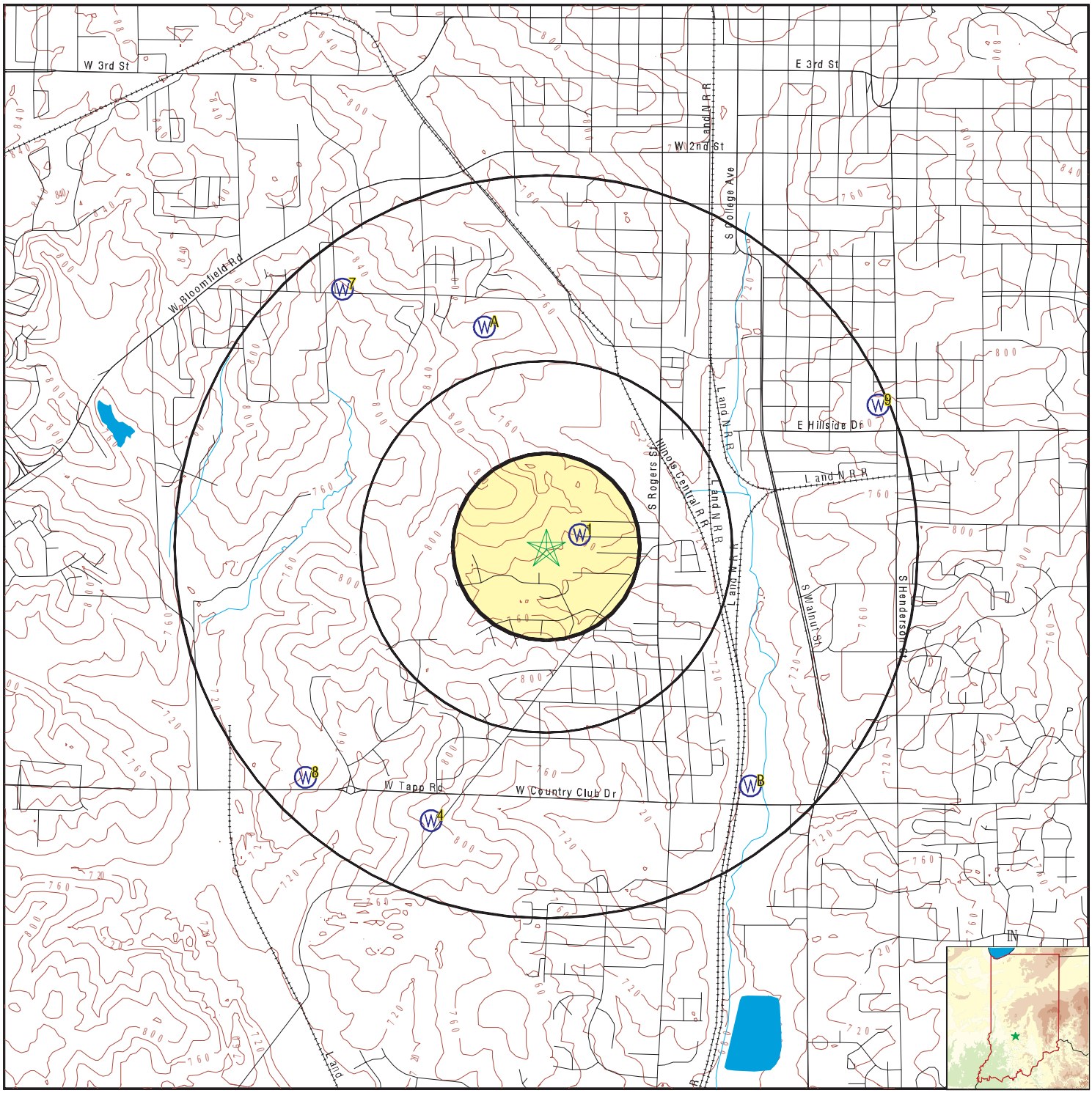
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	INDNR1000015390	0 - 1/8 Mile ENE
A2	INDNR1000015518	1/2 - 1 Mile NNW
A3	INDNR1000015519	1/2 - 1 Mile NNW
4	INDNR1000015222	1/2 - 1 Mile SSW
B5	INDNR1000015254	1/2 - 1 Mile SE
B6	INDNR1000015253	1/2 - 1 Mile SE
7	INDNR1000015554	1/2 - 1 Mile NW
8	INDNR1000015263	1/2 - 1 Mile SW
9	INDNR1000015476	1/2 - 1 Mile ENE

PHYSICAL SETTING SOURCE MAP - 4226811.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

N

SITE NAME:	Habitat For Humanity Dragoo Phase I	CLIENT:	Fields Environmental Inc
ADDRESS:	South Rockport Road Bloomington IN 47403	CONTACT:	Richard Creek
		INQUIRY #:	4226811.2s
LAT/LONG:	39.146 / 86.5445	DATE:	March 06, 2015 1:03 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
1 **ENE** **0 - 1/8 Mile** **Higher**	**IN WELLS**	**INDNR1000015390**

Refno:	213692		
Comp date:	28-OCT-63		
Drive:	S EDGE OF BLOOMINGTON AT THE W END OF CHAMBERS DR.(821 CHAMBERS DR) JUST S OF TRANS. 339-2327.		
County1:	MONROE	Civilt:	PERRY
Town1:	8N	Range1:	1W
Quarter1:	NW	Quarter2:	SW
Quarter3:	NE		
Section1:	8		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	Not Reported		
Feetns:	0		
Feetsn:	0		
Feetew:	0		
Feetwe:	0		
Utmx:	539507		
Utmy:	4332917		
Grnd elev:	758		
Depth:	179		
Bedrock:	753		
bedro 1:	5		
Aquelv:	0		
Static:	35		
Type test:	Not Reported		
Pumprate:	0		
Pumphou:	0		
Pumpdw:	0		
Bailerr:	10		
Bailerh:	1		
Bailerd:	0		
Welltype:	D	Well use:	HOME
Use other:	Not Reported	Method:	CABLE TOOL
Method other:	Not Reported		
Casingl:	7		
Casingd:	6		
Casingm:	Not Reported		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	7		
Linerdi:	5.63		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	Not Reported	Groutm:	Not Reported
Groutf:	0		
Groutt:	0		
Methodg:	Not Reported		
Groutba:	0		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		

Owner:	LEON RICHARDSON	Ownerad:	R5, BLOOMINGTON IN
Ownerzc:	0		
Ownertx:	Not Reported	Driller:	PAUL SCOTT
Drillad:	3615 SUGAR LN, BLOOMINGTON IN		
Drillzc:	0		
Drilltx:	Not Reported	Operator:	PAUL SCOTT
License:	Not Reported	Date co:	28-OCT-63
Cbuilde:	Not Reported		
Buildad:	Not Reported		
Buildzc:	0		
Buildtx:	Not Reported	Fieldby:	WG
Field d:	25-MAY-76	Courtby:	Not Reported
Court d:	20-APR-60	Classby:	Not Reported
Class date:	01-DEC-66	Accwo:	Not Reported
Accwo date:	01-JUN-75	County:	MONROE
Town:	7	Rang:	Not Reported
Section:	0		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported
Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015390		

A2
NNW **IN WELLS** **INDNR1000015518**
1/2 - 1 Mile
Higher

Refno:	213657		
Comp date:	22-SEP-68		
Drive:	HALFWAY BETWEEN RR & BLOOMFIELD RD ON W ALLEN ST ON S SIDE. A PART OF SEMINARY LOTS 165-168.		
County1:	MONROE	Civilt:	PERRY
Town1:	8N	Range1:	1W
Quarter1:	SE	Quarter2:	NE
Quarter3:	SW		
Section1:	5		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	Not Reported		
Feetns:	1300		
Feetsn:	0		
Feetew:	0		
Feetwe:	2600		
Utmx:	539090		
Utmy:	4333814		
Grnd elev:	810		
Depth:	140		
Bedrock:	0		
bedro 1:	0		
Aquelv:	0		
Static:	0		
Type test:	Not Reported		
Pumprate:	0		
Pumphou:	0		
Pumpdw:	0		
Bailerr:	1		
Bailerh:	0		
Bailerd:	80		
Welltype:	D	Well use:	Not Reported

Use other:	Not Reported	Method:	CABLE TOOL
Method other:	Not Reported		
Casingl:	13		
Casingd:	6		
Casingm:	Not Reported		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	0		
Linerdi:	0		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	Not Reported	Groutm:	Not Reported
Groutf:	0		
Groutt:	0		
Methodg:	Not Reported		
Groutba:	0		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		
Owner:	CLAUDE EASTON	Ownerad:	1301 WALLEN, BLOOMINGTON
Ownerzc:	0		
Ownertx:	Not Reported	Driller:	GEORGE SNAPP
Drillad:	RR#4, BLOOMINGTON IN		
Drillzc:	0		
Drilltx:	Not Reported	Operator:	GEO SNAPP&HASKLE GROGAN
License:	Not Reported	Date co:	22-SEP-60
Cbuilde:	Not Reported		
Buildad:	Not Reported		
Buildzc:	0		
Buildtx:	Not Reported	Fieldby:	JMH
Field d:	29-MAR-61	Courtby:	Not Reported
Court d:	20-APR-60	Classby:	Not Reported
Class date:	01-MAY-65	Accwo:	Not Reported
Accwo date:	01-JUN-75	County:	MONROE
Town:	8	Rang:	Not Reported
Section:	0		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported
Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015518		

A3
NNW
1/2 - 1 Mile
Higher

IN WELLS **INDNR1000015519**

Refno:	213672		
Comp date:	14-SEP-60		
Drive:	HALF WAY BETWEEN RR & BLOOMFIELD RD ON W ALLEN ST, ON S SIDE ST.		
County1:	MONROE	Civilt:	Not Reported
Town1:	8N	Range1:	1W
Quarter1:	SE	Quarter2:	NE
Quarter3:	SW		
Section1:	5		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	Not Reported		

Feetns:	1300		
Feetsn:	0		
Feetew:	0		
Feetwe:	2600		
Utmx:	539090		
Utmy:	4333814		
Grnd elev:	810		
Depth:	110		
Bedrock:	800		
bedro 1:	10		
Aquelv:	0		
Static:	25		
Type test:	Not Reported		
Pumprate:	0		
Pumphou:	0		
Pumpdw:	0		
Bailerr:	1		
Bailerh:	0		
Bailerd:	73		
Welltype:	D	Well use:	HOME
Use other:	Not Reported	Method:	CABLE TOOL
Method other:	Not Reported		
Casingl:	13		
Casingd:	6		
Casingm:	Not Reported		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	0		
Linerdi:	0		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	Not Reported	Groutm:	Not Reported
Groutf:	0		
Groutt:	0		
Methodg:	Not Reported		
Groutba:	0		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		
Owner:	DALE STONSIFER	Ownerad:	1301 W ALLEN ST.
Ownerzc:	0		
Ownertx:	Not Reported	Driller:	GEORGE SNAPP
Drillad:	RR#4, BLOOMINGTON IN		
Drillzc:	0		
Drilltx:	Not Reported	Operator:	GEO SNAPP&HASKLE GROGAN
License:	Not Reported	Date co:	14-SEP-60
Cbuilde:	Not Reported		
Buildad:	Not Reported		
Buildzc:	0		
Buildtx:	Not Reported	Fieldby:	JMH
Field d:	27-MAR-61	Courtby:	Not Reported
Court d:	20-APR-60	Classby:	Not Reported
Class date:	01-OCT-71	Accwo:	Not Reported
Accwo date:	01-JUN-75	County:	MONROE
Town:	Not Reported	Rang:	Not Reported
Section:	0		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported

Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015519		

4
SSW **IN WELLS** **INDNR1000015222**
1/2 - 1 Mile
Higher

Refno:	213757		
Comp date:	07-JUN-88		
Drive:	S. EDGE OF BLOOMINGTON CROSSING OFF BY PASS #37 TAKE TAPP RD. E. TO ROCKPORT RD. TURN RT 1ST OLD BRICK HOUSE ON RIGHT		
County1:	MONROE	Civilt:	PERRY
Town1:	8N	Range1:	1W
Quarter1:	NE	Quarter2:	NW
Quarter3:	NW		
Section1:	17		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	Not Reported		
Feetns:	0		
Feetsn:	450		
Feetew:	1100		
Feetwe:	0		
Utmx:	538870		
Utmy:	4331675		
Grnd elev:	800		
Depth:	225		
Bedrock:	793		
bedro 1:	7		
Aquelv:	0		
Static:	65		
Type test:	Not Reported		
Pumprate:	1		
Pumphou:	2		
Pumpdw:	225		
Bailerr:	0		
Bailerh:	0		
Bailerd:	0		
Welltype:	D	Well use:	HOME
Use other:	Not Reported	Method:	ROTARY
Method other:	Not Reported		
Casingl:	25		
Casingd:	6.63		
Casingm:	Not Reported		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	0		
Linerdi:	0		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	CLEAR	Groutm:	Not Reported
Groutf:	0		
Groutt:	0		
Methodg:	Not Reported		
Groutba:	0		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		

Owner:	WAYNE RICHARDS	Ownerad:	3020 S. ROCKPORT RD., BLOOMINGTON, IN
Ownerzc:	0		
Ownertx:	Not Reported	Driller:	FRED SCOTTS DRILLING
Drillad:	6236 W COWDEN RD., ELLETTSVILLE, IN		
Drillzc:	47429		
Drilltx:	(000)876-1055	Operator:	Not Reported
License:	Not Reported	Date co:	07-JUN-88
Cbuilde:	Not Reported		
Buildad:	Not Reported		
Buildzc:	0		
Buildtx:	Not Reported	Fieldby:	BEB
Field d:	09-MAR-89	Courtby:	Not Reported
Court d:	20-APR-60	Classby:	Not Reported
Class date:	16-NOV-64	Accwo:	Not Reported
Accwo date:	01-JUN-75	County:	MONROE
Town:	Not Reported	Rang:	Not Reported
Section:	0		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported
Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015222		

B5
SE **IN WELLS** **INDNR1000015254**
1/2 - 1 Mile
Lower

Refno:	213707		
Comp date:	05-NOV-63		
Drive:	1.5 MI S BLOOMINGTON IN, ON SR37 TO CO CLUB DR. 1ST PLACE E OF MONON RR.		
County1:	MONROE	Civilt:	PERRY
Town1:	8N	Range1:	1W
Quarter1:	SW	Quarter2:	SW
Quarter3:	SW		
Section1:	9		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	Not Reported		
Feetns:	200		
Feetsn:	0		
Feetew:	500		
Feetwe:	0		
Utmx:	540254		
Utmy:	4331835		
Grnd elev:	695		
Depth:	30		
Bedrock:	689		
bedro 1:	6		
Aquelv:	0		
Static:	8		
Type test:	Not Reported		
Pumprate:	0		
Pumphou:	0		
Pumpdw:	0		
Bailerr:	0		
Bailerh:	0		
Bailerd:	0		
Welltype:	D	Well use:	INDUSTRY

Use other:	Not Reported	Method:	CABLE TOOL
Method other:	Not Reported		
Casingl:	0		
Casingd:	0		
Casingm:	Not Reported		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	0		
Linerdi:	0		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	Not Reported	Groutm:	Not Reported
Groutf:	0		
Groutt:	0		
Methodg:	Not Reported		
Groutba:	0		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		
Owner:	INDIANA CRUSTING CO.	Ownerad:	240 CO CLUB DR
Ownerzc:	0		
Ownertx:	Not Reported	Driller:	GEORGE SNAPP
Drillad:	RR #4, BLOOMINGTON IN		
Drillzc:	0		
Drilltx:	Not Reported	Operator:	GEORGE SNAPP
License:	Not Reported	Date co:	05-NOV-63
Cbuilde:	Not Reported		
Buildad:	Not Reported		
Buildzc:	0		
Buildtx:	Not Reported	Fieldby:	Not Reported
Field d:	25-AUG-81	Courtby:	Not Reported
Court d:	20-APR-60	Classby:	WLS
Class date:	01-DEC-63	Accwo:	SL
Accwo date:	01-JUN-65	County:	MONROE
Town:	8N	Rang:	1W
Section:	9		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported
Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015254		

B6
SE
1/2 - 1 Mile
Lower

IN WELLS **INDNR1000015253**

Refno:	213712		
Comp date:	11-NOV-63		
Drive:	1.5MI S BLOOMINGTON IN, ON SR37 TO CO CLUB DR. 1ST PLACE E OFF MONEON RR. NE .25 OF CROSSING.		
County1:	MONROE	Civilt:	Not Reported
Town1:	8N	Range1:	1W
Quarter1:	SW	Quarter2:	SW
Quarter3:	SW		
Section1:	9		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	Not Reported		

Feetns:	400		
Feetsn:	0		
Feetew:	500		
Feetwe:	0		
Utmx:	540250		
Utmy:	4331830		
Grnd elev:	695		
Depth:	40		
Bedrock:	689		
bedro 1:	6		
Aquelv:	0		
Static:	8		
Type test:	Not Reported		
Pumprate:	0		
Pumphou:	0		
Pumpdw:	0		
Bailerr:	10		
Bailerh:	0		
Bailerd:	30		
Welltype:	D	Well use:	INDUSTRY
Use other:	Not Reported	Method:	CABLE TOOL
Method other:	Not Reported		
Casingl:	8		
Casingd:	6		
Casingm:	Not Reported		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	0		
Linerdi:	0		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	Not Reported	Groutm:	Not Reported
Groutf:	0		
Groutt:	0		
Methodg:	Not Reported		
Groutba:	0		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		
Owner:	INDIANA CRUSTING CO.	Ownerad:	240 CO CLUB DR
Ownerzc:	0		
Ownertx:	Not Reported	Driller:	GEO SNAPP
Drillad:	RR #4, BLOOMINGTON IN		
Drillzc:	0		
Drilltx:	Not Reported	Operator:	GEO SNAPP
License:	Not Reported	Date co:	11-NOV-63
Cbuilde:	Not Reported		
Buildad:	Not Reported		
Buildzc:	0		
Buildtx:	Not Reported	Fieldby:	BEB
Field d:	09-MAR-89	Courtby:	Not Reported
Court d:	20-APR-60	Classby:	Not Reported
Class date:	01-DEC-63	Accwo:	SL
Accwo date:	01-JUN-75	County:	MONROE
Town:	8N	Rang:	1W
Section:	9		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported

Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015253		

7
NW
1/2 - 1 Mile
Higher

IN WELLS **INDNR1000015554**

Refno:	213667		
Comp date:	12-AUG-70		
Drive:	LOT 174, ON W ALLEN ST. NE .25 OF ALLEN ST & RANCOM IN JCT.		
County1:	MONROE	Civilt:	PERRY
Town1:	8N	Range1:	1W
Quarter1:	SW	Quarter2:	NW
Quarter3:	SW		
Section1:	5		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	Not Reported		
Feetns:	1800		
Feetsn:	0		
Feetew:	100		
Feetwe:	0		
Utmx:	538475		
Utmy:	4333975		
Grnd elev:	830		
Depth:	143		
Bedrock:	0		
bedro 1:	0		
Aquelv:	0		
Static:	65		
Type test:	Not Reported		
Pumprate:	0		
Pumphou:	0		
Pumpdw:	0		
Bailerr:	.5		
Bailerh:	0		
Bailerd:	0		
Welltype:	D	Well use:	HOME
Use other:	Not Reported	Method:	CABLE TOOL
Method other:	Not Reported		
Casingl:	0		
Casingd:	0		
Casingm:	Not Reported		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	0		
Linerdi:	0		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	Not Reported	Groutm:	Not Reported
Groutf:	0		
Groutt:	0		
Methodg:	Not Reported		
Groutba:	0		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		

Owner:	CARL PENNA	Ownerad:	1730 W ALLEN, BLOOMINGTON IN
Ownerzc:	0		
Ownertx:	Not Reported	Driller:	GEORGE SNAPP
Drillad:	RR#4, BLOOMINGTON IN		
Drillzc:	0		
Drilltx:	Not Reported	Operator:	GEORGE SNAPP
License:	Not Reported	Date co:	02-JUL-64
Cbuilde:	Not Reported		
Buildad:	Not Reported		
Buildzc:	0		
Buildtx:	Not Reported	Fieldby:	BEB
Field d:	09-JUL-89	Courtby:	Not Reported
Court d:	20-APR-60	Classby:	DMM
Class date:	01-DEC-64	Accwo:	SL
Accwo date:	01-JUN-75	County:	MONROE
Town:	Not Reported	Rang:	1
Section:	5		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported
Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015554		

8
SW
1/2 - 1 Mile
Higher

IN WELLS **INDNR1000015263**

Refno:	213687		
Comp date:	21-JUN-73		
Drive:	ON TAPP RD W OF ROCKPORT ABOUT .5 MI ON WOLLERY QUARY LAND.		
County1:	MONROE	Civilt:	Not Reported
Town1:	8N	Range1:	1W
Quarter1:	SE	Quarter2:	SE
Quarter3:	SE		
Section1:	7		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	43318		
Feetns:	150		
Feetsn:	0		
Feetew:	0		
Feetwe:	650		
Utmx:	538325		
Utmy:	4331860		
Grnd elev:	760		
Depth:	225		
Bedrock:	748		
bedro 1:	12		
Aquelv:	0		
Static:	45		
Type test:	Not Reported		
Pumprate:	0		
Pumphou:	0		
Pumpdw:	0		
Bailerr:	.2		
Bailerh:	0		
Bailerd:	180		
Welltype:	D	Well use:	HOME

Use other:	Not Reported	Method:	CABLE TOOL
Method other:	Not Reported		
Casingl:	14		
Casingd:	5.63		
Casingm:	Not Reported		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	0		
Linerdi:	0		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	Not Reported	Groutm:	Not Reported
Groutf:	0		
Groutt:	0		
Methodg:	Not Reported		
Groutba:	0		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		
Owner:	WOOLERY STONE CO.	Ownerad:	1722 TAPP RD, BLOOMINGTON IN
Ownerzc:	0		
Ownertx:	Not Reported	Driller:	GEORGE SNAPP
Drillad:	RR5, BOX 86, BLOOMINGTON IN		
Drillzc:	0		
Drilltx:	Not Reported	Operator:	GEORGE SNAPP
License:	Not Reported	Date co:	21-JUN-73
Cbuilde:	Not Reported		
Buildad:	Not Reported		
Buildzc:	0		
Buildtx:	Not Reported	Fieldby:	BEB
Field d:	09-MAR-89	Courtby:	Not Reported
Court d:	20-APR-60	Classby:	Not Reported
Class date:	25-OCT-63	Accwo:	Not Reported
Accwo date:	01-JUN-75	County:	MONROE
Town:	Not Reported	Rang:	Not Reported
Section:	0		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported
Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015263		

9
ENE
1/2 - 1 Mile
Higher

IN WELLS **INDNR1000015476**

Refno:	410916		
Comp date:	16-JUL-07		
Drive:	Not Reported		
County1:	MONROE	Civilt:	PERRY
Town1:	8N	Range1:	1W
Quarter1:	SE	Quarter2:	SE
Quarter3:	SW		
Section1:	4		
Topo:	BLOOMINGTON	Subdiv:	Not Reported
Lotno:	Not Reported		

Feetns:	373		
Feetsn:	0		
Feetew:	2317		
Feetwe:	0		
Utmx:	540796		
Utmy:	4333485		
Grnd elev:	783		
Depth:	150		
Bedrock:	773		
bedro 1:	10		
Aquelv:	0		
Static:	0		
Type test:	Not Reported		
Pumprate:	0		
Pumphou:	0		
Pumpdw:	0		
Bailerr:	0		
Bailerh:	0		
Bailerd:	0		
Welltype:	Not Reported	Well use:	OTHER
Use other:	GEOTHERMAL	Method:	ROTARY
Method other:	Not Reported		
Casingl:	0		
Casingd:	0		
Casingm:	GEO LOOP		
Screenl:	0		
Screend:	0		
Screenm:	Not Reported	Slot:	Not Reported
Liner top:	0		
Linerdi:	0		
Pumpset:	0		
Type pump:	Not Reported	Pump other:	Not Reported
Quality:	Not Reported	Groutm:	BENTONITE
Groutf:	0		
Groutt:	150		
Methodg:	PRESSURE		
Groutba:	5		
Sealing:	Not Reported	Filledf:	Not Reported
Filledt:	Not Reported	Methods:	Not Reported
Sealbag:	0		
Owner:	Not Reported	Ownerad:	1327 S DUNN ST BLOOMINGTON, IN
Ownerzc:	47401		
Ownertx:	Not Reported	Driller:	C&J WELL DRILLING CO
Drillad:	PO BOX 747 BROWNBURG, IN		
Drillzc:	46112		
Drilltx:	(317)892-2100	Operator:	WALTER ANDERSON
License:	2081	Date co:	25-OCT-07
Cbuilde:	INDIANA GEOTHERMAL		
Buildad:	4355 LAFAYETTE BLVD INDIANAPOLIS, IN		
Buildzc:	46254		
Buildtx:	Not Reported	Fieldby:	DRILLER
Field d:	16-JUL-07	Courtby:	Not Reported
Court d:	01-JUL-04	Classby:	Not Reported
Class date:	01-AUG-65	Accwo:	Not Reported
Accwo date:	07-AUG-78	County:	MONROE
Town:	8N	Rang:	1W
Section:	4		
Ctyperm:	Not Reported	Dnrvarn:	Not Reported
Water supp:	Not Reported		
Bore hole:	0		
Gravelp:	0	Irregla:	Not Reported

Reserve:	Not Reported	Reserve:	0
Site id:	INDNR1000015476		

AREA RADON INFORMATION

State Database: IN Radon

Radon Test Results

Zipcode	Year	Test Type	Location	Result
47403	1997	Short Term	1st Floor	2.1
47403	2000	Short Term	2nd Floor	0.6
47403	2000	Short Term	2nd Floor	2.1
47403	0	Unknown	Other	0.5
47403	0	Unknown	Other	2.2
47403	0	Short Term	Other	9.9
47403	0	Unknown	Other	1.0
47403	0	Unknown	Other	2.1
47403	1994	Unknown	Other	0.6
47403	1998	Post-Mitigation	Other	0.9
47403	1994	Short Term	Other	1.4
47403	1994	Short Term	Other	3.9
47403	0	Unknown	Other	0.6
47403	0	Unknown	Other	7.1
47403	0	Unknown	Other	1.7
47403	0	Unknown	Other	2.7
47403	0	Unknown	Other	0.7
47403	0	Unknown	Other	1.4
47403	0	Unknown	Other	1.2
47403	0	Unknown	Other	1.7
47403	0	Unknown	Other	4.4
47403	0	Unknown	Other	5.0
47403	0	Unknown	Other	3.0
47403	0	Unknown	Other	4.4
47403	1999	Long Term	1st Floor	2.1
47403	1994	Short Term	Other	0.8
47403	1996	Post-Mitigation	Other	0.4
47403	0	Short Term	Basement	0.3
47403	0	Short Term	Other	1.3
47403	0	Unknown	Other	3.3
47403	0	Short Term	Other	3.3
47403	0	Short Term	Other	14.8
47403	0	Short Term	Other	14.8
47403	0	Short Term	Basement	6.9
47403	2000	Short Term	Basement	0.7
47403	2000	Short Term	Basement	2.4
47403	2000	Short Term	Basement	2.8
47403	1997	Short Term	Basement	4.8
47403	2000	Short Term	Basement	5.1
47403	2000	Short Term	Basement	5.3
47403	2000	Short Term	2nd Floor	0.6
47403	2000	Short Term	1st Floor	25.6
47403	2000	Short Term	2nd Floor	2.5
47403	2000	Short Term	1st Floor	2.4
47403	2000	Short Term	1st Floor	2.4
47403	2000	Short Term	2nd Floor	2.1
47403				

AREA RADON INFORMATION

	2001	Short Term	1st Floor	27.5
47403	2000	Short Term	Basement	1.2
47403	2000	Short Term	Basement	1.3
47403	1996	Short Term	Other	0.9
47403	1996	Short Term	Other	1.2
47403	1998	Short Term	Other	2.8
47403	1998	Short Term	Other	3.2
47403	1998	Short Term	Other	0.7
47403	2000	Post-Mitigation	Basement	1.4
47403	2003	Short Term	Basement	6.2
47403	2003	Short Term	Basement	2.0
47403	2004	Short Term	C	1.3
47403	2004	Short Term	1st Floor	1.3
47403	2004	Short Term	1st Floor	3.8
47403	2004	Short Term	1st Floor	4.2
47403	2002	Short Term	Basement	1.5
47403	2003	Short Term	1st Floor	1.4
47403	2003	Short Term	1st Floor	2.0
47403	2003	Short Term	1st Floor	0.9
47403	2003	Short Term	1st Floor	1.2
47403	2003	Short Term	1st Floor	1.1
47403	2003	Short Term	1st Floor	0.9
47403	2003	Short Term	1st Floor	2.1
47403	2003	Short Term	1st Floor	1.6
47403	2003	Short Term	1st Floor	3.9
47403	2003	Short Term	1st Floor	1.5
47403	2003	Short Term	1st Floor	1.0
47403	2003	Short Term	1st Floor	1.0
47403	2003	Short Term	1st Floor	1.5
47403	2003	Short Term	1st Floor	0.7
47403	2003	Short Term	1st Floor	1.0
47403	2003	Short Term	1st Floor	1.6
47403	2003	Short Term	1st Floor	0.9
47403	2003	Short Term	1st Floor	2.7
47403	2002	Short Term	Basement	1.5
47403	2004	Long Term	Basement	1.0
47403	2001	Short Term	Basement	74.4
47403	2001	Short Term	Basement	25.0
47403	2001	Short Term	Basement	19.1
47403	2001	Short Term	Basement	17.0
47403	2000	Post-Mitigation	1st Floor	1.0
47403	2000	Post-Mitigation	1st Floor	1.0
47403	2001	Short Term	1st Floor	2.0
47403	2001	Short Term	1st Floor	13.5
47403	2001	Short Term	1st Floor	0.7
47403	2001	Short Term	1st Floor	1.6
47403	2001	Short Term	1st Floor	1.0
47403	2001	Short Term	1st Floor	1.2
47403	2001	Short Term	1st Floor	1.3
47403	2001	Short Term	1st Floor	0.9
47403	2002	Short Term	Basement	5.3
47403	2002	Short Term	Basement	5.3
47403	2000	Short Term	1st Floor	0.9
47403	2000	Short Term	1st Floor	1.2
47403	2001	Short Term	0	3.5
47403	2002	Long Term	1st Floor	0.9
47403				

AREA RADON INFORMATION

	2001	Short Term	Basement	25.6
47403	2001	Short Term	Basement	7.0
47403	2001	Short Term	Basement	5.7
47403	2001	Short Term	Basement	3.7
47403	2001	Short Term	1st Floor	1.8
47403	2004	Long Term	1st Floor	1.7
47403	0	Short Term	Basement	1.0
47403	0	Short Term	Basement	6.0
47403	1997	Short Term	Basement	16.6
47403	2000	Short Term	2nd Floor	2.5
47403	2000	Short Term	Basement	0.9
47403	2000	Short Term	Basement	4.9
47403	2004	Short Term	1st Floor	1.8
47403	2003	Short Term	1st Floor	1.8
47403	2003	Short Term	1st Floor	1.2
47403	2003	Short Term	1st Floor	1.2
47403	2003	Short Term	1st Floor	3.5
47403	2001	Short Term	Basement	23.2
47403	2001	Short Term	1st Floor	1.5
47403	2001	Short Term	1st Floor	2.5
47403	2000	Short Term	1st Floor	1.3
47403	2001	Short Term	1st Floor	6.2

Federal EPA Radon Zone for MONROE County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for MONROE COUNTY, IN

Number of sites tested: 19

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.718 pCi/L	91%	9%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	6.289 pCi/L	58%	37%	5%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

State Database: IN Radon
Source: Department of Health
Telephone: 317-233-7148
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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ATTACHMENT 5

State of Indiana

Be It Known That

Rudy D. Fields

having qualified as required by law is hereby
authorized to practice in the state of Indiana as a

Licensed Professional Geologist

In witness whereof this

License Number 1511

is given by the

Indiana Board of Licensure for Professional Geologists

on this

31st day of May, 1994.

This certificate is issued in accordance with Public Law 245, Acts of the 101st General Assembly of 1979, as amended.

John C. Steinmetz, State Geologist

State Form LPG31201

Institute of Hazardous Materials Management

This certifies that

Rudy D. Fields

has successfully met all the requirements of education, experience and examination, and is hereby designated a

Certified Hazardous Materials Manager®

March 28, 2011
Date of Certification

15646
Credential Number

March 28, 2016
Certification Expires

Executive Director

Valid so long as this credential is renewed according to schedule and is not otherwise revoked.

Attachment 6:

Wetland Delineation, Dragoo Property

VET Environmental Engineering, LLC

Wetland Delineation

Dragoo Property
Habitat for Humanity of Monroe County
Bloomington, IN 47403

Prepared for:
Mr. Sean Price – Business Manager
Habitat for Humanity of Monroe County
213 East Kirkwood Avenue
Bloomington, IN 47408

Prepared by:

VET Environmental Engineering, LLC
341 West Sample Road
Bloomington, Indiana 47404

Date:
September 2, 2015

Project Number:
15-34

1. Introduction

VET Environmental Engineering, LLC (VET) was retained by Mr. Sean Price, Business Manager of Habitat for Humanity of Monroe County (Habitat) to evaluate a potential wetland area on property located near the intersection of South Rockport Road and South Rogers Street, Bloomington, Monroe County, Indiana. The Property is composed of one parcel (53-08-08-100-115.000-009) of land, approximately 5.66 acres in area, described as: 015-10185-01 PT SW NE 8-8-1W 5.40A; PLAT 27 (Site) (**Figure 1**). The Site is also referred to as the Dragoo Property. The Site is located in an upland area on an undeveloped lot that was historically used as a dirt bike track and for hay crop. VET was contracted to determine whether the Site contains regulated wetlands and if so delineate the wetland area(s). Figures and Site photographs are included to aide in understanding site context.

VET conducted field work at the Site on August 28, 2015. The goal of this work was to determine the regulatory status of an existing drainage swale on the Property. The area surrounding the drainage swale exhibits an entirely different plant community than the fields to the west. The majority of the plants inhabiting the area of the drainage swale are facultative wetland plants, or plants that usually occur in wetlands. VET evaluated three sample locations: DP-1, DP-2, and DP-3. DP-1 and DP-2 are located on the Site. DP-3 is located approximately thirty (30) feet south of the Site boundary on an adjacent parcel (**Figure 5**).

The soils that underlay the drainage swale are mapped as Wakeland Silt Loams according to the United States Department of Agriculture (USDA) Web Soil Survey (WSS). These soils are somewhat poorly drained and are common hydric soils. Hydric soils are those that can remain wet at shallow depths for significant durations during the growing period allowing the area to support vegetation adapted to saturated soil conditions (hydrophytes). Although there are no wetlands indicated on the Site according to the National Wetlands Inventory, the area surrounding the drainage swale exhibits wetland indicators.

2. Methods

A wetland delineation was performed by VET utilizing the following methodology:

<u>Hydrophytic Vegetation</u>

The presence of Hydrophytic vegetation is "*readily observable evidence that episodes of inundation or soil saturation lasting more than a few days during the growing season have occurred repeatedly over a period of years and that the timing, duration and frequency of wet conditions have been sufficient to produce a characteristic wetland plant community and hydric soil morphology* (USACE, p. 36)."

Hydrophytic vegetation is classified under several subcategories that include Obligate Wetland, Facultative Wetland, Facultative, Facultative Upland, and Upland. The plants are classified

based on the estimated probabilities of a particular species occurring in wetland conditions. The indicator status of each species identified as part of this wetland delineation was determined using the *National List of Plant Species that Occur in Wetlands: North Central (Region 3)*. Each indicator status is defined below:

Obligate Wetland (OBL) – Occur almost exclusively in wetland areas under natural conditions (estimated probability >99%)

Facultative Wetland (FACW) – Usually occur in wetlands but occasionally occur in non-wetland (upland) areas (estimated probability 67% to 99%)

Facultative (FAC) – Equally likely to occur in both wetland and upland areas (estimated probability 33% to 67%)

Facultative Upland (FACU) – Usually occur in upland areas, but occasionally occur in wetlands (estimated probability is 1% to 33%)

Obligate Upland (UPL) – Occur almost always in upland areas (estimated probability is >99%)

OBL, FACW and FAC species are considered wetland species. Areas are considered to meet hydrophytic vegetation criteria when more than 50% of the dominant plant species in each vegetation strata (tree, sapling/shrub, herb, and woody vine) within a plant community are wetland species (Dominance Test).

Hydric Soils

Hydric soils are soils that "*formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part* (USACE, p. 35)." Soils must be flooded, ponded or saturated for at least one week or more during the growing season when soil temperatures exceed 41˚F. Anaerobic (oxygen deficient) conditions cause changes in the soil matrix color, mottling, structure and chemistry. These properties are used to identify hydric soils from non-hydric soils.

Wetland Hydrology

"Wetland hydrology indicators provide evidence that the site has a continuing wetland hydrologic regime and that hydric soils and hydrophytic vegetation are not relicts of a past hydrologic regime (USACE, p. 79)." Wetland hydrology is defined as the presence of water for a significant period of time at or near the surface during the growing season. If during the field investigation there is no evidence of water at the surface (12" to 18"), wetland indicators (primary and/or secondary) may confirm periodic wetland hydrology.

3. Desktop Reconnaissance

National Wetland Inventory (NWI)

No wetland features were identified on the Site by the NWI Map (Bloomington, IND Quadrangle).

Soil Survey

The USDA WSS indicates that the Site is underlain by Wakeland Silt Loam, frequently flooded (map symbol Wa) soils (**Figure 4**). Wakeland Silt Loams are somewhat poorly-drained soils but are not included on the Hydric Soils List for Monroe County, Indiana. The Monroe County hydric soils list includes Bonnie silt loam (frequently flooded), Peoga silt loam, Zipp silty clay loam, and Zipp silty clay loam (frequently flooded) as the hydric soils commonly found in Monroe County.

Topographic Map

2010 Topographic contour data was obtained from the Monroe County GIS. Topographic contouring is included on **Figure 5**. The drainage swale with the potential wetland area is located in the northeast corner of the Site. The drainage way appears to have a more defined channel to the northwest of the potential wetland area. The potential wetland area appears to be dominated by sheet flow surface drainage allowing a hydrophytic plant community to develop in an area wider than the drainage feature itself.

Flow in the drainage swale is directed from the northwest to the southeast. The drainage appears to be an unnamed ephemeral tributary of Clear Creek. After traveling off Site the ephemeral drainage appears to feed an intermittent drainage of Clear Creek. There are two other areas on the Site that appear, based on aerial photography and topographic contouring, to be ephemeral drainages. VET confirmed that these ephemeral drainages exist on the Site during its field work on August 28, 2015.

Aerial Photography

Aerial photography was reviewed for the Property for the period between 1998 and 2014 (**Figures 2** and **3**). The Site is undeveloped in all photos reviewed. None of the aerial photographs reviewed showed saturation or inundation in the study area on the Site.

4. Field Investigation

VET conducted the wetland delineation on August 28, 2015. VET observed characteristics of hydrophytic vegetation and wetland hydrology in the area of interest during the field investigation. The concave depression where the potential wetland area is located is approximately 100 feet long (northwest to southwest) and approximately 50 feet wide along the

drainage swale present at the Site. The entire potential wetland area is dominated by vegetation in the shrub stratum. No individuals from the tree stratum and only a few individuals from the sapling/shrub stratum were observed. The area surrounding the ephemeral drainage contains a dominance of hydrophytic vegetation. VET collected three soil samples in the potential wetland area: DP-1, DP-2, and DP-3. The sample locations evaluated are shown on **Figure 5**.

Wetland Characteristics

Hydrophytic vegetation:

DP-1: Hydrophytic vegetation is present within the DP-1 area. Only vegetation from the herb stratum is present in the sampled area. The Herb Stratum (plot size ~25 ft^2) includes one species of Fescue (Festuca *sp.* the exact species could not be identified but the growth was assumed to be a facultative variety), Smooth Ironweed *(Vernonia fasciculata),* Creeping Bentgrass *(Agrostis stolonifera)*, and Carolina Horsenettle *(Solanum carolinense)*.

DP-2: Hydrophytic vegetation is present within the DP-2 area. Only vegetation from the herb stratum is present in the sampled area. The Herb Stratum (plot size ~25 ft^2) includes one species of Fescue (*Festuca sp.* the exact species could not be identified but the growth was assumed to be a facultative variety), Smooth Ironweed *(Vernonia fasciculata)*, Creeping Bentgrass *(Agrostis stolonifera)*, Canadian Tick-Trefoil (*Desmodium canadense*), Brome-like Sedge (*Carex bromoides*), and Hairy Groundcherry (*Physalis pubescens*).

DP-3: Hydrophytic vegetation is present within the DP-3 area. Only vegetation from the herb stratum is present in the study area. The Herb Stratum (plot size ~25 ft^2) includes one species of Fescue (*Festuca sp.* the exact species could not be identified but the growth was assumed to be a facultative variety), and Creeping Bentgrass *(Agrostis stolonifera)*.

Based on the results of all three sample locations, hydrophytic vegetation is present in the potential wetland area at the Site. The Wetland Determination Data Forms – Midwest Region completed by VET during the wetland delineation are includes as **Attachment 2**.

Hydric soils:

DP-1: Test pit DP-1 was excavated to a depth of approximately seventeen (17) inches. The soil matrix color from the surface to twelve (12) inches depth was brown (7.5YR 4/3). No redox features were observed from the surface to twelve (12) inches depth. The soil color from twelve (12) to seventeen (17) inches depth was brown (7.5YR 4/3) with yellowish red (5YR 4/6) redox concentrations along root channels and in pore linings. Yellowish red (5YR 5/8) patches in the soil matrix were also observed in the interval from twelve (12) to seventeen (17) inches depth. The soil texture is classified as silty clay loam.

DP-2: Test pit DP-2 was excavated to a depth of approximately fifteen (15) inches. The soil matrix color from the surface to four (4) inches depth was dark brown (7.5YR 3/3). No redox features were observed from the surface to four (4) inches depth. The soil color from four (4) to seven (7) inches depth was brown (7.5YR 4/3). No redox features were observed from four (4) to seven (7) inches depth. The soil color from seven (7) to twelve (12) inches depth was brown (7.5YR 4/3) with yellowish red (5YR 5/8) patches in the soil matrix and black (10YR 2/1) redox concentrations in pore linings. The soil color from twelve (12) to fifteen (15) inches depth was brown (7.5YR 4/3) with black (10YR 2/1) concentrations as patches in the matrix and pore linings. The soil texture is classified as silty clay loam.

DP-3: Test pit DP-3 was excavated to a depth of approximately sixteen (16) inches. The soil matrix color from the surface to three (3) inches depth was brown (7.5YR 4/3). No redox features were observed from the surface to three (3) inches depth. The soil color from three (3) to fifteen (15) inches depth was brown (7.5YR 4/3) with yellowish red (5YR 4/6) redox concentrations as pore linings. The soil texture is classified as silty clay loam.

Based on the results of all three sample locations, hydric soils are not present in the potential wetland area at the Site. VET used the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) and also evaluated Site soils using the Corps of Engineers Wetland Delineation Manual: Eastern Mountain and Piedmont Region (Version 2.0). Sample location DP-3 appears to exhibit hydric soil indicator F21: Red Parent Material from the Eastern Mountain and Piedmont Region. DP-3 is not located on the Site, and past experience with USACE shows that utilizing Data Forms for the Midwest Region is the preferred methodology. The Wetland Determination Data Forms – Midwest Region completed by VET during the wetland delineation are included as **Attachment 2**.

Wetland hydrology:

DP-1: Two secondary indicators of wetland hydrology were present at sample location DP-1 including Geomorphic Position (D2) and FAC-Neutral Test (D5).

DP-2: Two secondary indicators of wetland hydrology were present at sample location DP-2 including Geomorphic Position (D2) and FAC-Neutral Test (D5).

DP-3: Two secondary indicators of wetland hydrology were present at sample location DP-3 including Geomorphic Position (D2) and FAC-Neutral Test (D5).

Based on the results of all three sample locations, wetland hydrology is present in the potential wetland area at the Site. The Wetland Determination Data Forms – Midwest Region completed by VET during the wetland delineation are includes as **Attachment 2**.

5. Results and Conclusions

The three sample locations evaluated at the Site, DP-1, DP-2, and DP-3, exhibited wetland hydrology and hydrophytic vegetation. Hydric soils were not observed at any of the three observation locations based on the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). In order for an area to be identified as wetland subject to regulatory jurisdiction under Section 404 of the Clean Water Act it must exhibit hydrophytic vegetation, hydric soils, and wetland hydrology. It is VET's professional opinion based on the field work conducted that no regulated wetland areas exist at the Site.

VET evaluated the ephemeral drainage that generally runs from northwest to southeast across the Site for the presence of jurisdictional wetlands. The drainage appears to exhibit a downstream connection with an unnamed intermittent tributary of Clear Creek. There are two other drainages on the Site that appear to exhibit downstream connections with the intermittent tributary of Clear Creek. The unnamed intermittent tributary runs west to east to the south of the Site between Thomson Park Drive and Countryside Lane. Based on these characteristics, it is possible that all three ephemeral drainages on the Site will be considered jurisdictional by USACE. If any alterations to the drainages are planned, VET first recommends a full jurisdictional determination be completed at the Site for approval by USACE. VET did not conduct a jurisdictional determination as part of this project.

If you have any questions regarding anything contained in the above wetland delineation please do not hesitate to call Sara Hamidovic at (812) 327-2838.

Respectfully submitted,

Original Signed

Sara R. Hamidovic, PE, CHMM
President

References

U.S. Army Corps of Engineers, 2010, Environmental Laboratory, Interim Regional Supplement of the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (ERDC/EL TR-10-9): Vicksburg, MS, U.S. Army Corps of Engineers (USACE).

U.S. Army Corps of Engineers, 2010, Environmental Laboratory, Interim Regional Supplement of the Corps of Engineers Wetland Delineation Manual: Midwest Region (ERDC/EL TR-10-16): Vicksburg, MS, U.S. Army Corps of Engineers (USACE).

Steve W. Chadde, 2011, Wetland Plants of Indiana, A Complete Guide to the Wetland and Aquatic Plants of the Hoosier State: Lexington, KY, 317, 456, 559p.

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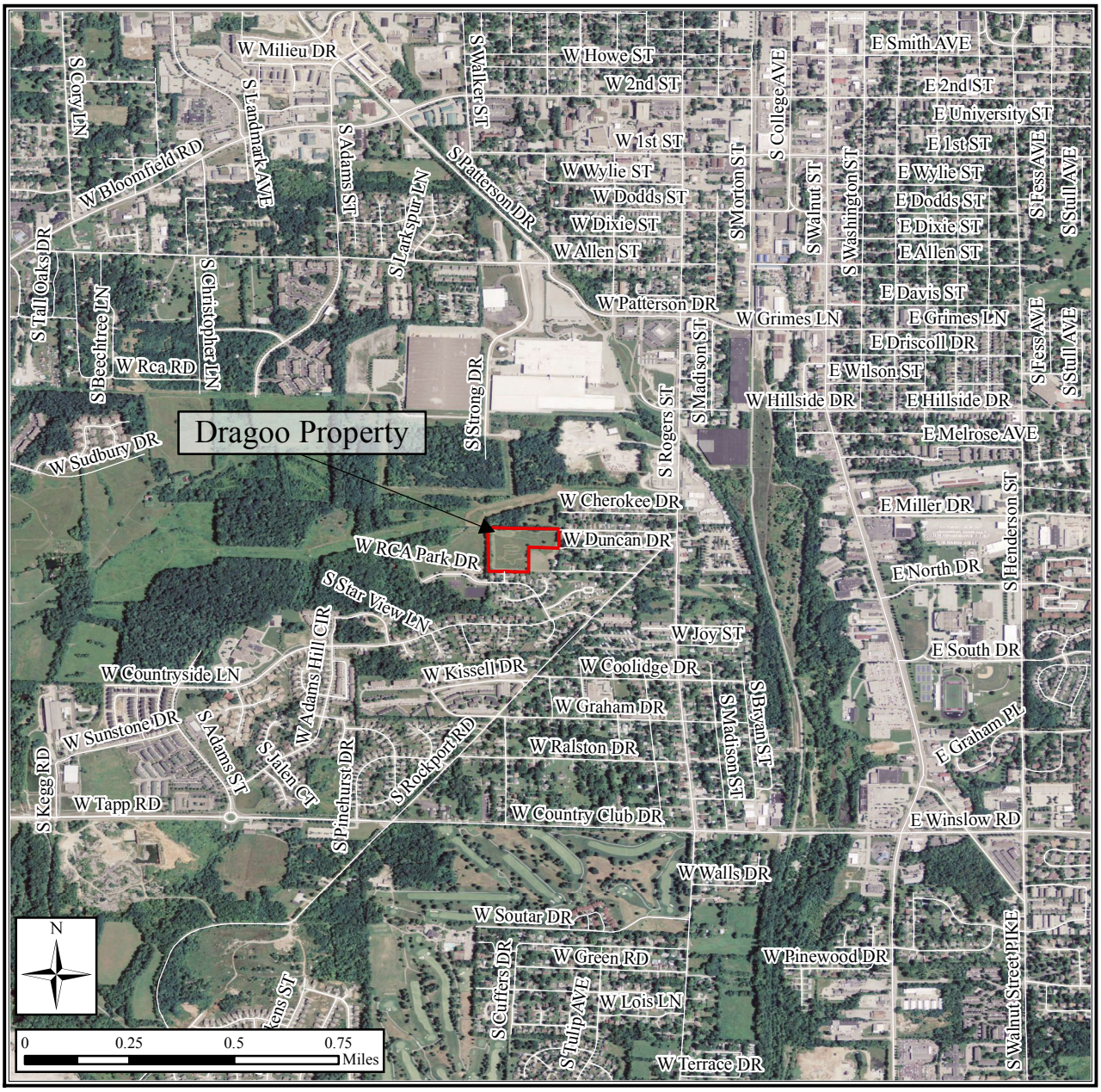
Resource Management Group, Inc., 1988, National List of Plant Species that Occur in Wetlands: North Central (Region 3). Available at: http: www.nwi.fws.gov.bha/list88.htm.



Legend

Dragoo Property

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 1

Area Map with Parcel Identification
Dragoo Property, Bloomington, Indiana

For: Dragoo Property | Date: 8/31/15 | Project #: 15-34

Graphics obtained from: NAIP, IDHS

Legend Dragoo Property

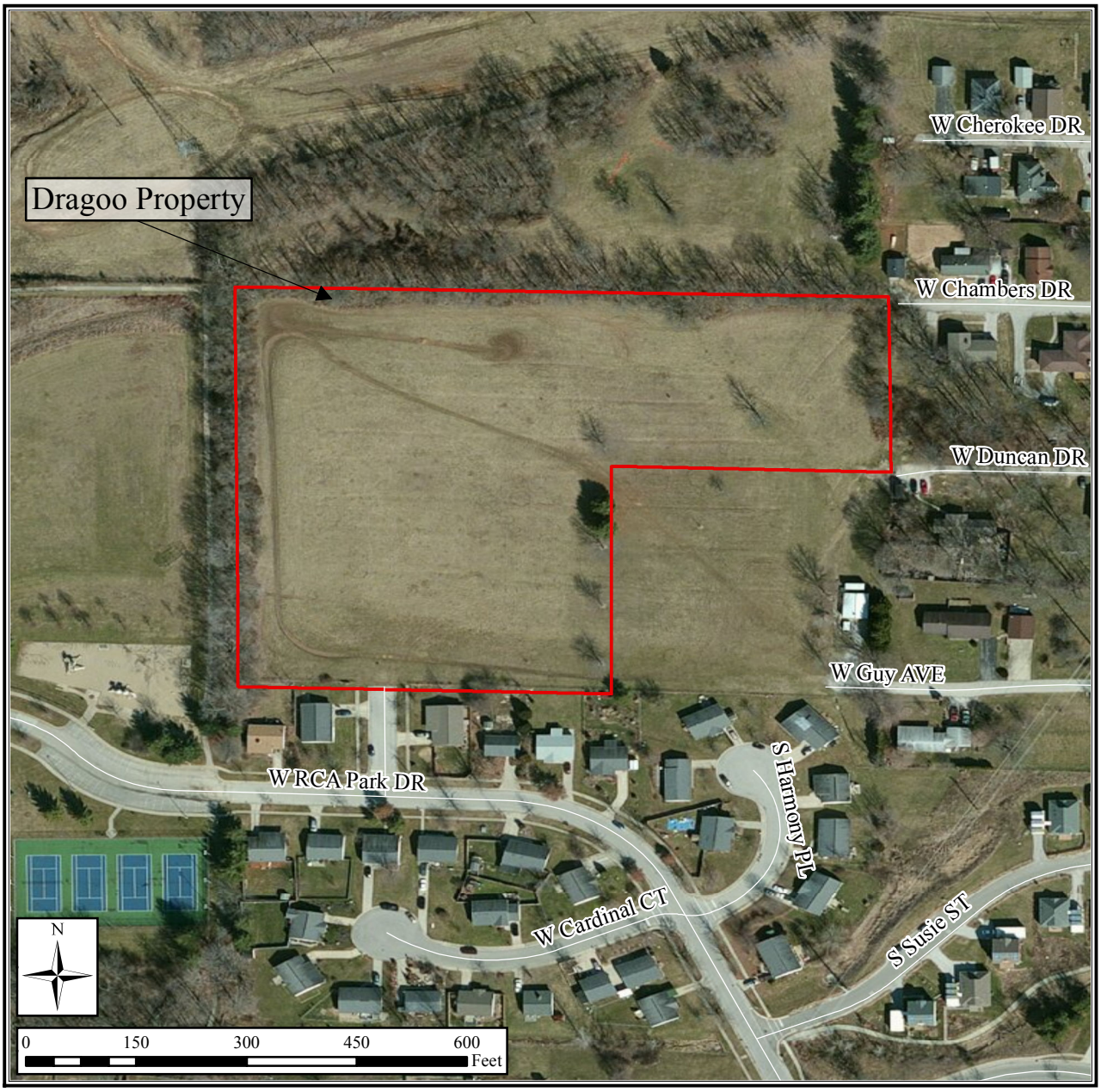
VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 2
1998 Aerial Photograph
Dragoo Property, Bloomington, Indiana

For: Dragoo Property | Date: 8/31/15 | Project #: 15-34

Graphics obtained from: USGS, IDHS



Legend Dragoo Property

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 3
2014 Aerial Photograph
Dragoo Property, Bloomington, Indiana

For: Dragoo Property | Date: 8/31/15 | Project #: 15-34

Graphics obtained from: NAIP, IDHS

Legend

- CrB 33.1% Crider Silt Loam, 2-6% Slopes
- CrC 62.2% Crider Silt Loam, 6-12% Slopes
- CtB 0.7% Crider-Urban Land Complex, 2-6% Slopes
- CtC 1.9% Crider-Urban Land Complex, 6-12% Slopes
- Wa 2.1% Wakeland Silt Loam, 0-2% Slopes

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 4
Soils Map
Dragoo Property, Bloomington, Indiana

For: Dragoo Property | Date: 8/31/15 | Project #: 15-34

Graphics obtained from: NAIP, IDHS, USDA WSS

Legend

Dragoo Property

VET Environmental Sample Locations

VET Environmental Engineering, LLC

341 West Sample Road
Bloomington, IN 47404
Phone: (812) 327-2838
www.vet-env.com

Figure 5

Topographical Map with Sample Locations
Dragoo Property, Bloomington, Indiana

For: Dragoo Property | Date: 8/31/15 | Project #: 15-34

Graphics obtained from: NAIP, IDHS, Monroe County GIS

Dragoo Property Wetland Delineation Photos

Potential Wetland Location
(view to the northwest)

DP-1 Soil Profile

DP-2 Soil Profile

DP-3 Soil Profile

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Dragoo Property City/County: Bloomington/Monroe Sampling Date: 8/28/15
Applicant/Owner: Habitat for Humanity of Monroe County State: IN Sampling Point: DP-1
Investigator(s): S. Hamidovic/R. Taylor Section, Township, Range: S8 T8N R1W
Landform (hillslope, terrace, etc.): Drainage Swale Local relief (concave, convex, none): concave
Slope (%): 0-2 Lat: 39°08'44.80"N Long: 86°32'35.74"W Datum: WGS84
Soil Map Unit Name: Wakeland Silt Loam, Frequently Flooded NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No — (If no, explain in Remarks.)
Are Vegetation —, Soil —, or Hydrology — significantly disturbed? Are "Normal Circumstances" present? Yes X No —
Are Vegetation —, Soil —, or Hydrology — naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes +	No —	Is the Sampled Area within a Wetland? Yes — No +
Hydric Soil Present?	Yes —	No +	
Wetland Hydrology Present?	Yes +	No —	

Remarks:
N/A

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Vernonia fasciculata	20	+	FACW
2. Agrostis stolonifera	60	+	FACW
3. Solanum carolinense	5	-	FACU
4. Festuca sp.	15	-	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	80	x 2 = 160
FAC species	15	x 3 = 45
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	100 (A)	225 (B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

+ 1 - Rapid Test for Hydrophytic Vegetation
+ 2 - Dominance Test is >50%
+ 3 - Prevalence Index is ≤3.0[1]
— 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes + No —

Remarks: (Include photo numbers here or on a separate sheet.)
N/A

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR4/3	100	—	—	—	—	SiCL	—
12-17	7.5YR4/3	60	5YR4/6	10	C	PL	SiCL	—
			5YR5/8	30	C	M	SiCL	—

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- — Histosol (A1)
- — Histic Epipedon (A2)
- — Black Histic (A3)
- — Hydrogen Sulfide (A4)
- — Stratified Layers (A5)
- — 2 cm Muck (A10)
- — Depleted Below Dark Surface (A11)
- — Thick Dark Surface (A12)
- — Sandy Mucky Mineral (S1)
- — 5 cm Mucky Peat or Peat (S3)
- — Sandy Gleyed Matrix (S4)
- — Sandy Redox (S5)
- — Stripped Matrix (S6)
- — Loamy Mucky Mineral (F1)
- — Loamy Gleyed Matrix (F2)
- — Depleted Matrix (F3)
- — Redox Dark Surface (F6)
- — Depleted Dark Surface (F7)
- — Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- — Coast Prairie Redox (A16)
- — Dark Surface (S7)
- — Iron-Manganese Masses (F12)
- — Very Shallow Dark Surface (TF12)
- — Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes — No +

Remarks:

N/A

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- — Surface Water (A1)
- — High Water Table (A2)
- — Saturation (A3)
- — Water Marks (B1)
- — Sediment Deposits (B2)
- — Drift Deposits (B3)
- — Algal Mat or Crust (B4)
- — Iron Deposits (B5)
- — Inundation Visible on Aerial Imagery (B7)
- — Sparsely Vegetated Concave Surface (B8)
- — Water-Stained Leaves (B9)
- — Aquatic Fauna (B13)
- — True Aquatic Plants (B14)
- — Hydrogen Sulfide Odor (C1)
- — Oxidized Rhizospheres on Living Roots (C3)
- — Presence of Reduced Iron (C4)
- — Recent Iron Reduction in Tilled Soils (C6)
- — Thin Muck Surface (C7)
- — Gauge or Well Data (D9)
- — Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- — Surface Soil Cracks (B6)
- — Drainage Patterns (B10)
- — Dry-Season Water Table (C2)
- — Crayfish Burrows (C8)
- — Saturation Visible on Aerial Imagery (C9)
- — Stunted or Stressed Plants (D1)
- + Geomorphic Position (D2)
- + FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes — No — Depth (inches): N/A

Water Table Present? Yes — No — Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes — No — Depth (inches): N/A

Wetland Hydrology Present? Yes + No —

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

N/A

Remarks:

N/A

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Dragoo Property City/County: Bloomington/Monroe Sampling Date: 8/28/15
Applicant/Owner: Habitat for Humanity of Monroe County State: IN Sampling Point: DP-2
Investigator(s): S. Hamidovic/R. Taylor Section, Township, Range: S8 T8N R1W
Landform (hillslope, terrace, etc.): Drainage Swale Local relief (concave, convex, none): concave
Slope (%): 0-2 Lat: 39°08'44.80"N Long: 86°32'35.74"W Datum: WGS84
Soil Map Unit Name: Wakeland Silt Loam, frequently flooded NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes + No — (If no, explain in Remarks.)
Are Vegetation —, Soil —, or Hydrology — significantly disturbed? Are "Normal Circumstances" present? Yes + No —
Are Vegetation —, Soil —, or Hydrology — naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes +	No —	Is the Sampled Area within a Wetland? Yes — No +
Hydric Soil Present?	Yes —	No +	
Wetland Hydrology Present?	Yes +	No —	

Remarks: N/A

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Vernonia fasciculata	30	+	FACW
2. Agrostis stolonifera	30	+	FACW
3. Desmodium canadense	15	—	FAC
4. Carex bromoides	3	—	FACW
5. Physalis pubescens	5	—	UPL
6. Festuca sp.	17	—	FAC
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	63	x 2 = 126
FAC species	32	x 3 = 96
FACU species	0	x 4 = 0
UPL species	5	x 5 = 25
Column Totals:	100 (A)	247 (B)

Prevalence Index = B/A = 2.47

Hydrophytic Vegetation Indicators:

+ 1 - Rapid Test for Hydrophytic Vegetation
+ 2 - Dominance Test is >50%
+ 3 - Prevalence Index is ≤3.0[1]
— 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes + No —

Remarks: (Include photo numbers here or on a separate sheet.)
N/A

SOIL

Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR3/3	100					SiCL	—
4-7	7.5YR4/3	100					SiCL	—
7-12	7.5YR4/3	80	5YR5/8	40	C	M	SiCL	—
			10YR2/1	1	C	P		—
12-15	7.5YR4/3	48	10YR2/1	50	C	M	SiCL	—
			10YR2/1	2	C	PL		—

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- — Histosol (A1)
- — Histic Epipedon (A2)
- — Black Histic (A3)
- — Hydrogen Sulfide (A4)
- — Stratified Layers (A5)
- — 2 cm Muck (A10)
- — Depleted Below Dark Surface (A11)
- — Thick Dark Surface (A12)
- — Sandy Mucky Mineral (S1)
- — 5 cm Mucky Peat or Peat (S3)
- — Sandy Gleyed Matrix (S4)
- — Sandy Redox (S5)
- — Stripped Matrix (S6)
- — Loamy Mucky Mineral (F1)
- — Loamy Gleyed Matrix (F2)
- — Depleted Matrix (F3)
- — Redox Dark Surface (F6)
- — Depleted Dark Surface (F7)
- — Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- — Coast Prairie Redox (A16)
- — Dark Surface (S7)
- — Iron-Manganese Masses (F12)
- — Very Shallow Dark Surface (TF12)
- — Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes — No +

Remarks:

N/A

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- — Surface Water (A1)
- — High Water Table (A2)
- — Saturation (A3)
- — Water Marks (B1)
- — Sediment Deposits (B2)
- — Drift Deposits (B3)
- — Algal Mat or Crust (B4)
- — Iron Deposits (B5)
- — Inundation Visible on Aerial Imagery (B7)
- — Sparsely Vegetated Concave Surface (B8)
- — Water-Stained Leaves (B9)
- — Aquatic Fauna (B13)
- — True Aquatic Plants (B14)
- — Hydrogen Sulfide Odor (C1)
- — Oxidized Rhizospheres on Living Roots (C3)
- — Presence of Reduced Iron (C4)
- — Recent Iron Reduction in Tilled Soils (C6)
- — Thin Muck Surface (C7)
- — Gauge or Well Data (D9)
- — Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- — Surface Soil Cracks (B6)
- — Drainage Patterns (B10)
- — Dry-Season Water Table (C2)
- — Crayfish Burrows (C8)
- — Saturation Visible on Aerial Imagery (C9)
- — Stunted or Stressed Plants (D1)
- + Geomorphic Position (D2)
- + FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes — No + Depth (inches): —

Water Table Present? Yes — No + Depth (inches): —

Saturation Present? (includes capillary fringe) Yes — No + Depth (inches): —

Wetland Hydrology Present? Yes + No —

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

N/A

Remarks:

N/A

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Dragoo Property City/County: Bloomington/Monroe Sampling Date: 8/28/15
Applicant/Owner: Habitat for Humanity of Monroe County State: IN Sampling Point: DP-3
Investigator(s): S. Hanidovic/R. Taylor Section, Township, Range: S8 T8N R1W
Landform (hillslope, terrace, etc.): Drainage Swale Local relief (concave, convex, none): concave
Slope (%): 0-2 Lat: Long: Datum: WGS84
Soil Map Unit Name: Wakeland Silt Loam, Frequently flooded NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes + No – (If no, explain in Remarks.)
Are Vegetation –, Soil –, or Hydrology – significantly disturbed? Are "Normal Circumstances" present? Yes + No –
Are Vegetation –, Soil –, or Hydrology – naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes +	No –	Is the Sampled Area within a Wetland? Yes – No +
Hydric Soil Present?	Yes –	No +	
Wetland Hydrology Present?	Yes +	No –	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Agrostis stolonifera	80	+	FACW
2. Festuca sp.	20	–	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	100	x 2 = 200
FAC species	20	x 3 = 60
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	120 (A)	260 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:

+ 1 - Rapid Test for Hydrophytic Vegetation
+ 2 - Dominance Test is >50%
+ 3 - Prevalence Index is ≤3.0[1]
– 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
– Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes + No –

Remarks: (Include photo numbers here or on a separate sheet.)
N/A

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR4/3	100	–	–	–	–	SiCL	–
3-16	7.5YR4/3	90	5YR4/6	10	C	PL	SiCL	–

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- – Histosol (A1)
- – Histic Epipedon (A2)
- – Black Histic (A3)
- – Hydrogen Sulfide (A4)
- – Stratified Layers (A5)
- – 2 cm Muck (A10)
- – Depleted Below Dark Surface (A11)
- – Thick Dark Surface (A12)
- – Sandy Mucky Mineral (S1)
- – 5 cm Mucky Peat or Peat (S3)
- – Sandy Gleyed Matrix (S4)
- – Sandy Redox (S5)
- – Stripped Matrix (S6)
- – Loamy Mucky Mineral (F1)
- – Loamy Gleyed Matrix (F2)
- – Depleted Matrix (F3)
- – Redox Dark Surface (F6)
- – Depleted Dark Surface (F7)
- – Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- – Coast Prairie Redox (A16)
- – Dark Surface (S7)
- – Iron-Manganese Masses (F12)
- – Very Shallow Dark Surface (TF12)
- – Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes – No +

Remarks:

N/A

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- – Surface Water (A1)
- – High Water Table (A2)
- – Saturation (A3)
- – Water Marks (B1)
- – Sediment Deposits (B2)
- – Drift Deposits (B3)
- – Algal Mat or Crust (B4)
- – Iron Deposits (B5)
- – Inundation Visible on Aerial Imagery (B7)
- – Sparsely Vegetated Concave Surface (B8)
- – Water-Stained Leaves (B9)
- – Aquatic Fauna (B13)
- – True Aquatic Plants (B14)
- – Hydrogen Sulfide Odor (C1)
- – Oxidized Rhizospheres on Living Roots (C3)
- – Presence of Reduced Iron (C4)
- – Recent Iron Reduction in Tilled Soils (C6)
- – Thin Muck Surface (C7)
- – Gauge or Well Data (D9)
- – Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- – Surface Soil Cracks (B6)
- – Drainage Patterns (B10)
- – Dry-Season Water Table (C2)
- – Crayfish Burrows (C8)
- – Saturation Visible on Aerial Imagery (C9)
- – Stunted or Stressed Plants (D1)
- + Geomorphic Position (D2)
- + FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes – No + Depth (inches): –

Water Table Present? Yes – No + Depth (inches): –

Saturation Present? (includes capillary fringe) Yes – No + Depth (inches): –

Wetland Hydrology Present? Yes + No –

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

N/A

Remarks:

N/A

Attachment 7:

Phase II Environmental Assessment, Dragoo Property

Fields Environmental, Inc.

Fields Environmental, Inc.

PHASE II ENVIRONMENTAL INVESTIGATION

DRAGOO PROPERTY

South Rockport Road

Bloomington, Indiana 47401

May 15, 2015

Electronic File Section 1 of 1

Environmental Investigations

Phase II Environmental Investigation

Dragoo Property

South Rockport Road
Bloomington, Indiana 47401

Prepared for:
Habitat for Humanity of Monroe County
213 East Kirkwood Avenue
Bloomington, Indiana 47408

Prepared by:
Fields Environmental, Inc.
1309 West Vernal Pike
Bloomington, Indiana 47404

Date:
May 15, 2015

Project Number:
15-07.02

Fields Environmental, Inc.

1309 WEST VERNAL PIKE
BLOOMINGTON, IN 47404

RUDY D. FIELDS, LPG, CHMM
President

www.fieldsenvironmentalinc.com

Phone: 812-333-5333
Fax: 812-333-5334

May 15, 2015

Mr. Sean Price
Habitat for Humanity of Monroe County
213 East Kirkwood Avenue
Bloomington, Indiana 47408

Subject: **PHASE I ENVIRONMENTAL SITE ASSESSMENT & PHASE II ENVIRONMENTAL INVESTIGATION DRAGOO PROPERTY SOUTH ROCKPORT ROAD (PROPERTY) BLOOMINGTON, INDIANA 47401**

Dear Mr. Price,

This report summarizes the activities and findings of the Phase I Environmental Site Assessment (ESA) and a Phase II Investigation conducted at the above-referenced location. Fields Environmental, Inc. representatives Mr. Aaron Norton, and Mr. Richard Creek performed walk-through inspections of the Property and adjacent properties on April 1, 2015 as part of the ESA. Based upon findings Fields conducted a limited soil investigation on April 30, 2015 to assess a Recognized Environmental Condition (REC) identified in the ESA.

The Phase I ESA and Phase II Environmental Investigation were conducted at the request of Mr. Sean Price of Habitat for Humanity of Monroe County.

Please contact Rudy Fields at 812-333-5333 if you have any questions regarding this report.

Respectfully submitted,
Fields Environmental, Inc.

Rudy D. Fields

Rudy Fields, LPG, CHMM
President

Fields Environmental, Inc.
1309 WEST VERNAL PIKE
BLOOMINGTON, IN 47404
RUDY D. FIELDS, LPG, CHMM
President
www.fieldsenvironmentalinc.com
Phone: 812-333-5333
Fax: 812-333-5334

May 15, 2015

Mr. Sean Price, Business Manager
Habitat for Humanity of Monroe County
213 East Kirkwood Avenue
Bloomington, Indiana 47408

Subject: **PHASE II ENVIRONMENTAL INVESTIGATION**
DRAGOO PROPERTY
SOUTH ROCKPORT ROAD
BLOOMINGTON, INDIANA 47401

Dear Mr. Sean Price:

This correspondence summarizes environmental investigations designed to assess the presence or absence of adverse environmental conditions associated with Recognized Environmental Conditions (RECs) identified in the *April 22, 2015 Phase I Environmental Site Assessment, Dragoo Property South Rockport Road (Property), Bloomington, Indiana* (Phase I). The Phase I was conducted by Fields Environmental, Inc. (Fields) on behalf of the Habitat for Humanity of Monroe County (HHMC) for a prospective real estate purchase.

Environmental investigations were conducted at the Property for HHMC in Bloomington, Indiana (**Figure 1**). Environmental investigations were performed at the request of Mr. Sean Price, Business Manager of HHMC.

Introduction

Fields was retained by HHMC to conduct the Phase I at the Property. RECs identified in the Phase I included:

- *An eighty-five (85) acre parcel located adjacent and to the north of the Property historically was part of the Thomson property.*

The Thomson property contained several former quarry pits that were filled-in. There are reports of dumping including suspected electrical capacitors in the quarry pits and reported fill material brought onto the Thomson site during previous construction phases at other former areas of the RCA Thomson manufacturing facility. Uncertainty with the conditions at the hydraulically up-gradient Thomson site and the potential for migration of contamination through surface water drainage from the adjacent Thomson property could pose a threat to the Property and constitutes a REC.

Additional investigation was recommended to assess the potential for adverse environmental conditions associated with the RECs identified in the Phase I.

A surface water drainage that flows from the adjacent Thomson property onto the subject Property provides a mechanism to transport contamination on-site from potentially impaired areas off-site. The industrial nature of the historic, up-gradient land use suggested the potential for contamination associated with environmentally persistent heavy metal and organic contaminants.

Fields conducted a limited surface soil investigation on the Property on April 30, 2015.

Ten (10) surface soil samples were collected from an intermittent drainage on the Property to assess for the presence or absence of polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and RCRA 8 Metals. The limited surface soil investigation was structured along a primary drainage feature originating on the adjacent parcel to the north. The drainage feature was measured to be approximately 310' in length from the northern Property edge to the southern Property edge (**Figure 1**). The drainage feature was subdivided into ten (10) sample locations (DS-1 to DS-10) placed at thirty (30) foot intervals with the exception of the DS-9 to DS-10 interval which was forty (40) feet in length (**Figure 1**).

Analytical testing results were below Indiana Department of Environmental Management (IDEM) Remediation Closure Guide (RCG) Residential Direct Contact Screening Levels (RDCL) with the exception of Benzo(A)pyrene (BAP). The BAP concentration exceeded the default RDCL and Residential Migration to Groundwater (MTG) Screening Level in one (1) duplicate sample in one (1) location (DS-1/DS-DUP). The primary sample in this location did not exceed the RDCL or MTG.

Arsenic was detected at concentrations below the RDCL, but exceeding the MTG Screening Level. Arsenic levels typical to Bloomington soils were detected at all sample locations.

Investigative Activities

Limited Soil Investigation

Fields personnel Mr. Aaron Norton and Mr. Richard Creek conducted a limited surface soil investigation on the Dragoo Property on April 30, 2015. The soil investigation was conducted along an intermittent drainage feature originating the former Thomson property. The former Thomson property (Thomson) is a large area located on the adjacent parcel to the north of the Property. A variety of industrial land uses are attributed to Thomson and others on that adjacent property. The drainage feature crosses the Property northwest to southeast to a drainage outfall on the adjacent property to the southeast and is mostly grass covered. The drainage feature was measured to be approximately 310' in length from the northern Property edge to the southern Property edge (**Figure 1**). The drainage feature on the Property was subdivided into ten (10) sample locations (DS-1 to DS-10) placed at thirty (30) foot intervals with the exception of the DS-9 to DS-10 interval which was forty (40) feet in length (**Figure 1**).

A total of ten (10) grab soil samples (DS-1 to DS-10) were collected from the ten (10) sample locations (**Figure 1**). One (1) additional sample was collected as a duplicate at sample location DS-1 for quality assurance/quality control (QA/QC) and submitted for laboratory analysis as DUP-1.

Soil samples were collected in an alternating pattern starting on the left side of the drainage at the northern Property boundary. No visual or olfactory signs of impacted soils were identified by Fields' personnel during the limited soil investigation. Aliquots were collected from surface soils immediately beneath organic growth (approximately 6" below the surface), placed into a decontaminated stainless steel bowl, and homogenized to form samples for laboratory testing. Non-disposable equipment was decontaminated with an Alconox detergent solution between each sample location. Fields' personnel donned new nitrile gloves between samples. Samples were placed in clean, laboratory-supplied containers, packed in coolers on ice, and shipped via FedEx to TestAmerica Laboratories in University Park, Illinois under strict chain-of-custody documentation. Soil samples were submitted for the analysis of PAHs, PCBs, and RCRA 8 Metals utilizing USEPA methods 8270D, 8082, and 6010C, respectively.

PAHs consist of semi-volatile hydrocarbons commonly contained in diesel, kerosene, and heating oil fuels and can be created from the incomplete combustion of petroleum-based fuels and other organic matter. Most PAHs are classified as carcinogens.

PCBs are long-lived, relict, synthetic chemicals historically used as insulators in transformers and capacitors in electricity distribution systems, appliances, automobiles and other varied materials.

Varieties of PCBs exist and are identified according to the number and orientation of chlorine atoms attached along the perimeter of its organic structure. These are called "congeners" and are commonly identified as "Aroclors" followed by an identifier number; 209 different congeners of PCBs are possible. Soils collected from the Property were analyzed for the most common PCB congeners.

RCRA 8 Metals consist of naturally-occurring, inorganic, toxic heavy metals that are generally found in areas that have been adversely impacted by human activities from prior land use. Naturally-occurring background levels of RCRA 8 Metals can be variable throughout regional geographic and geologic areas.

Soil analytical results are compared to the IDEM RCG Screening Levels where criteria are available. Soil Screening Levels are segregated into four (5) sets of exposure-based criteria dependent on site-specific land use: Residential MTG, RDCL, Commercial/Industrial Direct Contact, Direct Contact by Excavation workers, and Recreational Soil Direct Contact. Some screened compounds do not have screening criteria developed at this time. Analytical results compared to default IDEM RCG Screening Levels are tabulated in **Table 1**. The laboratory report is included in **Attachment 2**.

Analytical Results

Soil analytical results detected RCRA 8 Metals at all sample locations. PAHs were detected at only one (1) sample location. PCB Aroclors were not detected.

BAP was detected at duplicate sample location DS-DUP (DS-1) at a concentration above its RDCL and MTG Screening Level. A duplicate sample is a common programmatic quality control sample taken at the same location as the primary sample utilizing the same methodology. Duplicates are collected for all environmental media (soil, water, and air). Duplicate sample locations and times are not identified to the laboratory so that results can be reviewed for consistency in the lab. The inhomogeneous nature of soil does not always provide good correlation between the primary sample and the duplicate. Sample/duplicate correlation in DS-1/DS-DUP has the primary sample result below all applicable criteria and the duplicate slightly above the RDCL. All sample results were below Recreational Soil Direct Contact Screening Levels (**Table 1**). No additional PAHs were detected above IDEM RCG Screening Levels.

Barium, cadmium, chromium, lead, selenium and mercury were detected at concentrations that did not exceed any IDEM RCG Screening Levels. Arsenic was detected above its Residential MTG Screening Level at every sample location. Arsenic concentrations are consistent with natural background soil levels for this area of Indiana. Documentation provided by IDEM regarding background levels of arsenic in this area of Bloomington is included in **Attachment 1**.

IDEM suggests a natural background range of arsenic concentrations at 5.1 to 15.1 milligrams per kilogram (mg/kg). The IDEM RDCL for arsenic is 9.4 mg/kg. It is Fields' opinion that the Residential MTG criteria are not applicable in this context. There are no wells on the Property and there is almost no chance that wells would ever be utilized for the production of potable water.

PCB Aroclors were not detected at any sample location. The reporting limits for PCB Aroclors 1221 and 1232 were above the applicable criteria. There are instances when laboratory equipment cannot quantitatively measure certain constituents below criteria set by IDEM. This issue is known to regulatory agencies. Data are reported at the lowest achievable laboratory reporting limits (**Attachment 2**).

Conclusions

Based upon the investigations completed to date Fields concludes that:

- Investigation conducted to assess the potential for on-site contamination associated with surface migration from off-site, up-gradient former industrial areas to the north of the Property detected BAP in a duplicate sample (DS-DUP) at a concentration above the IDEM RCG RDCL and MTG screening level.
- The primary sample (DS-1) taken from the same aliquot of soil as the duplicate sample (DS-DUP) detected BAP but did not exceed any applicable criteria.
- The presence of BAP at this location may be a result of contaminants transported by surface water runoff from the adjacent, up-gradient, former Thomson property.
- The BAP level is below the IDEM Recreational Soil Direct Screening Level
- BAP was not detected at any other locations on the Property.
- Surface soils at the Dragoo Property do not appear to be adversely impacted by PCBs, or RCRA 8 Metals.

Recommendations

Fields recommends that the Site owners utilize experienced environmental counsel and evaluate potential reporting requirements under the Indiana Spill Rule. A copy of the Indiana Spill Rule is included as **Attachment 2**.

Based upon the limited soil investigation and pending decisions with regard to release reporting, no further investigations are warranted.

Fields appreciates the opportunity to provide environmental consulting services to the Habitat for Humanity of Monroe County.

Please contact Rudy Fields at 812-333-5333 if you have any questions regarding this report.

Respectfully submitted,
Fields Environmental, Inc.

Rudy Fields, LPG, CHMM
President

FIGURES

DS-3 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	6.6
Balance Metals	BA
PCBs	ND

DS-2 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	7.4
Balance Metals	BA
PCBs	ND

DS-1 (mg/Kg)	4/30/2015	DUP 4/30/2015
Benzo(A)Pyrene	0.065*	0.53
Balance PAHs	BA	BA
Arsenic	7.9	8.0
Balance Metals	ND	ND
PCBs	ND	ND

DS-4 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	6.9
Balance Metals	BA
PCBs	ND

DS-5 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	8.9
Balance Metals	BA
PCBs	ND

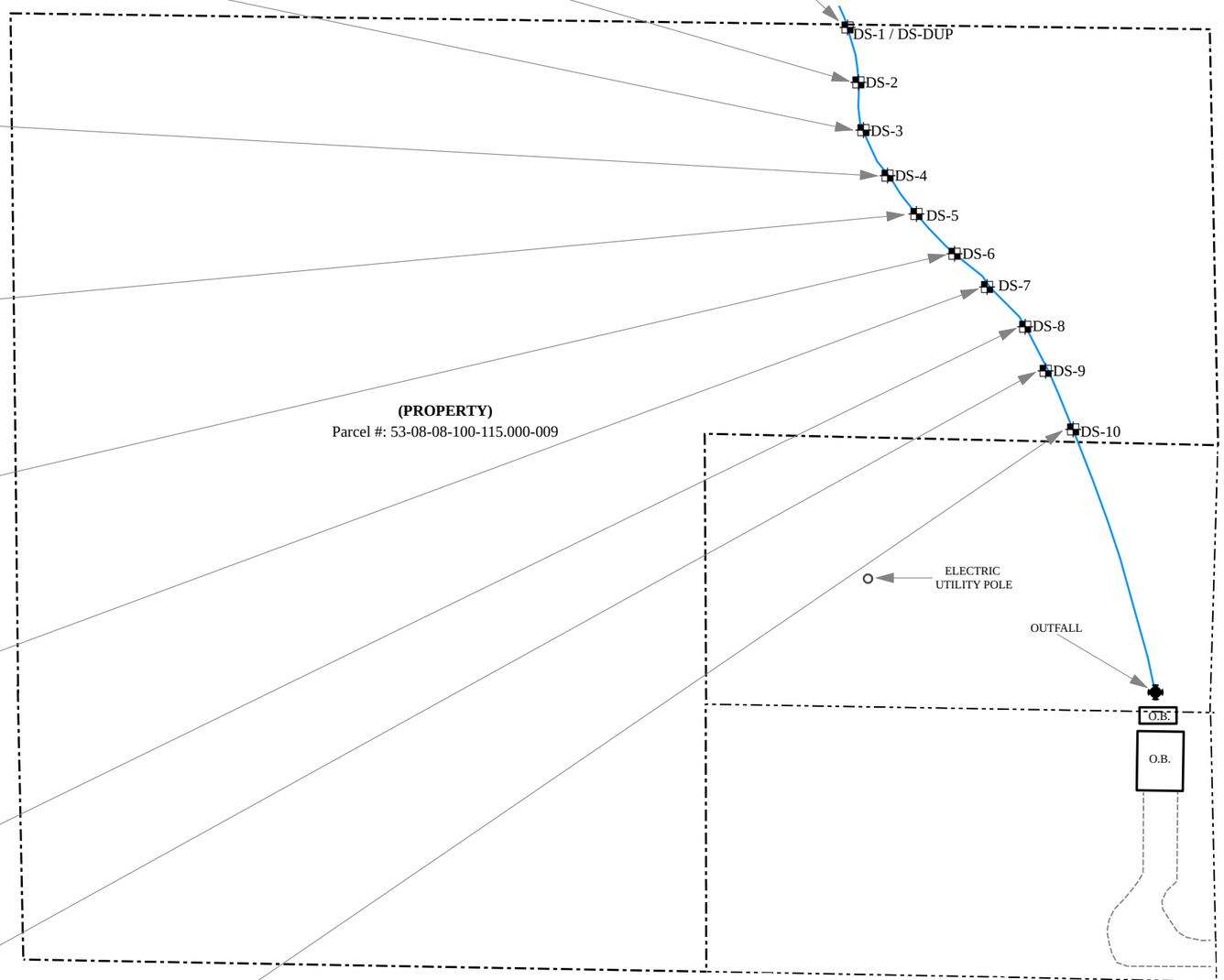
DS-6 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	7.8
Balance Metals	BA
PCBs	ND

DS-7 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	7.0
Balance Metals	BA
PCBs	ND

DS-8 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	7.4
Balance Metals	BA
PCBs	ND

DS-9 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	6.9
Balance Metals	BA
PCBs	ND

DS-10 (mg/Kg)	4/30/2015
PAHs	ND
Arsenic	6.8
Balance Metals	BA
PCBs	ND



Legend

= PROPERTY LINE

= PARCEL LINES

DS-1 = SURFACE SOIL SAMPLE LOCATIONS

= OUTFALL

= DRAINAGE FEATURE

IDEM RCG SCREENING LEVELS

100.0 = DETECTION DOES NOT EXCEED SCREENING LEVELS

100.0 = DETECTION EXCEEDS IDEM RCG RESIDENTIAL MIGRATION TO GROUNDWATER (MTG) SCREENING LEVEL

100.0 = DETECTION EXCEEDS IDEM RCG DIRECT CONTACT RESIDENTIAL SCREENING LEVEL

ND = CONSTITUENT NOT DETECTED

ND = CONSTITUENT NOT DETECTED, REPORTING LIMIT EXCEEDS IDEM RCG RESIDENTIAL MIGRATION TO GROUNDWATER (MTG) SCREENING LEVEL

BA = CONSTITUENT DETECTED BELOW APPLICABLE SCREENING LEVELS

* = ISTD RESPONSE OR RETENTION TIME OUTSIDE ACCEPTABLE LIMITS

N

0 30 60 120 180 240 Feet

Fields Environmental Inc.
1309 West Vernal Pike
Bloomington, IN 47404
Phone: 812-333-5333
www.fieldsenvironmentalinc.com

Figure 1
SITE MAP AND ADJACENT PROPERTIES
& PCB SOIL SAMPLING RESULTS

For: HABITAT FOR HUMANITY OF MONROE COUNTY

Date: 05 - 01 - 2015 | BLOOMINGTON, INDIANA

Project# 15-07.01 | Drawn By: R. Creek | Scale: 1" = 80'

TABLES

Table 1. Soil Analytical Results - Phase II Environmental Investigation
Dragoo Property - South Rockport Road - Bloomington, Indiana - April 2015

Constituents (mg/Kg)		IDEM Remediation Closure Guide (RCG) Screening Levels (mg/Kg)					DS-1	DS-DUP (DS-1)	DS-2
		Direct Contact Excavation	Direct Contact Comm/Ind	Direct Contact Residential	Recreational	Residential MTG	500-95474-1	500-95474-11	500-95474-2
							4/30/2015	4/30/2015	4/30/2015
CAS #	**PAHs Method 8270D**								
83-32-9	**Acenaphthene**	100000	45000	4900	**	110	<0.042	<0.041	<0.041
208-96-8	**Acenaphthylene**	**	**	**	**	**	<0.042	<0.041	<0.041
120-12-7	**Anthracene**	100000	100000	24000	**	1200	<0.042	<0.041	<0.041
56-55-3	**Benzo(A)Anthracene**	1600	29	2.1	**	2.4	0.047*	0.39	<0.041
50-32-8	**Benzo(A)Pyrene**	160	2.9	**0.21**	0.94	4.7	0.065*	**0.53**	<0.041*
205-99-2	**Benzo(B)Fluoranthene**	1600	29	2.1	**	8.2	0.093*	0.70	<0.041*
191-24-2	**Benzo(G,H,I)Perylene**	**	**	**	**	**	<0.042	0.37	<0.041*
207-08-9	**Benzo(K)Fluoranthene**	16000	290	21	**	80	0.054*	0.27	<0.041*
218-01-9	**Chrysene**	100000	2900	210	**	250	0.072*	0.44	<0.041
53-70-3	**Dibenz(A,H)Anthracene**	160	2.9	0.21	**	2.6	<0.042*	0.081	<0.041*
206-44-0	**Fluoranthene**	68000	30000	3200	**	1800	0.11	0.59	<0.041
86-73-7	**Fluorene**	68000	30000	3200	**	110	<0.042	<0.041	<0.041
193-39-5	**Indeno(1,2,3-C,D)Pyrene**	1600	29	2.1	**	47	<0.042*	0.31	<0.041*
90-12-0	**1-Methylnaphthalene**	40000	730	240	**	1.2	<0.042	<0.041	<0.041
91-57-6	**2-Methylnaphthalene**	6800	3000	320	**	3.7	<0.042	<0.041	<0.041
91-20-3	**Naphthalene**	3100	170	53	**	0.11	<0.042	<0.041	<0.041
85-01-8	**Phenanthrene**	**	**	**	**	**	0.044	0.20	<0.041
129-00-0	**Pyrene**	51000	23000	2400	**	260	0.12*	0.80	<0.041
CAS #	**Metals (ICP/MS) Method 6010C**								
7440-38-2	**Arsenic (Total)**	920	30	9.4	45	**5.9**	**7.9**	**8.0**	**7.4**
7440-39-3	**Barium (Total)**	100000	100000	21000	**	1700	100	98	89
7440-43-9	**Cadmium (Total)**	1900	980	98	**	**	0.33	0.31	0.27
7440-47-3	**Chromium (Total)**	**	**	**	**	1000000	17	18	16
7439-92-1	**Lead (Total)**	1000	800	400	800	270	24	25	22
7439-97-6	**Mercury (Total)**	3.1	3.1	3.1	**	2.1	0.053	0.063	0.047
7782-49-2	**Selenium (Total)**	9800	5800	550	**	5.3	<1.3	1.1	<1.3
7440-22-4	**Silver (Total)**	9800	5800	550	**	16	<0.64	<0.57	<0.64
CAS #	**PCBs Method 8082A**								
12674-11-2	**PCB-1016**	120	52	5.6	**	2.7	<0.022	<0.021	<0.021
11104-28-2	**PCB-1221**	470	6.6	2.1	**	**0.016**	**<0.022**	**<0.021**	**<0.021**
11141-16-5	**PCB-1232**	73	6.6	2.1	**	**0.016**	**<0.022**	**<0.021**	**<0.021**
53469-21-9	**PCB-1242**	570	10	3.4	**	1.2	<0.022	<0.021	<0.021
12672-29-6	**PCB-1248**	570	10	3.4	**	1.2	<0.022	<0.021	<0.021
11097-69-1	**PCB-1254**	33	10	1.5	**	2	<0.022	<0.021	<0.021
11096-82-5	**PCB-1260**	570	10	3.4	**	5.5	<0.022	<0.021	<0.021

Table Legend

NA = Not Analyzed
* = ISTD response or retention time outside acceptable limits
** = Criteria for Constituent Not Available
1 = MS and/or MSD Recovery is outside acceptance limits
2 = MS/MSD RPD exceeds control limits
3 = Serial Dilution exceeds the control limits
<0.0 = Constituent not detected - Reporting limit exceeds IDEM RCG Residential Migration to Groundwater Screening Level
<0.0 = Constituent not detected - Reporting limit exceeds IDEM RCG Direct Contact Residential Screening Level
<0.0 = Constituent not detected at reporting limit
100.0 = Detection does not exceed Screening Levels
100.0 = Detection exceeds IDEM RCG Residential Migration to Groundwater (MTG) Screening Level
100.0 = Detection exceeds IDEM RCG Direct Contact Residential Screening Level
100.0 = Detection exceeds IDEM RCG Direct Contact Industrial/Commercial Screening Level
100.0 = Detection exceeds IDEM RCG Direct Contact Excavation Screening Level

Table 1. Soil Analytical Results - Phase II Environmental Investigation
Dragoo Property - South Rockport Road - Bloomington, Indiana - April 2015

Constituents (mg/Kg)		IDEM Remediation Closure Guide (RCG) Screening Levels (mg/Kg)					DS-3	DS-4	DS-5
		Direct Contact Excavation	Direct Contact Comm/Ind	Direct Contact Residential	Recreational	Residential MTG	500-95474-3	500-95474-4	500-95474-5
							4/30/2015	4/30/2015	4/30/2015
CAS #	**PAHs Method 8270D**								
83-32-9	**Acenaphthene**	100000	45000	4900	**	110	<0.043	<0.040	<0.039
208-96-8	**Acenaphthylene**	**	**	**	**	**	<0.043	<0.040	<0.039
120-12-7	**Anthracene**	100000	100000	24000	**	1200	<0.043	<0.040	<0.039
56-55-3	**Benzo(A)Anthracene**	1600	29	2.1	**	2.4	<0.043*	<0.040*	<0.039
50-32-8	**Benzo(A)Pyrene**	160	2.9	**0.21**	0.94	4.7	<0.043*	<0.040*	<0.039
205-99-2	**Benzo(B)Fluoranthene**	1600	29	2.1	**	8.2	<0.043*	<0.040*	<0.039
191-24-2	**Benzo(G,H,I)Perylene**	**	**	**	**	**	<0.043*	<0.040*	<0.039
207-08-9	**Benzo(K)Fluoranthene**	16000	290	21	**	80	<0.043*	<0.040*	<0.039
218-01-9	**Chrysene**	100000	2900	210	**	250	<0.043*	<0.040*	<0.039
53-70-3	**Dibenz(A,H)Anthracene**	160	2.9	0.21	**	2.6	<0.043*	<0.040*	<0.039
206-44-0	**Fluoranthene**	68000	30000	3200	**	1800	<0.043	<0.040	<0.039
86-73-7	**Fluorene**	68000	30000	3200	**	110	<0.043	<0.040	<0.039
193-39-5	**Indeno(1,2,3-C,D)Pyrene**	1600	29	2.1	**	47	<0.043*	<0.040*	<0.039
90-12-0	**1-Methylnaphthalene**	40000	730	240	**	1.2	<0.043	<0.040	<0.039
91-57-6	**2-Methylnaphthalene**	6800	3000	320	**	3.7	<0.043	<0.040	<0.039
91-20-3	**Naphthalene**	3100	170	53	**	0.11	<0.043	<0.040	<0.039
85-01-8	**Phenanthrene**	**	**	**	**	**	<0.043	<0.040	<0.039
129-00-0	**Pyrene**	51000	23000	2400	**	260	<0.043*	<0.040*	<0.039
CAS #	**Metals (ICP/MS) Method 6010C**								
7440-38-2	**Arsenic (Total)**	920	30	9.4	45	**5.9**	**6.6**	**6.9**	**8.9**
7440-39-3	**Barium (Total)**	100000	100000	21000	**	1700	91	94	100
7440-43-9	**Cadmium (Total)**	1900	980	98	**	**	0.25	0.25	0.28
7440-47-3	**Chromium (Total)**	**	**	**	**	1000000	16	17	27
7439-92-1	**Lead (Total)**	1000	800	400	800	270	17	26	33
7439-97-6	**Mercury (Total)**	3.1	3.1	3.1	**	2.1	0.044	0.044	0.046
7782-49-2	**Selenium (Total)**	9800	5800	550	**	5.3	<1.2	<1.1	<1.2
7440-22-4	**Silver (Total)**	9800	5800	550	**	16	<0.62	<0.55	<0.58
CAS #	**PCBs Method 8082A**								
12674-11-2	**PCB-1016**	120	52	5.6	**	2.7	<0.022	<0.020	<0.021
11104-28-2	**PCB-1221**	470	6.6	2.1	**	**0.016**	**<0.022**	**<0.020**	**<0.021**
11141-16-5	**PCB-1232**	73	6.6	2.1	**	**0.016**	**<0.022**	**<0.020**	**<0.021**
53469-21-9	**PCB-1242**	570	10	3.4	**	1.2	<0.022	<0.020	<0.021
12672-29-6	**PCB-1248**	570	10	3.4	**	1.2	<0.022	<0.020	<0.021
11097-69-1	**PCB-1254**	33	10	1.5	**	2	<0.022	<0.020	<0.021
11096-82-5	**PCB-1260**	570	10	3.4	**	5.5	<0.022	<0.020	<0.021

Table Legend

NA = Not Analyzed
* = ISTD response or retention time outside acceptable limits
** = Criteria for Constituent Not Available
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100.0 = Detection exceeds IDEM RCG Direct Contact Excavation Screening Level

Table 1. Soil Analytical Results - Phase II Environmental Investigation
Dragoo Property - South Rockport Road - Bloomington, Indiana - April 2015

Constituents (mg/Kg)		IDEM Remediation Closure Guide (RCG) Screening Levels (mg/Kg)					DS-6	DS-7	DS-8
		Direct Contact Excavation	Direct Contact Comm/Ind	Direct Contact Residential	Recreational	Residential MTG	500-95474-6	500-95474-7	500-95474-8
							4/30/2015	4/30/2015	4/30/2015
CAS #	**PAHs Method 8270D**								
83-32-9	**Acenaphthene**	100000	45000	4900	**	110	<0.040	<0.040	<0.041
208-96-8	**Acenaphthylene**	**	**	**	**	**	<0.040	<0.040	<0.041
120-12-7	**Anthracene**	100000	100000	24000	**	1200	<0.040	<0.040	<0.041
56-55-3	**Benzo(A)Anthracene**	1600	29	2.1	**	2.4	<0.040	<0.040	<0.041
50-32-8	**Benzo(A)Pyrene**	160	2.9	**0.21**	0.94	4.7	<0.040*	<0.040*	<0.041
205-99-2	**Benzo(B)Fluoranthene**	1600	29	2.1	**	8.2	<0.040*	<0.040*	<0.041
191-24-2	**Benzo(G,H,I)Perylene**	**	**	**	**	**	<0.040*	<0.040*	<0.041
207-08-9	**Benzo(K)Fluoranthene**	16000	290	21	**	80	<0.040*	<0.040*	<0.041
218-01-9	**Chrysene**	100000	2900	210	**	250	<0.040	<0.040	<0.041
53-70-3	**Dibenz(A,H)Anthracene**	160	2.9	0.21	**	2.6	<0.040*	<0.040*	<0.041
206-44-0	**Fluoranthene**	68000	30000	3200	**	1800	<0.040	<0.040	<0.041
86-73-7	**Fluorene**	68000	30000	3200	**	110	<0.040	<0.040	<0.041
193-39-5	**Indeno(1,2,3-C,D)Pyrene**	1600	29	2.1	**	47	<0.040*	<0.040*	<0.041
90-12-0	**1-Methylnaphthalene**	40000	730	240	**	1.2	<0.040	<0.040	<0.041
91-57-6	**2-Methylnaphthalene**	6800	3000	320	**	3.7	<0.040	<0.040	<0.041
91-20-3	**Naphthalene**	3100	170	53	**	0.11	<0.040	<0.040	<0.041
85-01-8	**Phenanthrene**	**	**	**	**	**	<0.040	<0.040	<0.041
129-00-0	**Pyrene**	51000	23000	2400	**	260	<0.040	<0.040	<0.041
CAS #	**Metals (ICP/MS) Method 6010C**								
7440-38-2	**Arsenic (Total)**	920	30	9.4	45	**5.9**	**7.8**	**7.0**	**7.4**
7440-39-3	**Barium (Total)**	100000	100000	21000	**	1700	96	92	92
7440-43-9	**Cadmium (Total)**	1900	980	98	**	**	0.26	<0.23	0.25
7440-47-3	**Chromium (Total)**	**	**	**	**	1000000	20	16	23
7439-92-1	**Lead (Total)**	1000	800	400	800	270	23	20	21
7439-97-6	**Mercury (Total)**	3.1	3.1	3.1	**	2.1	0.049	0.043	0.049
7782-49-2	**Selenium (Total)**	9800	5800	550	**	5.3	<1.2	<1.1	<1.2
7440-22-4	**Silver (Total)**	9800	5800	550	**	16	<0.62	<0.57	<0.60
CAS #	**PCBs Method 8082A**								
12674-11-2	**PCB-1016**	120	52	5.6	**	2.7	<0.021	<0.020	<0.020
11104-28-2	**PCB-1221**	470	6.6	2.1	**	**0.016**	**<0.021**	**<0.020**	**<0.020**
11141-16-5	**PCB-1232**	73	6.6	2.1	**	**0.016**	**<0.021**	**<0.020**	**<0.020**
53469-21-9	**PCB-1242**	570	10	3.4	**	1.2	<0.021	<0.020	<0.020
12672-29-6	**PCB-1248**	570	10	3.4	**	1.2	<0.021	<0.020	<0.020
11097-69-1	**PCB-1254**	33	10	1.5	**	2	<0.021	<0.020	<0.020
11096-82-5	**PCB-1260**	570	10	3.4	**	5.5	<0.021	<0.020	<0.020

Table Legend

NA = Not Analyzed
* = ISTD response or retention time outside acceptable limits
** = Criteria for Constituent Not Available
1 = MS and/or MSD Recovery is outside acceptance limits
2 = MS/MSD RPD exceeds control limits
3 = Serial Dilution exceeds the control limits
<0.0 = Constituent not detected - Reporting limit exceeds IDEM RCG Residential Migration to Groundwater Scree
<0.0 = Constituent not detected - Reporting limit exceeds IDEM RCG Direct Contact Residential Screening Level
<0.0 = Constituent not detected at reporting limit
100.0 = Detection does not exceed Screening Levels
100.0 = Detection exceeds IDEM RCG Residential Migration to Groundwater (MTG) Screening Level
100.0 = Detection exceeds IDEM RCG Direct Contact Residential Screening Level
100.0 = Detection exceeds IDEM RCG Direct Contact Industrial/Commercial Screening Level
100.0 = Detection exceeds IDEM RCG Direct Contact Excavation Screening Level

Table 1. Soil Analytical Results - Phase II Environmental Investigation
Dragoo Property - South Rockport Road - Bloomington, Indiana - April 2015

Constituents (mg/Kg)		IDEM Remediation Closure Guide (RCG) Screening Levels (mg/Kg)					DS-9	DS-10
		Direct Contact Excavation	Direct Contact Comm/Ind	Direct Contact Residential	Recreational	Residential MTG	500-95474-9	500-95474-10
							4/30/2015	4/30/2015
CAS #	**PAHs Method 8270D**							
83-32-9	**Acenaphthene**	100000	45000	4900	**	110	<0.040	<0.041
208-96-8	**Acenaphthylene**	**	**	**	**	**	<0.040	<0.041
120-12-7	**Anthracene**	100000	100000	24000	**	1200	<0.040	<0.041
56-55-3	**Benzo(A)Anthracene**	1600	29	2.1	**	2.4	<0.040	<0.041
50-32-8	**Benzo(A)Pyrene**	160	2.9	**0.21**	0.94	4.7	<0.040*	<0.041
205-99-2	**Benzo(B)Fluoranthene**	1600	29	2.1	**	8.2	<0.040*	<0.041[2]
191-24-2	**Benzo(G,H,I)Perylene**	**	**	**	**	**	<0.040*	<0.041[1,2]
207-08-9	**Benzo(K)Fluoranthene**	16000	290	21	**	80	<0.040*	<0.041
218-01-9	**Chrysene**	100000	2900	210	**	250	<0.040	<0.041
53-70-3	**Dibenz(A,H)Anthracene**	160	2.9	0.21	**	2.6	<0.040*	<0.041[1,2]
206-44-0	**Fluoranthene**	68000	30000	3200	**	1800	<0.040	<0.041
86-73-7	**Fluorene**	68000	30000	3200	**	110	<0.040	<0.041
193-39-5	**Indeno(1,2,3-C,D)Pyrene**	1600	29	2.1	**	47	<0.040*	<0.041[1,2]
90-12-0	**1-Methylnaphthalene**	40000	730	240	**	1.2	<0.040	<0.041
91-57-6	**2-Methylnaphthalene**	6800	3000	320	**	3.7	<0.040	<0.041
91-20-3	**Naphthalene**	3100	170	53	**	0.11	<0.040	<0.041
85-01-8	**Phenanthrene**	**	**	**	**	**	<0.040	<0.041
129-00-0	**Pyrene**	51000	23000	2400	**	260	<0.040	<0.041[1,2]
CAS #	**Metals (ICP/MS) Method 6010C**							
7440-38-2	**Arsenic (Total)**	920	30	9.4	45	**5.9**	**6.9**	**6.8[1,2]**
7440-39-3	**Barium (Total)**	100000	100000	21000	**	1700	92	91[3]
7440-43-9	**Cadmium (Total)**	1900	980	98	**	**	0.26	0.28
7440-47-3	**Chromium (Total)**	**	**	**	**	1000000	17	16[1,2,3]
7439-92-1	**Lead (Total)**	1000	800	400	800	270	21	20
7439-97-6	**Mercury (Total)**	3.1	3.1	3.1	**	2.1	0.046	0.041[1]
7782-49-2	**Selenium (Total)**	9800	5800	550	**	5.3	<1.1	<1.2[1]
7440-22-4	**Silver (Total)**	9800	5800	550	**	16	<0.54	<0.62
CAS #	**PCBs Method 8082A**							
12674-11-2	**PCB-1016**	120	52	5.6	**	2.7	<0.021	<0.020
11104-28-2	**PCB-1221**	470	6.6	2.1	**	**0.016**	**<0.021**	**<0.020**
11141-16-5	**PCB-1232**	73	6.6	2.1	**	**0.016**	**<0.021**	**<0.020**
53469-21-9	**PCB-1242**	570	10	3.4	**	1.2	<0.021	<0.020
12672-29-6	**PCB-1248**	570	10	3.4	**	1.2	<0.021	<0.020
11097-69-1	**PCB-1254**	33	10	1.5	**	2	<0.021	<0.020
11096-82-5	**PCB-1260**	570	10	3.4	**	5.5	<0.021	<0.020

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ATTACHMENT 1

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

November 3, 2003

Kerry Thomson Pattillo, Executive Director
Habitat for Humanity of Monroe County
P.O. Box 1441
Bloomington, IN 47402

Dear Ms. Thomson Pattillo:

Re: Site Status Letter
Habitat for Humanity Oolitic Drive
1002, 1004, 1006, 1008 Oolitic Drive
Bloomington, Monroe County
Site #: BFD4000005

In response to the request by Habitat for Humanity of Monroe County (Habitat for Humanity) for assistance concerning 1002, 1004, 1006, 1008 Oolitic Drive (Site), the Indiana Department of Environmental Management (IDEM) has agreed to provide this brownfield Site Status Letter to clarify IDEM's position on the necessity of an environmental response action at the Site. Though not a legal release from liability, this letter will help to establish whether environmental conditions at the Site should be a barrier to redevelopment or transfer.

As part of Habitat for Humanity's request for assistance in determining the existing environmental impacts and potential liability at this 0.716-acre Site, IDEM's Brownfields Program staff have reviewed data from the following:

- Modified Phase I Environmental Site Assessment by Bynum Fanyo Environmental, Inc., dated July 14, 2000;
- Phase II Environmental Site Assessment with Addendum by Bynum Fanyo Environmental, Inc., dated September 1, 2000;
- Brownfield Environmental Assessment performed at the Site by IDEM for Monroe County on August 14, 2002, and March 12, 2003;
- Final Remediation Report by Kerr Environmental Services, Inc., dated October 24, 2003; and
- Additional soil sampling results dated October 31, 2003.

The exact source of the contamination is unknown; however, the suspected cause of contamination at the Site is illegal dumping. When the Phase I was completed in July 2000,

evidence of the dumping of various materials, including roofing materials, household appliances, household trash, and at least one empty 55-gallon drum was present.

Levels of arsenic exceeding the IDEM Risk Integrated System of Closure (RISC) Residential Direct Contact Closure Level of 3.9 parts per million (ppm) were found at the Site in all 11 surface and 11 subsurface (eight-foot depth) samples collected on August 14, 2002. Results ranged from 5.1 ppm to 15.1 ppm. IDEM collected background surface soil samples on October 22, 2002 from four locations near the Site that were unlikely to be contaminated. The arsenic levels obtained at the Site were consistent with the results of the background sample analysis, indicating that the elevated levels are likely naturally occurring. Therefore, no further action regarding the elevated arsenic concentrations at the Site is necessary.

IDEM performed oversight of the remediation activities that were performed at the Site on September 24 and 25, 2003 to remove surface soil (the top two feet) contaminated with benzo(g,h,i)perylene, benzo(a)pyrene, dibenzo(a,h)anthracene. The soil removal and necessary confirmatory sampling was completed in accordance with the IDEM-approved Remediation Plan dated June 10, 2003. The total amount of soil removed was 131.57 tons.

The soil sampling data that was reviewed indicate that as of September 25, 2003, levels of the contaminants of concern at the Site, with the exception of arsenic as explained above, are below Residential Direct Contact Levels established by IDEM's RISC guidance. Soil at the Site has been sampled for metals, polychlorinated byphenyls (PCBs), volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs). Because of the clay soil type and the estimated depth to ground water in the area, IDEM has determined that the Residential Direct Contact Levels are appropriate for this Site. In addition, because of the lack of contaminants in the subsurface soil samples that were collected, and because ground water at the Site will not be used for drinking water, ground water samples were not necessary. The investigations concluded that there are no potential exposure pathways and that the soil contamination identified at the Site presents no current threat to human health or the environment.

IDEM concludes Habitat for Humanity has demonstrated to IDEM's satisfaction that:
(1) no state or federal enforcement action at the Site is pending;
(2) no federal grant requires an enforcement action at the Site;
(3) no condition on the Site constitutes an imminent and substantial threat to human health or the environment;
(4) current levels of soil contaminants at the Site meet current cleanup criteria as established by IDEM; and
(5) neither Habitat for Humanity nor an agent or employee of Habitat for Humanity caused, contributed to, or knowingly exacerbated the release or threat of release of any hazardous substance or petroleum at the Site.

Ms. Thomson Pattillo
Habitat for Humanity of Monroe County
Page three

Based on the information submitted to IDEM, current conditions do not warrant a response action at this time, and IDEM does not plan to take any action at the subject property at this time.

If IDEM later discovers that the investigations or other information submitted to IDEM were inaccurate, or if any activities undertaken by an owner or operator of the Site exacerbate the Site contamination, then IDEM reserves the right to revoke this decision and pursue any responsible parties. Additionally, this decision does not apply to past or present contamination that is not described in this Site Status Letter, any future releases, or closure requirements under the Resource Conservation and Recovery Act, 42 U.S.C. § 6901.

IDEM encourages the redevelopment of this Site. Please be advised that any work performed at the subject property must be done in accordance with all applicable environmental laws. Redevelopment of this Site in a manner consistent with these standards will lessen the possibility that environmental conditions at the subject property could deteriorate in the future. In addition, IDEM recommends that municipal water be the source of drinking water at the Site.

In order for this letter to be given effect by IDEM, Habitat for Humanity must record a memorandum describing the actions taken together with this letter in the Monroe County Recorder's Office. Please return a certified copy of the filed notice to Gabriele Hauer, Chief, Brownfields Program, IDEM, Office of Land Quality, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, IN, 46206-6015.

IDEM is pleased to assist Habitat for Humanity with the redevelopment of the Oolitic Drive parcels. Should you have any questions or comments, please contact Susan Tynes at 800-451-6027, ext. 3-1504.

Sincerely,

Gabriele Hauer

Gabriele Hauer, Chief
Brownfields Program
Office of Land Quality

st/st/gh
cc: Matt Wysocki, Monroe County
Dana Kerr, Kerr Environmental Services

(a) The application for the permit shall be made on a form provided by the commissioner and shall include as a minimum the following:

(1) Phosphorus content of the detergent by weight and the maximum daily and monthly average quantities used.

(2) Description of the use and why a phosphorus detergent is required.

(3) The means of treatment that will be installed using the best practicable control technology for removal of phosphorus from the wastewater before discharge directly into the waters of Indiana or into any sewer or drain that enters the waters of the state of Indiana.

(b) The commissioner may issue a permit for a period not to exceed four (4) years, upon a determination that the use of phosphorus detergents is necessary with no adequate substitute available and that the best practicable treatment method of removal of phosphorus is accomplished prior to discharge of the treated effluent. Renewal applications must be submitted to the commissioner at least sixty (60) days in advance of the expiration date of the permit. *(Water Pollution Control Division; 327 IAC 2-5-1; filed Sep 24, 1987, 3:00 pm: 11 IR 587; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)*

Rule 6. Spills of Oil and Other Objectionable Substances; Reporting, Containment and Cleanup (Repealed)

(Repealed by Water Pollution Control Division; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1734)

Rule 6.1. Spills; Reporting, Containment, and Response

327 IAC 2-6.1-1 Applicability

Authority: IC 13-14-8-7
Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17

Sec. 1. This rule applies to the reporting and containment of, and the response to those spills of hazardous substances, extremely hazardous substances, petroleum, and objectionable substances that are of a quantity, type, duration and in a location as to damage the waters of the state. Nothing in this rule is intended to affect reporting or clean-up requirements set forth by other federal, state, or local laws. *(Water Pollution Control Division; 327 IAC 2-6.1-1; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1731; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)*

327 IAC 2-6.1-2 Special areas

Authority: IC 13-14-8-7
Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17

Sec. 2. Certain areas of the state are recognized as having unique geology. A large section of the mid-southern part of the state is a karst region. Portions of Saint Joseph, Elkhart, Kosciusko, and LaGrange Counties contain a sole source aquifer as referenced in 42 U.S.C. 300h-3(e). The waters of the state are particularly vulnerable to damage from spills in these areas, and care should be exercised when evaluating damage from spills. Information about these areas can be obtained by calling the Department of Environmental Management, Office of Land Quality, Emergency Response Section: Area Code 1-888-233-7745 for in-state calls (toll free), (317) 233-7745 for out-of-state calls. *(Water Pollution Control Division; 327 IAC 2-6.1-2; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1731; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; errata filed May 27, 2008, 2:06 p.m.: 20080625-IR-327080419ACA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)*

327 IAC 2-6.1-3 Exclusions

Authority: IC 13-14-8-7
Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17

Sec. 3. Notwithstanding any other section of this rule, the reporting requirement of this rule does not apply to the following occurrences:

(1) Discharges or exceedances that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur.

(2) Lawful application of materials, including, but not limited to:

(A) commercial or natural fertilizers and pesticides on or to land or water; or

(B) dust suppression materials.

(3) The application of petroleum necessary for construction that does not damage waters of the state.

(4) Spills of less than one (1) pound or one (1) pint.

(5) Spills of integral operating fluids, in the use of motor vehicles or other equipment, the total volume of which is less than or equal to fifty-five (55) gallons and which do not damage waters of the state.

(6) Oil sheens produced as a result of the normal operation of properly functioning watercraft.

(7) A release of a substance integral to a spill response activity that has been approved and authorized by a state or federal on-scene coordinator.

(Water Pollution Control Division; 327 IAC 2-6.1-3; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1731; errata filed Mar 7, 1997, 2:25 p.m.: 20 IR 1738; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)

327 IAC 2-6.1-4 Definitions

Authority: IC 13-14-8-7

Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17; IC 14-8-2-7; IC 14-25-7-13; IC 14-25-7-15

Sec. 4. In addition to the definitions contained in IC 13-11-2-17(d), IC 13-11-2-35(a), IC 13-11-2-51, IC 13-11-2-158(a), IC 13-11-2-160, IC 13-11-2-260, IC 13-11-2-265, and in 327 IAC 1, the following definitions apply throughout this rule:

(1) "Animal" means all mammals, birds, reptiles, amphibians, fish, crustaceans, and mollusks.

(2) "Aquatic life" means those plants and macroinvertebrates that are dependent upon an aquatic environment.

(3) "Contain" means to take such immediate action as necessary to dam, block, restrain, or otherwise act to most effectively prevent a spill from entering waters of the state or minimize damage to the waters of the state from a spill.

(4) "Damage" means the actual or imminent alteration of the waters of the state so as to render the waters harmful, detrimental, or injurious to:

(A) public health, safety, or welfare;

(B) domestic, commercial, industrial, agricultural, or recreational uses; or

(C) animals or aquatic life.

(5) "Downstream water user" means:

(A) a community public water supply, as identified by the department of natural resources under IC 14-25-7-13(d);

(B) a significant water withdrawal facility as registered with the department of natural resources under IC 14-25-7-15;

(C) users of recreational waters; or

(D) any other user made known to the person who has a spill.

(6) "Extremely hazardous substance" means a substance identified pursuant to 42 U.S.C. 11002 and 11004. (40 CFR 355 Appendix A.)

(7) "Facility" means all land, buildings, equipment, structures, and other stationary items that are located on a single site or on contiguous sites and that are owned or operated by the same person or by any person who controls, is controlled by, or is under common control with, such person.

(8) "Facility boundary" means the boundary of a facility or an easement or right-of-way.

(9) "Hazardous substance" has the meaning set forth in 42 U.S.C. 9601(14).

(10) "Mode of transportation" includes, but is not limited to, carriage by:

(A) rail and motor vehicles;

(B) aircraft;

(C) watercraft;

(D) pipelines; or

(E) other means of transportation;

in commerce. This definition excludes carriage within a facility by transportation equipment owned, operated, or controlled by that facility.

(11) "Objectionable substances" means substances that are:

(A) of a quantity and a type; and

(B) present for a duration and in a location;

so as to damage waters of the state. This definition excludes hazardous substances, extremely hazardous substances, petroleum, and mixtures thereof.

(12) "On-scene coordinator" means a state or federal official designated by the department, the United States Environmental Protection Agency, or the United States Coast Guard to direct and coordinate special spill response activities.

(13) "Recreational waters" means any water used for:

(A) boating, swimming, fishing, hunting, trapping, or wildlife viewing; or

(B) public access areas that are owned by the department of natural resources or the federal government;

as listed by the department.

(14) "Reportable quantity" means the amount of a hazardous substance or extremely hazardous substance that is required to be reported under federal law under 42 U.S.C. 9602(a) and (b) and 42 U.S.C. 9603(a). (40 CFR 302.4 or 40 CFR 355 Appendix A.)

(15) "Spill" means any unexpected, unintended, abnormal, or unapproved dumping, leakage, drainage, seepage, discharge or other loss of petroleum, hazardous substances, extremely hazardous substances, or objectionable substances. The term does not include releases to impermeable surfaces when the substance does not migrate off the surface or penetrate the surface and enter the soil.

(16) "Spill response", for purposes of this rule, means the following:

(A) The spill is contained; and

(B) Free material is removed or neutralized.

(17) "Spill report" means an oral report that includes the following information about a spill, to the extent that the information is known at the time of the report:

(A) The name, address, and telephone number of the person making the spill report.

(B) The name, address, and telephone number of a contact person if different from clause (A).

(C) The location of the spill.

(D) The time of the spill.

(E) The identification of the substance spilled.

(F) The approximate quantity of the substance that has been or may further be spilled.

(G) The duration of the spill.

(H) The source of the spill.

(I) Name and location of the waters damaged.

(J) The identity of any response organization responding to the spill.

(K) What measures have been or will be undertaken to perform a spill response.

(L) Any other information that may be significant to the response action.

(18) "Waters", as defined in IC 13-11-2-265, means the accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof, that are wholly or partially within, flow through, or border upon this state. The term does not include any private pond or any off-stream pond, reservoir, or facility built for reduction or control of pollution or cooling of water prior to discharge unless the discharge from the pond, reservoir, or facility causes or threatens to cause water pollution.

(Water Pollution Control Division; 327 IAC 2-6.1-4; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1731; errata filed Mar 7, 1997, 2:25 p.m.: 20 IR 1738; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)

327 IAC 2-6.1-5 Reportable spills; facility

Authority: IC 13-14-8-7
Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17

Sec. 5. The following spills from a facility must be reported:

(1) Spills that damage the waters of the state so as to cause death or acute injury or illness to humans or animals.

(2) Spills from a facility that has been notified in writing by a water utility that it is located in a delineated public water supply wellhead protection area as approved by the department under 327 IAC 8-4.1 that are:

(A) spills of hazardous substances or extremely hazardous substances when the amount spilled exceeds one hundred (100) pounds or the reportable quantity, whichever is less;

(B) spills of petroleum when the amount spilled exceeds fifty-five (55) gallons; or

(C) spills of objectionable substances as defined in section 4(11) of this rule.

(3) Spills that damage waters of the state and that:

(A) are located within fifty (50) feet of a known private drinking water well located beyond the facility property boundary; or

(B) are located within one hundred (100) yards of:

(i) any high quality water designated as an outstanding state resource pursuant to 327 IAC 2-1-2(3), excluding Lake Michigan;

(ii) any water designated as exceptional use pursuant to 327 IAC 2-13(a)(6) *[sic., 327 IAC 2-1-3(a)(6)]* and 327 IAC 2-1-11(b);

(iii) any water designated as capable of supporting a salmonid fishery pursuant to 327 IAC 2-1-6(c)(1), except Lake Michigan; or

(iv) any water that is a fish hatchery, fish and wildlife area, nature preserve, or recreational water owned by the department of natural resources or the federal government.

(4) For any spill which does not meet the criteria in subdivisions (1) through (3), the following must be reported:

(A) Spills to surface waters:

(i) spills of hazardous substances or extremely hazardous substances when the amount spilled exceeds one hundred (100) pounds or the reportable quantity, whichever is less;

(ii) spills of petroleum of such quantity as to cause a sheen upon the waters; or

(iii) spills of objectionable substances as defined in section 4(11) of this rule.

(B) Spills to soil beyond the facility boundary:

(i) spills of hazardous substances or extremely hazardous substances when the amount spilled exceeds one hundred (100) pounds or the reportable quantity, whichever is less;

(ii) spills of petroleum when the amount spilled exceeds fifty-five (55) gallons; or

(iii) spills of objectionable substances as defined in section 4(11) of this rule.

(C) Spills to soil within the facility boundary:

(i) spills of hazardous substances or extremely hazardous substances when the amount spilled exceeds the reportable quantity;

(ii) spills of petroleum when the spilled amount exceeds one thousand (1,000) gallons; or

(iii) spills of objectionable substances as defined in section 4(11) of this rule.

(5) Any spill for which a spill response has not been done.

(Water Pollution Control Division; 327 IAC 2-6.1-5; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1732; errata filed Mar 7, 1997, 2:25 p.m.: 20 IR 1738; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)

327 IAC 2-6.1-6 Reportable spills; transportation

Authority: IC 13-14-8-7
Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17

Sec. 6. The following spills from a mode of transportation must be reported:

(1) Spills that damage the waters of the state so as to cause death or acute injury or illness to humans or animals.

(2) Spills that damage surface waters.

(3) Spills to soil:

(A) spills of hazardous substances or extremely hazardous substances when the amount spilled exceeds one hundred (100) pounds or the reportable quantity, whichever is less;

(B) spills of petroleum when the amount spilled exceeds fifty-five (55) gallons; or

(C) spills of objectionable substances as defined in section 4(11) of this rule.

(4) Any spill for which a spill response has not been done.

(Water Pollution Control Division; 327 IAC 2-6.1-6; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1733; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)

327 IAC 2-6.1-7 Reportable spills; responsibilities

Authority: IC 13-14-8-7
Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17

Sec. 7. Any person who operates, controls, or maintains any mode of transportation or facility from which a spill occurs shall, upon discovery of a reportable spill to the soil or surface waters of the state, do the following:

(1) Contain the spill, if possible, to prevent additional spilled material from entering the waters of the state.

(2) Undertake or cause others to undertake activities needed to accomplish a spill response.

(3) As soon as possible, but within two (2) hours of discovery, communicate a spill report to the Department of Environmental Management, Office of Land Quality, Emergency Response Section: Area Code 1-888-233-7745 for in-state calls (toll free), (317) 233-7745 for out-of-state calls. If new or updated spill report information becomes known that indicates a significant increase in the likelihood of damage to the waters of the state, the responsible party shall notify the department as soon as possible but within two (2) hours of the time the new or updated information becomes known.

(4) Submit to the Indiana Department of Environmental Management, Office of Land Quality, Emergency Response Section (MC 66-30), 2525 N. Shadeland Ave., Suite 100, Indianapolis, IN 46219-1787, a written copy of the spill report if requested in writing by the department.

(5) Except from modes of transportation other than pipelines, exercise due diligence and document attempts to notify the following:

(A) For spills to surface water that cause damage, the nearest affected downstream water user located within ten (10) miles of the spill and in the state of Indiana; and

(B) For spills to soil outside the facility boundary, the affected property owner or owners, operator or operators, or occupant or occupants.

(Water Pollution Control Division; 327 IAC 2-6.1-7; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1733; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; errata filed Feb 6, 2006, 11:15 a.m.: 29 IR 1936; errata filed Oct 20, 2006, 10:08 a.m.: 20061101-IR-327060497ACA; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; errata filed May 27, 2008, 2:06 p.m.: 20080625-IR-327080419ACA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)

327 IAC 2-6.1-8 Emergency spill response actions

Authority: IC 13-14-8-7
Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17

Sec. 8. Notwithstanding any other section of this rule, emergency spill response actions take precedence over reporting requirements, and when emergency spill response activities render spill reporting inconsistent with effective response activities, communication of the spill report to the Indiana department of environmental management may be delayed. In situations where the spill report is delayed, the burden of proving the need for the delay shall be upon the responsible person. *(Water Pollution Control Division; 327 IAC 2-6.1-8; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1734; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR*

1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)

327 IAC 2-6.1-9 Compliance confirmation

Authority: IC 13-14-8-7
Affected: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17

Sec. 9. When spill reporting and response, as provided for in this rule, has occurred, the department shall, upon request, issue a letter confirming compliance with this rule and stating that no further action is required under this rule. *(Water Pollution Control Division; 327 IAC 2-6.1-9; filed Feb 25, 1997, 1:00 p.m.: 20 IR 1734; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)*

Rule 7. Lake Michigan and Contiguous Harbor Areas (Repealed)

(Repealed by Water Pollution Control Division; filed Feb 1, 1990, 4:30 p.m.: 13 IR 1046)

Rule 8. Grand Calumet River and Indiana Harbor Ship Canal (Repealed)

(Repealed by Water Pollution Control Division; filed Feb 1, 1990, 4:30 p.m.: 13 IR 1046)

Rule 9. Natural Spawning, Rearing or Imprinting Areas; Migration Routes for Salmonid Fishes (Repealed)

(Repealed by Water Pollution Control Division; filed Feb 1, 1990, 4:30 p.m.: 13 IR 1046)

Rule 10. Secondary Containment of Aboveground Storage Tanks Containing Hazardous Materials

327 IAC 2-10-1 Purpose

Authority: IC 13-18-5
Affected: IC 13-11-2

Sec. 1. (a) This rule provides the requirements for secondary containment structures and spill response plans for the purpose of preventing released hazardous materials from entering surface water or ground water at facilities storing liquid hazardous materials in an aboveground storage tank or storage area, or operating a transfer area.

(b) The intent of this rule is to provide for short term containment of discharges.

(c) This rule does not reduce or replace the secondary containment requirements found in other regulations or laws. *(Water Pollution Control Division; 327 IAC 2-10-1; filed May 28, 1999, 11:42 a.m.: 22 IR 3099; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: 20071219-IR-327070553BFA; readopted filed Jul 29, 2013, 9:21 a.m.: 20130828-IR-327130176BFA)*

327 IAC 2-10-2 Applicability

Authority: IC 13-18-5
Affected: IC 13-11-2

Sec. 2. (a) The secondary containment requirements of this rule apply to owners or operators of a facility storing liquid hazardous materials in an aboveground storage tank or storage area, or operating a transfer area for liquid hazardous materials as defined in section 4 of this rule, if the aboveground tank, storage area, or transfer area is constructed after the effective date of this rule and includes:

(1) construction activities scheduled after the effective date of this rule; or

(2) construction activities scheduled before the effective date of this rule only when physical construction did not begin within

ATTACHMENT 2

ANALYTICAL REPORT

Job Number: 500-95474-1

SDG Number: 15-07.01

Job Description: Habitat/Dragoo Phase II

For:
Fields Environmental
1309 West Vernal Pike
Bloomington, IN 47404

Attention: Rudy Fields

Approved for release.
Robin M Kintz
Project Manager II
5/11/2015 4:14 PM

Robin M Kintz, Project Manager II
2417 Bond Street, University Park, IL, 60484
(708)534-5200
robinm.kintz@testamericainc.com
05/11/2015

All questions regarding this test report should be directed to the TestAmerica Project Manager whose signature appears on this report. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Job Narrative
500-95474-1

Comments
No additional comments.

Receipt
The samples were received on 5/1/2015 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was -0.8º C.

GC/MS Semi VOA
Method(s) 8270D: The following samples contained one base surrogate outside acceptance limits: DS-9 (500-95474-9), 95474-4(RA), 95474-9(RA), 95474-10 MSD(RA). The laboratory's SOP allows one acid and one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The matrix spike duplicate (MSD) recoveries for 286634 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8270D: The %RPD for the matrix spike (MS) and matrix spike duplicate (MSD) was outside control limits; however, the %recovery for the MS and laboratory control standard (LCS) were within control limits. No further action is required. DS-10 (500-95474-10), DS-10 (500-95474-10[MS]) and DS-10 (500-95474-10[MSD])

Method(s) 8270D: Internal standards failed control limits for the following samples: DS-1 (500-95474-1), DS-2 (500-95474-2), DS-3 (500-95474-3), DS-4 (500-95474-4), DS-6 (500-95474-6), DS-7 (500-95474-7), DS-9 (500-95474-9), DS-10 (500-95474-10), DS-10 (500-95474-10[MS]) and DS-10 (500-95474-10[MSD]). Reanalysis (RA) was performed and confirmed original results. Both original and RA results have been reported.

Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 286746 was outside the method criteria for the following analyte: Benzo[g,h,i]perylene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated. The following samples were affected: DS-1 (500-95474-1), DS-2 (500-95474-2), DS-3 (500-95474-3), DS-4 (500-95474-4), DS-6 (500-95474-6), DS-9 (500-95474-9), DS-10 (500-95474-10), DS-10 (500-95474-10[MS]) and DS-10 (500-95474-10[MSD]), 95474-7(RA).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 286895 recovered above the upper control limit for Benzo(b)fluoranthene. The samples associated with this CCV were non-detects for the affected analytes except 95474-11. The data have been reported. The following samples are impacted: DS-5 (500-95474-5), DS-7 (500-95474-7), DS-8 (500-95474-8), DS-10 (500-95474-10), DS-10 (500-95474-10[MS]) and DS-10 (500-95474-10[MSD]), 95474-1(RA), 95474-2(RA), 95474-3(RA), 95474-4(RA), 95474-6(RA), 95474-9(RA), 95474-10 MSD(RA).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8082: Compound DCB eluted outside the retention time window on the primary column for the following samples: DS-1 (500-95474-1), DS-2 (500-95474-2), DS-3 (500-95474-3), DS-4 (500-95474-4), DS-5 (500-95474-5), DS-6 (500-95474-6), DS-7 (500-95474-7), DS-8 (500-95474-8), DS-9 (500-95474-9), DS-10 (500-95474-10), DS-10 (500-95474-10[MS]), DS-10 (500-95474-10[MSD]) and DS-DUP (500-95474-11). This retention time shift was taken into account when reviewing the sample(s) for target compounds.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS21 Analysis Batch Number: 285596

Lab Sample ID: IC 500-285596/8 Client Sample ID:

Date Analyzed: 04/27/15 15:29 Lab File ID: L1STD20.D GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Chloroaniline	6.06	Split Peak	rynkarg	04/28/15 09:11

Lab Sample ID: IC 500-285596/10 Client Sample ID:

Date Analyzed: 04/27/15 16:18 Lab File ID: L1STD50.D GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Chloroaniline	6.07	Split Peak	rynkarg	04/28/15 09:11

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS21 Analysis Batch Number: 286746

Lab Sample ID: 500-95474-1 Client Sample ID: DS-1

Date Analyzed: 05/05/15 15:00 Lab File ID: 95474-1.D GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[b]fluoranthene	11.61	Split Peak	lesiakk	05/07/15 12:55
Benzo[k]fluoranthene	11.63	Split Peak	lesiakk	05/07/15 12:55

Lab Sample ID: 500-95474-2 Client Sample ID: DS-2

Date Analyzed: 05/05/15 15:25 Lab File ID: 95474-2.D GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[b]fluoranthene	11.61	Split Peak	lesiakk	05/07/15 12:58

Lab Sample ID: 500-95474-9 Client Sample ID: DS-9

Date Analyzed: 05/05/15 18:17 Lab File ID: 95474-9.D GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[b]fluoranthene	11.62	Split Peak	lesiakk	05/06/15 09:29

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS23 Analysis Batch Number: 285942

Lab Sample ID: IC 500-285942/10 Client Sample ID:

Date Analyzed: 04/29/15 13:38 Lab File ID: L1STD50.d GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	5.76	Baseline	rynkarg	04/29/15 16:44

Lab Sample ID: IC 500-285942/11 Client Sample ID:

Date Analyzed: 04/29/15 13:57 Lab File ID: L1STD60.d GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	5.77	Baseline	rynkarg	04/29/15 16:43

Lab Sample ID: IC 500-285942/12 Client Sample ID:

Date Analyzed: 04/29/15 14:16 Lab File ID: L1STD70.d GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	5.78	Baseline	rynkarg	04/29/15 16:43

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS23 Analysis Batch Number: 286895

Lab Sample ID: 500-95474-1 RA Client Sample ID: DS-1 RA

Date Analyzed: 05/06/15 12:16 Lab File ID: 95474-1.d GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[b]fluoranthene	10.99	Split Peak	lesiakk	05/07/15 15:37
Benzo[k]fluoranthene	11.00	Split Peak	lesiakk	05/07/15 15:37

Lab Sample ID: 500-95474-9 RA Client Sample ID: DS-9 RA

Date Analyzed: 05/06/15 14:53 Lab File ID: 95474-9.d GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chrysene	10.11	Split Peak	lesiakk	05/07/15 15:47

Lab Sample ID: 500-95474-11 Client Sample ID: DS-DUP

Date Analyzed: 05/06/15 15:32 Lab File ID: 95474-11.d GC Column: ZB5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[b]fluoranthene	10.99	Split Peak	lesiakk	05/07/15 15:52
Benzo[k]fluoranthene	11.00	Split Peak	lesiakk	05/07/15 15:52

SAMPLE SUMMARY

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
500-95474-1	DS-1	Solid	04/30/2015 1420	05/01/2015 1015
500-95474-2	DS-2	Solid	04/30/2015 1430	05/01/2015 1015
500-95474-3	DS-3	Solid	04/30/2015 1435	05/01/2015 1015
500-95474-4	DS-4	Solid	04/30/2015 1445	05/01/2015 1015
500-95474-5	DS-5	Solid	04/30/2015 1505	05/01/2015 1015
500-95474-6	DS-6	Solid	04/30/2015 1515	05/01/2015 1015
500-95474-7	DS-7	Solid	04/30/2015 1525	05/01/2015 1015
500-95474-8	DS-8	Solid	04/30/2015 1545	05/01/2015 1015
500-95474-9	DS-9	Solid	04/30/2015 1550	05/01/2015 1015
500-95474-10	DS-10	Solid	04/30/2015 1605	05/01/2015 1015
500-95474-10MS	DS-10	Solid	04/30/2015 1605	05/01/2015 1015
500-95474-10MSD	DS-10	Solid	04/30/2015 1605	05/01/2015 1015
500-95474-11	DS-DUP	Solid	04/30/2015 0000	05/01/2015 1015

EXECUTIVE SUMMARY - Detections

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
500-95474-1	**DS-1**					
Benzo[a]anthracene		0.047	*	0.042	mg/Kg	8270D
Benzo[a]pyrene		0.065	*	0.042	mg/Kg	8270D
Benzo[b]fluoranthene		0.093	*	0.042	mg/Kg	8270D
Benzo[k]fluoranthene		0.054	*	0.042	mg/Kg	8270D
Chrysene		0.072	*	0.042	mg/Kg	8270D
Fluoranthene		0.11		0.042	mg/Kg	8270D
Phenanthrene		0.044		0.042	mg/Kg	8270D
Pyrene		0.12	*	0.042	mg/Kg	8270D
Arsenic		7.9		1.3	mg/Kg	6010B
Barium		100		1.3	mg/Kg	6010B
Cadmium		0.33		0.26	mg/Kg	6010B
Chromium		17		1.3	mg/Kg	6010B
Lead		24		0.64	mg/Kg	6010B
Mercury		0.053		0.022	mg/Kg	7471B
Percent Moisture		24		0.10	%	Moisture
Percent Solids		76		0.10	%	Moisture
500-95474-2	**DS-2**					
Arsenic		7.4		1.3	mg/Kg	6010B
Barium		89		1.3	mg/Kg	6010B
Cadmium		0.27		0.26	mg/Kg	6010B
Chromium		16		1.3	mg/Kg	6010B
Lead		22		0.64	mg/Kg	6010B
Mercury		0.047		0.019	mg/Kg	7471B
Percent Moisture		22		0.10	%	Moisture
Percent Solids		78		0.10	%	Moisture
500-95474-3	**DS-3**					
Arsenic		6.6		1.2	mg/Kg	6010B
Barium		91		1.2	mg/Kg	6010B
Cadmium		0.25		0.25	mg/Kg	6010B
Chromium		16		1.2	mg/Kg	6010B
Lead		17		0.62	mg/Kg	6010B
Mercury		0.044		0.020	mg/Kg	7471B
Percent Moisture		24		0.10	%	Moisture
Percent Solids		76		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
500-95474-4	**DS-4**					
Arsenic		6.9		1.1	mg/Kg	6010B
Barium		94		1.1	mg/Kg	6010B
Cadmium		0.25		0.22	mg/Kg	6010B
Chromium		17		1.1	mg/Kg	6010B
Lead		26		0.55	mg/Kg	6010B
Mercury		0.044		0.018	mg/Kg	7471B
Percent Moisture		19		0.10	%	Moisture
Percent Solids		81		0.10	%	Moisture
500-95474-5	**DS-5**					
Arsenic		8.9		1.2	mg/Kg	6010B
Barium		100		1.2	mg/Kg	6010B
Cadmium		0.28		0.23	mg/Kg	6010B
Chromium		27		1.2	mg/Kg	6010B
Lead		33		0.58	mg/Kg	6010B
Mercury		0.046		0.019	mg/Kg	7471B
Percent Moisture		21		0.10	%	Moisture
Percent Solids		79		0.10	%	Moisture
500-95474-6	**DS-6**					
Arsenic		7.8		1.2	mg/Kg	6010B
Barium		96		1.2	mg/Kg	6010B
Cadmium		0.26		0.25	mg/Kg	6010B
Chromium		20		1.2	mg/Kg	6010B
Lead		23		0.62	mg/Kg	6010B
Mercury		0.049		0.020	mg/Kg	7471B
Percent Moisture		21		0.10	%	Moisture
Percent Solids		79		0.10	%	Moisture
500-95474-7	**DS-7**					
Arsenic		7.0		1.1	mg/Kg	6010B
Barium		92		1.1	mg/Kg	6010B
Chromium		16		1.1	mg/Kg	6010B
Lead		20		0.57	mg/Kg	6010B
Mercury		0.043		0.019	mg/Kg	7471B
Percent Moisture		21		0.10	%	Moisture
Percent Solids		79		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
500-95474-8	**DS-8**					
Arsenic		7.4		1.2	mg/Kg	6010B
Barium		92		1.2	mg/Kg	6010B
Cadmium		0.25		0.24	mg/Kg	6010B
Chromium		23		1.2	mg/Kg	6010B
Lead		21		0.60	mg/Kg	6010B
Mercury		0.049		0.019	mg/Kg	7471B
Percent Moisture		21		0.10	%	Moisture
Percent Solids		79		0.10	%	Moisture
500-95474-9	**DS-9**					
Arsenic		6.9		1.1	mg/Kg	6010B
Barium		92		1.1	mg/Kg	6010B
Cadmium		0.26		0.22	mg/Kg	6010B
Chromium		17		1.1	mg/Kg	6010B
Lead		21		0.54	mg/Kg	6010B
Mercury		0.046		0.018	mg/Kg	7471B
Percent Moisture		22		0.10	%	Moisture
Percent Solids		78		0.10	%	Moisture
500-95474-10	**DS-10**					
Arsenic		6.8	F1 F2	1.2	mg/Kg	6010B
Barium		91	V	1.2	mg/Kg	6010B
Cadmium		0.28		0.25	mg/Kg	6010B
Chromium		16	F1 F2 V	1.2	mg/Kg	6010B
Lead		20		0.62	mg/Kg	6010B
Mercury		0.041	F1	0.021	mg/Kg	7471B
Percent Moisture		22		0.10	%	Moisture
Percent Solids		78		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
500-95474-11	**DS-DUP**					
Benzo[a]anthracene		0.39		0.041	mg/Kg	8270D
Benzo[a]pyrene		0.53		0.041	mg/Kg	8270D
Benzo[b]fluoranthene		0.70		0.041	mg/Kg	8270D
Benzo[g,h,i]perylene		0.37		0.041	mg/Kg	8270D
Benzo[k]fluoranthene		0.27		0.041	mg/Kg	8270D
Chrysene		0.44		0.041	mg/Kg	8270D
Dibenz(a,h)anthracene		0.081		0.041	mg/Kg	8270D
Fluoranthene		0.59		0.041	mg/Kg	8270D
Indeno[1,2,3-cd]pyrene		0.31		0.041	mg/Kg	8270D
Phenanthrene		0.20		0.041	mg/Kg	8270D
Pyrene		0.80		0.041	mg/Kg	8270D
Arsenic		8.0		1.1	mg/Kg	6010B
Barium		98		1.1	mg/Kg	6010B
Cadmium		0.31		0.23	mg/Kg	6010B
Chromium		18		1.1	mg/Kg	6010B
Lead		25		0.57	mg/Kg	6010B
Selenium		1.1		1.1	mg/Kg	6010B
Mercury		0.063		0.021	mg/Kg	7471B
Percent Moisture		24		0.10	%	Moisture
Percent Solids		76		0.10	%	Moisture

METHOD SUMMARY

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Semivolatile Organic Compounds (GC/MS)	TAL CHI	SW846 8270D	
Automated Soxhlet Extraction	TAL CHI		SW846 3541
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL CHI	SW846 8082	
Automated Soxhlet Extraction	TAL CHI		SW846 3541
Metals (ICP)	TAL CHI	SW846 6010B	
Preparation, Metals	TAL CHI		SW846 3050B
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	TAL CHI	SW846 7471B	
Preparation, Mercury	TAL CHI		SW846 7471B
Percent Moisture	TAL CHI	EPA Moisture	

Lab References:

TAL CHI = TestAmerica Chicago

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Method	Analyst	Analyst ID
SW846 8270D	Hamner, Barb J	BJH
SW846 8082	Orf, Gene M	GMO
SW846 6010B	Jones, Paul	PJ1
SW846 7471B	Laird, Rebecca L	RLL
EPA Moisture	Nelson, Larry W	LWN

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-1

Lab Sample ID: 500-95474-1
Client Matrix: Solid
% Moisture: 24.0

Date Sampled: 04/30/2015 1420
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286746	Instrument ID:	CMS21
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-1.D
Dilution:	1.0			Initial Weight/Volume:	15.4848 g
Analysis Date:	05/05/2015 1500			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.042		0.042
Acenaphthylene		<0.042		0.042
Anthracene		<0.042		0.042
Benzo[a]anthracene		0.047	*	0.042
Benzo[a]pyrene		0.065	*	0.042
Benzo[b]fluoranthene		0.093	*	0.042
Benzo[g,h,i]perylene		<0.042	*	0.042
Benzo[k]fluoranthene		0.054	*	0.042
Chrysene		0.072	*	0.042
Dibenz(a,h)anthracene		<0.042	*	0.042
Fluoranthene		0.11		0.042
Fluorene		<0.042		0.042
Indeno[1,2,3-cd]pyrene		<0.042	*	0.042
1-Methylnaphthalene		<0.042		0.042
2-Methylnaphthalene		<0.042		0.042
Naphthalene		<0.042		0.042
Phenanthrene		0.044		0.042
Pyrene		0.12	*	0.042

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	68		25 - 119
Nitrobenzene-d5 (Surr)	56		25 - 115
Terphenyl-d14 (Surr)	96	*	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-1

Lab Sample ID: 500-95474-1
Client Matrix: Solid
% Moisture: 24.0

Date Sampled: 04/30/2015 1420
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-1.d
Dilution:	1.0			Initial Weight/Volume:	15.4848 g
Analysis Date:	05/06/2015 1216	Run Type:	RA	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.042		0.042
Acenaphthylene		<0.042		0.042
Anthracene		<0.042		0.042
Benzo[a]anthracene		0.049		0.042
Benzo[a]pyrene		0.063	*	0.042
Benzo[b]fluoranthene		0.11	*	0.042
Benzo[g,h,i]perylene		<0.042	*	0.042
Benzo[k]fluoranthene		0.054	*	0.042
Chrysene		0.073		0.042
Dibenz(a,h)anthracene		<0.042	*	0.042
Fluoranthene		0.12		0.042
Fluorene		<0.042		0.042
Indeno[1,2,3-cd]pyrene		<0.042	*	0.042
1-Methylnaphthalene		<0.042		0.042
2-Methylnaphthalene		<0.042		0.042
Naphthalene		<0.042		0.042
Phenanthrene		0.045		0.042
Pyrene		0.16		0.042

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	67		25 - 119
Nitrobenzene-d5 (Surr)	58		25 - 115
Terphenyl-d14 (Surr)	116		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-2

Lab Sample ID: 500-95474-2
Client Matrix: Solid
% Moisture: 22.4

Date Sampled: 04/30/2015 1430
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286746	Instrument ID:	CMS21
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-2.D
Dilution:	1.0			Initial Weight/Volume:	15.5790 g
Analysis Date:	05/05/2015 1525			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.041		0.041
Acenaphthylene		<0.041		0.041
Anthracene		<0.041		0.041
Benzo[a]anthracene		<0.041		0.041
Benzo[a]pyrene		<0.041	*	0.041
Benzo[b]fluoranthene		<0.041	*	0.041
Benzo[g,h,i]perylene		<0.041	*	0.041
Benzo[k]fluoranthene		<0.041	*	0.041
Chrysene		<0.041		0.041
Dibenz(a,h)anthracene		<0.041	*	0.041
Fluoranthene		<0.041		0.041
Fluorene		<0.041		0.041
Indeno[1,2,3-cd]pyrene		<0.041	*	0.041
1-Methylnaphthalene		<0.041		0.041
2-Methylnaphthalene		<0.041		0.041
Naphthalene		<0.041		0.041
Phenanthrene		<0.041		0.041
Pyrene		<0.041		0.041

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	64		25 - 119
Nitrobenzene-d5 (Surr)	59		25 - 115
Terphenyl-d14 (Surr)	92		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-2

Lab Sample ID: 500-95474-2
Client Matrix: Solid
% Moisture: 22.4

Date Sampled: 04/30/2015 1430
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-2.d
Dilution:	1.0			Initial Weight/Volume:	15.5790 g
Analysis Date:	05/06/2015 1236	Run Type:	RA	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.041		0.041
Acenaphthylene		<0.041		0.041
Anthracene		<0.041		0.041
Benzo[a]anthracene		<0.041		0.041
Benzo[a]pyrene		<0.041	*	0.041
Benzo[b]fluoranthene		<0.041	*	0.041
Benzo[g,h,i]perylene		<0.041	*	0.041
Benzo[k]fluoranthene		<0.041	*	0.041
Chrysene		<0.041		0.041
Dibenz(a,h)anthracene		<0.041	*	0.041
Fluoranthene		<0.041		0.041
Fluorene		<0.041		0.041
Indeno[1,2,3-cd]pyrene		<0.041	*	0.041
1-Methylnaphthalene		<0.041		0.041
2-Methylnaphthalene		<0.041		0.041
Naphthalene		<0.041		0.041
Phenanthrene		<0.041		0.041
Pyrene		<0.041		0.041

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	68		25 - 119
Nitrobenzene-d5 (Surr)	59		25 - 115
Terphenyl-d14 (Surr)	124		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-3

Lab Sample ID: 500-95474-3
Client Matrix: Solid
% Moisture: 24.5

Date Sampled: 04/30/2015 1435
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286746	Instrument ID:	CMS21
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-3.D
Dilution:	1.0			Initial Weight/Volume:	15.2074 g
Analysis Date:	05/05/2015 1549			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.043		0.043
Acenaphthylene		<0.043		0.043
Anthracene		<0.043		0.043
Benzo[a]anthracene		<0.043	*	0.043
Benzo[a]pyrene		<0.043	*	0.043
Benzo[b]fluoranthene		<0.043	*	0.043
Benzo[g,h,i]perylene		<0.043	*	0.043
Benzo[k]fluoranthene		<0.043	*	0.043
Chrysene		<0.043	*	0.043
Dibenz(a,h)anthracene		<0.043	*	0.043
Fluoranthene		<0.043		0.043
Fluorene		<0.043		0.043
Indeno[1,2,3-cd]pyrene		<0.043	*	0.043
1-Methylnaphthalene		<0.043		0.043
2-Methylnaphthalene		<0.043		0.043
Naphthalene		<0.043		0.043
Phenanthrene		<0.043		0.043
Pyrene		<0.043	*	0.043

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	59		25 - 119
Nitrobenzene-d5 (Surr)	49		25 - 115
Terphenyl-d14 (Surr)	106	*	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-3

Lab Sample ID: 500-95474-3
Client Matrix: Solid
% Moisture: 24.5

Date Sampled: 04/30/2015 1435
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-3.d
Dilution:	1.0			Initial Weight/Volume:	15.2074 g
Analysis Date:	05/06/2015 1255	Run Type:	RA	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.043		0.043
Acenaphthylene		<0.043		0.043
Anthracene		<0.043		0.043
Benzo[a]anthracene		<0.043		0.043
Benzo[a]pyrene		<0.043	*	0.043
Benzo[b]fluoranthene		<0.043	*	0.043
Benzo[g,h,i]perylene		<0.043	*	0.043
Benzo[k]fluoranthene		<0.043	*	0.043
Chrysene		<0.043		0.043
Dibenz(a,h)anthracene		<0.043	*	0.043
Fluoranthene		<0.043		0.043
Fluorene		<0.043		0.043
Indeno[1,2,3-cd]pyrene		<0.043	*	0.043
1-Methylnaphthalene		<0.043		0.043
2-Methylnaphthalene		<0.043		0.043
Naphthalene		<0.043		0.043
Phenanthrene		<0.043		0.043
Pyrene		<0.043		0.043

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	56		25 - 119
Nitrobenzene-d5 (Surr)	51		25 - 115
Terphenyl-d14 (Surr)	126		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-4

Lab Sample ID: 500-95474-4
Client Matrix: Solid
% Moisture: 18.6

Date Sampled: 04/30/2015 1445
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286746	Instrument ID:	CMS21
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-4.D
Dilution:	1.0			Initial Weight/Volume:	15.2779 g
Analysis Date:	05/05/2015 1614			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.040		0.040
Acenaphthylene		<0.040		0.040
Anthracene		<0.040		0.040
Benzo[a]anthracene		<0.040	*	0.040
Benzo[a]pyrene		<0.040	*	0.040
Benzo[b]fluoranthene		<0.040	*	0.040
Benzo[g,h,i]perylene		<0.040	*	0.040
Benzo[k]fluoranthene		<0.040	*	0.040
Chrysene		<0.040	*	0.040
Dibenz(a,h)anthracene		<0.040	*	0.040
Fluoranthene		<0.040		0.040
Fluorene		<0.040		0.040
Indeno[1,2,3-cd]pyrene		<0.040	*	0.040
1-Methylnaphthalene		<0.040		0.040
2-Methylnaphthalene		<0.040		0.040
Naphthalene		<0.040		0.040
Phenanthrene		<0.040		0.040
Pyrene		<0.040	*	0.040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	79		25 - 119
Nitrobenzene-d5 (Surr)	63		25 - 115
Terphenyl-d14 (Surr)	120	*	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-4

Lab Sample ID: 500-95474-4
Client Matrix: Solid
% Moisture: 18.6

Date Sampled: 04/30/2015 1445
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-4.d
Dilution:	1.0			Initial Weight/Volume:	15.2779 g
Analysis Date:	05/06/2015 1315	Run Type:	RA	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.040		0.040
Acenaphthylene		<0.040		0.040
Anthracene		<0.040		0.040
Benzo[a]anthracene		<0.040		0.040
Benzo[a]pyrene		<0.040	*	0.040
Benzo[b]fluoranthene		<0.040	*	0.040
Benzo[g,h,i]perylene		<0.040	*	0.040
Benzo[k]fluoranthene		<0.040	*	0.040
Chrysene		<0.040		0.040
Dibenz(a,h)anthracene		<0.040	*	0.040
Fluoranthene		<0.040		0.040
Fluorene		<0.040		0.040
Indeno[1,2,3-cd]pyrene		<0.040	*	0.040
1-Methylnaphthalene		<0.040		0.040
2-Methylnaphthalene		<0.040		0.040
Naphthalene		<0.040		0.040
Phenanthrene		<0.040		0.040
Pyrene		<0.040		0.040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	78		25 - 119
Nitrobenzene-d5 (Surr)	64		25 - 115
Terphenyl-d14 (Surr)	140	X	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-5

Lab Sample ID: 500-95474-5
Client Matrix: Solid
% Moisture: 20.8

Date Sampled: 04/30/2015 1505
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-5.d
Dilution:	1.0			Initial Weight/Volume:	15.8345 g
Analysis Date:	05/06/2015 1334			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.039		0.039
Acenaphthylene		<0.039		0.039
Anthracene		<0.039		0.039
Benzo[a]anthracene		<0.039		0.039
Benzo[a]pyrene		<0.039		0.039
Benzo[b]fluoranthene		<0.039		0.039
Benzo[g,h,i]perylene		<0.039		0.039
Benzo[k]fluoranthene		<0.039		0.039
Chrysene		<0.039		0.039
Dibenz(a,h)anthracene		<0.039		0.039
Fluoranthene		<0.039		0.039
Fluorene		<0.039		0.039
Indeno[1,2,3-cd]pyrene		<0.039		0.039
1-Methylnaphthalene		<0.039		0.039
2-Methylnaphthalene		<0.039		0.039
Naphthalene		<0.039		0.039
Phenanthrene		<0.039		0.039
Pyrene		<0.039		0.039

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	36		25 - 119
Nitrobenzene-d5 (Surr)	33		25 - 115
Terphenyl-d14 (Surr)	57		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-6

Lab Sample ID: 500-95474-6
Client Matrix: Solid
% Moisture: 21.2

Date Sampled: 04/30/2015 1515
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286746	Instrument ID:	CMS21
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-6.D
Dilution:	1.0			Initial Weight/Volume:	15.6065 g
Analysis Date:	05/05/2015 1703			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.040		0.040
Acenaphthylene		<0.040		0.040
Anthracene		<0.040		0.040
Benzo[a]anthracene		<0.040		0.040
Benzo[a]pyrene		<0.040	*	0.040
Benzo[b]fluoranthene		<0.040	*	0.040
Benzo[g,h,i]perylene		<0.040	*	0.040
Benzo[k]fluoranthene		<0.040	*	0.040
Chrysene		<0.040		0.040
Dibenz(a,h)anthracene		<0.040	*	0.040
Fluoranthene		<0.040		0.040
Fluorene		<0.040		0.040
Indeno[1,2,3-cd]pyrene		<0.040	*	0.040
1-Methylnaphthalene		<0.040		0.040
2-Methylnaphthalene		<0.040		0.040
Naphthalene		<0.040		0.040
Phenanthrene		<0.040		0.040
Pyrene		<0.040		0.040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	72		25 - 119
Nitrobenzene-d5 (Surr)	59		25 - 115
Terphenyl-d14 (Surr)	105		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-6

Lab Sample ID: 500-95474-6
Client Matrix: Solid
% Moisture: 21.2

Date Sampled: 04/30/2015 1515
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-6.d
Dilution:	1.0			Initial Weight/Volume:	15.6065 g
Analysis Date:	05/06/2015 1354	Run Type:	RA	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.040		0.040
Acenaphthylene		<0.040		0.040
Anthracene		<0.040		0.040
Benzo[a]anthracene		<0.040		0.040
Benzo[a]pyrene		<0.040	*	0.040
Benzo[b]fluoranthene		<0.040	*	0.040
Benzo[g,h,i]perylene		<0.040	*	0.040
Benzo[k]fluoranthene		<0.040	*	0.040
Chrysene		<0.040		0.040
Dibenz(a,h)anthracene		<0.040	*	0.040
Fluoranthene		<0.040		0.040
Fluorene		<0.040		0.040
Indeno[1,2,3-cd]pyrene		<0.040	*	0.040
1-Methylnaphthalene		<0.040		0.040
2-Methylnaphthalene		<0.040		0.040
Naphthalene		<0.040		0.040
Phenanthrene		<0.040		0.040
Pyrene		<0.040		0.040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	69		25 - 119
Nitrobenzene-d5 (Surr)	59		25 - 115
Terphenyl-d14 (Surr)	129		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-7

Lab Sample ID: 500-95474-7
Client Matrix: Solid
% Moisture: 21.2

Date Sampled: 04/30/2015 1525
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286746	Instrument ID:	CMS21
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-7.D
Dilution:	1.0			Initial Weight/Volume:	15.7229 g
Analysis Date:	05/05/2015 1728	Run Type:	RA	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.040		0.040
Acenaphthylene		<0.040		0.040
Anthracene		<0.040		0.040
Benzo[a]anthracene		<0.040	*	0.040
Benzo[a]pyrene		<0.040	*	0.040
Benzo[b]fluoranthene		<0.040	*	0.040
Benzo[g,h,i]perylene		<0.040	*	0.040
Benzo[k]fluoranthene		<0.040	*	0.040
Chrysene		<0.040	*	0.040
Dibenz(a,h)anthracene		<0.040	*	0.040
Fluoranthene		<0.040		0.040
Fluorene		<0.040		0.040
Indeno[1,2,3-cd]pyrene		<0.040	*	0.040
1-Methylnaphthalene		<0.040		0.040
2-Methylnaphthalene		<0.040		0.040
Naphthalene		<0.040		0.040
Phenanthrene		<0.040		0.040
Pyrene		<0.040	*	0.040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	62		25 - 119
Nitrobenzene-d5 (Surr)	51		25 - 115
Terphenyl-d14 (Surr)	115	*	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-7

Lab Sample ID: 500-95474-7
Client Matrix: Solid
% Moisture: 21.2

Date Sampled: 04/30/2015 1525
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-7.d
Dilution:	1.0			Initial Weight/Volume:	15.7229 g
Analysis Date:	05/06/2015 1413			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.040		0.040
Acenaphthylene		<0.040		0.040
Anthracene		<0.040		0.040
Benzo[a]anthracene		<0.040		0.040
Benzo[a]pyrene		<0.040	*	0.040
Benzo[b]fluoranthene		<0.040	*	0.040
Benzo[g,h,i]perylene		<0.040	*	0.040
Benzo[k]fluoranthene		<0.040	*	0.040
Chrysene		<0.040		0.040
Dibenz(a,h)anthracene		<0.040	*	0.040
Fluoranthene		<0.040		0.040
Fluorene		<0.040		0.040
Indeno[1,2,3-cd]pyrene		<0.040	*	0.040
1-Methylnaphthalene		<0.040		0.040
2-Methylnaphthalene		<0.040		0.040
Naphthalene		<0.040		0.040
Phenanthrene		<0.040		0.040
Pyrene		<0.040		0.040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	55		25 - 119
Nitrobenzene-d5 (Surr)	51		25 - 115
Terphenyl-d14 (Surr)	132		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-8

Lab Sample ID: 500-95474-8
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 04/30/2015 1545
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-8.d
Dilution:	1.0			Initial Weight/Volume:	15.1946 g
Analysis Date:	05/06/2015 1433			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.041		0.041
Acenaphthylene		<0.041		0.041
Anthracene		<0.041		0.041
Benzo[a]anthracene		<0.041		0.041
Benzo[a]pyrene		<0.041		0.041
Benzo[b]fluoranthene		<0.041		0.041
Benzo[g,h,i]perylene		<0.041		0.041
Benzo[k]fluoranthene		<0.041		0.041
Chrysene		<0.041		0.041
Dibenz(a,h)anthracene		<0.041		0.041
Fluoranthene		<0.041		0.041
Fluorene		<0.041		0.041
Indeno[1,2,3-cd]pyrene		<0.041		0.041
1-Methylnaphthalene		<0.041		0.041
2-Methylnaphthalene		<0.041		0.041
Naphthalene		<0.041		0.041
Phenanthrene		<0.041		0.041
Pyrene		<0.041		0.041

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	31		25 - 119
Nitrobenzene-d5 (Surr)	26		25 - 115
Terphenyl-d14 (Surr)	49		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-9

Lab Sample ID: 500-95474-9
Client Matrix: Solid
% Moisture: 21.7

Date Sampled: 04/30/2015 1550
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286746	Instrument ID:	CMS21
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-9.D
Dilution:	1.0			Initial Weight/Volume:	15.8016 g
Analysis Date:	05/05/2015 1817			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.040		0.040
Acenaphthylene		<0.040		0.040
Anthracene		<0.040		0.040
Benzo[a]anthracene		<0.040		0.040
Benzo[a]pyrene		<0.040	*	0.040
Benzo[b]fluoranthene		<0.040	*	0.040
Benzo[g,h,i]perylene		<0.040	*	0.040
Benzo[k]fluoranthene		<0.040	*	0.040
Chrysene		<0.040		0.040
Dibenz(a,h)anthracene		<0.040	*	0.040
Fluoranthene		<0.040		0.040
Fluorene		<0.040		0.040
Indeno[1,2,3-cd]pyrene		<0.040	*	0.040
1-Methylnaphthalene		<0.040		0.040
2-Methylnaphthalene		<0.040		0.040
Naphthalene		<0.040		0.040
Phenanthrene		<0.040		0.040
Pyrene		<0.040		0.040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	86		25 - 119
Nitrobenzene-d5 (Surr)	73		25 - 115
Terphenyl-d14 (Surr)	147	X	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-9

Lab Sample ID: 500-95474-9
Client Matrix: Solid
% Moisture: 21.7

Date Sampled: 04/30/2015 1550
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-9.d
Dilution:	1.0			Initial Weight/Volume:	15.8016 g
Analysis Date:	05/06/2015 1453	Run Type:	RA	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.040		0.040
Acenaphthylene		<0.040		0.040
Anthracene		<0.040		0.040
Benzo[a]anthracene		<0.040		0.040
Benzo[a]pyrene		<0.040	*	0.040
Benzo[b]fluoranthene		<0.040	*	0.040
Benzo[g,h,i]perylene		<0.040	*	0.040
Benzo[k]fluoranthene		<0.040	*	0.040
Chrysene		<0.040		0.040
Dibenz(a,h)anthracene		<0.040	*	0.040
Fluoranthene		<0.040		0.040
Fluorene		<0.040		0.040
Indeno[1,2,3-cd]pyrene		<0.040	*	0.040
1-Methylnaphthalene		<0.040		0.040
2-Methylnaphthalene		<0.040		0.040
Naphthalene		<0.040		0.040
Phenanthrene		<0.040		0.040
Pyrene		<0.040		0.040

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	81		25 - 119
Nitrobenzene-d5 (Surr)	73		25 - 115
Terphenyl-d14 (Surr)	157	X	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-10

Lab Sample ID: 500-95474-10
Client Matrix: Solid
% Moisture: 21.7

Date Sampled: 04/30/2015 1605
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-10.d
Dilution:	1.0			Initial Weight/Volume:	15.4626 g
Analysis Date:	05/06/2015 1512			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.041		0.041
Acenaphthylene		<0.041		0.041
Anthracene		<0.041		0.041
Benzo[a]anthracene		<0.041		0.041
Benzo[a]pyrene		<0.041		0.041
Benzo[b]fluoranthene		<0.041	F2	0.041
Benzo[g,h,i]perylene		<0.041	F2 F1	0.041
Benzo[k]fluoranthene		<0.041		0.041
Chrysene		<0.041		0.041
Dibenz(a,h)anthracene		<0.041	F2 F1	0.041
Fluoranthene		<0.041		0.041
Fluorene		<0.041		0.041
Indeno[1,2,3-cd]pyrene		<0.041	F2 F1	0.041
1-Methylnaphthalene		<0.041		0.041
2-Methylnaphthalene		<0.041		0.041
Naphthalene		<0.041		0.041
Phenanthrene		<0.041		0.041
Pyrene		<0.041	F2 F1	0.041

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	69		25 - 119
Nitrobenzene-d5 (Surr)	57		25 - 115
Terphenyl-d14 (Surr)	127		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: **DS-DUP**

Lab Sample ID: 500-95474-11
Client Matrix: Solid
% Moisture: 24.3

Date Sampled: 04/30/2015 0000
Date Received: 05/01/2015 1015

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	500-286895	Instrument ID:	CMS23
Prep Method:	3541	Prep Batch:	500-286634	Lab File ID:	95474-11.d
Dilution:	1.0			Initial Weight/Volume:	15.9990 g
Analysis Date:	05/06/2015 1532			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Acenaphthene		<0.041		0.041
Acenaphthylene		<0.041		0.041
Anthracene		<0.041		0.041
Benzo[a]anthracene		0.39		0.041
Benzo[a]pyrene		0.53		0.041
Benzo[b]fluoranthene		0.70		0.041
Benzo[g,h,i]perylene		0.37		0.041
Benzo[k]fluoranthene		0.27		0.041
Chrysene		0.44		0.041
Dibenz(a,h)anthracene		0.081		0.041
Fluoranthene		0.59		0.041
Fluorene		<0.041		0.041
Indeno[1,2,3-cd]pyrene		0.31		0.041
1-Methylnaphthalene		<0.041		0.041
2-Methylnaphthalene		<0.041		0.041
Naphthalene		<0.041		0.041
Phenanthrene		0.20		0.041
Pyrene		0.80		0.041

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	48		25 - 119
Nitrobenzene-d5 (Surr)	41		25 - 115
Terphenyl-d14 (Surr)	85		36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: **DS-1**

Lab Sample ID: 500-95474-1
Client Matrix: Solid
% Moisture: 24.0

Date Sampled: 04/30/2015 1420
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.0722 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0418			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.022		0.022
PCB-1221		<0.022		0.022
PCB-1232		<0.022		0.022
PCB-1242		<0.022		0.022
PCB-1248		<0.022		0.022
PCB-1254		<0.022		0.022
PCB-1260		<0.022		0.022
Polychlorinated biphenyls, Total		<0.022		0.022

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	73		50 - 116
DCB Decachlorobiphenyl	80		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-2

Lab Sample ID: 500-95474-2
Client Matrix: Solid
% Moisture: 22.4

Date Sampled: 04/30/2015 1430
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.3794 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0431			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.021		0.021
PCB-1221		<0.021		0.021
PCB-1232		<0.021		0.021
PCB-1242		<0.021		0.021
PCB-1248		<0.021		0.021
PCB-1254		<0.021		0.021
PCB-1260		<0.021		0.021
Polychlorinated biphenyls, Total		<0.021		0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	75		50 - 116
DCB Decachlorobiphenyl	87		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-3

Lab Sample ID: 500-95474-3
Client Matrix: Solid
% Moisture: 24.5

Date Sampled: 04/30/2015 1435
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.1852 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0445			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.022		0.022
PCB-1221		<0.022		0.022
PCB-1232		<0.022		0.022
PCB-1242		<0.022		0.022
PCB-1248		<0.022		0.022
PCB-1254		<0.022		0.022
PCB-1260		<0.022		0.022
Polychlorinated biphenyls, Total		<0.022		0.022

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	82		50 - 116
DCB Decachlorobiphenyl	92		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: **DS-4**

Lab Sample ID: 500-95474-4
Client Matrix: Solid
% Moisture: 18.6

Date Sampled: 04/30/2015 1445
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.5144 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0459			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.020		0.020
PCB-1221		<0.020		0.020
PCB-1232		<0.020		0.020
PCB-1242		<0.020		0.020
PCB-1248		<0.020		0.020
PCB-1254		<0.020		0.020
PCB-1260		<0.020		0.020
Polychlorinated biphenyls, Total		<0.020		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	71		50 - 116
DCB Decachlorobiphenyl	87		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-5

Lab Sample ID: 500-95474-5
Client Matrix: Solid
% Moisture: 20.8

Date Sampled: 04/30/2015 1505
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.1919 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0513			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.021		0.021
PCB-1221		<0.021		0.021
PCB-1232		<0.021		0.021
PCB-1242		<0.021		0.021
PCB-1248		<0.021		0.021
PCB-1254		<0.021		0.021
PCB-1260		<0.021		0.021
Polychlorinated biphenyls, Total		<0.021		0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	83		50 - 116
DCB Decachlorobiphenyl	90		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: **DS-6**

Lab Sample ID: 500-95474-6
Client Matrix: Solid
% Moisture: 21.2

Date Sampled: 04/30/2015 1515
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.1254 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0526			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.021		0.021
PCB-1221		<0.021		0.021
PCB-1232		<0.021		0.021
PCB-1242		<0.021		0.021
PCB-1248		<0.021		0.021
PCB-1254		<0.021		0.021
PCB-1260		<0.021		0.021
Polychlorinated biphenyls, Total		<0.021		0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	72		50 - 116
DCB Decachlorobiphenyl	86		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: **DS-7**

Lab Sample ID: 500-95474-7
Client Matrix: Solid
% Moisture: 21.2

Date Sampled: 04/30/2015 1525
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.7212 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0540			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.020		0.020
PCB-1221		<0.020		0.020
PCB-1232		<0.020		0.020
PCB-1242		<0.020		0.020
PCB-1248		<0.020		0.020
PCB-1254		<0.020		0.020
PCB-1260		<0.020		0.020
Polychlorinated biphenyls, Total		<0.020		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	73		50 - 116
DCB Decachlorobiphenyl	92		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-8

Lab Sample ID: 500-95474-8
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 04/30/2015 1545
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.4312 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0554			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.020		0.020
PCB-1221		<0.020		0.020
PCB-1232		<0.020		0.020
PCB-1242		<0.020		0.020
PCB-1248		<0.020		0.020
PCB-1254		<0.020		0.020
PCB-1260		<0.020		0.020
Polychlorinated biphenyls, Total		<0.020		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	77		50 - 116
DCB Decachlorobiphenyl	92		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-9

Lab Sample ID: 500-95474-9
Client Matrix: Solid
% Moisture: 21.7

Date Sampled: 04/30/2015 1550
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.6015 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0607			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.021		0.021
PCB-1221		<0.021		0.021
PCB-1232		<0.021		0.021
PCB-1242		<0.021		0.021
PCB-1248		<0.021		0.021
PCB-1254		<0.021		0.021
PCB-1260		<0.021		0.021
Polychlorinated biphenyls, Total		<0.021		0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	75		50 - 116
DCB Decachlorobiphenyl	91		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-10

Lab Sample ID: 500-95474-10
Client Matrix: Solid
% Moisture: 21.7

Date Sampled: 04/30/2015 1605
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.9733 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0634			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.020		0.020
PCB-1221		<0.020		0.020
PCB-1232		<0.020		0.020
PCB-1242		<0.020		0.020
PCB-1248		<0.020		0.020
PCB-1254		<0.020		0.020
PCB-1260		<0.020		0.020
Polychlorinated biphenyls, Total		<0.020		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	65		50 - 116
DCB Decachlorobiphenyl	81		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: **DS-DUP**

Lab Sample ID: 500-95474-11
Client Matrix: Solid
% Moisture: 24.3

Date Sampled: 04/30/2015 0000
Date Received: 05/01/2015 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Prep Method:	3541	Prep Batch:	500-286408	Initial Weight/Volume:	15.7512 g
Dilution:	1.0			Final Weight/Volume:	5.0 mL
Analysis Date:	05/02/2015 0716			Injection Volume:	1 uL
Prep Date:	05/01/2015 1626			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
PCB-1016		<0.021		0.021
PCB-1221		<0.021		0.021
PCB-1232		<0.021		0.021
PCB-1242		<0.021		0.021
PCB-1248		<0.021		0.021
PCB-1254		<0.021		0.021
PCB-1260		<0.021		0.021
Polychlorinated biphenyls, Total		<0.021		0.021

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	81		50 - 116
DCB Decachlorobiphenyl	89		48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-1

Lab Sample ID: 500-95474-1
Client Matrix: Solid
% Moisture: 24.0

Date Sampled: 04/30/2015 1420
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.0262 g
Analysis Date:	05/04/2015 2038			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		7.9		1.3
Barium		100		1.3
Cadmium		0.33		0.26
Chromium		17		1.3
Lead		24		0.64
Selenium		<1.3		1.3
Silver		<0.64		0.64

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6087 g
Analysis Date:	05/05/2015 0947			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.053		0.022

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-2

Lab Sample ID: 500-95474-2
Client Matrix: Solid
% Moisture: 22.4

Date Sampled: 04/30/2015 1430
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.0015 g
Analysis Date:	05/04/2015 2235			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		7.4		1.3
Barium		89		1.3
Cadmium		0.27		0.26
Chromium		16		1.3
Lead		22		0.64
Selenium		<1.3		1.3
Silver		<0.64		0.64

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6877 g
Analysis Date:	05/05/2015 0949			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.047		0.019

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-3

Lab Sample ID: 500-95474-3
Client Matrix: Solid
% Moisture: 24.5

Date Sampled: 04/30/2015 1435
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.0646 g
Analysis Date:	05/04/2015 2247			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		6.6		1.2
Barium		91		1.2
Cadmium		0.25		0.25
Chromium		16		1.2
Lead		17		0.62
Selenium		<1.2		1.2
Silver		<0.62		0.62

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6507 g
Analysis Date:	05/05/2015 0952			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.044		0.020

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-4

Lab Sample ID: 500-95474-4
Client Matrix: Solid
% Moisture: 18.6

Date Sampled: 04/30/2015 1445
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.1126 g
Analysis Date:	05/04/2015 2100			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		6.9		1.1
Barium		94		1.1
Cadmium		0.25		0.22
Chromium		17		1.1
Lead		26		0.55
Selenium		<1.1		1.1
Silver		<0.55		0.55

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6692 g
Analysis Date:	05/05/2015 0954			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.044		0.018

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-5

Lab Sample ID: 500-95474-5
Client Matrix: Solid
% Moisture: 20.8

Date Sampled: 04/30/2015 1505
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.0839 g
Analysis Date:	05/04/2015 2105			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		8.9		1.2
Barium		100		1.2
Cadmium		0.28		0.23
Chromium		27		1.2
Lead		33		0.58
Selenium		<1.2		1.2
Silver		<0.58		0.58

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6688 g
Analysis Date:	05/05/2015 0956			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.046		0.019

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-6

Lab Sample ID: 500-95474-6
Client Matrix: Solid
% Moisture: 21.2

Date Sampled: 04/30/2015 1515
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.0179 g
Analysis Date:	05/04/2015 2109			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		7.8		1.2
Barium		96		1.2
Cadmium		0.26		0.25
Chromium		20		1.2
Lead		23		0.62
Selenium		<1.2		1.2
Silver		<0.62		0.62

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6487 g
Analysis Date:	05/05/2015 0959			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.049		0.020

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-7

Lab Sample ID: 500-95474-7
Client Matrix: Solid
% Moisture: 21.2

Date Sampled: 04/30/2015 1525
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.1182 g
Analysis Date:	05/04/2015 2114			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		7.0		1.1
Barium		92		1.1
Cadmium		<0.23		0.23
Chromium		16		1.1
Lead		20		0.57
Selenium		<1.1		1.1
Silver		<0.57		0.57

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6839 g
Analysis Date:	05/05/2015 1005			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.043		0.019

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-8

Lab Sample ID: 500-95474-8
Client Matrix: Solid
% Moisture: 20.6

Date Sampled: 04/30/2015 1545
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.0468 g
Analysis Date:	05/04/2015 2119			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		7.4		1.2
Barium		92		1.2
Cadmium		0.25		0.24
Chromium		23		1.2
Lead		21		0.60
Selenium		<1.2		1.2
Silver		<0.60		0.60

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6635 g
Analysis Date:	05/05/2015 1007			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.049		0.019

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-9

Lab Sample ID: 500-95474-9
Client Matrix: Solid
% Moisture: 21.7

Date Sampled: 04/30/2015 1550
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.1790 g
Analysis Date:	05/04/2015 2124			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		6.9		1.1
Barium		92		1.1
Cadmium		0.26		0.22
Chromium		17		1.1
Lead		21		0.54
Selenium		<1.1		1.1
Silver		<0.54		0.54

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6995 g
Analysis Date:	05/05/2015 1009			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.046		0.018

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: DS-10

Lab Sample ID: 500-95474-10
Client Matrix: Solid
% Moisture: 21.7

Date Sampled: 04/30/2015 1605
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.0278 g
Analysis Date:	05/04/2015 2129			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		6.8	F1 F2	1.2
Barium		91	V	1.2
Cadmium		0.28		0.25
Chromium		16	F1 F2 V	1.2
Lead		20		0.62
Selenium		<1.2	F1	1.2
Silver		<0.62		0.62

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6194 g
Analysis Date:	05/05/2015 1011			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.041	F1	0.021

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Client Sample ID: **DS-DUP**

Lab Sample ID: 500-95474-11
Client Matrix: Solid
% Moisture: 24.3

Date Sampled: 04/30/2015 0000
Date Received: 05/01/2015 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	500-286672	Instrument ID:	ICP6
Prep Method:	3050B	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0			Initial Weight/Volume:	1.1642 g
Analysis Date:	05/04/2015 2159			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		8.0		1.1
Barium		98		1.1
Cadmium		0.31		0.23
Chromium		18		1.1
Lead		25		0.57
Selenium		1.1		1.1
Silver		<0.57		0.57

7471B Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analysis Method:	7471B	Analysis Batch:	500-286742	Instrument ID:	HG5
Prep Method:	7471B	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0			Initial Weight/Volume:	0.6352 g
Analysis Date:	05/05/2015 1020			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		0.063		0.021

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-1**

Lab Sample ID: 500-95474-1
Client Matrix: Solid

Date Sampled: 04/30/2015 1420
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	24		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	76		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-2**

Lab Sample ID: 500-95474-2
Client Matrix: Solid

Date Sampled: 04/30/2015 1430
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	22		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	78		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-3**

Lab Sample ID: 500-95474-3
Client Matrix: Solid

Date Sampled: 04/30/2015 1435
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	24		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	76		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-4**

Lab Sample ID: 500-95474-4
Client Matrix: Solid

Date Sampled: 04/30/2015 1445
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	19		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	81		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-5**

Lab Sample ID: 500-95474-5
Client Matrix: Solid

Date Sampled: 04/30/2015 1505
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	21		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	79		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-6**

Lab Sample ID: 500-95474-6
Client Matrix: Solid

Date Sampled: 04/30/2015 1515
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	21		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	79		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-7**

Lab Sample ID: 500-95474-7
Client Matrix: Solid

Date Sampled: 04/30/2015 1525
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	21		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	79		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

General Chemistry

Client Sample ID: **DS-8**

Lab Sample ID: 500-95474-8
Client Matrix: Solid

Date Sampled: 04/30/2015 1545
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	21		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	79		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-9**

Lab Sample ID: 500-95474-9
Client Matrix: Solid

Date Sampled: 04/30/2015 1550
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	22		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	78		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-10**

Lab Sample ID: 500-95474-10
Client Matrix: Solid

Date Sampled: 04/30/2015 1605
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	22		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	78		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

General Chemistry

Client Sample ID: **DS-DUP**

Lab Sample ID: 500-95474-11
Client Matrix: Solid

Date Sampled: 04/30/2015 0000
Date Received: 05/01/2015 1015

Analyte	Result	Qual	Units	RL	Dil	Method
Percent Moisture	24		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N
Percent Solids	76		%	0.10	1.0	Moisture
Analysis Batch: 500-286372	Analysis Date: 05/01/2015 1415					DryWt Corrected: N

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Surrogate Recovery Report

8270D Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	NBZ %Rec	FBP %Rec	TPH %Rec
500-95474-1	DS-1	56	68	96*
500-95474-1 RA	DS-1 RA	58	67	116
500-95474-2	DS-2	59	64	92
500-95474-2 RA	DS-2 RA	59	68	124
500-95474-3	DS-3	49	59	106*
500-95474-3 RA	DS-3 RA	51	56	126
500-95474-4	DS-4	63	79	120*
500-95474-4 RA	DS-4 RA	64	78	140X
500-95474-5	DS-5	33	36	57
500-95474-6	DS-6	59	72	105
500-95474-6 RA	DS-6 RA	59	69	129
500-95474-7 RA	DS-7 RA	51	62	115*
500-95474-7	DS-7	51	55	132
500-95474-8	DS-8	26	31	49
500-95474-9	DS-9	73	86	147X
500-95474-9 RA	DS-9 RA	73	81	157X
500-95474-10	DS-10	57	69	127
500-95474-11	DS-DUP	41	48	85
MB 500-286634/1-A		72	79	95
LCS 500-286634/2-A		81	94	99
500-95474-10 MS	DS-10 MS	49	58	111
500-95474-10 MSD	DS-10 MSD	65	74	171X *
500-95474-10 MSD RA	DS-10 MSD RA	58	69	149* X

Surrogate	Acceptance Limits
NBZ = Nitrobenzene-d5 (Surr)	25-115
FBP = 2-Fluorobiphenyl	25-119
TPH = Terphenyl-d14 (Surr)	36-134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	DCB1 %Rec
500-95474-1	DS-1	73	80
500-95474-2	DS-2	75	87
500-95474-3	DS-3	82	92
500-95474-4	DS-4	71	87
500-95474-5	DS-5	83	90
500-95474-6	DS-6	72	86
500-95474-7	DS-7	73	92
500-95474-8	DS-8	77	92
500-95474-9	DS-9	75	91
500-95474-10	DS-10	65	81
500-95474-11	DS-DUP	81	89
MB 500-286408/1-A		64	65
LCS 500-286408/2-A		77	82
500-95474-10 MS	DS-10 MS	87	96
500-95474-10 MSD	DS-10 MSD	75	89

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	50-116
DCB = DCB Decachlorobiphenyl	48-142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Method Blank - Batch: 500-286634

Method: 8270D
Preparation: 3541

Lab Sample ID:	MB 500-286634/1-A	Analysis Batch:	500-286703	Instrument ID:	CMS20
Client Matrix:	Solid	Prep Batch:	500-286634	Lab File ID:	MB 286634.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	05/05/2015 1224	Units:	mg/Kg	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	RL
Acenaphthene	<0.033		0.033
Acenaphthylene	<0.033		0.033
Anthracene	<0.033		0.033
Benzo[a]anthracene	<0.033		0.033
Benzo[a]pyrene	<0.033		0.033
Benzo[b]fluoranthene	<0.033		0.033
Benzo[g,h,i]perylene	<0.033		0.033
Benzo[k]fluoranthene	<0.033		0.033
Chrysene	<0.033		0.033
Dibenz(a,h)anthracene	<0.033		0.033
Fluoranthene	<0.033		0.033
Fluorene	<0.033		0.033
Indeno[1,2,3-cd]pyrene	<0.033		0.033
1-Methylnaphthalene	<0.033		0.033
2-Methylnaphthalene	<0.033		0.033
Naphthalene	<0.033		0.033
Phenanthrene	<0.033		0.033
Pyrene	<0.033		0.033

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	79	25 - 119
Nitrobenzene-d5 (Surr)	72	25 - 115
Terphenyl-d14 (Surr)	95	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Lab Control Sample - Batch: 500-286634

Method: 8270D
Preparation: 3541

Lab Sample ID:	LCS 500-286634/2-A	Analysis Batch:	500-286703	Instrument ID:	CMS20
Client Matrix:	Solid	Prep Batch:	500-286634	Lab File ID:	LCS 286634.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	05/05/2015 1050	Units:	mg/Kg	Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	1.33	1.21	90	47 - 110	
Acenaphthylene	1.33	1.27	95	51 - 113	
Anthracene	1.33	1.28	96	53 - 121	
Benzo[a]anthracene	1.33	1.32	99	52 - 113	
Benzo[a]pyrene	1.33	1.24	93	52 - 110	
Benzo[b]fluoranthene	1.33	1.24	93	49 - 118	
Benzo[g,h,i]perylene	1.33	1.13	85	53 - 115	
Benzo[k]fluoranthene	1.33	1.24	93	46 - 115	
Chrysene	1.33	1.27	95	51 - 112	
Dibenz(a,h)anthracene	1.33	1.16	87	48 - 113	
Fluoranthene	1.33	1.24	93	53 - 122	
Fluorene	1.33	1.36	102	51 - 119	
Indeno[1,2,3-cd]pyrene	1.33	1.18	88	49 - 113	
2-Methylnaphthalene	1.33	1.11	83	49 - 110	
Naphthalene	1.33	1.08	81	49 - 110	
Phenanthrene	1.33	1.25	94	54 - 120	
Pyrene	1.33	1.14	86	54 - 119	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	94	25 - 119
Nitrobenzene-d5 (Surr)	81	25 - 115
Terphenyl-d14 (Surr)	99	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-286634

Method: 8270D
Preparation: 3541

MS Lab Sample ID:	500-95474-10	Analysis Batch:	500-286895	Instrument ID:	CMS23
Client Matrix:	Solid	Prep Batch:	500-286634	Lab File ID:	95474-10MS.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.3133 g
Analysis Date:	05/06/2015 1730			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	500-95474-10	Analysis Batch:	500-286746	Instrument ID:	CMS21
Client Matrix:	Solid	Prep Batch:	500-286634	Lab File ID:	95474-10MSD.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0274 g
Analysis Date:	05/05/2015 2243			Final Weight/Volume:	0.5 mL
Prep Date:	05/04/2015 1601			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	65	80	47 - 110	24	30		
Acenaphthylene	62	81	51 - 113	29	30		
Anthracene	63	77	53 - 121	21	30		
Benzo[a]anthracene	70	80	52 - 113	16	30		*
Benzo[a]pyrene	67	71	52 - 110	7	30		*
Benzo[b]fluoranthene	75	64	49 - 118	14	30		*
Benzo[g,h,i]perylene	65	125	53 - 115	65	30		F1 F2 *
Benzo[k]fluoranthene	73	63	46 - 115	12	30		*
Chrysene	68	75	51 - 112	11	30		*
Dibenz(a,h)anthracene	68	144	48 - 113	74	30		F1 F2 *
Fluoranthene	58	77	53 - 122	30	30		
Fluorene	69	85	51 - 119	23	30		
Indeno[1,2,3-cd]pyrene	67	138	49 - 113	71	30		F1 F2 *
2-Methylnaphthalene	56	68	49 - 110	20	30		
Naphthalene	51	61	49 - 110	18	30		
Phenanthrene	65	78	54 - 120	21	30		
Pyrene	98	161	54 - 119	50	30		F1 F2 *

Surrogate	MS % Rec	MSD % Rec		Acceptance Limits
2-Fluorobiphenyl	58	74		25 - 119
Nitrobenzene-d5 (Surr)	49	65		25 - 115
Terphenyl-d14 (Surr)	111	171	X *	36 - 134

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-286634

Method: 8270D
Preparation: 3541

MS Lab Sample ID:	500-95474-10	Units: mg/Kg	MSD Lab Sample ID:	500-95474-10
Client Matrix:	Solid		Client Matrix:	Solid
Dilution:	1.0		Dilution:	1.0
Analysis Date:	05/06/2015 1730		Analysis Date:	05/05/2015 2243
Prep Date:	05/04/2015 1601		Prep Date:	05/04/2015 1601
Leach Date:	N/A		Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual	
Acenaphthene	<0.041	1.67	1.70	1.08	1.37	
Acenaphthylene	<0.041	1.67	1.70	1.03	1.38	
Anthracene	<0.041	1.67	1.70	1.06	1.30	
Benzo[a]anthracene	<0.041	1.67	1.70	1.16	1.36	*
Benzo[a]pyrene	<0.041	1.67	1.70	1.12	1.20	*
Benzo[b]fluoranthene	<0.041	1.67	1.70	1.25	1.08	*
Benzo[g,h,i]perylene	<0.041	1.67	1.70	1.08	2.12	F1 F2
Benzo[k]fluoranthene	<0.041	1.67	1.70	1.21	1.07	*
Chrysene	<0.041	1.67	1.70	1.14	1.27	*
Dibenz(a,h)anthracene	<0.041	1.67	1.70	1.13	2.45	F1 F2
Fluoranthene	<0.041	1.67	1.70	0.971	1.31	
Fluorene	<0.041	1.67	1.70	1.15	1.45	
Indeno[1,2,3-cd]pyrene	<0.041	1.67	1.70	1.12	2.35	F1 F2
2-Methylnaphthalene	<0.041	1.67	1.70	0.937	1.15	
Naphthalene	<0.041	1.67	1.70	0.857	1.03	
Phenanthrene	<0.041	1.67	1.70	1.08	1.33	
Pyrene	<0.041	1.67	1.70	1.65	2.74	F1 F2

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Method Blank - Batch: 500-286408

Method: 8082
Preparation: 3541

Lab Sample ID:	MB 500-286408/1-A	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Client Matrix:	Solid	Prep Batch:	500-286408	Lab File ID:	042415_258.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	05/02/2015 0025	Units:	mg/Kg	Final Weight/Volume:	5.0 mL
Prep Date:	05/01/2015 1626			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	RL
PCB-1016	<0.017		0.017
PCB-1221	<0.017		0.017
PCB-1232	<0.017		0.017
PCB-1242	<0.017		0.017
PCB-1248	<0.017		0.017
PCB-1254	<0.017		0.017
PCB-1260	<0.017		0.017
Polychlorinated biphenyls, Total	<0.017		0.017

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	64	50 - 116
DCB Decachlorobiphenyl	65	48 - 142

Lab Control Sample - Batch: 500-286408

Method: 8082
Preparation: 3541

Lab Sample ID:	LCS 500-286408/2-A	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Client Matrix:	Solid	Prep Batch:	500-286408	Lab File ID:	042415_259.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	05/02/2015 0039	Units:	mg/Kg	Final Weight/Volume:	5.0 mL
Prep Date:	05/01/2015 1626			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	0.167	0.140	84	59 - 110	
PCB-1260	0.167	0.143	86	69 - 120	

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	77	50 - 116
DCB Decachlorobiphenyl	82	48 - 142

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-286408

Method: 8082
Preparation: 3541

MS Lab Sample ID:	500-95474-10	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Client Matrix:	Solid	Prep Batch:	500-286408	Lab File ID:	042415_286.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0151 g
Analysis Date:	05/02/2015 0648			Final Weight/Volume:	5.0 mL
Prep Date:	05/01/2015 1626			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	500-95474-10	Analysis Batch:	500-286255	Instrument ID:	INST23-24
Client Matrix:	Solid	Prep Batch:	500-286408	Lab File ID:	042415_287.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.5635 g
Analysis Date:	05/02/2015 0702			Final Weight/Volume:	5.0 mL
Prep Date:	05/01/2015 1626			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
PCB-1016	97	94	59 - 110	7	30		
PCB-1260	101	100	69 - 120	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	87	75	50 - 116
DCB Decachlorobiphenyl	96	89	48 - 142

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-286408

Method: 8082
Preparation: 3541

MS Lab Sample ID:	500-95474-10	Units:	mg/Kg	MSD Lab Sample ID:	500-95474-10
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/02/2015 0648			Analysis Date:	05/02/2015 0702
Prep Date:	05/01/2015 1626			Prep Date:	05/01/2015 1626
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
PCB-1016	<0.020	0.213	0.205	0.207	0.193
PCB-1260	<0.020	0.213	0.205	0.214	0.206

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Method Blank - Batch: 500-286488

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 500-286488/1-A	Analysis Batch:	500-286672	Instrument ID:	ICP6
Client Matrix:	Solid	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	05/04/2015 2029	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Arsenic	<1.0		1.0
Barium	<1.0		1.0
Cadmium	<0.20		0.20
Chromium	<1.0		1.0
Lead	<0.50		0.50
Selenium	<1.0		1.0
Silver	<0.50		0.50

Lab Control Sample - Batch: 500-286488

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 500-286488/2-A	Analysis Batch:	500-286672	Instrument ID:	ICP6
Client Matrix:	Solid	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	05/04/2015 2034	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	10.0	10.2	102	80 - 120	
Barium	200	199	99	80 - 120	
Cadmium	5.00	5.17	103	80 - 120	
Chromium	20.0	21.2	106	80 - 120	
Lead	10.0	10.4	104	80 - 120	
Selenium	10.0	8.79	88	80 - 120	
Silver	5.00	4.93	99	80 - 120	

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-286488

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	500-95474-10	Analysis Batch:	500-286672	Instrument ID:	ICP6
Client Matrix:	Solid	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0011 g
Analysis Date:	05/04/2015 2142			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				
Leach Date:	N/A				

MSD Lab Sample ID:	500-95474-10	Analysis Batch:	500-286672	Instrument ID:	ICP6
Client Matrix:	Solid	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.1208 g
Analysis Date:	05/04/2015 2154			Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	154	89	75 - 125	44	20	F1	F2
Barium	93	91	75 - 125	9	20		
Cadmium	90	86	75 - 125	14	20		
Chromium	142	110	75 - 125	24	20	F1	F2
Lead	120	107	75 - 125	9	20		
Selenium	72	72	75 - 125	9	20	F1	F1
Silver	84	82	75 - 125	14	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-286488

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	500-95474-10	Units:	mg/Kg	MSD Lab Sample ID:	500-95474-10
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/04/2015 2142			Analysis Date:	05/04/2015 2154
Prep Date:	05/03/2015 1808			Prep Date:	05/03/2015 1808
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Arsenic	6.8	12.8	11.4	26.4	F1	16.9	F2
Barium	91	255	228	328		299	
Cadmium	0.28	6.38	5.70	6.00		5.19	
Chromium	16	25.5	22.8	52.4	F1	41.1	F2
Lead	20	12.8	11.4	35.9		32.7	
Selenium	<1.2	12.8	11.4	10.0	F1	9.14	F1
Silver	<0.62	6.38	5.70	5.39		4.70	

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Serial Dilution - Batch: 500-286488

Method: 6010B
Preparation: 3050B

Lab Sample ID:	500-95474-10	Analysis Batch:	500-286672	Instrument ID:	ICP6
Client Matrix:	Solid	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0278 g
Analysis Date:	05/04/2015 2134	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	%Diff	Limit	Qual
Arsenic	6.8	6.85	NC	10	
Barium	91	103	13	10	V
Cadmium	0.28	<1.2	NC	10	
Chromium	16	18.7	16	10	V
Lead	20	20.8	1.6	10	
Selenium	<1.2	<6.2	NC	10	
Silver	<0.62	<3.1	NC	10	

Duplicate - Batch: 500-286488

Method: 6010B
Preparation: 3050B

Lab Sample ID:	500-95474-10	Analysis Batch:	500-286672	Instrument ID:	ICP6
Client Matrix:	Solid	Prep Batch:	500-286488	Lab File ID:	P6050415B.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0028 g
Analysis Date:	05/04/2015 2138	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/03/2015 1808				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Arsenic	6.8	7.03	4	20	
Barium	91	93.7	3	20	
Cadmium	0.28	0.262	6	20	
Chromium	16	17.6	9	20	
Lead	20	20.6	0.5	20	
Selenium	<1.2	<1.3	NC	20	
Silver	<0.62	<0.64	NC	20	

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Method Blank - Batch: 500-286609

Method: 7471B
Preparation: 7471B

Lab Sample ID:	MB 500-286609/12-A	Analysis Batch:	500-286742	Instrument ID:	HG5
Client Matrix:	Solid	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	05/05/2015 0941	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Mercury	<0.017		0.017

Lab Control Sample - Batch: 500-286609

Method: 7471B
Preparation: 7471B

Lab Sample ID:	LCS 500-286609/13-A	Analysis Batch:	500-286742	Instrument ID:	HG5
Client Matrix:	Solid	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	05/05/2015 0943	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.167	0.174	104	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-286609

Method: 7471B
Preparation: 7471B

MS Lab Sample ID:	500-95474-10	Analysis Batch:	500-286742	Instrument ID:	HG5
Client Matrix:	Solid	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6588 g
Analysis Date:	05/05/2015 1015			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				
Leach Date:	N/A				

MSD Lab Sample ID:	500-95474-10	Analysis Batch:	500-286742	Instrument ID:	HG5
Client Matrix:	Solid	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6003 g
Analysis Date:	05/05/2015 1017			Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	124	120	80 - 120	4	20	F1	

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-286609

Method: 7471B
Preparation: 7471B

MS Lab Sample ID:	500-95474-10	Units: mg/Kg	MSD Lab Sample ID:	500-95474-10
Client Matrix:	Solid		Client Matrix:	Solid
Dilution:	1.0		Dilution:	1.0
Analysis Date:	05/05/2015 1015		Analysis Date:	05/05/2015 1017
Prep Date:	05/04/2015 1400		Prep Date:	05/04/2015 1400
Leach Date:	N/A		Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual
Mercury	0.041	0.0969	0.106	0.162	F1	0.169

Duplicate - Batch: 500-286609

Method: 7471B
Preparation: 7471B

Lab Sample ID:	500-95474-10	Analysis Batch:	500-286742	Instrument ID:	HG5
Client Matrix:	Solid	Prep Batch:	500-286609	Lab File ID:	050515A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6797 g
Analysis Date:	05/05/2015 1013	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/04/2015 1400				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.041	0.0478	14	20	

DATA REPORTING QUALIFIERS

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	*	ISTD response or retention time outside acceptable limits
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	X	Surrogate is outside control limits
Metals		
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	V	Serial Dilution exceeds the control limits

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 500-286634					
LCS 500-286634/2-A	Lab Control Sample	T	Solid	3541	
MB 500-286634/1-A	Method Blank	T	Solid	3541	
500-95474-1	DS-1	T	Solid	3541	
500-95474-1RA	DS-1	T	Solid	3541	
500-95474-2	DS-2	T	Solid	3541	
500-95474-2RA	DS-2	T	Solid	3541	
500-95474-3	DS-3	T	Solid	3541	
500-95474-3RA	DS-3	T	Solid	3541	
500-95474-4	DS-4	T	Solid	3541	
500-95474-4RA	DS-4	T	Solid	3541	
500-95474-5	DS-5	T	Solid	3541	
500-95474-6	DS-6	T	Solid	3541	
500-95474-6RA	DS-6	T	Solid	3541	
500-95474-7	DS-7	T	Solid	3541	
500-95474-7RA	DS-7	T	Solid	3541	
500-95474-8	DS-8	T	Solid	3541	
500-95474-9	DS-9	T	Solid	3541	
500-95474-9RA	DS-9	T	Solid	3541	
500-95474-10	DS-10	T	Solid	3541	
500-95474-10MS	Matrix Spike	T	Solid	3541	
500-95474-10MSD	Matrix Spike Duplicate	T	Solid	3541	
500-95474-10MSDRA	Matrix Spike Duplicate	T	Solid	3541	
500-95474-11	DS-DUP	T	Solid	3541	
Analysis Batch:500-286703					
LCS 500-286634/2-A	Lab Control Sample	T	Solid	8270D	500-286634
MB 500-286634/1-A	Method Blank	T	Solid	8270D	500-286634
Analysis Batch:500-286746					
500-95474-1	DS-1	T	Solid	8270D	500-286634
500-95474-2	DS-2	T	Solid	8270D	500-286634
500-95474-3	DS-3	T	Solid	8270D	500-286634
500-95474-4	DS-4	T	Solid	8270D	500-286634
500-95474-6	DS-6	T	Solid	8270D	500-286634
500-95474-7RA	DS-7	T	Solid	8270D	500-286634
500-95474-9	DS-9	T	Solid	8270D	500-286634
500-95474-10MSD	Matrix Spike Duplicate	T	Solid	8270D	500-286634

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:500-286895					
500-95474-1RA	DS-1	T	Solid	8270D	500-286634
500-95474-2RA	DS-2	T	Solid	8270D	500-286634
500-95474-3RA	DS-3	T	Solid	8270D	500-286634
500-95474-4RA	DS-4	T	Solid	8270D	500-286634
500-95474-5	DS-5	T	Solid	8270D	500-286634
500-95474-6RA	DS-6	T	Solid	8270D	500-286634
500-95474-7	DS-7	T	Solid	8270D	500-286634
500-95474-8	DS-8	T	Solid	8270D	500-286634
500-95474-9RA	DS-9	T	Solid	8270D	500-286634
500-95474-10	DS-10	T	Solid	8270D	500-286634
500-95474-10MS	Matrix Spike	T	Solid	8270D	500-286634
500-95474-10MSDRA	Matrix Spike Duplicate	T	Solid	8270D	500-286634
500-95474-11	DS-DUP	T	Solid	8270D	500-286634

Report Basis
T = Total

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:500-286255					
LCS 500-286408/2-A	Lab Control Sample	T	Solid	8082	500-286408
MB 500-286408/1-A	Method Blank	T	Solid	8082	500-286408
500-95474-1	DS-1	T	Solid	8082	500-286408
500-95474-2	DS-2	T	Solid	8082	500-286408
500-95474-3	DS-3	T	Solid	8082	500-286408
500-95474-4	DS-4	T	Solid	8082	500-286408
500-95474-5	DS-5	T	Solid	8082	500-286408
500-95474-6	DS-6	T	Solid	8082	500-286408
500-95474-7	DS-7	T	Solid	8082	500-286408
500-95474-8	DS-8	T	Solid	8082	500-286408
500-95474-9	DS-9	T	Solid	8082	500-286408
500-95474-10	DS-10	T	Solid	8082	500-286408
500-95474-10MS	Matrix Spike	T	Solid	8082	500-286408
500-95474-10MSD	Matrix Spike Duplicate	T	Solid	8082	500-286408
500-95474-11	DS-DUP	T	Solid	8082	500-286408
Prep Batch: 500-286408					
LCS 500-286408/2-A	Lab Control Sample	T	Solid	3541	
MB 500-286408/1-A	Method Blank	T	Solid	3541	
500-95474-1	DS-1	T	Solid	3541	
500-95474-2	DS-2	T	Solid	3541	
500-95474-3	DS-3	T	Solid	3541	
500-95474-4	DS-4	T	Solid	3541	
500-95474-5	DS-5	T	Solid	3541	
500-95474-6	DS-6	T	Solid	3541	
500-95474-7	DS-7	T	Solid	3541	
500-95474-8	DS-8	T	Solid	3541	
500-95474-9	DS-9	T	Solid	3541	
500-95474-10	DS-10	T	Solid	3541	
500-95474-10MS	Matrix Spike	T	Solid	3541	
500-95474-10MSD	Matrix Spike Duplicate	T	Solid	3541	
500-95474-11	DS-DUP	T	Solid	3541	

Report Basis
T = Total

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 500-286488					
LCS 500-286488/2-A	Lab Control Sample	T	Solid	3050B	
MB 500-286488/1-A	Method Blank	T	Solid	3050B	
500-95474-1	DS-1	T	Solid	3050B	
500-95474-2	DS-2	T	Solid	3050B	
500-95474-3	DS-3	T	Solid	3050B	
500-95474-4	DS-4	T	Solid	3050B	
500-95474-5	DS-5	T	Solid	3050B	
500-95474-6	DS-6	T	Solid	3050B	
500-95474-7	DS-7	T	Solid	3050B	
500-95474-8	DS-8	T	Solid	3050B	
500-95474-9	DS-9	T	Solid	3050B	
500-95474-10	DS-10	T	Solid	3050B	
500-95474-10DU	Duplicate	T	Solid	3050B	
500-95474-10MS	Matrix Spike	T	Solid	3050B	
500-95474-10MSD	Matrix Spike Duplicate	T	Solid	3050B	
500-95474-11	DS-DUP	T	Solid	3050B	
Prep Batch: 500-286609					
LCS 500-286609/13-A	Lab Control Sample	T	Solid	7471B	
MB 500-286609/12-A	Method Blank	T	Solid	7471B	
500-95474-1	DS-1	T	Solid	7471B	
500-95474-2	DS-2	T	Solid	7471B	
500-95474-3	DS-3	T	Solid	7471B	
500-95474-4	DS-4	T	Solid	7471B	
500-95474-5	DS-5	T	Solid	7471B	
500-95474-6	DS-6	T	Solid	7471B	
500-95474-7	DS-7	T	Solid	7471B	
500-95474-8	DS-8	T	Solid	7471B	
500-95474-9	DS-9	T	Solid	7471B	
500-95474-10	DS-10	T	Solid	7471B	
500-95474-10DU	Duplicate	T	Solid	7471B	
500-95474-10MS	Matrix Spike	T	Solid	7471B	
500-95474-10MSD	Matrix Spike Duplicate	T	Solid	7471B	
500-95474-11	DS-DUP	T	Solid	7471B	

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:500-286672					
LCS 500-286488/2-A	Lab Control Sample	T	Solid	6010B	500-286488
MB 500-286488/1-A	Method Blank	T	Solid	6010B	500-286488
500-95474-1	DS-1	T	Solid	6010B	500-286488
500-95474-2	DS-2	T	Solid	6010B	500-286488
500-95474-3	DS-3	T	Solid	6010B	500-286488
500-95474-4	DS-4	T	Solid	6010B	500-286488
500-95474-5	DS-5	T	Solid	6010B	500-286488
500-95474-6	DS-6	T	Solid	6010B	500-286488
500-95474-7	DS-7	T	Solid	6010B	500-286488
500-95474-8	DS-8	T	Solid	6010B	500-286488
500-95474-9	DS-9	T	Solid	6010B	500-286488
500-95474-10	DS-10	T	Solid	6010B	500-286488
500-95474-10DU	Duplicate	T	Solid	6010B	500-286488
500-95474-10MS	Matrix Spike	T	Solid	6010B	500-286488
500-95474-10MSD	Matrix Spike Duplicate	T	Solid	6010B	500-286488
500-95474-11	DS-DUP	T	Solid	6010B	500-286488
Analysis Batch:500-286742					
LCS 500-286609/13-A	Lab Control Sample	T	Solid	7471B	500-286609
MB 500-286609/12-A	Method Blank	T	Solid	7471B	500-286609
500-95474-1	DS-1	T	Solid	7471B	500-286609
500-95474-2	DS-2	T	Solid	7471B	500-286609
500-95474-3	DS-3	T	Solid	7471B	500-286609
500-95474-4	DS-4	T	Solid	7471B	500-286609
500-95474-5	DS-5	T	Solid	7471B	500-286609
500-95474-6	DS-6	T	Solid	7471B	500-286609
500-95474-7	DS-7	T	Solid	7471B	500-286609
500-95474-8	DS-8	T	Solid	7471B	500-286609
500-95474-9	DS-9	T	Solid	7471B	500-286609
500-95474-10	DS-10	T	Solid	7471B	500-286609
500-95474-10DU	Duplicate	T	Solid	7471B	500-286609
500-95474-10MS	Matrix Spike	T	Solid	7471B	500-286609
500-95474-10MSD	Matrix Spike Duplicate	T	Solid	7471B	500-286609
500-95474-11	DS-DUP	T	Solid	7471B	500-286609

Report Basis
T = Total

Client: Fields Environmental

Job Number: 500-95474-1
Sdg Number: 15-07.01

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:500-286372					
500-95474-1	DS-1	T	Solid	Moisture	
500-95474-2	DS-2	T	Solid	Moisture	
500-95474-3	DS-3	T	Solid	Moisture	
500-95474-4	DS-4	T	Solid	Moisture	
500-95474-5	DS-5	T	Solid	Moisture	
500-95474-6	DS-6	T	Solid	Moisture	
500-95474-7	DS-7	T	Solid	Moisture	
500-95474-8	DS-8	T	Solid	Moisture	
500-95474-9	DS-9	T	Solid	Moisture	
500-95474-10	DS-10	T	Solid	Moisture	
500-95474-11	DS-DUP	T	Solid	Moisture	

Report Basis
T = Total

Client: Fields Environmental

Job Number: 500-95474-1
SDG: 15-07.01

Laboratory Chronicle

Lab ID: 500-95474-1 **Client ID: DS-1**

Sample Date/Time: 04/30/2015 14:20 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-1-C		500-286746	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-1-C		500-286746	500-286634	05/05/2015 15:00	1	TAL CHI	BJH
P:3541	500-95474-B-1-C	RA	500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-1-C	RA	500-286895	500-286634	05/06/2015 12:16	1	TAL CHI	BJH
P:3541	500-95474-B-1-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-B-1-A		500-286255	500-286408	05/02/2015 04:18	1	TAL CHI	GMO
P:3050B	500-95474-A-1-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-1-A		500-286672	500-286488	05/04/2015 20:38	1	TAL CHI	PJ1
P:7471B	500-95474-B-1-B		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-1-B		500-286742	500-286609	05/05/2015 09:47	1	TAL CHI	RLL
A:Moisture	500-95474-A-1		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Lab ID: 500-95474-2 **Client ID: DS-2**

Sample Date/Time: 04/30/2015 14:30 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-A-2-C		500-286746	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-A-2-C		500-286746	500-286634	05/05/2015 15:25	1	TAL CHI	BJH
P:3541	500-95474-A-2-C	RA	500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-A-2-C	RA	500-286895	500-286634	05/06/2015 12:36	1	TAL CHI	BJH
P:3541	500-95474-A-2-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-A-2-A		500-286255	500-286408	05/02/2015 04:31	1	TAL CHI	GMO
P:3050B	500-95474-B-2-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-B-2-A		500-286672	500-286488	05/04/2015 22:35	1	TAL CHI	PJ1
P:7471B	500-95474-A-2-B		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-A-2-B		500-286742	500-286609	05/05/2015 09:49	1	TAL CHI	RLL
A:Moisture	500-95474-B-2		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Client: Fields Environmental

Job Number: 500-95474-1
SDG: 15-07.01

Laboratory Chronicle

Lab ID: 500-95474-3 **Client ID: DS-3**

Sample Date/Time: 04/30/2015 14:35 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-3-C		500-286746	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-3-C		500-286746	500-286634	05/05/2015 15:49	1	TAL CHI	BJH
P:3541	500-95474-B-3-C	RA	500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-3-C	RA	500-286895	500-286634	05/06/2015 12:55	1	TAL CHI	BJH
P:3541	500-95474-B-3-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-B-3-A		500-286255	500-286408	05/02/2015 04:45	1	TAL CHI	GMO
P:3050B	500-95474-A-3-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-3-A		500-286672	500-286488	05/04/2015 22:47	1	TAL CHI	PJ1
P:7471B	500-95474-B-3-B		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-3-B		500-286742	500-286609	05/05/2015 09:52	1	TAL CHI	RLL
A:Moisture	500-95474-A-3		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Lab ID: 500-95474-4 **Client ID: DS-4**

Sample Date/Time: 04/30/2015 14:45 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-4-B		500-286746	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-4-B		500-286746	500-286634	05/05/2015 16:14	1	TAL CHI	BJH
P:3541	500-95474-B-4-B	RA	500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-4-B	RA	500-286895	500-286634	05/06/2015 13:15	1	TAL CHI	BJH
P:3541	500-95474-A-4-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-A-4-A		500-286255	500-286408	05/02/2015 04:59	1	TAL CHI	GMO
P:3050B	500-95474-A-4-B		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-4-B		500-286672	500-286488	05/04/2015 21:00	1	TAL CHI	PJ1
P:7471B	500-95474-B-4-A		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-4-A		500-286742	500-286609	05/05/2015 09:54	1	TAL CHI	RLL
A:Moisture	500-95474-A-4		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Lab ID: 500-95474-5 **Client ID: DS-5**

Sample Date/Time: 04/30/2015 15:05 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-5-C		500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-5-C		500-286895	500-286634	05/06/2015 13:34	1	TAL CHI	BJH
P:3541	500-95474-B-5-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-B-5-A		500-286255	500-286408	05/02/2015 05:13	1	TAL CHI	GMO
P:3050B	500-95474-A-5-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-5-A		500-286672	500-286488	05/04/2015 21:05	1	TAL CHI	PJ1
P:7471B	500-95474-B-5-B		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-5-B		500-286742	500-286609	05/05/2015 09:56	1	TAL CHI	RLL
A:Moisture	500-95474-A-5		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Client: Fields Environmental

Job Number: 500-95474-1
SDG: 15-07.01

Laboratory Chronicle

Lab ID: 500-95474-6 **Client ID: DS-6**

Sample Date/Time: 04/30/2015 15:15 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-6-B		500-286746	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-6-B		500-286746	500-286634	05/05/2015 17:03	1	TAL CHI	BJH
P:3541	500-95474-B-6-B	RA	500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-6-B	RA	500-286895	500-286634	05/06/2015 13:54	1	TAL CHI	BJH
P:3541	500-95474-A-6-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-A-6-A		500-286255	500-286408	05/02/2015 05:26	1	TAL CHI	GMO
P:3050B	500-95474-A-6-B		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-6-B		500-286672	500-286488	05/04/2015 21:09	1	TAL CHI	PJ1
P:7471B	500-95474-B-6-A		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-6-A		500-286742	500-286609	05/05/2015 09:59	1	TAL CHI	RLL
A:Moisture	500-95474-A-6		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Lab ID: 500-95474-7 **Client ID: DS-7**

Sample Date/Time: 04/30/2015 15:25 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-7-C	RA	500-286746	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-7-C	RA	500-286746	500-286634	05/05/2015 17:28	1	TAL CHI	BJH
P:3541	500-95474-B-7-C		500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-7-C		500-286895	500-286634	05/06/2015 14:13	1	TAL CHI	BJH
P:3541	500-95474-B-7-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-B-7-A		500-286255	500-286408	05/02/2015 05:40	1	TAL CHI	GMO
P:3050B	500-95474-A-7-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-7-A		500-286672	500-286488	05/04/2015 21:14	1	TAL CHI	PJ1
P:7471B	500-95474-B-7-B		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-7-B		500-286742	500-286609	05/05/2015 10:05	1	TAL CHI	RLL
A:Moisture	500-95474-A-7		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Lab ID: 500-95474-8 **Client ID: DS-8**

Sample Date/Time: 04/30/2015 15:45 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-A-8-C		500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-A-8-C		500-286895	500-286634	05/06/2015 14:33	1	TAL CHI	BJH
P:3541	500-95474-A-8-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-A-8-A		500-286255	500-286408	05/02/2015 05:54	1	TAL CHI	GMO
P:3050B	500-95474-B-8-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-B-8-A		500-286672	500-286488	05/04/2015 21:19	1	TAL CHI	PJ1
P:7471B	500-95474-A-8-B		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-A-8-B		500-286742	500-286609	05/05/2015 10:07	1	TAL CHI	RLL
A:Moisture	500-95474-A-8		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Client: Fields Environmental

Job Number: 500-95474-1
SDG: 15-07.01

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Lab ID: 500-95474-9 **Client ID: DS-9**

Sample Date/Time: 04/30/2015 15:50 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-9-C		500-286746	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-9-C		500-286746	500-286634	05/05/2015 18:17	1	TAL CHI	BJH
P:3541	500-95474-B-9-C	RA	500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-9-C	RA	500-286895	500-286634	05/06/2015 14:53	1	TAL CHI	BJH
P:3541	500-95474-B-9-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-B-9-A		500-286255	500-286408	05/02/2015 06:07	1	TAL CHI	GMO
P:3050B	500-95474-A-9-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-9-A		500-286672	500-286488	05/04/2015 21:24	1	TAL CHI	PJ1
P:7471B	500-95474-B-9-B		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-9-B		500-286742	500-286609	05/05/2015 10:09	1	TAL CHI	RLL
A:Moisture	500-95474-A-9		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Lab ID: 500-95474-10 **Client ID: DS-10**

Sample Date/Time: 04/30/2015 16:05 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-10-F		500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-10-F		500-286895	500-286634	05/06/2015 15:12	1	TAL CHI	BJH
P:3541	500-95474-A-10-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-A-10-A		500-286255	500-286408	05/02/2015 06:34	1	TAL CHI	GMO
P:3050B	500-95474-A-10-C		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-10-C		500-286672	500-286488	05/04/2015 21:29	1	TAL CHI	PJ1
P:7471B	500-95474-B-10-C		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-10-C		500-286742	500-286609	05/05/2015 10:11	1	TAL CHI	RLL
A:Moisture	500-95474-A-10		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Client: Fields Environmental

Job Number: 500-95474-1
SDG: 15-07.01

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Lab ID: 500-95474-10 **Client ID: DS-10**

Sample Date/Time: 04/30/2015 16:05 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-A-10-G MS		500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-A-10-G MS		500-286895	500-286634	05/06/2015 17:30	1	TAL CHI	BJH
P:3541	500-95474-A-10-B MS		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-A-10-B MS		500-286255	500-286408	05/02/2015 06:48	1	TAL CHI	GMO
P:3050B	500-95474-B-10-B MS		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-B-10-B MS		500-286672	500-286488	05/04/2015 21:42	1	TAL CHI	PJ1
P:7471B	500-95474-A-10-F MS		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-A-10-F MS		500-286742	500-286609	05/05/2015 10:15	1	TAL CHI	RLL

Lab ID: 500-95474-10 **Client ID: DS-10**

Sample Date/Time: 04/30/2015 16:05 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-B-10-G MSD		500-286746	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-10-G MSD		500-286746	500-286634	05/05/2015 22:43	1	TAL CHI	BJH
P:3541	500-95474-B-10-G MSD	RA	500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-B-10-G MSD	RA	500-286895	500-286634	05/06/2015 17:50	1	TAL CHI	BJH
P:3541	500-95474-B-10-A MSD		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-B-10-A MSD		500-286255	500-286408	05/02/2015 07:02	1	TAL CHI	GMO
P:3050B	500-95474-A-10-E MSD		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-10-E MSD		500-286672	500-286488	05/04/2015 21:54	1	TAL CHI	PJ1
P:7471B	500-95474-B-10-E MSD		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-10-E MSD		500-286742	500-286609	05/05/2015 10:17	1	TAL CHI	RLL

Client: Fields Environmental

Job Number: 500-95474-1
SDG: 15-07.01

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Lab ID: 500-95474-10 DU **Client ID: DS-10**

Sample Date/Time: 04/30/2015 16:05 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	500-95474-A-10-D DU		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-A-10-D DU		500-286672	500-286488	05/04/2015 21:38	1	TAL CHI	PJ1
P:7471B	500-95474-B-10-D DU		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-B-10-D DU		500-286742	500-286609	05/05/2015 10:13	1	TAL CHI	RLL

Lab ID: 500-95474-10 SD **Client ID: DS-10**

Sample Date/Time: 04/30/2015 16:05 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	500-95474-A-10-C SD ^5		500-286672	500-286488	05/03/2015 18:08	5	TAL CHI	PJH
A:6010B	500-95474-A-10-C SD ^5		500-286672	500-286488	05/04/2015 21:34	5	TAL CHI	PJ1

Lab ID: 500-95474-11 **Client ID: DS-DUP**

Sample Date/Time: 04/30/2015 00:00 Received Date/Time: 05/01/2015 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	500-95474-A-11-B		500-286895	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	500-95474-A-11-B		500-286895	500-286634	05/06/2015 15:32	1	TAL CHI	BJH
P:3541	500-95474-B-11-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	500-95474-B-11-A		500-286255	500-286408	05/02/2015 07:16	1	TAL CHI	GMO
P:3050B	500-95474-B-11-B		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	500-95474-B-11-B		500-286672	500-286488	05/04/2015 21:59	1	TAL CHI	PJ1
P:7471B	500-95474-A-11-A		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	500-95474-A-11-A		500-286742	500-286609	05/05/2015 10:20	1	TAL CHI	RLL
A:Moisture	500-95474-A-11		500-286372		05/01/2015 14:15	1	TAL CHI	LWN

Client: Fields Environmental

Job Number: 500-95474-1
SDG: 15-07.01

Laboratory Chronicle

Lab ID: MB **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	MB 500-286634/1-A		500-286703	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	MB 500-286634/1-A		500-286703	500-286634	05/05/2015 12:24	1	TAL CHI	BJH
P:3541	MB 500-286408/1-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	MB 500-286408/1-A		500-286255	500-286408	05/02/2015 00:25	1	TAL CHI	GMO
P:3050B	MB 500-286488/1-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	MB 500-286488/1-A		500-286672	500-286488	05/04/2015 20:29	1	TAL CHI	PJ1
P:7471B	MB 500-286609/12-A		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	MB 500-286609/12-A		500-286742	500-286609	05/05/2015 09:41	1	TAL CHI	RLL

Lab ID: LCS **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3541	LCS 500-286634/2-A		500-286703	500-286634	05/04/2015 16:01	1	TAL CHI	DEA
A:8270D	LCS 500-286634/2-A		500-286703	500-286634	05/05/2015 10:50	1	TAL CHI	BJH
P:3541	LCS 500-286408/2-A		500-286255	500-286408	05/01/2015 16:26	1	TAL CHI	DEA
A:8082	LCS 500-286408/2-A		500-286255	500-286408	05/02/2015 00:39	1	TAL CHI	GMO
P:3050B	LCS 500-286488/2-A		500-286672	500-286488	05/03/2015 18:08	1	TAL CHI	PJH
A:6010B	LCS 500-286488/2-A		500-286672	500-286488	05/04/2015 20:34	1	TAL CHI	PJ1
P:7471B	LCS 500-286609/13-A		500-286742	500-286609	05/04/2015 14:00	1	TAL CHI	RLL
A:7471B	LCS 500-286609/13-A		500-286742	500-286609	05/05/2015 09:43	1	TAL CHI	RLL

Lab References:
TAL CHI = TestAmerica Chicago

Certification Summary

Client: Fields Environmental
Project/Site: Habitat/Dragoo Phase II

TestAmerica Job ID: 500-95474-1
SDG: 15-07.01

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Chicago	Alabama	State Program	4	40461
TestAmerica Chicago	California	State Program	9	2903
TestAmerica Chicago	Georgia	State Program	4	939
TestAmerica Chicago	Georgia	State Program	4	N/A
TestAmerica Chicago	Hawaii	State Program	9	N/A
TestAmerica Chicago	Illinois	NELAP	5	100201
TestAmerica Chicago	Indiana	State Program	5	C-IL-02
TestAmerica Chicago	Iowa	State Program	7	82
TestAmerica Chicago	Kansas	NELAP	7	E-10161
TestAmerica Chicago	Kentucky (UST)	State Program	4	66
TestAmerica Chicago	Kentucky (WW)	State Program	4	KY90023
TestAmerica Chicago	Massachusetts	State Program	1	M-IL035
TestAmerica Chicago	Mississippi	State Program	4	N/A
TestAmerica Chicago	New York	NELAP	2	IL00035
TestAmerica Chicago	North Carolina (WW/SW)	State Program	4	291
TestAmerica Chicago	North Dakota	State Program	8	R-194
TestAmerica Chicago	Oklahoma	State Program	6	8908
TestAmerica Chicago	South Carolina	State Program	4	77001
TestAmerica Chicago	USDA	Federal		P330-15-00038
TestAmerica Chicago	Wisconsin	State Program	5	999580010
TestAmerica Chicago	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low

GC Column (1): ZB5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ #	FBP #	TPH #
DS-1	500-95474-1	56	68	96 *
DS-1 RA	500-95474-1 RA	58	67	116
DS-2	500-95474-2	59	64	92
DS-2 RA	500-95474-2 RA	59	68	124
DS-3	500-95474-3	49	59	106 *
DS-3 RA	500-95474-3 RA	51	56	126
DS-4	500-95474-4	63	79	120 *
DS-4 RA	500-95474-4 RA	64	78	140 X
DS-5	500-95474-5	33	36	57
DS-6	500-95474-6	59	72	105
DS-6 RA	500-95474-6 RA	59	69	129
DS-7	500-95474-7	51	55	132
DS-7 RA	500-95474-7 RA	51	62	115 *
DS-8	500-95474-8	26	31	49
DS-9	500-95474-9	73	86	147 X
DS-9 RA	500-95474-9 RA	73	81	157 X
DS-10	500-95474-10	57	69	127
DS-DUP	500-95474-11	41	48	85
	MB 500-286634/1-A	72	79	95
	LCS 500-286634/2-A	81	94	99
DS-10 MS	500-95474-10 MS	49	58	111
DS-10 MSD	500-95474-10 MSD	65	74	171 X *
DS-10 MSD RA	500-95474-10 MSD RA	58	69	149 * X

	QC LIMITS
NBZ = Nitrobenzene-d5 (Surr)	25-115
FBP = 2-Fluorobiphenyl	25-119
TPH = Terphenyl-d14 (Surr)	36-134

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low Lab File ID: LCS 286634.D

Lab ID: LCS 500-286634/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC	QC LIMITS REC	#
Acenaphthene	1.33	1.21	90	47-110	
Acenaphthylene	1.33	1.27	95	51-113	
Anthracene	1.33	1.28	96	53-121	
Benzo[a]anthracene	1.33	1.32	99	52-113	
Benzo[a]pyrene	1.33	1.24	93	52-110	
Benzo[b]fluoranthene	1.33	1.24	93	49-118	
Benzo[g,h,i]perylene	1.33	1.13	85	53-115	
Benzo[k]fluoranthene	1.33	1.24	93	46-115	
Chrysene	1.33	1.27	95	51-112	
Dibenz(a,h)anthracene	1.33	1.16	87	48-113	
Fluoranthene	1.33	1.24	93	53-122	
Fluorene	1.33	1.36	102	51-119	
Indeno[1,2,3-cd]pyrene	1.33	1.18	88	49-113	
2-Methylnaphthalene	1.33	1.11	83	49-110	
Naphthalene	1.33	1.08	81	49-110	
Phenanthrene	1.33	1.25	94	54-120	
Pyrene	1.33	1.14	86	54-119	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low Lab File ID: 95474-10MS.d

Lab ID: 500-95474-10 MS Client ID: DS-10 MS

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	MS CONCENTRATION (mg/Kg)	MS % REC	QC LIMITS REC	#
Acenaphthene	1.67	<0.041	1.08	65	47-110	
Acenaphthylene	1.67	<0.041	1.03	62	51-113	
Anthracene	1.67	<0.041	1.06	63	53-121	
Benzo[a]anthracene	1.67	<0.041	1.16	70	52-113	
Benzo[a]pyrene	1.67	<0.041	1.12	67	52-110	
Benzo[b]fluoranthene	1.67	<0.041	1.25	75	49-118	
Benzo[g,h,i]perylene	1.67	<0.041	1.08	65	53-115	
Benzo[k]fluoranthene	1.67	<0.041	1.21	73	46-115	
Chrysene	1.67	<0.041	1.14	68	51-112	
Dibenz(a,h)anthracene	1.67	<0.041	1.13	68	48-113	
Fluoranthene	1.67	<0.041	0.971	58	53-122	
Fluorene	1.67	<0.041	1.15	69	51-119	
Indeno[1,2,3-cd]pyrene	1.67	<0.041	1.12	67	49-113	
2-Methylnaphthalene	1.67	<0.041	0.937	56	49-110	
Naphthalene	1.67	<0.041	0.857	51	49-110	
Phenanthrene	1.67	<0.041	1.08	65	54-120	
Pyrene	1.67	<0.041	1.65	98	54-119	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low Lab File ID: 95474-10MSD.D

Lab ID: 500-95474-10 MSD Client ID: DS-10 MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acenaphthene	1.70	1.37	80	24	30	47-110	
Acenaphthylene	1.70	1.38	81	29	30	51-113	
Anthracene	1.70	1.30	77	21	30	53-121	
Benzo[a]anthracene	1.70	1.36	80	16	30	52-113	*
Benzo[a]pyrene	1.70	1.20	71	7	30	52-110	*
Benzo[b]fluoranthene	1.70	1.08	64	14	30	49-118	*
Benzo[g,h,i]perylene	1.70	2.12	125	65	30	53-115	F1 F2 *
Benzo[k]fluoranthene	1.70	1.07	63	12	30	46-115	*
Chrysene	1.70	1.27	75	11	30	51-112	*
Dibenz(a,h)anthracene	1.70	2.45	144	74	30	48-113	F1 F2 *
Fluoranthene	1.70	1.31	77	30	30	53-122	
Fluorene	1.70	1.45	85	23	30	51-119	
Indeno[1,2,3-cd]pyrene	1.70	2.35	138	71	30	49-113	F1 F2 *
2-Methylnaphthalene	1.70	1.15	68	20	30	49-110	
Naphthalene	1.70	1.03	61	18	30	49-110	
Phenanthrene	1.70	1.33	78	21	30	54-120	
Pyrene	1.70	2.74	161	50	30	54-119	F1 F2 *

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low Lab File ID: 95474-10MSD.d

Lab ID: 500-95474-10 MSD RA Client ID: DS-10 MSD RA

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acenaphthene	1.70	1.23	73	14	30	47-110	
Acenaphthylene	1.70	1.19	70	14	30	51-113	
Anthracene	1.70	1.19	70	12	30	53-121	
Benzo[a]anthracene	1.70	1.28	76	10	30	52-113	*
Benzo[a]pyrene	1.70	1.27	75	13	30	52-110	*
Benzo[b]fluoranthene	1.70	1.73	102	32	30	49-118	* F2
Benzo[g,h,i]perylene	1.70	0.770	45	33	30	53-115	* F1 F2
Benzo[k]fluoranthene	1.70	1.63	96	29	30	46-115	*
Chrysene	1.70	1.22	72	7	30	51-112	*
Dibenz(a,h)anthracene	1.70	0.828	49	31	30	48-113	* F2
Fluoranthene	1.70	1.07	62	10	30	53-122	
Fluorene	1.70	1.29	76	12	30	51-119	
Indeno[1,2,3-cd]pyrene	1.70	0.819	48	31	30	49-113	* F1 F2
2-Methylnaphthalene	1.70	1.11	65	17	30	49-110	
Naphthalene	1.70	1.04	61	20	30	49-110	
Phenanthrene	1.70	1.20	71	11	30	54-120	
Pyrene	1.70	2.28	133	32	30	54-119	* F1 F2

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab File ID: MB 286634.D Lab Sample ID: MB 500-286634/1-A

Matrix: Solid Date Extracted: 05/04/2015 16:01

Instrument ID: CMS20 Date Analyzed: 05/05/2015 12:24

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 500-286634/2-A	LCS 286634.D	05/05/2015 10:50
DS-1	500-95474-1	95474-1.D	05/05/2015 15:00
DS-2	500-95474-2	95474-2.D	05/05/2015 15:25
DS-3	500-95474-3	95474-3.D	05/05/2015 15:49
DS-4	500-95474-4	95474-4.D	05/05/2015 16:14
DS-6	500-95474-6	95474-6.D	05/05/2015 17:03
DS-7 RA	500-95474-7 RA	95474-7.D	05/05/2015 17:28
DS-9	500-95474-9	95474-9.D	05/05/2015 18:17
DS-10 MSD	500-95474-10 MSD	95474-10MSD .D	05/05/2015 22:43
DS-1 RA	500-95474-1 RA	95474-1.d	05/06/2015 12:16
DS-2 RA	500-95474-2 RA	95474-2.d	05/06/2015 12:36
DS-3 RA	500-95474-3 RA	95474-3.d	05/06/2015 12:55
DS-4 RA	500-95474-4 RA	95474-4.d	05/06/2015 13:15
DS-5	500-95474-5	95474-5.d	05/06/2015 13:34
DS-6 RA	500-95474-6 RA	95474-6.d	05/06/2015 13:54
DS-7	500-95474-7	95474-7.d	05/06/2015 14:13
DS-8	500-95474-8	95474-8.d	05/06/2015 14:33
DS-9 RA	500-95474-9 RA	95474-9.d	05/06/2015 14:53
DS-10	500-95474-10	95474-10.d	05/06/2015 15:12
DS-DUP	500-95474-11	95474-11.d	05/06/2015 15:32
DS-10 MS	500-95474-10 MS	95474-10MS. d	05/06/2015 17:30
DS-10 MSD RA	500-95474-10 MSD RA	95474-10MSD .d	05/06/2015 17:50

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab File ID: 20D0330C.D DFTPP Injection Date: 03/30/2015

Instrument ID: CMS20 DFTPP Injection Time: 11:40

Analysis Batch No.: 281696

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	52.8	
68	Less than 2% of mass 69	0.8	(1.8)1
69	Mass 69 Relative abundance	46.6	
70	Less than 2% of mass 69	0.2	(0.4)1
127	10-80% of Base Peak	50.6	
197	Less than 2% of mass 198	0.0	
198	Base peak	100.0	
199	5-9% of mass 198	6.8	
275	10-60% of Base Peak	24.6	
365	Greater than 1% of mass 198	3.1	
441	present but less than 24% of mass 442	12.8	(14.6)2
442	Greater than 50% of mass 198	87.5	
443	15-24% of mass 442	16.6	(19.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 500-281696/2	L1STD2.D	03/30/2015	12:14
	IC 500-281696/3	L1STD02.D	03/30/2015	12:38
	IC 500-281696/4	L1STD05.D	03/30/2015	13:03
	IC 500-281696/5	L1STD1.D	03/30/2015	13:27
	IC 500-281696/6	L1STD5.D	03/30/2015	13:51
	IC 500-281696/7	L1STD10.D	03/30/2015	14:16
	IC 500-281696/8	L1STD20.D	03/30/2015	14:40
	ICIS 500-281696/9	L1STD40.D	03/30/2015	15:05
	IC 500-281696/10	L1STD50.D	03/30/2015	15:29
	IC 500-281696/11	L1STD60.D	03/30/2015	15:54
	IC 500-281696/12	L1STD70.D	03/30/2015	16:18
	ICV 500-281696/13	L1ICV.D	03/30/2015	16:43

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab File ID: 20D0505.D DFTPP Injection Date: 05/05/2015

Instrument ID: CMS20 DFTPP Injection Time: 09:17

Analysis Batch No.: 286703

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	57.0	
68	Less than 2% of mass 69	0.6	(1.1)1
69	Mass 69 Relative abundance	50.2	
70	Less than 2% of mass 69	0.3	(0.5)1
127	10-80% of Base Peak	51.8	
197	Less than 2% of mass 198	0.0	
198	Base peak	100.0	
199	5-9% of mass 198	6.7	
275	10-60% of Base Peak	26.7	
365	Greater than 1% of mass 198	3.6	
441	present but less than 24% of mass 442	16.3	(14.8)2
442	Greater than 50% of mass 198	110.2	
443	15-24% of mass 442	20.8	(18.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 500-286703/2	20C0505.D	05/05/2015	09:40
	LCS 500-286634/2-A	LCS 286634.D	05/05/2015	10:50
	MB 500-286634/1-A	MB 286634.D	05/05/2015	12:24

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab File ID: 21D0427B.D DFTPP Injection Date: 04/27/2015

Instrument ID: CMS21 DFTPP Injection Time: 12:38

Analysis Batch No.: 285596

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	45.4	
68	Less than 2% of mass 69	0.2	(0.7)1
69	Mass 69 Relative abundance	34.8	
70	Less than 2% of mass 69	0.2	(0.5)1
127	10-80% of Base Peak	49.2	
197	Less than 2% of mass 198	0.3	
198	Base peak	100.0	
199	5-9% of mass 198	6.7	
275	10-60% of Base Peak	27.3	
365	Greater than 1% of mass 198	3.6	
441	present but less than 24% of mass 442	16.7	(13.1)2
442	Greater than 50% of mass 198	127.5	
443	15-24% of mass 442	24.9	(19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 500-285596/2	L1STD2.D	04/27/2015	13:03
	IC 500-285596/3	L1STD02.D	04/27/2015	13:27
	IC 500-285596/4	L1STD05.D	04/27/2015	13:51
	IC 500-285596/5	L1STD1.D	04/27/2015	14:16
	IC 500-285596/6	L1STD5.D	04/27/2015	14:40
	IC 500-285596/7	L1STD10.D	04/27/2015	15:05
	IC 500-285596/8	L1STD20.D	04/27/2015	15:29
	ICIS 500-285596/9	L1STD40.D	04/27/2015	15:53
	IC 500-285596/10	L1STD50.D	04/27/2015	16:18
	ICV 500-285596/13	L1STD60.D	04/27/2015	16:42
	IC 500-285596/12	L1STD70.D	04/27/2015	17:06
	IC 500-285596/11	ICVMIX1.D	04/27/2015	17:30

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab File ID: 21D0505.D DFTPP Injection Date: 05/05/2015

Instrument ID: CMS21 DFTPP Injection Time: 12:10

Analysis Batch No.: 286746

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	49.4	
68	Less than 2% of mass 69	0.2	(0.6)1
69	Mass 69 Relative abundance	38.2	
70	Less than 2% of mass 69	0.3	(0.7)1
127	10-80% of Base Peak	50.8	
197	Less than 2% of mass 198	0.1	
198	Base peak	100.0	
199	5-9% of mass 198	6.9	
275	10-60% of Base Peak	26.5	
365	Greater than 1% of mass 198	3.6	
441	present but less than 24% of mass 442	16.5	(13.5)2
442	Greater than 50% of mass 198	121.7	
443	15-24% of mass 442	24.0	(19.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 500-286746/2	21C0505.D	05/05/2015	12:34
	CCVL 500-286746/4	21C0505B.D	05/05/2015	13:23
DS-1	500-95474-1	95474-1.D	05/05/2015	15:00
DS-2	500-95474-2	95474-2.D	05/05/2015	15:25
DS-3	500-95474-3	95474-3.D	05/05/2015	15:49
DS-4	500-95474-4	95474-4.D	05/05/2015	16:14
DS-6	500-95474-6	95474-6.D	05/05/2015	17:03
DS-7 RA	500-95474-7 RA	95474-7.D	05/05/2015	17:28
DS-9	500-95474-9	95474-9.D	05/05/2015	18:17
DS-10 MSD	500-95474-10 MSD	95474-10MSD.D	05/05/2015	22:43

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab File ID: 23D0429B.d DFTPP Injection Date: 04/29/2015

Instrument ID: CMS23 DFTPP Injection Time: 10:23

Analysis Batch No.: 285942

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	55.3	
68	Less than 2% of mass 69	0.0	(0.0)1
69	Mass 69 Relative abundance	43.9	
70	Less than 2% of mass 69	0.3	(0.6)1
127	10-80% of Base Peak	59.7	
197	Less than 2% of mass 198	0.0	
198	Base peak	100.0	
199	5-9% of mass 198	6.8	
275	10-60% of Base Peak	27.0	
365	Greater than 1% of mass 198	3.4	
441	present but less than 24% of mass 442	16.8	(15.3)2
442	Greater than 50% of mass 198	109.8	
443	15-24% of mass 442	21.1	(19.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 500-285942/2	L1STD2.d	04/29/2015	10:54
	IC 500-285942/3	L1STD02.d	04/29/2015	11:13
	IC 500-285942/4	L1STD05.d	04/29/2015	11:31
	IC 500-285942/5	L1STD1.d	04/29/2015	11:50
	IC 500-285942/6	L1STD5.d	04/29/2015	12:09
	IC 500-285942/7	L1STD10.d	04/29/2015	12:28
	IC 500-285942/8	L1STD20a.d	04/29/2015	13:01
	ICIS 500-285942/9	L1STD40a.d	04/29/2015	13:19
	IC 500-285942/10	L1STD50.d	04/29/2015	13:38
	IC 500-285942/11	L1STD60.d	04/29/2015	13:57
	IC 500-285942/12	L1STD70.d	04/29/2015	14:16
	ICV 500-285942/13	L1ICV.d	04/29/2015	14:35

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab File ID: 23D0506.d DFTPP Injection Date: 05/06/2015

Instrument ID: CMS23 DFTPP Injection Time: 09:18

Analysis Batch No.: 286895

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10-80% of Base Peak	59.9	
68	Less than 2% of mass 69	0.0	(0.0)1
69	Mass 69 Relative abundance	48.3	
70	Less than 2% of mass 69	0.2	(0.5)1
127	10-80% of Base Peak	61.3	
197	Less than 2% of mass 198	0.0	
198	Base peak	100.0	
199	5-9% of mass 198	6.8	
275	10-60% of Base Peak	25.5	
365	Greater than 1% of mass 198	3.1	
441	present but less than 24% of mass 442	15.1	(15.9)2
442	Greater than 50% of mass 198	95.2	
443	15-24% of mass 442	18.2	(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 500-286895/2	23C0506.d	05/06/2015	09:36
DS-1 RA	500-95474-1 RA	95474-1.d	05/06/2015	12:16
DS-2 RA	500-95474-2 RA	95474-2.d	05/06/2015	12:36
DS-3 RA	500-95474-3 RA	95474-3.d	05/06/2015	12:55
DS-4 RA	500-95474-4 RA	95474-4.d	05/06/2015	13:15
DS-5	500-95474-5	95474-5.d	05/06/2015	13:34
DS-6 RA	500-95474-6 RA	95474-6.d	05/06/2015	13:54
DS-7	500-95474-7	95474-7.d	05/06/2015	14:13
DS-8	500-95474-8	95474-8.d	05/06/2015	14:33
DS-9 RA	500-95474-9 RA	95474-9.d	05/06/2015	14:53
DS-10	500-95474-10	95474-10.d	05/06/2015	15:12
DS-DUP	500-95474-11	95474-11.d	05/06/2015	15:32
DS-10 MS	500-95474-10 MS	95474-10MS.d	05/06/2015	17:30
DS-10 MSD RA	500-95474-10 MSD RA	95474-10MSD.d	05/06/2015	17:50

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: ICIS 500-281696/9 Date Analyzed: 03/30/2015 15:05

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): L1STD40.D Heated Purge: (Y/N) N

Calibration ID: 18243

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		51066	5.19	195106	6.16	116487	7.57
UPPER LIMIT		102132	5.69	390212	6.66	232974	8.07
LOWER LIMIT		25533	4.69	97553	5.66	58244	7.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 500-281696/13		73551	5.19	287835	6.16	167745	7.57

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: ICIS 500-281696/9 Date Analyzed: 03/30/2015 15:05

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): L1STD40.D Heated Purge: (Y/N) N

Calibration ID: 18243

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		212421	8.81	198986	11.06	183907	12.71
UPPER LIMIT		424842	9.31	397972	11.56	367814	13.21
LOWER LIMIT		106211	8.31	99493	10.56	91954	12.21
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 500-281696/13		312415	8.81	299986	11.07	308199	12.72

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: CCVIS 500-286703/2 Date Analyzed: 05/05/2015 09:40

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): 20C0505.D Heated Purge: (Y/N) N

Calibration ID: 18243

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		59165	4.73	191136	5.68	97979	7.06
UPPER LIMIT		118330	5.23	382272	6.18	195958	7.56
LOWER LIMIT		29583	4.23	95568	5.18	48990	6.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 500-286634/2-A		34941	4.73	135194	5.68	70434	7.06
MB 500-286634/1-A		34489	4.73	129999	5.67	71549	7.05

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: CCVIS 500-286703/2 Date Analyzed: 05/05/2015 09:40

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): 20C0505.D Heated Purge: (Y/N) N

Calibration ID: 18243

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		196293	8.29	199019	10.50	203913	11.81
UPPER LIMIT		392586	8.79	398038	11.00	407826	12.31
LOWER LIMIT		98147	7.79	99510	10.00	101957	11.31
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 500-286634/2-A		139967	8.28	144678	10.49	131150	11.81
MB 500-286634/1-A		136530	8.28	141348	10.49	130478	11.80

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: ICIS 500-285596/9 Date Analyzed: 04/27/2015 15:53

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): L1STD40.D Heated Purge: (Y/N) N

Calibration ID: 18538

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		83844	5.08	328323	6.03	181867	7.43
UPPER LIMIT		167688	5.58	656646	6.53	363734	7.93
LOWER LIMIT		41922	4.58	164162	5.53	90934	6.93
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 500-285596/13		97226	5.08	377707	6.03	223532	7.43

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: ICIS 500-285596/9 Date Analyzed: 04/27/2015 15:53

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): L1STD40.D Heated Purge: (Y/N) N

Calibration ID: 18538

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		293242	8.66	323691	10.88	224533	12.38
UPPER LIMIT		586484	9.16	647382	11.38	449066	12.88
LOWER LIMIT		146621	8.16	161846	10.38	112267	11.88
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 500-285596/13		365314	8.66	416924	10.88	278104	12.38

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: CCVIS 500-286746/2 Date Analyzed: 05/05/2015 12:34

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): 21C0505.D Heated Purge: (Y/N) N

Calibration ID: 18632

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		70681	4.89	284233	5.83	146012	7.22
UPPER LIMIT		141362	5.39	568466	6.33	292024	7.72
LOWER LIMIT		35341	4.39	142117	5.33	73006	6.72
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVL 500-286746/4		70680	4.88	278536	5.83	144938	7.22
500-95474-1	DS-1	39688	4.88	163402	5.83	80368	7.22
500-95474-2	DS-2	41551	4.88	145871	5.83	79906	7.22
500-95474-3	DS-3	38619	4.88	163349	5.83	89254	7.22
500-95474-4	DS-4	41576	4.88	161946	5.83	80437	7.22
500-95474-6	DS-6	40630	4.88	165205	5.83	87073	7.22
500-95474-7 RA	DS-7 RA	39787	4.88	162379	5.83	87810	7.22
500-95474-9	DS-9	45026	4.89	171106	5.83	90638	7.22
500-95474-10 MSD	DS-10 MSD	42205	4.88	168137	5.83	85573	7.22

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: CCVIS 500-286746/2 Date Analyzed: 05/05/2015 12:34

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): 21C0505.D Heated Purge: (Y/N) N

Calibration ID: 18632

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		247751	8.45	298402	10.67	219011	12.04
UPPER LIMIT		495502	8.95	596804	11.17	438022	12.54
LOWER LIMIT		123876	7.95	149201	10.17	109506	11.54
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVL 500-286746/4		252681	8.44	296336	10.66	241736	12.04
500-95474-1	DS-1	163044	8.44	145707*	10.65	78680*	12.03
500-95474-2	DS-2	158243	8.44	161991	10.65	82437*	12.03
500-95474-3	DS-3	155176	8.44	145588*	10.66	54633*	12.03
500-95474-4	DS-4	153327	8.44	138209*	10.66	55651*	12.03
500-95474-6	DS-6	165311	8.44	156063	10.66	61565*	12.04
500-95474-7 RA	DS-7 RA	161573	8.44	140992*	10.66	54542*	12.04
500-95474-9	DS-9	166879	8.44	150788	10.66	53363*	12.04
500-95474-10 MSD	DS-10 MSD	156789	8.45	76029*	10.66	50633*	12.04

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: ICIS 500-285942/9 Date Analyzed: 04/29/2015 13:19

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): L1STD40a.d Heated Purge: (Y/N) N

Calibration ID: 18540

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		48084	4.46	187268	5.40	102862	6.76
UPPER LIMIT		96168	4.96	374536	5.90	205724	7.26
LOWER LIMIT		24042	3.96	93634	4.90	51431	6.26
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 500-285942/13		55464	4.46	216867	5.40	118404	6.76

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: ICIS 500-285942/9 Date Analyzed: 04/29/2015 13:19

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): L1STD40a.d Heated Purge: (Y/N) N

Calibration ID: 18540

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		155437	7.98	155641	10.21	149214	11.46
UPPER LIMIT		310874	8.48	311282	10.71	298428	11.96
LOWER LIMIT		77719	7.48	77821	9.71	74607	10.96
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 500-285942/13		175766	7.98	181427	10.21	174742	11.45

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: CCVIS 500-286895/2 Date Analyzed: 05/06/2015 09:36

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): 23C0506.d Heated Purge: (Y/N) N

Calibration ID: 18540

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		35162	4.37	141527	5.30	75258	6.65
UPPER LIMIT		70324	4.87	283054	5.80	150516	7.15
LOWER LIMIT		17581	3.87	70764	4.80	37629	6.15
LAB SAMPLE ID	CLIENT SAMPLE ID						
500-95474-1 RA	DS-1 RA	34317	4.37	138327	5.30	68810	6.65
500-95474-2 RA	DS-2 RA	31369	4.37	125744	5.30	63110	6.65
500-95474-3 RA	DS-3 RA	31870	4.37	123620	5.30	68737	6.65
500-95474-4 RA	DS-4 RA	32101	4.37	132157	5.30	64613	6.65
500-95474-5	DS-5	60522	4.37	249393	5.30	130784	6.65
500-95474-6 RA	DS-6 RA	34530	4.37	138547	5.30	68784	6.65
500-95474-7	DS-7	33186	4.37	133663	5.30	72537	6.65
500-95474-8	DS-8	61110	4.37	243633	5.30	120843	6.65
500-95474-9 RA	DS-9 RA	32253	4.37	129960	5.30	64156	6.65
500-95474-10	DS-10	33530	4.37	138284	5.30	68192	6.65
500-95474-11	DS-DUP	46548	4.37	189545	5.30	97077	6.65
500-95474-10 MS	DS-10 MS	35943	4.37	139956	5.30	70692	6.65
500-95474-10 MSD RA	DS-10 MSD RA	33248	4.37	130977	5.30	67367	6.65

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: CCVIS 500-286895/2 Date Analyzed: 05/06/2015 09:36

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm)

Lab File ID (Standard): 23C0506.d Heated Purge: (Y/N) N

Calibration ID: 18540

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		113585	7.87	115420	10.09	97697	11.32
UPPER LIMIT		227170	8.37	230840	10.59	195394	11.82
LOWER LIMIT		56793	7.37	57710	9.59	48849	10.82
LAB SAMPLE ID	CLIENT SAMPLE ID						
500-95474-1 RA	DS-1 RA	114741	7.86	80862	10.08	33787*	11.31
500-95474-2 RA	DS-2 RA	106676	7.86	73542	10.09	26583*	11.32
500-95474-3 RA	DS-3 RA	107237	7.86	71317	10.09	32851*	11.31
500-95474-4 RA	DS-4 RA	109612	7.86	71725	10.09	39094*	11.32
500-95474-5	DS-5	221091	7.86	167865	10.09	96872	11.31
500-95474-6 RA	DS-6 RA	114455	7.86	76218	10.09	47441*	11.32
500-95474-7	DS-7	114236	7.86	72975	10.09	34430*	11.32
500-95474-8	DS-8	208601	7.86	179112	10.09	111122	11.32
500-95474-9 RA	DS-9 RA	108738	7.87	73130	10.09	34337*	11.32
500-95474-10	DS-10	114847	7.86	81387	10.09	55771	11.31
500-95474-11	DS-DUP	158205	7.86	106783	10.09	75680	11.32
500-95474-10 MS	DS-10 MS	114213	7.87	62342	10.09	50551	11.31
500-95474-10 MSD RA	DS-10 MSD RA	106724	7.87	46045*	10.09	16533*	11.31

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-1 | Lab Sample ID: 500-95474-1
Matrix: Solid | Lab File ID: 95474-1.D
Analysis Method: 8270D | Date Collected: 04/30/2015 14:20
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.4848(g) | Date Analyzed: 05/05/2015 15:00
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 24.0 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286746 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.042		0.042	
208-96-8	Acenaphthylene	<0.042		0.042	
120-12-7	Anthracene	<0.042		0.042	
56-55-3	Benzo[a]anthracene	0.047	*	0.042	
50-32-8	Benzo[a]pyrene	0.065	*	0.042	
205-99-2	Benzo[b]fluoranthene	0.093	*	0.042	
191-24-2	Benzo[g,h,i]perylene	<0.042	*	0.042	
207-08-9	Benzo[k]fluoranthene	0.054	*	0.042	
218-01-9	Chrysene	0.072	*	0.042	
53-70-3	Dibenz(a,h)anthracene	<0.042	*	0.042	
206-44-0	Fluoranthene	0.11		0.042	
86-73-7	Fluorene	<0.042		0.042	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.042	*	0.042	
90-12-0	1-Methylnaphthalene	<0.042		0.042	
91-57-6	2-Methylnaphthalene	<0.042		0.042	
91-20-3	Naphthalene	<0.042		0.042	
85-01-8	Phenanthrene	0.044		0.042	
129-00-0	Pyrene	0.12	*	0.042	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	68		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	56		25-115
1718-51-0	Terphenyl-d14 (Surr)	96	*	36-134

Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D
Lims ID: 500-95474-B-1-C Lab Sample ID: 500-95474-1
Client ID: DS-1
Sample Type: Client
Inject. Date: 05-May-2015 15:00:30 ALS Bottle#: 9 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 500-95474-b-1-c
Misc. Info.: 500-0030679-011
Operator ID: AD Instrument ID: CMS21

Method: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 07-May-2015 12:58:07 Calib Date: 01-May-2015 11:27:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D

Column 1 : Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: lesiakk Date: 07-May-2015 15:26:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.881	4.885	-0.004	94	39688	8.00	
* 2 Naphthalene-d8	136	5.827	5.832	-0.005	99	163402	8.00	
* 3 Acenaphthene-d10	164	7.217	7.222	-0.005	94	80368	8.00	
* 4 Phenanthrene-d10	188	8.439	8.449	-0.010	97	163044	8.00	
* 5 Chrysene-d12	240	10.652	10.666	-0.014	97	145707	8.00	s
* 6 Perylene-d12	264	12.031	12.041	-0.010	97	78680	8.00	s
$ 9 Nitrobenzene-d5	82	5.280	5.290	-0.010	87	95130	14.1	
$ 10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	210799	16.9	
$ 12 Terphenyl-d14	244	9.748	9.753	-0.005	98	331633	23.9	
128 Phenanthrene	178	8.463	8.473	-0.010	55	23896	1.03	
140 Fluoranthene	202	9.457	9.467	-0.010	97	64740	2.55	
143 Pyrene	202	9.653	9.662	-0.009	93	62496	2.82	
162 Benzo[a]anthracene	228	10.647	10.657	-0.010	72	22336	1.10	
163 Chrysene	228	10.675	10.690	-0.015	89	31356	1.69	
167 Benzo[b]fluoranthene	252	11.613	11.632	-0.019	95	28489	2.19	M
168 Benzo[k]fluoranthene	252	11.627	11.660	-0.033	92	15814	1.27	M
170 Benzo[a]pyrene	252	11.970	11.994	-0.024	90	17199	1.52	
176 Indeno[1,2,3-cd]pyrene	276	13.473	13.516	-0.043	74	8357	0.7897	
177 Benzo[g,h,i]perylene	276	13.915	13.954	-0.039	73	7552	0.8840	

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test
Review Flags
M - Manually Integrated

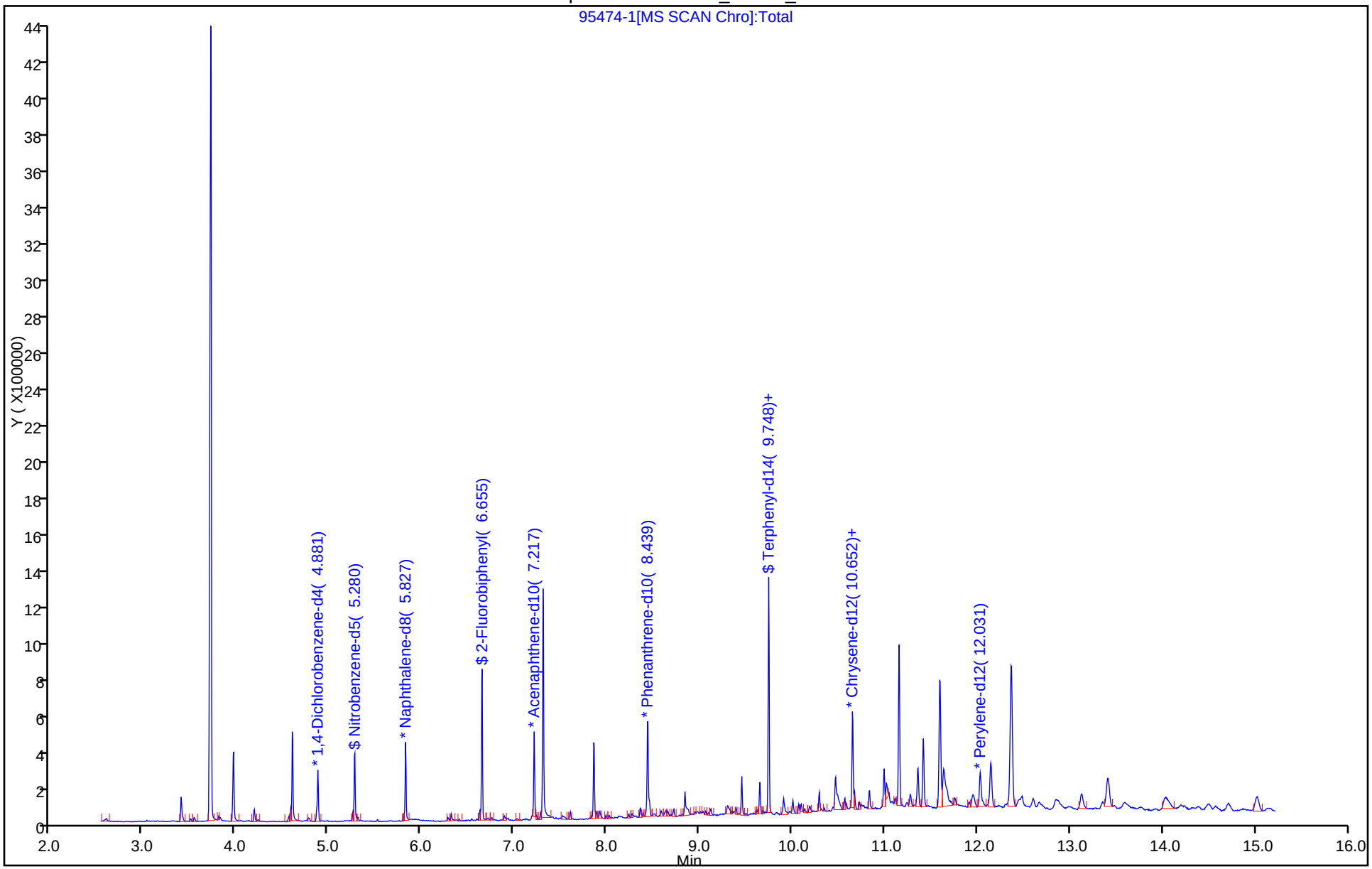
Reagents:

SMISTDWORK_00281 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1	Worklist Smp#:	11
Client ID:	DS-1				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		

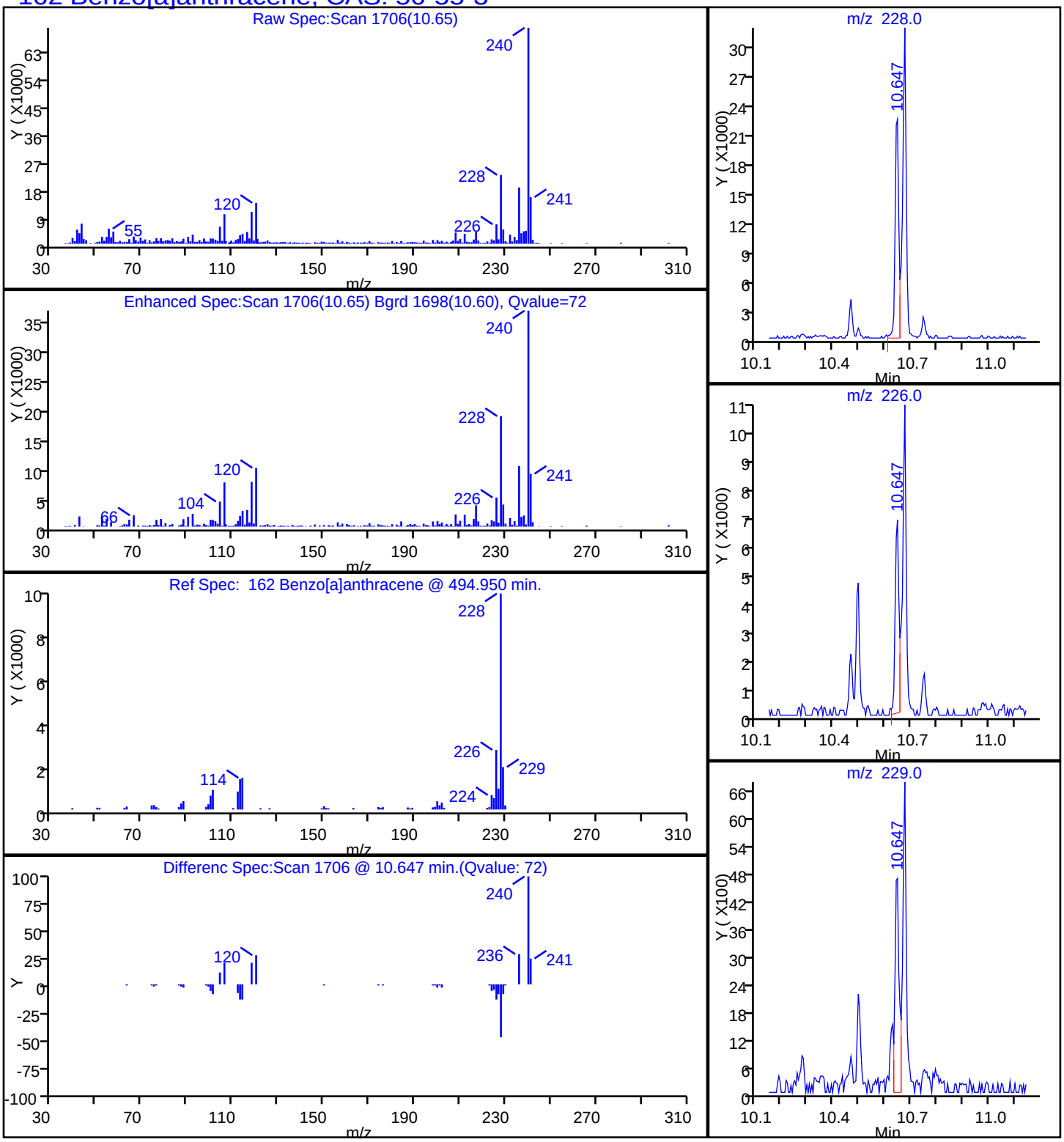


Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

162 Benzo[a]anthracene, CAS: 56-55-3

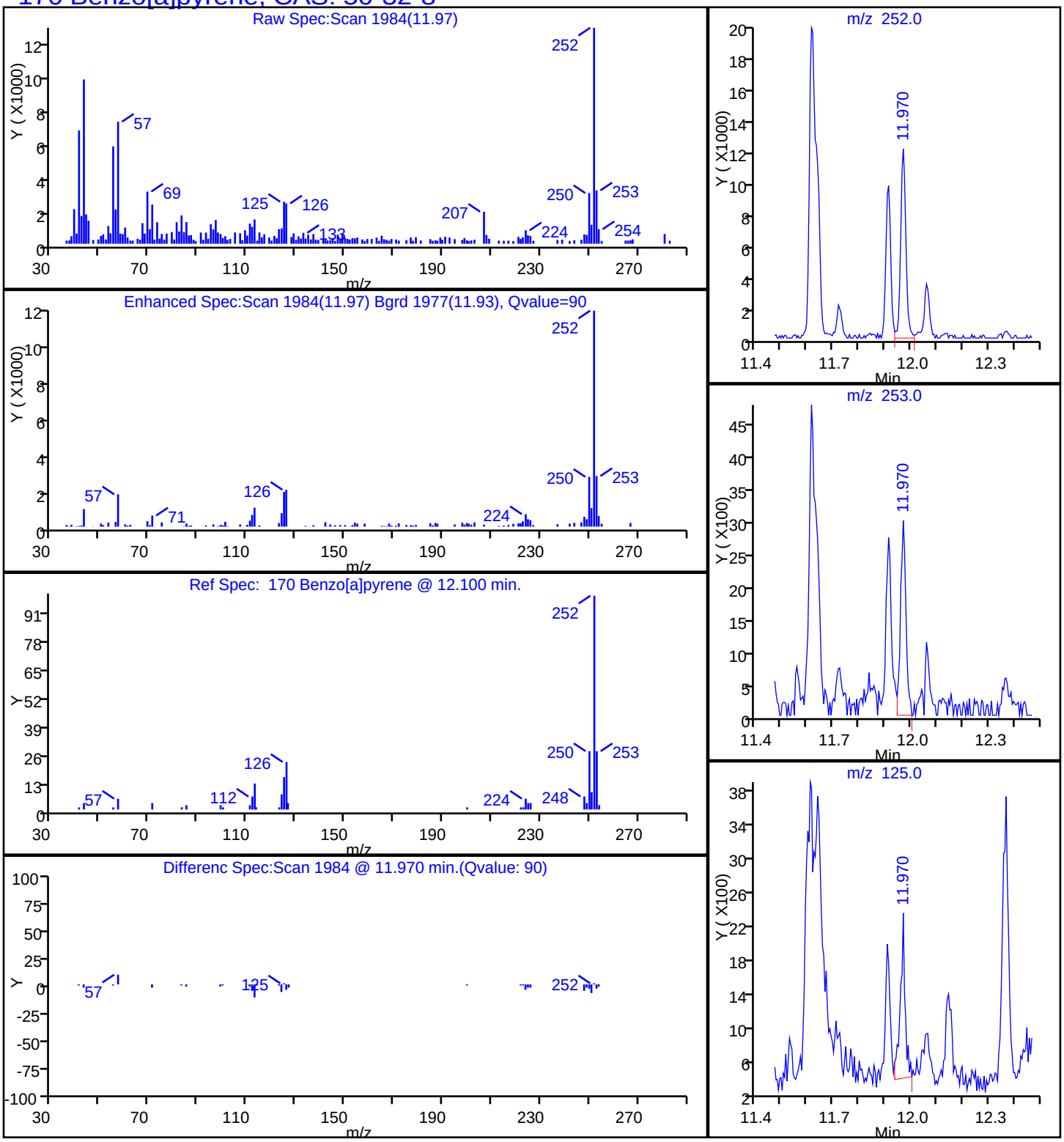


Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

170 Benzo[a]pyrene, CAS: 50-32-8

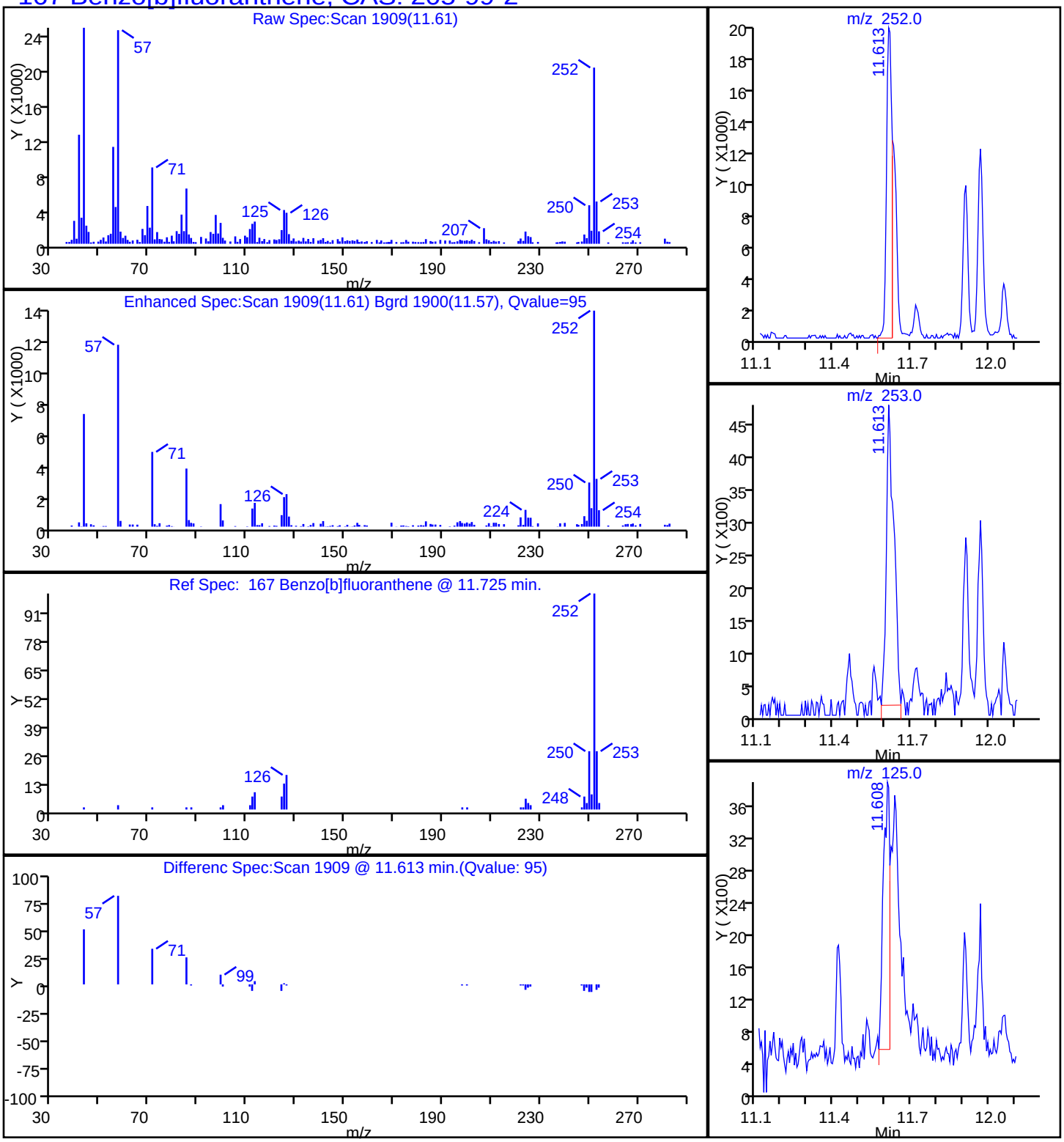


Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

167 Benzo[b]fluoranthene, CAS: 205-99-2

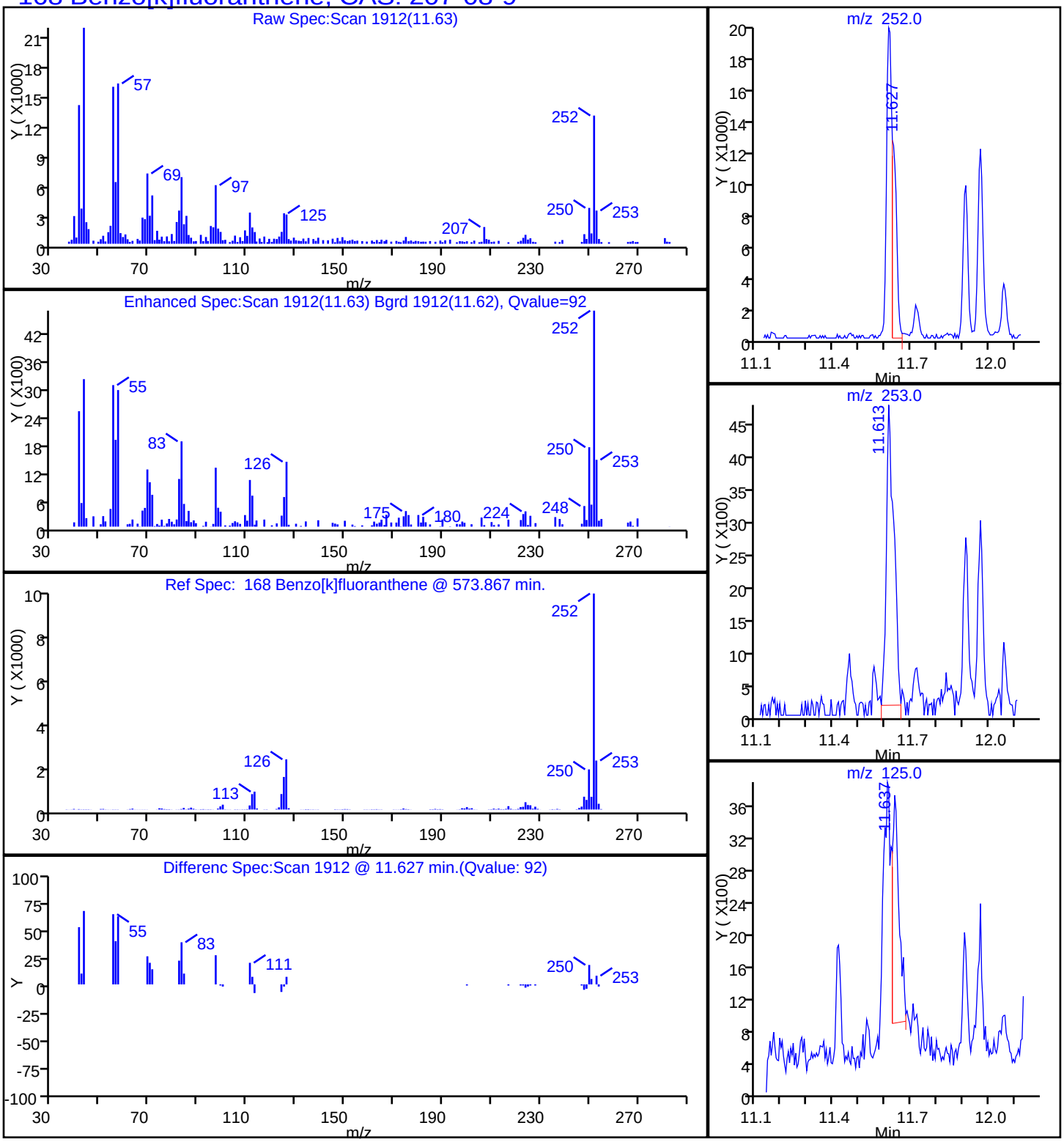


Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

168 Benzo[k]fluoranthene, CAS: 207-08-9

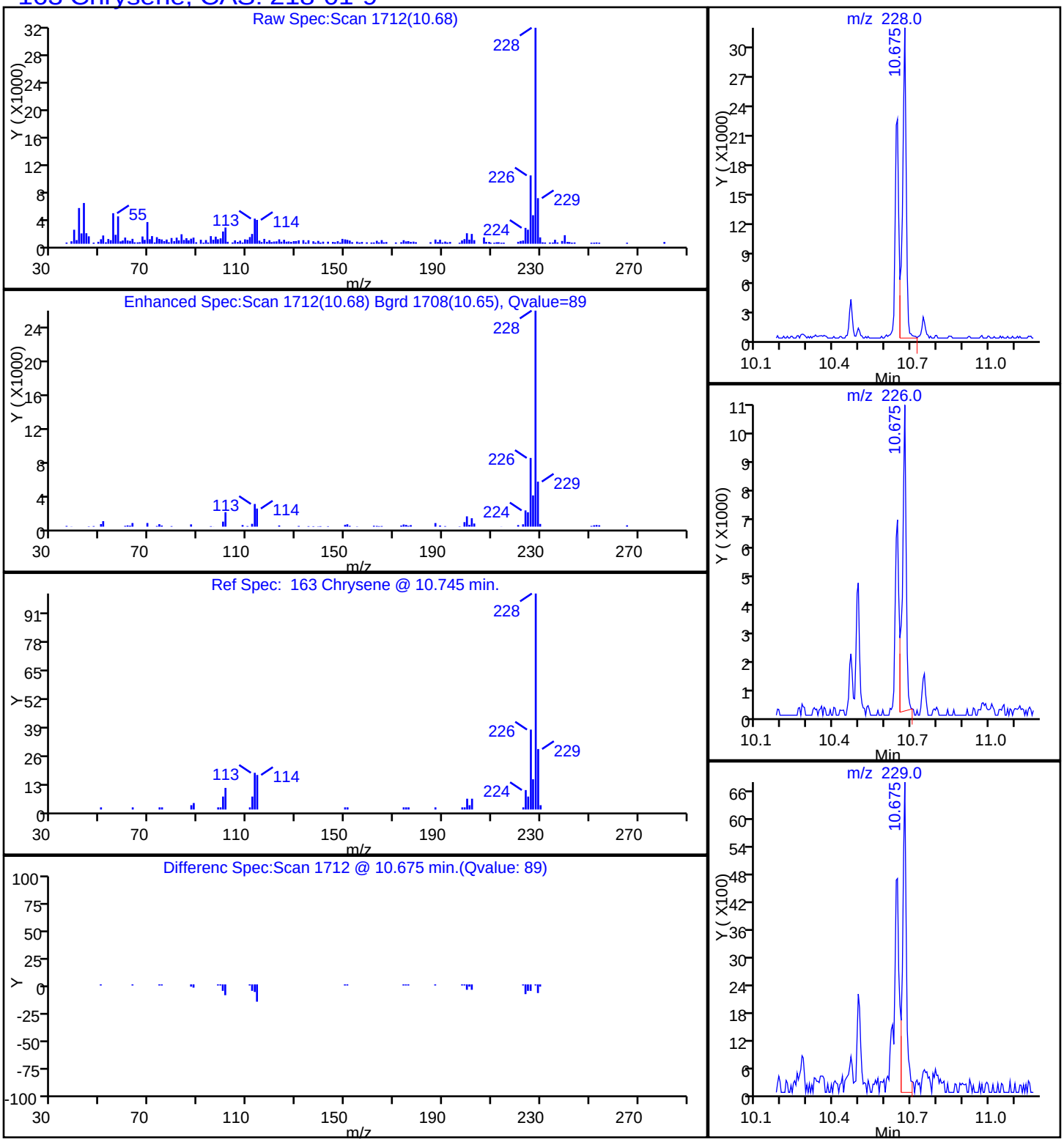


Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

163 Chrysene, CAS: 218-01-9

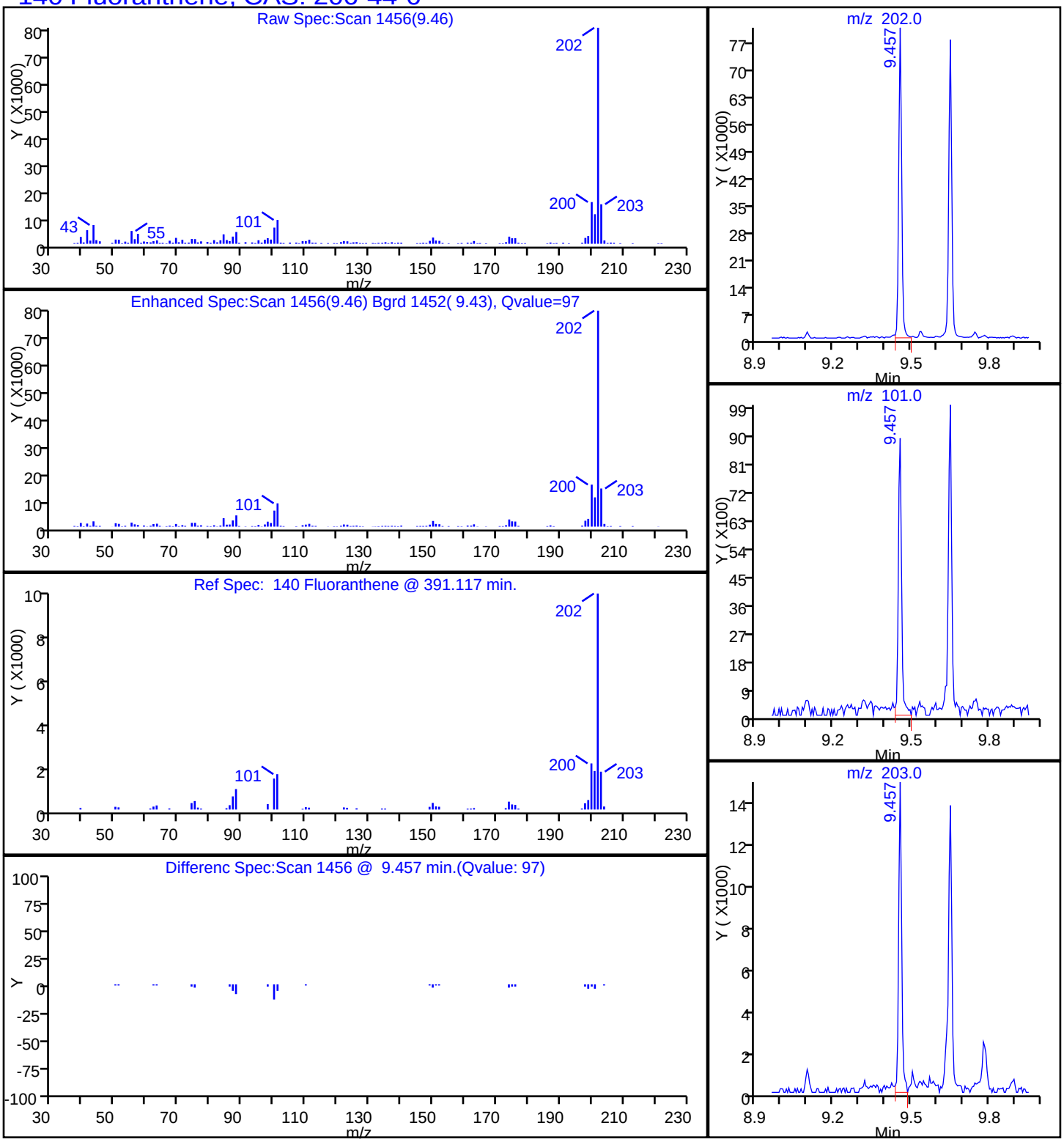


Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

140 Fluoranthene, CAS: 206-44-0

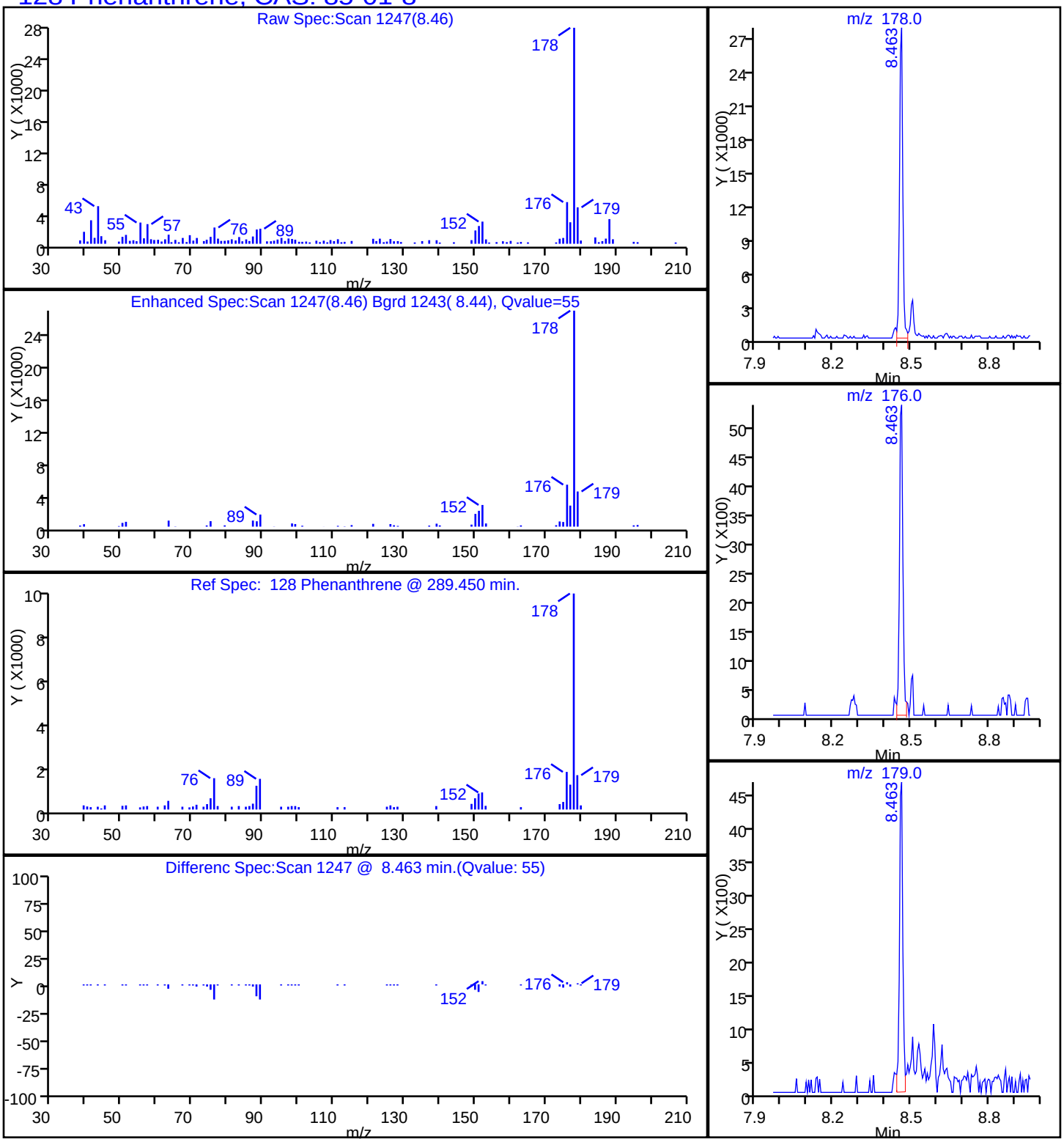


Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

128 Phenanthrene, CAS: 85-01-8

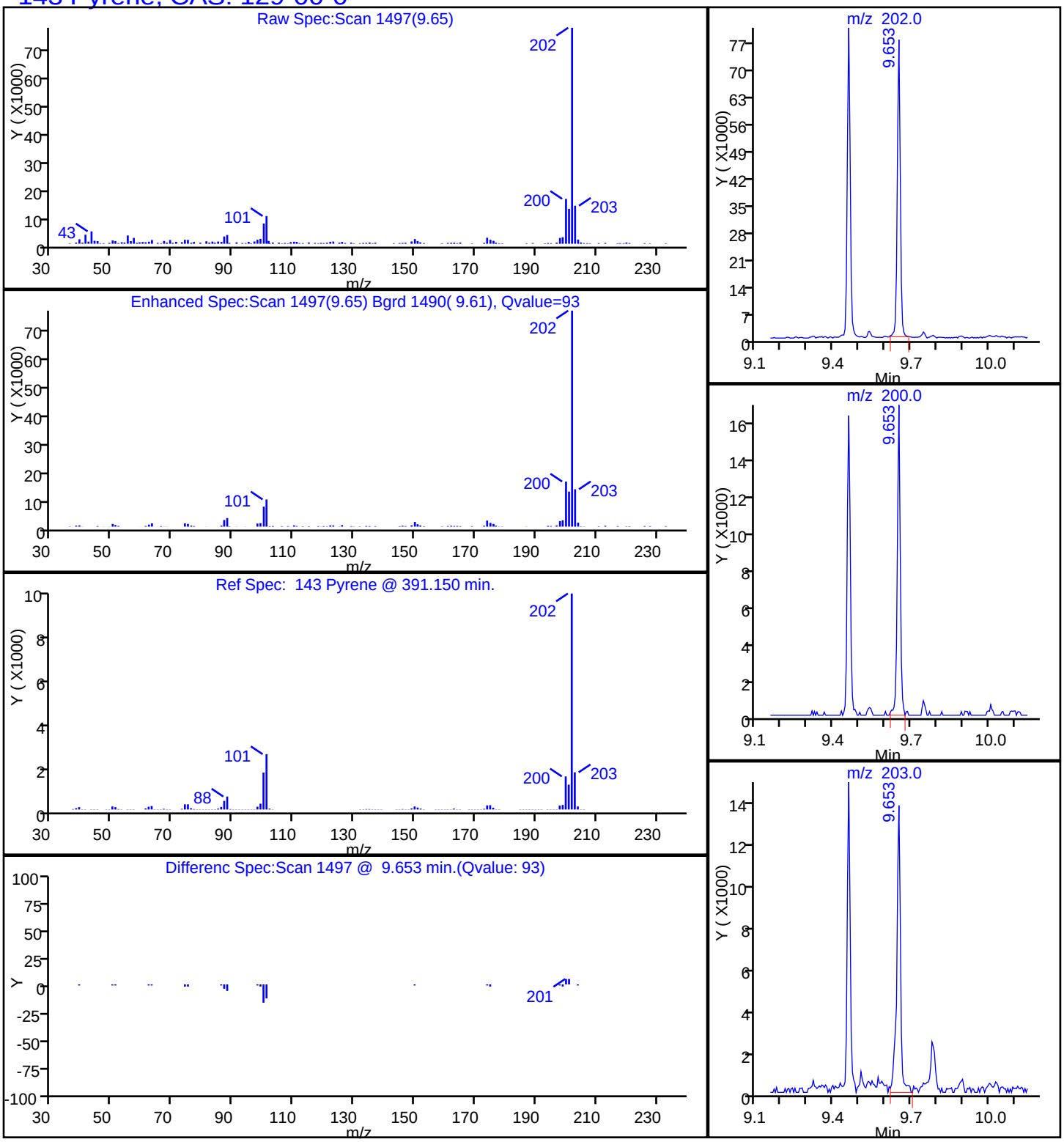


Report Date: 07-May-2015 15:26:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

143 Pyrene, CAS: 129-00-0



Manual Integration/User Assign Peak Report

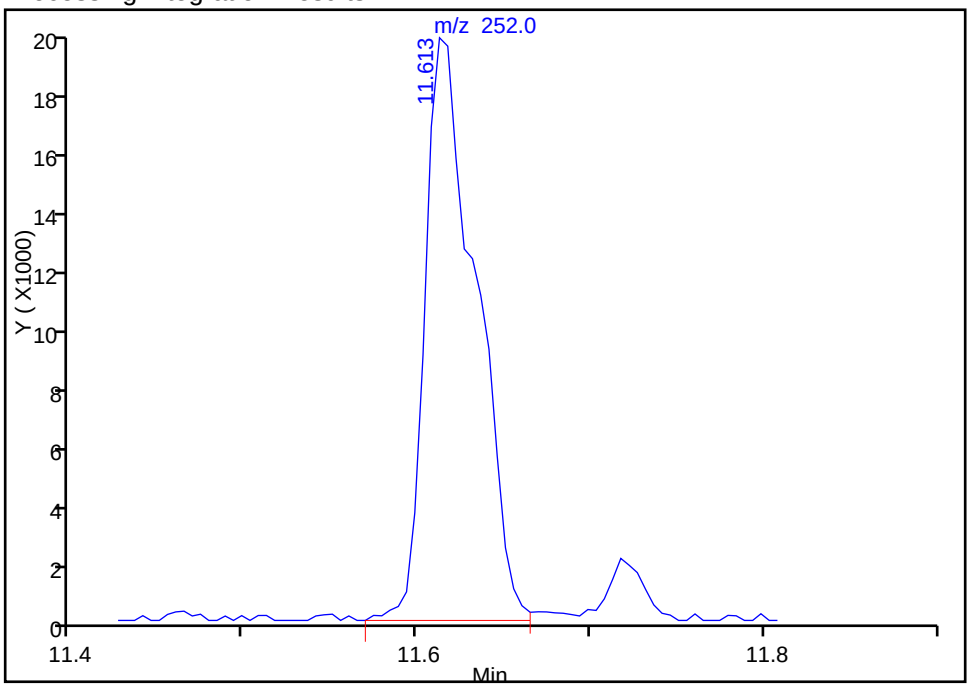
TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

167 Benzo[b]fluoranthene, CAS: 205-99-2

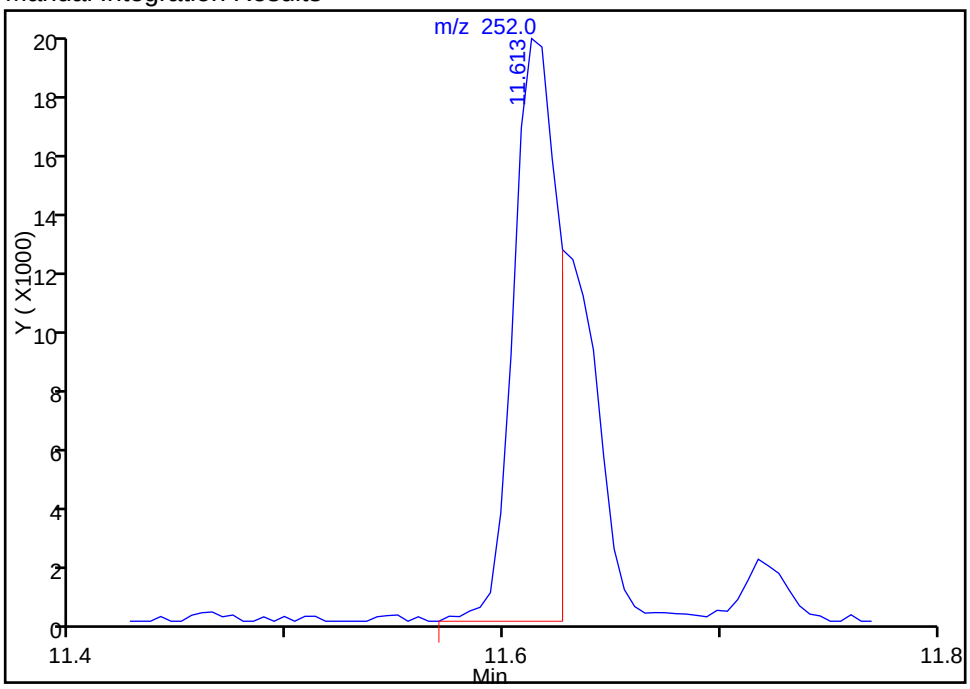
Processing Integration Results

RT: 11.61
Area: 40679
Amount: 3.126144
Amount Units: ug/mL



Manual Integration Results

RT: 11.61
Area: 28489
Amount: 2.189354
Amount Units: ug/mL



Reviewer: lesiakk, 07-May-2015 12:55:11
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

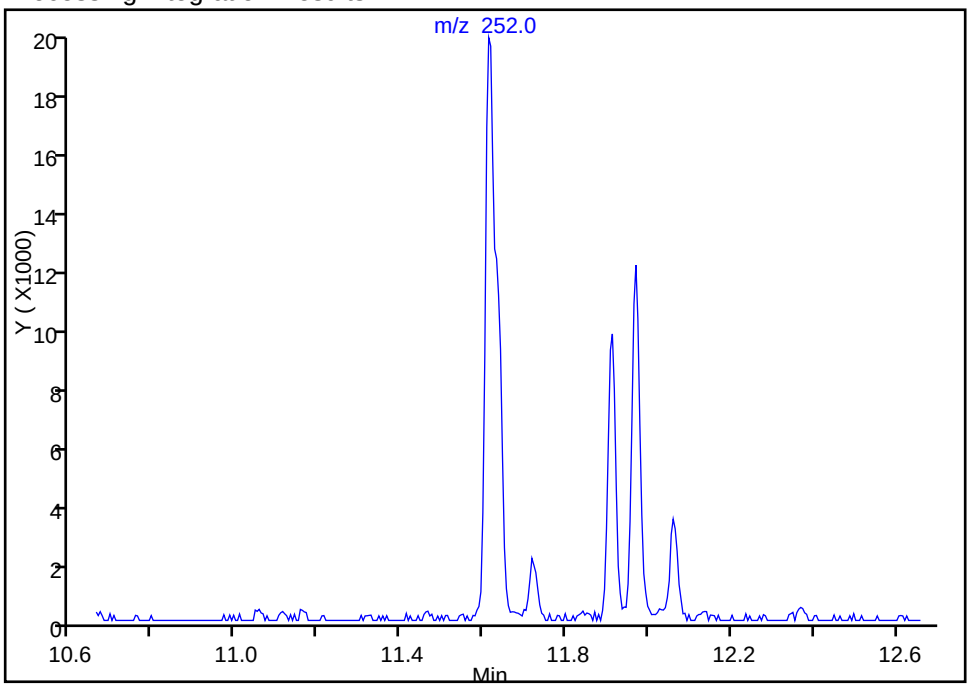
TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-1.D				
Injection Date:	05-May-2015 15:00:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	AD	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

168 Benzo[k]fluoranthene, CAS: 207-08-9

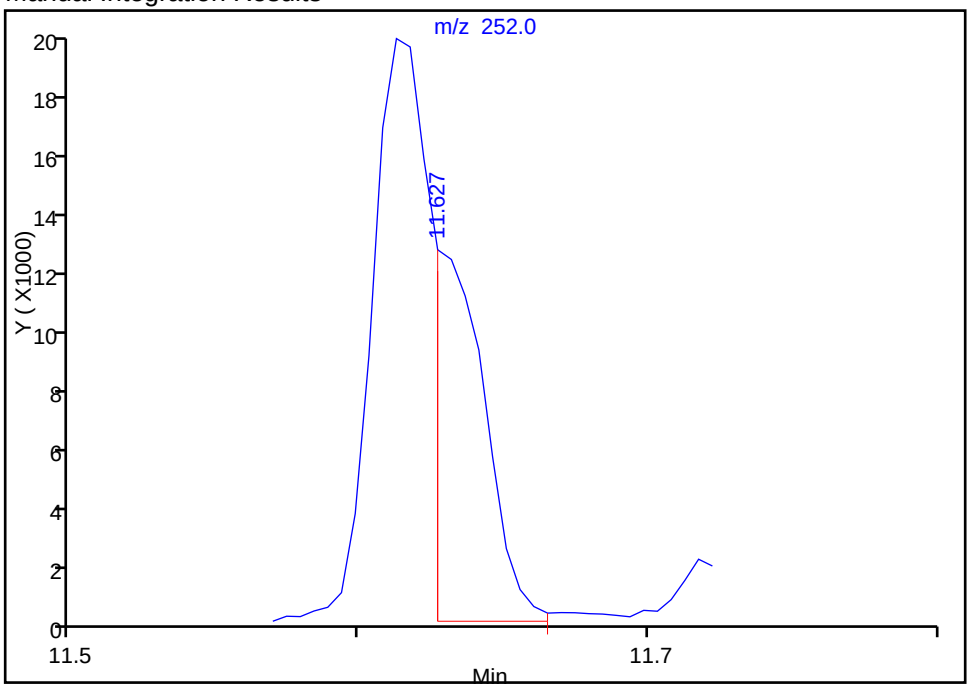
Not Detected
Expected RT: 11.66

Processing Integration Results



Manual Integration Results

RT: 11.63
Area: 15814
Amount: 1.269194
Amount Units: ug/mL



Reviewer: lesiakk, 07-May-2015 12:55:11
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-1 RA | Lab Sample ID: 500-95474-1 RA

Matrix: Solid | Lab File ID: 95474-1.d

Analysis Method: 8270D | Date Collected: 04/30/2015 14:20

Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01

Sample wt/vol: 15.4848(g) | Date Analyzed: 05/06/2015 12:16

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 24.0 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.042		0.042	
208-96-8	Acenaphthylene	<0.042		0.042	
120-12-7	Anthracene	<0.042		0.042	
56-55-3	Benzo[a]anthracene	0.049		0.042	
50-32-8	Benzo[a]pyrene	0.063	*	0.042	
205-99-2	Benzo[b]fluoranthene	0.11	*	0.042	
191-24-2	Benzo[g,h,i]perylene	<0.042	*	0.042	
207-08-9	Benzo[k]fluoranthene	0.054	*	0.042	
218-01-9	Chrysene	0.073		0.042	
53-70-3	Dibenz(a,h)anthracene	<0.042	*	0.042	
206-44-0	Fluoranthene	0.12		0.042	
86-73-7	Fluorene	<0.042		0.042	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.042	*	0.042	
90-12-0	1-Methylnaphthalene	<0.042		0.042	
91-57-6	2-Methylnaphthalene	<0.042		0.042	
91-20-3	Naphthalene	<0.042		0.042	
85-01-8	Phenanthrene	0.045		0.042	
129-00-0	Pyrene	0.16		0.042	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	67		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	58		25-115
1718-51-0	Terphenyl-d14 (Surr)	116		36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Sample Type:	Client				
Inject. Date:	06-May-2015 12:16:30	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-1-c				
Misc. Info.:	500-0030710-012				
Operator ID:	TW	Instrument ID:	CMS23		
Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	07-May-2015 15:37:53	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				

First Level Reviewer: lesiakk Date: 07-May-2015 15:37:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.369	4.369	0.000	95	34317	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	138327	8.00	
* 3 Acenaphthene-d10	164	6.647	6.650	-0.003	94	68810	8.00	
* 4 Phenanthrene-d10	188	7.862	7.865	-0.003	97	114741	8.00	
* 5 Chrysene-d12	240	10.084	10.090	-0.006	97	80862	8.00	
* 6 Perylene-d12	264	11.313	11.315	-0.002	94	33787	8.00	s
$ 9 Nitrobenzene-d5	82	4.779	4.782	-0.003	94	81922	14.5	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	100	180072	16.6	
$ 12 Terphenyl-d14	244	9.177	9.180	-0.003	98	215975	28.9	
149 Phenanthrene	178	7.883	7.888	-0.005	88	17288	1.06	
161 Fluoranthene	202	8.877	8.877	0.000	99	47290	2.85	
164 Pyrene	202	9.068	9.070	-0.002	95	45389	3.69	
173 Benzo[a]anthracene	228	10.079	10.079	0.000	69	12461	1.14	
174 Chrysene	228	10.107	10.115	-0.008	87	18030	1.72	
178 Benzo[b]fluoranthene	252	10.986	10.986	-0.003	53	12292	2.68	M
179 Benzo[k]fluoranthene	252	10.997	10.997	-0.015	53	6163	1.26	M
180 Benzo[a]pyrene	252	11.269	11.272	-0.003	29	6880	1.47	
182 Indeno[1,2,3-cd]pyrene	276	12.444	12.449	-0.005	67	3115	0.5823	
185 Benzo[g,h,i]perylene	276	12.783	12.780	0.003	71	3134	0.6976	

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test
Review Flags
M - Manually Integrated

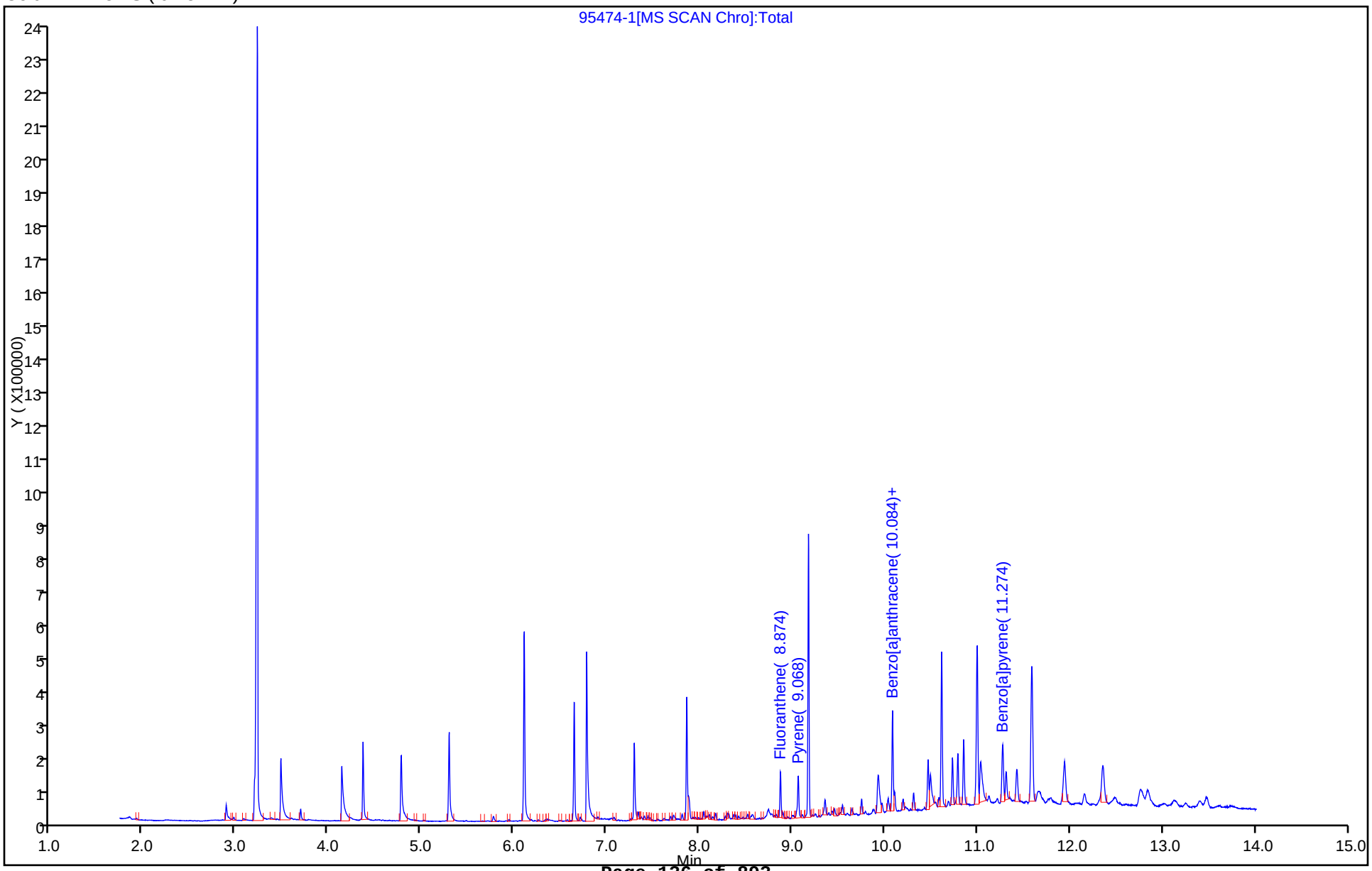
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1	Worklist Smp#:	12
Client ID:	DS-1				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					

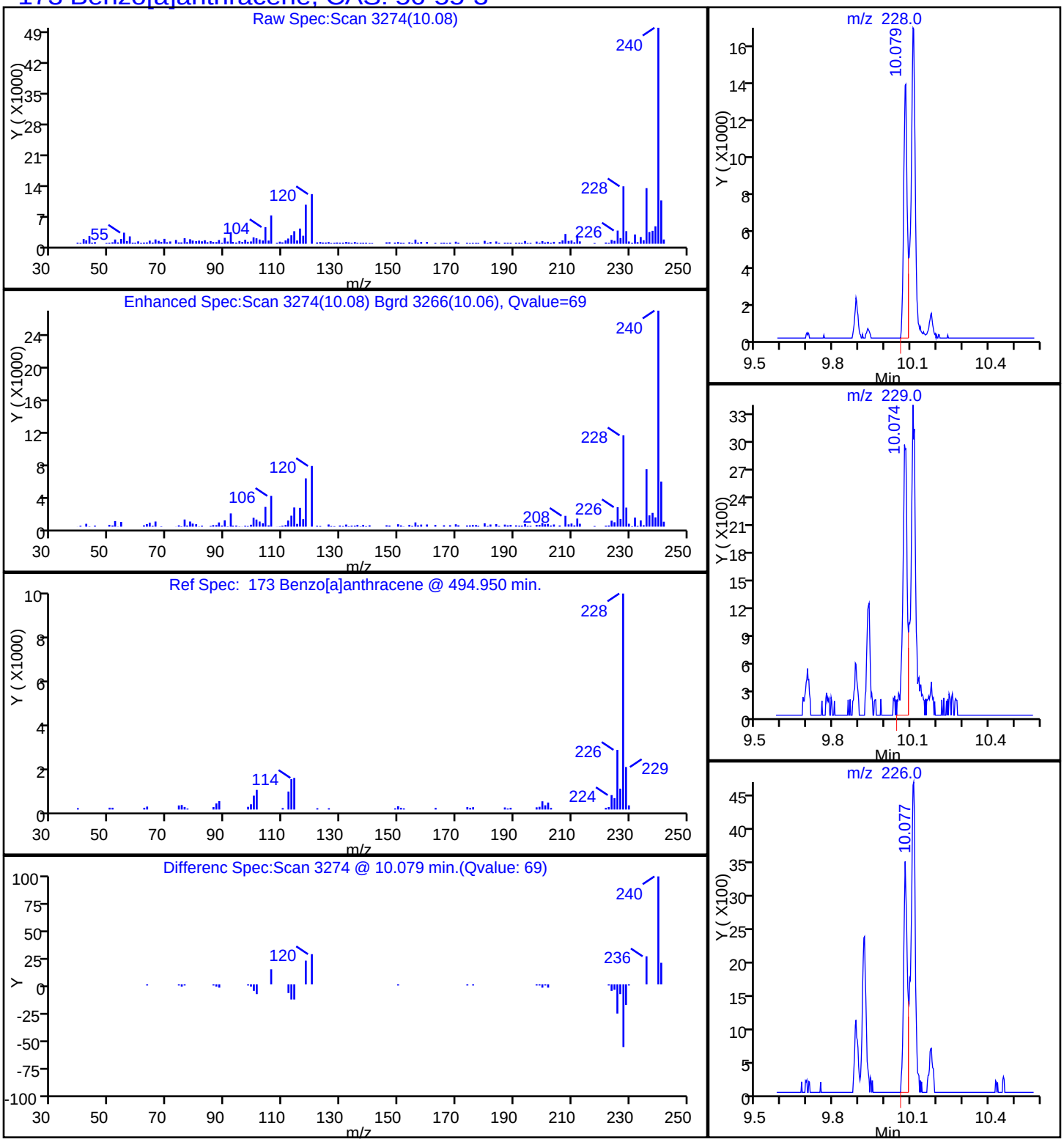


Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

173 Benzo[a]anthracene, CAS: 56-55-3

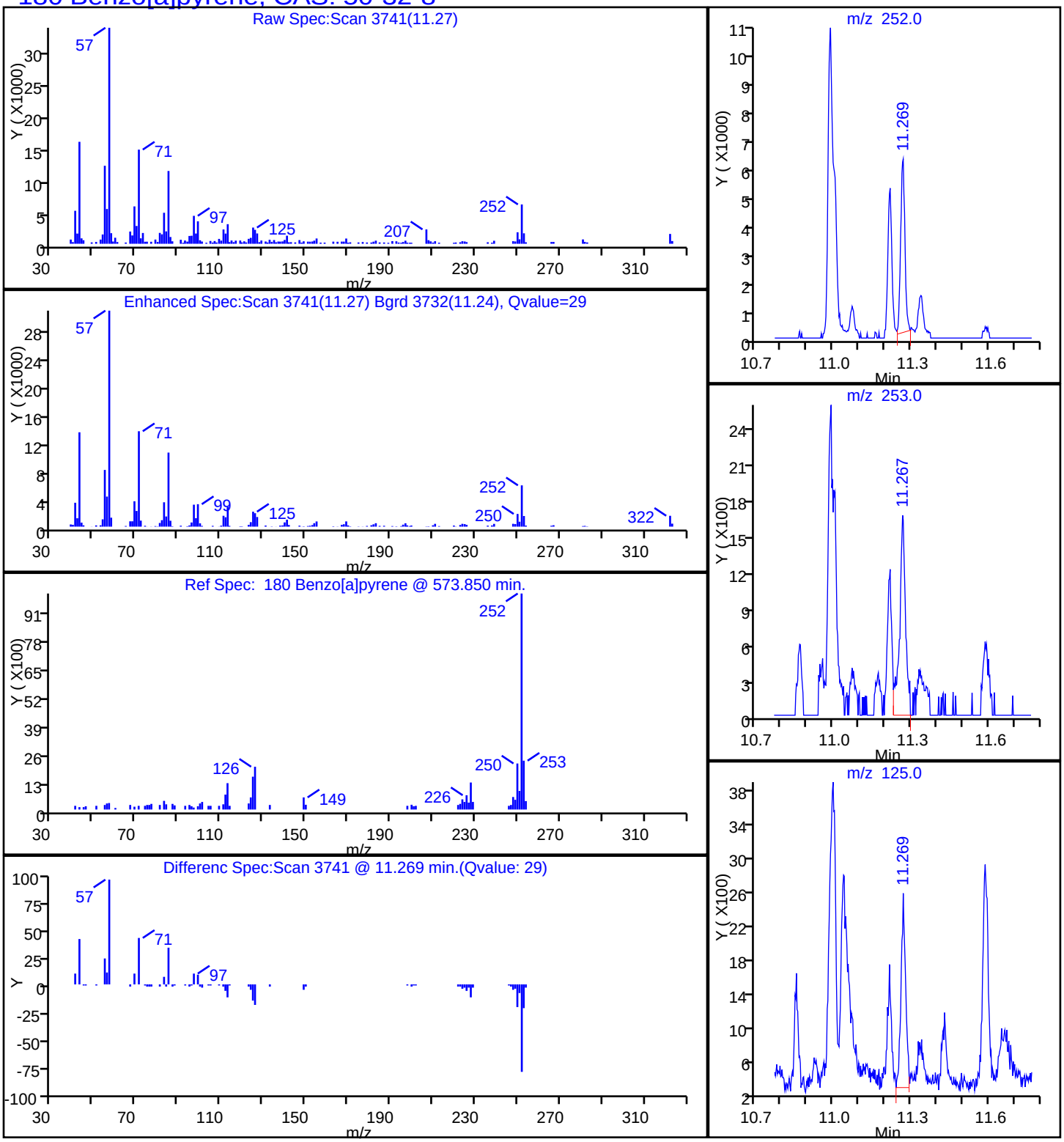


Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

180 Benzo[a]pyrene, CAS: 50-32-8

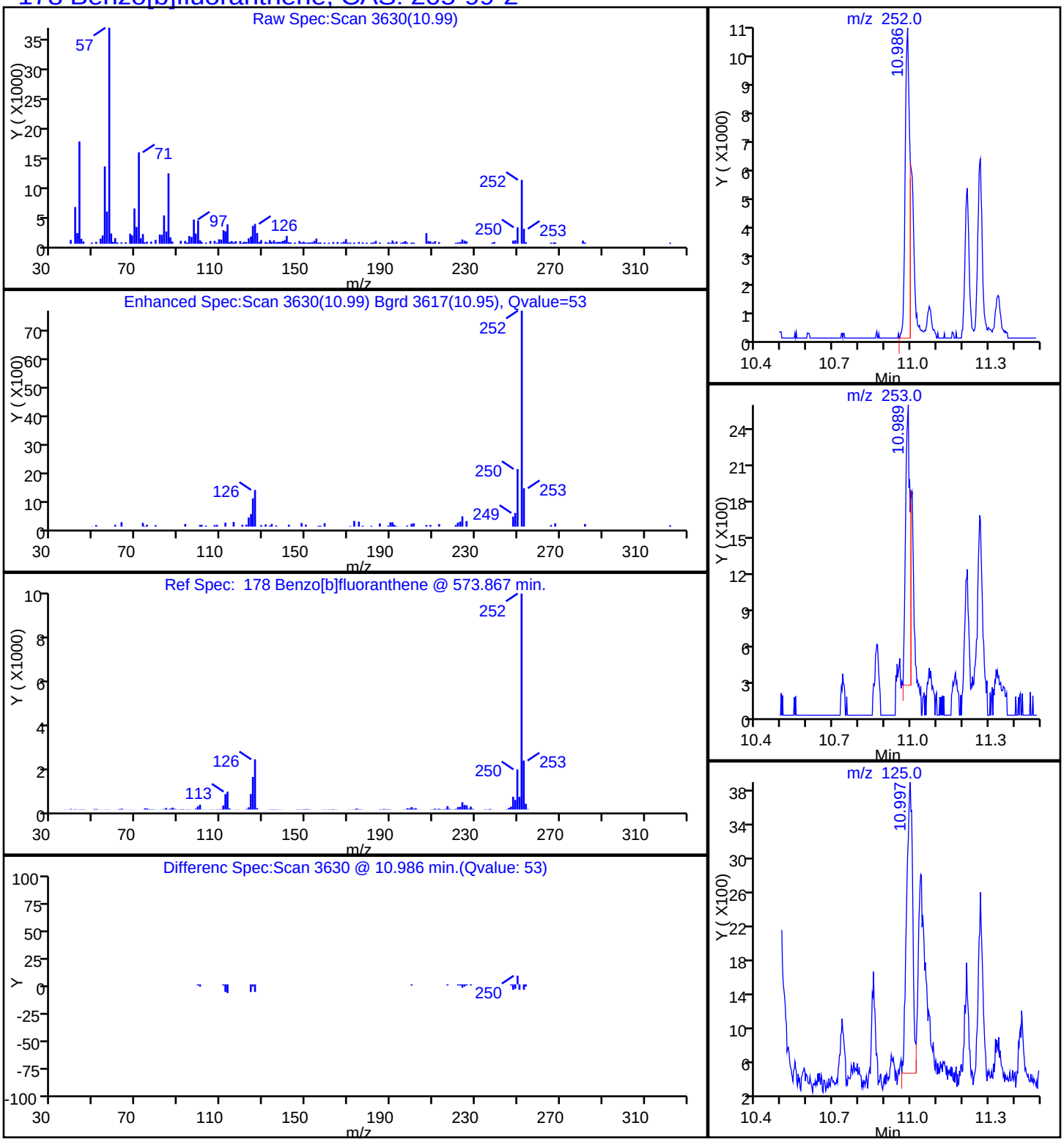


Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

178 Benzo[b]fluoranthene, CAS: 205-99-2

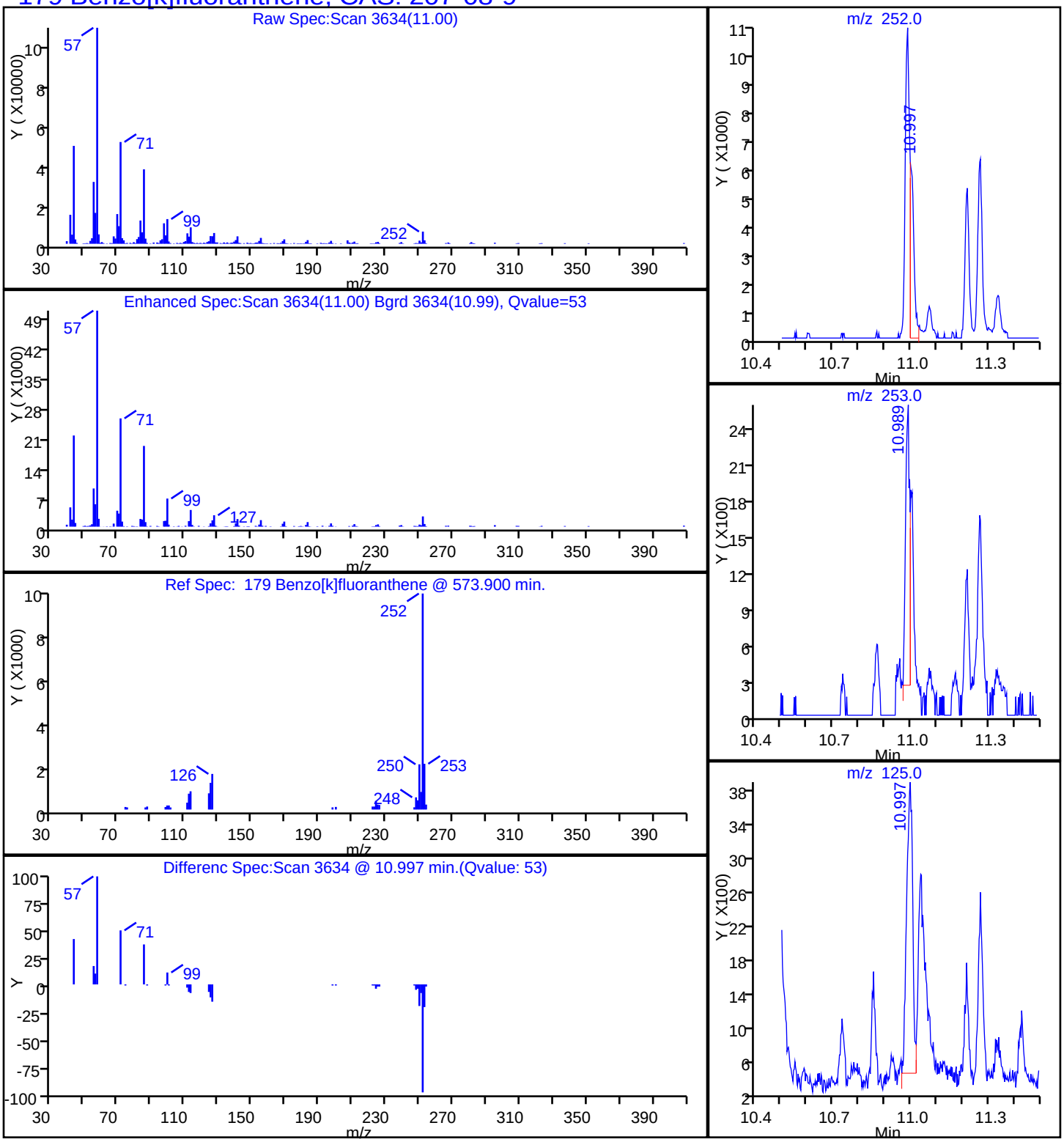


Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

179 Benzo[k]fluoranthene, CAS: 207-08-9

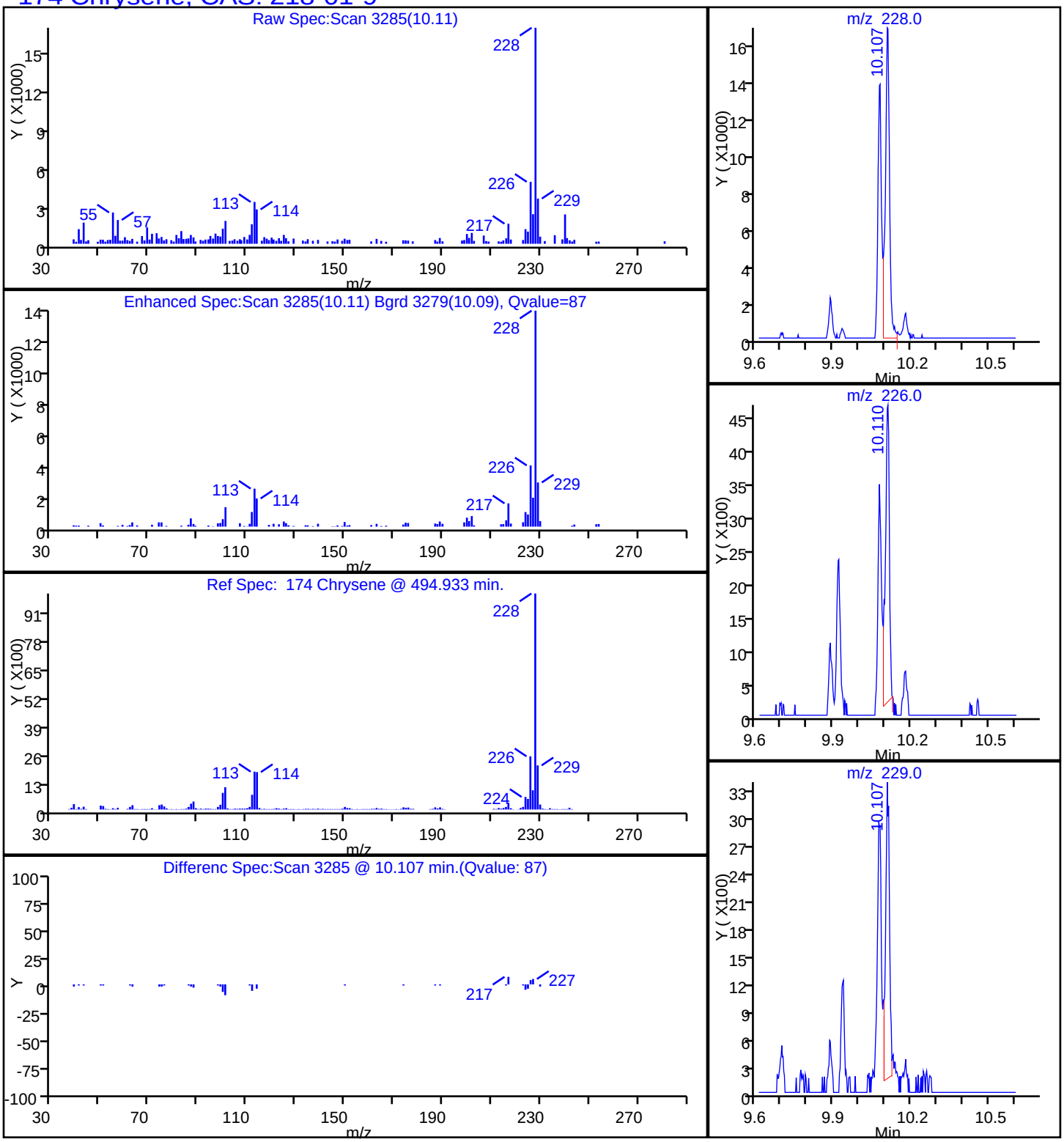


Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

174 Chrysene, CAS: 218-01-9

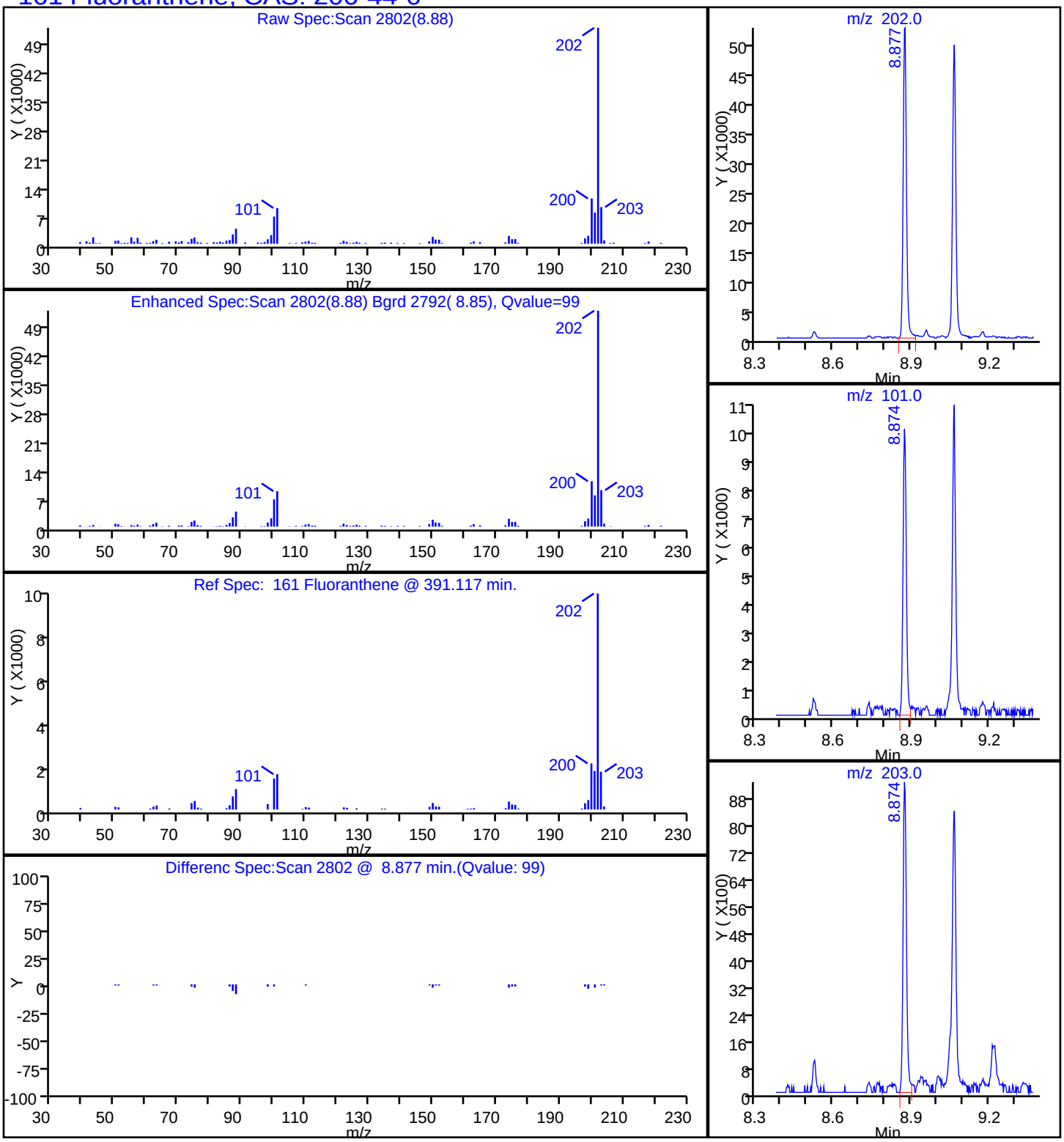


Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

161 Fluoranthene, CAS: 206-44-0

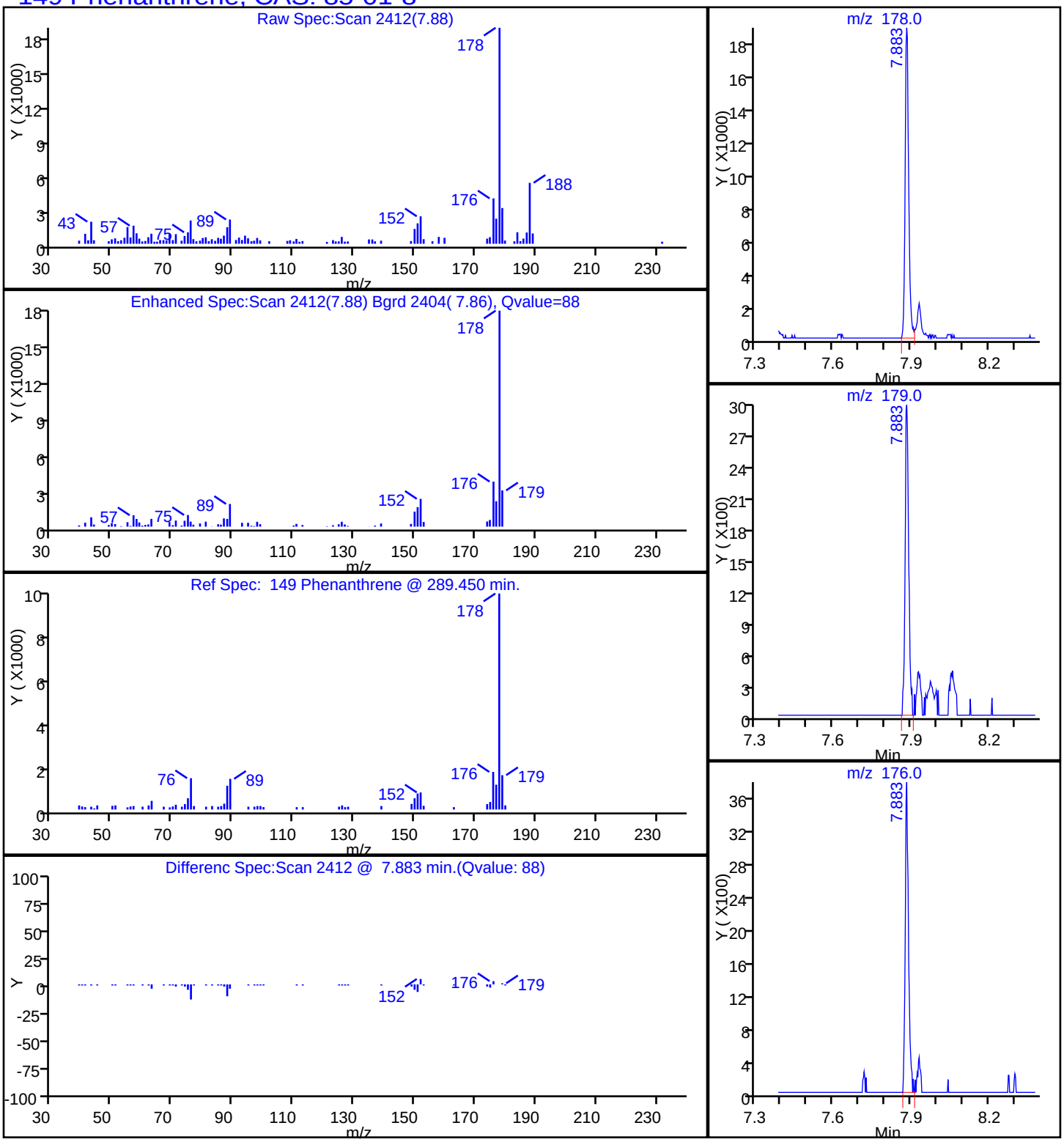


Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

149 Phenanthrene, CAS: 85-01-8

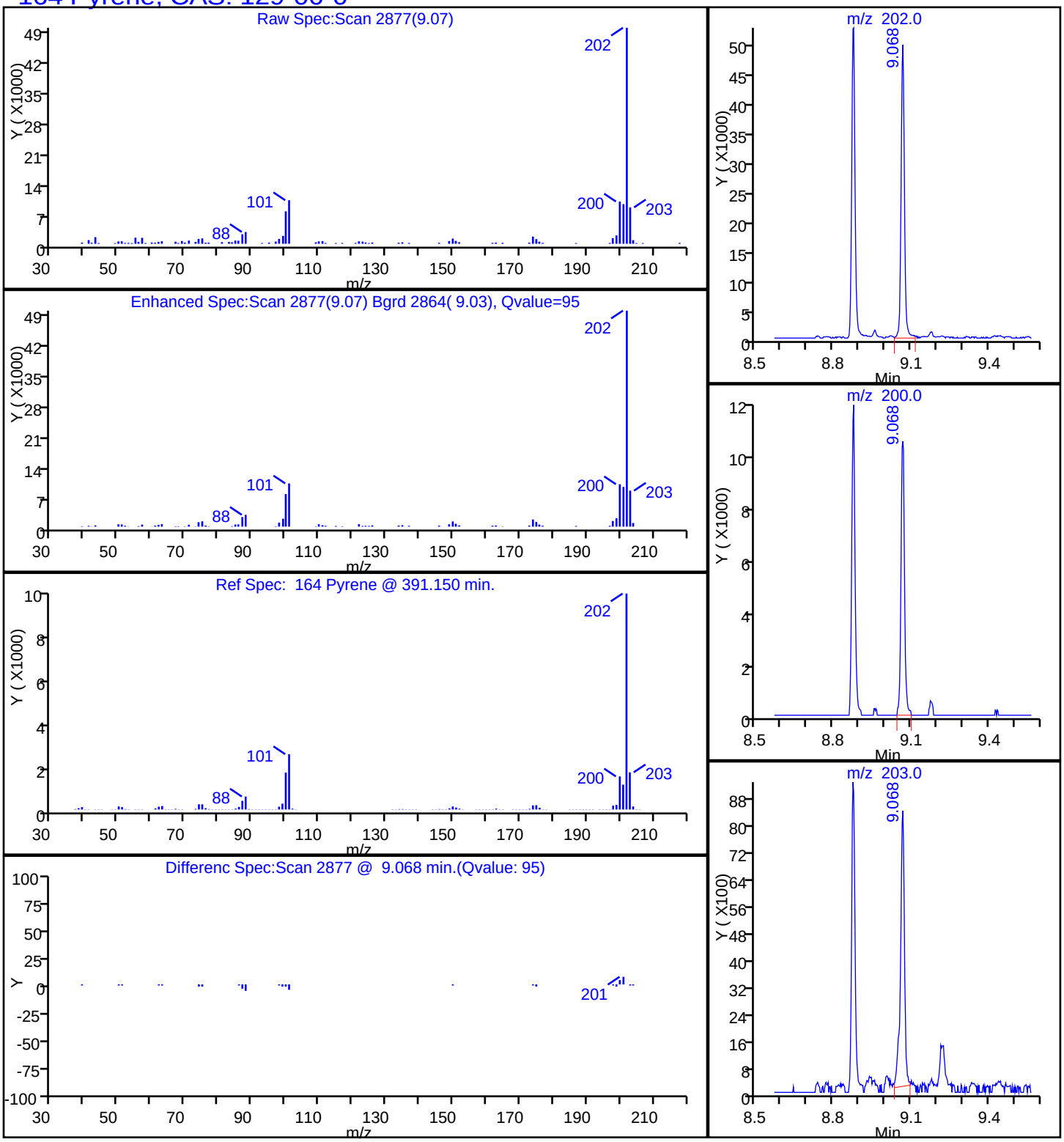


Report Date: 07-May-2015 15:37:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

164 Pyrene, CAS: 129-00-0



Manual Integration/User Assign Peak Report

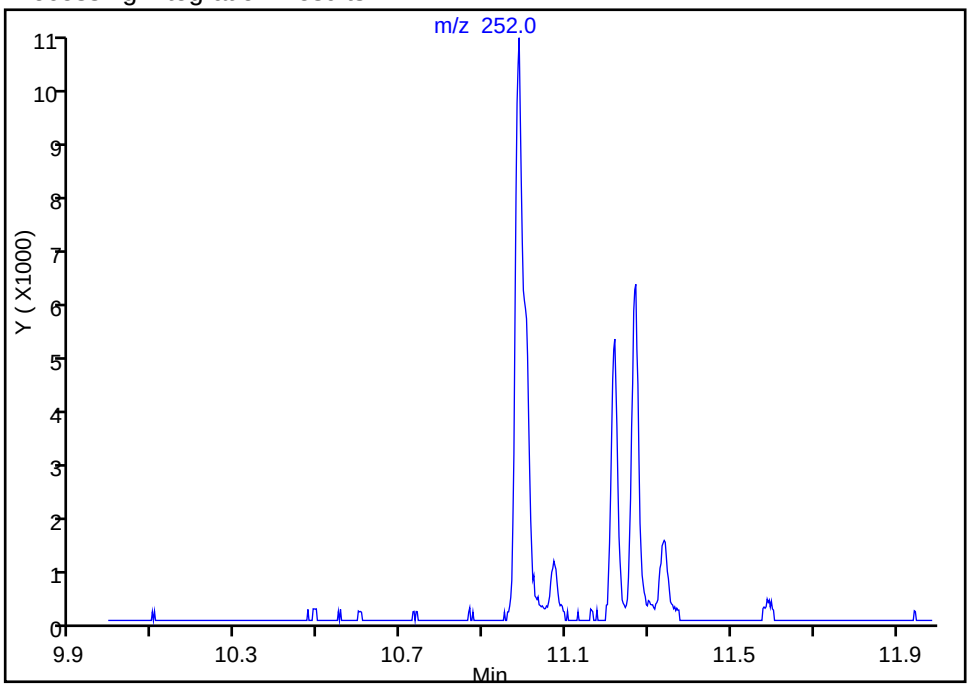
TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

178 Benzo[b]fluoranthene, CAS: 205-99-2

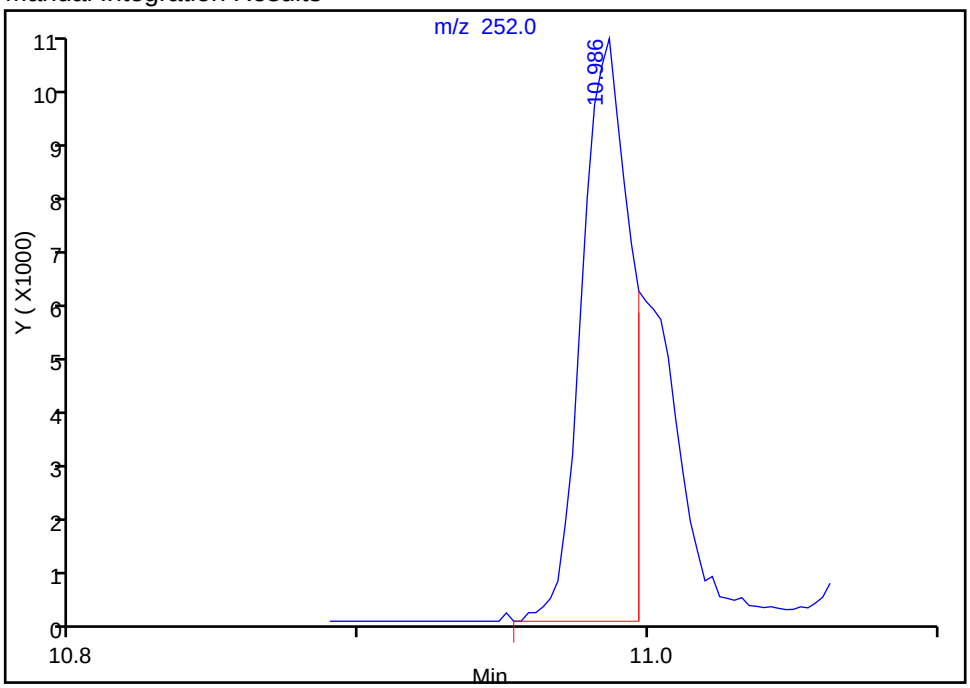
Not Detected
Expected RT: 10.99

Processing Integration Results



Manual Integration Results

RT: 10.99
Area: 12292
Amount: 2.680055
Amount Units: ug/ml



Reviewer: lesiakk, 07-May-2015 15:37:53
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

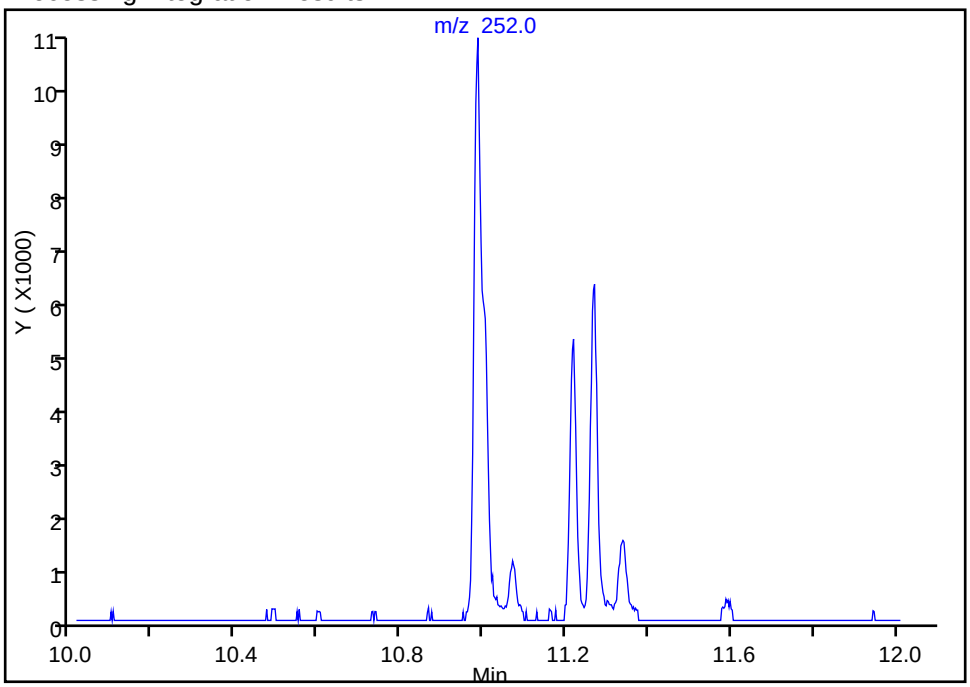
TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-1.d				
Injection Date:	06-May-2015 12:16:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-1-C	Lab Sample ID:	500-95474-1		
Client ID:	DS-1				
Operator ID:	TW	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

179 Benzo[k]fluoranthene, CAS: 207-08-9

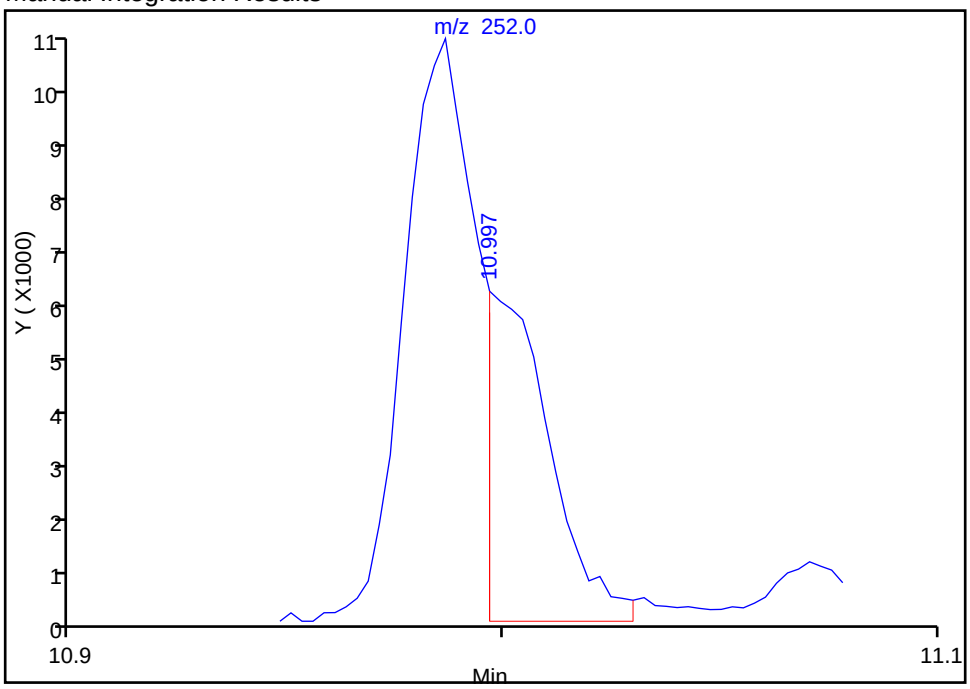
Not Detected
Expected RT: 11.01

Processing Integration Results



RT: 11.00
Area: 6163
Amount: 1.260287
Amount Units: ug/ml

Manual Integration Results



Reviewer: lesiakk, 07-May-2015 15:37:53
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-2 | Lab Sample ID: 500-95474-2
Matrix: Solid | Lab File ID: 95474-2.D
Analysis Method: 8270D | Date Collected: 04/30/2015 14:30
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.5790(g) | Date Analyzed: 05/05/2015 15:25
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 22.4 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286746 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.041		0.041	
208-96-8	Acenaphthylene	<0.041		0.041	
120-12-7	Anthracene	<0.041		0.041	
56-55-3	Benzo[a]anthracene	<0.041		0.041	
50-32-8	Benzo[a]pyrene	<0.041	*	0.041	
205-99-2	Benzo[b]fluoranthene	<0.041	*	0.041	
191-24-2	Benzo[g,h,i]perylene	<0.041	*	0.041	
207-08-9	Benzo[k]fluoranthene	<0.041	*	0.041	
218-01-9	Chrysene	<0.041		0.041	
53-70-3	Dibenz(a,h)anthracene	<0.041	*	0.041	
206-44-0	Fluoranthene	<0.041		0.041	
86-73-7	Fluorene	<0.041		0.041	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.041	*	0.041	
90-12-0	1-Methylnaphthalene	<0.041		0.041	
91-57-6	2-Methylnaphthalene	<0.041		0.041	
91-20-3	Naphthalene	<0.041		0.041	
85-01-8	Phenanthrene	<0.041		0.041	
129-00-0	Pyrene	<0.041		0.041	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	64		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	59		25-115
1718-51-0	Terphenyl-d14 (Surr)	92		36-134

Report Date: 07-May-2015 15:26:58 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-2.D				
Lims ID:	500-95474-A-2-C	Lab Sample ID:	500-95474-2		
Client ID:	DS-2				
Sample Type:	Client				
Inject. Date:	05-May-2015 15:25:30	ALS Bottle#:	10	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-a-2-c				
Misc. Info.:	500-0030679-012				
Operator ID:	AD	Instrument ID:	CMS21		

Method:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 12:58:07	Calib Date:	01-May-2015 11:27:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D		

Column 1 : Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: lesiakk Date: 07-May-2015 15:26:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.881	4.885	-0.004	94	41551	8.00	
* 2 Naphthalene-d8	136	5.827	5.832	-0.005	99	145871	8.00	
* 3 Acenaphthene-d10	164	7.217	7.222	-0.005	94	79906	8.00	
* 4 Phenanthrene-d10	188	8.439	8.449	-0.010	97	158243	8.00	
* 5 Chrysene-d12	240	10.652	10.666	-0.014	97	161991	8.00	
* 6 Perylene-d12	264	12.031	12.041	-0.010	97	82437	8.00	s
$ 9 Nitrobenzene-d5	82	5.280	5.290	-0.010	88	88075	14.6	
$ 10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	198417	16.0	
$ 12 Terphenyl-d14	244	9.748	9.753	-0.005	98	354598	23.0	
140 Fluoranthene	202	9.458	9.467	-0.009	91	4792	0.1946	
143 Pyrene	202	9.653	9.662	-0.009	81	4733	0.1919	7
167 Benzo[b]fluoranthene	252	11.613	11.632	-0.019	40	3288	0.2412	M

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
s - Failed ISTD Recovery Test
Review Flags
M - Manually Integrated

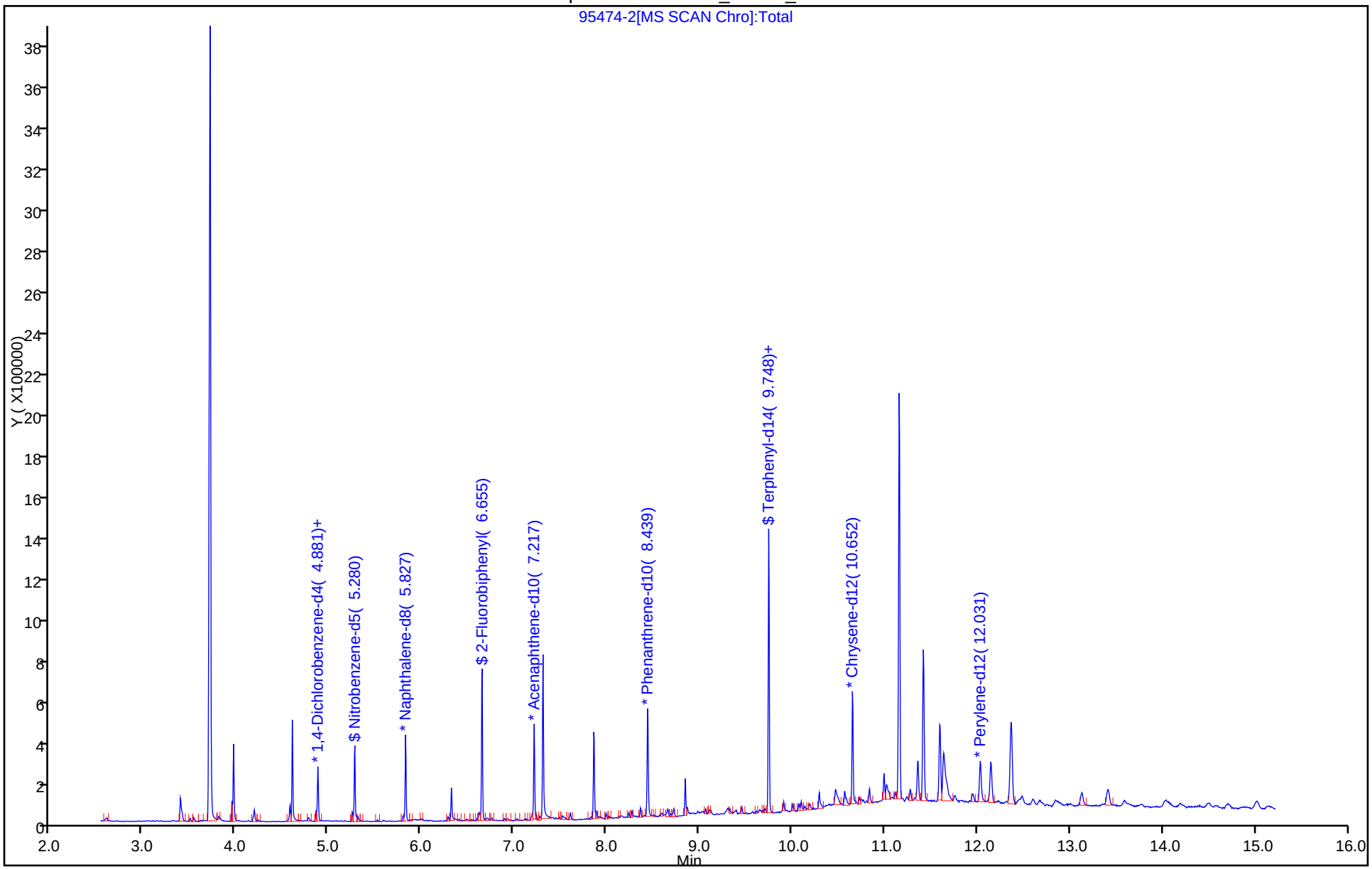
Reagents:

SMISTDWORK_00281 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:26:59 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-2.D				
Injection Date:	05-May-2015 15:25:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	500-95474-A-2-C	Lab Sample ID:	500-95474-2	Worklist Smp#:	12
Client ID:	DS-2				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



Manual Integration/User Assign Peak Report

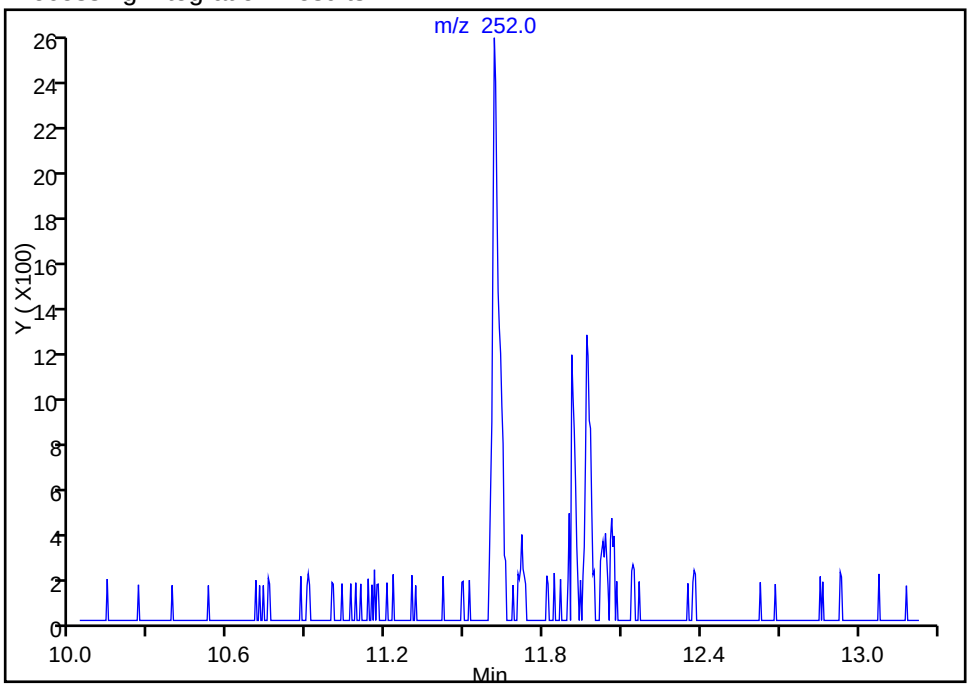
TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-2.D				
Injection Date:	05-May-2015 15:25:30	Instrument ID:	CMS21		
Lims ID:	500-95474-A-2-C	Lab Sample ID:	500-95474-2		
Client ID:	DS-2				
Operator ID:	AD	ALS Bottle#:	10	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

167 Benzo[b]fluoranthene, CAS: 205-99-2

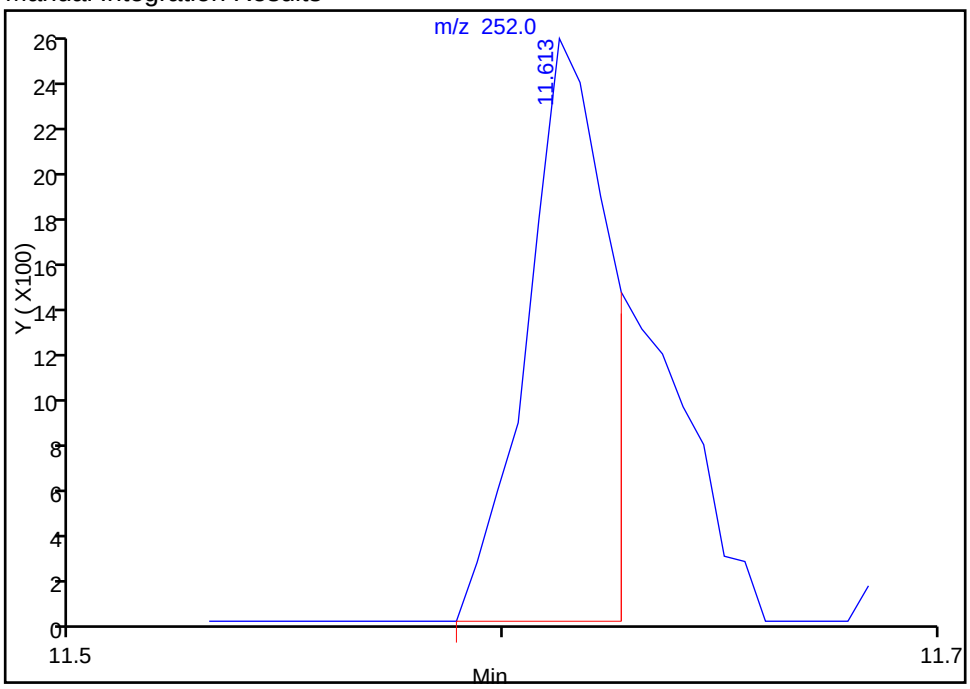
Not Detected
Expected RT: 11.63

Processing Integration Results



RT: 11.61
Area: 3288
Amount: 0.241164
Amount Units: ug/mL

Manual Integration Results



Reviewer: lesiakk, 07-May-2015 12:58:07
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-2 RA | Lab Sample ID: 500-95474-2 RA
Matrix: Solid | Lab File ID: 95474-2.d
Analysis Method: 8270D | Date Collected: 04/30/2015 14:30
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.5790(g) | Date Analyzed: 05/06/2015 12:36
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 22.4 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	*Acenaphthene*	*<0.041*		*0.041*	
208-96-8	*Acenaphthylene*	*<0.041*		*0.041*	
120-12-7	*Anthracene*	*<0.041*		*0.041*	
56-55-3	*Benzo[a]anthracene*	*<0.041*		*0.041*	
50-32-8	*Benzo[a]pyrene*	*<0.041*	*	*0.041*	
205-99-2	*Benzo[b]fluoranthene*	*<0.041*	*	*0.041*	
191-24-2	*Benzo[g,h,i]perylene*	*<0.041*	*	*0.041*	
207-08-9	*Benzo[k]fluoranthene*	*<0.041*	*	*0.041*	
218-01-9	*Chrysene*	*<0.041*		*0.041*	
53-70-3	*Dibenz(a,h)anthracene*	*<0.041*	*	*0.041*	
206-44-0	*Fluoranthene*	*<0.041*		*0.041*	
86-73-7	*Fluorene*	*<0.041*		*0.041*	
193-39-5	*Indeno[1,2,3-cd]pyrene*	*<0.041*	*	*0.041*	
90-12-0	*1-Methylnaphthalene*	*<0.041*		*0.041*	
91-57-6	*2-Methylnaphthalene*	*<0.041*		*0.041*	
91-20-3	*Naphthalene*	*<0.041*		*0.041*	
85-01-8	*Phenanthrene*	*<0.041*		*0.041*	
129-00-0	*Pyrene*	*<0.041*		*0.041*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	68		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	59		25-115
1718-51-0	Terphenyl-d14 (Surr)	124		36-134

Report Date: 07-May-2015 15:39:16 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-2.d				
Lims ID:	500-95474-A-2-C	Lab Sample ID:	500-95474-2		
Client ID:	DS-2				
Sample Type:	Client				
Inject. Date:	06-May-2015 12:36:30	ALS Bottle#:	10	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-a-2-c				
Misc. Info.:	500-0030710-013				
Operator ID:	TW	Instrument ID:	CMS23		
Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	07-May-2015 15:39:16	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				

First Level Reviewer: lesiakk Date: 07-May-2015 15:39:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.372	4.369	0.003	94	31369	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	125744	8.00	
* 3 Acenaphthene-d10	164	6.650	6.650	0.000	95	63110	8.00	
* 4 Phenanthrene-d10	188	7.863	7.865	-0.002	97	106676	8.00	
* 5 Chrysene-d12	240	10.090	10.090	0.000	97	73542	8.00	
* 6 Perylene-d12	264	11.318	11.315	0.003	95	26583	8.00	s
$ 9 Nitrobenzene-d5	82	4.782	4.782	0.000	92	75834	14.7	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	100	168162	17.0	
$ 12 Terphenyl-d14	244	9.177	9.180	-0.003	98	210196	30.9	
161 Fluoranthene	202	8.879	8.877	0.002	56	2972	0.1926	
164 Pyrene	202	9.070	9.070	0.000	61	2793	0.2499	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

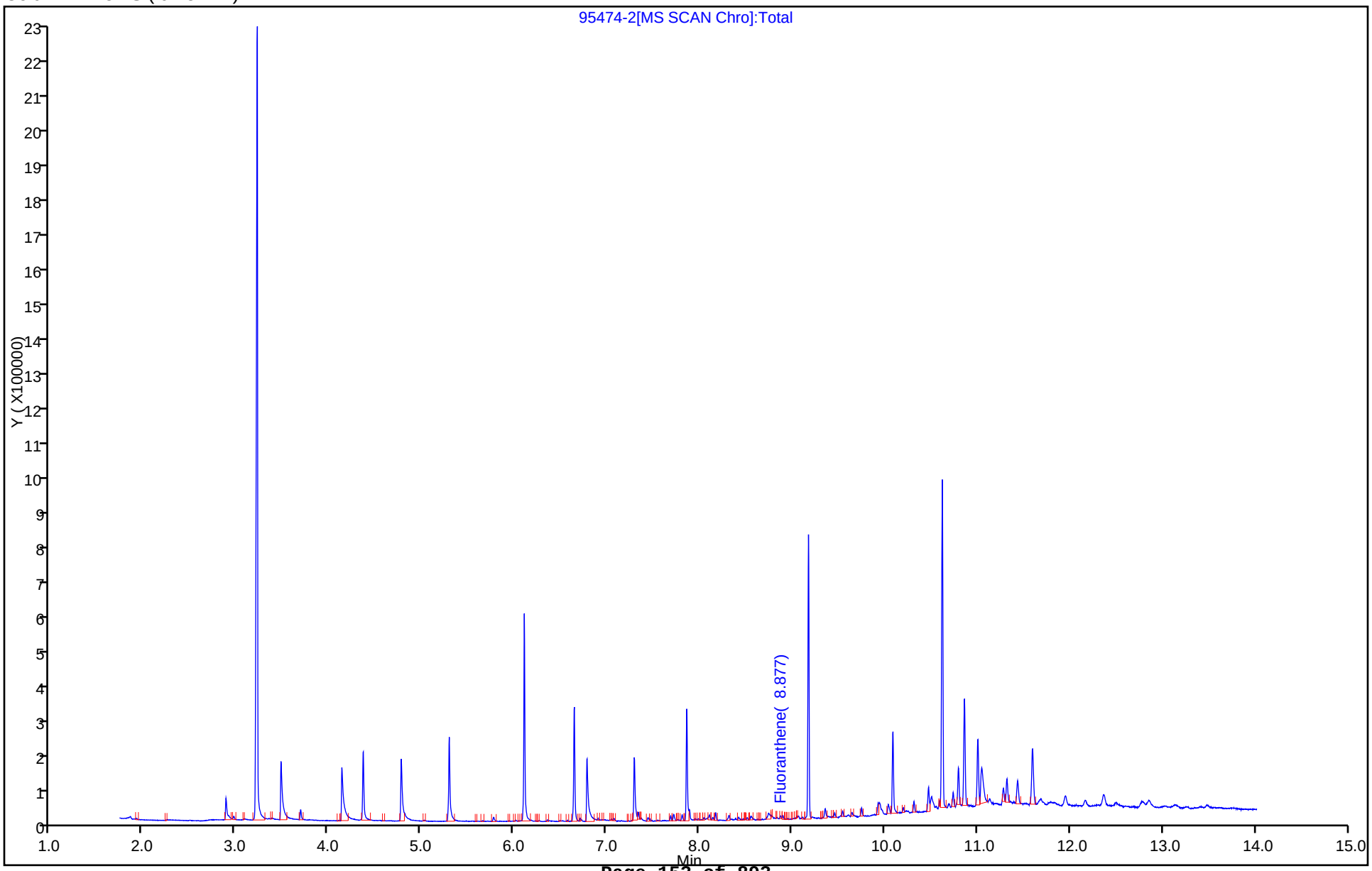
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:39:17 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-2.d				
Injection Date:	06-May-2015 12:36:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-A-2-C	Lab Sample ID:	500-95474-2	Worklist Smp#:	13
Client ID:	DS-2				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-3 | Lab Sample ID: 500-95474-3
Matrix: Solid | Lab File ID: 95474-3.D
Analysis Method: 8270D | Date Collected: 04/30/2015 14:35
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.2074(g) | Date Analyzed: 05/05/2015 15:49
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 24.5 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286746 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.043		0.043	
208-96-8	Acenaphthylene	<0.043		0.043	
120-12-7	Anthracene	<0.043		0.043	
56-55-3	Benzo[a]anthracene	<0.043	*	0.043	
50-32-8	Benzo[a]pyrene	<0.043	*	0.043	
205-99-2	Benzo[b]fluoranthene	<0.043	*	0.043	
191-24-2	Benzo[g,h,i]perylene	<0.043	*	0.043	
207-08-9	Benzo[k]fluoranthene	<0.043	*	0.043	
218-01-9	Chrysene	<0.043	*	0.043	
53-70-3	Dibenz(a,h)anthracene	<0.043	*	0.043	
206-44-0	Fluoranthene	<0.043		0.043	
86-73-7	Fluorene	<0.043		0.043	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.043	*	0.043	
90-12-0	1-Methylnaphthalene	<0.043		0.043	
91-57-6	2-Methylnaphthalene	<0.043		0.043	
91-20-3	Naphthalene	<0.043		0.043	
85-01-8	Phenanthrene	<0.043		0.043	
129-00-0	Pyrene	<0.043	*	0.043	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	59		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	49		25-115
1718-51-0	Terphenyl-d14 (Surr)	106	*	36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-3.D				
Lims ID:	500-95474-B-3-C	Lab Sample ID:	500-95474-3		
Client ID:	DS-3				
Sample Type:	Client				
Inject. Date:	05-May-2015 15:49:30	ALS Bottle#:	11	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-3-c				
Misc. Info.:	500-0030679-013				
Operator ID:	AD	Instrument ID:	CMS21		

Method:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	06-May-2015 09:21:04	Calib Date:	01-May-2015 11:27:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D		

Column 1 : Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: lesiakk Date: 06-May-2015 09:21:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.881	4.885	-0.004	94	38619	8.00	
* 2 Naphthalene-d8	136	5.827	5.832	-0.005	99	163349	8.00	
* 3 Acenaphthene-d10	164	7.217	7.222	-0.005	85	89254	8.00	
* 4 Phenanthrene-d10	188	8.444	8.449	-0.005	97	155176	8.00	
* 5 Chrysene-d12	240	10.657	10.666	-0.009	98	145588	8.00	s
* 6 Perylene-d12	264	12.032	12.041	-0.009	97	54633	8.00	s
$ 9 Nitrobenzene-d5	82	5.280	5.290	-0.010	89	82136	12.2	
$ 10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	203797	14.7	
$ 12 Terphenyl-d14	244	9.753	9.753	0.000	99	368874	26.6	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

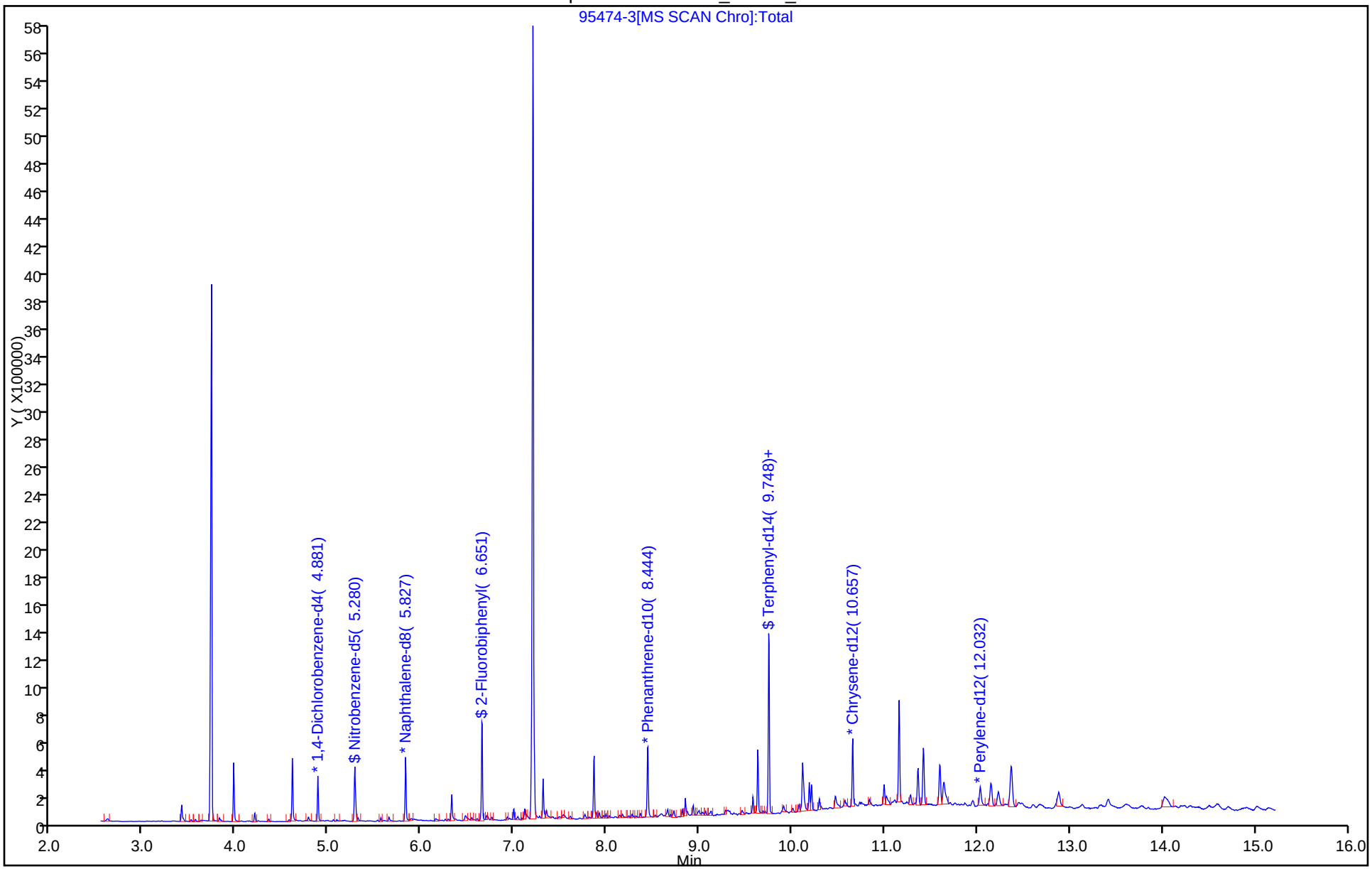
Reagents:

SMISTDWORK_00281 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 06-May-2015 09:21:04 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-3.D				
Injection Date:	05-May-2015 15:49:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	500-95474-B-3-C	Lab Sample ID:	500-95474-3	Worklist Smp#:	13
Client ID:	DS-3				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-3 RA | Lab Sample ID: 500-95474-3 RA
Matrix: Solid | Lab File ID: 95474-3.d
Analysis Method: 8270D | Date Collected: 04/30/2015 14:35
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.2074(g) | Date Analyzed: 05/06/2015 12:55
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 24.5 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.043		0.043	
208-96-8	Acenaphthylene	<0.043		0.043	
120-12-7	Anthracene	<0.043		0.043	
56-55-3	Benzo[a]anthracene	<0.043		0.043	
50-32-8	Benzo[a]pyrene	<0.043	*	0.043	
205-99-2	Benzo[b]fluoranthene	<0.043	*	0.043	
191-24-2	Benzo[g,h,i]perylene	<0.043	*	0.043	
207-08-9	Benzo[k]fluoranthene	<0.043	*	0.043	
218-01-9	Chrysene	<0.043		0.043	
53-70-3	Dibenz(a,h)anthracene	<0.043	*	0.043	
206-44-0	Fluoranthene	<0.043		0.043	
86-73-7	Fluorene	<0.043		0.043	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.043	*	0.043	
90-12-0	1-Methylnaphthalene	<0.043		0.043	
91-57-6	2-Methylnaphthalene	<0.043		0.043	
91-20-3	Naphthalene	<0.043		0.043	
85-01-8	Phenanthrene	<0.043		0.043	
129-00-0	Pyrene	<0.043		0.043	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	56		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	51		25-115
1718-51-0	Terphenyl-d14 (Surr)	126		36-134

Report Date: 07-May-2015 15:40:06 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-3.d				
Lims ID:	500-95474-B-3-C	Lab Sample ID:	500-95474-3		
Client ID:	DS-3				
Sample Type:	Client				
Inject. Date:	06-May-2015 12:55:30	ALS Bottle#:	11	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-3-c				
Misc. Info.:	500-0030710-014				
Operator ID:	TW	Instrument ID:	CMS23		

Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 15:40:06	Calib Date:	29-Apr-2015 14:16:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d		

Column 1 :	ZB5MS (0.25 mm)	Det: MS SCAN
Process Host:	XAWRK036	

First Level Reviewer: lesiakk Date: 07-May-2015 15:40:06

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.372	4.369	0.003	94	31870	8.00	
*	2 Naphthalene-d8	136	5.299	5.299	0.000	99	123620	8.00	
*	3 Acenaphthene-d10	164	6.650	6.650	0.000	50	68737	8.00	
*	4 Phenanthrene-d10	188	7.863	7.865	-0.002	97	107237	8.00	
*	5 Chrysene-d12	240	10.087	10.090	-0.003	97	71317	8.00	
*	6 Perylene-d12	264	11.313	11.315	-0.002	94	32851	8.00	s
$	9 Nitrobenzene-d5	82	4.782	4.782	0.000	92	64482	12.7	
$	10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	99	150021	13.9	
$	12 Terphenyl-d14	244	9.177	9.180	-0.003	97	207342	31.5	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

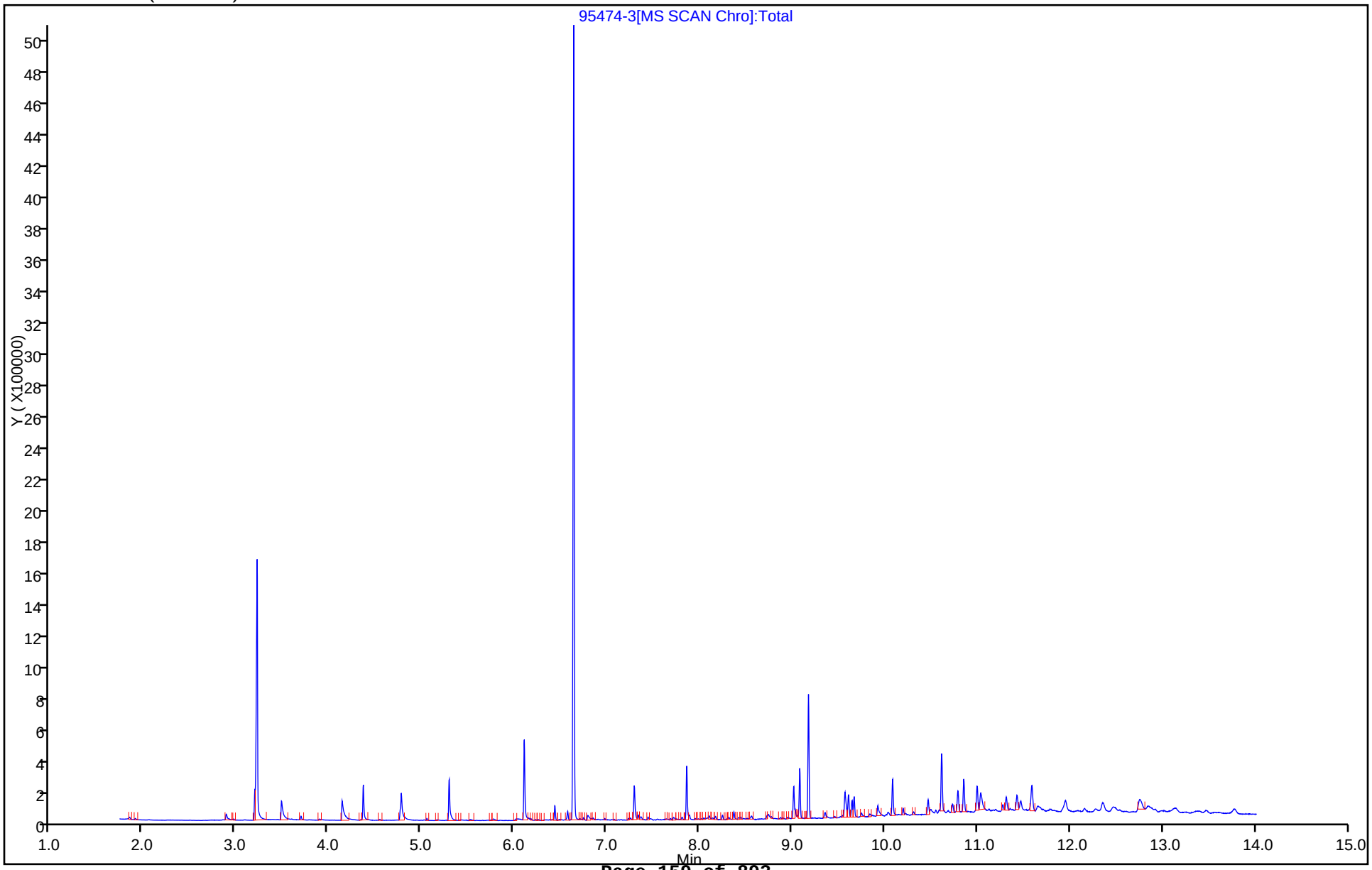
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:40:07 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-3.d				
Injection Date:	06-May-2015 12:55:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-3-C	Lab Sample ID:	500-95474-3	Worklist Smp#:	14
Client ID:	DS-3				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-4 | Lab Sample ID: 500-95474-4

Matrix: Solid | Lab File ID: 95474-4.D

Analysis Method: 8270D | Date Collected: 04/30/2015 14:45

Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01

Sample wt/vol: 15.2779(g) | Date Analyzed: 05/05/2015 16:14

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 18.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286746 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.040		0.040	
208-96-8	Acenaphthylene	<0.040		0.040	
120-12-7	Anthracene	<0.040		0.040	
56-55-3	Benzo[a]anthracene	<0.040	*	0.040	
50-32-8	Benzo[a]pyrene	<0.040	*	0.040	
205-99-2	Benzo[b]fluoranthene	<0.040	*	0.040	
191-24-2	Benzo[g,h,i]perylene	<0.040	*	0.040	
207-08-9	Benzo[k]fluoranthene	<0.040	*	0.040	
218-01-9	Chrysene	<0.040	*	0.040	
53-70-3	Dibenz(a,h)anthracene	<0.040	*	0.040	
206-44-0	Fluoranthene	<0.040		0.040	
86-73-7	Fluorene	<0.040		0.040	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.040	*	0.040	
90-12-0	1-Methylnaphthalene	<0.040		0.040	
91-57-6	2-Methylnaphthalene	<0.040		0.040	
91-20-3	Naphthalene	<0.040		0.040	
85-01-8	Phenanthrene	<0.040		0.040	
129-00-0	Pyrene	<0.040	*	0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	79		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	63		25-115
1718-51-0	Terphenyl-d14 (Surr)	120	*	36-134

Report Date: 07-May-2015 15:27:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-4.D				
Lims ID:	500-95474-B-4-B	Lab Sample ID:	500-95474-4		
Client ID:	DS-4				
Sample Type:	Client				
Inject. Date:	05-May-2015 16:14:30	ALS Bottle#:	12	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-4-b				
Misc. Info.:	500-0030679-014				
Operator ID:	AD	Instrument ID:	CMS21		

Method:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 12:58:07	Calib Date:	01-May-2015 11:27:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D		

Column 1 : Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: lesiakk Date: 07-May-2015 15:27:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.881	4.885	-0.004	94	41576	8.00	
* 2 Naphthalene-d8	136	5.827	5.832	-0.005	99	161946	8.00	
* 3 Acenaphthene-d10	164	7.217	7.222	-0.005	94	80437	8.00	
* 4 Phenanthrene-d10	188	8.444	8.449	-0.005	97	153327	8.00	
* 5 Chrysene-d12	240	10.657	10.666	-0.009	97	138209	8.00	s
* 6 Perylene-d12	264	12.032	12.041	-0.009	97	55651	8.00	s
$ 9 Nitrobenzene-d5	82	5.280	5.290	-0.010	87	105565	15.8	
$ 10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	247617	19.9	
$ 12 Terphenyl-d14	244	9.753	9.753	0.000	99	395521	30.1	
140 Fluoranthene	202	9.458	9.467	-0.009	94	6469	0.2712	
143 Pyrene	202	9.653	9.662	-0.009	83	4829	0.2295	
163 Chrysene	228	10.676	10.690	-0.014	53	3758	0.2135	
167 Benzo[b]fluoranthene	252	11.613	11.632	-0.019	40	2064	0.2243	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

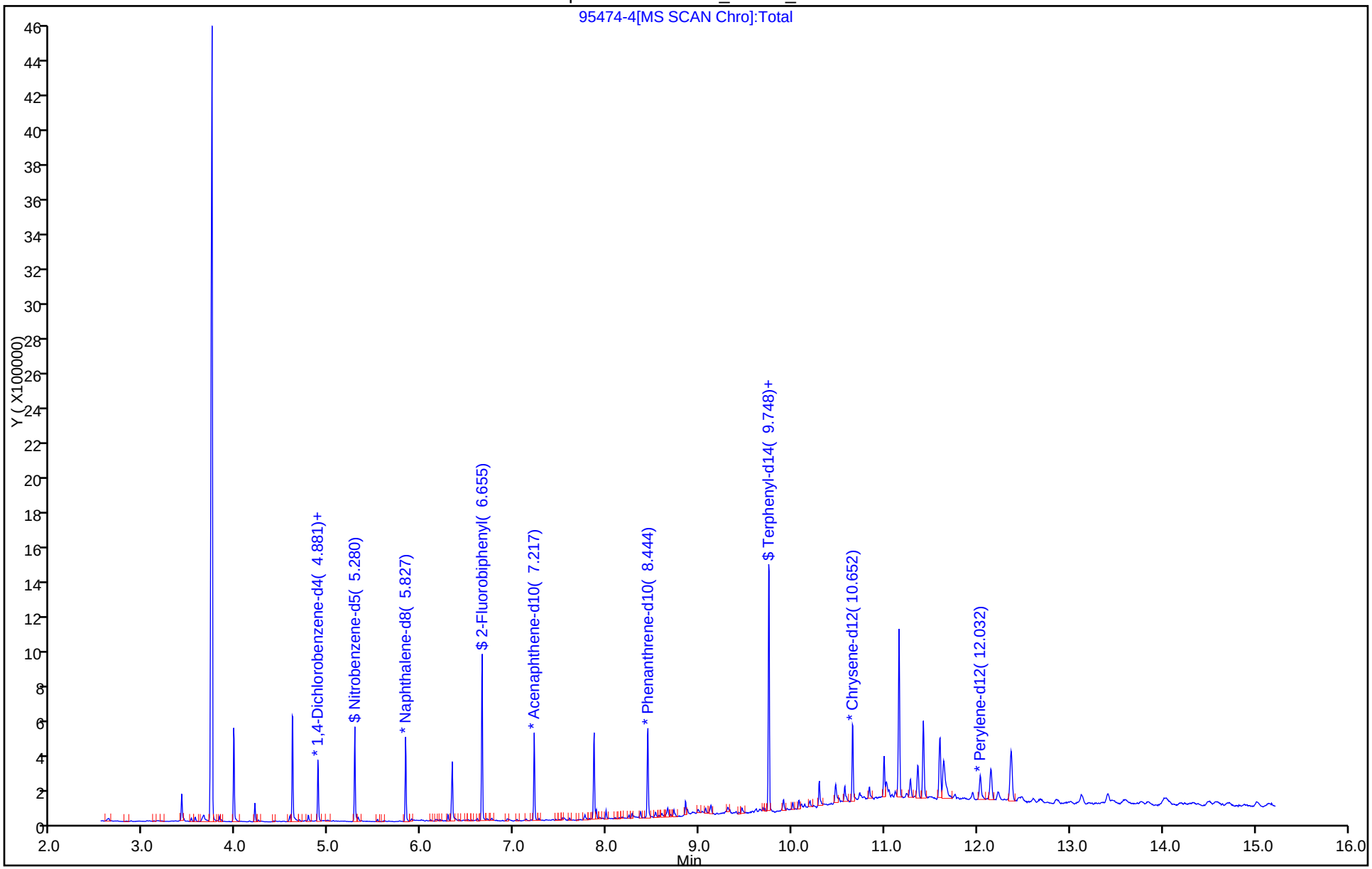
Reagents:

SMISTDWORK_00281 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:27:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-4.D				
Injection Date:	05-May-2015 16:14:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	500-95474-B-4-B	Lab Sample ID:	500-95474-4	Worklist Smp#:	14
Client ID:	DS-4				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-4 RA | Lab Sample ID: 500-95474-4 RA
Matrix: Solid | Lab File ID: 95474-4.d
Analysis Method: 8270D | Date Collected: 04/30/2015 14:45
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.2779(g) | Date Analyzed: 05/06/2015 13:15
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 18.6 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.040		0.040	
208-96-8	Acenaphthylene	<0.040		0.040	
120-12-7	Anthracene	<0.040		0.040	
56-55-3	Benzo[a]anthracene	<0.040		0.040	
50-32-8	Benzo[a]pyrene	<0.040	*	0.040	
205-99-2	Benzo[b]fluoranthene	<0.040	*	0.040	
191-24-2	Benzo[g,h,i]perylene	<0.040	*	0.040	
207-08-9	Benzo[k]fluoranthene	<0.040	*	0.040	
218-01-9	Chrysene	<0.040		0.040	
53-70-3	Dibenz(a,h)anthracene	<0.040	*	0.040	
206-44-0	Fluoranthene	<0.040		0.040	
86-73-7	Fluorene	<0.040		0.040	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.040	*	0.040	
90-12-0	1-Methylnaphthalene	<0.040		0.040	
91-57-6	2-Methylnaphthalene	<0.040		0.040	
91-20-3	Naphthalene	<0.040		0.040	
85-01-8	Phenanthrene	<0.040		0.040	
129-00-0	Pyrene	<0.040		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	78		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	64		25-115
1718-51-0	Terphenyl-d14 (Surr)	140	X	36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-4.d				
Lims ID:	500-95474-B-4-B	Lab Sample ID:	500-95474-4		
Client ID:	DS-4				
Sample Type:	Client				
Inject. Date:	06-May-2015 13:15:30	ALS Bottle#:	12	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-4-b				
Misc. Info.:	500-0030710-015				
Operator ID:	TW	Instrument ID:	CMS23		
Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	07-May-2015 15:41:37	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				
First Level Reviewer: lesiakk		Date:	07-May-2015 15:41:37		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.369	4.369	0.000	95	32101	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	132157	8.00	
* 3 Acenaphthene-d10	164	6.649	6.650	-0.001	95	64613	8.00	
* 4 Phenanthrene-d10	188	7.862	7.865	-0.003	97	109612	8.00	
* 5 Chrysene-d12	240	10.087	10.090	-0.003	97	71725	8.00	
* 6 Perylene-d12	264	11.318	11.315	0.003	95	39094	8.00	s
$ 9 Nitrobenzene-d5	82	4.779	4.782	-0.003	93	86290	15.9	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	100	197039	19.4	
$ 12 Terphenyl-d14	244	9.177	9.180	-0.003	98	232649	35.1	
161 Fluoranthene	202	8.877	8.877	0.000	74	4070	0.2567	
164 Pyrene	202	9.070	9.070	0.000	74	3311	0.3037	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

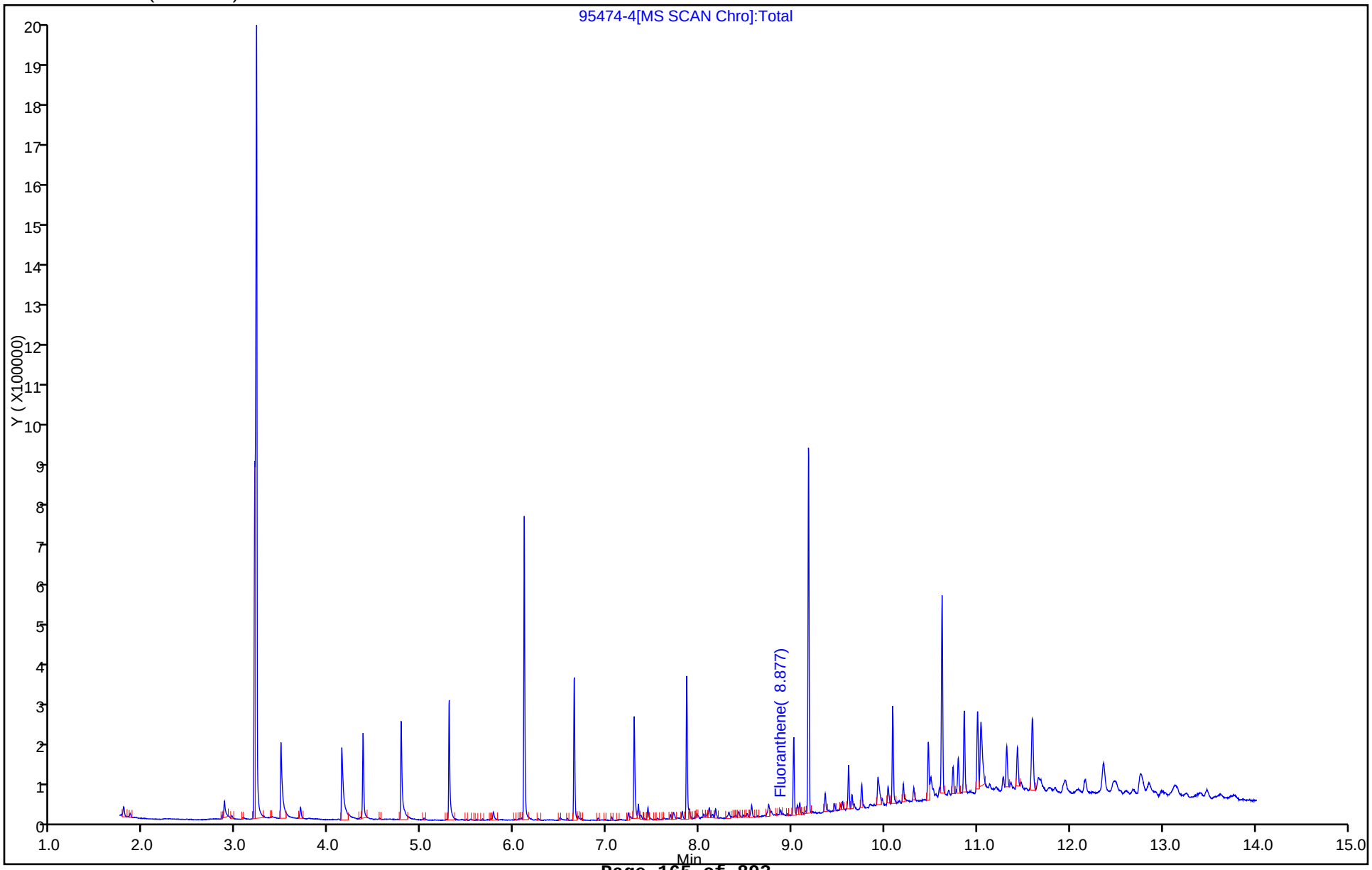
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:41:38 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-4.d				
Injection Date:	06-May-2015 13:15:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-4-B	Lab Sample ID:	500-95474-4	Worklist Smp#:	15
Client ID:	DS-4				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-5 | Lab Sample ID: 500-95474-5
Matrix: Solid | Lab File ID: 95474-5.d
Analysis Method: 8270D | Date Collected: 04/30/2015 15:05
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.8345(g) | Date Analyzed: 05/06/2015 13:34
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 20.8 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.039		0.039	
208-96-8	Acenaphthylene	<0.039		0.039	
120-12-7	Anthracene	<0.039		0.039	
56-55-3	Benzo[a]anthracene	<0.039		0.039	
50-32-8	Benzo[a]pyrene	<0.039		0.039	
205-99-2	Benzo[b]fluoranthene	<0.039		0.039	
191-24-2	Benzo[g,h,i]perylene	<0.039		0.039	
207-08-9	Benzo[k]fluoranthene	<0.039		0.039	
218-01-9	Chrysene	<0.039		0.039	
53-70-3	Dibenz(a,h)anthracene	<0.039		0.039	
206-44-0	Fluoranthene	<0.039		0.039	
86-73-7	Fluorene	<0.039		0.039	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.039		0.039	
90-12-0	1-Methylnaphthalene	<0.039		0.039	
91-57-6	2-Methylnaphthalene	<0.039		0.039	
91-20-3	Naphthalene	<0.039		0.039	
85-01-8	Phenanthrene	<0.039		0.039	
129-00-0	Pyrene	<0.039		0.039	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	36		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	33		25-115
1718-51-0	Terphenyl-d14 (Surr)	57		36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-5.d				
Lims ID:	500-95474-B-5-C	Lab Sample ID:	500-95474-5		
Client ID:	DS-5				
Sample Type:	Client				
Inject. Date:	06-May-2015 13:34:30	ALS Bottle#:	13	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-5-c				
Misc. Info.:	500-0030710-016				
Operator ID:	TW	Instrument ID:	CMS23		
Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	07-May-2015 15:42:55	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				

First Level Reviewer: lesiakk Date: 07-May-2015 15:42:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.369	4.369	0.000	95	60522	8.00	
* 2 Naphthalene-d8	136	5.297	5.299	-0.002	99	249393	8.00	
* 3 Acenaphthene-d10	164	6.647	6.650	-0.003	94	130784	8.00	
* 4 Phenanthrene-d10	188	7.863	7.865	-0.002	97	221091	8.00	
* 5 Chrysene-d12	240	10.087	10.090	-0.003	96	167865	8.00	
* 6 Perylene-d12	264	11.310	11.315	-0.005	95	96872	8.00	
$ 9 Nitrobenzene-d5	82	4.779	4.782	-0.003	94	83918	8.21	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	100	183767	8.94	
$ 12 Terphenyl-d14	244	9.177	9.180	-0.003	98	220852	14.2	

Reagents:

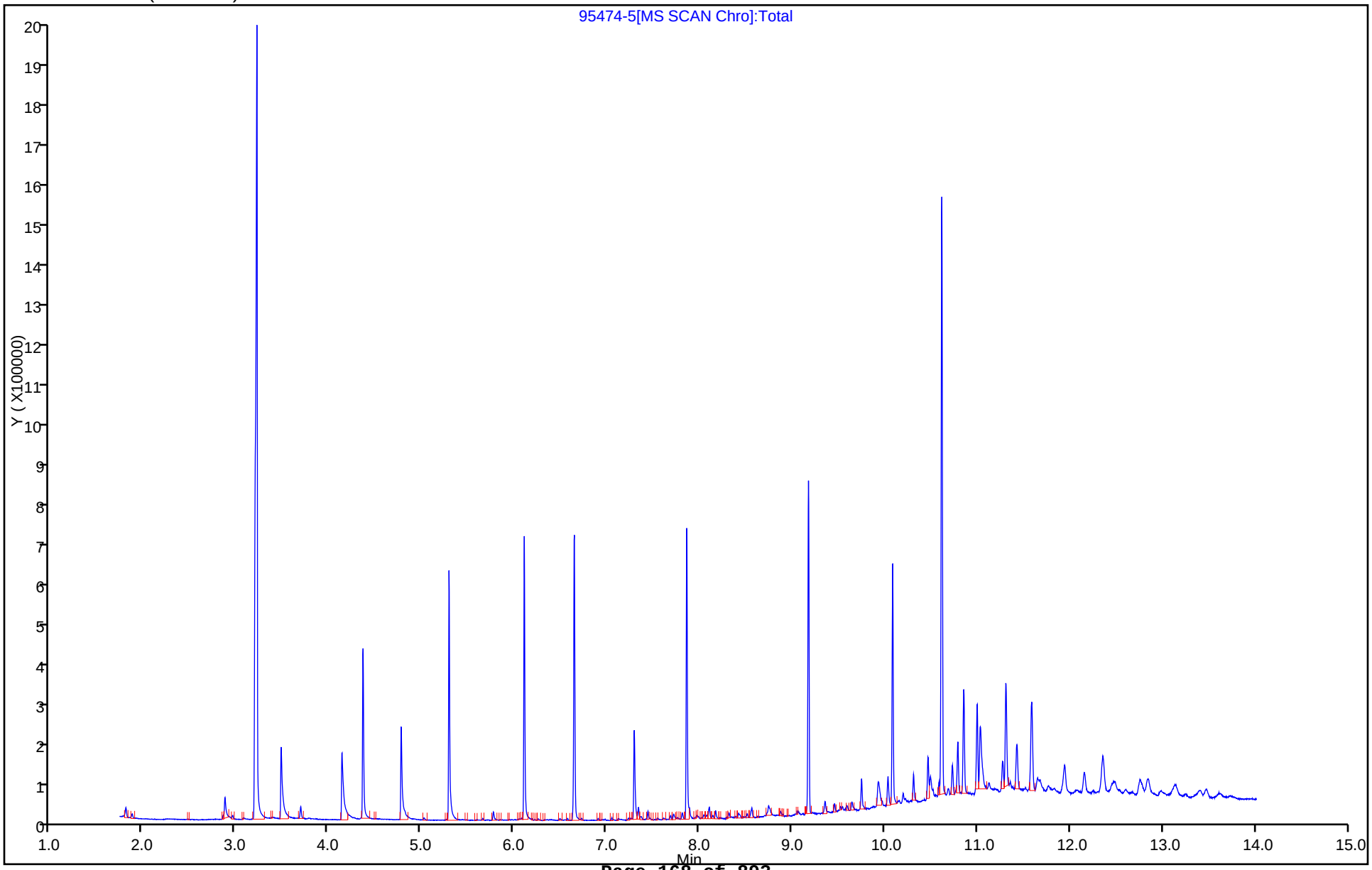
SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:42:55 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-5.d				
Injection Date:	06-May-2015 13:34:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-5-C	Lab Sample ID:	500-95474-5	Worklist Smp#:	16
Client ID:	DS-5				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-6 | Lab Sample ID: 500-95474-6
Matrix: Solid | Lab File ID: 95474-6.D
Analysis Method: 8270D | Date Collected: 04/30/2015 15:15
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.6065(g) | Date Analyzed: 05/05/2015 17:03
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 21.2 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286746 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.040		0.040	
208-96-8	Acenaphthylene	<0.040		0.040	
120-12-7	Anthracene	<0.040		0.040	
56-55-3	Benzo[a]anthracene	<0.040		0.040	
50-32-8	Benzo[a]pyrene	<0.040	*	0.040	
205-99-2	Benzo[b]fluoranthene	<0.040	*	0.040	
191-24-2	Benzo[g,h,i]perylene	<0.040	*	0.040	
207-08-9	Benzo[k]fluoranthene	<0.040	*	0.040	
218-01-9	Chrysene	<0.040		0.040	
53-70-3	Dibenz(a,h)anthracene	<0.040	*	0.040	
206-44-0	Fluoranthene	<0.040		0.040	
86-73-7	Fluorene	<0.040		0.040	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.040	*	0.040	
90-12-0	1-Methylnaphthalene	<0.040		0.040	
91-57-6	2-Methylnaphthalene	<0.040		0.040	
91-20-3	Naphthalene	<0.040		0.040	
85-01-8	Phenanthrene	<0.040		0.040	
129-00-0	Pyrene	<0.040		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	72		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	59		25-115
1718-51-0	Terphenyl-d14 (Surr)	105		36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-6.D				
Lims ID:	500-95474-B-6-B	Lab Sample ID:	500-95474-6		
Client ID:	DS-6				
Sample Type:	Client				
Inject. Date:	05-May-2015 17:03:30	ALS Bottle#:	14	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-6-b				
Misc. Info.:	500-0030679-016				
Operator ID:	AD	Instrument ID:	CMS21		

Method:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 15:28:21	Calib Date:	01-May-2015 11:27:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D		

Column 1 : Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: lesiakk Date: 07-May-2015 15:28:43

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/mL	Flags
*	1 1,4-Dichlorobenzene-d4	152	4.881	4.885	-0.004	94	40630	8.00	
*	2 Naphthalene-d8	136	5.827	5.832	-0.005	99	165205	8.00	
*	3 Acenaphthene-d10	164	7.217	7.222	-0.005	94	87073	8.00	
*	4 Phenanthrene-d10	188	8.444	8.449	-0.005	97	165311	8.00	
*	5 Chrysene-d12	240	10.657	10.666	-0.010	98	156063	8.00	
*	6 Perylene-d12	264	12.036	12.041	-0.005	98	61565	8.00	s
$	9 Nitrobenzene-d5	82	5.280	5.290	-0.010	87	99650	14.6	
$	10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	242950	18.0	
$	12 Terphenyl-d14	244	9.753	9.753	0.000	99	390063	26.3	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

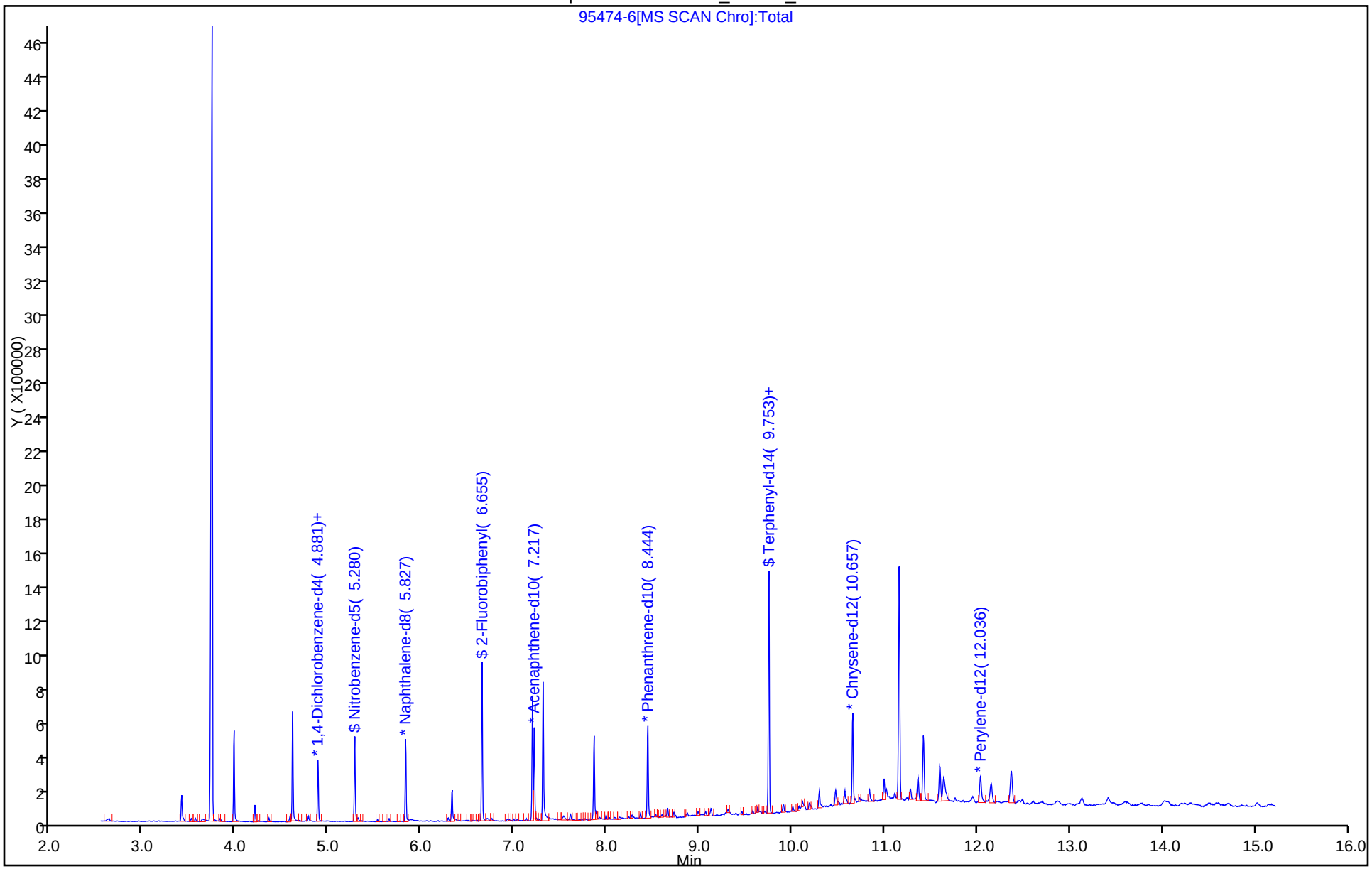
Reagents:

SMISTDWORK_00281 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:28:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-6.D				
Injection Date:	05-May-2015 17:03:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	500-95474-B-6-B	Lab Sample ID:	500-95474-6	Worklist Smp#:	16
Client ID:	DS-6				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-6 RA | Lab Sample ID: 500-95474-6 RA

Matrix: Solid | Lab File ID: 95474-6.d

Analysis Method: 8270D | Date Collected: 04/30/2015 15:15

Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01

Sample wt/vol: 15.6065(g) | Date Analyzed: 05/06/2015 13:54

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 21.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	*Acenaphthene*	*<0.040*		*0.040*	
208-96-8	*Acenaphthylene*	*<0.040*		*0.040*	
120-12-7	*Anthracene*	*<0.040*		*0.040*	
56-55-3	*Benzo[a]anthracene*	*<0.040*		*0.040*	
50-32-8	*Benzo[a]pyrene*	*<0.040*	*	*0.040*	
205-99-2	*Benzo[b]fluoranthene*	*<0.040*	*	*0.040*	
191-24-2	*Benzo[g,h,i]perylene*	*<0.040*	*	*0.040*	
207-08-9	*Benzo[k]fluoranthene*	*<0.040*	*	*0.040*	
218-01-9	*Chrysene*	*<0.040*		*0.040*	
53-70-3	*Dibenz(a,h)anthracene*	*<0.040*	*	*0.040*	
206-44-0	*Fluoranthene*	*<0.040*		*0.040*	
86-73-7	*Fluorene*	*<0.040*		*0.040*	
193-39-5	*Indeno[1,2,3-cd]pyrene*	*<0.040*	*	*0.040*	
90-12-0	*1-Methylnaphthalene*	*<0.040*		*0.040*	
91-57-6	*2-Methylnaphthalene*	*<0.040*		*0.040*	
91-20-3	*Naphthalene*	*<0.040*		*0.040*	
85-01-8	*Phenanthrene*	*<0.040*		*0.040*	
129-00-0	*Pyrene*	*<0.040*		*0.040*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	69		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	59		25-115
1718-51-0	Terphenyl-d14 (Surr)	129		36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-6.d				
Lims ID:	500-95474-B-6-B	Lab Sample ID:	500-95474-6		
Client ID:	DS-6				
Sample Type:	Client				
Inject. Date:	06-May-2015 13:54:30	ALS Bottle#:	14	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-6-b				
Misc. Info.:	500-0030710-017				
Operator ID:	TW	Instrument ID:	CMS23		

Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 15:44:16	Calib Date:	29-Apr-2015 14:16:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d		

Column 1 :	ZB5MS (0.25 mm)	Det: MS SCAN
Process Host:	XAWRK036	

First Level Reviewer: lesiakk Date: 07-May-2015 15:44:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.369	4.369	0.000	94	34530	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	138547	8.00	
* 3 Acenaphthene-d10	164	6.650	6.650	0.000	95	68784	8.00	
* 4 Phenanthrene-d10	188	7.863	7.865	-0.002	97	114455	8.00	
* 5 Chrysene-d12	240	10.087	10.090	-0.003	97	76218	8.00	
* 6 Perylene-d12	264	11.315	11.315	0.000	95	47441	8.00	s
$ 9 Nitrobenzene-d5	82	4.779	4.782	-0.003	93	83787	14.8	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	99	187120	17.3	
$ 12 Terphenyl-d14	244	9.177	9.180	-0.003	98	226585	32.2	
164 Pyrene	202	9.070	9.070	0.000	70	2396	0.2068	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

Reagents:

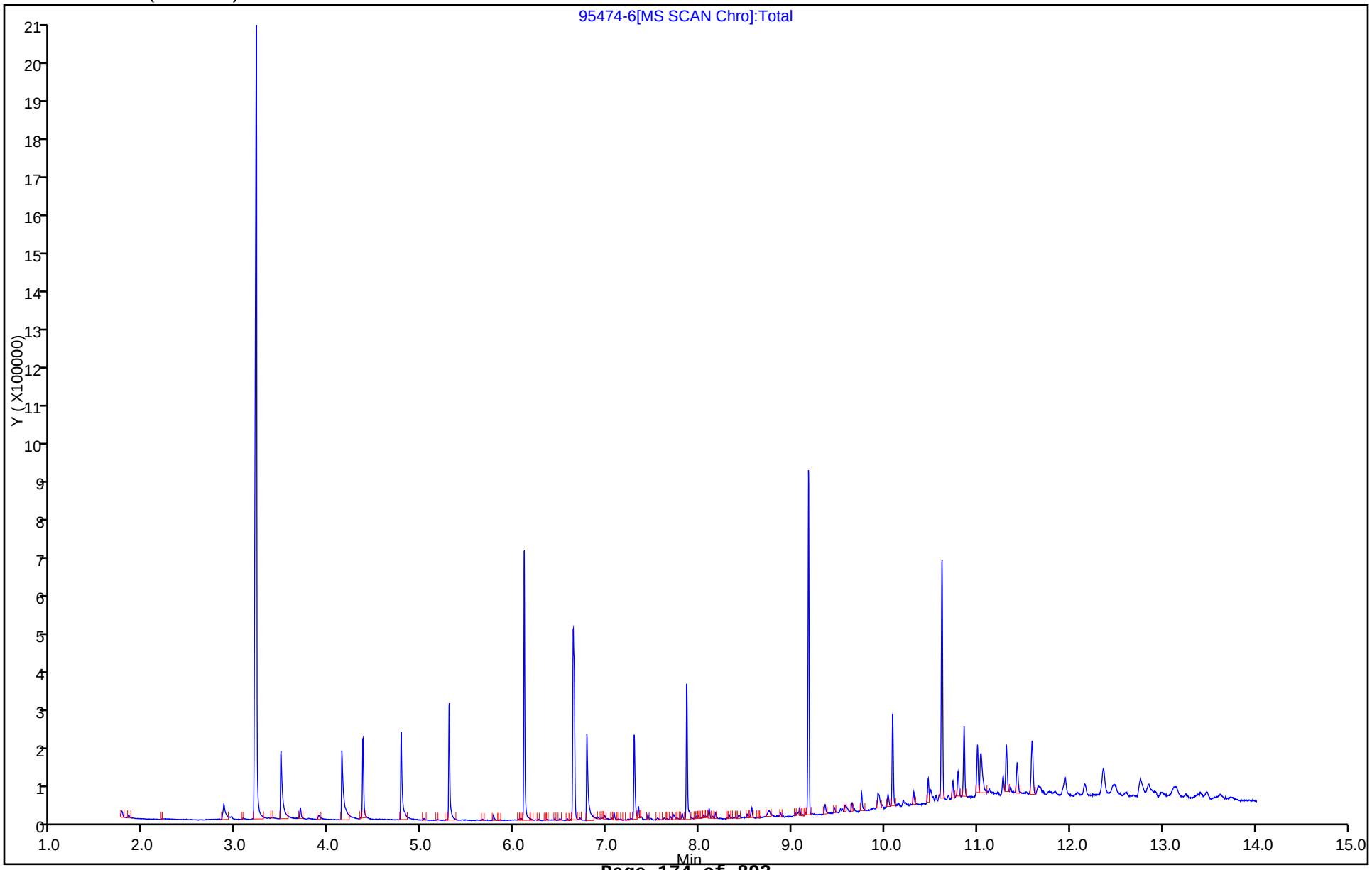
SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:44:16 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-6.d				
Injection Date:	06-May-2015 13:54:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-6-B	Lab Sample ID:	500-95474-6	Worklist Smp#:	17
Client ID:	DS-6				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-7 RA | Lab Sample ID: 500-95474-7 RA

Matrix: Solid | Lab File ID: 95474-7.D

Analysis Method: 8270D | Date Collected: 04/30/2015 15:25

Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01

Sample wt/vol: 15.7229(g) | Date Analyzed: 05/05/2015 17:28

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 21.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286746 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	*Acenaphthene*	*<0.040*		*0.040*	
208-96-8	*Acenaphthylene*	*<0.040*		*0.040*	
120-12-7	*Anthracene*	*<0.040*		*0.040*	
56-55-3	*Benzo[a]anthracene*	*<0.040*	*	*0.040*	
50-32-8	*Benzo[a]pyrene*	*<0.040*	*	*0.040*	
205-99-2	*Benzo[b]fluoranthene*	*<0.040*	*	*0.040*	
191-24-2	*Benzo[g,h,i]perylene*	*<0.040*	*	*0.040*	
207-08-9	*Benzo[k]fluoranthene*	*<0.040*	*	*0.040*	
218-01-9	*Chrysene*	*<0.040*	*	*0.040*	
53-70-3	*Dibenz(a,h)anthracene*	*<0.040*	*	*0.040*	
206-44-0	*Fluoranthene*	*<0.040*		*0.040*	
86-73-7	*Fluorene*	*<0.040*		*0.040*	
193-39-5	*Indeno[1,2,3-cd]pyrene*	*<0.040*	*	*0.040*	
90-12-0	*1-Methylnaphthalene*	*<0.040*		*0.040*	
91-57-6	*2-Methylnaphthalene*	*<0.040*		*0.040*	
91-20-3	*Naphthalene*	*<0.040*		*0.040*	
85-01-8	*Phenanthrene*	*<0.040*		*0.040*	
129-00-0	*Pyrene*	*<0.040*	*	*0.040*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	62		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	51		25-115
1718-51-0	Terphenyl-d14 (Surr)	115	*	36-134

Report Date: 07-May-2015 15:29:16 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-7.D				
Lims ID:	500-95474-B-7-C	Lab Sample ID:	500-95474-7		
Client ID:	DS-7				
Sample Type:	Client				
Inject. Date:	05-May-2015 17:28:30	ALS Bottle#:	15	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-7-c				
Misc. Info.:	500-0030679-017				
Operator ID:	AD	Instrument ID:	CMS21		

Method:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 15:28:21	Calib Date:	01-May-2015 11:27:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D		

Column 1 : Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: lesiakk Date: 07-May-2015 15:29:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.881	4.885	-0.004	94	39787	8.00	
* 2 Naphthalene-d8	136	5.832	5.832	0.000	99	162379	8.00	
* 3 Acenaphthene-d10	164	7.217	7.222	-0.005	90	87810	8.00	
* 4 Phenanthrene-d10	188	8.444	8.449	-0.005	97	161573	8.00	
* 5 Chrysene-d12	240	10.656	10.666	-0.010	98	140992	8.00	s
* 6 Perylene-d12	264	12.036	12.041	-0.005	98	54542	8.00	s
$ 9 Nitrobenzene-d5	82	5.280	5.290	-0.010	86	85939	12.8	
$ 10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	210220	15.4	
$ 12 Terphenyl-d14	244	9.752	9.753	-0.001	99	385047	28.7	
90 Acenaphthene	154	7.202	7.250	-0.048	38	3154	0.2465	
167 Benzo[b]fluoranthene	252	11.622	11.632	-0.010	1	1944	0.2155	

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test

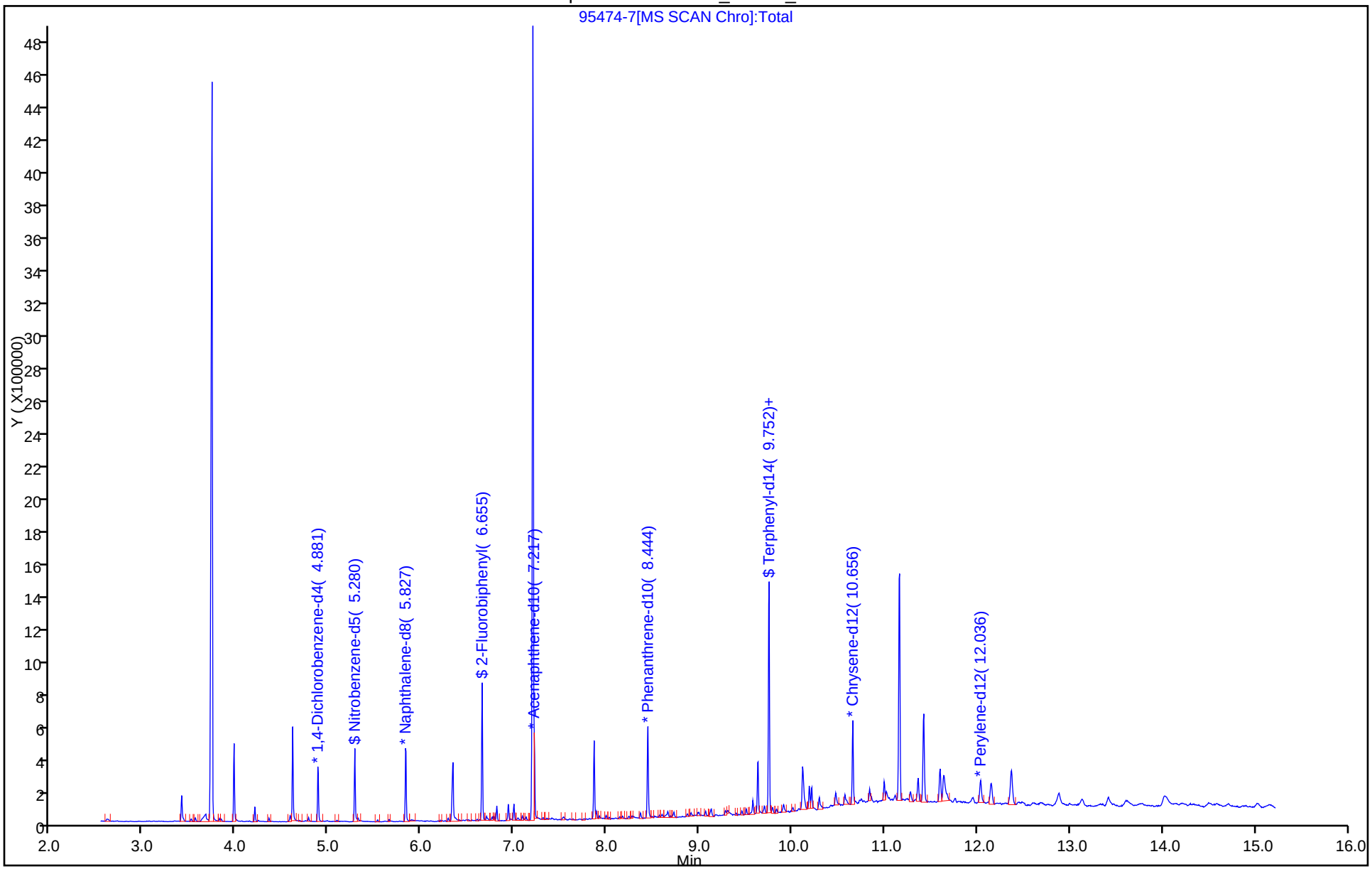
Reagents:

SMISTDWORK_00281 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:29:16 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-7.D				
Injection Date:	05-May-2015 17:28:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	500-95474-B-7-C	Lab Sample ID:	500-95474-7	Worklist Smp#:	17
Client ID:	DS-7				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-7 | Lab Sample ID: 500-95474-7
Matrix: Solid | Lab File ID: 95474-7.d
Analysis Method: 8270D | Date Collected: 04/30/2015 15:25
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.7229(g) | Date Analyzed: 05/06/2015 14:13
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 21.2 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.040		0.040	
208-96-8	Acenaphthylene	<0.040		0.040	
120-12-7	Anthracene	<0.040		0.040	
56-55-3	Benzo[a]anthracene	<0.040		0.040	
50-32-8	Benzo[a]pyrene	<0.040	*	0.040	
205-99-2	Benzo[b]fluoranthene	<0.040	*	0.040	
191-24-2	Benzo[g,h,i]perylene	<0.040	*	0.040	
207-08-9	Benzo[k]fluoranthene	<0.040	*	0.040	
218-01-9	Chrysene	<0.040		0.040	
53-70-3	Dibenz(a,h)anthracene	<0.040	*	0.040	
206-44-0	Fluoranthene	<0.040		0.040	
86-73-7	Fluorene	<0.040		0.040	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.040	*	0.040	
90-12-0	1-Methylnaphthalene	<0.040		0.040	
91-57-6	2-Methylnaphthalene	<0.040		0.040	
91-20-3	Naphthalene	<0.040		0.040	
85-01-8	Phenanthrene	<0.040		0.040	
129-00-0	Pyrene	<0.040		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	55		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	51		25-115
1718-51-0	Terphenyl-d14 (Surr)	132		36-134

Report Date: 07-May-2015 15:44:58 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-7.d				
Lims ID:	500-95474-B-7-C	Lab Sample ID:	500-95474-7		
Client ID:	DS-7				
Sample Type:	Client				
Inject. Date:	06-May-2015 14:13:30	ALS Bottle#:	15	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-7-c				
Misc. Info.:	500-0030710-018				
Operator ID:	TW	Instrument ID:	CMS23		

Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 15:44:58	Calib Date:	29-Apr-2015 14:16:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d		

Column 1 :	ZB5MS (0.25 mm)	Det: MS SCAN
Process Host:	XAWRK036	

First Level Reviewer: lesiakk Date: 07-May-2015 15:44:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.371	4.369	0.002	95	33186	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	133663	8.00	
* 3 Acenaphthene-d10	164	6.650	6.650	0.000	63	72537	8.00	
* 4 Phenanthrene-d10	188	7.862	7.865	-0.003	97	114236	8.00	
* 5 Chrysene-d12	240	10.087	10.090	-0.003	97	72975	8.00	
* 6 Perylene-d12	264	11.315	11.315	0.000	95	34430	8.00	s
$ 9 Nitrobenzene-d5	82	4.782	4.782	0.000	92	70145	12.8	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	99	157719	13.8	
$ 12 Terphenyl-d14	244	9.177	9.180	-0.003	98	222491	33.0	
164 Pyrene	202	9.073	9.070	0.003	68	2621	0.2363	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

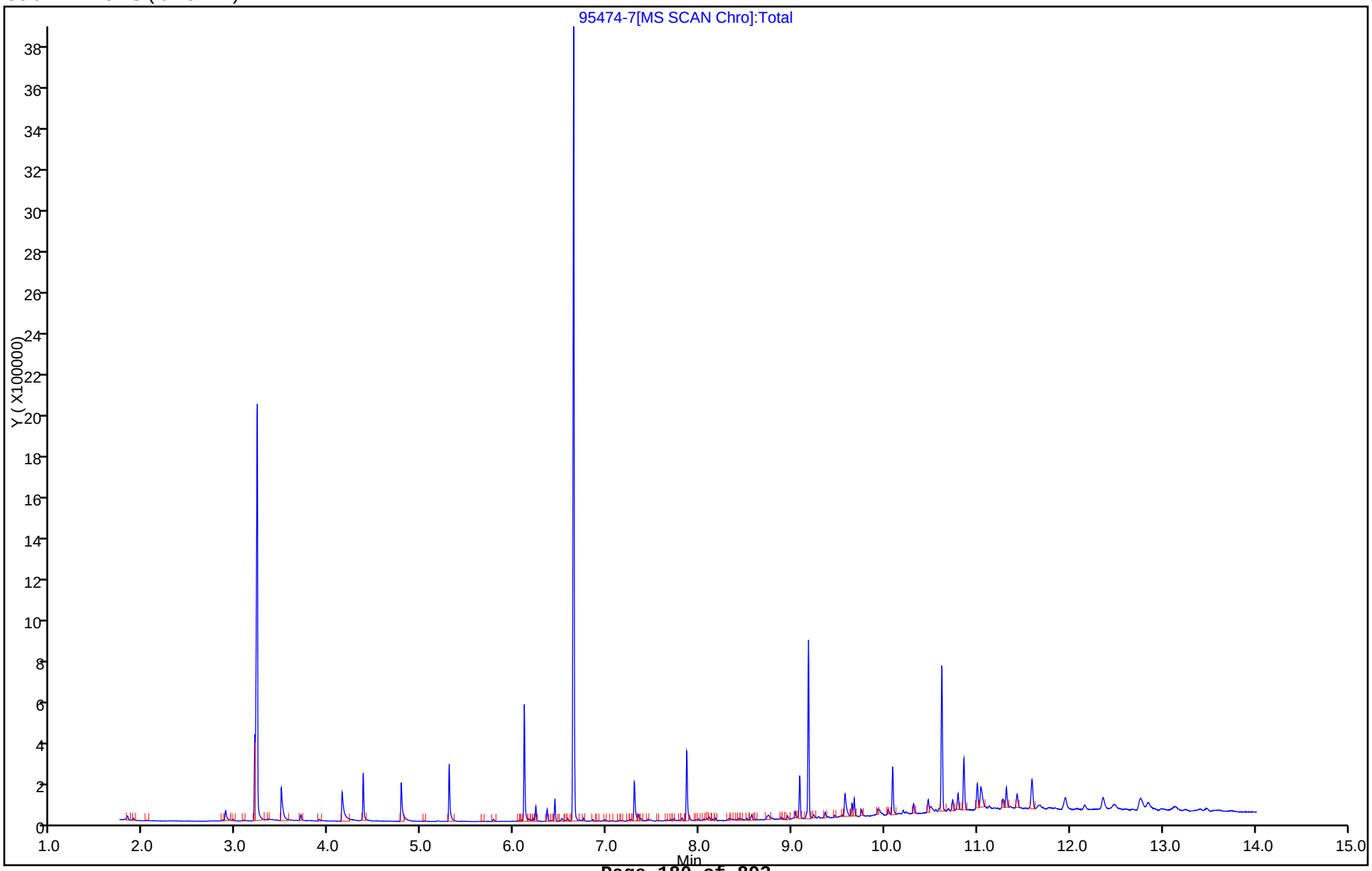
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:44:58 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-7.d				
Injection Date:	06-May-2015 14:13:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-7-C	Lab Sample ID:	500-95474-7	Worklist Smp#:	18
Client ID:	DS-7				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-8 | Lab Sample ID: 500-95474-8
Matrix: Solid | Lab File ID: 95474-8.d
Analysis Method: 8270D | Date Collected: 04/30/2015 15:45
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.1946(g) | Date Analyzed: 05/06/2015 14:33
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 20.6 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.041		0.041	
208-96-8	Acenaphthylene	<0.041		0.041	
120-12-7	Anthracene	<0.041		0.041	
56-55-3	Benzo[a]anthracene	<0.041		0.041	
50-32-8	Benzo[a]pyrene	<0.041		0.041	
205-99-2	Benzo[b]fluoranthene	<0.041		0.041	
191-24-2	Benzo[g,h,i]perylene	<0.041		0.041	
207-08-9	Benzo[k]fluoranthene	<0.041		0.041	
218-01-9	Chrysene	<0.041		0.041	
53-70-3	Dibenz(a,h)anthracene	<0.041		0.041	
206-44-0	Fluoranthene	<0.041		0.041	
86-73-7	Fluorene	<0.041		0.041	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.041		0.041	
90-12-0	1-Methylnaphthalene	<0.041		0.041	
91-57-6	2-Methylnaphthalene	<0.041		0.041	
91-20-3	Naphthalene	<0.041		0.041	
85-01-8	Phenanthrene	<0.041		0.041	
129-00-0	Pyrene	<0.041		0.041	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	31		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	26		25-115
1718-51-0	Terphenyl-d14 (Surr)	49		36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-8.d				
Lims ID:	500-95474-A-8-C	Lab Sample ID:	500-95474-8		
Client ID:	DS-8				
Sample Type:	Client				
Inject. Date:	06-May-2015 14:33:30	ALS Bottle#:	16	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-a-8-c				
Misc. Info.:	500-0030710-019				
Operator ID:	TW	Instrument ID:	CMS23		
Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	07-May-2015 15:45:58	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				

First Level Reviewer: lesiakk Date: 07-May-2015 15:45:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.369	4.369	0.000	95	61110	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	243633	8.00	
* 3 Acenaphthene-d10	164	6.650	6.650	0.000	96	120843	8.00	
* 4 Phenanthrene-d10	188	7.863	7.865	-0.002	97	208601	8.00	
* 5 Chrysene-d12	240	10.087	10.090	-0.003	97	179112	8.00	
* 6 Perylene-d12	264	11.315	11.315	0.000	95	111122	8.00	
$ 9 Nitrobenzene-d5	82	4.782	4.782	0.000	92	64935	6.50	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	99	148689	7.83	
$ 12 Terphenyl-d14	244	9.177	9.180	-0.003	98	204189	12.3	

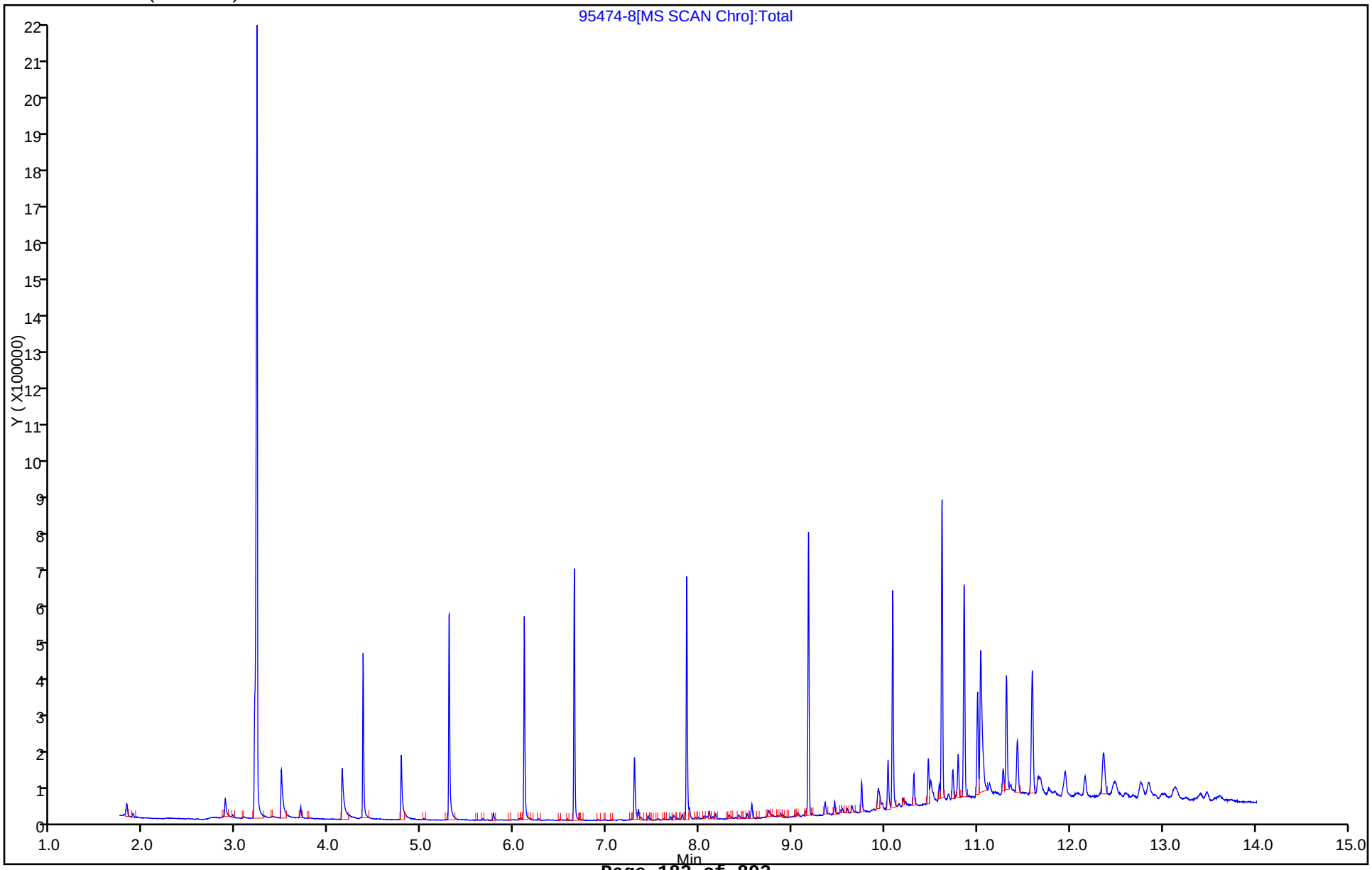
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:45:58 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-8.d				
Injection Date:	06-May-2015 14:33:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-A-8-C	Lab Sample ID:	500-95474-8	Worklist Smp#:	19
Client ID:	DS-8				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-9 | Lab Sample ID: 500-95474-9
Matrix: Solid | Lab File ID: 95474-9.D
Analysis Method: 8270D | Date Collected: 04/30/2015 15:50
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.8016(g) | Date Analyzed: 05/05/2015 18:17
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 21.7 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286746 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.040		0.040	
208-96-8	Acenaphthylene	<0.040		0.040	
120-12-7	Anthracene	<0.040		0.040	
56-55-3	Benzo[a]anthracene	<0.040		0.040	
50-32-8	Benzo[a]pyrene	<0.040	*	0.040	
205-99-2	Benzo[b]fluoranthene	<0.040	*	0.040	
191-24-2	Benzo[g,h,i]perylene	<0.040	*	0.040	
207-08-9	Benzo[k]fluoranthene	<0.040	*	0.040	
218-01-9	Chrysene	<0.040		0.040	
53-70-3	Dibenz(a,h)anthracene	<0.040	*	0.040	
206-44-0	Fluoranthene	<0.040		0.040	
86-73-7	Fluorene	<0.040		0.040	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.040	*	0.040	
90-12-0	1-Methylnaphthalene	<0.040		0.040	
91-57-6	2-Methylnaphthalene	<0.040		0.040	
91-20-3	Naphthalene	<0.040		0.040	
85-01-8	Phenanthrene	<0.040		0.040	
129-00-0	Pyrene	<0.040		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	86		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	73		25-115
1718-51-0	Terphenyl-d14 (Surr)	147	X	36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-9.D				
Lims ID:	500-95474-B-9-C	Lab Sample ID:	500-95474-9		
Client ID:	DS-9				
Sample Type:	Client				
Inject. Date:	05-May-2015 18:17:30	ALS Bottle#:	17	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-9-c				
Misc. Info.:	500-0030679-019				
Operator ID:	AD	Instrument ID:	CMS21		

Method:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 15:28:21	Calib Date:	01-May-2015 11:27:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D		

Column 1 : Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: lesiakk Date: 07-May-2015 15:29:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.885	4.885	0.000	94	45026	8.00	
* 2 Naphthalene-d8	136	5.832	5.832	0.000	99	171106	8.00	
* 3 Acenaphthene-d10	164	7.217	7.222	-0.005	94	90638	8.00	
* 4 Phenanthrene-d10	188	8.444	8.449	-0.005	97	166879	8.00	
* 5 Chrysene-d12	240	10.656	10.666	-0.010	98	150788	8.00	
* 6 Perylene-d12	264	12.036	12.041	-0.005	98	53363	8.00	s
$ 9 Nitrobenzene-d5	82	5.280	5.290	-0.010	86	128249	18.2	
$ 10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	300631	21.4	
$ 12 Terphenyl-d14	244	9.752	9.753	-0.001	99	529214	36.9	
140 Fluoranthene	202	9.458	9.467	-0.009	93	7297	0.2810	
143 Pyrene	202	9.653	9.662	-0.009	86	6844	0.2981	
162 Benzo[a]anthracene	228	10.647	10.657	-0.010	34	4744	0.2260	
163 Chrysene	228	10.675	10.690	-0.015	70	5265	0.2742	
167 Benzo[b]fluoranthene	252	11.618	11.632	-0.014	64	3444	0.3902	M

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test
Review Flags
M - Manually Integrated

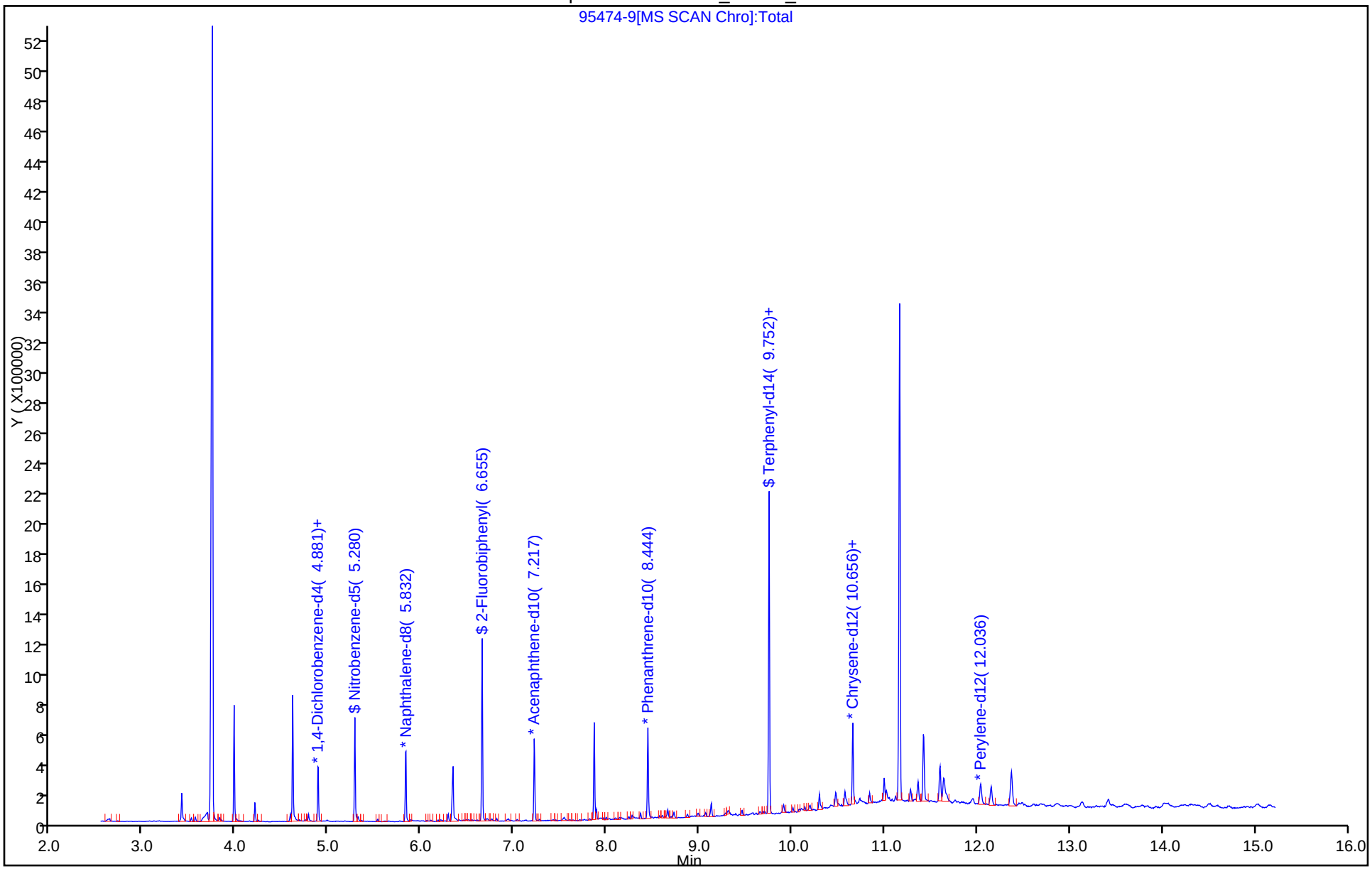
Reagents:

SMISTDWORK_00281 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:29:39 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-9.D				
Injection Date:	05-May-2015 18:17:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	500-95474-B-9-C	Lab Sample ID:	500-95474-9	Worklist Smp#:	19
Client ID:	DS-9				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



Manual Integration/User Assign Peak Report

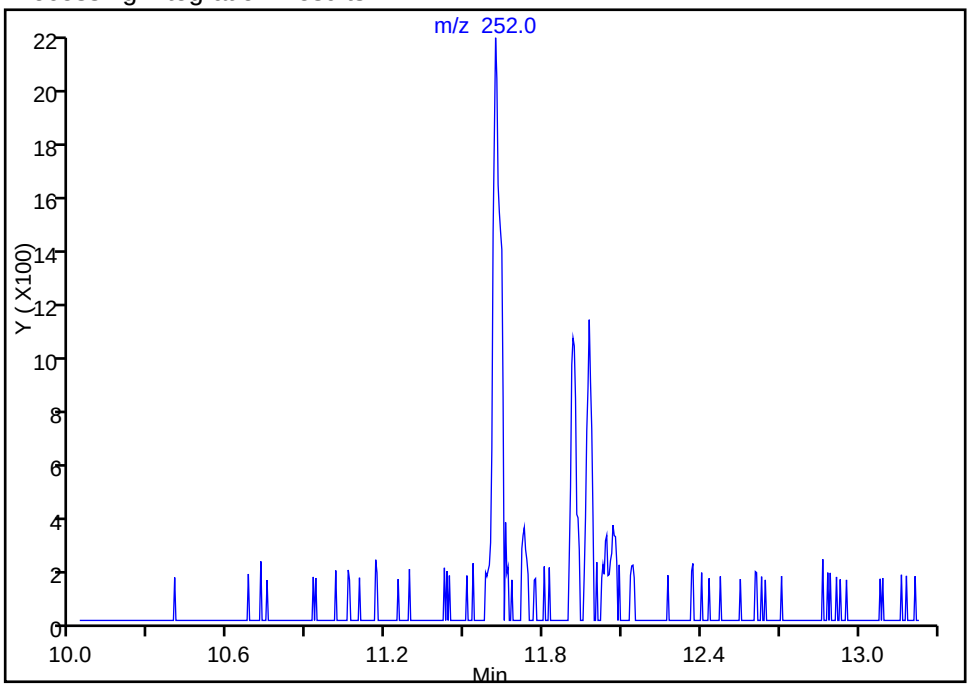
TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-9.D				
Injection Date:	05-May-2015 18:17:30	Instrument ID:	CMS21		
Lims ID:	500-95474-B-9-C	Lab Sample ID:	500-95474-9		
Client ID:	DS-9				
Operator ID:	AD	ALS Bottle#:	17	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

167 Benzo[b]fluoranthene, CAS: 205-99-2

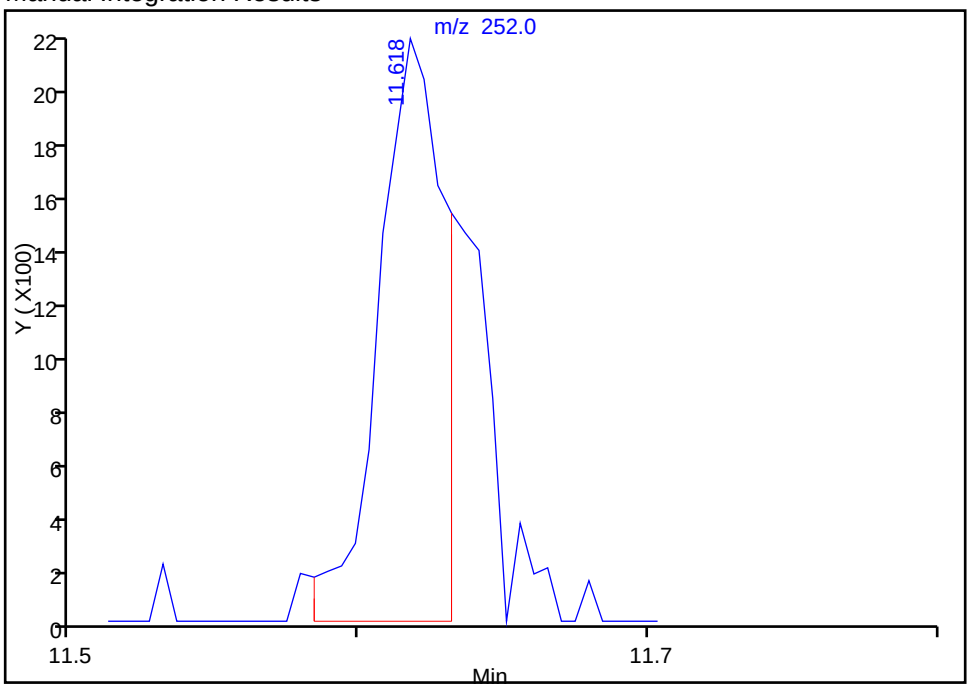
Not Detected
Expected RT: 11.63

Processing Integration Results



RT: 11.62
Area: 3444
Amount: 0.390235
Amount Units: ug/mL

Manual Integration Results



Reviewer: lesiakk, 06-May-2015 09:29:43
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-9 RA | Lab Sample ID: 500-95474-9 RA
Matrix: Solid | Lab File ID: 95474-9.d
Analysis Method: 8270D | Date Collected: 04/30/2015 15:50
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.8016(g) | Date Analyzed: 05/06/2015 14:53
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 21.7 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.040		0.040	
208-96-8	Acenaphthylene	<0.040		0.040	
120-12-7	Anthracene	<0.040		0.040	
56-55-3	Benzo[a]anthracene	<0.040		0.040	
50-32-8	Benzo[a]pyrene	<0.040	*	0.040	
205-99-2	Benzo[b]fluoranthene	<0.040	*	0.040	
191-24-2	Benzo[g,h,i]perylene	<0.040	*	0.040	
207-08-9	Benzo[k]fluoranthene	<0.040	*	0.040	
218-01-9	Chrysene	<0.040		0.040	
53-70-3	Dibenz(a,h)anthracene	<0.040	*	0.040	
206-44-0	Fluoranthene	<0.040		0.040	
86-73-7	Fluorene	<0.040		0.040	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.040	*	0.040	
90-12-0	1-Methylnaphthalene	<0.040		0.040	
91-57-6	2-Methylnaphthalene	<0.040		0.040	
91-20-3	Naphthalene	<0.040		0.040	
85-01-8	Phenanthrene	<0.040		0.040	
129-00-0	Pyrene	<0.040		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	81		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	73		25-115
1718-51-0	Terphenyl-d14 (Surr)	157	X	36-134

Report Date: 07-May-2015 15:47:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-9.d				
Lims ID:	500-95474-B-9-C	Lab Sample ID:	500-95474-9		
Client ID:	DS-9				
Sample Type:	Client				
Inject. Date:	06-May-2015 14:53:30	ALS Bottle#:	17	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-9-c				
Misc. Info.:	500-0030710-020				
Operator ID:	TW	Instrument ID:	CMS23		

Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 15:47:35	Calib Date:	29-Apr-2015 14:16:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d		

Column 1 :	ZB5MS (0.25 mm)	Det: MS SCAN
Process Host:	XAWRK036	

First Level Reviewer: lesiakk Date: 07-May-2015 15:47:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.372	4.369	0.003	95	32253	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	129960	8.00	
* 3 Acenaphthene-d10	164	6.650	6.650	0.000	95	64156	8.00	
* 4 Phenanthrene-d10	188	7.865	7.865	0.000	97	108738	8.00	
* 5 Chrysene-d12	240	10.089	10.090	-0.001	97	73130	8.00	
* 6 Perylene-d12	264	11.323	11.315	0.008	94	34337	8.00	s
$ 9 Nitrobenzene-d5	82	4.782	4.782	0.000	93	97003	18.2	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	100	204078	20.2	
$ 12 Terphenyl-d14	244	9.180	9.180	0.000	98	265256	39.2	
161 Fluoranthene	202	8.879	8.877	0.002	80	4111	0.2613	
164 Pyrene	202	9.070	9.070	0.000	72	3825	0.3441	
173 Benzo[a]anthracene	228	10.079	10.079	0.000	27	2037	0.2068	
174 Chrysene	228	10.110	10.110	-0.005	30	2405	0.2537	M
178 Benzo[b]fluoranthene	252	10.997	10.989	0.008	31	2044	0.4385	

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test
Review Flags
M - Manually Integrated

Reagents:

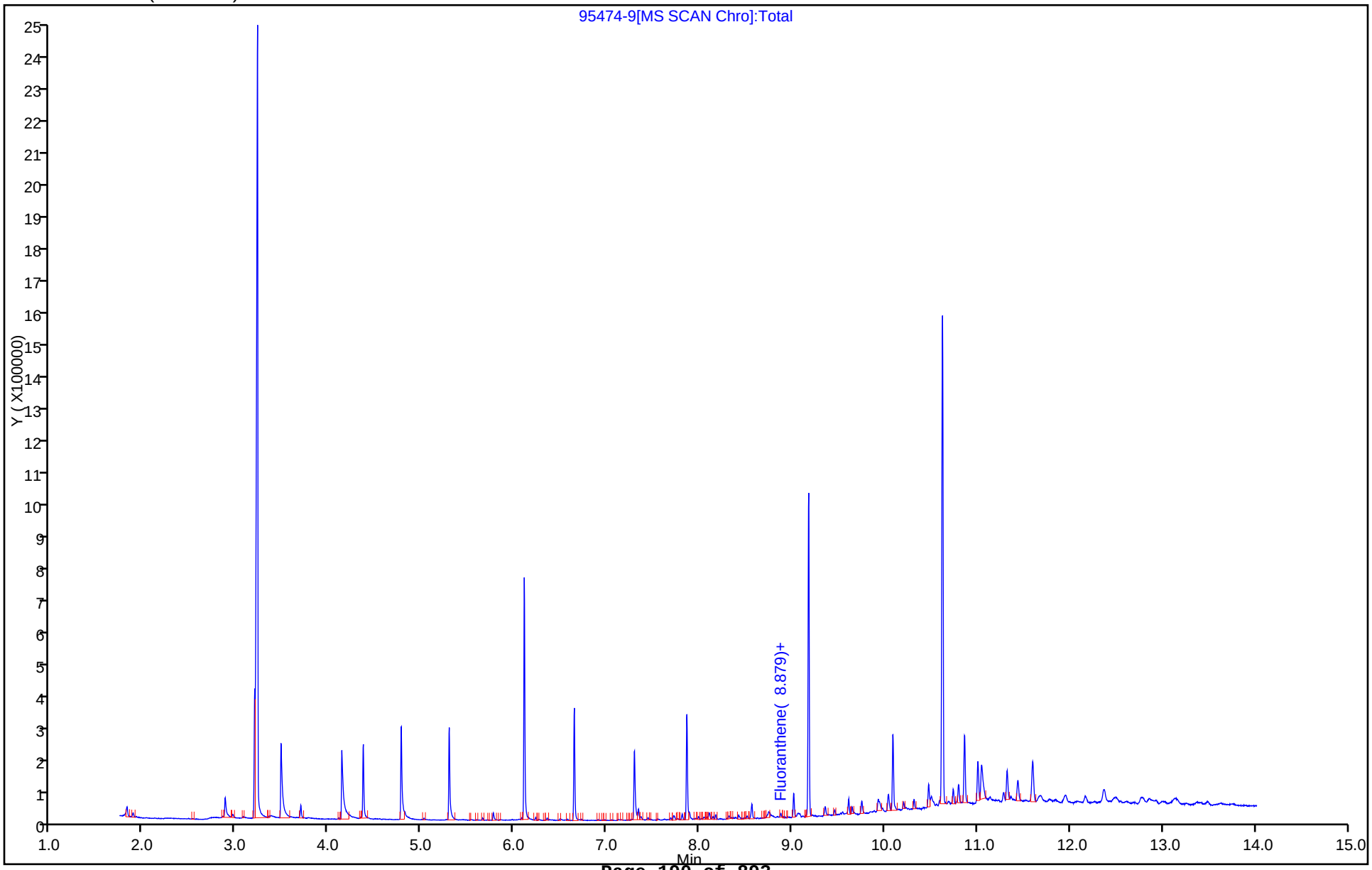
SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:47:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-9.d				
Injection Date:	06-May-2015 14:53:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-9-C	Lab Sample ID:	500-95474-9	Worklist Smp#:	20
Client ID:	DS-9				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



Manual Integration/User Assign Peak Report

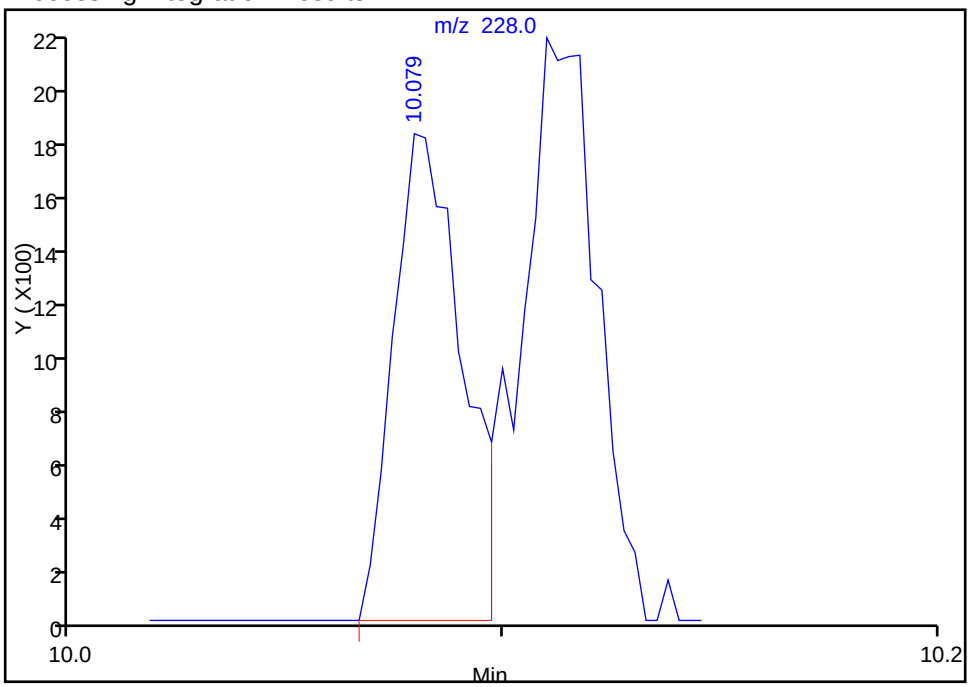
TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-9.d				
Injection Date:	06-May-2015 14:53:30	Instrument ID:	CMS23		
Lims ID:	500-95474-B-9-C	Lab Sample ID:	500-95474-9		
Client ID:	DS-9				
Operator ID:	TW	ALS Bottle#:	17	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

174 Chrysene, CAS: 218-01-9

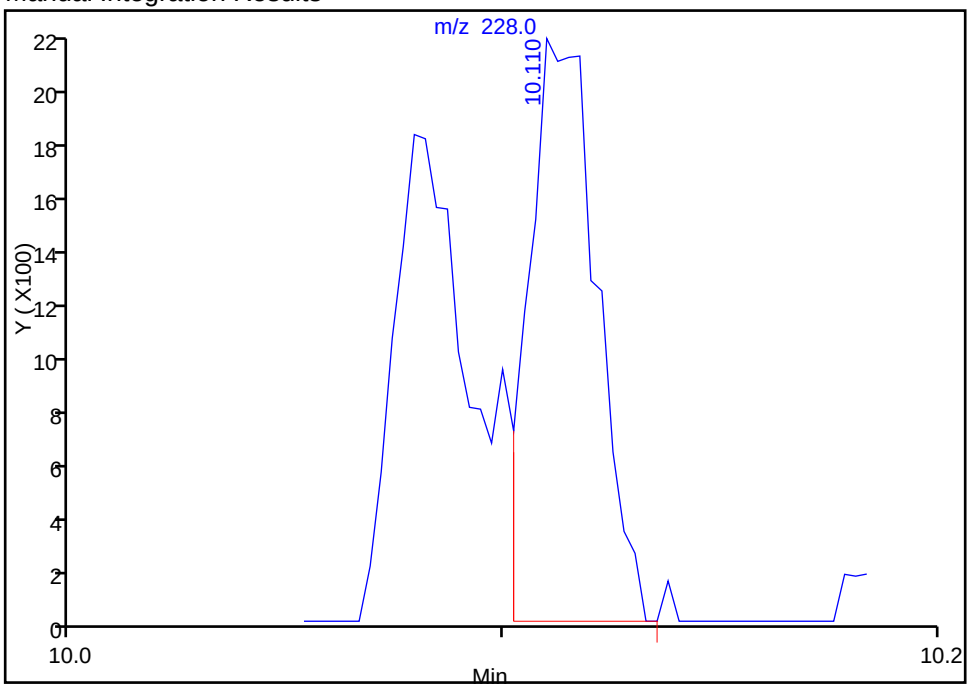
Processing Integration Results

RT: 10.08
Area: 2037
Amount: 0.214918
Amount Units: ug/ml



Manual Integration Results

RT: 10.11
Area: 2405
Amount: 0.253744
Amount Units: ug/ml



Reviewer: lesiakk, 07-May-2015 15:47:35
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-10 | Lab Sample ID: 500-95474-10
Matrix: Solid | Lab File ID: 95474-10.d
Analysis Method: 8270D | Date Collected: 04/30/2015 16:05
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.4626(g) | Date Analyzed: 05/06/2015 15:12
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 21.7 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.041		0.041	
208-96-8	Acenaphthylene	<0.041		0.041	
120-12-7	Anthracene	<0.041		0.041	
56-55-3	Benzo[a]anthracene	<0.041		0.041	
50-32-8	Benzo[a]pyrene	<0.041		0.041	
205-99-2	Benzo[b]fluoranthene	<0.041	F2	0.041	
191-24-2	Benzo[g,h,i]perylene	<0.041	F2 F1	0.041	
207-08-9	Benzo[k]fluoranthene	<0.041		0.041	
218-01-9	Chrysene	<0.041		0.041	
53-70-3	Dibenz(a,h)anthracene	<0.041	F2 F1	0.041	
206-44-0	Fluoranthene	<0.041		0.041	
86-73-7	Fluorene	<0.041		0.041	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.041	F2 F1	0.041	
90-12-0	1-Methylnaphthalene	<0.041		0.041	
91-57-6	2-Methylnaphthalene	<0.041		0.041	
91-20-3	Naphthalene	<0.041		0.041	
85-01-8	Phenanthrene	<0.041		0.041	
129-00-0	Pyrene	<0.041	F2 F1	0.041	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	69		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	57		25-115
1718-51-0	Terphenyl-d14 (Surr)	127		36-134

Report Date: 07-May-2015 15:48:30 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-10.d				
Lims ID:	500-95474-B-10-F	Lab Sample ID:	500-95474-10		
Client ID:	DS-10				
Sample Type:	Client				
Inject. Date:	06-May-2015 15:12:30	ALS Bottle#:	18	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-b-10-f				
Misc. Info.:	500-0030710-021				
Operator ID:	TW	Instrument ID:	CMS23		

Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	07-May-2015 15:48:29	Calib Date:	29-Apr-2015 14:16:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d		

Column 1 :	ZB5MS (0.25 mm)	Det: MS SCAN
Process Host:	XAWRK036	

First Level Reviewer: lesiakk Date: 07-May-2015 15:48:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.369	4.369	0.000	94	33530	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	138284	8.00	
* 3 Acenaphthene-d10	164	6.650	6.650	0.000	95	68192	8.00	
* 4 Phenanthrene-d10	188	7.863	7.865	-0.003	97	114847	8.00	
* 5 Chrysene-d12	240	10.087	10.090	-0.003	97	81387	8.00	
* 6 Perylene-d12	264	11.310	11.315	-0.005	95	55771	8.00	
$ 9 Nitrobenzene-d5	82	4.779	4.782	-0.003	93	81298	14.3	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	99	185079	17.3	
$ 12 Terphenyl-d14	244	9.177	9.180	-0.003	98	239419	31.8	
161 Fluoranthene	202	8.879	8.877	0.002	83	3882	0.2337	
164 Pyrene	202	9.070	9.070	0.000	77	3379	0.2732	

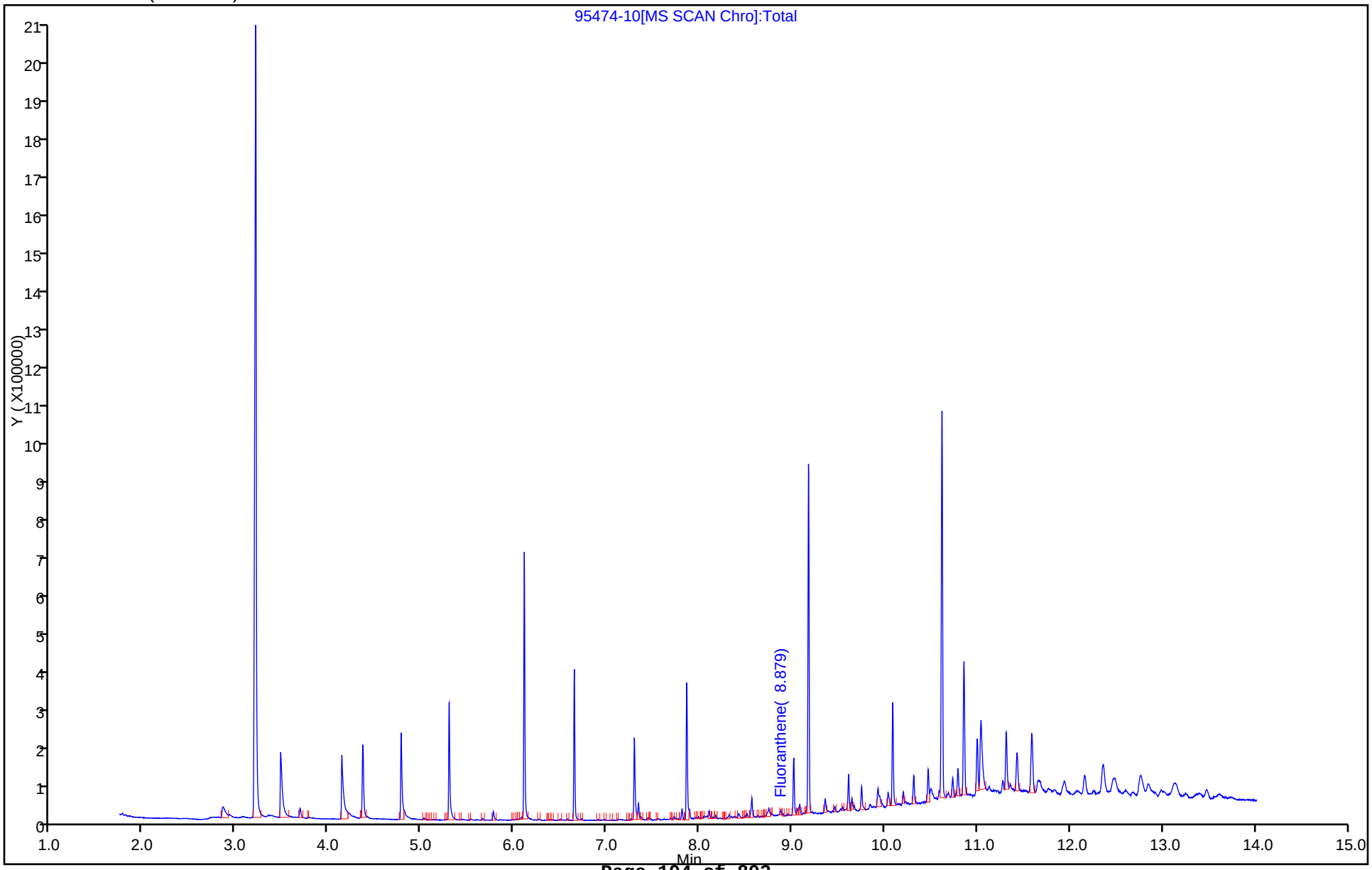
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:48:30 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-10.d				
Injection Date:	06-May-2015 15:12:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-10-F	Lab Sample ID:	500-95474-10	Worklist Smp#:	21
Client ID:	DS-10				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-DUP | Lab Sample ID: 500-95474-11
Matrix: Solid | Lab File ID: 95474-11.d
Analysis Method: 8270D | Date Collected: 04/30/2015 00:00
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.9990(g) | Date Analyzed: 05/06/2015 15:32
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 24.3 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.041		0.041	
208-96-8	Acenaphthylene	<0.041		0.041	
120-12-7	Anthracene	<0.041		0.041	
56-55-3	Benzo[a]anthracene	0.39		0.041	
50-32-8	Benzo[a]pyrene	0.53		0.041	
205-99-2	Benzo[b]fluoranthene	0.70		0.041	
191-24-2	Benzo[g,h,i]perylene	0.37		0.041	
207-08-9	Benzo[k]fluoranthene	0.27		0.041	
218-01-9	Chrysene	0.44		0.041	
53-70-3	Dibenz(a,h)anthracene	0.081		0.041	
206-44-0	Fluoranthene	0.59		0.041	
86-73-7	Fluorene	<0.041		0.041	
193-39-5	Indeno[1,2,3-cd]pyrene	0.31		0.041	
90-12-0	1-Methylnaphthalene	<0.041		0.041	
91-57-6	2-Methylnaphthalene	<0.041		0.041	
91-20-3	Naphthalene	<0.041		0.041	
85-01-8	Phenanthrene	0.20		0.041	
129-00-0	Pyrene	0.80		0.041	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	48		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	41		25-115
1718-51-0	Terphenyl-d14 (Surr)	85		36-134

Report Date: 07-May-2015 15:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Sample Type:	Client				
Inject. Date:	06-May-2015 15:32:30	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	500-95474-a-11-b				
Misc. Info.:	500-0030710-024				
Operator ID:	TW	Instrument ID:	CMS23		
Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	07-May-2015 15:52:43	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				

First Level Reviewer: lesiakk Date: 07-May-2015 15:52:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.366	4.369	-0.003	96	46548	8.00	
* 2 Naphthalene-d8	136	5.297	5.299	-0.002	99	189545	8.00	
* 3 Acenaphthene-d10	164	6.650	6.650	0.000	95	97077	8.00	
* 4 Phenanthrene-d10	188	7.862	7.865	-0.003	97	158205	8.00	
* 5 Chrysene-d12	240	10.087	10.090	-0.003	96	106783	8.00	
* 6 Perylene-d12	264	11.315	11.315	0.000	92	75680	8.00	
$ 9 Nitrobenzene-d5	82	4.779	4.782	-0.003	93	79737	10.3	
$ 10 2-Fluorobiphenyl	172	6.109	6.112	-0.003	99	182498	12.0	
$ 12 Terphenyl-d14	244	9.180	9.180	0.000	98	209770	21.3	
119 Acenaphthene	154	6.675	6.678	-0.003	80	7856	0.5896	
149 Phenanthrene	178	7.883	7.888	-0.005	90	110761	4.91	
150 Anthracene	178	7.929	7.931	-0.002	95	20358	0.8814	
161 Fluoranthene	202	8.877	8.877	0.000	99	324612	14.2	
164 Pyrene	202	9.068	9.070	-0.002	96	313737	19.3	
173 Benzo[a]anthracene	228	10.079	10.079	0.000	98	136643	9.50	
174 Chrysene	228	10.110	10.115	-0.005	91	147412	10.7	
178 Benzo[b]fluoranthene	252	10.986	10.986	-0.003	95	174878	17.0	M
179 Benzo[k]fluoranthene	252	10.999	10.999	-0.013	98	72879	6.65	M
180 Benzo[a]pyrene	252	11.269	11.272	-0.003	74	133101	12.7	
183 Dibenz(a,h)anthracene	278	12.426	12.426	-0.013	1	19368	1.95	
182 Indeno[1,2,3-cd]pyrene	276	12.439	12.449	-0.010	95	88888	7.42	
185 Benzo[g,h,i]perylene	276	12.775	12.780	-0.005	95	90926	9.04	

QC Flag Legend

Review Flags

M - Manually Integrated

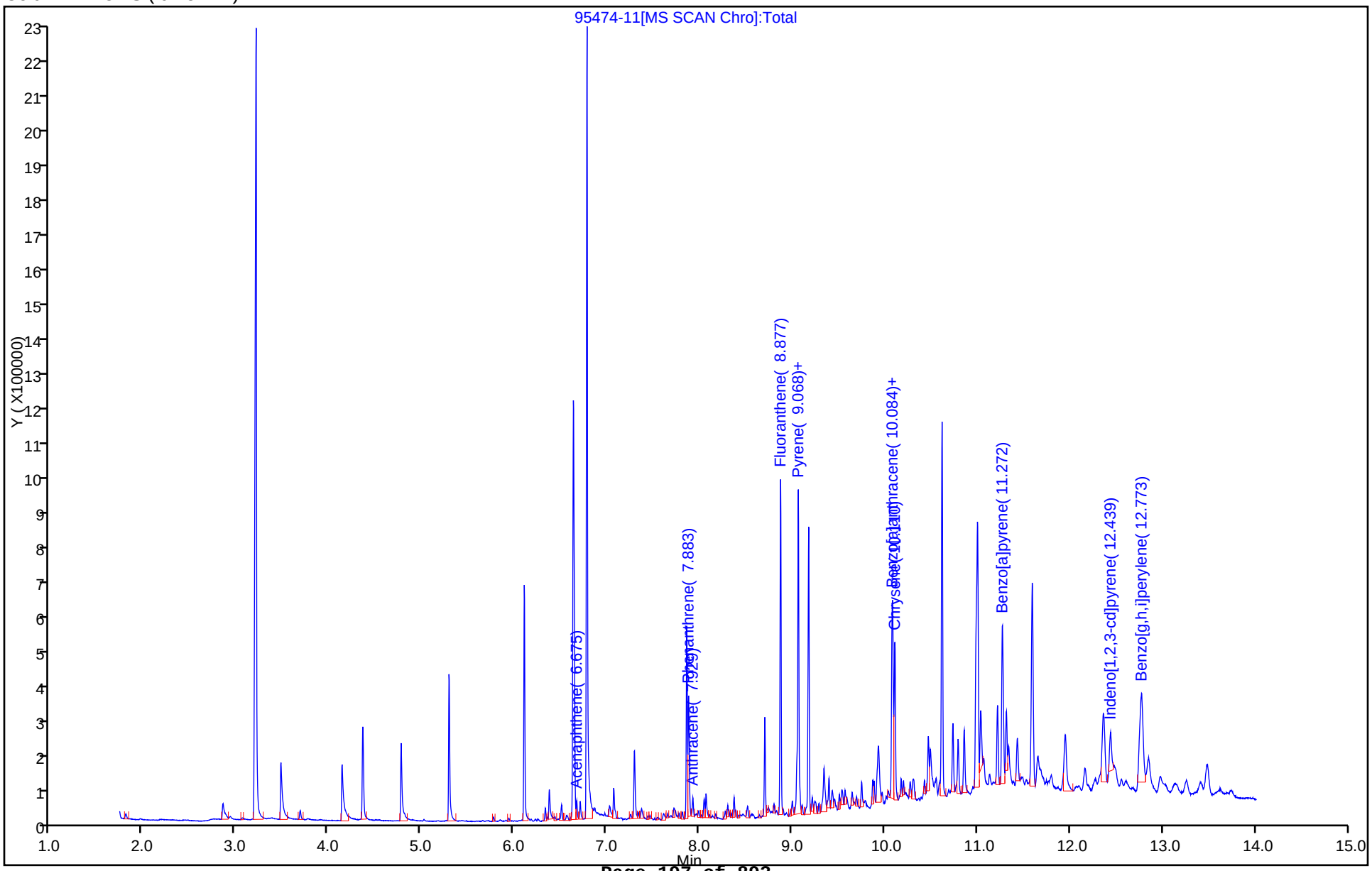
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11	Worklist Smp#:	24
Client ID:	DS-DUP				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					

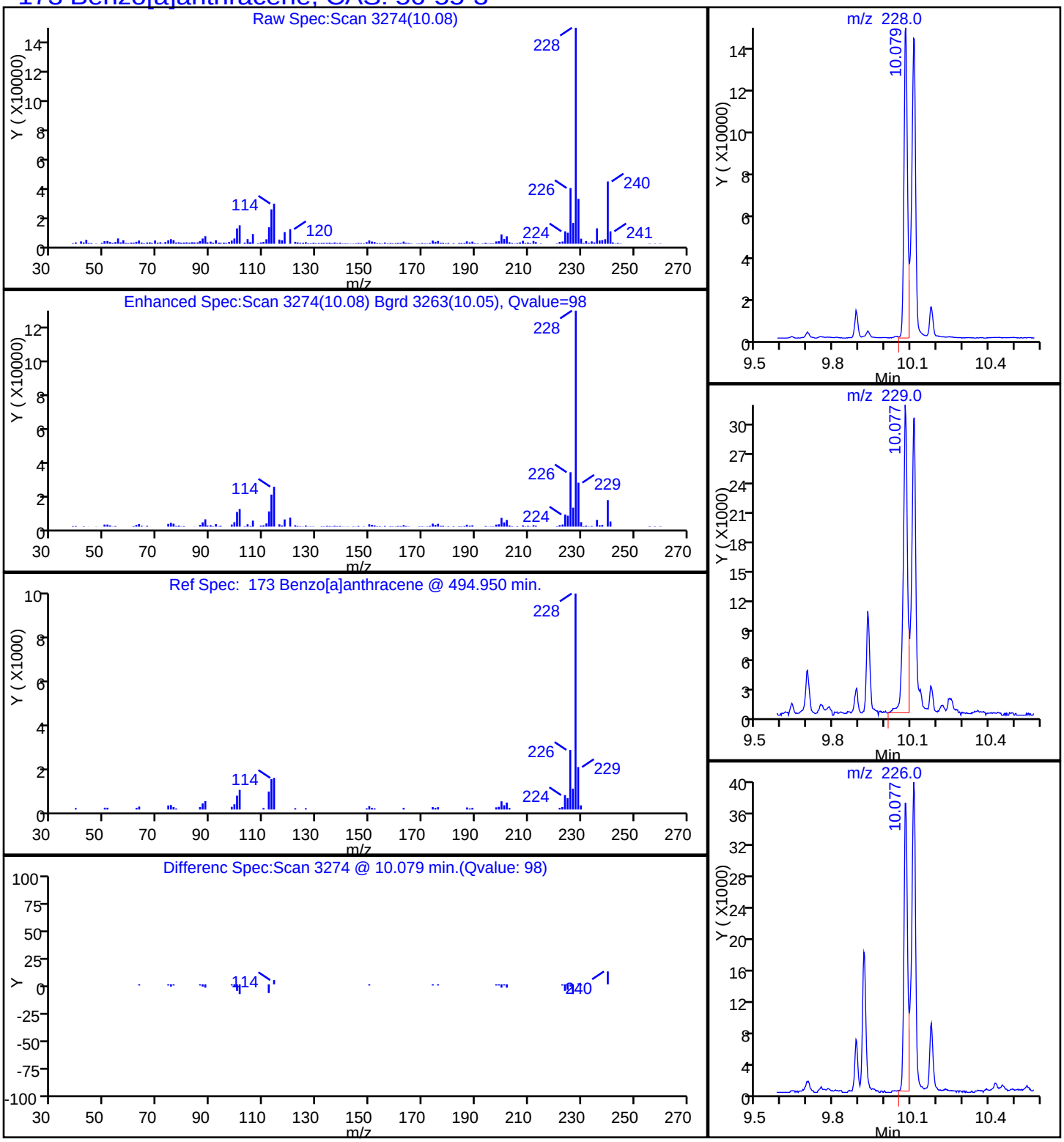


Report Date: 07-May-2015 15:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

173 Benzo[a]anthracene, CAS: 56-55-3

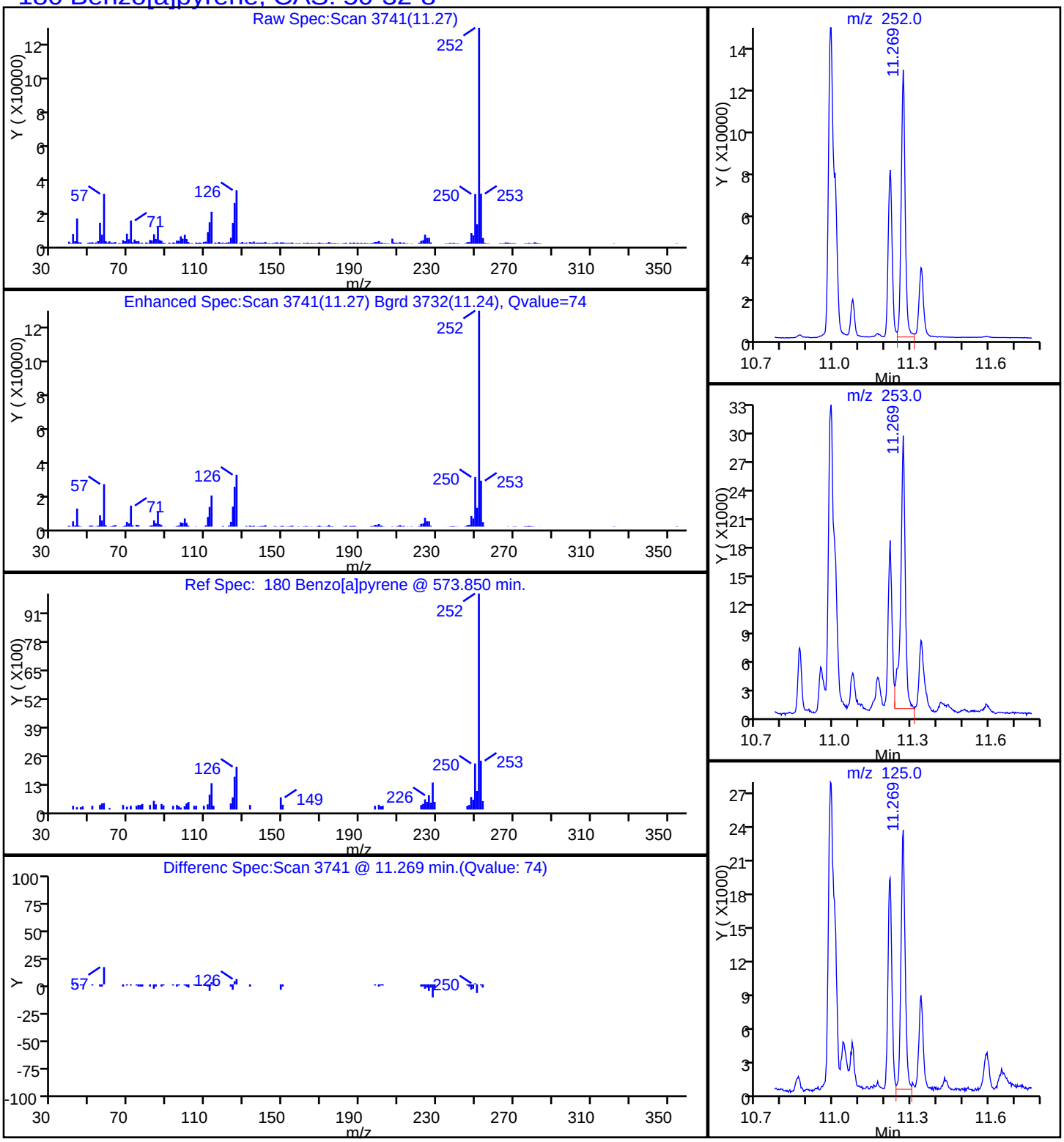


Report Date: 07-May-2015 15:52:44 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

180 Benzo[a]pyrene, CAS: 50-32-8

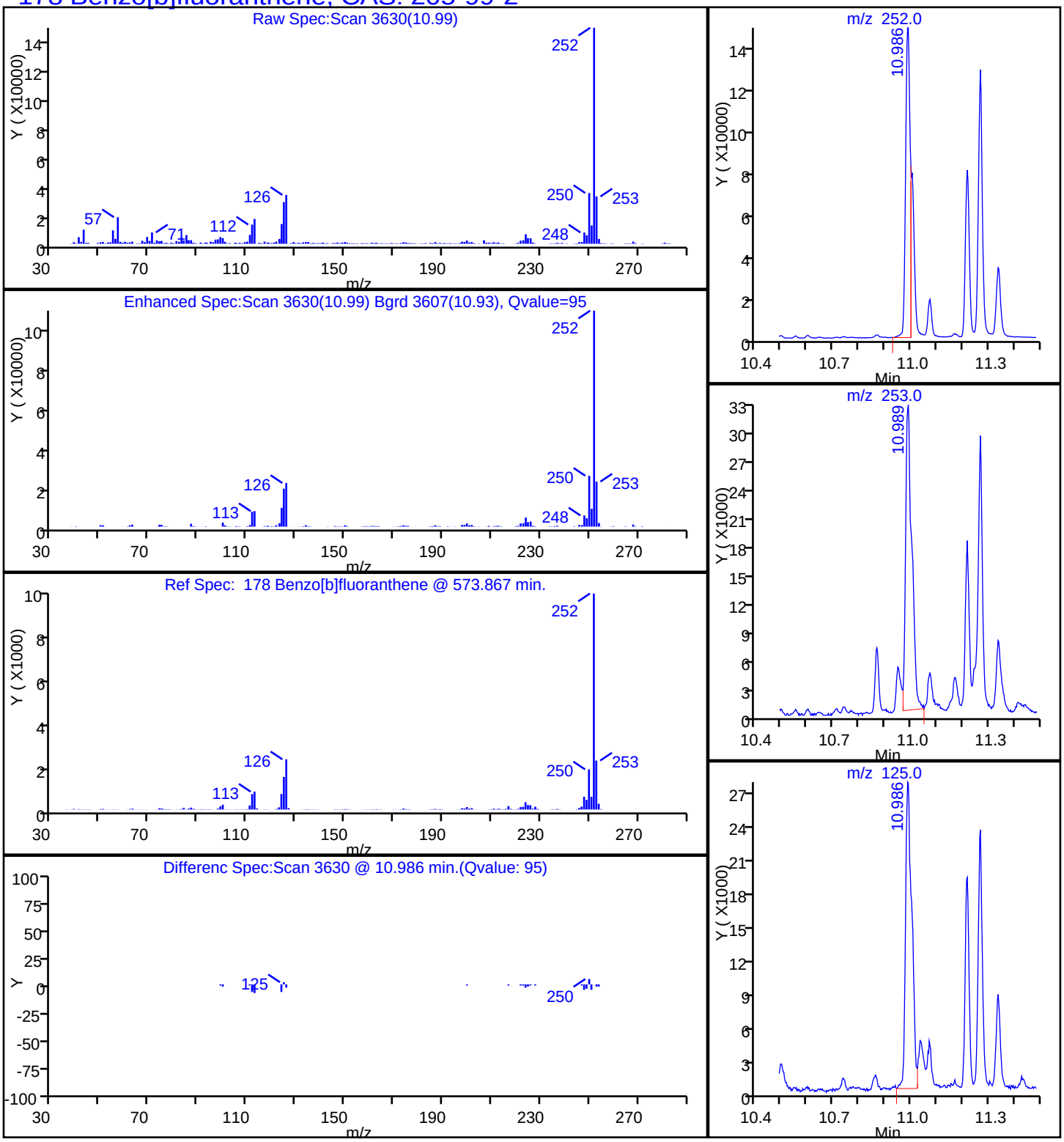


Report Date: 07-May-2015 15:52:44 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

178 Benzo[b]fluoranthene, CAS: 205-99-2

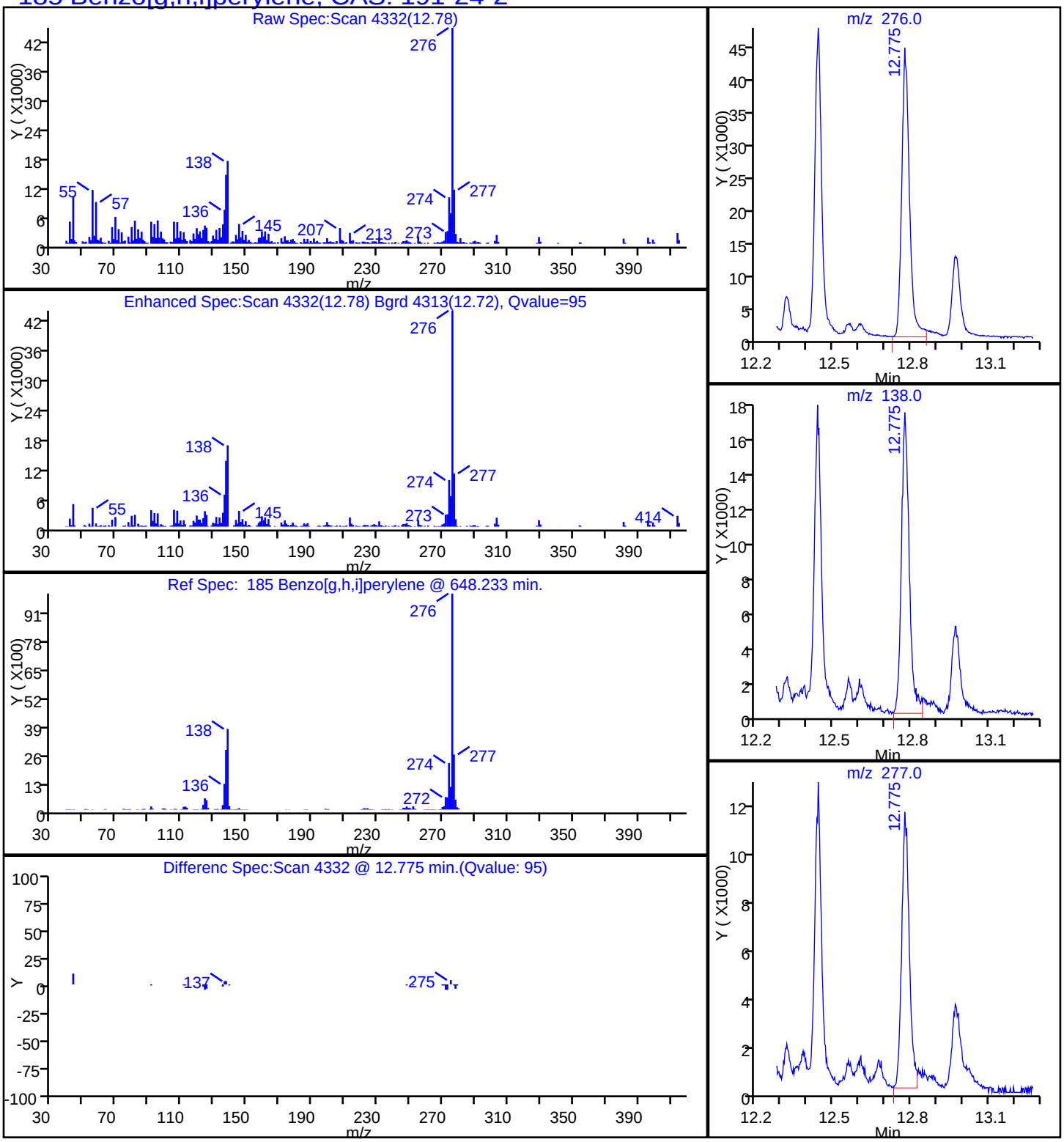


Report Date: 07-May-2015 15:52:44 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

185 Benzo[g,h,i]perylene, CAS: 191-24-2

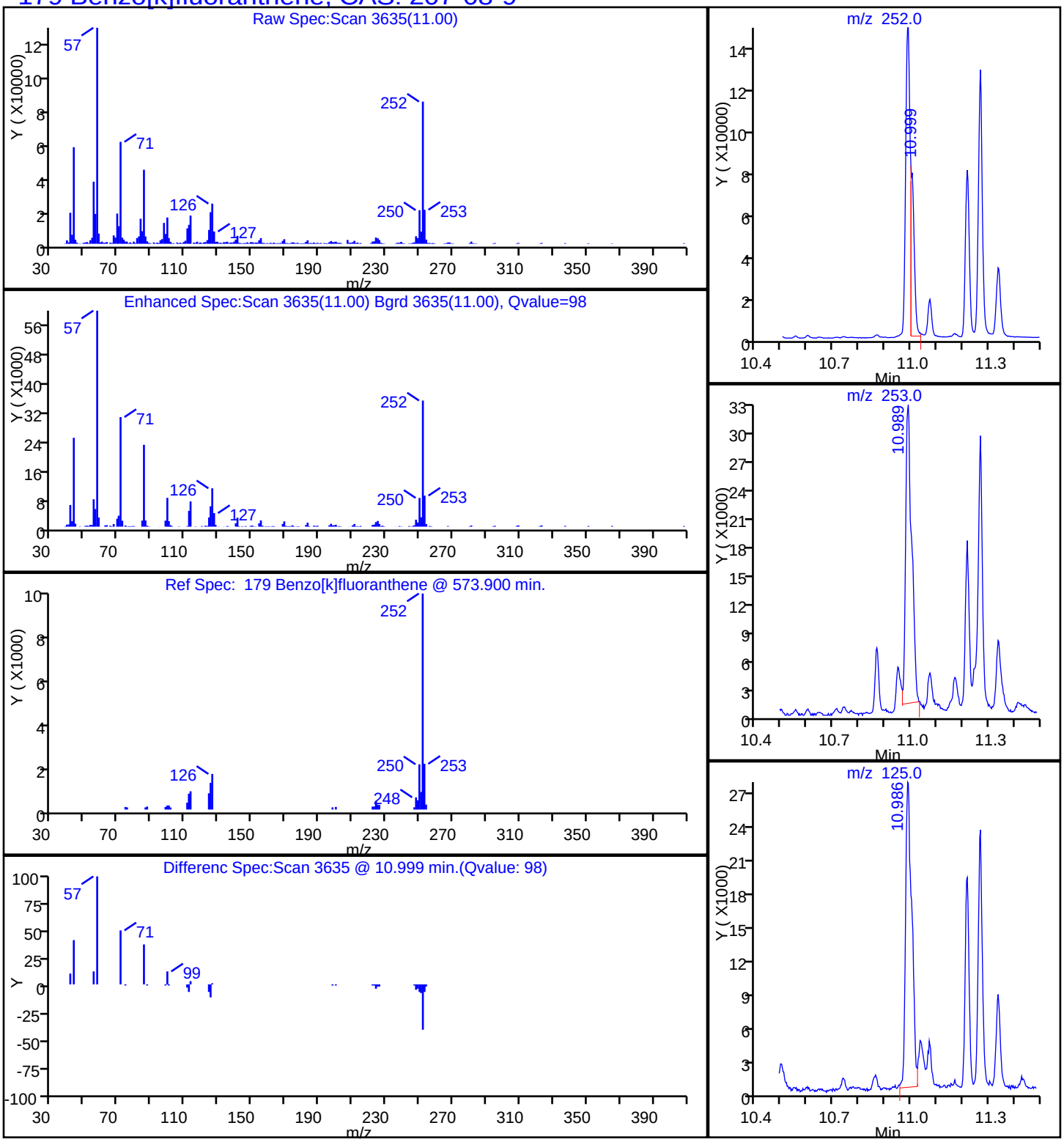


Report Date: 07-May-2015 15:52:44 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

179 Benzo[k]fluoranthene, CAS: 207-08-9

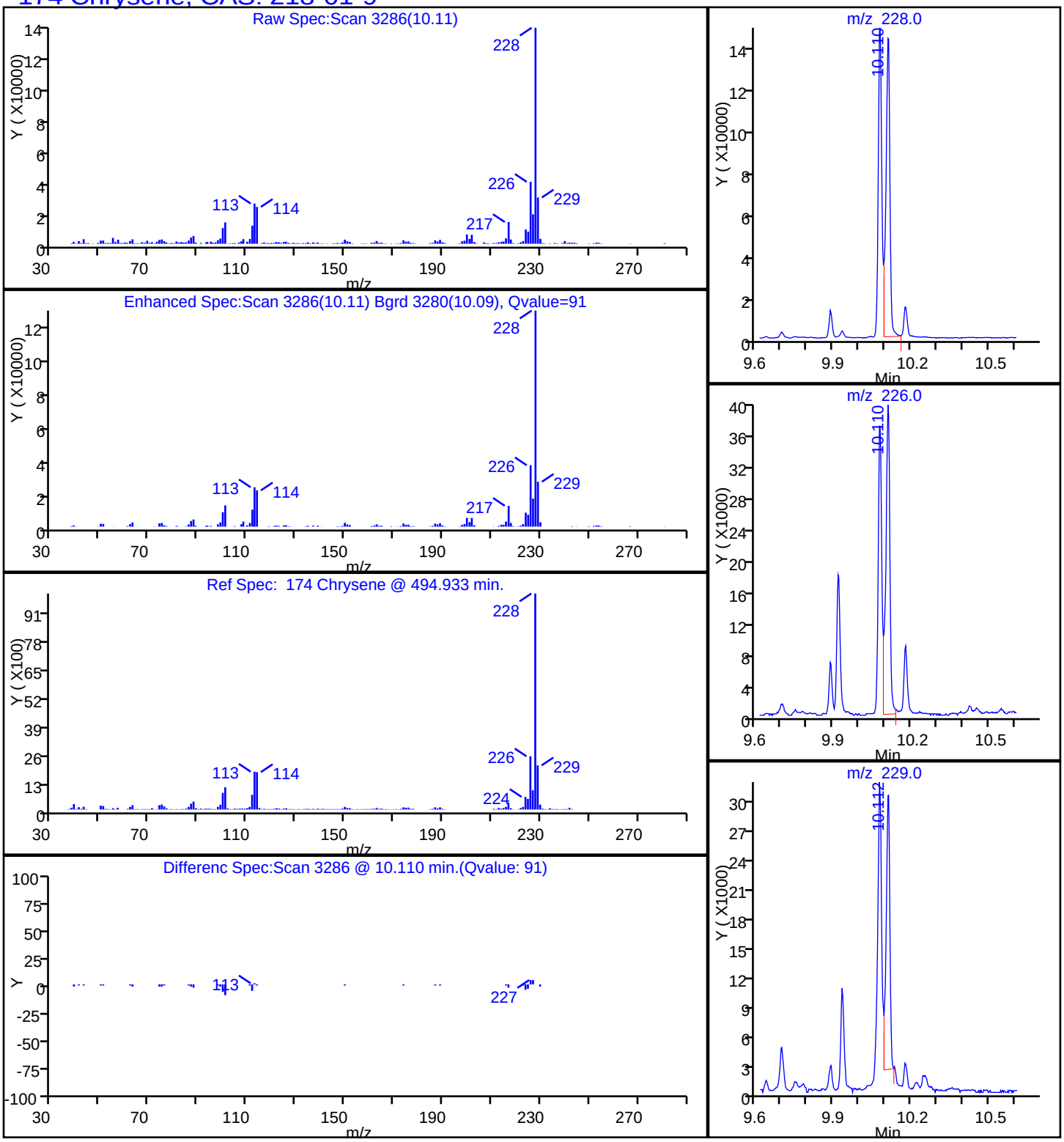


Report Date: 07-May-2015 15:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

174 Chrysene, CAS: 218-01-9

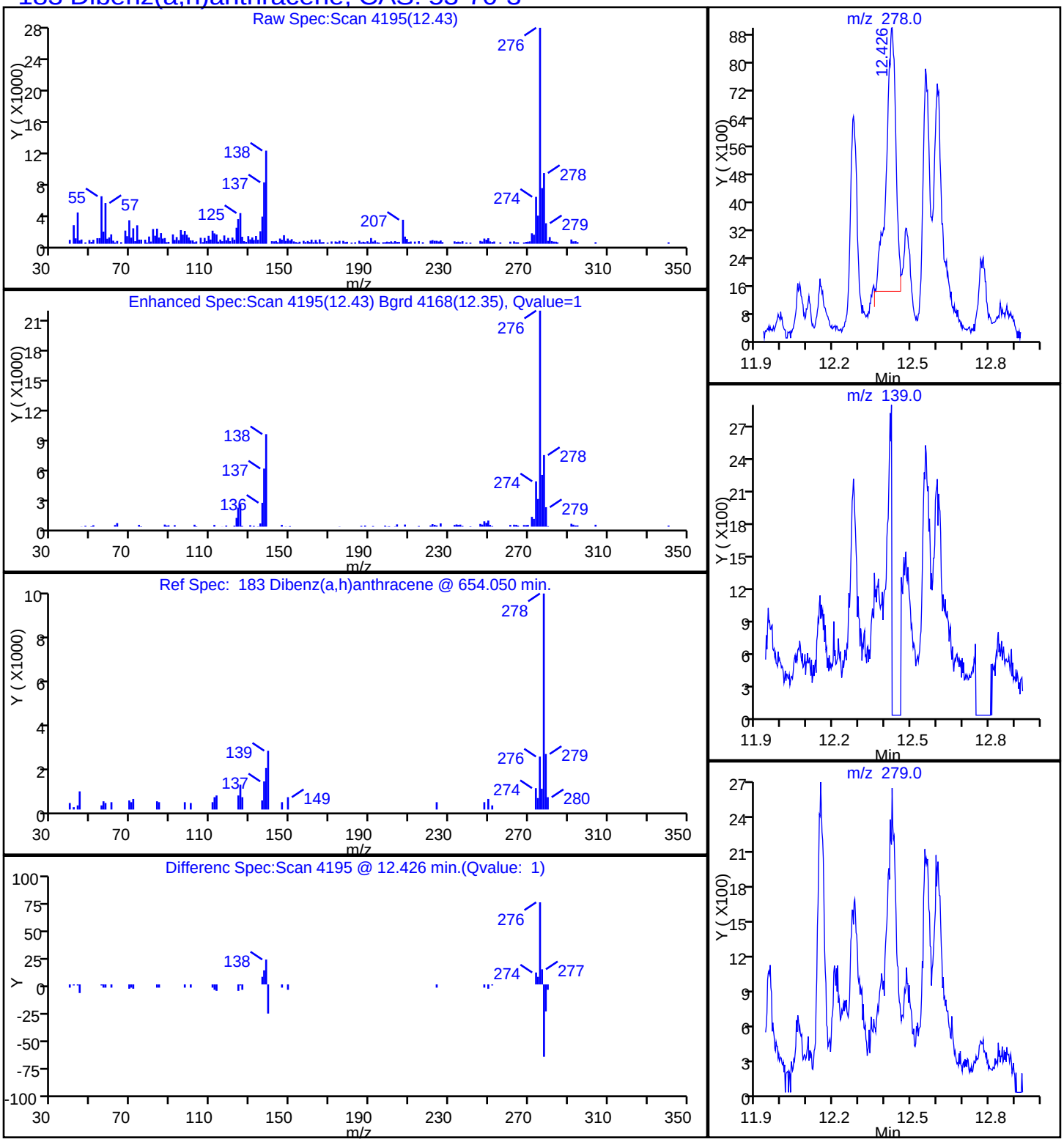


Report Date: 07-May-2015 15:52:44 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

183 Dibenz(a,h)anthracene, CAS: 53-70-3

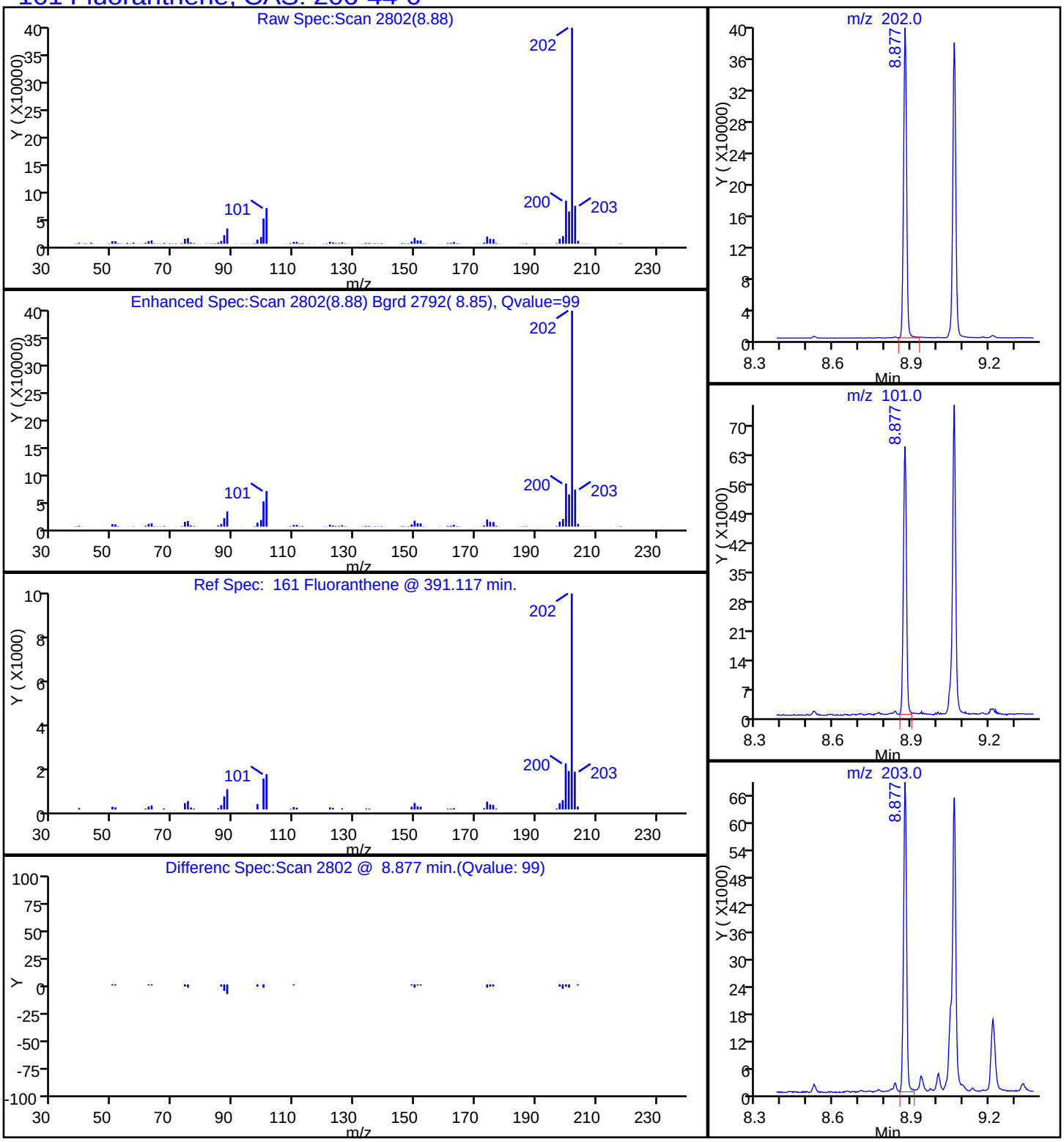


Report Date: 07-May-2015 15:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

161 Fluoranthene, CAS: 206-44-0

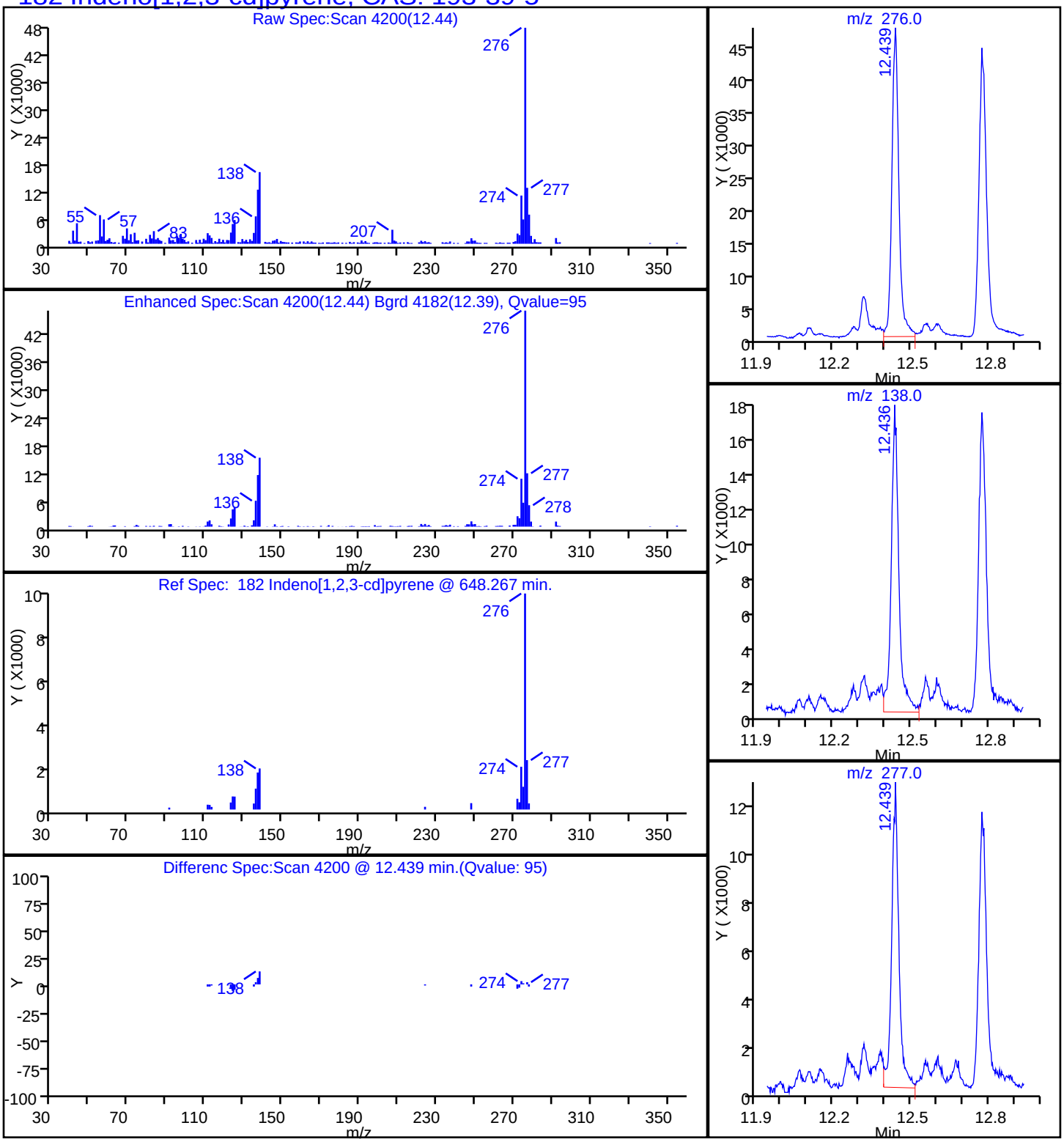


Report Date: 07-May-2015 15:52:44 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

182 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

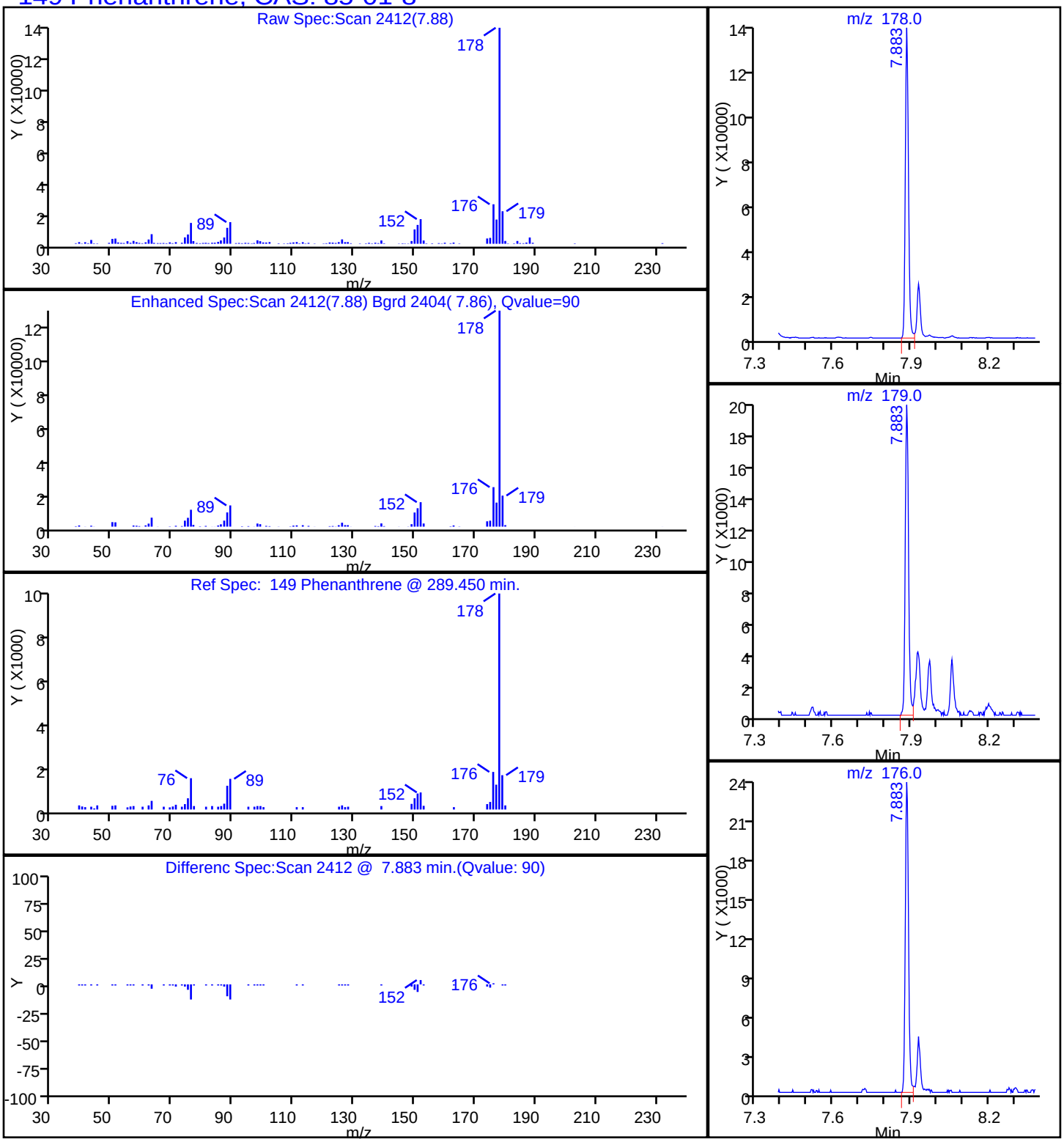


Report Date: 07-May-2015 15:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

149 Phenanthrene, CAS: 85-01-8

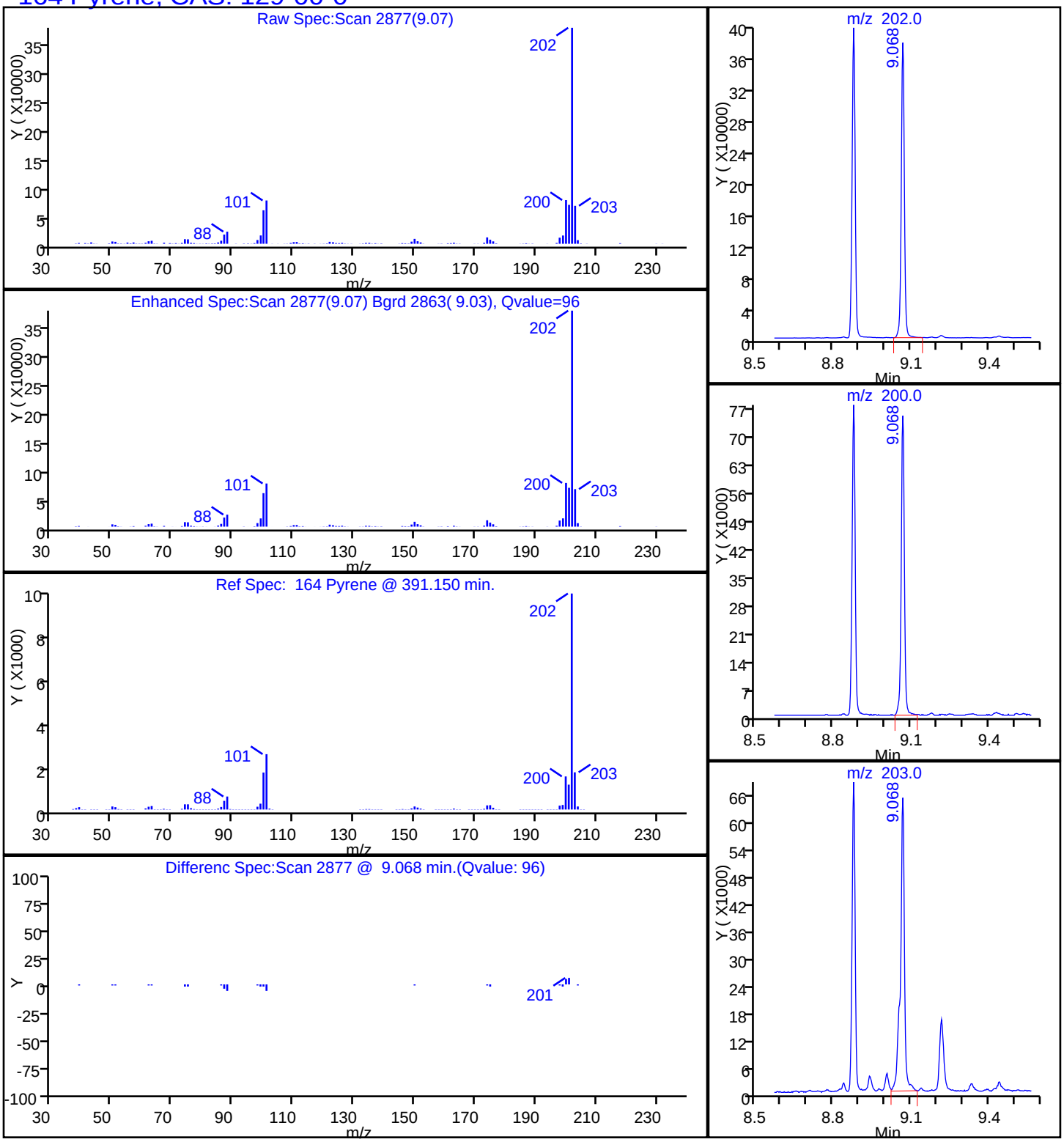


Report Date: 07-May-2015 15:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

164 Pyrene, CAS: 129-00-0



Manual Integration/User Assign Peak Report

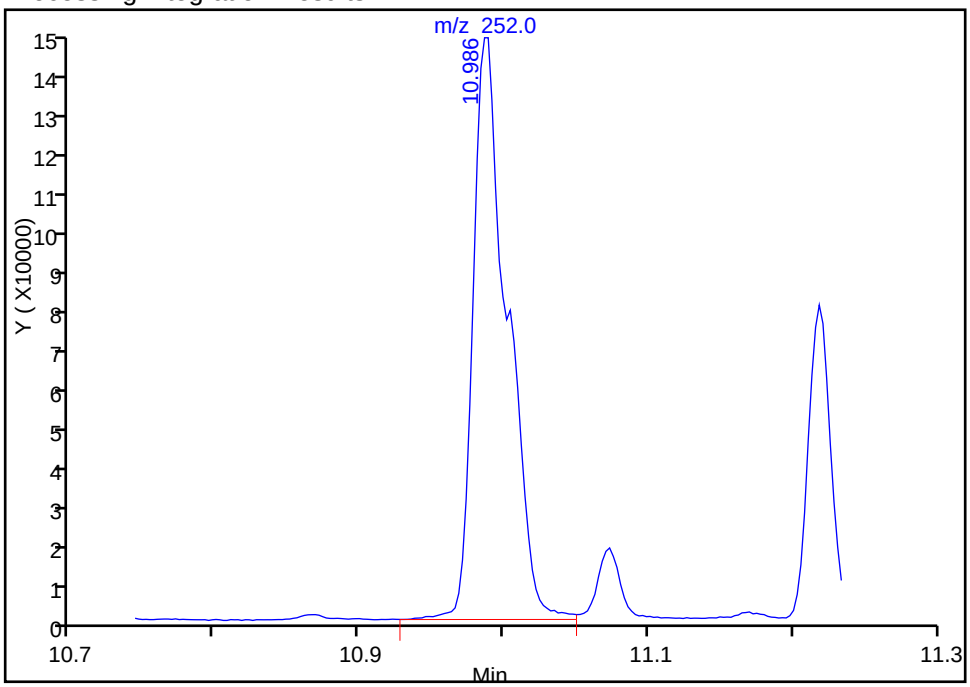
TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

178 Benzo[b]fluoranthene, CAS: 205-99-2

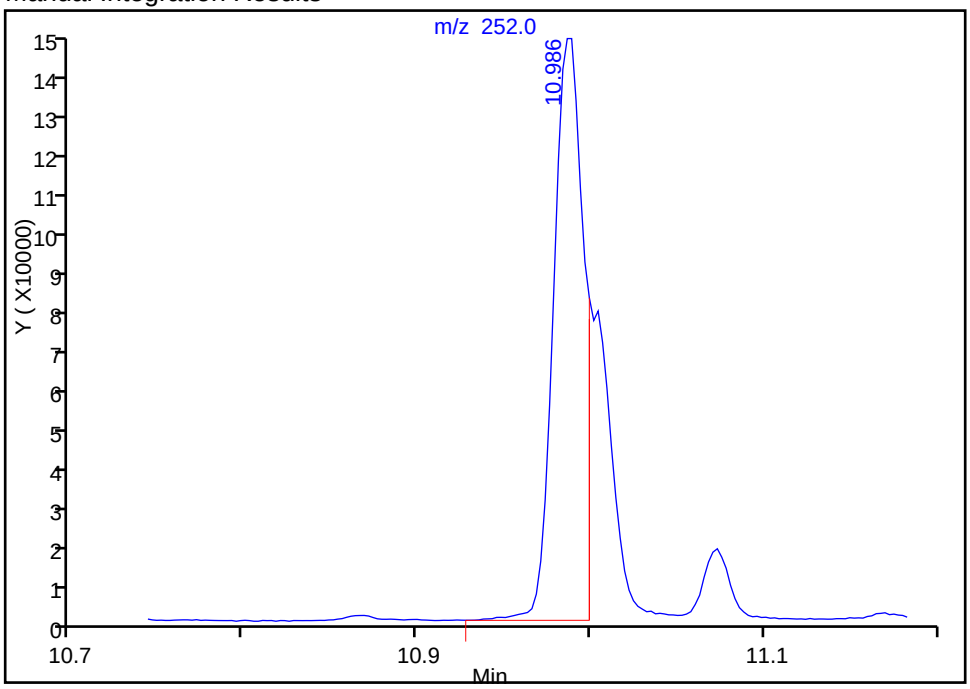
Processing Integration Results

RT: 10.99
Area: 238322
Amount: 23.198171
Amount Units: ug/ml



Manual Integration Results

RT: 10.99
Area: 174878
Amount: 17.022556
Amount Units: ug/ml



Reviewer: lesiakk, 07-May-2015 15:52:43
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

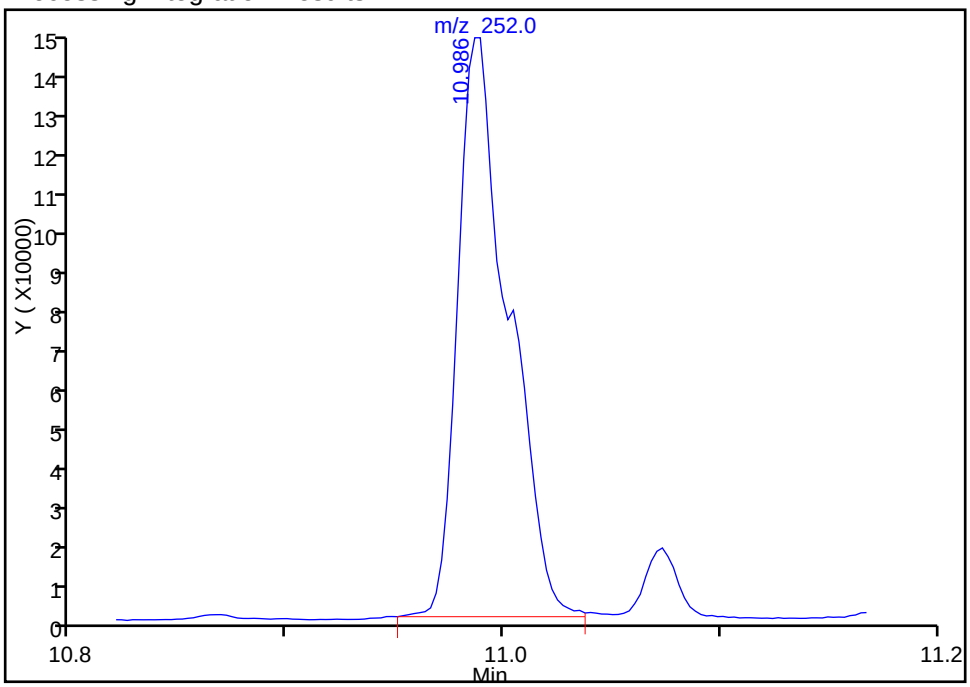
TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-11.d				
Injection Date:	06-May-2015 15:32:30	Instrument ID:	CMS23		
Lims ID:	500-95474-A-11-B	Lab Sample ID:	500-95474-11		
Client ID:	DS-DUP				
Operator ID:	TW	ALS Bottle#:	21	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

179 Benzo[k]fluoranthene, CAS: 207-08-9

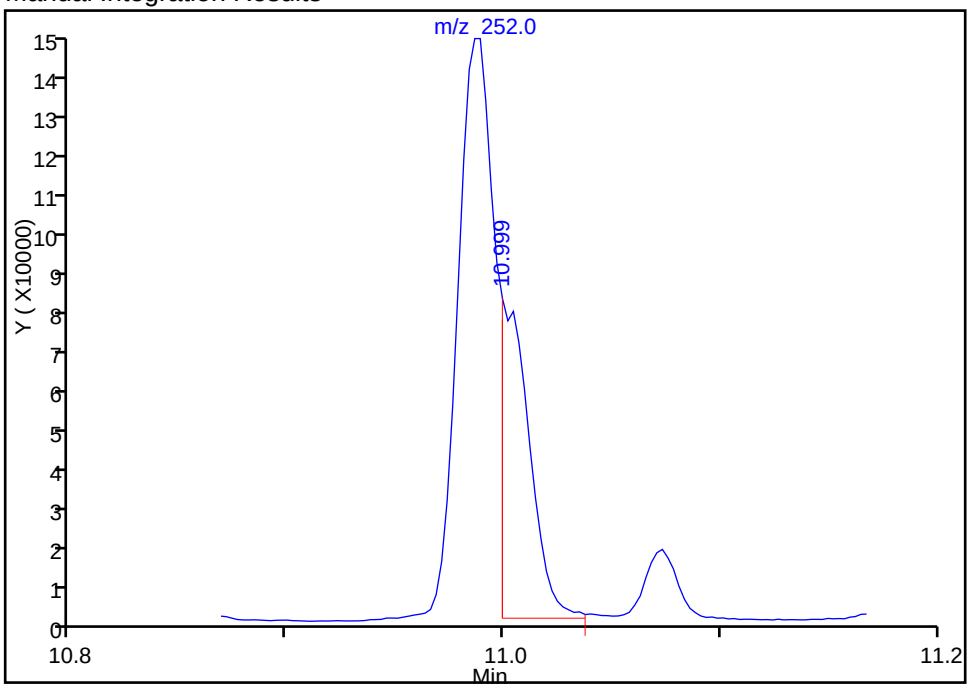
Processing Integration Results

RT: 10.99
Area: 233084
Amount: 21.279348
Amount Units: ug/ml



Manual Integration Results

RT: 11.00
Area: 72879
Amount: 6.653471
Amount Units: ug/ml



Reviewer: lesiakk, 07-May-2015 15:52:43
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 500-281696/3	L1STD02.D
Level 2	IC 500-281696/4	L1STD05.D
Level 3	IC 500-281696/5	L1STD1.D
Level 4	IC 500-281696/2	L1STD2.D
Level 5	IC 500-281696/6	L1STD5.D
Level 6	IC 500-281696/7	L1STD10.D
Level 7	IC 500-281696/8	L1STD20.D
Level 8	ICIS 500-281696/9	L1STD40.D
Level 9	IC 500-281696/10	L1STD50.D
Level 10	IC 500-281696/11	L1STD60.D
Level 11	IC 500-281696/12	L1STD70.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,4-Dioxane	0.5386 0.4720	0.5117	0.4864	0.4947	0.5106 0.4571	Ave		0.4959			0.0100	5.5		20.0			
N-Nitrosodimethylamine	0.9685 0.9237	0.9797	0.9502	1.0921 0.9378	0.9715 0.8952	Ave		0.9649			0.0100	6.1		20.0			
Pyridine	+++++ 1.3134	1.2191	1.2544	1.1147	+++++ 1.2614	Ave		1.2326			0.0100	6.0		20.0			
Benzaldehyde	0.9008 0.5809	0.8940	0.7701	0.7416	0.9067 0.6076	Ave		0.7716			0.0100	17.9		20.0			
Phenol	1.4409 1.3286	1.4575	1.3872	1.4399	1.4499 1.2751	Ave		1.3970			0.8000	5.0		20.0			
Aniline	1.7531 1.7970	1.8501	1.8582	1.8741	1.6600 1.7610	Ave		1.7933			0.0100	4.2		20.0			
Bis(2-chloroethyl)ether	1.1170 1.1407	1.1266	1.0909	1.2630 1.1391	1.1376 1.0155	Ave		1.1288			0.7000	6.1		20.0			
n-Decane	1.8301 1.3005	1.7307	1.5118	2.0525 1.5233	1.8595 1.3211	Ave		1.6412			0.0100	16.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Chlorophenol	1.1941 1.1002	1.2203	1.1524	1.1714	1.2229 1.0726	Ave		1.1620			0.8000	5.0		20.0			
1,3-Dichlorobenzene	1.4379 1.2805	1.4303	1.3376	1.5639 1.3611	1.4600 1.2458	Ave		1.3896			0.0100	7.5		20.0			
1,4-Dichlorobenzene	1.4535 1.2774	1.4463	1.3554	1.6363 1.3723	1.4644 1.2520	Ave		1.4072			0.0100	8.7		20.0			
Benzyl alcohol	0.7887 0.8158	0.8341	0.8137	0.8763 0.8710	0.7915 0.7660	Ave		0.8196			0.0100	4.8		20.0			
1,2-Dichlorobenzene	1.3642 1.2156	1.3481	1.2826	1.2912	1.3863 1.1883	Ave		1.2966			0.0100	5.8		20.0			
2-Methylphenol	0.9536 0.9342	1.0088	0.9672	1.0986 1.0126	0.9702 0.8919	Ave		0.9796			0.7000	6.3		20.0			
2,2'-oxybis[1-chloropropane]	2.3338 1.9664	2.3124	2.1839	2.6247 2.1760	2.3668 1.9348	Ave		2.2374			0.0100	10.0		20.0			
Indene	2.1667 1.9961	2.1889	2.0966	2.1174	2.1738 1.9482	Ave		2.0983			0.0100	4.4		20.0			
3 & 4 Methylphenol	1.1638 1.1980	1.2293	1.1982	1.3394 1.2881	1.1826 1.1319	Ave		1.2164			0.6000	5.6		20.0			
N-Nitrosodi-n-propylamine	0.8882 0.8545	0.7561 0.9553	0.8150 0.9092	1.0174 0.9873	0.8882 0.8452	Ave		0.8917			0.5000	8.9		20.0			
Acetophenone	1.6982 1.5993	1.7422	1.7164 1.6783	1.9093 1.7540	1.7263 1.5166	Ave		1.7045			0.0100	6.3		20.0			
Hexachloroethane	0.5868 0.5491	0.5941	0.5762	0.5832	0.6030 0.5365	Ave		0.5756			0.3000	4.2		20.0			
Nitrobenzene	0.3525 0.3247	0.3533	0.3449 0.3484	0.3960 0.3405	0.3443 0.3161	Ave		0.3467			0.2000	6.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Isophorone	0.5925 0.6000	0.6271	0.6194	0.6627 0.6520	0.5889 0.5860	Ave		0.6161			0.4000	4.8		20.0			
2,4-Dimethylphenol	0.3288 0.2835	0.3217	0.3115	0.3053	0.4026 0.2800	Ave		0.3191			0.2000	12.9		20.0			
2-Nitrophenol	0.1662 0.1589	0.1714	0.1697	0.1682	0.1599 0.1545	Ave		0.1641			0.1000	3.9		20.0			
Benzoic acid	+++++ 0.2113	0.1644	0.2004	0.2249	+++++ 0.2043	Ave		0.2011			0.0100	11.2		20.0			
Bis(2-chloroethoxy)methane	0.3606 0.3333	0.3628	0.3531	0.4089 0.3509	0.3612 0.3225	Ave		0.3567			0.3000	7.2		20.0			
2,4-Dichlorophenol	0.2838 0.2721	0.2856	0.2847	0.2862	0.2781 0.2625	Ave		0.2790			0.2000	3.2		20.0			
1,2,4-Trichlorobenzene	0.3159 0.2828	0.3117	0.3047	0.3501 0.2974	0.3190 0.2769	Ave		0.3073			0.0100	7.5		20.0			
Naphthalene	0.9845 0.8519	0.9955	1.0683 0.9468	1.1377 0.9246	0.9935 0.8366	Ave		0.9710			0.7000	9.9		20.0			
4-Chloroaniline	0.3864 0.3337	0.4184	0.3966	0.3906	0.3810 0.3192	Ave		0.3751			0.0100	9.5		20.0			
2,6-Dichlorophenol	0.2781 0.2427	0.2765	0.2661	0.2663	0.2754 0.2407	Ave		0.2637			0.0100	6.0		20.0			
Hexachlorobutadiene	0.1873 0.1660	0.1834	0.1795	0.1731	0.1874 0.1630	Ave		0.1771			0.0100	5.6		20.0			
Caprolactam	0.0910 0.1050	0.1028	0.1073	0.1158	0.0866 0.1013	Ave		0.1014			0.0100	9.7		20.0			
4-Chloro-3-methylphenol	0.2956 0.2849	0.3139	0.3028	0.3208	0.2887 0.2794	Ave		0.2980			0.2000	5.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Methylnaphthalene	0.6790 0.5827	0.7066 0.6834	0.7375 0.6435	0.7521 0.6519	0.6829 0.5823	Ave		0.6702			0.4000	8.5		20.0			
1-Methylnaphthalene	0.5994 0.5156	0.5975	0.6496 0.5685	0.6530 0.5786	0.5968 0.5152	Ave		0.5860			0.0100	8.4		20.0			
Hexachlorocyclopentadiene	0.3744 0.3534	0.3667	0.3819	0.3540	0.3521 0.3510	Ave		0.3619			0.0500	3.4		20.0			
1,2,4,5-Tetrachlorobenzene	0.5469 0.4532	0.5138	0.5063	0.4783	0.5528 0.4558	Ave		0.5010			0.0100	8.1		20.0			
2,4,6-Trichlorophenol	0.3428 0.3534	0.3504	0.3640	0.3488	0.3282 0.3380	Ave		0.3465			0.2000	3.3		20.0			
2,4,5-Trichlorophenol	0.3771 0.3531	0.3833	0.3759	0.3668	0.3550 0.3537	Ave		0.3664			0.2000	3.4		20.0			
1,1'-Biphenyl	1.4316 1.1895	1.3545	1.3287	1.2673	1.4220 1.1950	Ave		1.3127			0.0100	7.6		20.0			
2-Chloronaphthalene	1.0929 0.9226	1.0334	1.0213	1.2237 0.9776	1.0757 0.9285	Ave		1.0345			0.8000	9.5		20.0			
2-Nitroaniline	0.3509 0.3393	0.3643	0.3572	0.3399	0.3252 0.3353	Ave		0.3446			0.0100	3.9		20.0			
Dimethyl phthalate	1.2293 1.1193	1.2568	1.1971	1.3363 1.1329	1.2265 1.1137	Ave		1.2015			0.0100	6.4		20.0			
m-Dinitrobenzene	0.1770 0.1968	0.1929	0.1996	0.1930	0.1588 0.1912	Ave		0.1870			0.0100	7.7		20.0			
2,6-Dinitrotoluene	0.2760 0.2580	0.1417 0.2798	0.2149 0.2771	0.2764 0.2639	0.2682 0.2566	Lin1	-0.036	0.2655			0.2000				0.9980		0.9900
Acenaphthylene	1.8550 +++++	1.7911	1.8497 1.7562	2.0385 1.6638	1.8133 1.5820	Ave		1.7937			0.9000	7.6		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
3-Nitroaniline	0.3091 0.2737	0.3178	0.3052	0.2894	0.2844 0.2834	Ave		0.2947			0.0100	5.5		20.0			
Acenaphthene	1.1924 0.9343	1.1417	1.2408 1.0762	1.2637 1.0100	1.1804 0.9420	Ave		1.1091			0.9000	11.2		20.0			
2,4-Dinitrophenol	0.1177 0.1525	0.1469	0.1565	0.1538	+++++ 0.1510	Ave		0.1464			0.0100	9.9		20.0			
4-Nitrophenol	0.1882 0.1669	0.1857	0.1803	0.1768	0.1814 0.1672	Ave		0.1781			0.0100	4.7		20.0			
2,4-Dinitrotoluene	0.3632 0.3569	0.3789	0.2642 0.3734	0.3641 0.3647	0.3498 0.3528	Ave		0.3520			0.2000	9.7		20.0			
Dibenzofuran	1.6554 1.3953	1.6000	1.5524	1.8209 1.4647	1.6757 1.3995	Ave		1.5705			0.8000	9.4		20.0			
2,3,4,6-Tetrachlorophenol	0.2967 0.3017	0.3050	0.3120	0.2962	0.2744 0.2954	Ave		0.2973			0.0100	3.9		20.0			
Hexadecane	0.9399 0.6968	0.8918	0.8228	0.7705	0.9624 0.7144	Ave		0.8284			0.0100	12.9		20.0			
Diethyl phthalate	1.3017 1.0727	1.2451	1.1801	1.4621 1.1485	1.3342 1.0643	Ave		1.2261			0.0100	11.2		20.0			
4-Chlorophenyl phenyl ether	0.6312 0.5364	0.6058	0.6057	0.5683	0.6343 0.5475	Ave		0.5899			0.4000	6.7		20.0			
Fluorene	1.3523 1.0656	1.2670	1.4641 1.1950	1.4971 1.1209	1.3653 1.0673	Ave		1.2661			0.9000	13.0		20.0			
4-Nitroaniline	0.3020 0.2783	0.2858	0.2963	0.2947	0.3101 0.2782	Ave		0.2922			0.0100	4.1		20.0			
4,6-Dinitro-2-methylphenol	0.0962 0.1141	0.1124	0.1145	0.1197	+++++ 0.1117	Ave		0.1114			0.0100	7.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
N-Nitrosodiphenylamine	0.5193 0.4052	0.4940	0.5611 0.4539	0.5766 0.4351	0.5163 0.4028	Ave		0.4849			0.0100	13.2		20.0			
1,2-Diphenylhydrazine	1.3028 1.0662	1.2452	1.2039	1.1212	1.3184 1.0743	Ave		1.1903			0.0100	8.8		20.0			
4-Bromophenyl phenyl ether	0.1864 0.1790	0.1888	0.1882	0.1858	0.1829 0.1765	Ave		0.1839			0.1000	2.5		20.0			
Hexachlorobenzene	0.2046 0.1938	0.2098 0.2020	0.2114 0.2051	0.2186 0.2019	0.2043 0.1914	Ave		0.2043			0.1000	3.9		20.0			
Atrazine	0.1900 0.1676	0.1889	0.1853	0.1865	0.1882 0.1689	Ave		0.1822			0.0100	5.3		20.0			
n-Octadecane	0.4437 0.2205	0.3899	0.3116	0.5098 0.2818	0.4538 0.2401	Qua2	0.1231	0.4542	-0.003488		0.0100				0.9990		0.9900
Pentachlorophenol	0.1105 0.1173	0.1215	0.1223	0.1240	0.1009 0.1140	Ave		0.1158			0.0500	7.0		20.0			
Phenanthrene	1.0346 0.8535	1.0094	1.1449 0.9567	1.1830 0.9362	1.0516 0.8452	Ave		1.0017			0.7000	11.7		20.0			
Anthracene	1.0455 0.8476	1.0234	1.1031 0.9620	1.1966 0.9381	1.0532 0.8560	Ave		1.0028			0.7000	11.4		20.0			
Carbazole	1.0293 0.8387	0.9790	0.9023	0.9130	1.0193 0.8240	Ave		0.9294			0.0100	8.9		20.0			
Di-n-butyl phthalate	1.1601 0.9807	1.1894	1.1134	1.3115 1.1274	1.1678 0.9912	Ave		1.1302			0.0100	9.5		20.0			
Fluoranthene	1.1536 0.9480	1.1287	1.2324 1.0517	1.3459 1.0402	1.1698 0.9417	Ave		1.1124			0.6000	11.9		20.0			
Benzidine	0.4843 0.5285	0.5671	0.5585	0.5552	0.4220 0.5220	Ave		0.5196			0.0100	9.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Pyrene	1.2145 1.0749	1.2644	1.3200 1.1764	1.3591 1.3046	1.2022 1.0816	Ave		1.2220			0.6000	8.2		20.0			
Butyl benzyl phthalate	0.5182 0.4872	0.5338	0.5255	0.5742 0.5518	0.5017 0.4799	Ave		0.5215			0.0100	6.1		20.0			
Bis(2-ethylhexyl) phthalate	0.7042 0.6481	0.7390	0.7194	0.7912 0.7210	0.6705 0.6549	Ave		0.7060			0.0100	6.8		20.0			
3,3'-Dichlorobenzidine	0.3502 0.3589	0.3428	0.3568	0.3515	0.3406 0.3495	Ave		0.3501			0.0100	1.9		20.0			
Benzo[a]anthracene	1.6835 1.0320 1.0033	1.2868 1.0391	1.1258 1.0154	1.1874 1.0067	1.0591 0.9552	Lin1	0.1615	0.9957			0.8000				0.9990		0.9900
Chrysene	1.7451 0.9992 0.9129	1.2843 0.9870	1.1235 0.9603	1.1719 0.9626	1.0021 0.8960	Lin1	0.2004	0.9323			0.7000				0.9990		0.9900
Di-n-octyl phthalate	1.1647 1.1142	1.1513	1.1665	0.9784	1.0752 1.0682	Ave		1.1026			0.0100	6.2		20.0			
Benzo[b]fluoranthene	1.3808 1.1441 1.0902	1.1307 1.0456	1.0941 1.0606	1.1821 1.0469	1.0691 0.9982	Ave		1.1130			0.7000	9.2		20.0			
Benzo[k]fluoranthene	1.3609 1.1480 0.9114	1.2128 1.1535	1.1872 1.0957	1.2952 1.1212	1.2114 0.9516	Ave		1.1499			0.7000	11.5		20.0			
Benzo[a]pyrene	1.0414 1.0676 0.9786	0.9180 1.0535	0.9922 1.0469	1.1496 1.0487	1.0496 0.9567	Ave		1.0275			0.7000	6.1		20.0			
Indeno[1,2,3-cd]pyrene	0.8883 1.1863 1.0629	0.9836 1.1783	1.0241 1.1280	1.2624 1.1414	1.1427 1.0461	Ave		1.0949			0.5000	9.7		20.0			
Dibenz(a,h)anthracene	0.8495 0.9968 0.8943	0.8305 0.9954	0.8728 0.9459	1.0839 0.9648	0.9593 0.8834	Ave		0.9342			0.4000	8.1		20.0			
Benzo[g,h,i]perylene	1.0007 0.9298	0.9807	0.9086 0.9711	1.0577 0.9922	0.9512 0.9212	Ave		0.9681			0.5000	4.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Fluorophenol (Surr)	1.2610 1.1503	1.2067	1.2231 1.1738	1.3199 1.1874	1.2033 1.1056	Ave		1.2034			0.0100	5.2		20.0			
Phenol-d5 (Surr)	1.4865 1.2935	1.4013	1.3643 1.3656	1.5739 1.4095	1.4193 1.2369	Ave		1.3946			0.0100	7.1		20.0			
Nitrobenzene-d5 (Surr)	0.3747 0.3424	0.3623	0.3447 0.3688	0.4038 0.3513	0.3585 0.3302	Ave		0.3596			0.0100	6.0		20.0			
2-Fluorobiphenyl (Surr)	1.3650 1.0779	1.2202	1.3855 1.2266	1.4532 1.1357	1.3257 1.0977	Ave		1.2542			0.0100	10.8		20.0			
2,4,6-Tribromophenol (Surr)	0.1815 0.1966	0.1772	0.1301 0.1955	0.1745 0.1917	0.1585 0.1908	Ave		0.1774			0.0100	12.1		20.0			
Terphenyl-d14 (Surr)	0.7182 0.6860	0.7191	0.7798 0.7191	0.7920 0.7926	0.7103 0.6853	Ave		0.7336			0.0100	5.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 500-281696/3	L1STD02.D
Level 2	IC 500-281696/4	L1STD05.D
Level 3	IC 500-281696/5	L1STD1.D
Level 4	IC 500-281696/2	L1STD2.D
Level 5	IC 500-281696/6	L1STD5.D
Level 6	IC 500-281696/7	L1STD10.D
Level 7	IC 500-281696/8	L1STD20.D
Level 8	ICIS 500-281696/9	L1STD40.D
Level 9	IC 500-281696/10	L1STD50.D
Level 10	IC 500-281696/11	L1STD60.D
Level 11	IC 500-281696/12	L1STD70.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,4-Dioxane	DCB	Ave	23547 264667	52418	124187	143614	14034 204516	10.0 70.0	20.0	40.0	50.0	5.00 60.0
N-Nitrosodimethylamine	DCB	Ave	42343 517983	100363	242606	20960 272255	26703 400555	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Pyridine	DCB	Ave	+++++ 736465	124880	320279	323598	+++++ 564367	+++++ 70.0	20.0	40.0	50.0	+++++ 60.0
Benzaldehyde	DCB	Ave	39381 325715	91583	196619	215298	24921 271842	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Phenol	DCB	Ave	62994 744982	149305	354191	417991	39852 570506	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Aniline	DCB	Ave	76645 1007646	189522	474460	544049	45628 787908	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Bis(2-chloroethyl)ether	DCB	Ave	48835 639655	115410	278547	24239 330694	31270 454382	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
n-Decane	DCB	Ave	80011 729269	177296	386003	39393 442225	51112 591076	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorophenol	DCB	Ave	52208 616955	125008	294230	340049	33614 479907	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,3-Dichlorobenzene	DCB	Ave	62865 718055	146525	341521	30015 395127	40131 557390	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
1,4-Dichlorobenzene	DCB	Ave	63546 716305	148155	346082	31405 398380	40251 560161	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Benzyl alcohol	DCB	Ave	34483 457452	85446	207770	16818 252865	21755 342735	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
1,2-Dichlorobenzene	DCB	Ave	59643 681660	138102	327499	374832	38105 531657	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2-Methylphenol	DCB	Ave	41693 523833	103345	246953	21084 293963	26668 399061	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2,2'-oxybis[1-chloropropane]	DCB	Ave	102035 1102657	236883	557617	50373 631696	65056 865694	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Indene	DCB	Ave	94730 1119310	224229	535334	614687	59752 871680	10.0 70.0	20.0	40.0	50.0	5.00 60.0
3 & 4 Methylphenol	DCB	Ave	50880 671760	125929	305947	25707 373921	32506 506449	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
N-Nitrosodi-n-propylamine	DCB	Ave	38832 479183	1270 97866	4061 232143	19527 286625	24414 378159	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Acetophenone	DCB	Ave	74246 896773	178473	8552 428523	36644 509187	47450 678587	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Hexachloroethane	DCB	Ave	25655 307910	60859	147127	169309	16575 240064	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Nitrobenzene	NPT	Ave	57417 709272	140457	6469 339870	28354 401263	35602 545992	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Isophorone	NPT	Ave	96491 1310755	249304	604266	47456 768310	60895 1012220	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2,4-Dimethylphenol	NPT	Ave	53557 619415	127882	303896	359800	41631 483569	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2-Nitrophenol	NPT	Ave	27072 347081	68136	165574	198246	16537 266827	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzoic acid	NPT	Ave	+++++ 461582	65357	195487	265066	+++++ 352929	+++++ 70.0	20.0	40.0	50.0	+++++ 60.0
Bis(2-chloroethoxy)methane	NPT	Ave	58733 728098	144245	344451	29280 413505	37348 556979	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2,4-Dichlorophenol	NPT	Ave	46220 594505	113565	277742	337267	28756 453464	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,2,4-Trichlorobenzene	NPT	Ave	51448 617814	123942	297290	25066 350462	32986 478230	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Naphthalene	NPT	Ave	160347 1861038	395788	20034 923593	81467 1089576	102723 1445012	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
4-Chloroaniline	NPT	Ave	62924 729032	166351	386859	460357	39390 551371	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,6-Dichlorophenol	NPT	Ave	45298 530178	109920	259631	313780	28477 415751	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Hexachlorobutadiene	NPT	Ave	30512 362566	72907	175131	203991	19377 281581	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Caprolactam	NPT	Ave	14821 229362	40887	104673	136465	8958 175014	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4-Chloro-3-methylphenol	NPT	Ave	48140 622337	124793	295369	378047	29855 482679	10.0 70.0	20.0	40.0	50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Methylnaphthalene	NPT	Ave	110579 1272992	4440 271714	13831 627725	53856 768206	70616 1005837	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
1-Methylnaphthalene	NPT	Ave	97621 1126436	237547	12182 554565	46759 681906	61712 889836	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Hexachlorocyclopentadiene	ANT	Ave	35303 467595	90518	222419	272018	21125 366229	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,2,4,5-Tetrachlorobenzene	ANT	Ave	51576 599598	126851	294868	367453	33167 475615	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4,6-Trichlorophenol	ANT	Ave	32325 467609	86495	211995	268000	19690 352636	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4,5-Trichlorophenol	ANT	Ave	35562 467214	94618	218910	281805	21298 369039	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,1'-Biphenyl	ANT	Ave	134998 1573826	334384	773882	973650	85312 1246900	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2-Chloronaphthalene	ANT	Ave	103059 1220637	255122	594850	49214 751077	64539 968822	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2-Nitroaniline	ANT	Ave	33087 448977	89946	208072	261110	19508 349845	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Dimethyl phthalate	ANT	Ave	115925 1480915	310274	697248	53742 870449	73582 1162026	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
m-Dinitrobenzene	ANT	Ave	16687 260359	47617	116228	148293	9529 199532	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,6-Dinitrotoluene	ANT	Lin1	26022 341294	526 69065	2461 161410	11117 202782	16091 267743	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Acenaphthylene	ANT	Ave	174922 +++++	442171	21183 1022869	81983 1278345	108788 1650672	10.0 +++++	20.0	1.00 40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
3-Nitroaniline	ANT	Ave	29146 362099	78460	177743	222345	17065 295676	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Acenaphthene	ANT	Ave	112440 1236106	281851	14210 626841	50823 776004	70820 982890	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2,4-Dinitrophenol	ANT	Ave	22196 403496	72531	182334	236280	+++++ 315143	20.0 140	40.0	80.0	100	+++++ 120
4-Nitrophenol	ANT	Ave	35493 441643	91707	210054	271646	21772 348840	20.0 140	40.0	80.0	100	10.0 120
2,4-Dinitrotoluene	ANT	Ave	34253 472140	93542	3026 217485	14644 280169	20984 368104	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Dibenzofuran	ANT	Ave	156100 1846032	395009	904198	73233 1125305	100535 1460193	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	27982 399121	75298	181745	227580	16462 308174	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Hexadecane	ANT	Ave	88633 921916	220165	479221	592016	57739 745448	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Diethyl phthalate	ANT	Ave	122753 1419228	307392	687338	58801 882427	80047 1110489	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
4-Chlorophenyl phenyl ether	ANT	Ave	59523 709709	149551	352778	436666	38054 571288	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Fluorene	ANT	Ave	127523 1409879	312796	16767 695982	60210 861175	81913 1113563	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
4-Nitroaniline	ANT	Ave	28474 368261	70568	172580	226393	18607 290272	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4,6-Dinitro-2-methylphenol	PHN	Ave	33076 545545	100472	243210	329833	+++++ 429027	20.0 140	40.0	80.0	100	+++++ 120

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
N-Nitrosodiphenylamine	PHN	Ave	178522 1937320	441444	23611 964114	84587 1199253	116249 1546484	20.0 140	40.0	2.00 80.0	4.00 100	10.0 120
1,2-Diphenylhydrazine	ANT	Ave	122856 1410649	307403	701186	861412	79099 1120867	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4-Bromophenyl phenyl ether	PHN	Ave	32038 427754	84353	199930	256031	20589 338923	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Hexachlorobenzene	PHN	Ave	35176 463228	1383 90263	4448 217886	16039 278319	22997 367410	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Atrazine	PHN	Ave	32663 400697	84404	196835	257076	21191 324162	10.0 70.0	20.0	40.0	50.0	5.00 60.0
n-Octadecane	PHN	Qua2	76263 527055	174231	330999	37398 388455	51087 460848	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Pentachlorophenol	PHN	Ave	37985 560672	108588	259775	341843	22729 437831	20.0 140	40.0	80.0	100	10.0 120
Phenanthrene	PHN	Ave	177832 2040200	451039	24088 1016079	86782 1290376	118395 1622563	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Anthracene	PHN	Ave	179715 2026106	457305	23209 1021734	87779 1292906	118568 1643298	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Carbazole	PHN	Ave	176920 2004795	437457	958389	1258388	114750 1581914	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Di-n-butyl phthalate	PHN	Ave	199415 2344113	531459	1182517	96208 1553902	131476 1902855	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Fluoranthene	PHN	Ave	198292 2265972	504349	25929 1116986	98726 1433684	131693 1807834	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzidine	CRY	Ave	83592 1171340	236170	555664	632440	48025 916571	10.0 70.0	20.0	40.0	50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Pyrene	CRY	Ave	209650 2382471	526559	27252 1170396	104459 1486171	136823 1899090	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Butyl benzyl phthalate	CRY	Ave	89447 1079766	222290	522811	44134 628612	57100 842715	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	121553 1436440	307744	715704	60811 821301	76314 1149893	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
3,3'-Dichlorobenzidine	CRY	Ave	60457 795446	142778	354992	400453	38762 613728	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzo[a]anthracene	CRY	Lin1	4533 178148 2223633	8349 432720	23242 1010206	91267 1146835	120547 1677307	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Chrysene	CRY	Lin1	4699 172486 2023427	8333 411027	23195 955415	90077 1096558	114049 1573197	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Di-n-octyl phthalate	PHN	Ave	200201 2663325	514433	1238966	1348452	121043 2050617	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzo[b]fluoranthene	PRY	Ave	3129 170408 2516028	6064 398569	18438 975249	84618 1036444	107634 1728278	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[k]fluoranthene	PRY	Ave	3084 170978 2103269	6504 439683	20006 1007499	92712 1109933	121960 1647557	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[a]pyrene	PRY	Ave	2360 159006 2258522	4923 401575	16720 962616	82291 1038177	105670 1656373	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Indeno[1,2,3-cd]pyrene	PRY	Ave	2013 176686 2452996	5275 449143	17258 1037264	90368 1129950	115047 1811208	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Dibenz(a,h)anthracene	PRY	Ave	1925 148460 2063828	4454 379404	14708 869774	77586 955165	96576 1529407	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[g,h,i]perylene	PRY	Ave	149037 2145899	373817	15312 892915	75712 982252	95764 1594966	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 281696

SDG No.: 15-07.01

Instrument ID: CMS20 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/30/2015 12:14 Calibration End Date: 03/30/2015 16:18 Calibration ID: 18243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Fluorophenol (Surr)	DCB	Ave	55131 645020	123614	6094 299694	25332 344701	33075 494696	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Phenol-d5 (Surr)	DCB	Ave	64990 725338	143551	6798 348686	30207 409189	39013 553444	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Nitrobenzene-d5 (Surr)	NPT	Ave	61022 748036	144059	6465 359755	28912 414028	37073 570301	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2-Fluorobiphenyl (Surr)	ANT	Ave	128717 1426111	301251	15867 714389	58444 872557	79539 1145314	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	17113 260086	43739	1490 113870	7016 147262	9511 199094	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Terphenyl-d14 (Surr)	CRY	Ave	123975 1520523	299466	16099 715440	60873 902858	80841 1203383	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua2 = Quadratic 1/conc^2 ISTD

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD2.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Mar-2015 12:14:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 500-0029969-002
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:30 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:10:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.189	5.194	-0.005	96	76769	8.00	8.00	
* 2 Naphthalene-d8	136	6.156	6.156	0.000	99	286423	8.00	8.00	
* 3 Acenaphthene-d10	164	7.566	7.565	0.001	91	160871	8.00	8.00	
* 4 Phenanthrene-d10	188	8.808	8.808	0.000	97	293420	8.00	8.00	
* 5 Chrysene-d12	240	11.056	11.061	-0.005	98	307445	8.00	8.00	
* 6 Perylene-d12	264	12.713	12.713	0.000	98	286327	8.00	8.00	
$ 7 2-Fluorophenol	112	4.237	4.242	-0.005	99	25332	2.00	2.19	
$ 8 Phenol-d5	99	4.865	4.875	-0.010	83	30207	2.00	2.26	
$ 9 Nitrobenzene-d5	82	5.594	5.599	-0.005	91	28912	2.00	2.25	
$ 10 2-Fluorobiphenyl	172	6.989	6.989	0.000	99	58444	2.00	2.32	
$ 11 2,4,6-Tribromophenol	330	8.213	8.218	-0.005	70	7016	2.00	1.97	
$ 12 Terphenyl-d14	244	10.123	10.123	0.000	98	60873	2.00	2.16	
15 N-Nitrosodimethylamine	42	3.265	3.275	-0.010	74	20960	2.00	2.26	
34 Bis(2-chloroethyl)ether	93	4.970	4.975	-0.005	85	24239	2.00	2.24	
29 n-Decane	43	5.027	5.032	-0.005	92	39393	2.00	2.50	
38 1,3-Dichlorobenzene	146	5.151	5.156	-0.005	95	30015	2.00	2.25	
39 1,4-Dichlorobenzene	146	5.204	5.204	0.000	91	31405	2.00	2.33	
41 Benzyl alcohol	108	5.265	5.270	-0.005	88	16818	2.00	2.14	
43 2-Methylphenol	107	5.323	5.332	-0.009	93	21084	2.00	2.24	
44 2,2'-oxybis[1-chloropropan	45	5.356	5.361	-0.005	64	50373	2.00	2.35	
46 3 & 4 Methylphenol	108	5.432	5.442	-0.010	94	25707	2.00	2.20	
47 N-Nitrosodi-n-propylamine	70	5.451	5.465	-0.014	79	19527	2.00	2.28	
49 Acetophenone	105	5.470	5.480	-0.010	89	36644	2.00	2.24	
52 Nitrobenzene	77	5.608	5.613	-0.005	1	28354	2.00	2.28	
54 Isophorone	82	5.775	5.785	-0.009	99	47456	2.00	2.15	
59 Bis(2-chloroethoxy)methane	93	5.918	5.923	-0.005	94	29280	2.00	2.29	
64 1,2,4-Trichlorobenzene	180	6.099	6.099	0.000	92	25066	2.00	2.28	
65 Naphthalene	128	6.170	6.175	-0.005	91	81467	2.00	2.34	
76 2-Methylnaphthalene	142	6.708	6.713	-0.005	85	53856	2.00	2.24	
31 1-Methylnaphthalene	142	6.794	6.794	0.000	90	46759	2.00	2.23	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
61 2-Chloronaphthalene	162	7.108	7.108	0.000	90	49214	2.00	2.37	
88 Dimethyl phthalate	163	7.294	7.299	-0.005	97	53742	2.00	2.22	
104 2,6-Dinitrotoluene	165	7.356	7.361	-0.005	72	11117	2.00	2.22	
93 Acenaphthylene	152	7.451	7.456	-0.005	91	81983	2.00	2.30	
99 Acenaphthene	154	7.589	7.594	-0.005	89	50823	2.00	2.28	
90 2,4-Dinitrotoluene	165	7.689	7.694	-0.005	85	14644	2.00	2.07	
105 Dibenzofuran	168	7.732	7.737	-0.005	87	73233	2.00	2.32	
110 Diethyl phthalate	149	7.866	7.875	-0.009	99	58801	2.00	2.38	
115 Fluorene	166	8.018	8.018	0.000	83	60210	2.00	2.36	
120 N-Nitrosodiphenylamine	169	8.085	8.094	-0.009	97	84587	4.00	4.76	
128 Hexachlorobenzene	284	8.475	8.480	-0.005	86	16039	2.00	2.14	
123 n-Octadecane	43	8.627	8.627	0.000	94	37398	2.00	2.00	
134 Phenanthrene	178	8.827	8.832	-0.005	79	86782	2.00	2.36	
135 Anthracene	178	8.870	8.875	-0.005	95	87779	2.00	2.39	
140 Di-n-butyl phthalate	149	9.227	9.232	-0.005	99	96208	2.00	2.32	
146 Fluoranthene	202	9.832	9.837	-0.005	97	98726	2.00	2.42	
149 Pyrene	202	10.032	10.037	-0.005	93	104459	2.00	2.22	
155 Butyl benzyl phthalate	149	10.504	10.504	0.000	96	44134	2.00	2.20	
161 Bis(2-ethylhexyl) phthalat	149	10.966	10.966	0.000	96	60811	2.00	2.24	
163 Benzo[a]anthracene	228	11.047	11.051	-0.004	98	91267	2.00	2.22	
164 Chrysene	228	11.080	11.085	-0.005	78	90077	2.00	2.30	
169 Benzo[b]fluoranthene	252	12.194	12.204	-0.010	92	84618	2.00	2.12	
170 Benzo[k]fluoranthene	252	12.227	12.237	-0.010	99	92712	2.00	2.25	
171 Benzo[a]pyrene	252	12.637	12.647	-0.009	68	82291	2.00	2.24	
174 Indeno[1,2,3-cd]pyrene	276	14.499	14.527	-0.028	95	90368	2.00	2.31	
175 Dibenz(a,h)anthracene	278	14.518	14.547	-0.029	67	77586	2.00	2.32	
176 Benzo[g,h,i]perylene	276	15.056	15.085	-0.029	88	75712	2.00	2.19	
S 177 Methyl Phenols,Total	1				0			4.45	
S 178 Total Cresols, TCEQ Defini	1				0			4.45	

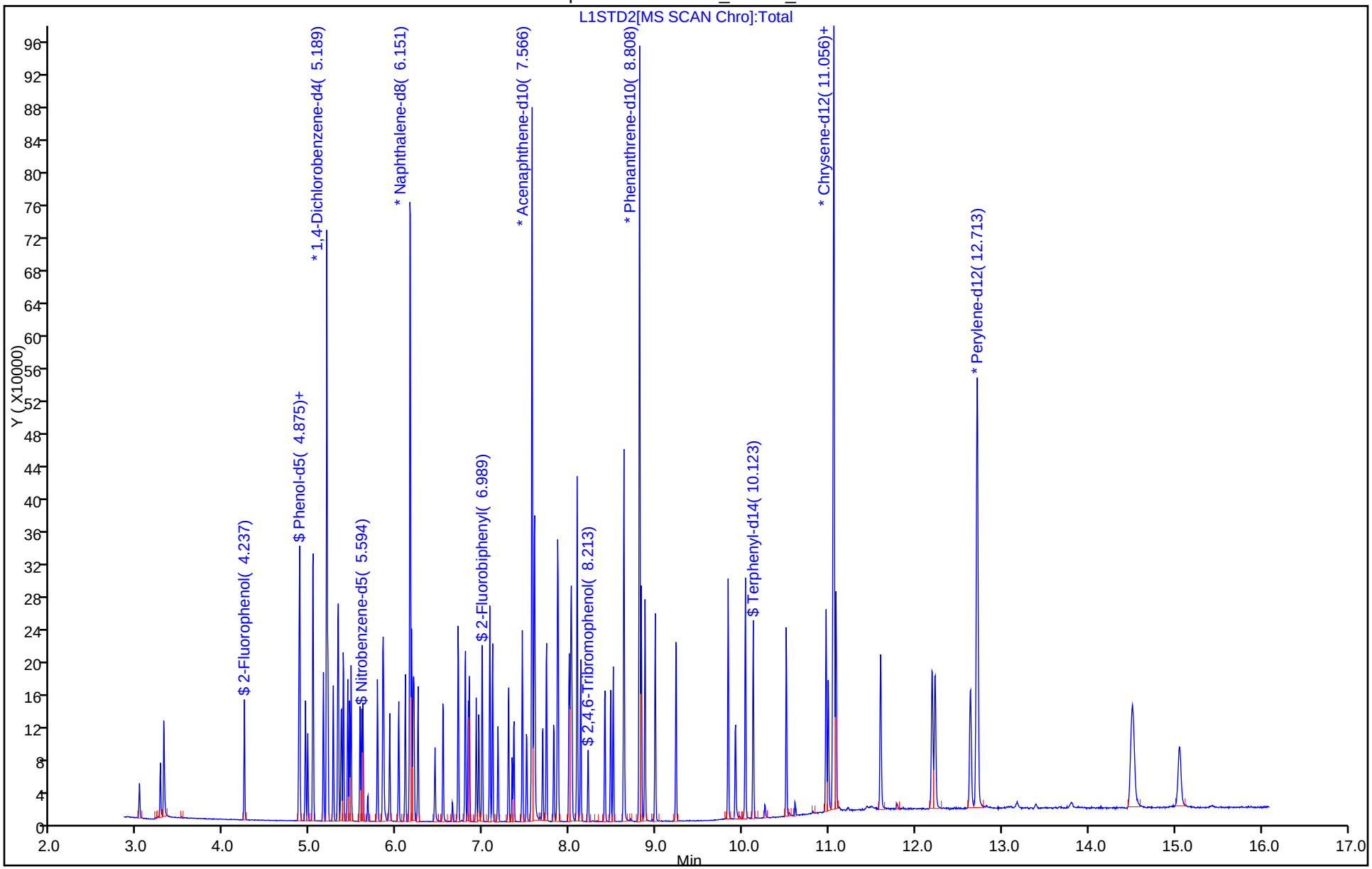
Reagents:

SMlst1_1uLL4_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:30 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD2.D				
Injection Date:	30-Mar-2015 12:14:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD02.D				
Lims ID:	ic				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	30-Mar-2015 12:38:30	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	STD02				
Misc. Info.:	500-0029969-003				
Operator ID:	DA	Instrument ID:	CMS20		
Sublist:	chrom-20-8270*sub105				
Method:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	31-Mar-2015 08:18:31	Calib Date:	30-Mar-2015 16:18:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D				
Column 1 :			Det: MS SCAN		
Process Host:	XAWRK007				
First Level Reviewer: rynkarg		Date:	30-Mar-2015 16:09:33		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.189	5.194	-0.005	96	29788	8.00	8.00	
* 2 Naphthalene-d8	136	6.151	6.156	-0.005	99	107436	8.00	8.00	
* 3 Acenaphthene-d10	164	7.561	7.565	-0.004	91	64105	8.00	8.00	
* 4 Phenanthrene-d10	188	8.804	8.808	-0.004	96	116429	8.00	8.00	
* 5 Chrysene-d12	240	11.051	11.061	-0.010	97	107706	8.00	8.00	
* 6 Perylene-d12	264	12.704	12.713	-0.009	98	90645	8.00	8.00	
163 Benzo[a]anthracene	228	11.042	11.051	-0.009	39	4533	0.2000	0.1760	
164 Chrysene	228	11.075	11.085	-0.010	43	4699	0.2000	0.1594	
169 Benzo[b]fluoranthene	252	12.185	12.204	-0.019	34	3129	0.2000	0.2481	
170 Benzo[k]fluoranthene	252	12.218	12.237	-0.019	39	3084	0.2000	0.2367	
171 Benzo[a]pyrene	252	12.632	12.647	-0.014	1	2360	0.2000	0.2027	
174 Indeno[1,2,3-cd]pyrene	276	14.499	14.527	-0.028	28	2013	0.2000	0.1623	
175 Dibenz(a,h)anthracene	278	14.523	14.547	-0.024	1	1925	0.2000	0.1819	

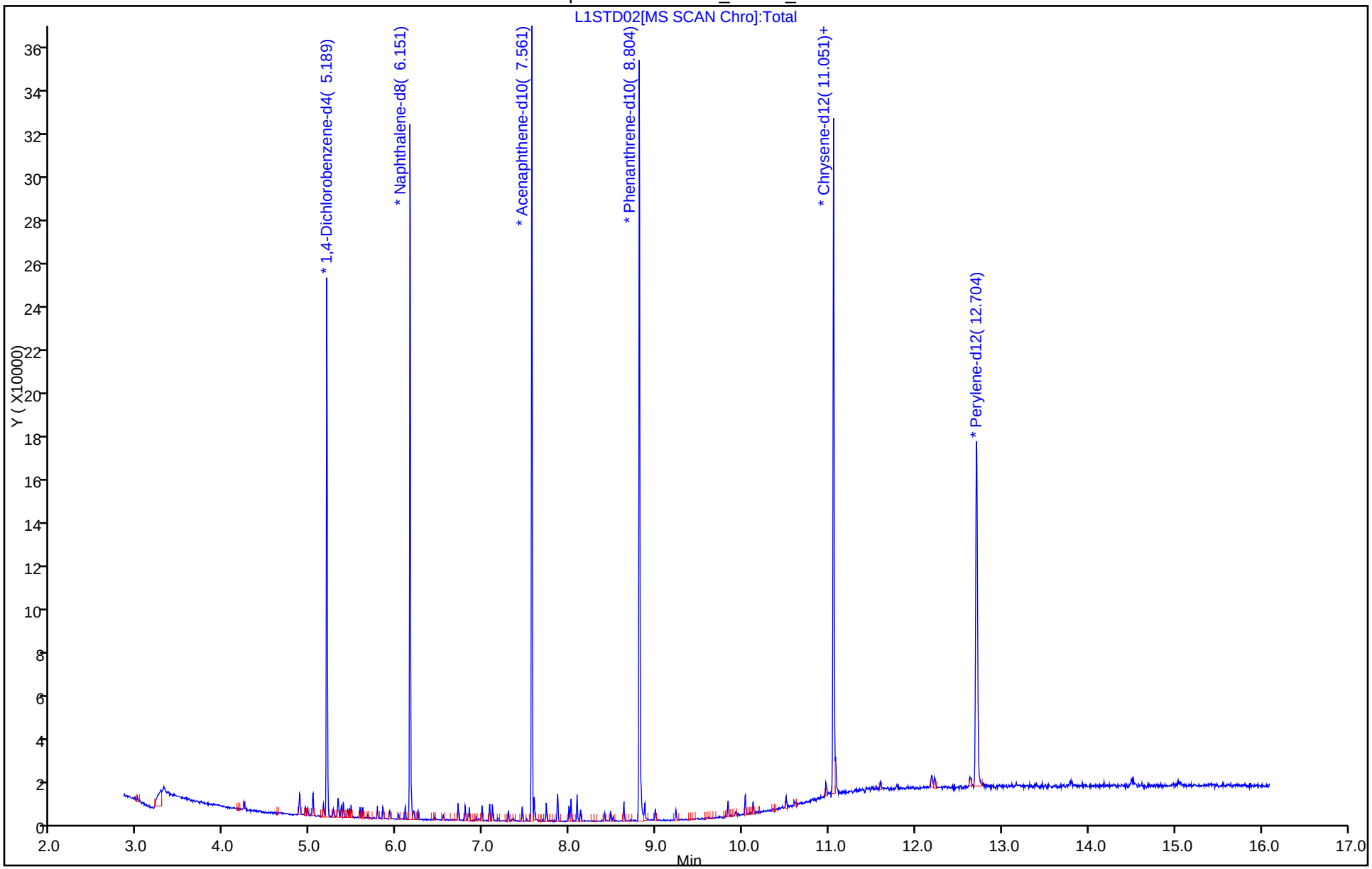
Reagents:

SMlst1_1uLL1_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:31 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD02.D				
Injection Date:	30-Mar-2015 12:38:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



Report Date: 31-Mar-2015 08:18:33 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD05.D				
Lims ID:	ic				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	30-Mar-2015 13:03:30	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	STD05				
Misc. Info.:	500-0029969-004				
Operator ID:	DA	Instrument ID:	CMS20		
Sublist:	chrom-20-8270*sub105				
Method:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	31-Mar-2015 08:18:33	Calib Date:	30-Mar-2015 16:18:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D				
Column 1 :			Det: MS SCAN		
Process Host:	XAWRK007				

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:11:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.189	5.194	-0.005	96	26874	8.00	8.00	
* 2 Naphthalene-d8	136	6.151	6.156	-0.005	99	100533	8.00	8.00	
* 3 Acenaphthene-d10	164	7.561	7.565	-0.004	92	59414	8.00	8.00	
* 4 Phenanthrene-d10	188	8.803	8.808	-0.005	97	105449	8.00	8.00	
* 5 Chrysene-d12	240	11.051	11.061	-0.010	97	103812	8.00	8.00	
* 6 Perylene-d12	264	12.704	12.713	-0.009	98	85807	8.00	8.00	
47 N-Nitrosodi-n-propylamine	70	5.451	5.465	-0.014	60	1270	0.5000	0.4240	
76 2-Methylnaphthalene	142	6.708	6.713	-0.005	64	4440	0.5000	0.5272	
104 2,6-Dinitrotoluene	165	7.351	7.361	-0.010	48	526	0.5000	0.4035	
128 Hexachlorobenzene	284	8.470	8.480	-0.010	44	1383	0.5000	0.5136	
163 Benzo[a]anthracene	228	11.042	11.051	-0.009	45	8349	0.5000	0.4840	
164 Chrysene	228	11.075	11.085	-0.010	61	8333	0.5000	0.4738	
169 Benzo[b]fluoranthene	252	12.184	12.204	-0.020	68	6064	0.5000	0.5080	
170 Benzo[k]fluoranthene	252	12.223	12.237	-0.014	73	6504	0.5000	0.5273	
171 Benzo[a]pyrene	252	12.627	12.647	-0.019	4	4923	0.5000	0.4467	
174 Indeno[1,2,3-cd]pyrene	276	14.494	14.527	-0.033	61	5275	0.5000	0.4492	
175 Dibenz(a,h)anthracene	278	14.508	14.547	-0.039	1	4454	0.5000	0.4445	

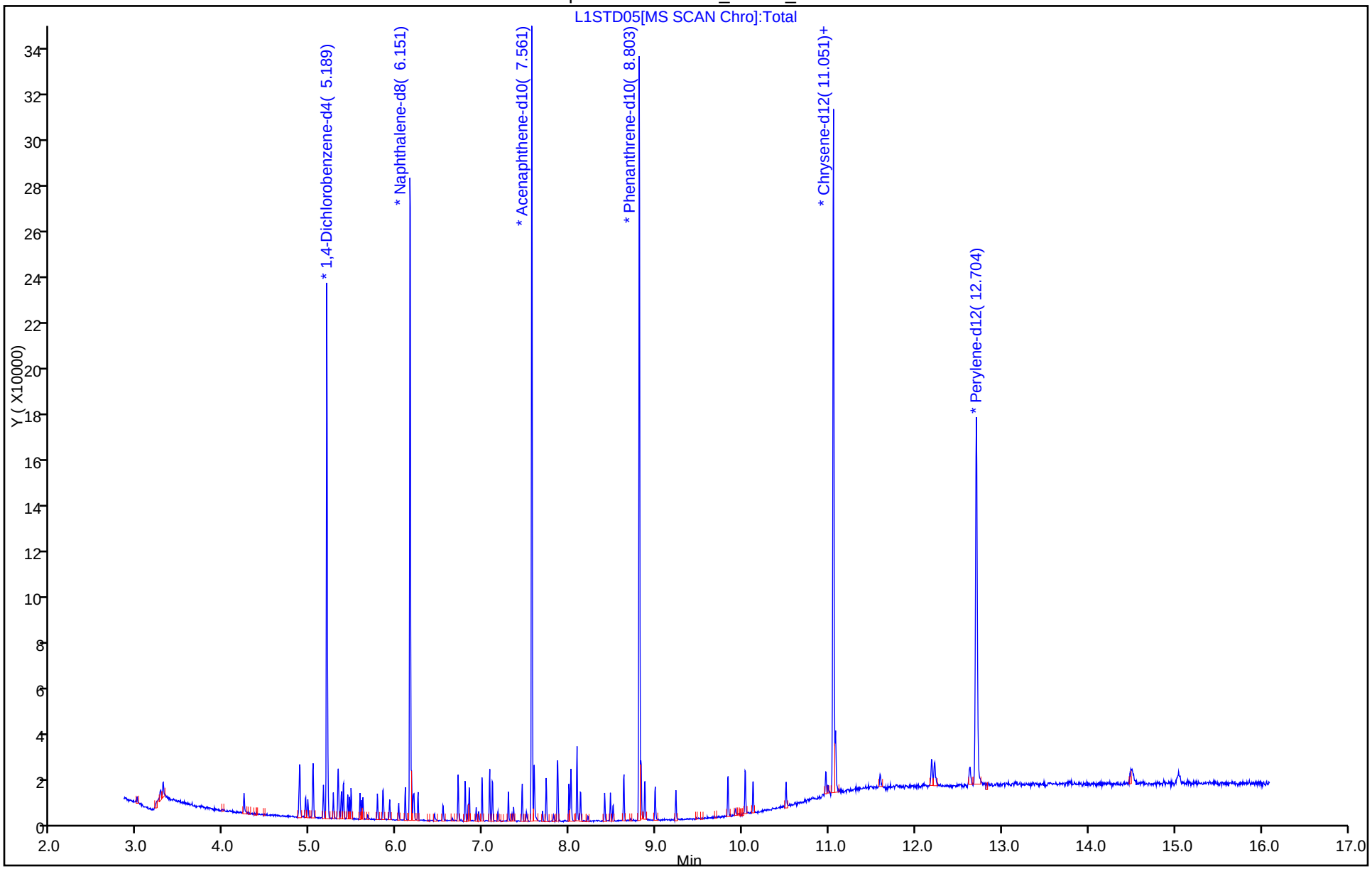
Reagents:

SMlst1_1uLL2_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:33 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD05.D				
Injection Date:	30-Mar-2015 13:03:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD1.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Mar-2015 13:27:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Misc. Info.: 500-0029969-005
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:34 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:11:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.189	5.194	-0.005	96	39861	8.00	8.00	
* 2 Naphthalene-d8	136	6.151	6.156	-0.005	100	150028	8.00	8.00	
* 3 Acenaphthene-d10	164	7.561	7.565	-0.004	91	91616	8.00	8.00	
* 4 Phenanthrene-d10	188	8.804	8.808	-0.004	97	168315	8.00	8.00	
* 5 Chrysene-d12	240	11.051	11.061	-0.010	97	165165	8.00	8.00	
* 6 Perylene-d12	264	12.704	12.713	-0.009	98	134813	8.00	8.00	
$ 7 2-Fluorophenol	112	4.232	4.242	-0.010	91	6094	1.00	1.02	
$ 8 Phenol-d5	99	4.870	4.875	-0.005	88	6798	1.00	0.9783	
$ 9 Nitrobenzene-d5	82	5.594	5.599	-0.005	83	6465	1.00	0.9586	
$ 10 2-Fluorobiphenyl	172	6.985	6.989	-0.004	93	15867	1.00	1.10	
$ 11 2,4,6-Tribromophenol	330	8.213	8.218	-0.005	15	1490	1.00	0.7336	
$ 12 Terphenyl-d14	244	10.118	10.123	-0.005	98	16099	1.00	1.06	
47 N-Nitrosodi-n-propylamine	70	5.451	5.465	-0.014	74	4061	1.00	0.9141	
49 Acetophenone	105	5.470	5.480	-0.010	79	8552	1.00	1.01	
52 Nitrobenzene	77	5.608	5.613	-0.005	1	6469	1.00	0.99	
65 Naphthalene	128	6.170	6.175	-0.005	62	20034	1.00	1.10	
76 2-Methylnaphthalene	142	6.708	6.713	-0.005	76	13831	1.00	1.10	
31 1-Methylnaphthalene	142	6.789	6.794	-0.005	87	12182	1.00	1.11	
104 2,6-Dinitrotoluene	165	7.351	7.361	-0.010	57	2461	1.00	0.9461	
93 Acenaphthylene	152	7.451	7.456	-0.005	86	21183	1.00	1.04	
99 Acenaphthene	154	7.589	7.594	-0.005	82	14210	1.00	1.12	
90 2,4-Dinitrotoluene	165	7.685	7.694	-0.009	57	3026	1.00	0.7507	
115 Fluorene	166	8.013	8.018	-0.005	79	16767	1.00	1.16	
120 N-Nitrosodiphenylamine	169	8.085	8.094	-0.009	86	23611	2.00	2.31	
128 Hexachlorobenzene	284	8.470	8.480	-0.010	75	4448	1.00	1.03	
134 Phenanthrene	178	8.827	8.832	-0.005	69	24088	1.00	1.14	
135 Anthracene	178	8.870	8.875	-0.005	91	23209	1.00	1.10	
146 Fluoranthene	202	9.832	9.837	-0.005	93	25929	1.00	1.11	
149 Pyrene	202	10.027	10.037	-0.010	93	27252	1.00	1.08	
163 Benzo[a]anthracene	228	11.042	11.051	-0.009	78	23242	1.00	0.9684	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
164 Chrysene	228	11.075	11.085	-0.010	76	23195	1.00	0.99	
169 Benzo[b]fluoranthene	252	12.189	12.204	-0.015	85	18438	1.00	0.9831	
170 Benzo[k]fluoranthene	252	12.223	12.237	-0.014	90	20006	1.00	1.03	
171 Benzo[a]pyrene	252	12.627	12.647	-0.019	42	16720	1.00	0.9656	
174 Indeno[1,2,3-cd]pyrene	276	14.494	14.527	-0.033	93	17258	1.00	0.9353	
175 Dibenz(a,h)anthracene	278	14.504	14.547	-0.043	32	14708	1.00	0.9343	
176 Benzo[g,h,i]perylene	276	15.037	15.085	-0.048	72	15312	1.00	0.9385	

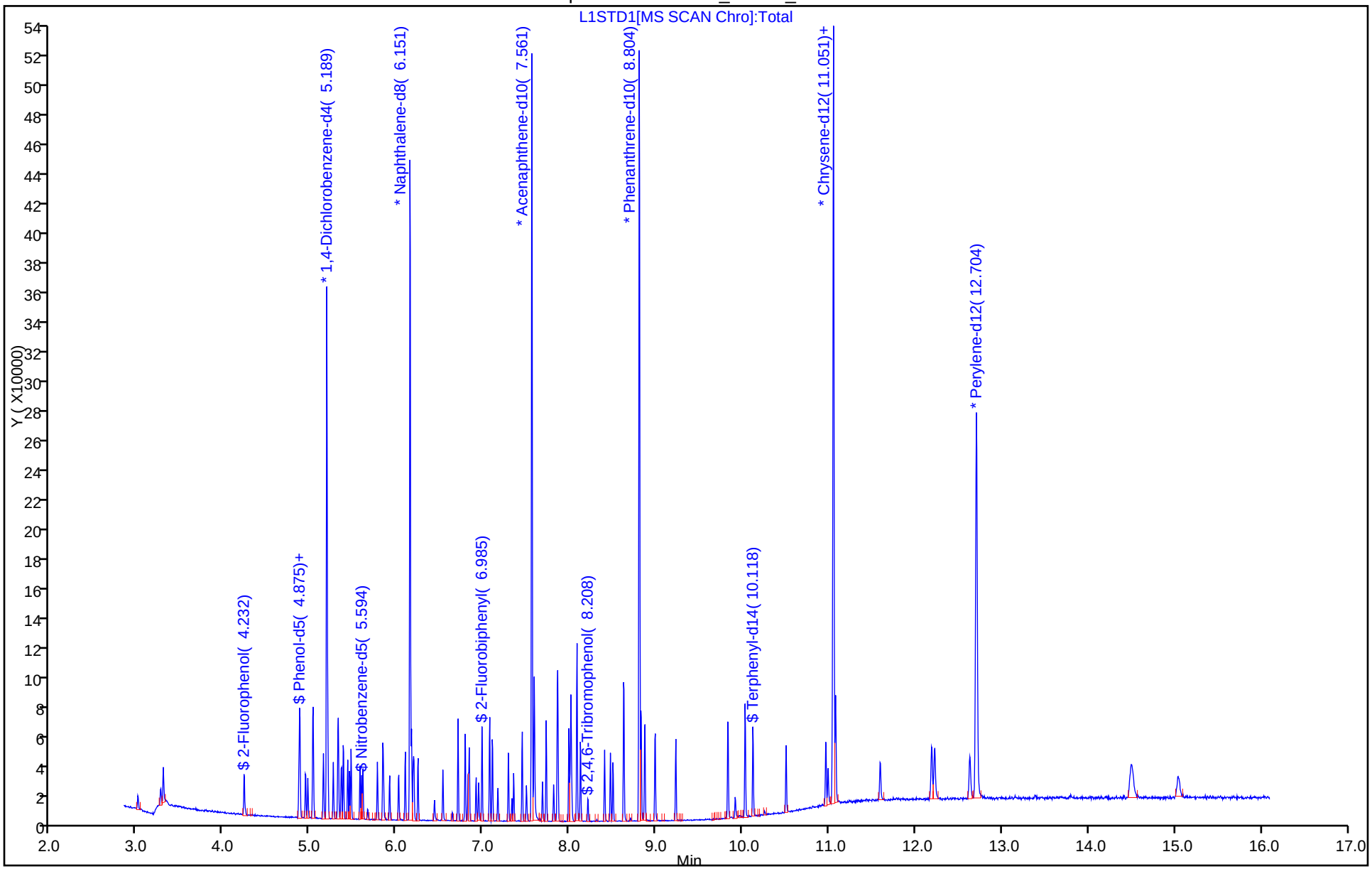
Reagents:

SMlst1_1uLL3_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:34 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD1.D				
Injection Date:	30-Mar-2015 13:27:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD5.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Mar-2015 13:51:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 500-0029969-006
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:36 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:12:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.189	5.194	-0.005	97	43979	8.00	8.00	
* 2 Naphthalene-d8	136	6.151	6.156	-0.005	98	165439	8.00	8.00	
* 3 Acenaphthene-d10	164	7.561	7.565	-0.004	90	95993	8.00	8.00	
* 4 Phenanthrene-d10	188	8.803	8.808	-0.005	92	180131	8.00	8.00	
* 5 Chrysene-d12	240	11.051	11.061	-0.010	97	182104	8.00	8.00	
* 6 Perylene-d12	264	12.708	12.713	-0.005	98	161081	8.00	8.00	
$ 7 2-Fluorophenol	112	4.237	4.242	-0.005	99	33075	5.00	5.00	
$ 8 Phenol-d5	99	4.870	4.875	-0.005	88	39013	5.00	5.09	
$ 9 Nitrobenzene-d5	82	5.594	5.599	-0.005	92	37073	5.00	4.98	
$ 10 2-Fluorobiphenyl	172	6.984	6.989	-0.005	99	79539	5.00	5.29	
$ 11 2,4,6-Tribromophenol	330	8.213	8.218	-0.005	70	9511	5.00	4.47	
$ 12 Terphenyl-d14	244	10.118	10.123	-0.005	99	80841	5.00	4.84	
13 1,4-Dioxane	88	3.013	3.018	-0.005	98	14034	5.00	5.15	
15 N-Nitrosodimethylamine	42	3.270	3.275	-0.005	76	26703	5.00	5.03	
16 Pyridine	79	3.299	3.304	-0.005	78	36581	5.00	5.40	
20 Benzaldehyde	77	4.880	4.880	0.000	63	24921	5.00	5.87	
30 Phenol	94	4.880	4.889	-0.009	78	39852	5.00	5.19	
33 Aniline	93	4.946	4.951	-0.005	88	45628	5.00	4.63	
34 Bis(2-chloroethyl)ether	93	4.970	4.975	-0.005	89	31270	5.00	5.04	
29 n-Decane	43	5.027	5.032	-0.005	92	51112	5.00	5.67	
36 2-Chlorophenol	128	5.037	5.037	0.000	95	33614	5.00	5.26	
38 1,3-Dichlorobenzene	146	5.151	5.156	-0.005	82	40131	5.00	5.25	
39 1,4-Dichlorobenzene	146	5.203	5.204	-0.001	91	40251	5.00	5.20	
41 Benzyl alcohol	108	5.265	5.270	-0.005	90	21755	5.00	4.83	
42 1,2-Dichlorobenzene	146	5.318	5.323	-0.005	93	38105	5.00	5.35	
43 2-Methylphenol	107	5.327	5.332	-0.005	93	26668	5.00	4.95	
44 2,2'-oxybis[1-chloropropan	45	5.361	5.361	0.000	64	65056	5.00	5.29	
19 Indene	116	5.384	5.385	0.000	75	59752	5.00	5.18	
46 3 & 4 Methylphenol	108	5.432	5.442	-0.010	75	32506	5.00	4.86	
47 N-Nitrosodi-n-propylamine	70	5.456	5.465	-0.009	79	24414	5.00	4.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
49 Acetophenone	105	5.470	5.480	-0.010	81	47450	5.00	5.06	
51 Hexachloroethane	117	5.575	5.575	0.000	84	16575	5.00	5.24	
52 Nitrobenzene	77	5.608	5.613	-0.005	1	35602	5.00	4.96	
54 Isophorone	82	5.775	5.785	-0.009	98	60895	5.00	4.78	
55 2,4-Dimethylphenol	122	5.837	5.842	-0.005	93	41631	5.00	6.31	
56 2-Nitrophenol	139	5.846	5.851	-0.005	86	16537	5.00	4.87	
59 Bis(2-chloroethoxy)methane	93	5.918	5.923	-0.005	94	37348	5.00	5.06	
62 2,4-Dichlorophenol	162	6.023	6.027	-0.005	94	28756	5.00	4.98	
64 1,2,4-Trichlorobenzene	180	6.099	6.099	0.000	94	32986	5.00	5.19	
65 Naphthalene	128	6.170	6.175	-0.005	83	102723	5.00	5.12	
66 4-Chloroaniline	127	6.189	6.194	-0.005	69	39390	5.00	5.08	
67 2,6-Dichlorophenol	162	6.199	6.204	-0.005	84	28477	5.00	5.22	
69 Hexachlorobutadiene	225	6.246	6.246	0.000	93	19377	5.00	5.29	
28 Caprolactam	113	6.442	6.475	-0.033	76	8958	5.00	4.27	
71 4-Chloro-3-methylphenol	107	6.532	6.546	-0.014	96	29855	5.00	4.84	
76 2-Methylnaphthalene	142	6.708	6.713	-0.005	88	70616	5.00	5.10	
31 1-Methylnaphthalene	142	6.789	6.794	-0.005	90	61712	5.00	5.09	
77 Hexachlorocyclopentadiene	237	6.827	6.827	0.000	79	21125	5.00	4.86	
78 1,2,4,5-Tetrachlorobenzene	216	6.837	6.842	-0.005	97	33167	5.00	5.52	
81 2,4,6-Trichlorophenol	196	6.918	6.923	-0.005	91	19690	5.00	4.74	
83 2,4,5-Trichlorophenol	196	6.946	6.951	-0.005	94	21298	5.00	4.84	
40 1,1'-Biphenyl	154	7.075	7.080	-0.005	91	85312	5.00	5.42	
61 2-Chloronaphthalene	162	7.108	7.108	0.000	95	64539	5.00	5.20	
85 2-Nitroaniline	65	7.170	7.175	-0.005	80	19508	5.00	4.72	
88 Dimethyl phthalate	163	7.294	7.299	-0.005	97	73582	5.00	5.10	
89 1,3-Dinitrobenzene	168	7.332	7.342	-0.010	54	9529	5.00	4.25	
104 2,6-Dinitrotoluene	165	7.351	7.361	-0.010	50	16091	5.00	5.19	
93 Acenaphthylene	152	7.451	7.456	-0.005	91	108788	5.00	5.12	
95 3-Nitroaniline	138	7.499	7.508	-0.009	89	17065	5.00	4.83	
98 2,4-Dinitrophenol	184	7.584	7.594	-0.010	45	11562	10.0	6.58	
99 Acenaphthene	154	7.589	7.594	-0.005	89	70820	5.00	5.32	
100 4-Nitrophenol	109	7.594	7.613	-0.019	74	21772	10.0	10.2	
90 2,4-Dinitrotoluene	165	7.684	7.694	-0.010	80	20984	5.00	4.97	
105 Dibenzofuran	168	7.727	7.737	-0.010	87	100535	5.00	5.33	
107 2,3,4,6-Tetrachlorophenol	232	7.813	7.818	-0.005	75	16462	5.00	4.61	
186 Hexadecane	57	7.856	7.861	-0.005	87	57739	5.00	5.81	
110 Diethyl phthalate	149	7.865	7.875	-0.010	98	80047	5.00	5.44	
113 4-Chlorophenyl phenyl ethe	204	7.994	7.994	0.000	84	38054	5.00	5.38	
115 Fluorene	166	8.013	8.018	-0.005	73	81913	5.00	5.39	
116 4-Nitroaniline	138	8.003	8.023	-0.020	34	18607	5.00	5.31	
117 4,6-Dinitro-2-methylphenol	198	8.023	8.037	-0.014	87	19191	10.0	7.65	
120 N-Nitrosodiphenylamine	169	8.084	8.094	-0.010	97	116249	10.0	10.6	
121 1,2-Diphenylhydrazine	77	8.127	8.132	-0.005	96	79099	5.00	5.54	
127 4-Bromophenyl phenyl ether	248	8.403	8.408	-0.005	71	20589	5.00	4.97	
128 Hexachlorobenzene	284	8.470	8.480	-0.010	83	22997	5.00	5.00	
72 Atrazine	200	8.503	8.513	-0.010	70	21191	5.00	5.17	
130 Pentachlorophenol	266	8.627	8.627	0.000	93	22729	10.0	8.72	
123 n-Octadecane	43	8.623	8.627	-0.004	95	51087	5.00	4.91	
134 Phenanthrene	178	8.827	8.832	-0.005	76	118395	5.00	5.25	
135 Anthracene	178	8.870	8.875	-0.005	96	118568	5.00	5.25	
136 Carbazole	167	8.989	8.994	-0.005	74	114750	5.00	5.48	
140 Di-n-butyl phthalate	149	9.227	9.232	-0.005	99	131476	5.00	5.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
146 Fluoranthene	202	9.832	9.837	-0.005	97	131693	5.00	5.26	
147 Benzidine	184	9.913	9.923	-0.010	96	48025	5.00	4.06	
149 Pyrene	202	10.032	10.037	-0.005	93	136823	5.00	4.92	
155 Butyl benzyl phthalate	149	10.504	10.504	0.000	97	57100	5.00	4.81	
161 Bis(2-ethylhexyl) phthalat	149	10.965	10.966	-0.001	96	76314	5.00	4.75	
162 3,3'-Dichlorobenzidine	252	10.989	10.994	-0.005	93	38762	5.00	4.86	
163 Benzo[a]anthracene	228	11.042	11.051	-0.009	98	120547	5.00	5.16	
164 Chrysene	228	11.075	11.085	-0.010	82	114049	5.00	5.16	
166 Di-n-octyl phthalate	149	11.594	11.594	0.000	98	121043	5.00	4.88	
169 Benzo[b]fluoranthene	252	12.189	12.204	-0.015	92	107634	5.00	4.80	
170 Benzo[k]fluoranthene	252	12.223	12.237	-0.014	99	121960	5.00	5.27	
171 Benzo[a]pyrene	252	12.632	12.647	-0.014	57	105670	5.00	5.11	
174 Indeno[1,2,3-cd]pyrene	276	14.494	14.527	-0.033	94	115047	5.00	5.22	
175 Dibenz(a,h)anthracene	278	14.513	14.547	-0.034	55	96576	5.00	5.13	
176 Benzo[g,h,i]perylene	276	15.046	15.085	-0.039	88	95764	5.00	4.91	
S 177 Methyl Phenols,Total	1				0			9.81	
S 178 Total Cresols, TCEQ Defini	1				0			9.81	

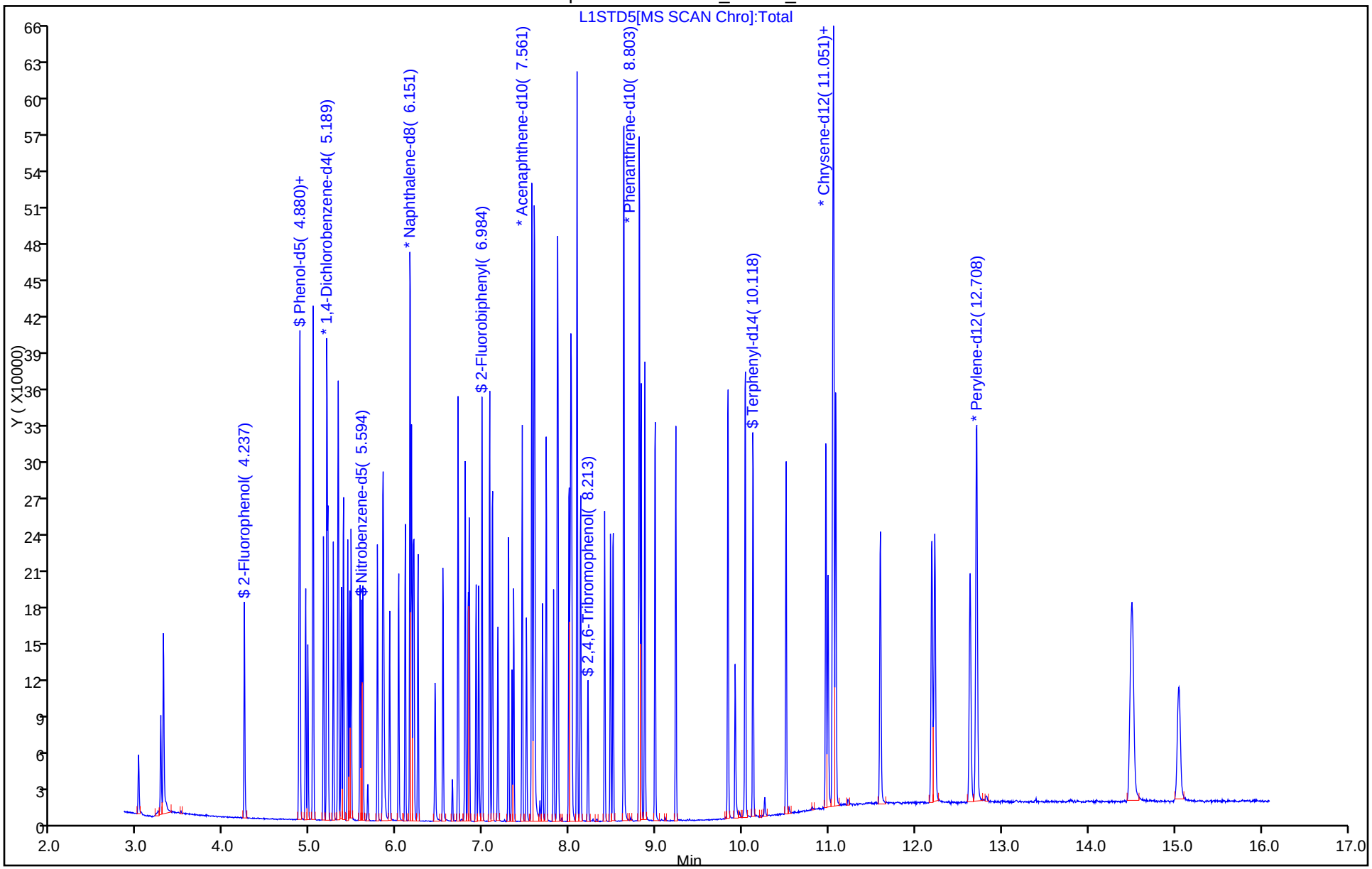
Reagents:

SMlst1_1uLL5_00015 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:36 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD5.D				
Injection Date:	30-Mar-2015 13:51:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD10.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Mar-2015 14:16:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD10
Misc. Info.: 500-0029969-007
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:37 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:13:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.189	5.194	-0.005	96	34976	8.00	8.00	
* 2 Naphthalene-d8	136	6.151	6.156	-0.005	98	130293	8.00	8.00	
* 3 Acenaphthene-d10	164	7.561	7.565	-0.004	80	75439	8.00	8.00	
* 4 Phenanthrene-d10	188	8.808	8.808	0.000	95	137513	8.00	8.00	
* 5 Chrysene-d12	240	11.051	11.061	-0.010	97	138096	8.00	8.00	
* 6 Perylene-d12	264	12.704	12.713	-0.009	98	119152	8.00	8.00	
$ 7 2-Fluorophenol	112	4.237	4.242	-0.005	99	55131	10.0	10.5	
$ 8 Phenol-d5	99	4.870	4.875	-0.005	88	64990	10.0	10.7	
$ 9 Nitrobenzene-d5	82	5.594	5.599	-0.005	93	61022	10.0	10.4	
$ 10 2-Fluorobiphenyl	172	6.984	6.989	-0.005	100	128717	10.0	10.9	
$ 11 2,4,6-Tribromophenol	330	8.213	8.218	-0.005	73	17113	10.0	10.2	
$ 12 Terphenyl-d14	244	10.123	10.123	0.000	98	123975	10.0	9.79	
13 1,4-Dioxane	88	3.003	3.018	-0.015	97	23547	10.0	10.9	
15 N-Nitrosodimethylamine	42	3.265	3.275	-0.010	76	42343	10.0	10.0	
16 Pyridine	79	3.294	3.304	-0.010	80	53758	10.0	9.98	
20 Benzaldehyde	77	4.880	4.880	0.000	62	39381	10.0	11.7	
30 Phenol	94	4.880	4.889	-0.009	80	62994	10.0	10.3	
33 Aniline	93	4.946	4.951	-0.005	88	76645	10.0	9.78	
34 Bis(2-chloroethyl)ether	93	4.970	4.975	-0.005	89	48835	10.0	9.90	
29 n-Decane	43	5.027	5.032	-0.005	92	80011	10.0	11.2	
36 2-Chlorophenol	128	5.037	5.037	0.000	96	52208	10.0	10.3	
38 1,3-Dichlorobenzene	146	5.151	5.156	-0.005	87	62865	10.0	10.3	
39 1,4-Dichlorobenzene	146	5.203	5.204	-0.001	91	63546	10.0	10.3	
41 Benzyl alcohol	108	5.265	5.270	-0.005	90	34483	10.0	9.62	
42 1,2-Dichlorobenzene	146	5.318	5.323	-0.005	92	59643	10.0	10.5	
43 2-Methylphenol	107	5.327	5.332	-0.005	92	41693	10.0	9.73	
44 2,2'-oxybis[1-chloropropan	45	5.361	5.361	0.000	64	102035	10.0	10.4	
19 Indene	116	5.384	5.385	0.000	76	94730	10.0	10.3	
46 3 & 4 Methylphenol	108	5.432	5.442	-0.010	96	50880	10.0	9.57	
47 N-Nitrosodi-n-propylamine	70	5.456	5.465	-0.009	79	38832	10.0	9.96	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
49 Acetophenone	105	5.470	5.480	-0.010	81	74246	10.0	9.96	
51 Hexachloroethane	117	5.575	5.575	0.000	80	25655	10.0	10.2	
52 Nitrobenzene	77	5.608	5.613	-0.005	1	57417	10.0	10.2	
54 Isophorone	82	5.775	5.785	-0.009	99	96491	10.0	9.62	
55 2,4-Dimethylphenol	122	5.837	5.842	-0.005	95	53557	10.0	10.3	
56 2-Nitrophenol	139	5.846	5.851	-0.005	89	27072	10.0	10.1	
58 Benzoic acid	122	5.865	5.908	-0.043	64	20697	10.0	6.32	
59 Bis(2-chloroethoxy)methane	93	5.918	5.923	-0.005	94	58733	10.0	10.1	
62 2,4-Dichlorophenol	162	6.022	6.027	-0.005	95	46220	10.0	10.2	
64 1,2,4-Trichlorobenzene	180	6.099	6.099	0.000	94	51448	10.0	10.3	
65 Naphthalene	128	6.170	6.175	-0.005	81	160347	10.0	10.1	
66 4-Chloroaniline	127	6.189	6.194	-0.005	68	62924	10.0	10.3	
67 2,6-Dichlorophenol	162	6.199	6.204	-0.005	83	45298	10.0	10.5	
69 Hexachlorobutadiene	225	6.246	6.246	0.000	94	30512	10.0	10.6	
28 Caprolactam	113	6.446	6.475	-0.029	77	14821	10.0	8.97	
71 4-Chloro-3-methylphenol	107	6.537	6.546	-0.009	95	48140	10.0	9.92	
76 2-Methylnaphthalene	142	6.708	6.713	-0.005	89	110579	10.0	10.1	
31 1-Methylnaphthalene	142	6.789	6.794	-0.005	87	97621	10.0	10.2	
77 Hexachlorocyclopentadiene	237	6.827	6.827	0.000	79	35303	10.0	10.3	
78 1,2,4,5-Tetrachlorobenzene	216	6.837	6.842	-0.005	97	51576	10.0	10.9	
81 2,4,6-Trichlorophenol	196	6.918	6.923	-0.005	91	32325	10.0	9.89	
83 2,4,5-Trichlorophenol	196	6.946	6.951	-0.005	94	35562	10.0	10.3	
40 1,1'-Biphenyl	154	7.075	7.080	-0.005	91	134998	10.0	10.9	
61 2-Chloronaphthalene	162	7.108	7.108	0.000	95	103059	10.0	10.6	
85 2-Nitroaniline	65	7.170	7.175	-0.005	80	33087	10.0	10.2	
88 Dimethyl phthalate	163	7.294	7.299	-0.005	98	115925	10.0	10.2	
89 1,3-Dinitrobenzene	168	7.332	7.342	-0.010	82	16687	10.0	9.46	
104 2,6-Dinitrotoluene	165	7.356	7.361	-0.005	56	26022	10.0	10.5	
93 Acenaphthylene	152	7.451	7.456	-0.005	92	174922	10.0	10.5	
95 3-Nitroaniline	138	7.503	7.508	-0.005	92	29146	10.0	10.5	
98 2,4-Dinitrophenol	184	7.584	7.594	-0.010	58	22196	20.0	16.1	
99 Acenaphthene	154	7.589	7.594	-0.005	91	112440	10.0	10.8	
100 4-Nitrophenol	109	7.599	7.613	-0.014	96	35493	20.0	21.1	
90 2,4-Dinitrotoluene	165	7.689	7.694	-0.005	87	34253	10.0	10.3	
105 Dibenzofuran	168	7.727	7.737	-0.010	88	156100	10.0	10.5	
107 2,3,4,6-Tetrachlorophenol	232	7.813	7.818	-0.005	69	27982	10.0	9.98	
186 Hexadecane	57	7.856	7.861	-0.005	87	88633	10.0	11.3	
110 Diethyl phthalate	149	7.865	7.875	-0.010	98	122753	10.0	10.6	
113 4-Chlorophenyl phenyl ethe	204	7.994	7.994	0.000	84	59523	10.0	10.7	
115 Fluorene	166	8.013	8.018	-0.005	72	127523	10.0	10.7	
116 4-Nitroaniline	138	8.008	8.023	-0.015	88	28474	10.0	10.3	
117 4,6-Dinitro-2-methylphenol	198	8.027	8.037	-0.010	79	33076	20.0	17.3	
120 N-Nitrosodiphenylamine	169	8.084	8.094	-0.010	97	178522	20.0	21.4	
121 1,2-Diphenylhydrazine	77	8.127	8.132	-0.005	97	122856	10.0	10.9	
127 4-Bromophenyl phenyl ether	248	8.403	8.408	-0.005	70	32038	10.0	10.1	
128 Hexachlorobenzene	284	8.475	8.480	-0.005	84	35176	10.0	10.0	
72 Atrazine	200	8.503	8.513	-0.010	67	32663	10.0	10.4	
130 Pentachlorophenol	266	8.627	8.627	0.000	92	37985	20.0	19.1	
123 n-Octadecane	43	8.623	8.627	-0.004	94	76263	10.0	10.3	
134 Phenanthrene	178	8.827	8.832	-0.005	80	177832	10.0	10.3	
135 Anthracene	178	8.870	8.875	-0.005	96	179715	10.0	10.4	
136 Carbazole	167	8.989	8.994	-0.005	85	176920	10.0	11.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
140 Di-n-butyl phthalate	149	9.227	9.232	-0.005	99	199415	10.0	10.3	
146 Fluoranthene	202	9.832	9.837	-0.005	97	198292	10.0	10.4	
147 Benzidine	184	9.913	9.923	-0.010	97	83592	10.0	9.32	
149 Pyrene	202	10.032	10.037	-0.005	93	209650	10.0	9.94	
155 Butyl benzyl phthalate	149	10.504	10.504	0.000	97	89447	10.0	9.94	
161 Bis(2-ethylhexyl) phthalat	149	10.965	10.966	-0.001	96	121553	10.0	9.97	
162 3,3'-Dichlorobenzidine	252	10.989	10.994	-0.005	92	60457	10.0	10.0	
163 Benzo[a]anthracene	228	11.042	11.051	-0.009	98	178148	10.0	10.2	
164 Chrysene	228	11.080	11.085	-0.005	84	172486	10.0	10.5	
166 Di-n-octyl phthalate	149	11.594	11.594	0.000	99	200201	10.0	10.6	
169 Benzo[b]fluoranthene	252	12.189	12.204	-0.015	92	170408	10.0	10.3	
170 Benzo[k]fluoranthene	252	12.223	12.237	-0.014	99	170978	10.0	9.98	
171 Benzo[a]pyrene	252	12.632	12.647	-0.014	60	159006	10.0	10.4	
174 Indeno[1,2,3-cd]pyrene	276	14.494	14.527	-0.033	95	176686	10.0	10.8	
175 Dibenz(a,h)anthracene	278	14.513	14.547	-0.034	61	148460	10.0	10.7	
176 Benzo[g,h,i]perylene	276	15.046	15.085	-0.039	90	149037	10.0	10.3	
S 177 Methyl Phenols,Total	1				0			19.3	
S 178 Total Cresols, TCEQ Defini	1				0			19.3	

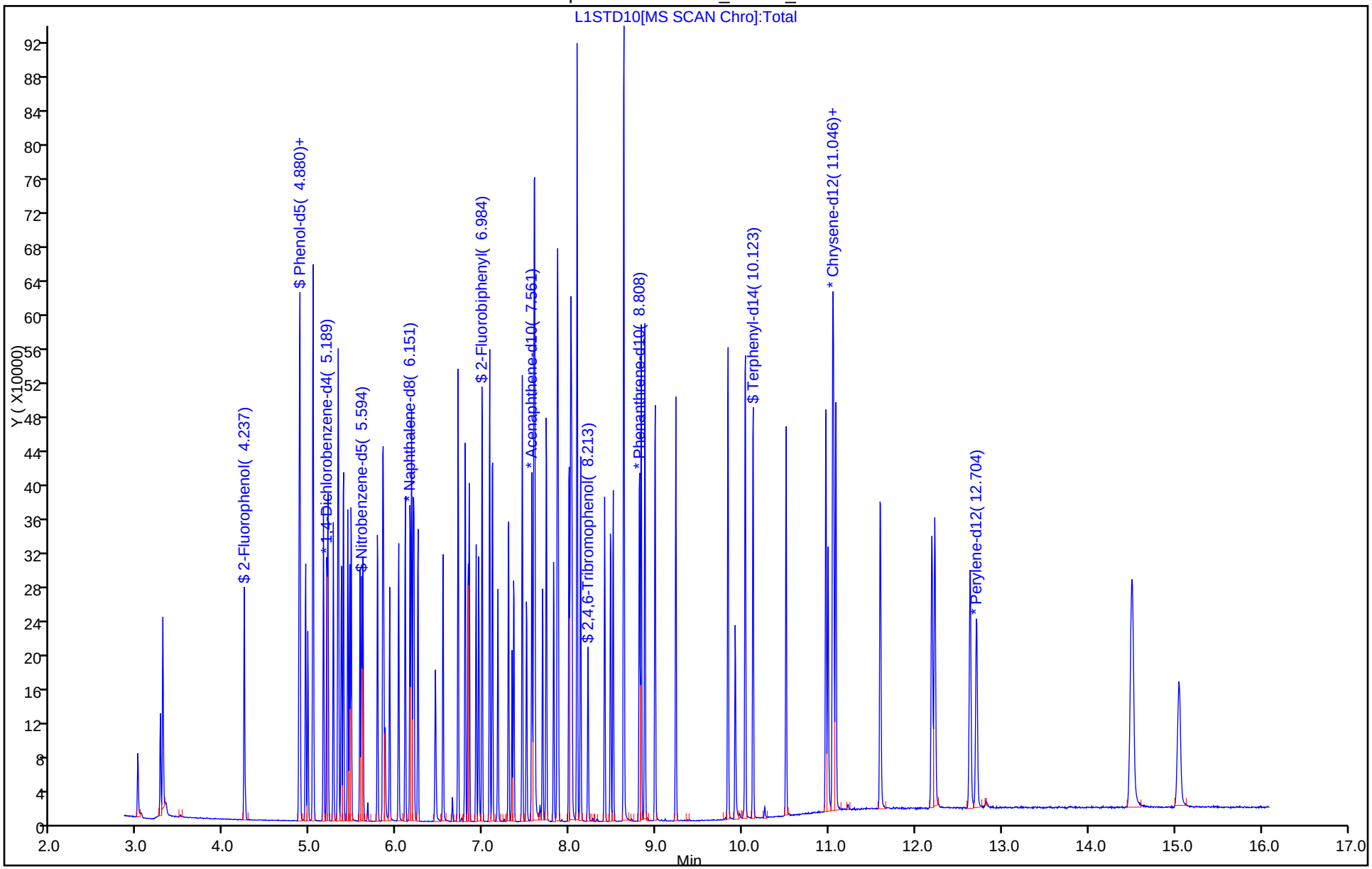
Reagents:

SMlst1_1uLL6_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:37 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD10.D				
Injection Date:	30-Mar-2015 14:16:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD20.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 30-Mar-2015 14:40:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD20
Misc. Info.: 500-0029969-008
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:39 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:14:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.189	5.194	-0.005	96	40976	8.00	8.00	
* 2 Naphthalene-d8	136	6.156	6.156	0.000	96	159031	8.00	8.00	
* 3 Acenaphthene-d10	164	7.566	7.565	0.001	76	98751	8.00	8.00	
* 4 Phenanthrene-d10	188	8.808	8.808	0.000	90	178737	8.00	8.00	
* 5 Chrysene-d12	240	11.056	11.061	-0.005	98	166580	8.00	8.00	
* 6 Perylene-d12	264	12.709	12.713	-0.004	98	152469	8.00	8.00	
$ 7 2-Fluorophenol	112	4.237	4.242	-0.005	98	123614	20.0	20.1	
$ 8 Phenol-d5	99	4.870	4.875	-0.005	87	143551	20.0	20.1	
$ 9 Nitrobenzene-d5	82	5.594	5.599	-0.005	89	144059	20.0	20.2	
$ 10 2-Fluorobiphenyl	172	6.989	6.989	0.000	98	301251	20.0	19.5	
$ 11 2,4,6-Tribromophenol	330	8.213	8.218	-0.005	79	43739	20.0	20.0	
$ 12 Terphenyl-d14	244	10.123	10.123	0.000	98	299466	20.0	19.6	
13 1,4-Dioxane	88	3.004	3.018	-0.014	98	52418	20.0	20.6	
15 N-Nitrosodimethylamine	42	3.266	3.275	-0.009	77	100363	20.0	20.3	
16 Pyridine	79	3.289	3.304	-0.015	79	124880	20.0	19.8	
20 Benzaldehyde	77	4.880	4.880	0.000	64	91583	20.0	23.2	
30 Phenol	94	4.880	4.889	-0.009	81	149305	20.0	20.9	
33 Aniline	93	4.947	4.951	-0.004	88	189522	20.0	20.6	
34 Bis(2-chloroethyl)ether	93	4.970	4.975	-0.005	85	115410	20.0	20.0	
29 n-Decane	43	5.027	5.032	-0.005	93	177296	20.0	21.1	
36 2-Chlorophenol	128	5.037	5.037	0.000	96	125008	20.0	21.0	
38 1,3-Dichlorobenzene	146	5.151	5.156	-0.005	94	146525	20.0	20.6	
39 1,4-Dichlorobenzene	146	5.204	5.204	0.000	91	148155	20.0	20.6	
41 Benzyl alcohol	108	5.266	5.270	-0.004	80	85446	20.0	20.4	
42 1,2-Dichlorobenzene	146	5.318	5.323	-0.005	93	138102	20.0	20.8	
43 2-Methylphenol	107	5.327	5.332	-0.005	93	103345	20.0	20.6	
44 2,2'-oxybis[1-chloropropan	45	5.361	5.361	0.000	66	236883	20.0	20.7	
19 Indene	116	5.385	5.385	0.001	77	224229	20.0	20.9	
46 3 & 4 Methylphenol	108	5.437	5.442	-0.005	95	125929	20.0	20.2	
47 N-Nitrosodi-n-propylamine	70	5.456	5.465	-0.009	80	97866	20.0	21.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
49 Acetophenone	105	5.475	5.480	-0.005	91	178473	20.0	20.4	
51 Hexachloroethane	117	5.575	5.575	0.000	82	60859	20.0	20.6	
52 Nitrobenzene	77	5.608	5.613	-0.005	1	140457	20.0	20.4	
54 Isophorone	82	5.780	5.785	-0.004	99	249304	20.0	20.4	
55 2,4-Dimethylphenol	122	5.842	5.842	0.000	91	127882	20.0	20.2	
56 2-Nitrophenol	139	5.847	5.851	-0.004	88	68136	20.0	20.9	
58 Benzoic acid	122	5.885	5.908	-0.023	96	65357	20.0	16.4	
59 Bis(2-chloroethoxy)methane	93	5.918	5.923	-0.005	93	144245	20.0	20.3	
62 2,4-Dichlorophenol	162	6.023	6.027	-0.004	94	113565	20.0	20.5	
64 1,2,4-Trichlorobenzene	180	6.099	6.099	0.000	93	123942	20.0	20.3	
65 Naphthalene	128	6.170	6.175	-0.005	98	395788	20.0	20.5	
66 4-Chloroaniline	127	6.189	6.194	-0.005	67	166351	20.0	22.3	
67 2,6-Dichlorophenol	162	6.199	6.204	-0.005	83	109920	20.0	21.0	
69 Hexachlorobutadiene	225	6.247	6.246	0.001	94	72907	20.0	20.7	
28 Caprolactam	113	6.456	6.475	-0.019	78	40887	20.0	20.3	
71 4-Chloro-3-methylphenol	107	6.537	6.546	-0.009	97	124793	20.0	21.1	
76 2-Methylnaphthalene	142	6.708	6.713	-0.005	89	271714	20.0	20.4	
31 1-Methylnaphthalene	142	6.794	6.794	0.000	88	237547	20.0	20.4	
77 Hexachlorocyclopentadiene	237	6.828	6.827	0.001	79	90518	20.0	20.3	
78 1,2,4,5-Tetrachlorobenzene	216	6.842	6.842	0.000	94	126851	20.0	20.5	
81 2,4,6-Trichlorophenol	196	6.918	6.923	-0.005	94	86495	20.0	20.2	
83 2,4,5-Trichlorophenol	196	6.951	6.951	0.000	94	94618	20.0	20.9	
40 1,1'-Biphenyl	154	7.075	7.080	-0.005	94	334384	20.0	20.6	
61 2-Chloronaphthalene	162	7.108	7.108	0.000	97	255122	20.0	20.0	
85 2-Nitroaniline	65	7.170	7.175	-0.005	80	89946	20.0	21.1	
88 Dimethyl phthalate	163	7.294	7.299	-0.005	99	310274	20.0	20.9	
89 1,3-Dinitrobenzene	168	7.337	7.342	-0.005	75	47617	20.0	20.6	
104 2,6-Dinitrotoluene	165	7.356	7.361	-0.005	55	69065	20.0	21.2	
93 Acenaphthylene	152	7.451	7.456	-0.005	91	442171	20.0	20.2	
95 3-Nitroaniline	138	7.504	7.508	-0.004	89	78460	20.0	21.6	
98 2,4-Dinitrophenol	184	7.585	7.594	-0.009	67	72531	40.0	40.1	
99 Acenaphthene	154	7.589	7.594	-0.005	94	281851	20.0	20.6	
100 4-Nitrophenol	109	7.604	7.613	-0.009	96	91707	40.0	41.7	
90 2,4-Dinitrotoluene	165	7.689	7.694	-0.005	88	93542	20.0	21.5	
105 Dibenzofuran	168	7.732	7.737	-0.005	90	395009	20.0	20.4	
107 2,3,4,6-Tetrachlorophenol	232	7.818	7.818	0.000	69	75298	20.0	20.5	
186 Hexadecane	57	7.856	7.861	-0.005	88	220165	20.0	21.5	
110 Diethyl phthalate	149	7.870	7.875	-0.005	98	307392	20.0	20.3	
113 4-Chlorophenyl phenyl ethe	204	7.994	7.994	0.000	81	149551	20.0	20.5	
115 Fluorene	166	8.018	8.018	0.000	73	312796	20.0	20.0	
116 4-Nitroaniline	138	8.013	8.023	-0.010	98	70568	20.0	19.6	
117 4,6-Dinitro-2-methylphenol	198	8.032	8.037	-0.005	83	100472	40.0	40.4	
120 N-Nitrosodiphenylamine	169	8.089	8.094	-0.005	98	441444	40.0	40.7	
121 1,2-Diphenylhydrazine	77	8.128	8.132	-0.004	97	307403	20.0	20.9	
127 4-Bromophenyl phenyl ether	248	8.408	8.408	0.000	62	84353	20.0	20.5	
128 Hexachlorobenzene	284	8.475	8.480	-0.005	87	90263	20.0	19.8	
72 Atrazine	200	8.508	8.513	-0.005	62	84404	20.0	20.7	
130 Pentachlorophenol	266	8.628	8.627	0.001	90	108588	40.0	42.0	
123 n-Octadecane	43	8.628	8.627	0.001	96	174231	20.0	20.0	
134 Phenanthrene	178	8.828	8.832	-0.004	80	451039	20.0	20.2	
135 Anthracene	178	8.870	8.875	-0.005	96	457305	20.0	20.4	
136 Carbazole	167	8.989	8.994	-0.005	87	437457	20.0	21.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
140 Di-n-butyl phthalate	149	9.228	9.232	-0.004	99	531459	20.0	21.0	
146 Fluoranthene	202	9.832	9.837	-0.005	97	504349	20.0	20.3	
147 Benzidine	184	9.913	9.923	-0.010	97	236170	20.0	21.8	
149 Pyrene	202	10.032	10.037	-0.005	94	526559	20.0	20.7	
155 Butyl benzyl phthalate	149	10.504	10.504	0.000	96	222290	20.0	20.5	
161 Bis(2-ethylhexyl) phthalat	149	10.966	10.966	0.000	96	307744	20.0	20.9	
162 3,3'-Dichlorobenzidine	252	10.989	10.994	-0.005	92	142778	20.0	19.6	
163 Benzo[a]anthracene	228	11.047	11.051	-0.004	98	432720	20.0	20.7	
164 Chrysene	228	11.080	11.085	-0.005	84	411027	20.0	21.0	
166 Di-n-octyl phthalate	149	11.594	11.594	0.000	99	514433	20.0	20.9	
169 Benzo[b]fluoranthene	252	12.194	12.204	-0.010	94	398569	20.0	18.8	
170 Benzo[k]fluoranthene	252	12.228	12.237	-0.009	99	439683	20.0	20.1	
171 Benzo[a]pyrene	252	12.637	12.647	-0.009	68	401575	20.0	20.5	
174 Indeno[1,2,3-cd]pyrene	276	14.509	14.527	-0.018	94	449143	20.0	21.5	
175 Dibenz(a,h)anthracene	278	14.523	14.547	-0.024	65	379404	20.0	21.3	
176 Benzo[g,h,i]perylene	276	15.061	15.085	-0.024	92	373817	20.0	20.3	
S 177 Methyl Phenols,Total	1				0			40.8	
S 178 Total Cresols, TCEQ Defini	1				0			40.8	

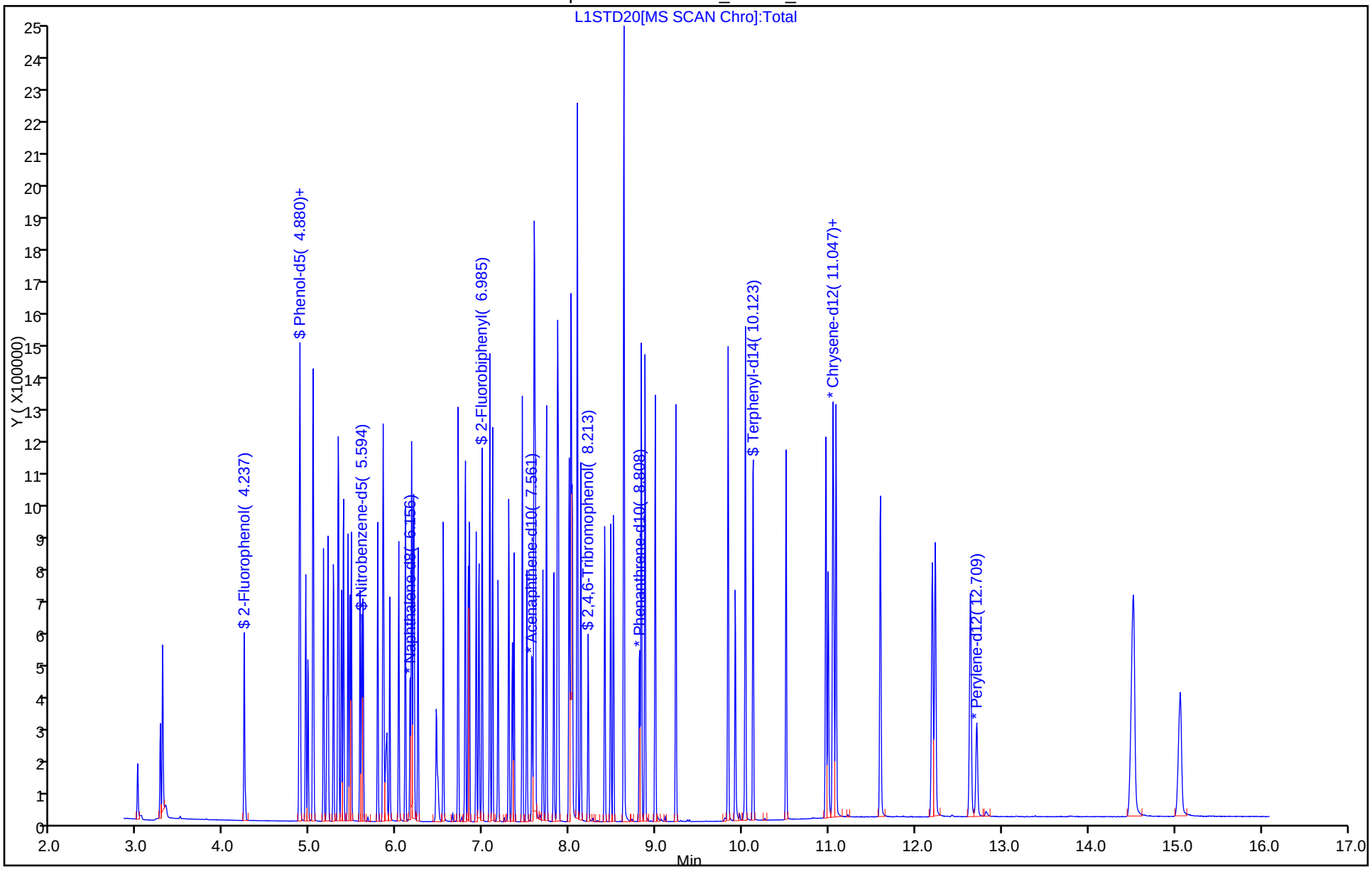
Reagents:

SMlst1_1uLL7_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:39 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD20.D				
Injection Date:	30-Mar-2015 14:40:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD40.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 8
Inject. Date: 30-Mar-2015 15:05:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD20
Misc. Info.: 500-0029969-009
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:23:35 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.194	5.194	0.000	94	51066	8.00	8.00	
* 2 Naphthalene-d8	136	6.156	6.156	0.000	91	195106	8.00	8.00	
* 3 Acenaphthene-d10	164	7.565	7.565	0.000	74	116487	8.00	8.00	
* 4 Phenanthrene-d10	188	8.808	8.808	0.000	90	212421	8.00	8.00	
* 5 Chrysene-d12	240	11.061	11.061	0.000	97	198986	8.00	8.00	
* 6 Perylene-d12	264	12.713	12.713	0.000	97	183907	8.00	8.00	
$ 7 2-Fluorophenol	112	4.242	4.242	0.000	98	299694	40.0	39.0	
$ 8 Phenol-d5	99	4.875	4.875	0.000	92	348686	40.0	39.2	
$ 9 Nitrobenzene-d5	82	5.599	5.599	0.000	92	359755	40.0	41.0	
$ 10 2-Fluorobiphenyl	172	6.989	6.989	0.000	94	714389	40.0	39.1	
$ 11 2,4,6-Tribromophenol	330	8.218	8.218	0.000	74	113870	40.0	44.1	
$ 12 Terphenyl-d14	244	10.123	10.123	0.000	98	715440	40.0	39.2	
13 1,4-Dioxane	88	3.018	3.018	0.000	98	124187	40.0	39.2	
15 N-Nitrosodimethylamine	42	3.275	3.275	0.000	77	242606	40.0	39.4	
16 Pyridine	79	3.304	3.304	0.000	81	320279	40.0	40.7	
20 Benzaldehyde	77	4.880	4.880	0.000	68	196619	40.0	39.9	
30 Phenol	94	4.889	4.889	0.000	84	354191	40.0	39.7	
33 Aniline	93	4.951	4.951	0.000	86	474460	40.0	41.4	
34 Bis(2-chloroethyl)ether	93	4.975	4.975	0.000	87	278547	40.0	38.7	
29 n-Decane	43	5.032	5.032	0.000	92	386003	40.0	36.8	
36 2-Chlorophenol	128	5.037	5.037	0.000	96	294230	40.0	39.7	
38 1,3-Dichlorobenzene	146	5.156	5.156	0.000	96	341521	40.0	38.5	
39 1,4-Dichlorobenzene	146	5.204	5.204	0.000	91	346082	40.0	38.5	
41 Benzyl alcohol	108	5.270	5.270	0.000	89	207770	40.0	39.7	
42 1,2-Dichlorobenzene	146	5.323	5.323	0.000	94	327499	40.0	39.6	
43 2-Methylphenol	107	5.332	5.332	0.000	92	246953	40.0	39.5	
44 2,2'-oxybis[1-chloropropan	45	5.361	5.361	0.000	64	557617	40.0	39.0	
19 Indene	116	5.385	5.385	0.000	76	535334	40.0	40.0	
46 3 & 4 Methylphenol	108	5.442	5.442	0.000	98	305947	40.0	39.4	
47 N-Nitrosodi-n-propylamine	70	5.465	5.465	0.000	82	232143	40.0	40.8	
49 Acetophenone	105	5.480	5.480	0.000	90	428523	40.0	39.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
51 Hexachloroethane	117	5.575	5.575	0.000	82	147127	40.0	40.0	
52 Nitrobenzene	77	5.613	5.613	0.000	1	339870	40.0	40.2	
54 Isophorone	82	5.785	5.785	0.000	99	604266	40.0	40.2	
55 2,4-Dimethylphenol	122	5.842	5.842	0.000	94	303896	40.0	39.1	
56 2-Nitrophenol	139	5.851	5.851	0.000	93	165574	40.0	41.4	
58 Benzoic acid	122	5.908	5.908	0.000	65	195487	40.0	39.9	
59 Bis(2-chloroethoxy)methane	93	5.923	5.923	0.000	91	344451	40.0	39.6	
62 2,4-Dichlorophenol	162	6.027	6.027	0.000	95	277742	40.0	40.8	
64 1,2,4-Trichlorobenzene	180	6.099	6.099	0.000	93	297290	40.0	39.7	
65 Naphthalene	128	6.175	6.175	0.000	83	923593	40.0	39.0	
66 4-Chloroaniline	127	6.194	6.194	0.000	61	386859	40.0	42.3	
67 2,6-Dichlorophenol	162	6.204	6.204	0.000	74	259631	40.0	40.4	
69 Hexachlorobutadiene	225	6.246	6.246	0.000	94	175131	40.0	40.5	
28 Caprolactam	113	6.475	6.475	0.000	80	104673	40.0	42.3	
71 4-Chloro-3-methylphenol	107	6.546	6.546	0.000	93	295369	40.0	40.6	
76 2-Methylnaphthalene	142	6.713	6.713	0.000	92	627725	40.0	38.4	
31 1-Methylnaphthalene	142	6.794	6.794	0.000	88	554565	40.0	38.8	
77 Hexachlorocyclopentadiene	237	6.827	6.827	0.000	79	222419	40.0	42.2	
78 1,2,4,5-Tetrachlorobenzene	216	6.842	6.842	0.000	96	294868	40.0	40.4	
81 2,4,6-Trichlorophenol	196	6.923	6.923	0.000	90	211995	40.0	42.0	
83 2,4,5-Trichlorophenol	196	6.951	6.951	0.000	94	218910	40.0	41.0	
40 1,1'-Biphenyl	154	7.080	7.080	0.000	92	773882	40.0	40.5	
61 2-Chloronaphthalene	162	7.108	7.108	0.000	88	594850	40.0	39.5	
85 2-Nitroaniline	65	7.175	7.175	0.000	81	208072	40.0	41.5	
88 Dimethyl phthalate	163	7.299	7.299	0.000	97	697248	40.0	39.9	
89 1,3-Dinitrobenzene	168	7.342	7.342	0.000	74	116228	40.0	42.7	
104 2,6-Dinitrotoluene	165	7.361	7.361	0.000	89	161410	40.0	41.9	
93 Acenaphthylene	152	7.456	7.456	0.000	91	1022869	40.0	39.2	
95 3-Nitroaniline	138	7.508	7.508	0.000	86	177743	40.0	41.4	
98 2,4-Dinitrophenol	184	7.594	7.594	0.000	57	182334	80.0	85.5	
99 Acenaphthene	154	7.594	7.594	0.000	95	626841	40.0	38.8	
100 4-Nitrophenol	109	7.613	7.613	0.000	98	210054	80.0	81.0	
90 2,4-Dinitrotoluene	165	7.694	7.694	0.000	83	217485	40.0	42.4	
105 Dibenzofuran	168	7.737	7.737	0.000	89	904198	40.0	39.5	
107 2,3,4,6-Tetrachlorophenol	232	7.818	7.818	0.000	72	181745	40.0	42.0	
186 Hexadecane	57	7.861	7.861	0.000	86	479221	40.0	39.7	
110 Diethyl phthalate	149	7.875	7.875	0.000	98	687338	40.0	38.5	
113 4-Chlorophenyl phenyl ethe	204	7.994	7.994	0.000	78	352778	40.0	41.1	
115 Fluorene	166	8.018	8.018	0.000	77	695982	40.0	37.8	
116 4-Nitroaniline	138	8.023	8.023	0.000	98	172580	40.0	40.6	
117 4,6-Dinitro-2-methylphenol	198	8.037	8.037	0.000	82	243210	80.0	82.2	
120 N-Nitrosodiphenylamine	169	8.094	8.094	0.000	96	964114	80.0	74.9	
121 1,2-Diphenylhydrazine	77	8.132	8.132	0.000	98	701186	40.0	40.5	
127 4-Bromophenyl phenyl ether	248	8.408	8.408	0.000	64	199930	40.0	40.9	
128 Hexachlorobenzene	284	8.480	8.480	0.000	94	217886	40.0	40.2	
72 Atrazine	200	8.513	8.513	0.000	68	196835	40.0	40.7	
123 n-Octadecane	43	8.627	8.627	0.000	95	330999	40.0	38.6	
130 Pentachlorophenol	266	8.632	8.632	0.000	82	259775	80.0	84.5	
134 Phenanthrene	178	8.832	8.832	0.000	88	1016079	40.0	38.2	
135 Anthracene	178	8.875	8.875	0.000	97	1021734	40.0	38.4	
136 Carbazole	167	8.994	8.994	0.000	88	958389	40.0	38.8	
140 Di-n-butyl phthalate	149	9.232	9.232	0.000	99	1182517	40.0	39.4	

Report Date: 31-Mar-2015 08:23:35 Chrom Revision: 2.2 13-Mar-2015 11:20:44
Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD40.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
146 Fluoranthene	202	9.837	9.837	0.000	97	1116986	40.0	37.8	
147 Benzidine	184	9.918	9.918	0.000	95	555664	40.0	43.0	
149 Pyrene	202	10.037	10.037	0.000	95	1170396	40.0	38.5	
155 Butyl benzyl phthalate	149	10.504	10.504	0.000	98	522811	40.0	40.3	
161 Bis(2-ethylhexyl) phthalat	149	10.966	10.966	0.000	96	715704	40.0	40.8	
162 3,3'-Dichlorobenzidine	252	10.994	10.994	0.000	97	354992	40.0	40.8	
163 Benzo[a]anthracene	228	11.051	11.051	0.000	98	1010206	40.0	40.6	
164 Chrysene	228	11.085	11.085	0.000	87	955415	40.0	41.0	
166 Di-n-octyl phthalate	149	11.594	11.594	0.000	99	1238966	40.0	42.3	
169 Benzo[b]fluoranthene	252	12.204	12.204	0.000	94	975249	40.0	38.1	
170 Benzo[k]fluoranthene	252	12.237	12.237	0.000	99	1007499	40.0	38.1	
171 Benzo[a]pyrene	252	12.647	12.647	0.000	80	962616	40.0	40.8	
174 Indeno[1,2,3-cd]pyrene	276	14.527	14.527	0.000	93	1037264	40.0	41.2	
175 Dibenz(a,h)anthracene	278	14.547	14.547	0.000	73	869774	40.0	40.5	
176 Benzo[g,h,i]perylene	276	15.085	15.085	0.000	93	892915	40.0	40.1	

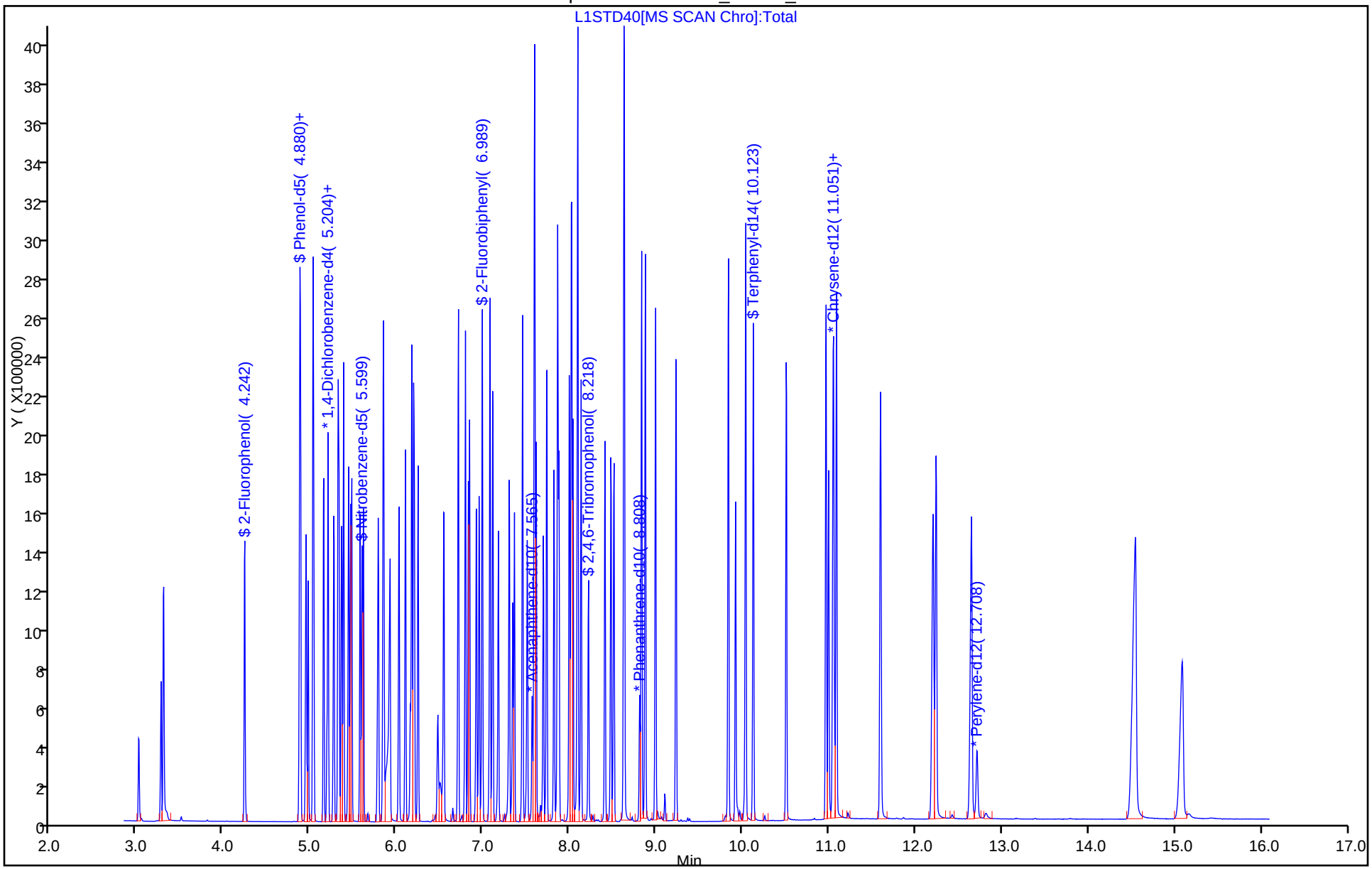
Reagents:

SMlst1_1uLL8_00015 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:23:35 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD40.D				
Injection Date:	30-Mar-2015 15:05:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	icis			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD50.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 30-Mar-2015 15:29:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD50
Misc. Info.: 500-0029969-010
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:44 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:17:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.194	5.194	0.000	96	46448	8.00	8.00	
* 2 Naphthalene-d8	136	6.156	6.156	0.000	85	188551	8.00	8.00	
* 3 Acenaphthene-d10	164	7.566	7.565	0.001	73	122929	8.00	8.00	
* 4 Phenanthrene-d10	188	8.808	8.808	0.000	90	220526	8.00	8.00	
* 5 Chrysene-d12	240	11.061	11.061	0.000	97	182267	8.00	8.00	
* 6 Perylene-d12	264	12.713	12.713	0.000	97	158398	8.00	8.00	
$ 7 2-Fluorophenol	112	4.242	4.242	0.000	98	344701	50.0	49.3	
$ 8 Phenol-d5	99	4.880	4.875	0.005	89	409189	50.0	50.5	
$ 9 Nitrobenzene-d5	82	5.604	5.599	0.005	92	414028	50.0	48.8	
$ 10 2-Fluorobiphenyl	172	6.989	6.989	0.000	93	872557	50.0	45.3	
$ 11 2,4,6-Tribromophenol	330	8.218	8.218	0.000	76	147262	50.0	54.0	
$ 12 Terphenyl-d14	244	10.123	10.123	0.000	98	902858	50.0	54.0	
13 1,4-Dioxane	88	3.013	3.018	-0.005	98	143614	50.0	49.9	
15 N-Nitrosodimethylamine	42	3.275	3.275	0.000	76	272255	50.0	48.6	
16 Pyridine	79	3.299	3.304	-0.005	80	323598	50.0	45.2	
20 Benzaldehyde	77	4.885	4.880	0.005	74	215298	50.0	48.1	
30 Phenol	94	4.889	4.889	0.000	85	417991	50.0	51.5	
33 Aniline	93	4.951	4.951	0.000	87	544049	50.0	52.3	
34 Bis(2-chloroethyl)ether	93	4.980	4.975	0.005	81	330694	50.0	50.5	
29 n-Decane	43	5.032	5.032	0.000	92	442225	50.0	46.4	
36 2-Chlorophenol	128	5.042	5.037	0.005	97	340049	50.0	50.4	
38 1,3-Dichlorobenzene	146	5.156	5.156	0.000	96	395127	50.0	49.0	
39 1,4-Dichlorobenzene	146	5.208	5.204	0.004	93	398380	50.0	48.8	
41 Benzyl alcohol	108	5.275	5.270	0.005	89	252865	50.0	53.1	
42 1,2-Dichlorobenzene	146	5.323	5.323	0.000	94	374832	50.0	49.8	
43 2-Methylphenol	107	5.332	5.332	0.000	91	293963	50.0	51.7	
44 2,2'-oxybis[1-chloropropan	45	5.366	5.361	0.005	76	631696	50.0	48.6	
19 Indene	116	5.385	5.385	0.001	77	614687	50.0	50.5	
46 3 & 4 Methylphenol	108	5.447	5.442	0.005	96	373921	50.0	52.9	
47 N-Nitrosodi-n-propylamine	70	5.470	5.465	0.005	83	286625	50.0	55.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
49 Acetophenone	105	5.480	5.480	0.000	92	509187	50.0	51.5	
51 Hexachloroethane	117	5.575	5.575	0.000	83	169309	50.0	50.7	
52 Nitrobenzene	77	5.618	5.613	0.005	1	401263	50.0	49.1	
54 Isophorone	82	5.789	5.785	0.005	98	768310	50.0	52.9	
55 2,4-Dimethylphenol	122	5.847	5.842	0.005	92	359800	50.0	47.8	
56 2-Nitrophenol	139	5.851	5.851	0.000	87	198246	50.0	51.3	
58 Benzoic acid	122	5.923	5.908	0.015	32	265066	50.0	55.9	
59 Bis(2-chloroethoxy)methane	93	5.923	5.923	0.000	94	413505	50.0	49.2	
62 2,4-Dichlorophenol	162	6.027	6.027	0.000	94	337267	50.0	51.3	
64 1,2,4-Trichlorobenzene	180	6.104	6.099	0.005	91	350462	50.0	48.4	
65 Naphthalene	128	6.175	6.175	0.000	70	1089576	50.0	47.6	
66 4-Chloroaniline	127	6.194	6.194	0.000	68	460357	50.0	52.1	
67 2,6-Dichlorophenol	162	6.204	6.204	0.000	73	313780	50.0	50.5	
69 Hexachlorobutadiene	225	6.247	6.246	0.001	95	203991	50.0	48.9	
28 Caprolactam	113	6.480	6.475	0.005	79	136465	50.0	57.1	
71 4-Chloro-3-methylphenol	107	6.547	6.546	0.001	97	378047	50.0	53.8	
76 2-Methylnaphthalene	142	6.713	6.713	0.000	90	768206	50.0	48.6	
31 1-Methylnaphthalene	142	6.794	6.794	0.000	88	681906	50.0	49.4	
77 Hexachlorocyclopentadiene	237	6.828	6.827	0.001	79	272018	50.0	48.9	
78 1,2,4,5-Tetrachlorobenzene	216	6.842	6.842	0.000	96	367453	50.0	47.7	
81 2,4,6-Trichlorophenol	196	6.923	6.923	0.000	91	268000	50.0	50.3	
83 2,4,5-Trichlorophenol	196	6.956	6.951	0.005	94	281805	50.0	50.1	
40 1,1'-Biphenyl	154	7.080	7.080	0.000	92	973650	50.0	48.3	
61 2-Chloronaphthalene	162	7.113	7.108	0.005	87	751077	50.0	47.3	
85 2-Nitroaniline	65	7.175	7.175	0.000	82	261110	50.0	49.3	
88 Dimethyl phthalate	163	7.304	7.299	0.005	97	870449	50.0	47.1	
89 1,3-Dinitrobenzene	168	7.347	7.342	0.005	79	148293	50.0	51.6	
104 2,6-Dinitrotoluene	165	7.366	7.361	0.005	90	202782	50.0	49.8	
93 Acenaphthylene	152	7.456	7.456	0.000	92	1278345	50.0	47.0	
95 3-Nitroaniline	138	7.513	7.508	0.005	87	222345	50.0	49.1	
98 2,4-Dinitrophenol	184	7.594	7.594	0.000	59	236280	100.0	105.0	
99 Acenaphthene	154	7.594	7.594	0.000	93	776004	50.0	45.5	
100 4-Nitrophenol	109	7.618	7.613	0.005	97	271646	100.0	99.3	
90 2,4-Dinitrotoluene	165	7.699	7.694	0.005	91	280169	50.0	51.8	
105 Dibenzofuran	168	7.737	7.737	0.000	90	1125305	50.0	46.6	
107 2,3,4,6-Tetrachlorophenol	232	7.823	7.818	0.005	70	227580	50.0	49.8	
186 Hexadecane	57	7.861	7.861	0.000	90	592016	50.0	46.5	
110 Diethyl phthalate	149	7.880	7.875	0.005	98	882427	50.0	46.8	
113 4-Chlorophenyl phenyl ethe	204	7.999	7.994	0.005	79	436666	50.0	48.2	
115 Fluorene	166	8.023	8.018	0.005	75	861175	50.0	44.3	
116 4-Nitroaniline	138	8.032	8.023	0.009	27	226393	50.0	50.4	
117 4,6-Dinitro-2-methylphenol	198	8.042	8.037	0.005	79	329833	100.0	107.4	
120 N-Nitrosodiphenylamine	169	8.099	8.094	0.005	97	1199253	100.0	89.7	
121 1,2-Diphenylhydrazine	77	8.132	8.132	0.000	98	861412	50.0	47.1	
127 4-Bromophenyl phenyl ether	248	8.408	8.408	0.000	65	256031	50.0	50.5	
128 Hexachlorobenzene	284	8.480	8.480	0.000	89	278319	50.0	49.4	
72 Atrazine	200	8.513	8.513	0.000	69	257076	50.0	51.2	
130 Pentachlorophenol	266	8.632	8.632	0.000	85	341843	100.0	107.1	
123 n-Octadecane	43	8.628	8.627	0.001	95	388455	50.0	49.8	
134 Phenanthrene	178	8.832	8.832	0.000	89	1290376	50.0	46.7	
135 Anthracene	178	8.875	8.875	0.000	97	1292906	50.0	46.8	
136 Carbazole	167	8.994	8.994	0.000	89	1258388	50.0	49.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
140 Di-n-butyl phthalate	149	9.232	9.232	0.000	99	1553902	50.0	49.9	
146 Fluoranthene	202	9.837	9.837	0.000	98	1433684	50.0	46.8	
147 Benzidine	184	9.918	9.918	0.000	97	632440	50.0	53.4	
149 Pyrene	202	10.037	10.037	0.000	95	1486171	50.0	53.4	
155 Butyl benzyl phthalate	149	10.509	10.504	0.004	96	628612	50.0	52.9	
161 Bis(2-ethylhexyl) phthalat	149	10.966	10.966	0.000	96	821301	50.0	51.1	
162 3,3'-Dichlorobenzidine	252	10.994	10.994	0.000	95	400453	50.0	50.2	
163 Benzo[a]anthracene	228	11.051	11.051	0.000	98	1146835	50.0	50.4	
164 Chrysene	228	11.089	11.085	0.004	89	1096558	50.0	51.4	
166 Di-n-octyl phthalate	149	11.594	11.594	0.000	99	1348452	50.0	44.4	
169 Benzo[b]fluoranthene	252	12.204	12.204	0.000	94	1036444	50.0	47.0	
170 Benzo[k]fluoranthene	252	12.242	12.237	0.005	99	1109933	50.0	48.8	
171 Benzo[a]pyrene	252	12.647	12.647	0.001	84	1038177	50.0	51.0	
174 Indeno[1,2,3-cd]pyrene	276	14.523	14.527	-0.004	95	1129950	50.0	52.1	
175 Dibenz(a,h)anthracene	278	14.551	14.547	0.004	68	955165	50.0	51.6	
176 Benzo[g,h,i]perylene	276	15.085	15.085	0.000	93	982252	50.0	51.2	
S 177 Methyl Phenols,Total	1				0			104.6	
S 178 Total Cresols, TCEQ Defini	1				0			104.6	

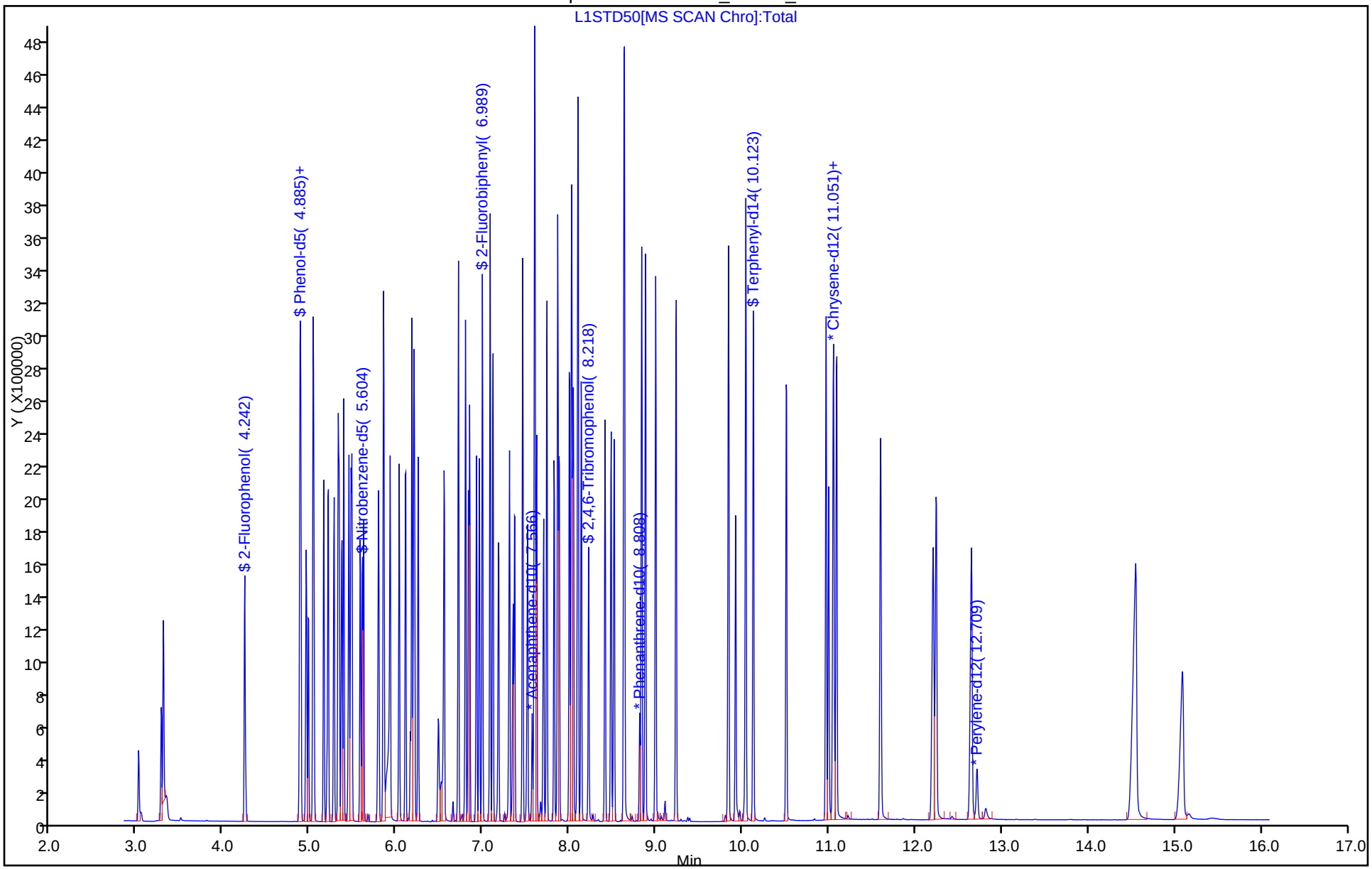
Reagents:

SMlst1_1uLL9_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:44 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD50.D				
Injection Date:	30-Mar-2015 15:29:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD60.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 30-Mar-2015 15:54:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD60
Misc. Info.: 500-0029969-011
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:46 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:18:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.194	5.194	0.000	95	59657	8.00	8.00	
* 2 Naphthalene-d8	136	6.156	6.156	0.000	79	230300	8.00	8.00	
* 3 Acenaphthene-d10	164	7.565	7.565	0.000	41	139119	8.00	8.00	
* 4 Phenanthrene-d10	188	8.813	8.808	0.005	91	255968	8.00	8.00	
* 5 Chrysene-d12	240	11.066	11.061	0.005	97	234119	8.00	8.00	
* 6 Perylene-d12	264	12.718	12.713	0.005	97	230849	8.00	8.00	
$ 7 2-Fluorophenol	112	4.242	4.242	0.000	99	494696	60.0	55.1	
$ 8 Phenol-d5	99	4.884	4.875	0.009	88	553444	60.0	53.2	
$ 9 Nitrobenzene-d5	82	5.604	5.599	0.005	94	570301	60.0	55.1	
$ 10 2-Fluorobiphenyl	172	6.989	6.989	0.000	93	1145314	60.0	52.5	
$ 11 2,4,6-Tribromophenol	330	8.223	8.218	0.005	71	199094	60.0	64.5	
$ 12 Terphenyl-d14	244	10.127	10.123	0.004	98	1203383	60.0	56.1	
13 1,4-Dioxane	88	3.018	3.018	0.000	98	204516	60.0	55.3	
15 N-Nitrosodimethylamine	42	3.280	3.275	0.005	77	400555	60.0	55.7	
16 Pyridine	79	3.304	3.304	0.000	80	564367	60.0	61.4	
20 Benzaldehyde	77	4.884	4.880	0.004	62	271842	60.0	47.2	
30 Phenol	94	4.894	4.889	0.005	86	570506	60.0	54.8	
33 Aniline	93	4.956	4.951	0.005	84	787908	60.0	58.9	
34 Bis(2-chloroethyl)ether	93	4.980	4.975	0.005	86	454382	60.0	54.0	
29 n-Decane	43	5.032	5.032	0.000	92	591076	60.0	48.3	
36 2-Chlorophenol	128	5.042	5.037	0.005	97	479907	60.0	55.4	
38 1,3-Dichlorobenzene	146	5.156	5.156	0.000	96	557390	60.0	53.8	
39 1,4-Dichlorobenzene	146	5.208	5.204	0.004	93	560161	60.0	53.4	
41 Benzyl alcohol	108	5.275	5.270	0.005	87	342735	60.0	56.1	
42 1,2-Dichlorobenzene	146	5.323	5.323	0.000	95	531657	60.0	55.0	
43 2-Methylphenol	107	5.337	5.332	0.005	90	399061	60.0	54.6	
44 2,2'-oxybis[1-chloropropan	45	5.365	5.361	0.004	84	865694	60.0	51.9	
19 Indene	116	5.389	5.385	0.005	76	871680	60.0	55.7	
46 3 & 4 Methylphenol	108	5.446	5.442	0.004	98	506449	60.0	55.8	
47 N-Nitrosodi-n-propylamine	70	5.475	5.465	0.010	84	378159	60.0	56.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
49 Acetophenone	105	5.484	5.480	0.004	84	678587	60.0	53.4	
51 Hexachloroethane	117	5.575	5.575	0.000	83	240064	60.0	55.9	
52 Nitrobenzene	77	5.618	5.613	0.005	1	545992	60.0	54.7	
54 Isophorone	82	5.794	5.785	0.010	98	1012220	60.0	57.1	
55 2,4-Dimethylphenol	122	5.846	5.842	0.004	92	483569	60.0	52.6	
56 2-Nitrophenol	139	5.856	5.851	0.005	94	266827	60.0	56.5	
58 Benzoic acid	122	5.932	5.908	0.024	69	352929	60.0	61.0	
59 Bis(2-chloroethoxy)methane	93	5.923	5.923	0.000	94	556979	60.0	54.2	
62 2,4-Dichlorophenol	162	6.032	6.027	0.005	96	453464	60.0	56.5	
64 1,2,4-Trichlorobenzene	180	6.104	6.099	0.005	91	478230	60.0	54.1	
65 Naphthalene	128	6.175	6.175	0.000	70	1445012	60.0	51.7	
66 4-Chloroaniline	127	6.199	6.194	0.005	69	551371	60.0	51.1	
67 2,6-Dichlorophenol	162	6.208	6.204	0.004	78	415751	60.0	54.8	
69 Hexachlorobutadiene	225	6.246	6.246	0.000	95	281581	60.0	55.2	
28 Caprolactam	113	6.489	6.475	0.014	80	175014	60.0	59.9	
71 4-Chloro-3-methylphenol	107	6.551	6.546	0.005	94	482679	60.0	56.3	
76 2-Methylnaphthalene	142	6.713	6.713	0.000	91	1005837	60.0	52.1	
31 1-Methylnaphthalene	142	6.799	6.794	0.005	88	889836	60.0	52.7	
77 Hexachlorocyclopentadiene	237	6.827	6.827	0.000	79	366229	60.0	58.2	
78 1,2,4,5-Tetrachlorobenzene	216	6.846	6.842	0.004	96	475615	60.0	54.6	
81 2,4,6-Trichlorophenol	196	6.923	6.923	0.000	91	352636	60.0	58.5	
83 2,4,5-Trichlorophenol	196	6.956	6.951	0.005	95	369039	60.0	57.9	
40 1,1'-Biphenyl	154	7.080	7.080	0.000	92	1246900	60.0	54.6	
61 2-Chloronaphthalene	162	7.113	7.108	0.005	96	968822	60.0	53.9	
85 2-Nitroaniline	65	7.180	7.175	0.005	71	349845	60.0	58.4	
88 Dimethyl phthalate	163	7.308	7.299	0.009	97	1162026	60.0	55.6	
89 1,3-Dinitrobenzene	168	7.351	7.342	0.009	84	199532	60.0	61.3	
104 2,6-Dinitrotoluene	165	7.365	7.361	0.004	88	267743	60.0	58.1	
93 Acenaphthylene	152	7.456	7.456	0.000	92	1650672	60.0	53.6	
95 3-Nitroaniline	138	7.518	7.508	0.010	93	295676	60.0	57.7	
98 2,4-Dinitrophenol	184	7.599	7.594	0.005	58	315143	120.0	123.8	
99 Acenaphthene	154	7.599	7.594	0.005	93	982890	60.0	51.0	
100 4-Nitrophenol	109	7.623	7.613	0.010	98	348840	120.0	112.6	
90 2,4-Dinitrotoluene	165	7.704	7.694	0.010	87	368104	60.0	60.1	
105 Dibenzofuran	168	7.737	7.737	0.000	89	1460193	60.0	53.5	
107 2,3,4,6-Tetrachlorophenol	232	7.823	7.818	0.005	70	308174	60.0	59.6	
186 Hexadecane	57	7.861	7.861	0.000	89	745448	60.0	51.7	
110 Diethyl phthalate	149	7.880	7.875	0.005	98	1110489	60.0	52.1	
113 4-Chlorophenyl phenyl ethe	204	7.999	7.994	0.005	81	571288	60.0	55.7	
115 Fluorene	166	8.023	8.018	0.005	75	1113563	60.0	50.6	
116 4-Nitroaniline	138	8.037	8.023	0.014	14	290272	60.0	57.1	
117 4,6-Dinitro-2-methylphenol	198	8.051	8.037	0.014	66	429027	120.0	120.3	
120 N-Nitrosodiphenylamine	169	8.099	8.094	0.005	97	1546484	120.0	99.7	
121 1,2-Diphenylhydrazine	77	8.137	8.132	0.005	98	1120867	60.0	54.2	
127 4-Bromophenyl phenyl ether	248	8.413	8.408	0.005	60	338923	60.0	57.6	
128 Hexachlorobenzene	284	8.480	8.480	0.000	84	367410	60.0	56.2	
72 Atrazine	200	8.518	8.513	0.005	66	324162	60.0	55.6	
123 n-Octadecane	43	8.627	8.627	0.000	96	460848	60.0	53.1	
130 Pentachlorophenol	266	8.637	8.632	0.005	54	437831	120.0	118.2	
134 Phenanthrene	178	8.837	8.832	0.005	88	1622563	60.0	50.6	
135 Anthracene	178	8.880	8.875	0.005	97	1643298	60.0	51.2	
136 Carbazole	167	8.999	8.994	0.005	84	1581914	60.0	53.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
140 Di-n-butyl phthalate	149	9.232	9.232	0.000	99	1902855	60.0	52.6	
146 Fluoranthene	202	9.842	9.837	0.005	97	1807834	60.0	50.8	
147 Benzidine	184	9.923	9.918	0.005	93	916571	60.0	60.3	
149 Pyrene	202	10.042	10.037	0.005	95	1899090	60.0	53.1	
155 Butyl benzyl phthalate	149	10.508	10.504	0.004	96	842715	60.0	55.2	
161 Bis(2-ethylhexyl) phthalat	149	10.966	10.966	0.000	96	1149893	60.0	55.7	
162 3,3'-Dichlorobenzidine	252	10.999	10.994	0.005	87	613728	60.0	59.9	
163 Benzo[a]anthracene	228	11.056	11.051	0.005	98	1677307	60.0	57.4	
164 Chrysene	228	11.094	11.085	0.009	88	1573197	60.0	57.4	
166 Di-n-octyl phthalate	149	11.599	11.594	0.005	99	2050617	60.0	58.1	
169 Benzo[b]fluoranthene	252	12.213	12.204	0.009	94	1728278	60.0	53.8	
170 Benzo[k]fluoranthene	252	12.246	12.237	0.009	99	1647557	60.0	49.7	
171 Benzo[a]pyrene	252	12.656	12.647	0.010	79	1656373	60.0	55.9	
174 Indeno[1,2,3-cd]pyrene	276	14.551	14.527	0.024	91	1811208	60.0	57.3	
175 Dibenz(a,h)anthracene	278	14.570	14.547	0.023	64	1529407	60.0	56.7	
176 Benzo[g,h,i]perylene	276	15.108	15.085	0.023	92	1594966	60.0	57.1	
S 177 Methyl Phenols,Total	1				0			110.5	
S 178 Total Cresols, TCEQ Defini	1				0			110.5	

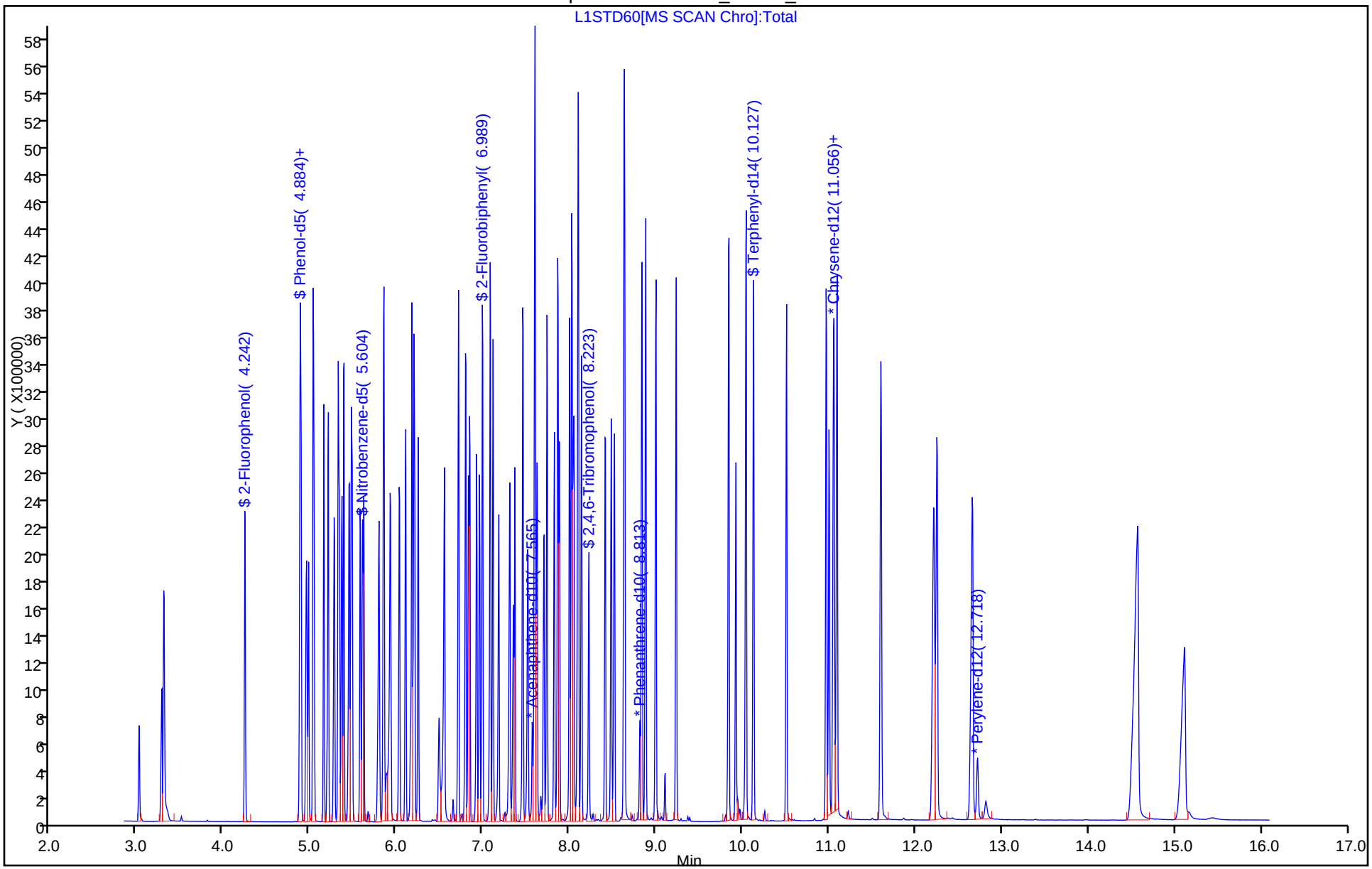
Reagents:

SMlst1_1uLL10_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:46 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD60.D				
Injection Date:	30-Mar-2015 15:54:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 11
Inject. Date: 30-Mar-2015 16:18:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD70
Misc. Info.: 500-0029969-012
Operator ID: DA Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:48 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 31-Mar-2015 08:07:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.194	5.194	0.000	95	64085	8.00	8.00	
* 2 Naphthalene-d8	136	6.156	6.156	0.000	91	249676	8.00	8.00	
* 3 Acenaphthene-d10	164	7.570	7.565	0.005	40	151206	8.00	8.00	
* 4 Phenanthrene-d10	188	8.813	8.808	0.005	90	273183	8.00	8.00	
* 5 Chrysene-d12	240	11.066	11.061	0.005	84	253306	8.00	8.00	
* 6 Perylene-d12	264	12.718	12.713	0.005	96	263755	8.00	8.00	
$ 7 2-Fluorophenol	112	4.246	4.242	0.004	97	645020	70.0	66.9	
$ 8 Phenol-d5	99	4.885	4.875	0.010	89	725338	70.0	64.9	
$ 9 Nitrobenzene-d5	82	5.604	5.599	0.005	92	748036	70.0	66.6	
$ 10 2-Fluorobiphenyl	172	6.994	6.989	0.005	98	1426111	70.0	60.2	
$ 11 2,4,6-Tribromophenol	330	8.223	8.218	0.005	74	260086	70.0	77.6	
$ 12 Terphenyl-d14	244	10.127	10.123	0.004	98	1520523	70.0	65.5	
13 1,4-Dioxane	88	3.023	3.018	0.005	98	264667	70.0	66.6	
15 N-Nitrosodimethylamine	42	3.289	3.275	0.014	80	517983	70.0	67.0	
16 Pyridine	79	3.308	3.304	0.004	84	736465	70.0	74.6	
20 Benzaldehyde	77	4.885	4.880	0.005	64	325715	70.0	52.7	
30 Phenol	94	4.899	4.889	0.010	86	744982	70.0	66.6	
33 Aniline	93	4.956	4.951	0.005	85	1007646	70.0	70.1	
34 Bis(2-chloroethyl)ether	93	4.980	4.975	0.005	79	639655	70.0	70.7	
29 n-Decane	43	5.032	5.032	0.000	92	729269	70.0	55.5	
36 2-Chlorophenol	128	5.046	5.037	0.009	98	616955	70.0	66.3	
38 1,3-Dichlorobenzene	146	5.156	5.156	0.000	95	718055	70.0	64.5	
39 1,4-Dichlorobenzene	146	5.208	5.204	0.004	93	716305	70.0	63.5	
41 Benzyl alcohol	108	5.280	5.270	0.010	83	457452	70.0	69.7	
42 1,2-Dichlorobenzene	146	5.323	5.323	0.000	95	681660	70.0	65.6	
43 2-Methylphenol	107	5.337	5.332	0.005	91	523833	70.0	66.8	
44 2,2'-oxybis[1-chloropropan	45	5.365	5.361	0.004	84	1102657	70.0	61.5	
19 Indene	116	5.389	5.385	0.005	76	1119310	70.0	66.6	
46 3 & 4 Methylphenol	108	5.451	5.442	0.009	97	671760	70.0	68.9	
47 N-Nitrosodi-n-propylamine	70	5.480	5.465	0.015	84	479183	70.0	67.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
49 Acetophenone	105	5.489	5.480	0.009	96	896773	70.0	65.7	
51 Hexachloroethane	117	5.580	5.575	0.005	80	307910	70.0	66.8	
52 Nitrobenzene	77	5.623	5.613	0.010	1	709272	70.0	65.5	
54 Isophorone	82	5.799	5.785	0.015	98	1310755	70.0	68.2	
55 2,4-Dimethylphenol	122	5.851	5.842	0.009	87	619415	70.0	62.2	
56 2-Nitrophenol	139	5.856	5.851	0.005	88	347081	70.0	67.8	
58 Benzoic acid	122	5.946	5.908	0.038	94	461582	70.0	73.6	
59 Bis(2-chloroethoxy)methane	93	5.927	5.923	0.004	96	728098	70.0	65.4	
62 2,4-Dichlorophenol	162	6.032	6.027	0.005	95	594505	70.0	68.3	
64 1,2,4-Trichlorobenzene	180	6.104	6.099	0.005	93	617814	70.0	64.4	
65 Naphthalene	128	6.180	6.175	0.005	70	1861038	70.0	61.4	
66 4-Chloroaniline	127	6.199	6.194	0.005	63	729032	70.0	62.3	
67 2,6-Dichlorophenol	162	6.208	6.204	0.004	83	530178	70.0	64.4	
69 Hexachlorobutadiene	225	6.251	6.246	0.005	94	362566	70.0	65.6	
28 Caprolactam	113	6.499	6.475	0.024	80	229362	70.0	72.5	
71 4-Chloro-3-methylphenol	107	6.556	6.546	0.010	96	622337	70.0	66.9	
76 2-Methylnaphthalene	142	6.713	6.713	0.000	90	1272992	70.0	60.9	
31 1-Methylnaphthalene	142	6.799	6.794	0.005	88	1126436	70.0	61.6	
77 Hexachlorocyclopentadiene	237	6.832	6.827	0.005	79	467595	70.0	68.4	
78 1,2,4,5-Tetrachlorobenzene	216	6.846	6.842	0.004	94	599598	70.0	63.3	
81 2,4,6-Trichlorophenol	196	6.927	6.923	0.004	89	467609	70.0	71.4	
83 2,4,5-Trichlorophenol	196	6.961	6.951	0.010	93	467214	70.0	67.5	
40 1,1'-Biphenyl	154	7.085	7.080	0.005	92	1573826	70.0	63.4	
61 2-Chloronaphthalene	162	7.118	7.108	0.010	96	1220637	70.0	62.4	
85 2-Nitroaniline	65	7.180	7.175	0.005	65	448977	70.0	68.9	
88 Dimethyl phthalate	163	7.313	7.299	0.014	96	1480915	70.0	65.2	
89 1,3-Dinitrobenzene	168	7.356	7.342	0.014	81	260359	70.0	73.6	
104 2,6-Dinitrotoluene	165	7.370	7.361	0.009	85	341294	70.0	68.1	
93 Acenaphthylene	152	7.461	7.456	0.005	92	2092760	70.0	61.7	
95 3-Nitroaniline	138	7.523	7.508	0.015	95	362099	70.0	65.0	
98 2,4-Dinitrophenol	184	7.604	7.594	0.010	63	403496	140.0	145.8	
99 Acenaphthene	154	7.599	7.594	0.005	92	1236106	70.0	59.0	
100 4-Nitrophenol	109	7.632	7.613	0.019	95	441643	140.0	131.2	
90 2,4-Dinitrotoluene	165	7.708	7.694	0.014	88	472140	70.0	71.0	
105 Dibenzofuran	168	7.742	7.737	0.005	89	1846032	70.0	62.2	
107 2,3,4,6-Tetrachlorophenol	232	7.823	7.818	0.005	71	399121	70.0	71.0	
186 Hexadecane	57	7.866	7.861	0.005	90	921916	70.0	58.9	
110 Diethyl phthalate	149	7.885	7.875	0.010	98	1419228	70.0	61.2	
113 4-Chlorophenyl phenyl ethe	204	8.004	7.994	0.010	83	709709	70.0	63.7	
115 Fluorene	166	8.027	8.018	0.009	70	1409879	70.0	58.9	
116 4-Nitroaniline	138	8.046	8.023	0.023	10	368261	70.0	66.7	
117 4,6-Dinitro-2-methylphenol	198	8.056	8.037	0.019	82	545545	140.0	143.4	
120 N-Nitrosodiphenylamine	169	8.104	8.094	0.010	88	1937320	140.0	117.0	
121 1,2-Diphenylhydrazine	77	8.137	8.132	0.005	99	1410649	70.0	62.7	
127 4-Bromophenyl phenyl ether	248	8.413	8.408	0.005	62	427754	70.0	68.1	
128 Hexachlorobenzene	284	8.485	8.480	0.005	95	463228	70.0	66.4	
72 Atrazine	200	8.523	8.513	0.010	62	400697	70.0	64.4	
123 n-Octadecane	43	8.627	8.627	0.000	96	527055	70.0	NQ	
130 Pentachlorophenol	266	8.642	8.632	0.010	34	560672	140.0	141.8	
134 Phenanthrene	178	8.837	8.832	0.005	90	2040200	70.0	59.6	
135 Anthracene	178	8.885	8.875	0.010	97	2026106	70.0	59.2	
136 Carbazole	167	8.999	8.994	0.005	88	2004795	70.0	63.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
140 Di-n-butyl phthalate	149	9.232	9.232	0.000	99	2344113	70.0	60.7	
146 Fluoranthene	202	9.842	9.837	0.005	98	2265972	70.0	59.7	
147 Benzidine	184	9.923	9.918	0.005	97	1171340	70.0	71.2	
149 Pyrene	202	10.042	10.037	0.005	96	2382471	70.0	61.6	
155 Butyl benzyl phthalate	149	10.508	10.504	0.004	97	1079766	70.0	65.4	
161 Bis(2-ethylhexyl) phthalat	149	10.970	10.966	0.004	95	1436440	70.0	64.3	
162 3,3'-Dichlorobenzidine	252	11.004	10.994	0.010	94	795446	70.0	71.8	
163 Benzo[a]anthracene	228	11.056	11.051	0.005	97	2223633	70.0	70.4	
164 Chrysene	228	11.094	11.085	0.009	88	2023427	70.0	68.3	
166 Di-n-octyl phthalate	149	11.604	11.594	0.010	99	2663325	70.0	70.7	
169 Benzo[b]fluoranthene	252	12.218	12.204	0.014	94	2516028	70.0	68.6	
170 Benzo[k]fluoranthene	252	12.256	12.237	0.019	99	2103269	70.0	55.5	
171 Benzo[a]pyrene	252	12.666	12.647	0.020	79	2258522	70.0	66.7	
174 Indeno[1,2,3-cd]pyrene	276	14.566	14.527	0.039	89	2452996	70.0	68.0	
175 Dibenz(a,h)anthracene	278	14.585	14.547	0.038	62	2063828	70.0	67.0	
176 Benzo[g,h,i]perylene	276	15.128	15.085	0.043	93	2145899	70.0	67.2	
S 177 Methyl Phenols,Total	1				0			135.7	
S 178 Total Cresols, TCEQ Defini	1				0			135.7	

QC Flag Legend

Processing Flags

NQ - Not Quantifiable

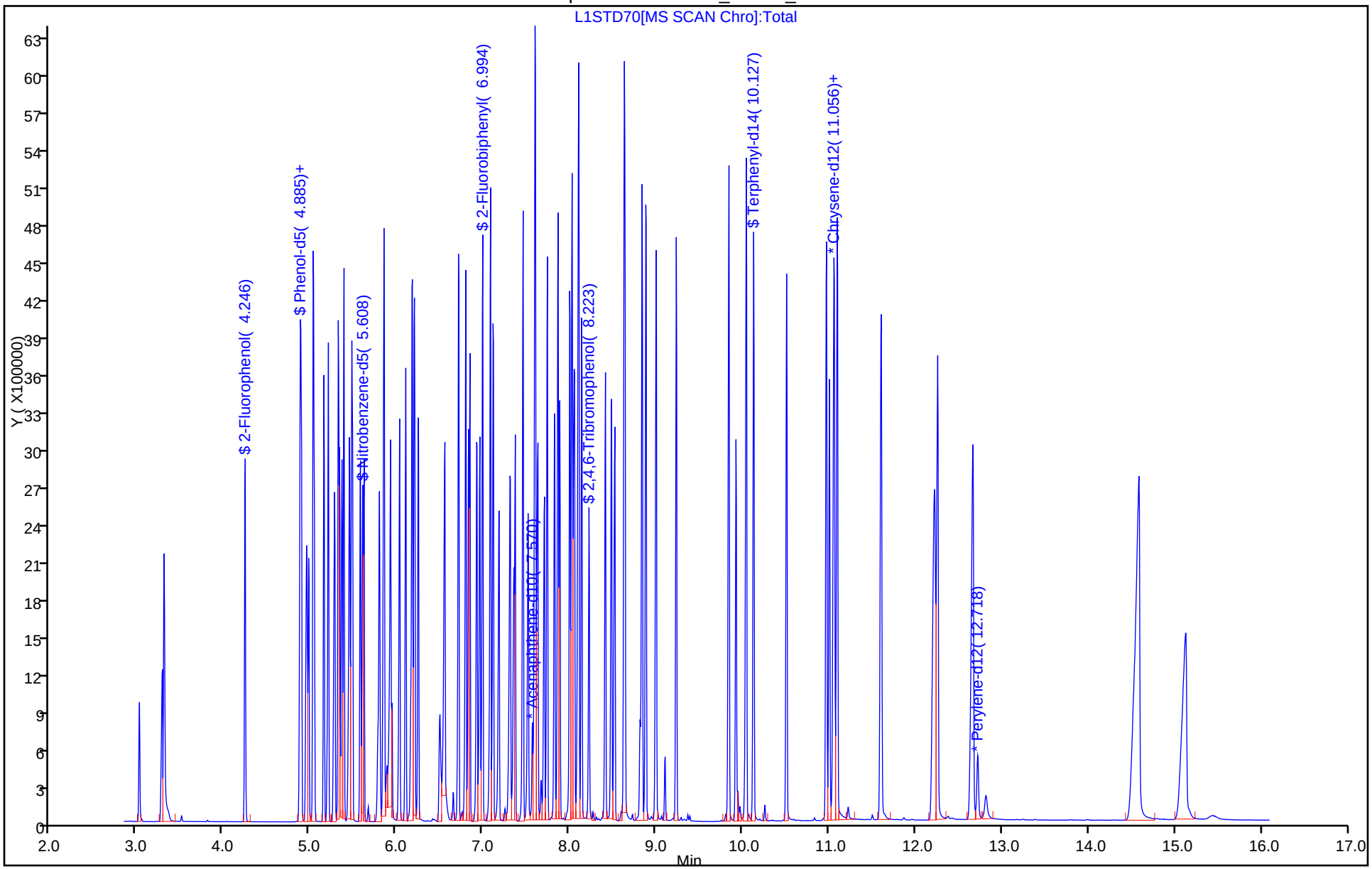
Reagents:

SMlst1_1uLL11_00014 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:48 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D				
Injection Date:	30-Mar-2015 16:18:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 500-285596/3	L1STD02.D
Level 2	IC 500-285596/4	L1STD05.D
Level 3	IC 500-285596/5	L1STD1.D
Level 4	IC 500-285596/2	L1STD2.D
Level 5	IC 500-285596/6	L1STD5.D
Level 6	IC 500-285596/7	L1STD10.D
Level 7	IC 500-285596/8	L1STD20.D
Level 8	ICIS 500-285596/9	L1STD40.D
Level 9	IC 500-285596/10	L1STD50.D
Level 10	IC 500-285596/11	ICVMIX1.D
Level 11	IC 500-285596/12	L1STD70.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,4-Dioxane	0.4645 0.4222	0.4840	0.4473	0.4549	0.4845 0.4222	Ave		0.4542			0.0100	5.7		20.0			
N-Nitrosodimethylamine	0.9404 0.8821	0.9410	0.9217	1.0677 0.9327	0.9525 0.8685	Ave		0.9383			0.0100	6.4		20.0			
Pyridine	1.2720 1.2849	1.2980	1.2354	1.2967	1.2789 1.2219	Ave		1.2697			0.0100	2.3		20.0			
Benzaldehyde	0.8583 0.4366	0.8291	0.6995	0.6309	0.8804 0.5301	Qua2	-0.511	1.0121	-0.007851		0.0100				0.9990		0.9900
Phenol	1.5008 1.3660	1.4913	1.4233	1.4511	1.5456 1.3659	Ave		1.4491			0.8000	4.7		20.0			
Aniline	1.8481 1.8176	1.8556	1.8478	1.8535	1.8301 1.8563	Ave		1.8442			0.0100	0.8		20.0			
Bis(2-chloroethyl)ether	1.1294 1.1624	1.1611	1.0982	1.1850 1.1725	1.1017 1.0833	Ave		1.1367			0.7000	3.4		20.0			
2-Chlorophenol	1.2979 1.1969	1.2992	1.2813	1.2841	1.3403 1.2279	Ave		1.2754			0.8000	3.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
n-Decane	1.9326 1.1508	1.7505	1.5206	2.2652 1.4329	2.0233 1.2519	Qua2	0.6254	1.9722	-0.011786		0.0100				1.0000		0.9900
1,3-Dichlorobenzene	1.5170 1.3282	1.5261	1.4881	1.6446 1.4464	1.5500 1.4141	Ave		1.4893			0.0100	6.4		20.0			
1,4-Dichlorobenzene	1.5450 1.3717	1.5258	1.5142	1.7155 1.4964	1.6087 1.4242	Ave		1.5252			0.0100	6.9		20.0			
Benzyl alcohol	0.8138 0.8423	0.8371	0.8134	0.8665 0.8563	0.8516 0.8124	Ave		0.8367			0.0100	2.5		20.0			
1,2-Dichlorobenzene	1.4729 1.3225	1.4999	1.4338	1.4247	1.5171 1.3803	Ave		1.4359			0.0100	4.8		20.0			
2-Methylphenol	0.9604 0.9588	0.9908	0.9732	1.0808 1.0143	1.0217 0.9806	Ave		0.9976			0.7000	4.1		20.0			
2,2'-oxybis[1-chloropropane]	2.7413 2.0753	2.6939	2.4725	3.2237 2.4025	2.9327 2.2253	Ave		2.5959			0.0100	14.6		20.0			
Indene	2.2053 2.0169	2.2454	2.2401	2.1716	2.3181 2.0937	Ave		2.1844			0.0100	4.6		20.0			
3 & 4 Methylphenol	1.1787 1.1657	1.1590	1.1985	1.2524 1.1950	1.2074 1.1513	Ave		1.1885			0.6000	2.7		20.0			
N-Nitrosodi-n-propylamine	0.8113 0.7021	0.8452 0.7947	0.8634 0.7527	0.8561 0.7705	0.8677 0.7149	Ave		0.7979			0.5000	7.7		20.0			
Acetophenone	1.6433 1.4753	1.6547	1.7436 1.5635	1.7418 1.5918	1.7206 1.5034	Ave		1.6265			0.0100	6.2		20.0			
Hexachloroethane	0.6089 0.5446	0.6085	0.5990	0.6066	0.6274 0.5586	Ave		0.5934			0.3000	5.1		20.0			
Nitrobenzene	0.3022 0.2798	0.2941	0.3025 0.2910	0.3103 0.3086	0.3036 0.2871	Ave		0.2977			0.2000	3.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Isophorone	0.5764 0.5862	0.5780	0.5665	0.5725 0.5911	0.5495 0.5714	Ave		0.5740			0.4000	2.2		20.0			
2-Nitrophenol	0.1582 0.1739	0.1707	0.1716	0.1827	0.1471 0.1768	Ave		0.1687			0.1000	7.2		20.0			
2,4-Dimethylphenol	0.3086 0.2982	0.3083	0.3021	0.3157	0.3105 0.3002	Ave		0.3062			0.2000	2.0		20.0			
Bis(2-chloroethoxy)methane	0.3375 0.3302	0.3336	0.3287	0.3553 0.3519	0.3430 0.3301	Ave		0.3388			0.3000	3.0		20.0			
Benzoic acid	+++++ 0.2034	0.1407	0.1663	0.1963	+++++ 0.1952	Ave		0.1804			0.0100	14.6		20.0			
2,4-Dichlorophenol	0.2791 0.2835	0.2854	0.2798	0.3050	0.2734 0.2885	Ave		0.2850			0.2000	3.5		20.0			
1,2,4-Trichlorobenzene	0.3144 0.3098	0.3189	0.3115	0.3417 0.3300	0.3054 0.3167	Ave		0.3185			0.0100	3.7		20.0			
Naphthalene	0.9946 0.8818	1.0062	1.1259 0.9456	1.1000 0.9731	1.0151 0.8902	Ave		0.9925			0.7000	8.4		20.0			
4-Chloroaniline	0.4571 0.3665	0.4612	0.4482	0.4395	0.4271 0.4015	Ave		0.4287			0.0100	8.0		20.0			
2,6-Dichlorophenol	0.2840 0.2852	0.2863	0.2754	0.2969	0.2695 0.2788	Ave		0.2823			0.0100	3.1		20.0			
Hexachlorobutadiene	0.1792 0.1671	0.1805	0.1731	0.1885	0.1723 0.1723	Ave		0.1761			0.0100	4.0		20.0			
Caprolactam	0.0969 0.1119	0.1073	0.1033	0.1085	0.1001 0.1014	Ave		0.1042			0.0100	5.1		20.0			
4-Chloro-3-methylphenol	0.2668 0.2686	0.2656	0.2580	0.2817	0.2625 0.2673	Ave		0.2672			0.2000	2.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Methylnaphthalene	0.6675 0.6189	0.7285 0.6532	0.7059 0.6426	0.7017 0.6687	0.6619 0.6033	Ave		0.6652			0.4000	5.9		20.0			
1-Methylnaphthalene	0.5949 0.5578	0.5896	0.6426 0.5832	0.6464 0.6025	0.5928 0.5526	Ave		0.5958			0.0100	5.4		20.0			
Hexachlorocyclopentadiene	0.3164 0.3253	0.3398	0.3456	0.3614	0.3202 0.3324	Ave		0.3344			0.0500	4.7		20.0			
1,2,4,5-Tetrachlorobenzene	0.5093 0.4733	0.5216	0.5067	0.5276	0.5227 0.4933	Ave		0.5078			0.0100	3.8		20.0			
2,4,6-Trichlorophenol	0.3098 0.3656	0.3355	0.3494	0.3833	0.3102 0.3756	Ave		0.3471			0.2000	8.6		20.0			
2,4,5-Trichlorophenol	0.3343 0.3826	0.3379	0.3629	0.3814	0.3404 0.3823	Ave		0.3603			0.2000	6.2		20.0			
1,1'-Biphenyl	1.3601 1.2798	1.3978	1.3810	1.4283	1.4390 1.3308	Ave		1.3738			0.0100	4.1		20.0			
2-Chloronaphthalene	1.0173 1.0209	1.0385	1.0340	1.1336 1.1194	1.0645 1.0512	Ave		1.0599			0.8000	4.1		20.0			
2-Nitroaniline	0.3336 0.3360	0.3582	0.3531	0.3467	0.3139 0.3305	Ave		0.3389			0.0100	4.5		20.0			
Dimethyl phthalate	1.1893 1.2197	1.2328	1.1940	1.2787 1.2372	1.2233 1.1669	Ave		1.2177			0.0100	2.8		20.0			
m-Dinitrobenzene	0.1558 0.1958	0.1720	0.1823	0.1909	0.1351 0.1906	Ave		0.1746			0.0100	12.7		20.0			
2,6-Dinitrotoluene	0.2745 0.2899	0.1632 0.2784	0.1765 0.2876	0.2257 0.2921	0.2577 0.2870	Lin1	-0.093	0.2896			0.2000				1.0000		0.9900
Acenaphthylene	1.7480 1.6227	1.7636	1.8259 1.7379	1.7978 1.7707	1.7614 1.6736	Ave		1.7446			0.9000	3.6		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
3-Nitroaniline	0.3196 0.3265	0.3331	0.3274	0.3314	0.2968 0.3025	Ave		0.3196			0.0100	4.5		20.0			
2,4-Dinitrophenol	0.1042 0.1603	0.1390	0.1612	0.1616	+++++ 0.1617	Ave		0.1480			0.0100	15.7		20.0			
Acenaphthene	1.1797 0.9969	1.2202	1.2171 1.2017	1.2400 1.1537	1.2028 1.0806	Ave		1.1658			0.9000	6.8		20.0			
4-Nitrophenol	0.1476 0.1529	0.1510	0.1555	0.1557	0.1473 0.1460	Ave		0.1509			0.0100	2.6		20.0			
2,4-Dinitrotoluene	0.3497 0.3734	0.3567	0.2089 0.3632	0.2766 0.3725	0.3340 0.3643	Lin1	-0.178	0.3714			0.2000				1.0000		0.9900
Dibenzofuran	1.4996 1.4143	1.5132	1.5005	1.6195 1.5276	1.6028 1.4569	Ave		1.5168			0.8000	4.5		20.0			
2,3,4,6-Tetrachlorophenol	0.2973 0.3368	0.3226	0.3272	0.3359	0.2828 0.3207	Ave		0.3176			0.0100	6.4		20.0			
Diethyl phthalate	1.2001 1.0009	1.2079	1.1218	1.3252 1.0827	1.3166 1.0080	Ave		1.1579			0.0100	10.9		20.0			
Hexadecane	1.0600 0.5631	0.9746	0.7909	0.7335	1.1661 0.6376	Qua2	0.5527	1.0908	-0.007628		0.0100				1.0000		0.9900
4-Chlorophenyl phenyl ether	0.5673 0.5576	0.5851	0.5735	0.5951	0.6039 0.5696	Ave		0.5789			0.4000	2.8		20.0			
4-Nitroaniline	0.3151 0.3314	0.3281	0.3282	0.3317	0.3195 0.3032	Ave		0.3225			0.0100	3.3		20.0			
Fluorene	1.2611 1.1524	1.2912	1.4053 1.2073	1.4024 1.1987	1.3439 1.1284	Ave		1.2656			0.9000	8.1		20.0			
4,6-Dinitro-2-methylphenol	0.1015 0.1512	0.1277	0.1380	0.1479	+++++ 0.1444	Ave		0.1351			0.0100	13.6		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
N-Nitrosodiphenylamine	0.5547 0.4720	0.5447	0.5885 0.5277	0.5909 0.5179	0.5390 0.5069	Ave		0.5380			0.0100	7.1		20.0			
1,2-Diphenylhydrazine	1.1239 0.9325	1.0795	0.9997	1.0022	1.1837 0.9409	Ave		1.0375			0.0100	9.1		20.0			
4-Bromophenyl phenyl ether	0.2155 0.2196	0.2174	0.2176	0.2309	0.1987 0.2233	Ave		0.2176			0.1000	4.5		20.0			
Hexachlorobenzene	0.2416 0.2685	0.2407 0.2507	0.2446 0.2616	0.2523 0.2805	0.2253 0.2701	Ave		0.2536			0.1000	6.6		20.0			
Atrazine	0.2037 0.2104	0.2122	0.2100	0.2133	0.2031 0.2075	Ave		0.2086			0.0100	1.9		20.0			
Pentachlorophenol	0.1363 0.1328	0.1552	0.1530	0.1529	0.1192 0.1401	Ave		0.1414			0.0500	9.4		20.0			
n-Octadecane	0.5104 +++++	0.4402	0.3414	0.6184 0.3139	0.5156 0.2714	Qua2	0.2264	0.5094	-0.004069		0.0100				0.9980		0.9900
Phenanthrene	1.1267 1.0510	1.1525	1.2273 1.1297	1.1909 1.1475	1.1353 1.0795	Ave		1.1378			0.7000	4.6		20.0			
Anthracene	1.1409 1.0391	1.1748	1.1985 1.1275	1.2140 1.1660	1.1491 1.0713	Ave		1.1423			0.7000	5.0		20.0			
Carbazole	1.0356 1.0079	1.0469	1.0536	1.0698	1.0583 1.0064	Ave		1.0398			0.0100	2.4		20.0			
Di-n-butyl phthalate	1.3226 1.1995	1.3446	1.2955	1.3728 1.3209	1.2785 1.2141	Ave		1.2936			0.0100	4.7		20.0			
Fluoranthene	1.2863 1.1422	1.3082	1.2313 1.2619	1.2932 1.2673	1.2390 1.1734	Ave		1.2447			0.6000	4.5		20.0			
Benzidine	0.4436 0.4007	0.5084	0.5308	0.5059	0.4156 0.4106	Ave		0.4594			0.0100	11.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Pyrene	1.1879 1.1743	1.1850	1.3535 1.2001	1.3279 1.1702	1.1755 1.1879	Ave		1.2180			0.6000	5.8		20.0			
Butyl benzyl phthalate	0.5073 0.5310	0.5409	0.5483	0.5525 0.5486	0.5211 0.5277	Ave		0.5347			0.0100	2.9		20.0			
Bis(2-ethylhexyl) phthalate	0.7356 0.6974	0.7550	0.7538	0.8201 0.7212	0.7365 0.7245	Ave		0.7430			0.0100	4.9		20.0			
3,3'-Dichlorobenzidine	0.3168 0.3460	0.3495	0.3601	0.3541	0.3161 0.3208	Ave		0.3376			0.0100	5.6		20.0			
Benzo[a]anthracene	1.2927 1.0536 1.0723	1.1781 1.0621	1.1371 1.0776	1.1866 1.1107	1.0467 1.0334	Ave		1.1137			0.8000	7.1		20.0			
Chrysene	1.1268 1.0038 0.9795	1.1005 0.9330	1.0382 0.9781	1.0999 0.9907	1.0045 0.9511	Ave		1.0188			0.7000	6.3		20.0			
Di-n-octyl phthalate	1.2820 1.1907	1.3425	1.3509	1.3779	1.1823 1.1925	Ave		1.2741			0.0100	6.7		20.0			
Benzo[b]fluoranthene	1.3538 1.1772 1.7191	1.1326 1.2434	1.2744 1.3596	1.2567 1.4161	1.1638 1.4572	Ave		1.3231			0.7000	12.7		20.0			
Benzo[k]fluoranthene	1.4088 1.1774 1.2720	1.2573 1.2822	1.1630 1.3423	1.2490 1.3170	1.1764 1.2904	Ave		1.2669			0.7000	5.9		20.0			
Benzo[a]pyrene	1.2790 1.0908 1.2594	1.0790 1.1299	1.0826 1.2017	1.1257 1.1770	1.0489 1.1988	Ave		1.1521			0.7000	6.6		20.0			
Indeno[1,2,3-cd]pyrene	1.4300 1.0242 0.9777	1.0110 1.0622	1.0160 0.9274	1.0708 0.8988	0.9831 0.9915	Lin1	0.0886	0.9638			0.5000				0.9980		0.9900
Dibenz(a,h)anthracene	0.9520 0.7743 0.8196	0.7054 0.8195	0.7254 0.7471	0.7577 0.7240	0.7231 0.8062	Ave		0.7777			0.4000	9.1		20.0			
Benzo[g,h,i]perylene	0.9736 0.7943	0.9456	0.9886 0.7257	1.0187 0.6819	0.9298 0.7600	Ave		0.8687			0.5000	14.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Fluorophenol (Surr)	1.2567 1.1859	1.1920	1.2443 1.1811	1.3050 1.2142	1.2341 1.1829	Ave		1.2218			0.0100	3.4		20.0			
Phenol-d5 (Surr)	1.5253 1.3898	1.4583	1.6061 1.4346	1.6235 1.4659	1.5165 1.3994	Ave		1.4910			0.0100	5.6		20.0			
Nitrobenzene-d5 (Surr)	0.3410 0.3140	0.3276	0.3170 0.3311	0.3377 0.3503	0.3289 0.3213	Ave		0.3299			0.0100	3.6		20.0			
2-Fluorobiphenyl	1.2597 1.1106	1.2022	1.3174 1.1972	1.3562 1.2449	1.2403 1.2339	Ave		1.2403			0.0100	5.7		20.0			
2,4,6-Tribromophenol (Surr)	0.2037 0.2477	0.2122	0.1519 0.2270	0.1708 0.2283	0.1898 0.2406	Ave		0.2080			0.0100	15.5		20.0			
Terphenyl-d14 (Surr)	0.7587 0.7466	0.7441	0.7597 0.7692	0.8130 0.7547	0.7447 0.7636	Ave		0.7616			0.0100	2.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 500-285596/3	L1STD02.D
Level 2	IC 500-285596/4	L1STD05.D
Level 3	IC 500-285596/5	L1STD1.D
Level 4	IC 500-285596/2	L1STD2.D
Level 5	IC 500-285596/6	L1STD5.D
Level 6	IC 500-285596/7	L1STD10.D
Level 7	IC 500-285596/8	L1STD20.D
Level 8	ICIS 500-285596/9	L1STD40.D
Level 9	IC 500-285596/10	L1STD50.D
Level 10	IC 500-285596/11	ICVMIX1.D
Level 11	IC 500-285596/12	L1STD70.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,4-Dioxane	DCB	Ave	53819 382980	116555	187504	263435	28236 319026	10.0 70.0	20.0	40.0	50.0	5.00 60.0
N-Nitrosodimethylamine	DCB	Ave	108963 800103	226593	386397	23639 540081	55506 656284	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Pyridine	DCB	Ave	147391 1165452	312560	517919	750868	74531 923381	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzaldehyde	DCB	Qua2	99455 395955	199633	293241	365344	51305 400608	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Phenol	DCB	Ave	173899 1238961	359089	596658	840248	90072 1032222	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Aniline	DCB	Ave	214145 1648614	446821	774630	1073295	106653 1402762	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Bis(2-chloroethyl)ether	DCB	Ave	130864 1054275	279588	460382	26238 678923	64202 818668	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2-Chlorophenol	DCB	Ave	150393 1085563	312841	537157	743548	78107 927884	10.0 70.0	20.0	40.0	50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
n-Decane	DCB	Qua2	223935 1043812	421513	637485	50154 829744	117908 946023	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
1,3-Dichlorobenzene	DCB	Ave	175779 1204690	367465	623862	36412 837522	90329 1068589	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
1,4-Dichlorobenzene	DCB	Ave	179027 1244127	367398	634773	37982 866496	93749 1076231	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Benzyl alcohol	DCB	Ave	94293 763960	201574	340981	19185 495838	49630 613944	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
1,2-Dichlorobenzene	DCB	Ave	170665 1199492	361162	601090	824990	88412 1043063	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2-Methylphenol	DCB	Ave	111285 869664	238581	407994	23931 587330	59542 741030	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2,2'-oxybis[1-chloropropane]	DCB	Ave	317639 1882350	648678	1036512	71377 1391155	170907 1681618	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Indene	DCB	Ave	255533 1829320	540675	939096	1257469	135090 1582203	10.0 70.0	20.0	40.0	50.0	5.00 60.0
3 & 4 Methylphenol	DCB	Ave	136575 1057327	279068	502421	27730 691943	70360 870020	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
N-Nitrosodi-n-propylamine	DCB	Ave	94007 636805	4965 191369	10020 315543	18956 446151	50569 540230	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Acetophenone	DCB	Ave	190421 1338150	398428	20235 655468	38565 921738	100269 1136120	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Hexachloroethane	DCB	Ave	70556 493985	146514	251127	351250	36561 422137	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Nitrobenzene	NPT	Ave	133019 976077	268748	12914 477736	26013 661090	69991 824110	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Isophorone	NPT	Ave	253735 2044886	528197	930006	47989 1266107	126659 1640371	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2-Nitrophenol	NPT	Ave	69657 606743	156015	281744	391248	33905 507459	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4-Dimethylphenol	NPT	Ave	135820 1040116	281791	495900	676212	71564 861815	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Bis(2-chloroethoxy)methane	NPT	Ave	148550 1151668	304848	539653	29779 753719	79059 947613	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Benzoic acid	NPT	Ave	+++++ 709595	128565	273009	420538	+++++ 560304	+++++ 70.0	20.0	40.0	50.0	+++++ 60.0
2,4-Dichlorophenol	NPT	Ave	122848 989006	260797	459397	653368	63024 828152	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,2,4-Trichlorobenzene	NPT	Ave	138380 1080679	291443	511299	28639 706808	70400 909106	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Naphthalene	NPT	Ave	437819 3075866	919516	48070 1552348	92208 2084448	233984 2555514	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
4-Chloroaniline	NPT	Ave	201192 1278325	421507	735702	941442	98441 1152597	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,6-Dichlorophenol	NPT	Ave	125012 994842	261606	452176	635905	62129 800414	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Hexachlorobutadiene	NPT	Ave	78863 582931	164967	284140	403695	39724 494479	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Caprolactam	NPT	Ave	42633 390341	98095	169624	232333	23070 290967	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4-Chloro-3-methylphenol	NPT	Ave	117455 936919	242748	423500	603455	60497 767464	10.0 70.0	20.0	40.0	50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Methylnaphthalene	NPT	Ave	293803 2158754	15929 596961	30139 1054982	58820 1432331	152574 1731831	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
1-Methylnaphthalene	NPT	Ave	261863 1945600	538802	27438 957416	54183 1290573	136639 1586281	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Hexachlorocyclopentadiene	ANT	Ave	79758 647527	175102	314240	432325	40615 522027	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,2,4,5-Tetrachlorobenzene	ANT	Ave	128392 941969	268789	460738	631147	66297 774695	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4,6-Trichlorophenol	ANT	Ave	78101 727575	172880	317743	458498	39338 589977	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4,5-Trichlorophenol	ANT	Ave	84270 761428	174118	330007	456288	43169 600503	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,1'-Biphenyl	ANT	Ave	342884 2547178	720305	1255813	1708518	182515 2090152	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2-Chloronaphthalene	ANT	Ave	256457 2031896	535154	940223	52507 1339005	135016 1651072	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2-Nitroaniline	ANT	Ave	84105 668675	184582	321126	414715	39814 519116	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Dimethyl phthalate	ANT	Ave	299823 2427594	635242	1085755	59228 1479895	155156 1832643	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
m-Dinitrobenzene	ANT	Ave	39281 389789	88617	165806	228364	17133 299299	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,6-Dinitrotoluene	ANT	Lin1	69213 576986	1985 143450	4055 261555	10454 349420	32690 450686	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Acenaphthylene	ANT	Ave	440673 3229762	908774	41960 1580291	83272 2118058	223406 2628504	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

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Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
3-Nitroaniline	ANT	Ave	80582 649884	171624	297708	396415	37649 475075	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4-Dinitrophenol	ANT	Ave	52548 637941	143213	293155	386625	+++++ 507930	20.0 140	40.0	80.0	100	+++++ 120
Acenaphthene	ANT	Ave	297409 1984147	628741	27968 1092739	57435 1380100	152549 1697107	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
4-Nitrophenol	ANT	Ave	74447 608623	155618	282724	372459	37377 458498	20.0 140	40.0	80.0	100	10.0 120
2,4-Dinitrotoluene	ANT	Lin1	88162 743273	183782	4800 330313	12814 445527	42359 572099	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Dibenzofuran	ANT	Ave	378051 2815047	779727	1364500	75014 1827259	203281 2288160	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	74941 670293	166211	297491	401748	35871 503635	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Diethyl phthalate	ANT	Ave	302547 1992106	622430	1020136	61385 1295141	166988 1583190	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Hexadecane	ANT	Qua2	267237 1120682	502194	719152	877400	147904 1001427	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4-Chlorophenyl phenyl ether	ANT	Ave	143018 1109891	301511	521469	711909	76592 894533	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4-Nitroaniline	ANT	Ave	79437 659522	169071	298441	396754	40526 476246	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Fluorene	ANT	Ave	317936 2293627	665332	32295 1097867	64961 1433926	170446 1772186	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
4,6-Dinitro-2-methylphenol	PHN	Ave	83523 970730	215096	404544	553814	+++++ 711282	20.0 140	40.0	80.0	100	+++++ 120

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
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Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285596

SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
N-Nitrosodiphenylamine	PHN	Ave	456296 3029624	917542	44917 1547299	92979 1939218	242341 2497454	20.0 140	40.0	2.00 80.0	4.00 100	10.0 120
1,2-Diphenylhydrazine	ANT	Ave	283345 1855941	556254	909043	1198804	150128 1477744	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4-Bromophenyl phenyl ether	PHN	Ave	88616 704886	183063	319032	432231	44663 550140	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Hexachlorobenzene	PHN	Ave	99372 861875	5306 211145	9335 383551	19846 525202	50642 665422	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Atrazine	PHN	Ave	83757 675114	178694	307866	399419	45657 511218	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Pentachlorophenol	PHN	Ave	112150 852123	261458	448711	572615	53616 690395	20.0 140	40.0	80.0	100	10.0 120
n-Octadecane	PHN	Qua2	209910 +++++	370710	500605	48648 587714	115919 668709	10.0 +++++	20.0	40.0	2.00 50.0	5.00 60.0
Phenanthrene	PHN	Ave	463386 3373120	970633	46839 1656432	93689 2148470	255246 2659537	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Anthracene	PHN	Ave	469214 3334957	989455	45740 1653086	95509 2183168	258331 2639258	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Carbazole	PHN	Ave	425922 3234772	881686	1544769	2002955	237919 2479576	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Di-n-butyl phthalate	PHN	Ave	543965 3849626	1132481	1899505	108003 2473109	287436 2991215	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Fluoranthene	PHN	Ave	529045 3665707	1101766	46994 1850229	101736 2372734	278543 2890796	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzidine	CRY	Ave	204926 1336159	486788	859077	1077309	100111 1042026	10.0 70.0	20.0	40.0	50.0	5.00 60.0

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Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

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			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Pyrene	CRY	Ave	548785 3916095	1134579	52982 1942310	108869 2492019	283174 3014857	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Butyl benzyl phthalate	CRY	Ave	234348 1770727	517927	887353	45297 1168273	125541 1339235	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	339853 2325740	722889	1219956	67235 1535823	177417 1838663	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
3,3'-Dichlorobenzidine	CRY	Ave	146381 1153836	334677	582850	754081	76159 814076	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzo[a]anthracene	CRY	Ave	9875 486742 3576082	26427 1016893	44511 1744052	97283 2365414	252160 2622774	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Chrysene	CRY	Ave	8608 463743 3266574	24686 893362	40641 1582986	90178 2109879	241994 2413901	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Di-n-octyl phthalate	PHN	Ave	527263 3821551	1130674	1980671	2579759	265811 2938019	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzo[b]fluoranthene	PRY	Ave	8301 422343 3511112	20701 873867	40284 1526365	79630 2104657	218027 2254859	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[k]fluoranthene	PRY	Ave	8638 422430 2597900	22980 901108	36764 1506952	79144 1957392	220383 1996750	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[a]pyrene	PRY	Ave	7842 391350 2572190	19722 794037	34223 1349095	71330 1749320	196498 1854940	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Indeno[1,2,3-cd]pyrene	PRY	Lin1	8768 367462 1996816	18479 746491	32117 1041104	67852 1335853	184183 1534142	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Dibenz(a,h)anthracene	PRY	Ave	5837 277794 1673919	12894 575902	22930 838704	48013 1076001	135461 1247476	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[g,h,i]perylene	PRY	Ave	349302 1622398	664518	31249 814701	64548 1013464	174194 1175921	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

FORM VI
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INTERNAL STANDARD RESPONSE AND CONCENTRATION

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SDG No.: 15-07.01

Instrument ID: CMS21 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/27/2015 13:03 Calibration End Date: 04/27/2015 17:30 Calibration ID: 18538

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Fluorophenol (Surr)	DCB	Ave	145622 1075609	287018	14440 495128	28893 703102	71918 893930	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Phenol-d5 (Surr)	DCB	Ave	176740 1260549	351157	18639 601401	35946 848831	88375 1057528	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Nitrobenzene-d5 (Surr)	NPT	Ave	150085 1095404	299361	13535 543509	28304 750309	75817 922217	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2-Fluorobiphenyl	ANT	Ave	317581 2210455	619502	30275 1088634	62819 1489172	157306 1938014	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	51361 493086	109364	3491 206430	7912 273060	24074 377890	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Terphenyl-d14 (Surr)	CRY	Ave	350525 2489768	712453	29737 1244912	66657 1607150	179394 1938023	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua2 = Quadratic 1/conc^2 ISTD

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD2.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 27-Apr-2015 13:03:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 500-0030526-002
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:25 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: rynkarg Date: 27-Apr-2015 14:02:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	95	88564	8.00	8.00	
* 2 Naphthalene-d8	136	6.027	6.032	-0.005	99	335293	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	89	185280	8.00	8.00	
* 4 Phenanthrene-d10	188	8.654	8.658	-0.004	97	314686	8.00	8.00	
* 5 Chrysene-d12	240	10.871	10.880	-0.009	96	327940	8.00	8.00	
* 6 Perylene-d12	264	12.374	12.379	-0.005	97	253459	8.00	8.00	
$ 7 2-Fluorophenol	112	4.139	4.139	0.000	92	28893	2.00	2.14	
$ 8 Phenol-d5	99	4.767	4.776	-0.009	87	35946	2.00	2.18	
$ 9 Nitrobenzene-d5	82	5.466	5.476	-0.010	84	28304	2.00	2.05	
$ 10 2-Fluorobiphenyl	172	6.855	6.860	-0.005	99	62819	2.00	2.19	
$ 11 2,4,6-Tribromophenol	330	8.068	8.073	-0.005	61	7912	2.00	1.64	
$ 12 Terphenyl-d14	244	9.962	9.962	0.000	99	66657	2.00	2.14	
14 N-Nitrosodimethylamine	42	3.130	3.140	-0.010	70	23639	2.00	2.28	
28 Bis(2-chloroethyl)ether	93	4.852	4.857	-0.005	85	26238	2.00	2.09	
16 n-Decane	43	4.938	4.938	0.000	92	50154	2.00	2.00	
32 1,3-Dichlorobenzene	146	5.038	5.043	-0.005	77	36412	2.00	2.21	
34 1,4-Dichlorobenzene	146	5.085	5.090	-0.005	92	37982	2.00	2.25	
35 Benzyl alcohol	108	5.147	5.157	-0.010	89	19185	2.00	2.07	
37 2-Methylphenol	107	5.219	5.223	-0.004	90	23931	2.00	2.17	
38 2,2'-oxybis[1-chloropropan	45	5.247	5.252	-0.005	1	71377	2.00	2.48	
39 3 & 4 Methylphenol	108	5.323	5.333	-0.010	59	27730	2.00	2.11	
40 N-Nitrosodi-n-propylamine	70	5.338	5.352	-0.014	79	18956	2.00	2.15	
43 Acetophenone	105	5.352	5.357	-0.005	89	38565	2.00	2.14	
47 Nitrobenzene	77	5.480	5.490	-0.010	93	26013	2.00	2.08	
50 Isophorone	82	5.652	5.666	-0.014	98	47989	2.00	1.99	
56 Bis(2-chloroethoxy)methane	93	5.794	5.799	-0.005	92	29779	2.00	2.10	
59 1,2,4-Trichlorobenzene	180	5.980	5.980	0.000	93	28639	2.00	2.15	
60 Naphthalene	128	6.042	6.046	-0.004	82	92208	2.00	2.22	
73 2-Methylnaphthalene	142	6.579	6.584	-0.005	92	58820	2.00	2.11	
45 1-Methylnaphthalene	142	6.660	6.665	-0.005	90	54183	2.00	2.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
80 2-Chloronaphthalene	162	6.969	6.974	-0.005	88	52507	2.00	2.14	
84 Dimethyl phthalate	163	7.155	7.169	-0.014	96	59228	2.00	2.10	
86 2,6-Dinitrotoluene	165	7.207	7.222	-0.015	79	10454	2.00	1.88	
87 Acenaphthylene	152	7.312	7.317	-0.005	90	83272	2.00	2.06	
90 Acenaphthene	154	7.450	7.455	-0.005	86	57435	2.00	2.13	
92 2,4-Dinitrotoluene	165	7.540	7.555	-0.015	89	12814	2.00	1.97	
94 Dibenzofuran	168	7.588	7.593	-0.005	92	75014	2.00	2.14	
100 Diethyl phthalate	149	7.726	7.735	-0.009	98	61385	2.00	2.29	
105 Fluorene	166	7.869	7.878	-0.009	40	64961	2.00	2.22	
108 N-Nitrosodiphenylamine	169	7.940	7.950	-0.010	75	92979	4.00	4.39	
119 Hexachlorobenzene	284	8.344	8.349	-0.005	90	19846	2.00	1.99	
79 n-Octadecane	43	8.497	8.501	-0.004	91	48648	2.00	2.02	
128 Phenanthrene	178	8.673	8.682	-0.009	77	93689	2.00	2.09	
130 Anthracene	178	8.716	8.725	-0.009	97	95509	2.00	2.13	
134 Di-n-butyl phthalate	149	9.082	9.082	0.000	99	108003	2.00	2.12	
140 Fluoranthene	202	9.672	9.677	-0.005	97	101736	2.00	2.08	
143 Pyrene	202	9.867	9.876	-0.009	94	108869	2.00	2.18	
153 Butyl benzyl phthalate	149	10.343	10.343	0.000	94	45297	2.00	2.07	
160 Bis(2-ethylhexyl) phthalat	149	10.799	10.804	-0.005	94	67235	2.00	2.21	
162 Benzo[a]anthracene	228	10.861	10.871	-0.010	98	97283	2.00	2.13	
163 Chrysene	228	10.895	10.904	-0.009	93	90178	2.00	2.16	
167 Benzo[b]fluoranthene	252	11.913	11.922	-0.009	97	79630	2.00	1.90	
168 Benzo[k]fluoranthene	252	11.937	11.956	-0.020	93	79144	2.00	1.97	
170 Benzo[a]pyrene	252	12.303	12.317	-0.014	96	71330	2.00	1.95	
176 Indeno[1,2,3-cd]pyrene	276	13.963	13.987	-0.024	91	67852	2.00	2.13	
175 Dibenz(a,h)anthracene	278	13.968	13.992	-0.024	58	48013	2.00	1.95	
177 Benzo[g,h,i]perylene	276	14.449	14.472	-0.023	91	64548	2.00	2.35	
S 179 Total Cresols, TCEQ Defini	1				0			4.27	
S 178 Methyl Phenols,Total	1				0			4.27	

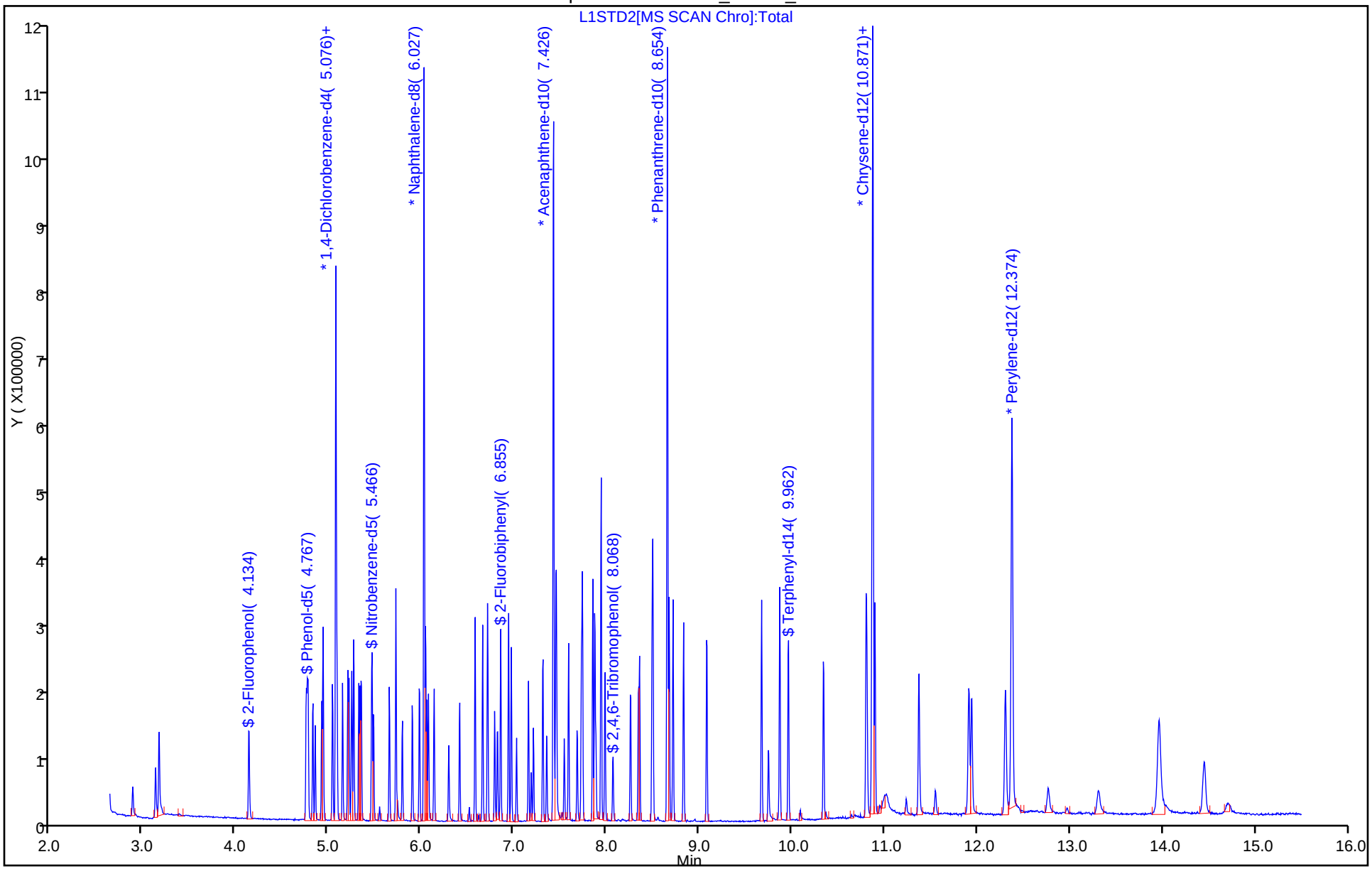
Reagents:

SMlst1_1uLL4_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:26 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD2.D				
Injection Date:	27-Apr-2015 13:03:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



Report Date: 28-Apr-2015 09:14:28 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD02.D				
Lims ID:	ic				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	27-Apr-2015 13:27:30	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	STD02				
Misc. Info.:	500-0030526-003				
Operator ID:	DA	Instrument ID:	CMS21		
Sublist:	chrom-21-8270*sub113				
Method:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	28-Apr-2015 09:14:28	Calib Date:	27-Apr-2015 17:30:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D				
Column 1 :			Det: MS SCAN		
Process Host:	XAWRK022				
First Level Reviewer: rynkarg		Date:	27-Apr-2015 14:00:59		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	95	86434	8.00	8.00	
* 2 Naphthalene-d8	136	6.027	6.032	-0.005	99	319245	8.00	8.00	
* 3 Acenaphthene-d10	164	7.421	7.426	-0.005	91	172741	8.00	8.00	
* 4 Phenanthrene-d10	188	8.654	8.658	-0.004	96	298820	8.00	8.00	
* 5 Chrysene-d12	240	10.871	10.880	-0.009	97	305568	8.00	8.00	
* 6 Perylene-d12	264	12.374	12.379	-0.005	97	245263	8.00	8.00	
162 Benzo[a]anthracene	228	10.861	10.871	-0.010	52	9875	0.2000	0.2321	
163 Chrysene	228	10.894	10.904	-0.010	75	8608	0.2000	0.2212	
167 Benzo[b]fluoranthene	252	11.908	11.922	-0.014	77	8301	0.2000	0.2046	
168 Benzo[k]fluoranthene	252	11.936	11.956	-0.020	77	8638	0.2000	0.2224	
170 Benzo[a]pyrene	252	12.303	12.317	-0.014	52	7842	0.2000	0.2220	
176 Indeno[1,2,3-cd]pyrene	276	13.958	13.987	-0.029	77	8768	0.2000	0.2048	
175 Dibenz(a,h)anthracene	278	13.968	13.992	-0.024	37	5837	0.2000	0.2448	

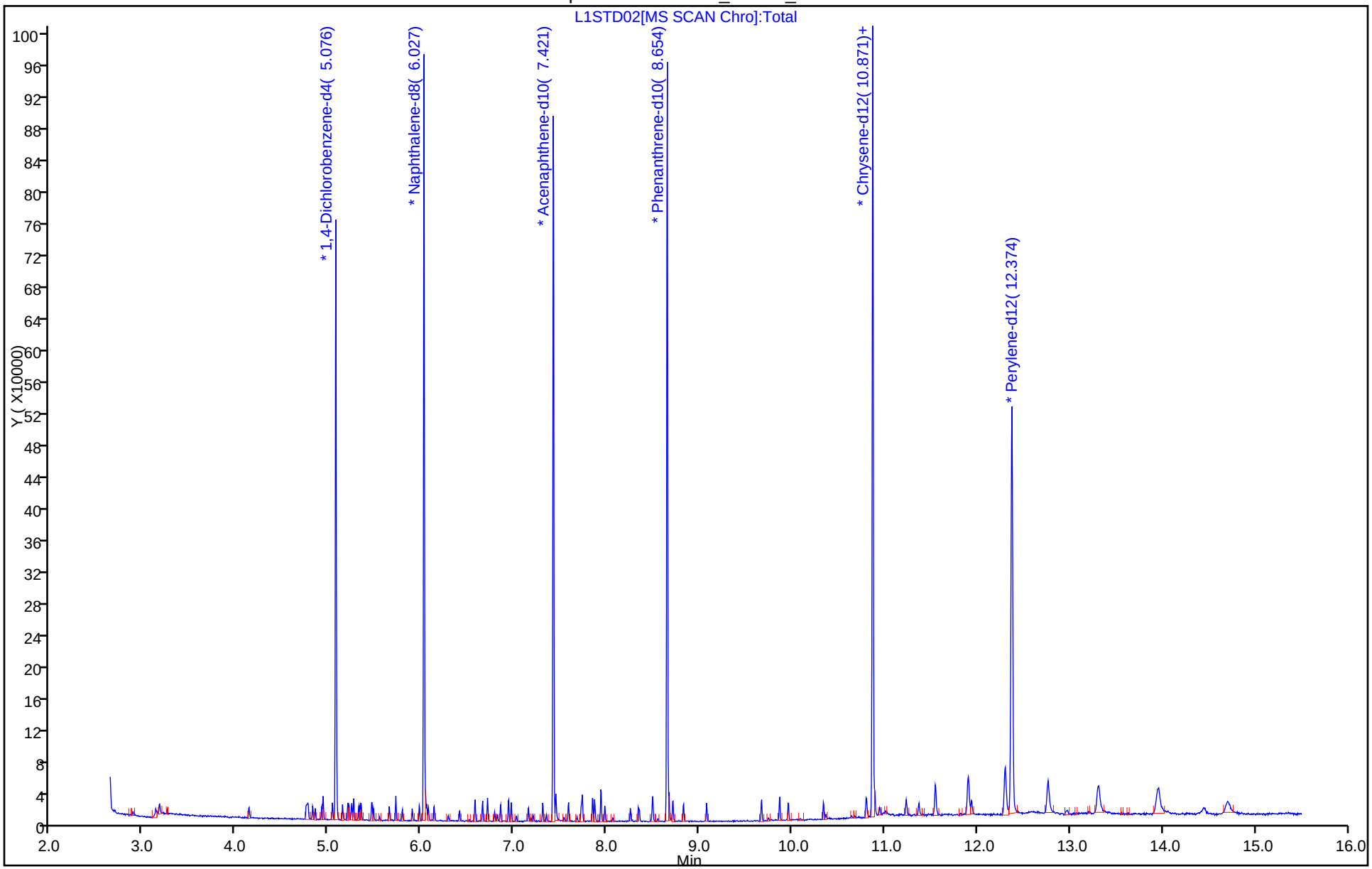
Reagents:

SMlst1_1uLL1_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:28 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD02.D				
Injection Date:	27-Apr-2015 13:27:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



Report Date: 28-Apr-2015 09:14:29 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD05.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 27-Apr-2015 13:51:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD05
Misc. Info.: 500-0030526-004
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:29 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: rynkarg Date: 27-Apr-2015 14:15:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	95	93987	8.00	8.00	
* 2 Naphthalene-d8	136	6.027	6.032	-0.005	99	349864	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	90	194641	8.00	8.00	
* 4 Phenanthrene-d10	188	8.653	8.658	-0.005	96	352723	8.00	8.00	
* 5 Chrysene-d12	240	10.871	10.880	-0.009	96	358896	8.00	8.00	
* 6 Perylene-d12	264	12.374	12.379	-0.005	97	292444	8.00	8.00	
40 N-Nitrosodi-n-propylamine	70	5.337	5.352	-0.015	75	4965	0.5000	0.5297	
73 2-Methylnaphthalene	142	6.579	6.584	-0.005	80	15929	0.5000	0.5475	
86 2,6-Dinitrotoluene	165	7.207	7.222	-0.015	58	1985	0.5000	0.6012	
119 Hexachlorobenzene	284	8.339	8.349	-0.010	79	5306	0.5000	0.4746	
162 Benzo[a]anthracene	228	10.861	10.871	-0.010	75	26427	0.5000	0.5289	
163 Chrysene	228	10.894	10.904	-0.010	88	24686	0.5000	0.5401	
167 Benzo[b]fluoranthene	252	11.908	11.922	-0.014	94	20701	0.5000	0.4280	
168 Benzo[k]fluoranthene	252	11.936	11.956	-0.020	86	22980	0.5000	0.4962	
170 Benzo[a]pyrene	252	12.303	12.317	-0.014	84	19722	0.5000	0.4683	
176 Indeno[1,2,3-cd]pyrene	276	13.958	13.987	-0.029	89	18479	0.5000	0.4326	
175 Dibenz(a,h)anthracene	278	13.968	13.992	-0.024	59	12894	0.5000	0.4536	

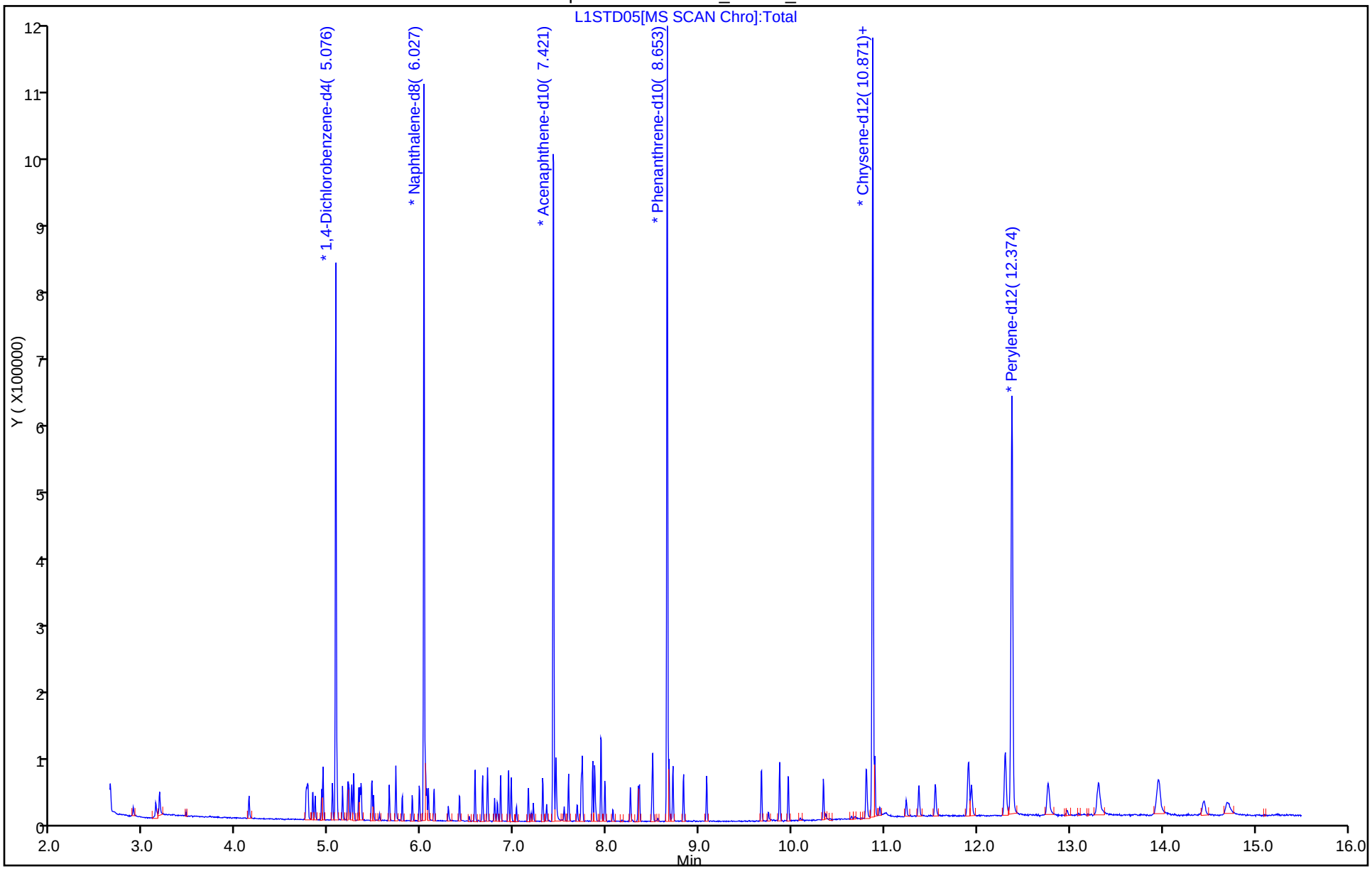
Reagents:

SMlst1_1uLL2_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:30 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD05.D				
Injection Date:	27-Apr-2015 13:51:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD1.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 27-Apr-2015 14:16:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Misc. Info.: 500-0030526-005
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:30 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: rynkarg Date: 27-Apr-2015 14:35:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	95	92841	8.00	8.00	
* 2 Naphthalene-d8	136	6.027	6.032	-0.005	99	341568	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	90	183841	8.00	8.00	
* 4 Phenanthrene-d10	188	8.653	8.658	-0.005	96	305320	8.00	8.00	
* 5 Chrysene-d12	240	10.871	10.880	-0.009	97	313158	8.00	8.00	
* 6 Perylene-d12	264	12.374	12.379	-0.005	97	252885	8.00	8.00	
$ 7 2-Fluorophenol	112	4.138	4.139	-0.001	88	14440	1.00	1.02	
$ 8 Phenol-d5	99	4.766	4.776	-0.010	87	18639	1.00	1.08	
$ 9 Nitrobenzene-d5	82	5.466	5.476	-0.010	87	13535	1.00	0.9610	
$ 10 2-Fluorobiphenyl	172	6.855	6.860	-0.005	99	30275	1.00	1.06	
$ 11 2,4,6-Tribromophenol	330	8.068	8.073	-0.005	40	3491	1.00	0.7303	
$ 12 Terphenyl-d14	244	9.957	9.962	-0.005	94	29737	1.00	1.00	
40 N-Nitrosodi-n-propylamine	70	5.337	5.352	-0.015	79	10020	1.00	1.08	
43 Acetophenone	105	5.347	5.357	-0.010	89	20235	1.00	1.07	
47 Nitrobenzene	77	5.480	5.490	-0.010	89	12914	1.00	1.02	
60 Naphthalene	128	6.041	6.046	-0.005	63	48070	1.00	1.13	
73 2-Methylnaphthalene	142	6.579	6.584	-0.005	84	30139	1.00	1.06	
45 1-Methylnaphthalene	142	6.660	6.665	-0.005	85	27438	1.00	1.08	
86 2,6-Dinitrotoluene	165	7.207	7.222	-0.015	78	4055	1.00	0.9289	
87 Acenaphthylene	152	7.312	7.317	-0.005	89	41960	1.00	1.05	
90 Acenaphthene	154	7.450	7.455	-0.005	83	27968	1.00	1.04	
92 2,4-Dinitrotoluene	165	7.540	7.555	-0.015	85	4800	1.00	1.04	
105 Fluorene	166	7.868	7.878	-0.010	39	32295	1.00	1.11	
108 N-Nitrosodiphenylamine	169	7.940	7.950	-0.010	75	44917	2.00	2.19	
119 Hexachlorobenzene	284	8.339	8.349	-0.010	85	9335	1.00	0.9645	
128 Phenanthrene	178	8.672	8.682	-0.010	70	46839	1.00	1.08	
130 Anthracene	178	8.715	8.725	-0.010	96	45740	1.00	1.05	
140 Fluoranthene	202	9.672	9.677	-0.005	95	46994	1.00	0.9892	
143 Pyrene	202	9.867	9.876	-0.009	93	52982	1.00	1.11	
162 Benzo[a]anthracene	228	10.861	10.871	-0.010	99	44511	1.00	1.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
163 Chrysene	228	10.894	10.904	-0.010	94	40641	1.00	1.02	
167 Benzo[b]fluoranthene	252	11.908	11.922	-0.014	97	40284	1.00	0.9632	
168 Benzo[k]fluoranthene	252	11.936	11.956	-0.020	92	36764	1.00	0.9180	
170 Benzo[a]pyrene	252	12.307	12.317	-0.010	90	34223	1.00	0.9397	
176 Indeno[1,2,3-cd]pyrene	276	13.958	13.987	-0.029	93	32117	1.00	0.9622	
175 Dibenz(a,h)anthracene	278	13.968	13.992	-0.024	57	22930	1.00	0.9328	
177 Benzo[g,h,i]perylene	276	14.444	14.472	-0.028	84	31249	1.00	1.14	

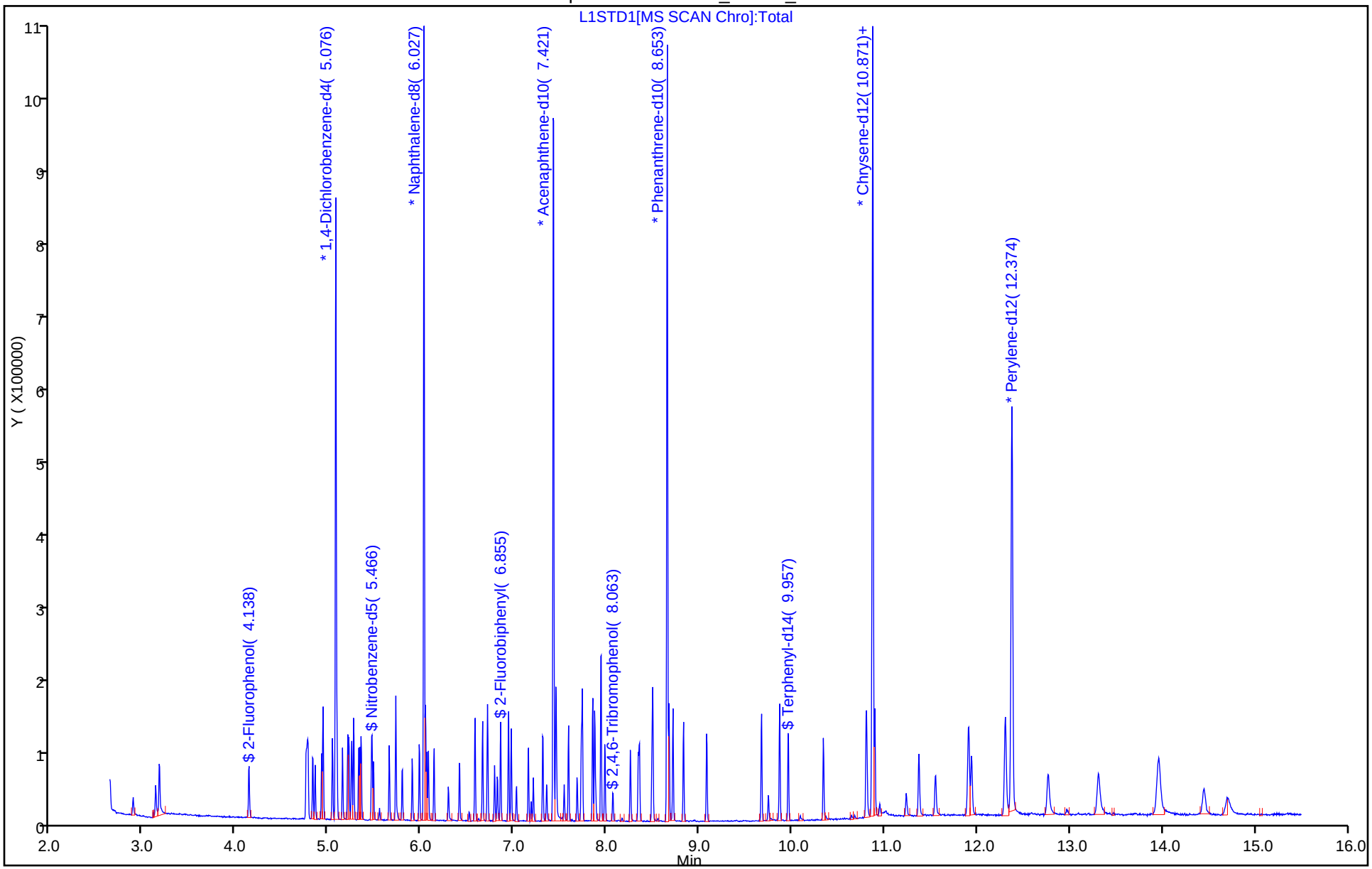
Reagents:

SMlst1_1uLL3_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD1.D				
Injection Date:	27-Apr-2015 14:16:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD5.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 27-Apr-2015 14:40:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 500-0030526-006
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:32 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: akcakald Date: 27-Apr-2015 15:44:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	95	93242	8.00	8.00	
* 2 Naphthalene-d8	136	6.027	6.032	-0.005	98	368812	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	87	202931	8.00	8.00	
* 4 Phenanthrene-d10	188	8.654	8.658	-0.004	96	359708	8.00	8.00	
* 5 Chrysene-d12	240	10.875	10.880	-0.005	97	385437	8.00	8.00	
* 6 Perylene-d12	264	12.374	12.379	-0.005	97	299745	8.00	8.00	
$ 7 2-Fluorophenol	112	4.138	4.139	-0.001	93	71918	5.00	5.05	
$ 8 Phenol-d5	99	4.766	4.776	-0.010	86	88375	5.00	5.09	
$ 9 Nitrobenzene-d5	82	5.466	5.476	-0.010	78	75817	5.00	4.99	
$ 10 2-Fluorobiphenyl	172	6.855	6.860	-0.005	99	157306	5.00	5.00	
$ 11 2,4,6-Tribromophenol	330	8.068	8.073	-0.005	70	24074	5.00	4.56	
$ 12 Terphenyl-d14	244	9.962	9.962	0.000	99	179394	5.00	4.89	
13 1,4-Dioxane	88	2.887	2.883	0.004	84	28236	5.00	5.33	
14 N-Nitrosodimethylamine	42	3.130	3.140	-0.010	72	55506	5.00	5.08	
15 Pyridine	79	3.168	3.168	0.000	73	74531	5.00	5.04	
24 Benzaldehyde	77	4.757	4.757	0.000	94	51305	5.00	5.05	
26 Phenol	94	4.776	4.786	-0.010	91	90072	5.00	5.33	
27 Aniline	93	4.828	4.833	-0.005	88	106653	5.00	4.96	
28 Bis(2-chloroethyl)ether	93	4.852	4.857	-0.005	85	64202	5.00	4.85	
30 2-Chlorophenol	128	4.923	4.928	-0.005	98	78107	5.00	5.25	
16 n-Decane	43	4.938	4.938	0.000	92	117908	5.00	4.96	
32 1,3-Dichlorobenzene	146	5.038	5.043	-0.005	89	90329	5.00	5.20	
34 1,4-Dichlorobenzene	146	5.085	5.090	-0.005	92	93749	5.00	5.27	
35 Benzyl alcohol	108	5.147	5.157	-0.010	90	49630	5.00	5.09	
36 1,2-Dichlorobenzene	146	5.204	5.209	-0.005	96	88412	5.00	5.28	
37 2-Methylphenol	107	5.218	5.223	-0.005	90	59542	5.00	5.12	
38 2,2'-oxybis[1-chloropropan	45	5.247	5.252	-0.005	1	170907	5.00	5.65	
51 Indene	116	5.266	5.271	-0.005	87	135090	5.00	5.31	
39 3 & 4 Methylphenol	108	5.323	5.333	-0.010	58	70360	5.00	5.08	
40 N-Nitrosodi-n-propylamine	70	5.337	5.352	-0.015	79	50569	5.00	5.44	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.352	5.357	-0.005	89	100269	5.00	5.29	
46 Hexachloroethane	117	5.461	5.461	0.000	89	36561	5.00	5.29	
47 Nitrobenzene	77	5.480	5.490	-0.010	93	69991	5.00	5.10	
50 Isophorone	82	5.651	5.666	-0.015	98	126659	5.00	4.79	
53 2-Nitrophenol	139	5.723	5.728	-0.005	71	33905	5.00	4.36	
52 2,4-Dimethylphenol	122	5.723	5.732	-0.009	85	71564	5.00	5.07	
56 Bis(2-chloroethoxy)methane	93	5.794	5.799	-0.005	92	79059	5.00	5.06	
55 Benzoic acid	122	5.751	5.809	-0.058	77	19631	5.00	2.36	
57 2,4-Dichlorophenol	162	5.904	5.909	-0.004	83	63024	5.00	4.80	
59 1,2,4-Trichlorobenzene	180	5.980	5.980	0.000	89	70400	5.00	4.79	
60 Naphthalene	128	6.042	6.046	-0.004	93	233984	5.00	5.11	
61 4-Chloroaniline	127	6.056	6.066	-0.010	59	98441	5.00	4.98	
62 2,6-Dichlorophenol	162	6.075	6.080	-0.005	86	62129	5.00	4.77	
64 Hexachlorobutadiene	225	6.137	6.137	0.000	93	39724	5.00	4.89	
58 Caprolactam	113	6.303	6.337	-0.034	80	23070	5.00	4.80	
69 4-Chloro-3-methylphenol	107	6.413	6.422	-0.009	92	60497	5.00	4.91	
73 2-Methylnaphthalene	142	6.579	6.584	-0.005	93	152574	5.00	4.98	
45 1-Methylnaphthalene	142	6.660	6.665	-0.005	93	136639	5.00	4.97	
74 Hexachlorocyclopentadiene	237	6.712	6.713	-0.001	2	40615	5.00	4.79	
75 1,2,4,5-Tetrachlorobenzene	216	6.717	6.722	-0.005	97	66297	5.00	5.15	
76 2,4,6-Trichlorophenol	196	6.789	6.793	-0.005	93	39338	5.00	4.47	
77 2,4,5-Trichlorophenol	196	6.822	6.827	-0.005	94	43169	5.00	4.72	
71 1,1'-Biphenyl	154	6.941	6.946	-0.005	81	182515	5.00	5.24	
80 2-Chloronaphthalene	162	6.969	6.974	-0.005	94	135016	5.00	5.02	
81 2-Nitroaniline	65	7.026	7.031	-0.005	85	39814	5.00	4.63	
84 Dimethyl phthalate	163	7.155	7.169	-0.014	86	155156	5.00	5.02	
85 1,3-Dinitrobenzene	168	7.183	7.198	-0.015	80	17133	5.00	3.87	
86 2,6-Dinitrotoluene	165	7.207	7.222	-0.015	75	32690	5.00	4.77	
87 Acenaphthylene	152	7.312	7.317	-0.005	91	223406	5.00	5.05	
88 3-Nitroaniline	138	7.355	7.364	-0.009	92	37649	5.00	4.64	
89 2,4-Dinitrophenol	184	7.436	7.450	-0.014	72	18894	10.0	5.03	
90 Acenaphthene	154	7.450	7.455	-0.005	92	152549	5.00	5.16	
91 4-Nitrophenol	109	7.459	7.483	-0.024	89	37377	10.0	9.77	
92 2,4-Dinitrotoluene	165	7.540	7.555	-0.015	91	42359	5.00	4.98	
94 Dibenzofuran	168	7.588	7.593	-0.005	88	203281	5.00	5.28	
97 2,3,4,6-Tetrachlorophenol	232	7.683	7.688	-0.005	70	35871	5.00	4.45	
100 Diethyl phthalate	149	7.726	7.735	-0.009	98	166988	5.00	5.69	
186 Hexadecane	57	7.735	7.740	-0.005	85	147904	5.00	5.01	
102 4-Chlorophenyl phenyl ethe	204	7.849	7.854	-0.005	90	76592	5.00	5.22	
104 4-Nitroaniline	138	7.854	7.873	-0.019	52	40526	5.00	4.95	
105 Fluorene	166	7.869	7.878	-0.010	41	170446	5.00	5.31	
106 4,6-Dinitro-2-methylphenol	198	7.883	7.902	-0.019	87	35089	10.0	5.78	
108 N-Nitrosodiphenylamine	169	7.940	7.950	-0.010	77	242341	10.0	10.0	
110 1,2-Diphenylhydrazine	77	7.983	7.988	-0.005	98	150128	5.00	5.70	
117 4-Bromophenyl phenyl ether	248	8.259	8.264	-0.005	65	44663	5.00	4.57	
119 Hexachlorobenzene	284	8.344	8.349	-0.005	92	50642	5.00	4.44	
109 Atrazine	200	8.354	8.368	-0.014	80	45657	5.00	4.87	
122 Pentachlorophenol	266	8.487	8.492	-0.005	90	53616	10.0	8.43	
79 n-Octadecane	43	8.497	8.501	-0.004	90	115919	5.00	4.80	
128 Phenanthrene	178	8.673	8.682	-0.009	81	255246	5.00	4.99	
130 Anthracene	178	8.715	8.725	-0.010	97	258331	5.00	5.03	
132 Carbazole	167	8.830	8.835	-0.004	99	237919	5.00	5.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	9.077	9.082	-0.005	99	287436	5.00	4.94	
140 Fluoranthene	202	9.672	9.677	-0.005	97	278543	5.00	4.98	
142 Benzidine	184	9.748	9.758	-0.010	95	100111	5.00	4.52	
143 Pyrene	202	9.867	9.876	-0.009	95	283174	5.00	4.83	
153 Butyl benzyl phthalate	149	10.343	10.343	0.000	96	125541	5.00	4.87	
160 Bis(2-ethylhexyl) phthalat	149	10.799	10.804	-0.005	95	177417	5.00	4.96	
161 3,3'-Dichlorobenzidine	252	10.809	10.818	-0.009	99	76159	5.00	4.68	
162 Benzo[a]anthracene	228	10.861	10.871	-0.010	98	252160	5.00	4.70	
163 Chrysene	228	10.894	10.904	-0.010	95	241994	5.00	4.93	
165 Di-n-octyl phthalate	149	11.370	11.370	0.000	98	265811	5.00	4.64	
167 Benzo[b]fluoranthene	252	11.913	11.922	-0.009	98	218027	5.00	4.40	
168 Benzo[k]fluoranthene	252	11.941	11.956	-0.015	94	220383	5.00	4.64	
170 Benzo[a]pyrene	252	12.303	12.317	-0.014	96	196498	5.00	4.55	
176 Indeno[1,2,3-cd]pyrene	276	13.963	13.987	-0.024	94	184183	5.00	5.01	
175 Dibenz(a,h)anthracene	278	13.973	13.992	-0.019	76	135461	5.00	4.65	
177 Benzo[g,h,i]perylene	276	14.453	14.472	-0.019	94	174194	5.00	5.35	
S 179 Total Cresols, TCEQ Defini	1				0			10.2	
S 178 Methyl Phenols,Total	1				0			10.2	

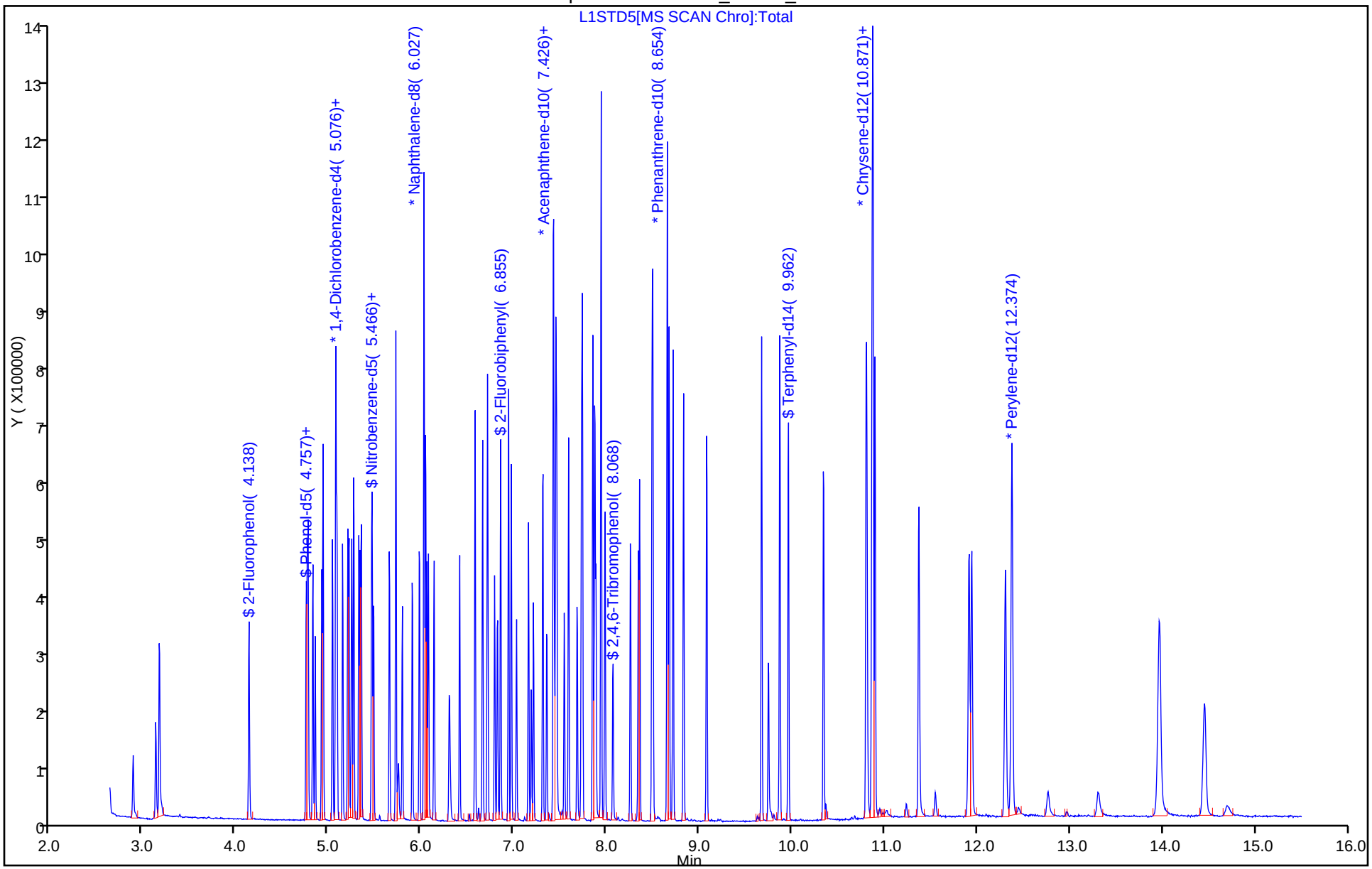
Reagents:

SMlst1_1uLL5_00015 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD5.D				
Injection Date:	27-Apr-2015 14:40:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD10.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 27-Apr-2015 15:05:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD10
Misc. Info.: 500-0030526-007
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:34 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: akcakald Date: 27-Apr-2015 15:46:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	95	92699	8.00	8.00	
* 2 Naphthalene-d8	136	6.027	6.032	-0.005	97	352140	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	85	201686	8.00	8.00	
* 4 Phenanthrene-d10	188	8.653	8.658	-0.005	97	329021	8.00	8.00	
* 5 Chrysene-d12	240	10.875	10.880	-0.005	96	369591	8.00	8.00	
* 6 Perylene-d12	264	12.374	12.379	-0.005	97	287021	8.00	8.00	
$ 7 2-Fluorophenol	112	4.138	4.139	-0.001	93	145622	10.0	10.3	
$ 8 Phenol-d5	99	4.766	4.776	-0.010	86	176740	10.0	10.2	
$ 9 Nitrobenzene-d5	82	5.471	5.476	-0.005	93	150085	10.0	10.3	
$ 10 2-Fluorobiphenyl	172	6.855	6.860	-0.005	99	317581	10.0	10.2	
$ 11 2,4,6-Tribromophenol	330	8.068	8.073	-0.005	74	51361	10.0	9.79	
$ 12 Terphenyl-d14	244	9.962	9.962	0.000	100	350525	10.0	9.96	
13 1,4-Dioxane	88	2.882	2.883	-0.001	84	53819	10.0	10.2	
14 N-Nitrosodimethylamine	42	3.130	3.140	-0.010	71	108963	10.0	10.0	
15 Pyridine	79	3.168	3.168	0.000	74	147391	10.0	10.0	
24 Benzaldehyde	77	4.757	4.757	0.000	94	99455	10.0	9.72	
26 Phenol	94	4.776	4.786	-0.010	89	173899	10.0	10.4	
27 Aniline	93	4.828	4.833	-0.005	88	214145	10.0	10.0	
28 Bis(2-chloroethyl)ether	93	4.852	4.857	-0.005	85	130864	10.0	9.94	
30 2-Chlorophenol	128	4.923	4.928	-0.005	98	150393	10.0	10.2	
16 n-Decane	43	4.938	4.938	0.000	91	223935	10.0	10.1	
32 1,3-Dichlorobenzene	146	5.038	5.043	-0.005	97	175779	10.0	10.2	
34 1,4-Dichlorobenzene	146	5.090	5.090	0.000	95	179027	10.0	10.1	
35 Benzyl alcohol	108	5.152	5.157	-0.005	91	94293	10.0	9.73	
36 1,2-Dichlorobenzene	146	5.204	5.209	-0.005	96	170665	10.0	10.3	
37 2-Methylphenol	107	5.218	5.223	-0.005	90	111285	10.0	9.63	
38 2,2'-oxybis[1-chloropropan	45	5.247	5.252	-0.005	1	317639	10.0	10.6	
51 Indene	116	5.271	5.271	0.000	86	255533	10.0	10.1	
39 3 & 4 Methylphenol	108	5.323	5.333	-0.010	57	136575	10.0	9.92	
40 N-Nitrosodi-n-propylamine	70	5.342	5.352	-0.010	80	94007	10.0	10.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.352	5.357	-0.005	89	190421	10.0	10.1	
46 Hexachloroethane	117	5.461	5.461	0.000	90	70556	10.0	10.3	
47 Nitrobenzene	77	5.485	5.490	-0.005	95	133019	10.0	10.2	
50 Isophorone	82	5.656	5.666	-0.010	98	253735	10.0	10.0	
53 2-Nitrophenol	139	5.723	5.728	-0.005	73	69657	10.0	9.38	
52 2,4-Dimethylphenol	122	5.723	5.732	-0.009	86	135820	10.0	10.1	
56 Bis(2-chloroethoxy)methane	93	5.794	5.799	-0.005	88	148550	10.0	9.96	
55 Benzoic acid	122	5.766	5.809	-0.043	69	55022	10.0	6.93	
57 2,4-Dichlorophenol	162	5.904	5.909	-0.004	84	122848	10.0	9.79	
59 1,2,4-Trichlorobenzene	180	5.980	5.980	0.000	91	138380	10.0	9.87	
60 Naphthalene	128	6.046	6.046	0.000	83	437819	10.0	10.0	
61 4-Chloroaniline	127	6.061	6.066	-0.005	63	201192	10.0	10.7	
62 2,6-Dichlorophenol	162	6.075	6.080	-0.005	85	125012	10.0	10.1	
64 Hexachlorobutadiene	225	6.137	6.137	0.000	94	78863	10.0	10.2	
58 Caprolactam	113	6.308	6.337	-0.029	78	42633	10.0	9.30	
69 4-Chloro-3-methylphenol	107	6.413	6.422	-0.009	92	117455	10.0	9.99	
73 2-Methylnaphthalene	142	6.579	6.584	-0.005	93	293803	10.0	10.0	
45 1-Methylnaphthalene	142	6.660	6.665	-0.005	93	261863	10.0	9.98	
74 Hexachlorocyclopentadiene	237	6.712	6.713	-0.001	26	79758	10.0	9.46	
75 1,2,4,5-Tetrachlorobenzene	216	6.717	6.722	-0.005	97	128392	10.0	10.0	
76 2,4,6-Trichlorophenol	196	6.788	6.793	-0.005	92	78101	10.0	8.93	
77 2,4,5-Trichlorophenol	196	6.822	6.827	-0.005	94	84270	10.0	9.28	
71 1,1'-Biphenyl	154	6.941	6.946	-0.005	95	342884	10.0	9.90	
80 2-Chloronaphthalene	162	6.969	6.974	-0.005	90	256457	10.0	9.60	
81 2-Nitroaniline	65	7.026	7.031	-0.005	82	84105	10.0	9.84	
84 Dimethyl phthalate	163	7.160	7.169	-0.009	82	299823	10.0	9.77	
85 1,3-Dinitrobenzene	168	7.188	7.198	-0.010	72	39281	10.0	8.92	
86 2,6-Dinitrotoluene	165	7.212	7.222	-0.010	75	69213	10.0	9.80	
87 Acenaphthylene	152	7.312	7.317	-0.005	92	440673	10.0	10.0	
88 3-Nitroaniline	138	7.355	7.364	-0.009	91	80582	10.0	10.0	
89 2,4-Dinitrophenol	184	7.440	7.450	-0.010	80	52548	20.0	14.1	
90 Acenaphthene	154	7.450	7.455	-0.005	93	297409	10.0	10.1	
91 4-Nitrophenol	109	7.464	7.483	-0.019	87	74447	20.0	19.6	
92 2,4-Dinitrotoluene	165	7.545	7.555	-0.010	96	88162	10.0	9.90	
94 Dibenzofuran	168	7.588	7.593	-0.005	85	378051	10.0	9.89	
97 2,3,4,6-Tetrachlorophenol	232	7.683	7.688	-0.005	70	74941	10.0	9.36	
100 Diethyl phthalate	149	7.730	7.735	-0.005	98	302547	10.0	10.4	
186 Hexadecane	57	7.735	7.740	-0.005	86	267237	10.0	9.90	
102 4-Chlorophenyl phenyl ethe	204	7.849	7.854	-0.005	92	143018	10.0	9.80	
104 4-Nitroaniline	138	7.859	7.873	-0.014	56	79437	10.0	9.77	
105 Fluorene	166	7.873	7.878	-0.005	54	317936	10.0	9.96	
106 4,6-Dinitro-2-methylphenol	198	7.887	7.902	-0.015	85	83523	20.0	15.0	
108 N-Nitrosodiphenylamine	169	7.940	7.950	-0.010	77	456296	20.0	20.6	
110 1,2-Diphenylhydrazine	77	7.983	7.988	-0.005	97	283345	10.0	10.8	
117 4-Bromophenyl phenyl ether	248	8.259	8.264	-0.005	65	88616	10.0	9.90	
119 Hexachlorobenzene	284	8.344	8.349	-0.005	93	99372	10.0	9.53	
109 Atrazine	200	8.358	8.368	-0.010	76	83757	10.0	9.76	
122 Pentachlorophenol	266	8.492	8.492	0.000	76	112150	20.0	19.3	
79 n-Octadecane	43	8.496	8.501	-0.005	91	209910	10.0	10.4	
128 Phenanthrene	178	8.673	8.682	-0.010	84	463386	10.0	9.90	
130 Anthracene	178	8.715	8.725	-0.010	97	469214	10.0	9.99	
132 Carbazole	167	8.830	8.835	-0.004	100	425922	10.0	9.96	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	9.082	9.082	0.000	99	543965	10.0	10.2	
140 Fluoranthene	202	9.672	9.677	-0.005	97	529045	10.0	10.3	
142 Benzidine	184	9.748	9.758	-0.010	96	204926	10.0	9.66	
143 Pyrene	202	9.867	9.876	-0.009	95	548785	10.0	9.75	
153 Butyl benzyl phthalate	149	10.338	10.343	-0.005	97	234348	10.0	9.49	
160 Bis(2-ethylhexyl) phthalat	149	10.799	10.804	-0.005	95	339853	10.0	9.90	
161 3,3'-Dichlorobenzidine	252	10.813	10.818	-0.005	99	146381	10.0	9.38	
162 Benzo[a]anthracene	228	10.866	10.871	-0.005	98	486742	10.0	9.46	
163 Chrysene	228	10.899	10.904	-0.005	94	463743	10.0	9.85	
165 Di-n-octyl phthalate	149	11.370	11.370	0.000	98	527263	10.0	10.1	
167 Benzo[b]fluoranthene	252	11.913	11.922	-0.010	98	422343	10.0	8.90	
168 Benzo[k]fluoranthene	252	11.941	11.956	-0.015	96	422430	10.0	9.29	
170 Benzo[a]pyrene	252	12.307	12.317	-0.010	97	391350	10.0	9.47	
176 Indeno[1,2,3-cd]pyrene	276	13.968	13.987	-0.019	93	367462	10.0	10.5	
175 Dibenz(a,h)anthracene	278	13.973	13.992	-0.019	68	277794	10.0	9.96	
177 Benzo[g,h,i]perylene	276	14.463	14.472	-0.009	93	349302	10.0	11.2	
S 179 Total Cresols, TCEQ Defini	1				0			19.5	
S 178 Methyl Phenols,Total	1				0			19.5	

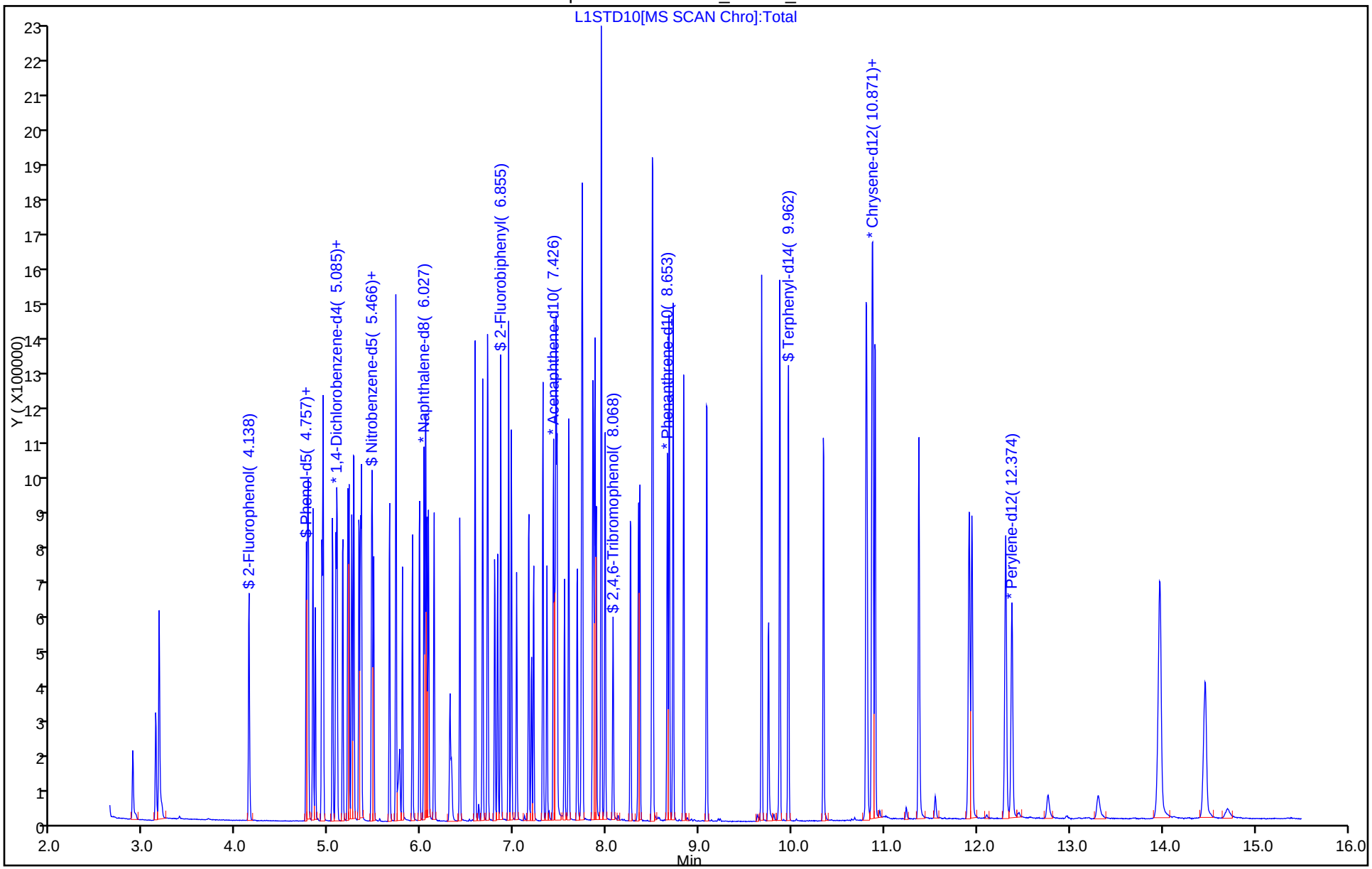
Reagents:

SMlst1_1uLL6_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD10.D				
Injection Date:	27-Apr-2015 15:05:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD20.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 27-Apr-2015 15:29:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD20
Misc. Info.: 500-0030526-008
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:35 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: akcakald Date: 27-Apr-2015 16:13:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	95	96317	8.00	8.00	
* 2 Naphthalene-d8	136	6.027	6.032	-0.005	90	365553	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	82	206119	8.00	8.00	
* 4 Phenanthrene-d10	188	8.654	8.658	-0.004	96	336888	8.00	8.00	
* 5 Chrysene-d12	240	10.875	10.880	-0.005	95	382989	8.00	8.00	
* 6 Perylene-d12	264	12.374	12.379	-0.005	97	281112	8.00	8.00	
$ 7 2-Fluorophenol	112	4.139	4.139	0.000	95	287018	20.0	19.5	
$ 8 Phenol-d5	99	4.771	4.776	-0.005	87	351157	20.0	19.6	
$ 9 Nitrobenzene-d5	82	5.471	5.476	-0.005	93	299361	20.0	19.9	
$ 10 2-Fluorobiphenyl	172	6.855	6.860	-0.005	99	619502	20.0	19.4	
$ 11 2,4,6-Tribromophenol	330	8.073	8.073	0.000	67	109364	20.0	20.4	
$ 12 Terphenyl-d14	244	9.962	9.962	0.000	100	712453	20.0	19.5	
13 1,4-Dioxane	88	2.887	2.883	0.004	85	116555	20.0	21.3	
14 N-Nitrosodimethylamine	42	3.139	3.140	-0.001	76	226593	20.0	20.1	
15 Pyridine	79	3.173	3.168	0.005	74	312560	20.0	20.4	
24 Benzaldehyde	77	4.757	4.757	0.000	94	199633	20.0	20.0	
26 Phenol	94	4.781	4.786	-0.005	77	359089	20.0	20.6	
27 Aniline	93	4.828	4.833	-0.005	93	446821	20.0	20.1	
28 Bis(2-chloroethyl)ether	93	4.857	4.857	0.000	82	279588	20.0	20.4	
30 2-Chlorophenol	128	4.928	4.928	0.000	97	312841	20.0	20.4	
16 n-Decane	43	4.938	4.938	0.000	91	421513	20.0	19.8	
32 1,3-Dichlorobenzene	146	5.043	5.043	0.000	98	367465	20.0	20.5	
34 1,4-Dichlorobenzene	146	5.090	5.090	0.000	96	367398	20.0	20.0	
35 Benzyl alcohol	108	5.152	5.157	-0.005	91	201574	20.0	20.0	
36 1,2-Dichlorobenzene	146	5.204	5.209	-0.005	96	361162	20.0	20.9	
37 2-Methylphenol	107	5.223	5.223	0.000	88	238581	20.0	19.9	
38 2,2'-oxybis[1-chloropropan	45	5.247	5.252	-0.005	1	648678	20.0	20.8	
51 Indene	116	5.271	5.271	0.000	87	540675	20.0	20.6	
39 3 & 4 Methylphenol	108	5.328	5.333	-0.005	58	279068	20.0	19.5	
40 N-Nitrosodi-n-propylamine	70	5.347	5.352	-0.005	80	191369	20.0	19.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.357	5.357	0.000	84	398428	20.0	20.3	
46 Hexachloroethane	117	5.461	5.461	0.000	92	146514	20.0	20.5	
47 Nitrobenzene	77	5.485	5.490	-0.005	94	268748	20.0	19.8	
50 Isophorone	82	5.656	5.666	-0.010	98	528197	20.0	20.1	
53 2-Nitrophenol	139	5.728	5.728	0.000	70	156015	20.0	20.2	
52 2,4-Dimethylphenol	122	5.728	5.732	-0.004	88	281791	20.0	20.1	
56 Bis(2-chloroethoxy)methane	93	5.794	5.799	-0.005	91	304848	20.0	19.7	
55 Benzoic acid	122	5.785	5.809	-0.024	94	128565	20.0	15.6	
57 2,4-Dichlorophenol	162	5.904	5.909	-0.004	85	260797	20.0	20.0	
59 1,2,4-Trichlorobenzene	180	5.980	5.980	0.000	93	291443	20.0	20.0	
60 Naphthalene	128	6.046	6.046	0.000	79	919516	20.0	20.3	
61 4-Chloroaniline	127	6.061	6.066	-0.005	94	421507	20.0	21.5	M
62 2,6-Dichlorophenol	162	6.080	6.080	0.000	80	261606	20.0	20.3	
64 Hexachlorobutadiene	225	6.137	6.137	0.000	93	164967	20.0	20.5	
58 Caprolactam	113	6.322	6.337	-0.015	80	98095	20.0	20.6	
69 4-Chloro-3-methylphenol	107	6.418	6.422	-0.004	92	242748	20.0	19.9	
73 2-Methylnaphthalene	142	6.579	6.584	-0.005	94	596961	20.0	19.6	
45 1-Methylnaphthalene	142	6.660	6.665	-0.005	93	538802	20.0	19.8	
74 Hexachlorocyclopentadiene	237	6.712	6.713	-0.001	36	175102	20.0	20.3	
75 1,2,4,5-Tetrachlorobenzene	216	6.717	6.722	-0.005	97	268789	20.0	20.5	
76 2,4,6-Trichlorophenol	196	6.793	6.793	0.000	89	172880	20.0	19.3	
77 2,4,5-Trichlorophenol	196	6.822	6.827	-0.005	93	174118	20.0	18.8	
71 1,1'-Biphenyl	154	6.941	6.946	-0.005	95	720305	20.0	20.3	
80 2-Chloronaphthalene	162	6.974	6.974	0.000	86	535154	20.0	19.6	
81 2-Nitroaniline	65	7.031	7.031	0.000	86	184582	20.0	21.1	
84 Dimethyl phthalate	163	7.160	7.169	-0.009	86	635242	20.0	20.2	
85 1,3-Dinitrobenzene	168	7.193	7.198	-0.005	55	88617	20.0	19.7	
86 2,6-Dinitrotoluene	165	7.217	7.222	-0.005	91	143450	20.0	19.5	
87 Acenaphthylene	152	7.312	7.317	-0.005	97	908774	20.0	20.2	
88 3-Nitroaniline	138	7.360	7.364	-0.004	89	171624	20.0	20.8	
89 2,4-Dinitrophenol	184	7.445	7.450	-0.005	65	143213	40.0	37.6	
90 Acenaphthene	154	7.455	7.455	0.000	92	628741	20.0	20.9	
91 4-Nitrophenol	109	7.474	7.483	-0.009	86	155618	40.0	40.0	
92 2,4-Dinitrotoluene	165	7.550	7.555	-0.005	90	183782	20.0	19.7	
94 Dibenzofuran	168	7.593	7.593	0.000	75	779727	20.0	20.0	
97 2,3,4,6-Tetrachlorophenol	232	7.683	7.688	-0.005	70	166211	20.0	20.3	
100 Diethyl phthalate	149	7.731	7.735	-0.004	98	622430	20.0	20.9	
186 Hexadecane	57	7.740	7.740	0.000	86	502194	20.0	20.2	
102 4-Chlorophenyl phenyl ethe	204	7.850	7.854	-0.004	84	301511	20.0	20.2	
104 4-Nitroaniline	138	7.864	7.873	-0.009	52	169071	20.0	20.4	
105 Fluorene	166	7.873	7.878	-0.005	89	665332	20.0	20.4	
106 4,6-Dinitro-2-methylphenol	198	7.892	7.902	-0.010	80	215096	40.0	37.8	
108 N-Nitrosodiphenylamine	169	7.945	7.950	-0.005	84	917542	40.0	40.5	
110 1,2-Diphenylhydrazine	77	7.983	7.988	-0.005	96	556254	20.0	20.8	
117 4-Bromophenyl phenyl ether	248	8.259	8.264	-0.005	66	183063	20.0	20.0	
119 Hexachlorobenzene	284	8.344	8.349	-0.005	91	211145	20.0	19.8	
109 Atrazine	200	8.363	8.368	-0.005	74	178694	20.0	20.3	
122 Pentachlorophenol	266	8.492	8.492	0.000	87	261458	40.0	43.9	
79 n-Octadecane	43	8.497	8.501	-0.004	91	370710	20.0	20.0	
128 Phenanthrene	178	8.677	8.682	-0.005	84	970633	20.0	20.3	
130 Anthracene	178	8.720	8.725	-0.005	98	989455	20.0	20.6	
132 Carbazole	167	8.834	8.835	0.000	100	881686	20.0	20.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	9.082	9.082	0.000	99	1132481	20.0	20.8	
140 Fluoranthene	202	9.677	9.677	0.000	97	1101766	20.0	21.0	
142 Benzidine	184	9.748	9.758	-0.010	91	486788	20.0	22.1	
143 Pyrene	202	9.872	9.876	-0.004	94	1134579	20.0	19.5	
153 Butyl benzyl phthalate	149	10.343	10.343	0.000	95	517927	20.0	20.2	
160 Bis(2-ethylhexyl) phthalat	149	10.799	10.804	-0.005	96	722889	20.0	20.3	
161 3,3'-Dichlorobenzidine	252	10.814	10.818	-0.004	99	334677	20.0	20.7	
162 Benzo[a]anthracene	228	10.866	10.871	-0.005	98	1016893	20.0	19.1	
163 Chrysene	228	10.899	10.904	-0.005	96	893362	20.0	18.3	
165 Di-n-octyl phthalate	149	11.370	11.370	0.000	98	1130674	20.0	21.1	
167 Benzo[b]fluoranthene	252	11.917	11.922	-0.005	98	873867	20.0	18.8	
168 Benzo[k]fluoranthene	252	11.951	11.956	-0.005	95	901108	20.0	20.2	
170 Benzo[a]pyrene	252	12.312	12.317	-0.005	96	794037	20.0	19.6	
176 Indeno[1,2,3-cd]pyrene	276	13.982	13.987	-0.005	92	746491	20.0	21.9	
175 Dibenz(a,h)anthracene	278	13.982	13.992	-0.010	72	575902	20.0	21.1	
177 Benzo[g,h,i]perylene	276	14.468	14.472	-0.004	95	664518	20.0	21.8	
S 179 Total Cresols, TCEQ Defini	1				0			39.4	
S 178 Methyl Phenols,Total	1				0			39.4	

QC Flag Legend

Review Flags

M - Manually Integrated

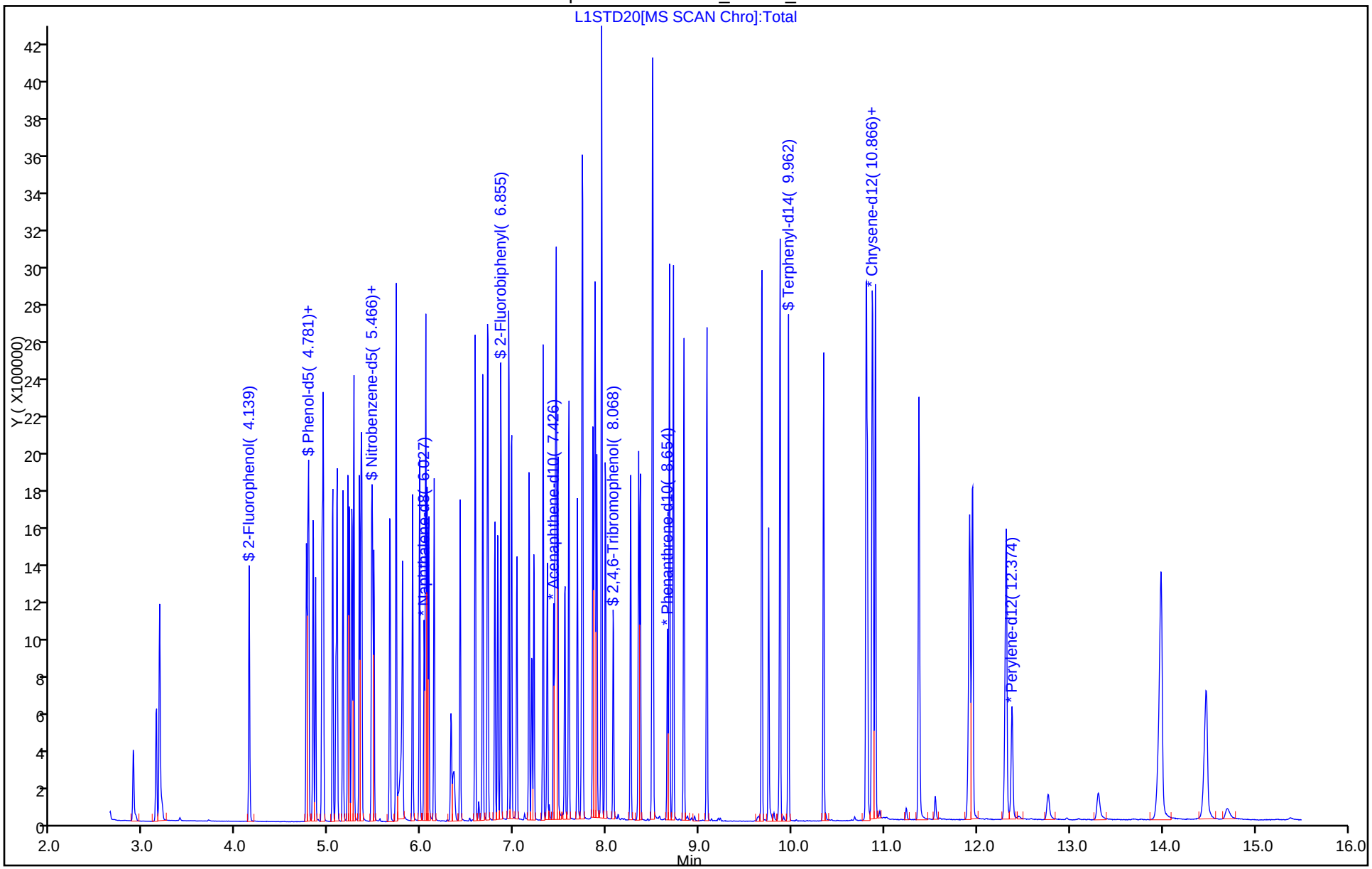
Reagents:

SMlst1_1uLL7_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:36 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD20.D				
Injection Date:	27-Apr-2015 15:29:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



Manual Integration/User Assign Peak Report

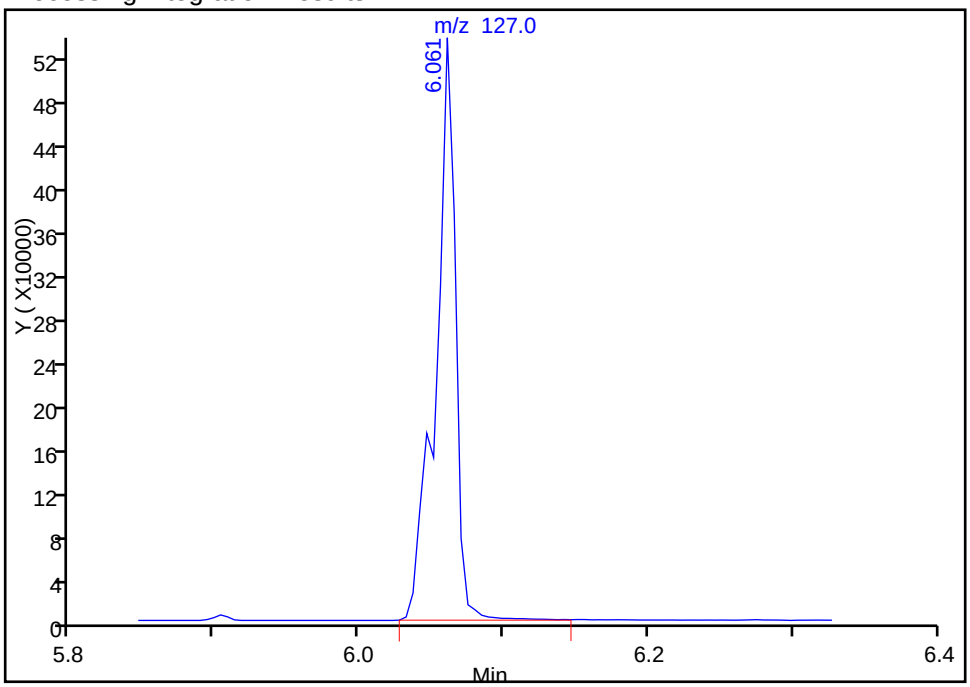
TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD20.D				
Injection Date:	27-Apr-2015 15:29:30	Instrument ID:	CMS21		
Lims ID:	ic				
Client ID:					
Operator ID:	DA	ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

61 4-Chloroaniline, CAS: 106-47-8

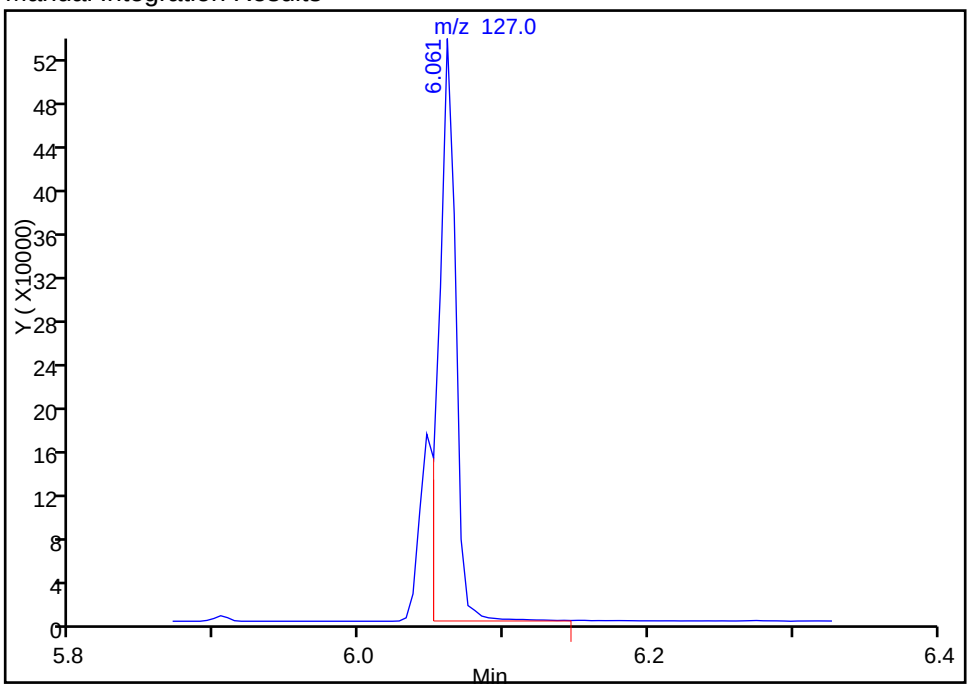
Processing Integration Results

RT: 6.06
Area: 507094
Amount: 25.102354
Amount Units: ug/mL



Manual Integration Results

RT: 6.06
Area: 421507
Amount: 21.516747
Amount Units: ug/mL



Reviewer: rynkarg, 28-Apr-2015 09:11:32
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD40.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 8
Inject. Date: 27-Apr-2015 15:53:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD40
Misc. Info.: 500-0030526-009
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:37 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: akcakald Date: 27-Apr-2015 16:17:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	94	83844	8.00	8.00	
* 2 Naphthalene-d8	136	6.032	6.032	0.000	87	328323	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	81	181867	8.00	8.00	
* 4 Phenanthrene-d10	188	8.658	8.658	0.000	91	293242	8.00	8.00	
* 5 Chrysene-d12	240	10.880	10.880	0.000	97	323691	8.00	8.00	
* 6 Perylene-d12	264	12.379	12.379	0.000	97	224533	8.00	8.00	
$ 7 2-Fluorophenol	112	4.139	4.139	0.000	94	495128	40.0	38.7	
$ 8 Phenol-d5	99	4.776	4.776	0.000	86	601401	40.0	38.5	
$ 9 Nitrobenzene-d5	82	5.476	5.476	0.000	94	543509	40.0	40.1	
$ 10 2-Fluorobiphenyl	172	6.860	6.860	0.000	100	1088634	40.0	38.6	
$ 11 2,4,6-Tribromophenol	330	8.073	8.073	0.000	72	206430	40.0	43.7	
$ 12 Terphenyl-d14	244	9.962	9.962	0.000	99	1244912	40.0	40.4	
13 1,4-Dioxane	88	2.883	2.883	0.000	87	187504	40.0	39.4	
14 N-Nitrosodimethylamine	42	3.140	3.140	0.000	76	386397	40.0	39.3	
15 Pyridine	79	3.168	3.168	0.000	72	517919	40.0	38.9	
24 Benzaldehyde	77	4.757	4.757	0.000	95	293241	40.0	41.5	
26 Phenol	94	4.786	4.786	0.000	78	596658	40.0	39.3	
27 Aniline	93	4.833	4.833	0.000	88	774630	40.0	40.1	
28 Bis(2-chloroethyl)ether	93	4.857	4.857	0.000	84	460382	40.0	38.6	
30 2-Chlorophenol	128	4.928	4.928	0.000	98	537157	40.0	40.2	
16 n-Decane	43	4.938	4.938	0.000	91	637485	40.0	40.2	
32 1,3-Dichlorobenzene	146	5.043	5.043	0.000	98	623862	40.0	40.0	
34 1,4-Dichlorobenzene	146	5.090	5.090	0.000	96	634773	40.0	39.7	
35 Benzyl alcohol	108	5.157	5.157	0.000	92	340981	40.0	38.9	
36 1,2-Dichlorobenzene	146	5.209	5.209	0.000	97	601090	40.0	39.9	
37 2-Methylphenol	107	5.223	5.223	0.000	88	407994	40.0	39.0	
38 2,2'-oxybis[1-chloropropan	45	5.252	5.252	0.000	1	1036512	40.0	38.1	
51 Indene	116	5.271	5.271	0.000	87	939096	40.0	41.0	
39 3 & 4 Methylphenol	108	5.333	5.333	0.000	58	502421	40.0	40.3	
40 N-Nitrosodi-n-propylamine	70	5.352	5.352	0.000	81	315543	40.0	37.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.357	5.357	0.000	90	655468	40.0	38.5	
46 Hexachloroethane	117	5.461	5.461	0.000	92	251127	40.0	40.4	
47 Nitrobenzene	77	5.490	5.490	0.000	95	477736	40.0	39.1	
50 Isophorone	82	5.666	5.666	0.000	97	930006	40.0	39.5	
53 2-Nitrophenol	139	5.728	5.728	0.000	79	281744	40.0	40.7	
52 2,4-Dimethylphenol	122	5.732	5.732	0.000	90	495900	40.0	39.5	
56 Bis(2-chloroethoxy)methane	93	5.799	5.799	0.000	93	539653	40.0	38.8	
55 Benzoic acid	122	5.809	5.809	0.000	95	273009	40.0	36.9	
57 2,4-Dichlorophenol	162	5.909	5.909	0.000	83	459397	40.0	39.3	
59 1,2,4-Trichlorobenzene	180	5.980	5.980	0.000	93	511299	40.0	39.1	
60 Naphthalene	128	6.046	6.046	0.000	80	1552348	40.0	38.1	
61 4-Chloroaniline	127	6.066	6.066	0.000	61	735702	40.0	41.8	
62 2,6-Dichlorophenol	162	6.080	6.080	0.000	75	452176	40.0	39.0	
64 Hexachlorobutadiene	225	6.137	6.137	0.000	93	284140	40.0	39.3	
58 Caprolactam	113	6.337	6.337	0.000	79	169624	40.0	39.7	
69 4-Chloro-3-methylphenol	107	6.422	6.422	0.000	90	423500	40.0	38.6	
73 2-Methylnaphthalene	142	6.584	6.584	0.000	95	1054982	40.0	38.6	
45 1-Methylnaphthalene	142	6.665	6.665	0.000	94	957416	40.0	39.2	
74 Hexachlorocyclopentadiene	237	6.713	6.713	0.000	24	314240	40.0	41.3	
75 1,2,4,5-Tetrachlorobenzene	216	6.722	6.722	0.000	97	460738	40.0	39.9	
76 2,4,6-Trichlorophenol	196	6.793	6.793	0.000	90	317743	40.0	40.3	
77 2,4,5-Trichlorophenol	196	6.827	6.827	0.000	92	330007	40.0	40.3	
71 1,1'-Biphenyl	154	6.946	6.946	0.000	95	1255813	40.0	40.2	
80 2-Chloronaphthalene	162	6.974	6.974	0.000	86	940223	40.0	39.0	
81 2-Nitroaniline	65	7.031	7.031	0.000	85	321126	40.0	41.7	
84 Dimethyl phthalate	163	7.169	7.169	0.000	81	1085755	40.0	39.2	
85 1,3-Dinitrobenzene	168	7.198	7.198	0.000	83	165806	40.0	41.8	
86 2,6-Dinitrotoluene	165	7.222	7.222	0.000	91	261555	40.0	40.1	
87 Acenaphthylene	152	7.317	7.317	0.000	97	1580291	40.0	39.8	
88 3-Nitroaniline	138	7.364	7.364	0.000	93	297708	40.0	41.0	
89 2,4-Dinitrophenol	184	7.450	7.450	0.000	66	293155	80.0	87.1	
90 Acenaphthene	154	7.455	7.455	0.000	89	1092739	40.0	41.2	
91 4-Nitrophenol	109	7.483	7.483	0.000	89	282724	80.0	82.4	
92 2,4-Dinitrotoluene	165	7.555	7.555	0.000	97	330313	40.0	39.6	
94 Dibenzofuran	168	7.593	7.593	0.000	76	1364500	40.0	39.6	
97 2,3,4,6-Tetrachlorophenol	232	7.688	7.688	0.000	68	297491	40.0	41.2	
100 Diethyl phthalate	149	7.735	7.735	0.000	97	1020136	40.0	38.8	
186 Hexadecane	57	7.740	7.740	0.000	81	719152	40.0	39.3	
102 4-Chlorophenyl phenyl ethe	204	7.854	7.854	0.000	84	521469	40.0	39.6	
104 4-Nitroaniline	138	7.873	7.873	0.000	9	298441	40.0	40.7	
105 Fluorene	166	7.878	7.878	0.000	90	1097867	40.0	38.2	
106 4,6-Dinitro-2-methylphenol	198	7.902	7.902	0.000	84	404544	80.0	81.7	
108 N-Nitrosodiphenylamine	169	7.950	7.950	0.000	83	1547299	80.0	78.5	
110 1,2-Diphenylhydrazine	77	7.988	7.988	0.000	98	909043	40.0	38.5	
117 4-Bromophenyl phenyl ether	248	8.264	8.264	0.000	61	319032	40.0	40.0	
119 Hexachlorobenzene	284	8.349	8.349	0.000	90	383551	40.0	41.3	
109 Atrazine	200	8.368	8.368	0.000	69	307866	40.0	40.3	
122 Pentachlorophenol	266	8.497	8.497	0.000	80	448711	80.0	86.6	
79 n-Octadecane	43	8.501	8.501	0.000	91	500605	40.0	37.7	
128 Phenanthrene	178	8.682	8.682	0.000	88	1656432	40.0	39.7	
130 Anthracene	178	8.725	8.725	0.000	97	1653086	40.0	39.5	
132 Carbazole	167	8.835	8.835	0.000	100	1544769	40.0	40.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	9.082	9.082	0.000	99	1899505	40.0	40.1	
140 Fluoranthene	202	9.677	9.677	0.000	98	1850229	40.0	40.6	
142 Benzidine	184	9.753	9.753	0.000	95	859077	40.0	46.2	
143 Pyrene	202	9.876	9.876	0.000	94	1942310	40.0	39.4	
153 Butyl benzyl phthalate	149	10.343	10.343	0.000	95	887353	40.0	41.0	
160 Bis(2-ethylhexyl) phthalat	149	10.804	10.804	0.000	95	1219956	40.0	40.6	
161 3,3'-Dichlorobenzidine	252	10.818	10.818	0.000	98	582850	40.0	42.7	
162 Benzo[a]anthracene	228	10.871	10.871	0.000	97	1744052	40.0	38.7	
163 Chrysene	228	10.904	10.904	0.000	96	1582986	40.0	38.4	
165 Di-n-octyl phthalate	149	11.370	11.370	0.000	99	1980671	40.0	42.4	
167 Benzo[b]fluoranthene	252	11.922	11.922	0.000	98	1526365	40.0	41.1	
168 Benzo[k]fluoranthene	252	11.956	11.956	0.000	96	1506952	40.0	42.4	
170 Benzo[a]pyrene	252	12.317	12.317	0.000	96	1349095	40.0	41.7	
176 Indeno[1,2,3-cd]pyrene	276	13.987	13.987	0.000	91	1041104	40.0	38.4	
175 Dibenz(a,h)anthracene	278	13.992	13.992	0.000	76	838704	40.0	38.4	
177 Benzo[g,h,i]perylene	276	14.472	14.472	0.000	94	814701	40.0	33.4	

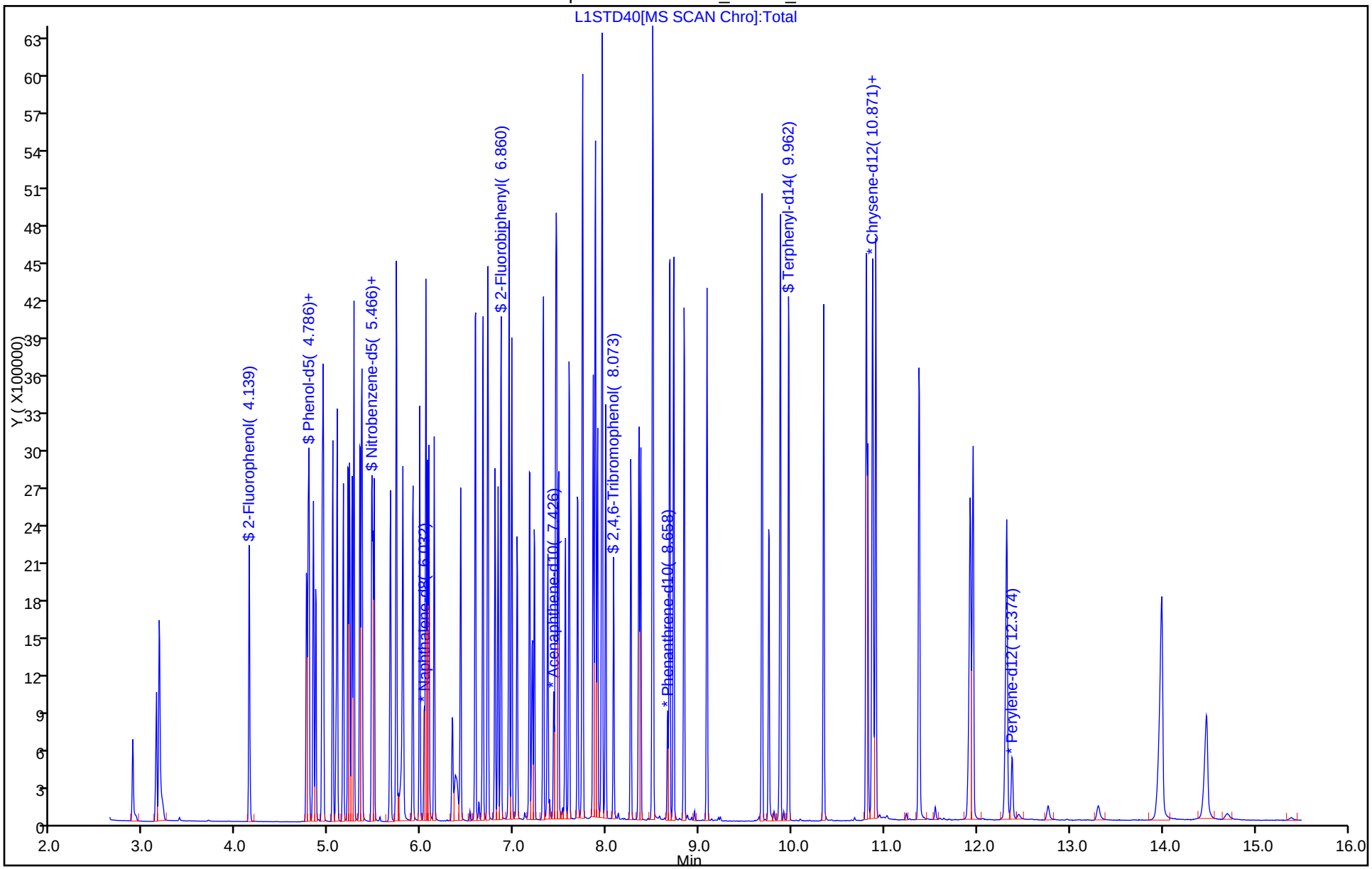
Reagents:

SMlst1_1uLL8_00015 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:38 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD40.D				
Injection Date:	27-Apr-2015 15:53:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	icis			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD50.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 27-Apr-2015 16:18:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD50
Misc. Info.: 500-0030526-010
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:40 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: swaneyg Date: 27-Apr-2015 18:10:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	79	92648	8.00	8.00	
* 2 Naphthalene-d8	136	6.032	6.032	0.000	90	342726	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	80	191391	8.00	8.00	
* 4 Phenanthrene-d10	188	8.658	8.658	0.000	95	299568	8.00	8.00	
* 5 Chrysene-d12	240	10.880	10.880	0.000	97	340741	8.00	8.00	
* 6 Perylene-d12	264	12.379	12.379	0.000	97	237793	8.00	8.00	
$ 7 2-Fluorophenol	112	4.143	4.139	0.004	94	703102	50.0	49.7	
$ 8 Phenol-d5	99	4.781	4.776	0.005	83	848831	50.0	49.2	
$ 9 Nitrobenzene-d5	82	5.480	5.476	0.004	94	750309	50.0	53.1	
$ 10 2-Fluorobiphenyl	172	6.860	6.860	0.000	100	1489172	50.0	50.2	
$ 11 2,4,6-Tribromophenol	330	8.078	8.073	0.005	67	273060	50.0	54.9	
$ 12 Terphenyl-d14	244	9.967	9.962	0.005	99	1607150	50.0	49.5	
13 1,4-Dioxane	88	2.882	2.883	-0.001	86	263435	50.0	50.1	
14 N-Nitrosodimethylamine	42	3.144	3.140	0.004	76	540081	50.0	49.7	
15 Pyridine	79	3.173	3.168	0.005	74	750868	50.0	51.1	
24 Benzaldehyde	77	4.757	4.757	0.000	95	365344	50.0	56.0	
26 Phenol	94	4.790	4.786	0.004	86	840248	50.0	50.1	
27 Aniline	93	4.838	4.833	0.005	90	1073295	50.0	50.3	
28 Bis(2-chloroethyl)ether	93	4.862	4.857	0.005	79	678923	50.0	51.6	
30 2-Chlorophenol	128	4.928	4.928	0.000	98	743548	50.0	50.3	
16 n-Decane	43	4.943	4.938	0.005	91	829744	50.0	52.5	
32 1,3-Dichlorobenzene	146	5.042	5.043	-0.001	97	837522	50.0	48.6	
34 1,4-Dichlorobenzene	146	5.090	5.090	0.000	95	866496	50.0	49.1	
35 Benzyl alcohol	108	5.161	5.157	0.004	92	495838	50.0	51.2	
36 1,2-Dichlorobenzene	146	5.209	5.209	0.000	97	824990	50.0	49.6	
37 2-Methylphenol	107	5.228	5.223	0.005	88	587330	50.0	50.8	
38 2,2'-oxybis[1-chloropropan	45	5.252	5.252	0.000	1	1391155	50.0	46.3	
51 Indene	116	5.271	5.271	0.000	88	1257469	50.0	49.7	
39 3 & 4 Methylphenol	108	5.337	5.333	0.004	58	691943	50.0	50.3	
40 N-Nitrosodi-n-propylamine	70	5.356	5.352	0.004	81	446151	50.0	48.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.361	5.357	0.004	90	921738	50.0	48.9	
46 Hexachloroethane	117	5.461	5.461	0.000	92	351250	50.0	51.1	
47 Nitrobenzene	77	5.494	5.490	0.004	95	661090	50.0	51.8	
50 Isophorone	82	5.670	5.666	0.004	97	1266107	50.0	51.5	
53 2-Nitrophenol	139	5.728	5.728	0.000	88	391248	50.0	54.1	
52 2,4-Dimethylphenol	122	5.732	5.732	0.000	88	676212	50.0	51.5	
56 Bis(2-chloroethoxy)methane	93	5.799	5.799	0.000	93	753719	50.0	51.9	
55 Benzoic acid	122	5.823	5.809	0.014	99	420538	50.0	54.4	
57 2,4-Dichlorophenol	162	5.908	5.909	0.000	84	653368	50.0	53.5	
59 1,2,4-Trichlorobenzene	180	5.980	5.980	0.000	93	706808	50.0	51.8	
60 Naphthalene	128	6.051	6.046	0.005	80	2084448	50.0	49.0	
61 4-Chloroaniline	127	6.065	6.066	-0.001	97	941442	50.0	51.3	M
62 2,6-Dichlorophenol	162	6.084	6.080	0.004	85	635905	50.0	52.6	
64 Hexachlorobutadiene	225	6.137	6.137	0.000	93	403695	50.0	53.5	
58 Caprolactam	113	6.346	6.337	0.009	79	232333	50.0	52.1	
69 4-Chloro-3-methylphenol	107	6.427	6.422	0.005	89	603455	50.0	52.7	
73 2-Methylnaphthalene	142	6.584	6.584	0.000	95	1432331	50.0	50.3	
45 1-Methylnaphthalene	142	6.665	6.665	0.000	95	1290573	50.0	50.6	
74 Hexachlorocyclopentadiene	237	6.717	6.713	0.004	1	432325	50.0	54.0	
75 1,2,4,5-Tetrachlorobenzene	216	6.722	6.722	0.000	97	631147	50.0	52.0	
76 2,4,6-Trichlorophenol	196	6.798	6.793	0.005	87	458498	50.0	55.2	
77 2,4,5-Trichlorophenol	196	6.831	6.827	0.004	95	456288	50.0	52.9	
71 1,1'-Biphenyl	154	6.950	6.946	0.004	81	1708518	50.0	52.0	
80 2-Chloronaphthalene	162	6.979	6.974	0.005	88	1339005	50.0	52.8	
81 2-Nitroaniline	65	7.036	7.031	0.005	88	414715	50.0	51.2	
84 Dimethyl phthalate	163	7.169	7.169	0.000	83	1479895	50.0	50.8	
85 1,3-Dinitrobenzene	168	7.202	7.198	0.004	83	228364	50.0	54.7	
86 2,6-Dinitrotoluene	165	7.221	7.222	-0.001	91	349420	50.0	50.8	
87 Acenaphthylene	152	7.317	7.317	0.000	93	2118058	50.0	50.7	
88 3-Nitroaniline	138	7.369	7.364	0.005	94	396415	50.0	51.8	
89 2,4-Dinitrophenol	184	7.455	7.450	0.005	54	386625	100.0	109.2	
90 Acenaphthene	154	7.459	7.455	0.004	86	1380100	50.0	49.5	
91 4-Nitrophenol	109	7.488	7.483	0.005	91	372459	100.0	103.2	
92 2,4-Dinitrotoluene	165	7.559	7.555	0.004	97	445527	50.0	50.6	
94 Dibenzofuran	168	7.597	7.593	0.004	76	1827259	50.0	50.4	
97 2,3,4,6-Tetrachlorophenol	232	7.688	7.688	0.000	68	401748	50.0	52.9	
100 Diethyl phthalate	149	7.740	7.735	0.005	97	1295141	50.0	46.8	
186 Hexadecane	57	7.740	7.740	0.000	75	877400	50.0	52.1	
102 4-Chlorophenyl phenyl ethe	204	7.854	7.854	0.000	82	711909	50.0	51.4	
104 4-Nitroaniline	138	7.883	7.873	0.010	35	396754	50.0	51.4	
105 Fluorene	166	7.878	7.878	0.000	88	1433926	50.0	47.4	
106 4,6-Dinitro-2-methylphenol	198	7.907	7.902	0.005	88	553814	100.0	109.5	
108 N-Nitrosodiphenylamine	169	7.954	7.950	0.004	78	1939218	100.0	96.3	
110 1,2-Diphenylhydrazine	77	7.992	7.988	0.004	99	1198804	50.0	48.3	
117 4-Bromophenyl phenyl ether	248	8.263	8.264	-0.001	62	432231	50.0	53.1	
119 Hexachlorobenzene	284	8.349	8.349	0.000	87	525202	50.0	55.3	
109 Atrazine	200	8.373	8.368	0.005	68	399419	50.0	51.1	
122 Pentachlorophenol	266	8.497	8.497	0.000	85	572615	100.0	108.2	
79 n-Octadecane	43	8.501	8.501	0.000	93	587714	50.0	51.8	
128 Phenanthrene	178	8.682	8.682	0.000	88	2148470	50.0	50.4	
130 Anthracene	178	8.725	8.725	0.000	97	2183168	50.0	51.0	
132 Carbazole	167	8.839	8.835	0.005	100	2002955	50.0	51.4	

Report Date: 28-Apr-2015 09:14:41 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD50.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	9.087	9.082	0.005	99	2473109	50.0	51.1	
140 Fluoranthene	202	9.681	9.677	0.004	97	2372734	50.0	50.9	
142 Benzidine	184	9.753	9.753	0.000	94	1077309	50.0	55.1	
143 Pyrene	202	9.876	9.876	0.000	95	2492019	50.0	48.0	
153 Butyl benzyl phthalate	149	10.343	10.343	0.000	95	1168273	50.0	51.3	
160 Bis(2-ethylhexyl) phthalat	149	10.804	10.804	0.000	95	1535823	50.0	48.5	
161 3,3'-Dichlorobenzidine	252	10.823	10.818	0.005	96	754081	50.0	52.4	
162 Benzo[a]anthracene	228	10.871	10.871	0.000	98	2365414	50.0	49.9	
163 Chrysene	228	10.909	10.904	0.005	95	2109879	50.0	48.6	
165 Di-n-octyl phthalate	149	11.375	11.370	0.005	99	2579759	50.0	54.1	
167 Benzo[b]fluoranthene	252	11.927	11.922	0.005	99	2104657	50.0	53.5	
168 Benzo[k]fluoranthene	252	11.960	11.956	0.004	96	1957392	50.0	52.0	
170 Benzo[a]pyrene	252	12.322	12.317	0.005	96	1749320	50.0	51.1	
176 Indeno[1,2,3-cd]pyrene	276	13.996	13.987	0.009	87	1335853	50.0	46.5	
175 Dibenz(a,h)anthracene	278	13.996	13.992	0.004	76	1076001	50.0	46.5	
177 Benzo[g,h,i]perylene	276	14.482	14.472	0.010	94	1013464	50.0	39.3	
S 179 Total Cresols, TCEQ Defini	1				0			101.1	
S 178 Methyl Phenols,Total	1				0			101.1	

QC Flag Legend

Review Flags

M - Manually Integrated

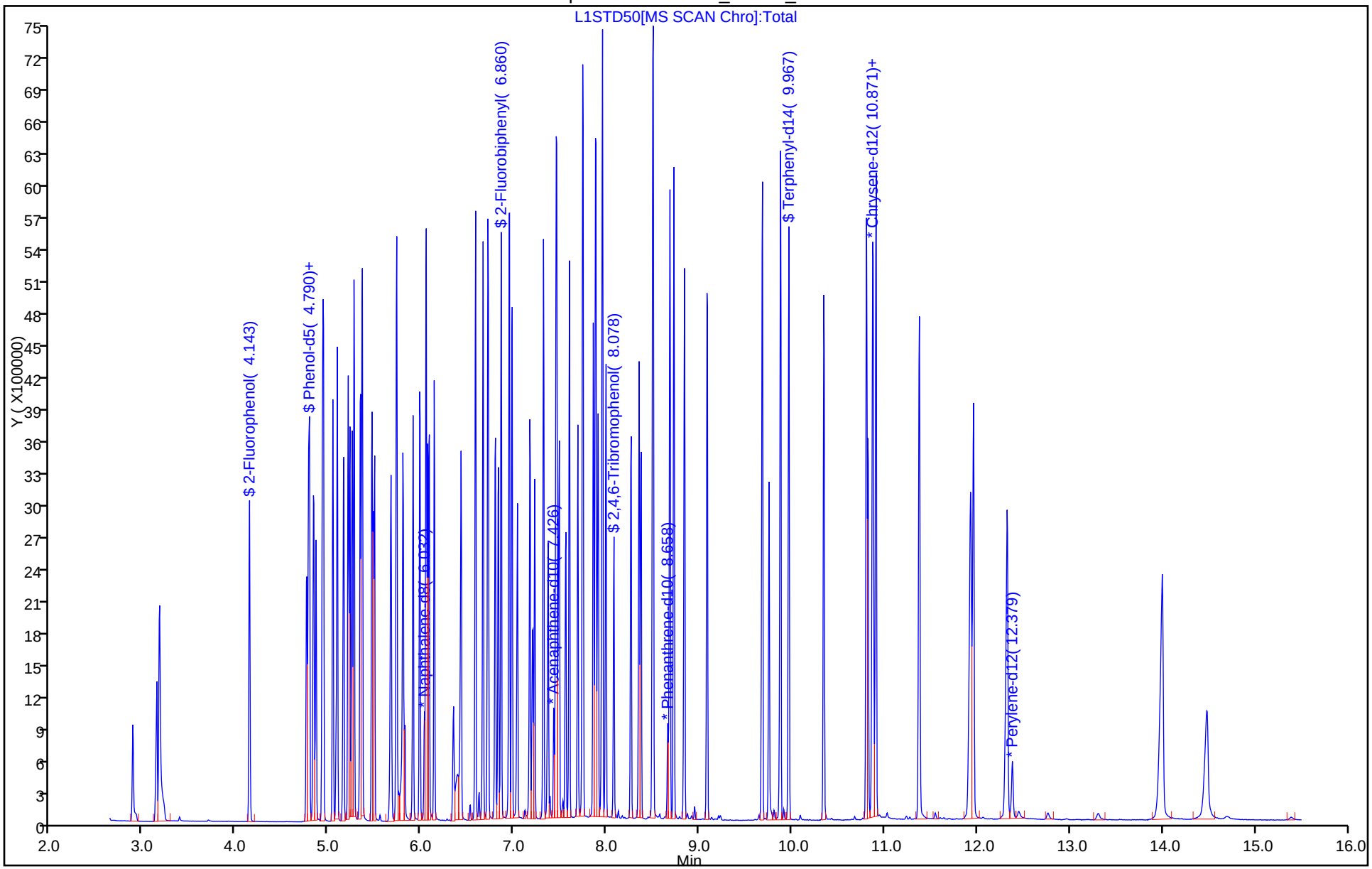
Reagents:

SMlst1_1uLL9_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:41 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD50.D				
Injection Date:	27-Apr-2015 16:18:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



Manual Integration/User Assign Peak Report

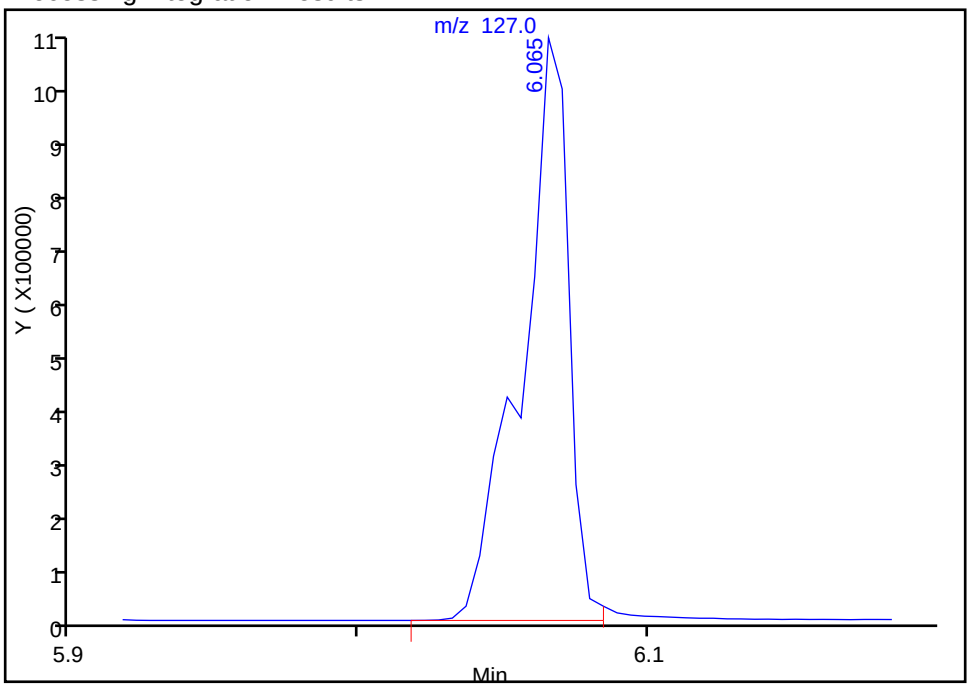
TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD50.D				
Injection Date:	27-Apr-2015 16:18:30	Instrument ID:	CMS21		
Lims ID:	ic				
Client ID:					
Operator ID:	DA	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:		Detector	MS SCAN		

61 4-Chloroaniline, CAS: 106-47-8

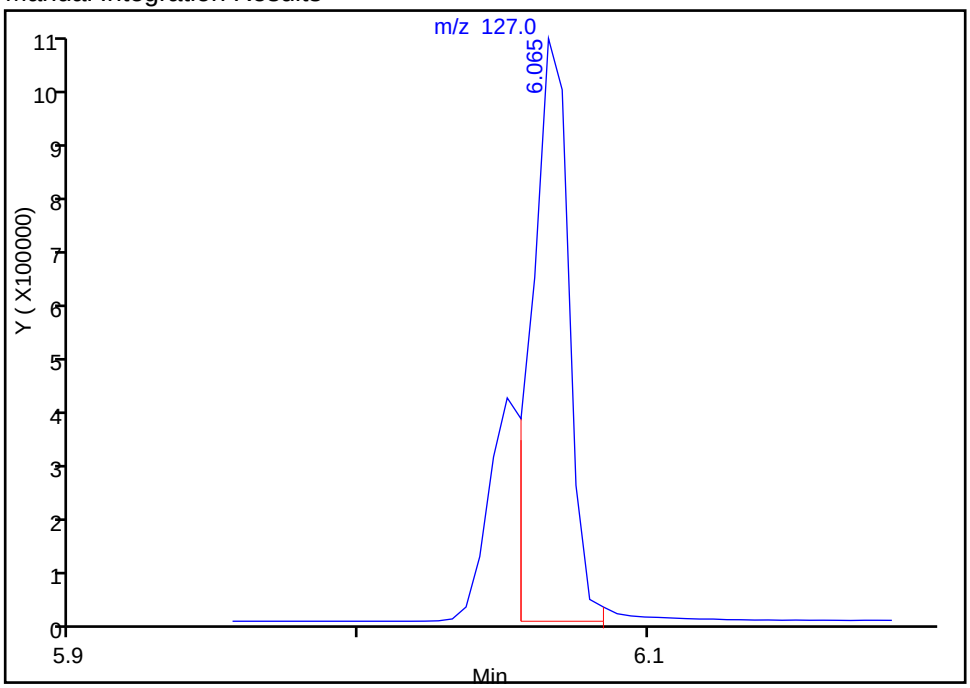
Processing Integration Results

RT: 6.07
Area: 1182642
Amount: 60.250532
Amount Units: ug/mL



Manual Integration Results

RT: 6.07
Area: 941442
Amount: 51.258829
Amount Units: ug/mL



Reviewer: rynkarg, 28-Apr-2015 09:11:16
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 27-Apr-2015 17:30:30 ALS Bottle#: 13 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD60
Misc. Info.: 500-0030526-011
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:42 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: swaneyg Date: 27-Apr-2015 18:18:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	77	100759	8.00	8.00	
* 2 Naphthalene-d8	136	6.032	6.032	0.000	80	382755	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	71	209411	8.00	8.00	
* 4 Phenanthrene-d10	188	8.658	8.658	0.000	95	328493	8.00	8.00	
* 5 Chrysene-d12	240	10.880	10.880	0.000	97	338388	8.00	8.00	
* 6 Perylene-d12	264	12.374	12.379	-0.005	97	206315	8.00	8.00	
$ 7 2-Fluorophenol	112	4.143	4.139	0.004	94	893930	60.0	58.1	
$ 8 Phenol-d5	99	4.786	4.776	0.010	79	1057528	60.0	56.3	
$ 9 Nitrobenzene-d5	82	5.480	5.476	0.004	94	922217	60.0	58.4	
$ 10 2-Fluorobiphenyl	172	6.860	6.860	0.000	100	1938014	60.0	59.7	
$ 11 2,4,6-Tribromophenol	330	8.078	8.073	0.005	68	377890	60.0	69.4	
$ 12 Terphenyl-d14	244	9.967	9.962	0.005	99	1938023	60.0	60.2	
13 1,4-Dioxane	88	2.882	2.883	-0.001	86	319026	60.0	55.8	
14 N-Nitrosodimethylamine	42	3.144	3.140	0.004	76	656284	60.0	55.5	
15 Pyridine	79	3.173	3.168	0.005	74	923381	60.0	57.7	
24 Benzaldehyde	77	4.762	4.757	0.005	92	400608	60.0	58.3	
26 Phenol	94	4.795	4.786	0.009	88	1032222	60.0	56.6	
27 Aniline	93	4.838	4.833	0.005	81	1402762	60.0	60.4	
28 Bis(2-chloroethyl)ether	93	4.862	4.857	0.005	84	818668	60.0	57.2	
30 2-Chlorophenol	128	4.933	4.928	0.005	96	927884	60.0	57.8	
16 n-Decane	43	4.943	4.938	0.005	91	946023	60.0	57.6	
32 1,3-Dichlorobenzene	146	5.042	5.043	-0.001	98	1068589	60.0	57.0	
34 1,4-Dichlorobenzene	146	5.090	5.090	0.000	95	1076231	60.0	56.0	
35 Benzyl alcohol	108	5.161	5.157	0.004	92	613944	60.0	58.3	
36 1,2-Dichlorobenzene	146	5.209	5.209	0.000	97	1043063	60.0	57.7	
37 2-Methylphenol	107	5.228	5.223	0.005	89	741030	60.0	59.0	
38 2,2'-oxybis[1-chloropropan	45	5.252	5.252	0.000	1	1681618	60.0	51.4	
51 Indene	116	5.276	5.271	0.005	87	1582203	60.0	57.5	
39 3 & 4 Methylphenol	108	5.342	5.333	0.009	59	870020	60.0	58.1	
40 N-Nitrosodi-n-propylamine	70	5.356	5.352	0.004	83	540230	60.0	53.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.366	5.357	0.009	90	1136120	60.0	55.5	
46 Hexachloroethane	117	5.461	5.461	0.000	91	422137	60.0	56.5	
47 Nitrobenzene	77	5.494	5.490	0.004	95	824110	60.0	57.9	
50 Isophorone	82	5.675	5.666	0.009	97	1640371	60.0	59.7	
53 2-Nitrophenol	139	5.732	5.728	0.004	80	507459	60.0	62.9	
52 2,4-Dimethylphenol	122	5.737	5.732	0.005	92	861815	60.0	58.8	
56 Bis(2-chloroethoxy)methane	93	5.804	5.799	0.005	95	947613	60.0	58.5	
55 Benzoic acid	122	5.832	5.809	0.023	97	560304	60.0	64.9	
57 2,4-Dichlorophenol	162	5.913	5.909	0.005	82	828152	60.0	60.7	
59 1,2,4-Trichlorobenzene	180	5.984	5.980	0.004	93	909106	60.0	59.7	
60 Naphthalene	128	6.051	6.046	0.005	80	2555514	60.0	53.8	
61 4-Chloroaniline	127	6.070	6.066	0.004	62	1152597	60.0	56.2	
62 2,6-Dichlorophenol	162	6.084	6.080	0.004	75	800414	60.0	59.3	
64 Hexachlorobutadiene	225	6.137	6.137	0.000	93	494479	60.0	58.7	
58 Caprolactam	113	6.356	6.337	0.019	79	290967	60.0	58.4	
69 4-Chloro-3-methylphenol	107	6.432	6.422	0.010	89	767464	60.0	60.0	
73 2-Methylnaphthalene	142	6.584	6.584	0.000	96	1731831	60.0	54.4	
45 1-Methylnaphthalene	142	6.665	6.665	0.000	95	1586281	60.0	55.6	
74 Hexachlorocyclopentadiene	237	6.717	6.713	0.004	1	522027	60.0	59.6	
75 1,2,4,5-Tetrachlorobenzene	216	6.722	6.722	0.000	97	774695	60.0	58.3	
76 2,4,6-Trichlorophenol	196	6.798	6.793	0.005	88	589977	60.0	64.9	
77 2,4,5-Trichlorophenol	196	6.831	6.827	0.004	93	600503	60.0	63.7	
71 1,1'-Biphenyl	154	6.950	6.946	0.004	85	2090152	60.0	58.1	
80 2-Chloronaphthalene	162	6.979	6.974	0.005	89	1651072	60.0	59.5	
81 2-Nitroaniline	65	7.036	7.031	0.005	87	519116	60.0	58.5	
84 Dimethyl phthalate	163	7.174	7.169	0.005	82	1832643	60.0	57.5	
85 1,3-Dinitrobenzene	168	7.202	7.198	0.004	85	299299	60.0	65.5	
86 2,6-Dinitrotoluene	165	7.226	7.222	0.004	92	450686	60.0	59.8	
87 Acenaphthylene	152	7.317	7.317	0.000	93	2628504	60.0	57.6	
88 3-Nitroaniline	138	7.369	7.364	0.005	93	475075	60.0	56.8	
89 2,4-Dinitrophenol	184	7.455	7.450	0.005	64	507930	120.0	131.1	
90 Acenaphthene	154	7.459	7.455	0.004	91	1697107	60.0	55.6	
91 4-Nitrophenol	109	7.493	7.483	0.010	88	458498	120.0	116.1	
92 2,4-Dinitrotoluene	165	7.559	7.555	0.004	99	572099	60.0	59.3	
94 Dibenzofuran	168	7.597	7.593	0.004	80	2288160	60.0	57.6	
97 2,3,4,6-Tetrachlorophenol	232	7.688	7.688	0.000	69	503635	60.0	60.6	
100 Diethyl phthalate	149	7.745	7.735	0.010	97	1583190	60.0	52.2	
186 Hexadecane	57	7.740	7.740	0.000	79	1001427	60.0	58.5	
102 4-Chlorophenyl phenyl ethe	204	7.859	7.854	0.005	77	894533	60.0	59.0	
104 4-Nitroaniline	138	7.888	7.873	0.015	33	476246	60.0	56.4	
105 Fluorene	166	7.883	7.878	0.005	85	1772186	60.0	53.5	
106 4,6-Dinitro-2-methylphenol	198	7.911	7.902	0.009	86	711282	120.0	128.2	
108 N-Nitrosodiphenylamine	169	7.959	7.950	0.009	78	2497454	120.0	113.0	
110 1,2-Diphenylhydrazine	77	7.992	7.988	0.004	100	1477744	60.0	54.4	
117 4-Bromophenyl phenyl ether	248	8.263	8.264	-0.001	62	550140	60.0	61.6	
119 Hexachlorobenzene	284	8.349	8.349	0.000	92	665422	60.0	63.9	
109 Atrazine	200	8.373	8.368	0.005	70	511218	60.0	59.7	
122 Pentachlorophenol	266	8.497	8.497	0.000	85	690395	120.0	118.9	
79 n-Octadecane	43	8.501	8.501	0.000	94	668709	60.0	NQ	
128 Phenanthrene	178	8.682	8.682	0.000	90	2659537	60.0	56.9	
130 Anthracene	178	8.725	8.725	0.000	98	2639258	60.0	56.3	
132 Carbazole	167	8.839	8.835	0.005	100	2479576	60.0	58.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	9.086	9.082	0.004	99	2991215	60.0	56.3	
140 Fluoranthene	202	9.681	9.677	0.004	97	2890796	60.0	56.6	
142 Benzidine	184	9.753	9.753	0.000	97	1042026	60.0	53.6	
143 Pyrene	202	9.876	9.876	0.000	94	3014857	60.0	58.5	
153 Butyl benzyl phthalate	149	10.343	10.343	0.000	95	1339235	60.0	59.2	
160 Bis(2-ethylhexyl) phthalat	149	10.804	10.804	0.000	94	1838663	60.0	58.5	
161 3,3'-Dichlorobenzidine	252	10.818	10.818	0.000	97	814076	60.0	57.0	
162 Benzo[a]anthracene	228	10.871	10.871	0.000	97	2622774	60.0	55.7	
163 Chrysene	228	10.909	10.904	0.005	95	2413901	60.0	56.0	
165 Di-n-octyl phthalate	149	11.375	11.370	0.005	99	2938019	60.0	56.2	
167 Benzo[b]fluoranthene	252	11.927	11.922	0.005	98	2254859	60.0	66.1	
168 Benzo[k]fluoranthene	252	11.960	11.956	0.004	95	1996750	60.0	61.1	
170 Benzo[a]pyrene	252	12.322	12.317	0.005	96	1854940	60.0	62.4	
176 Indeno[1,2,3-cd]pyrene	276	13.996	13.987	0.009	86	1534142	60.0	61.6	
175 Dibenz(a,h)anthracene	278	13.996	13.992	0.004	73	1247476	60.0	62.2	
177 Benzo[g,h,i]perylene	276	14.482	14.472	0.010	95	1175921	60.0	52.5	
S 179 Total Cresols, TCEQ Defini	1				0			117.1	
S 178 Methyl Phenols,Total	1				0			117.1	

QC Flag Legend

Processing Flags

NQ - Not Quantifiable

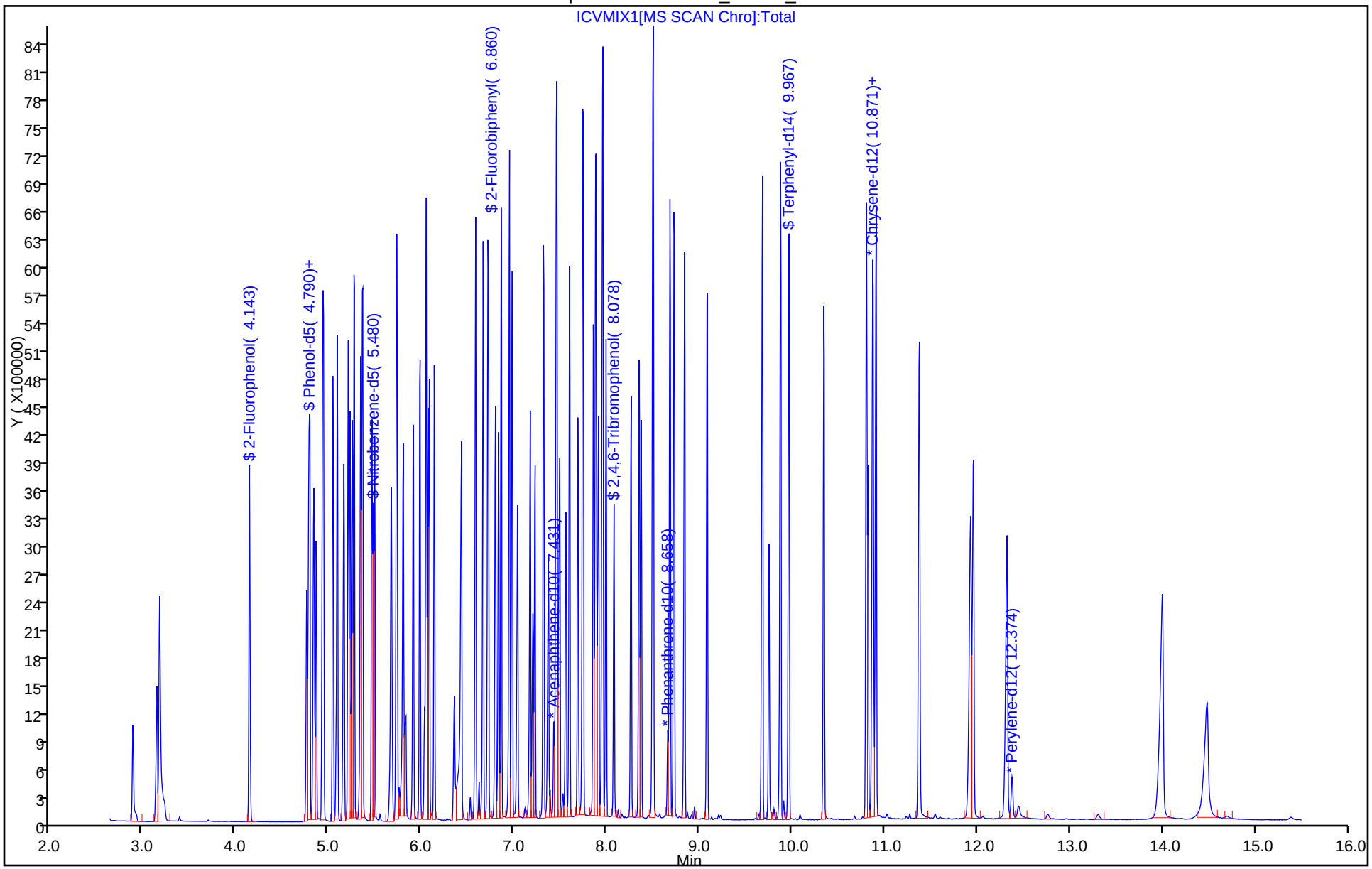
Reagents:

SMlst1_1uLL10_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:42 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D				
Injection Date:	27-Apr-2015 17:30:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD70.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 11
Inject. Date: 27-Apr-2015 17:06:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD70
Misc. Info.: 500-0030526-012
Operator ID: DA Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:44 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: swaneyg Date: 27-Apr-2015 18:19:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.081	5.076	0.005	80	103658	8.00	8.00	
* 2 Naphthalene-d8	136	6.032	6.032	0.000	87	398660	8.00	8.00	
* 3 Acenaphthene-d10	164	7.431	7.426	0.005	69	227469	8.00	8.00	
* 4 Phenanthrene-d10	188	8.663	8.658	0.005	89	366786	8.00	8.00	
* 5 Chrysene-d12	240	10.885	10.880	0.005	92	381130	8.00	8.00	
* 6 Perylene-d12	264	12.379	12.379	0.000	93	233422	8.00	8.00	
$ 7 2-Fluorophenol	112	4.143	4.139	0.004	94	1075609	70.0	67.9	
$ 8 Phenol-d5	99	4.786	4.776	0.010	94	1260549	70.0	65.2	
$ 9 Nitrobenzene-d5	82	5.480	5.476	0.004	95	1095404	70.0	66.6	
$ 10 2-Fluorobiphenyl	172	6.865	6.860	0.005	100	2210455	70.0	62.7	
$ 11 2,4,6-Tribromophenol	330	8.083	8.073	0.010	66	493086	70.0	83.4	
$ 12 Terphenyl-d14	244	9.967	9.962	0.005	99	2489768	70.0	68.6	
13 1,4-Dioxane	88	2.887	2.883	0.004	89	382980	70.0	65.1	
14 N-Nitrosodimethylamine	42	3.149	3.140	0.009	77	800103	70.0	65.8	
15 Pyridine	79	3.173	3.168	0.005	75	1165452	70.0	70.8	
24 Benzaldehyde	77	4.762	4.757	0.005	93	395955	70.0	50.4	
26 Phenol	94	4.800	4.786	0.014	93	1238961	70.0	66.0	
27 Aniline	93	4.838	4.833	0.005	80	1648614	70.0	69.0	
28 Bis(2-chloroethyl)ether	93	4.867	4.857	0.009	80	1054275	70.0	71.6	
30 2-Chlorophenol	128	4.933	4.928	0.005	96	1085563	70.0	65.7	
16 n-Decane	43	4.943	4.938	0.005	91	1043812	70.0	68.9	
32 1,3-Dichlorobenzene	146	5.047	5.043	0.004	97	1204690	70.0	62.4	
34 1,4-Dichlorobenzene	146	5.095	5.090	0.005	96	1244127	70.0	63.0	
35 Benzyl alcohol	108	5.166	5.157	0.009	92	763960	70.0	70.5	
36 1,2-Dichlorobenzene	146	5.209	5.209	0.000	93	1199492	70.0	64.5	
37 2-Methylphenol	107	5.233	5.223	0.010	87	869664	70.0	67.3	
38 2,2'-oxybis[1-chloropropan	45	5.257	5.252	0.005	1	1882350	70.0	56.0	
51 Indene	116	5.276	5.271	0.005	86	1829320	70.0	64.6	
39 3 & 4 Methylphenol	108	5.347	5.333	0.014	59	1057327	70.0	68.7	
40 N-Nitrosodi-n-propylamine	70	5.371	5.352	0.019	74	636805	70.0	61.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.366	5.357	0.009	89	1338150	70.0	63.5	
46 Hexachloroethane	117	5.466	5.461	0.005	87	493985	70.0	64.2	
47 Nitrobenzene	77	5.499	5.490	0.009	93	976077	70.0	65.8	
50 Isophorone	82	5.680	5.666	0.014	97	2044886	70.0	71.5	
53 2-Nitrophenol	139	5.732	5.728	0.004	86	606743	70.0	72.2	
52 2,4-Dimethylphenol	122	5.742	5.732	0.010	90	1040116	70.0	68.2	
56 Bis(2-chloroethoxy)methane	93	5.804	5.799	0.005	95	1151668	70.0	68.2	
55 Benzoic acid	122	5.847	5.809	0.038	77	709595	70.0	78.9	
57 2,4-Dichlorophenol	162	5.913	5.909	0.005	83	989006	70.0	69.6	
59 1,2,4-Trichlorobenzene	180	5.985	5.980	0.005	93	1080679	70.0	68.1	
60 Naphthalene	128	6.051	6.046	0.005	80	3075866	70.0	62.2	
61 4-Chloroaniline	127	6.070	6.066	0.004	76	1278325	70.0	59.8	
62 2,6-Dichlorophenol	162	6.084	6.080	0.004	76	994842	70.0	70.7	
64 Hexachlorobutadiene	225	6.142	6.137	0.005	91	582931	70.0	66.4	
58 Caprolactam	113	6.365	6.337	0.028	79	390341	70.0	75.2	
69 4-Chloro-3-methylphenol	107	6.437	6.422	0.015	87	936919	70.0	70.4	
73 2-Methylnaphthalene	142	6.589	6.584	0.005	96	2158754	70.0	65.1	
45 1-Methylnaphthalene	142	6.670	6.665	0.005	95	1945600	70.0	65.5	
74 Hexachlorocyclopentadiene	237	6.717	6.713	0.004	1	647527	70.0	68.1	
75 1,2,4,5-Tetrachlorobenzene	216	6.727	6.722	0.005	97	941969	70.0	65.2	
76 2,4,6-Trichlorophenol	196	6.798	6.793	0.005	88	727575	70.0	73.7	
77 2,4,5-Trichlorophenol	196	6.836	6.827	0.009	91	761428	70.0	74.3	
71 1,1'-Biphenyl	154	6.950	6.946	0.004	86	2547178	70.0	65.2	
80 2-Chloronaphthalene	162	6.979	6.974	0.005	88	2031896	70.0	67.4	
81 2-Nitroaniline	65	7.041	7.031	0.010	88	668675	70.0	69.4	
84 Dimethyl phthalate	163	7.179	7.169	0.010	82	2427594	70.0	70.1	
85 1,3-Dinitrobenzene	168	7.212	7.198	0.014	87	389789	70.0	78.5	
86 2,6-Dinitrotoluene	165	7.231	7.222	0.009	92	576986	70.0	70.4	
87 Acenaphthylene	152	7.321	7.317	0.004	97	3229762	70.0	65.1	
88 3-Nitroaniline	138	7.374	7.364	0.010	92	649884	70.0	71.5	
89 2,4-Dinitrophenol	184	7.459	7.450	0.009	61	637941	140.0	151.6	
90 Acenaphthene	154	7.464	7.455	0.009	93	1984147	70.0	59.9	
91 4-Nitrophenol	109	7.502	7.483	0.019	87	608623	140.0	141.9	
92 2,4-Dinitrotoluene	165	7.569	7.555	0.014	95	743273	70.0	70.9	
94 Dibenzofuran	168	7.602	7.593	0.009	74	2815047	70.0	65.3	
97 2,3,4,6-Tetrachlorophenol	232	7.693	7.688	0.005	68	670293	70.0	74.2	
100 Diethyl phthalate	149	7.754	7.735	0.019	97	1992106	70.0	60.5	
186 Hexadecane	57	7.745	7.740	0.005	88	1120682	70.0	67.3	
102 4-Chlorophenyl phenyl ethe	204	7.859	7.854	0.005	81	1109891	70.0	67.4	
104 4-Nitroaniline	138	7.902	7.873	0.029	81	659522	70.0	71.9	
105 Fluorene	166	7.883	7.878	0.005	82	2293627	70.0	63.7	
106 4,6-Dinitro-2-methylphenol	198	7.921	7.902	0.019	76	970730	140.0	156.7	
108 N-Nitrosodiphenylamine	169	7.964	7.950	0.014	64	3029624	140.0	122.8	
110 1,2-Diphenylhydrazine	77	7.997	7.988	0.009	99	1855941	70.0	62.9	
117 4-Bromophenyl phenyl ether	248	8.268	8.264	0.004	60	704886	70.0	70.7	
119 Hexachlorobenzene	284	8.354	8.349	0.005	87	861875	70.0	74.1	
109 Atrazine	200	8.382	8.368	0.014	66	675114	70.0	70.6	
122 Pentachlorophenol	266	8.501	8.497	0.004	80	852123	140.0	131.5	
79 n-Octadecane	43	8.506	8.501	0.005	94	736962	70.0	57.7	
128 Phenanthrene	178	8.687	8.682	0.005	88	3373120	70.0	64.7	
130 Anthracene	178	8.730	8.725	0.005	97	3334957	70.0	63.7	
132 Carbazole	167	8.844	8.835	0.010	100	3234772	70.0	67.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	9.087	9.082	0.005	99	3849626	70.0	64.9	
140 Fluoranthene	202	9.686	9.677	0.009	97	3665707	70.0	64.2	
142 Benzidine	184	9.757	9.753	0.004	95	1336159	70.0	61.1	
143 Pyrene	202	9.881	9.876	0.005	95	3916095	70.0	67.5	
153 Butyl benzyl phthalate	149	10.347	10.343	0.004	94	1770727	70.0	69.5	
160 Bis(2-ethylhexyl) phthalat	149	10.804	10.804	0.000	94	2325740	70.0	65.7	
161 3,3'-Dichlorobenzidine	252	10.828	10.818	0.010	95	1153836	70.0	71.7	
162 Benzo[a]anthracene	228	10.875	10.871	0.004	94	3576082	70.0	67.4	
163 Chrysene	228	10.914	10.904	0.010	96	3266574	70.0	67.3	
165 Di-n-octyl phthalate	149	11.375	11.370	0.005	99	3821551	70.0	65.4	
167 Benzo[b]fluoranthene	252	11.936	11.922	0.014	99	3511112	70.0	91.0	
168 Benzo[k]fluoranthene	252	11.970	11.956	0.014	95	2597900	70.0	70.3	
170 Benzo[a]pyrene	252	12.331	12.317	0.014	96	2572190	70.0	76.5	
176 Indeno[1,2,3-cd]pyrene	276	14.011	13.987	0.024	82	1996816	70.0	70.9	
175 Dibenz(a,h)anthracene	278	14.011	13.992	0.019	78	1673919	70.0	73.8	
177 Benzo[g,h,i]perylene	276	14.496	14.472	0.024	95	1622398	70.0	64.0	
S 179 Total Cresols, TCEQ Defini	1				0			135.9	
S 178 Methyl Phenols,Total	1				0			135.9	

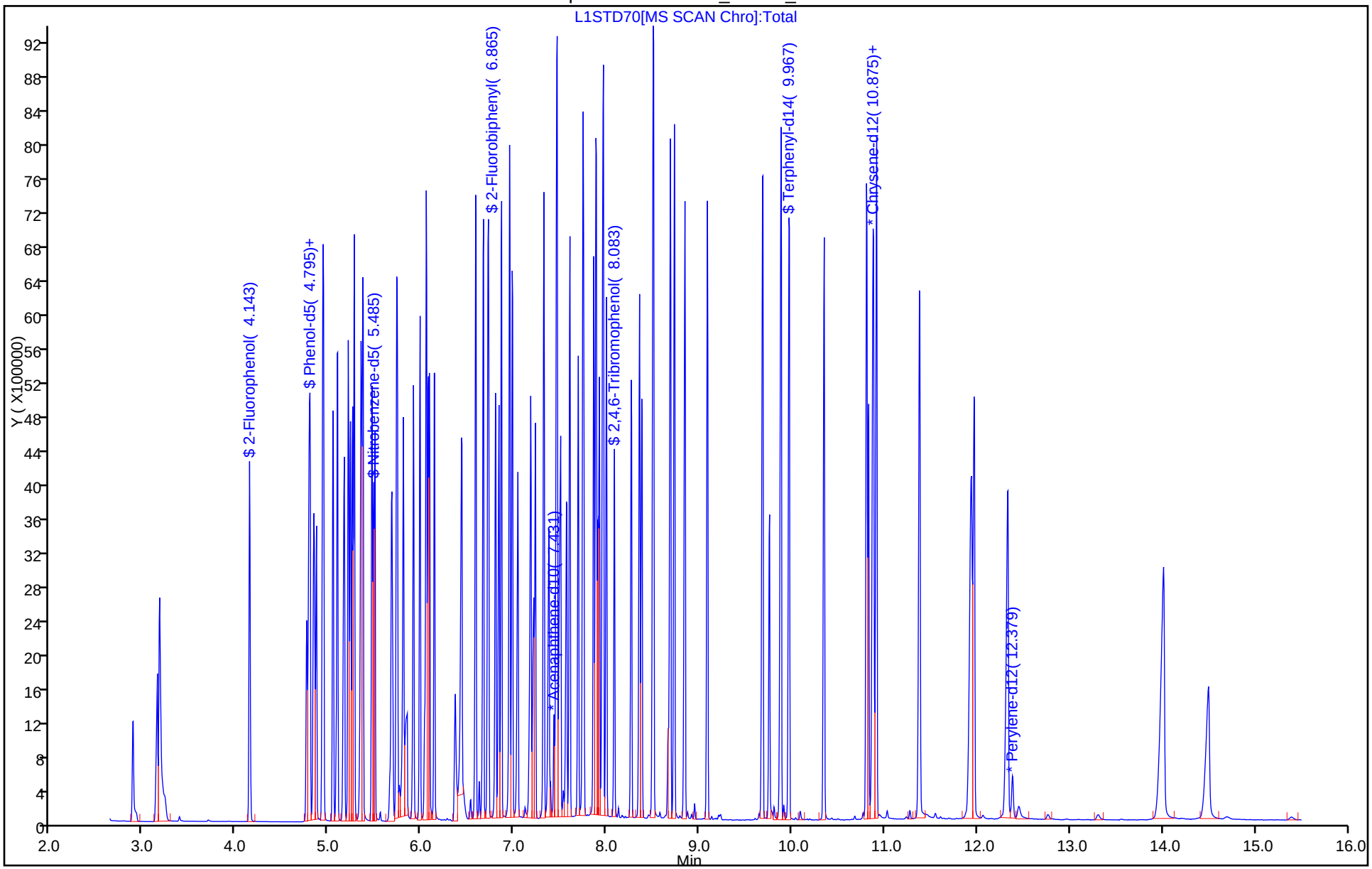
Reagents:

SMlst1_1uLL11_00014 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:44 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD70.D				
Injection Date:	27-Apr-2015 17:06:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 500-285942/3	L1STD02.d
Level 2	IC 500-285942/4	L1STD05.d
Level 3	IC 500-285942/5	L1STD1.d
Level 4	IC 500-285942/2	L1STD2.d
Level 5	IC 500-285942/6	L1STD5.d
Level 6	IC 500-285942/7	L1STD10.d
Level 7	IC 500-285942/8	L1STD20a.d
Level 8	ICIS 500-285942/9	L1STD40a.d
Level 9	IC 500-285942/10	L1STD50.d
Level 10	IC 500-285942/11	L1STD60.d
Level 11	IC 500-285942/12	L1STD70.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,4-Dioxane	0.4790 0.4612	0.4611	0.4518	0.4656	0.4631 0.4419	Ave		0.4605			0.0100	2.5		20.0			
N-Nitrosodimethylamine	0.5278 0.4696	0.5304	0.5266	0.4686 0.5193	0.4851 0.5012	Ave		0.5036			0.0100	5.2		20.0			
Pyridine	1.0951 1.1766	1.1481	1.1306	1.1747	0.9576 1.1690	Ave		1.1217			0.0100	7.0		20.0			
Benzaldehyde	0.8350 0.4502	0.8122	0.7226	0.6153	0.7957 0.5293	Qua2	-1.025	1.0334	-0.007986		0.0100				0.9990		0.9900
Phenol	1.5264 1.5157	1.5569	1.5564	1.5558	1.4215 1.4786	Ave		1.5159			0.8000	3.3		20.0			
Aniline	1.8299 1.7611	1.8412	1.8168	1.8028	1.7669 1.6914	Ave		1.7872			0.0100	2.9		20.0			
Bis(2-chloroethyl)ether	1.2443 1.2713	1.2174	1.2278	1.3804 1.2553	1.2271 1.2139	Ave		1.2547			0.7000	4.3		20.0			
n-Decane	1.0266 0.8609	0.9820	0.9403	1.1726 0.9098	1.0431 0.8584	Ave		0.9742			0.0100	10.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Chlorophenol	1.3813 1.2491	1.3712	1.3197	1.3034	1.3826 1.2230	Ave		1.3186			0.8000	4.9		20.0			
1,3-Dichlorobenzene	1.5006 1.4263	1.4770	1.4551	1.5678 1.4555	1.4740 1.3934	Ave		1.4687			0.0100	3.5		20.0			
1,4-Dichlorobenzene	1.5455 1.4448	1.5044	1.5009	1.6721 1.4778	1.5385 1.4198	Ave		1.5130			0.0100	5.1		20.0			
Benzyl alcohol	0.7249 0.7846	0.7674	0.7798	0.5861 0.7992	+++++ 0.7577	Ave		0.7428			0.0100	9.8		20.0			
1,2-Dichlorobenzene	1.4404 1.3177	1.4228	1.4051	1.3931	1.4525 1.3165	Ave		1.3926			0.0100	4.0		20.0			
Indene	2.3006 1.8804	2.2193	2.1200	2.0218	2.2620 1.8900	Ave		2.0991			0.0100	8.2		20.0			
2-Methylphenol	0.9663 0.8584	1.0177	0.9368	1.0246 0.9293	1.0528 0.8784	Ave		0.9581			0.7000	7.3		20.0			
2,2'-oxybis[1-chloropropane]	1.5630 1.2072	1.4750	1.3748	1.8178 1.2946	1.6333 1.2015	Ave		1.4459			0.0100	15.1		20.0			
N-Nitrosodi-n-propylamine	0.8523 0.7439	0.8168 0.8434	0.8443 0.8119	0.9178 0.7818	0.8446 0.7330	Ave		0.8190			0.5000	6.7		20.0			
Acetophenone	1.7700 1.4940	1.6878	1.7101 1.6181	1.8157 1.5640	1.7346 1.4661	Ave		1.6512			0.0100	7.4		20.0			
3 & 4 Methylphenol	1.1611 1.0442	1.1531	1.1545	1.1262 1.1062	1.2036 1.0325	Ave		1.1227			0.6000	5.3		20.0			
Hexachloroethane	0.6210 0.5700	0.6100	0.5996	0.5932	0.6083 0.5624	Ave		0.5949			0.3000	3.6		20.0			
Nitrobenzene	0.3270 0.2937	0.3060	0.3180 0.3063	0.3212 0.3099	0.3089 0.2928	Ave		0.3093			0.2000	3.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Isophorone	0.5816 0.5622	0.5829	0.5726	0.6169 0.5782	0.5716 0.5516	Ave		0.5772			0.4000	3.3		20.0			
2-Nitrophenol	0.1754 0.1880	0.1823	0.1880	0.1924	0.1610 0.1840	Ave		0.1816			0.1000	5.8		20.0			
2,4-Dimethylphenol	0.2913 0.3118	0.3016	0.3064	0.3050	0.2881 0.2939	Ave		0.2997			0.2000	2.9		20.0			
Bis(2-chloroethoxy)methane	0.3665 0.3514	0.3610	0.3605	0.3747 0.3628	0.3574 0.3467	Ave		0.3601			0.3000	2.4		20.0			
Benzoic acid	+++++ 0.0959	0.0556	0.0671	0.0861	+++++ 0.0840	Ave		0.0777			0.0100	20.8	*	20.0			
2,4-Dichlorophenol	0.2665 0.2721	0.2736	0.2770	0.2786	0.2401 0.2670	Ave		0.2678			0.2000	4.9		20.0			
1,2,4-Trichlorobenzene	0.2758 0.2630	0.2702	0.2686	0.2829 0.2717	0.2650 0.2595	Ave		0.2696			0.0100	2.8		20.0			
Naphthalene	1.0190 0.9379	1.0019	1.0856 0.9879	1.0698 0.9820	0.9996 0.9336	Ave		1.0019			0.7000	5.1		20.0			
4-Chloroaniline	0.4393 0.3815	0.4320	0.4188	0.4025	0.4267 0.3815	Ave		0.4118			0.0100	5.7		20.0			
2,6-Dichlorophenol	0.2589 0.2525	0.2621	0.2606	0.2594	0.2573 0.2476	Ave		0.2569			0.0100	2.0		20.0			
Hexachlorobutadiene	0.1384 0.1323	0.1367	0.1381	0.1375	0.1361 0.1323	Ave		0.1359			0.0100	1.9		20.0			
Caprolactam	0.1050 0.1090	0.1079	0.1184	0.1086	0.1037 0.1008	Ave		0.1076			0.0100	5.2		20.0			
4-Chloro-3-methylphenol	0.2836 0.2798	0.2852	0.2837	0.2887	0.2741 0.2725	Ave		0.2811			0.2000	2.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Methylnaphthalene	0.6826 0.6422	0.6507 0.6782	0.6875 0.6728	0.7222 0.6704	0.6645 0.6326	Ave		0.6704			0.4000	3.8		20.0			
1-Methylnaphthalene	0.6014 0.5674	0.5938	0.5958 0.5907	0.6509 0.5906	0.5849 0.5567	Ave		0.5925			0.0100	4.4		20.0			
Hexachlorocyclopentadiene	+++++ 0.1171	0.0349	0.0629	0.0924	+++++ 0.0991	Ave		0.0813			0.0500	39.9	*	20.0			
1,2,4,5-Tetrachlorobenzene	0.4715 0.4643	0.4656	0.4639	0.4764	0.4600 0.4474	Ave		0.4642			0.0100	2.0		20.0			
2,4,6-Trichlorophenol	0.2710 0.2995	0.2789	0.2827	0.2928	0.2498 0.2773	Ave		0.2789			0.2000	5.8		20.0			
2,4,5-Trichlorophenol	0.2504 0.2974	0.2629	0.2808	0.2910	0.2445 0.2790	Ave		0.2723			0.2000	7.4		20.0			
1,1'-Biphenyl	1.4766 1.3874	1.4583	1.4253	1.4320	1.4444 1.3491	Ave		1.4247			0.0100	3.1		20.0			
2-Chloronaphthalene	1.1224 1.0535	1.1107	1.0836	1.1873 1.0970	1.1061 1.0269	Ave		1.0984			0.8000	4.4		20.0			
2-Nitroaniline	0.3677 0.3533	0.3795	0.3753	0.3797	0.3473 0.3584	Ave		0.3659			0.0100	3.6		20.0			
Dimethyl phthalate	1.2703 1.1615	1.2712	1.2446	1.3790 1.2765	1.2537 1.1469	Ave		1.2505			0.0100	5.8		20.0			
m-Dinitrobenzene	0.2012 0.2134	0.2173	0.2193	0.2263	0.1866 0.2082	Ave		0.2103			0.0100	6.3		20.0			
2,6-Dinitrotoluene	0.2973 0.2779	0.2169 0.2998	0.2461 0.2984	0.2717 0.3027	0.2750 0.2740	Ave		0.2760			0.2000	9.8		20.0			
Acenaphthylene	1.8607 1.7925	1.8644	1.9683 1.8118	1.9980 1.8573	1.8210 1.7342	Ave		1.8565			0.9000	4.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
3-Nitroaniline	0.3346 0.3245	0.3522	0.3448	0.3281	0.3073 0.3172	Ave		0.3298			0.0100	4.7		20.0			
Acenaphthene	1.1067 1.0437	1.0990	1.1754 1.0758	1.1822 1.0879	1.0995 1.0117	Ave		1.0980			0.9000	5.0		20.0			
2,4-Dinitrophenol	0.0419 0.1281	0.0730	0.0930	0.1194	+++++ 0.1155	Qua2	-0.885	0.0782	0.0004036		0.0100				0.9960		0.9900
4-Nitrophenol	0.0746 0.1140	0.1044	0.1115	0.1181	+++++ 0.1117	Ave		0.1057			0.0100	15.0		20.0			
Dibenzofuran	1.5827 1.4623	1.5643	1.5244	1.6925 1.5334	1.5750 1.4135	Ave		1.5435			0.8000	5.4		20.0			
2,4-Dinitrotoluene	0.3962 0.3746	0.4091	0.2935 0.4003	0.3461 0.3931	0.3683 0.3673	Ave		0.3721			0.2000	9.5		20.0			
2,3,4,6-Tetrachlorophenol	0.1585 0.1867	0.1797	0.1956	0.2094	0.1386 0.1973	Ave		0.1808			0.0100	13.6		20.0			
Hexadecane	1.0093 0.8363	0.9670	0.9091	0.8891	1.0220 0.8307	Ave		0.9234			0.0100	8.5		20.0			
Diethyl phthalate	1.3090 1.1228	1.2794	1.2502	1.4141 1.2056	1.2978 1.1254	Ave		1.2505			0.0100	7.8		20.0			
4-Chlorophenyl phenyl ether	0.5475 0.4915	0.5449	0.5383	0.5468	0.5340 0.5085	Ave		0.5302			0.4000	4.1		20.0			
Fluorene	1.3227 1.1583	1.3136	1.3878 1.2833	1.4161 1.2787	1.3127 1.1913	Ave		1.2961			0.9000	6.4		20.0			
4-Nitroaniline	0.3624 0.3543	0.3667	0.3419	0.3497	0.3220 0.3132	Ave		0.3443			0.0100	5.8		20.0			
4,6-Dinitro-2-methylphenol	0.0719 0.1132	0.0980	0.1126	0.1129	+++++ 0.1126	Lin1	-0.951	0.1214			0.0100				1.0000		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
N-Nitrosodiphenylamine	0.6208 0.5304	0.6200	0.6474 0.6055	0.6761 0.5911	0.6174 0.5353	Ave		0.6049			0.0100	7.9		20.0			
1,2-Diphenylhydrazine	1.1977 1.0990	1.1784	1.0790	1.3887	1.1694 1.2849	Ave		1.1996			0.0100	8.9		20.0			
4-Bromophenyl phenyl ether	0.1934 0.1897	0.1973	0.2005	0.1975	0.1932 0.1874	Ave		0.1941			0.1000	2.4		20.0			
Hexachlorobenzene	0.2052 0.2061	0.2147 0.2071	0.2077 0.2132	0.2156 0.2106	0.2002 0.2045	Ave		0.2085			0.1000	2.4		20.0			
Atrazine	0.2172 0.2035	0.2066	0.2079	0.2104	0.2128 0.1978	Ave		0.2080			0.0100	3.0		20.0			
Pentachlorophenol	0.0110 0.0699	0.0275	0.0446	0.0586	+++++ 0.0612	Ave		0.0455		*	0.0500	49.4	*	20.0			
n-Octadecane	0.3534 0.2639	0.3429	0.3251	0.3938 0.3088	0.3603 0.2763	Ave		0.3281			0.0100	13.3		20.0			
Phenanthrene	1.1370 1.0696	1.1628	1.2085 1.1633	1.2128 1.1321	1.1286 1.0544	Ave		1.1410			0.7000	4.8		20.0			
Anthracene	1.1900 1.0684	1.1713	1.2515 1.1453	1.3077 1.1335	1.1811 1.0625	Ave		1.1679			0.7000	6.8		20.0			
Carbazole	1.0935 1.0141	1.0507	1.0466	1.0642	1.1252 0.9623	Ave		1.0509			0.0100	5.0		20.0			
Di-n-butyl phthalate	1.4441 1.2784	1.3748	1.3491	1.5579 1.3365	1.4248 1.2690	Ave		1.3793			0.0100	6.9		20.0			
Fluoranthene	1.1733 1.0861	1.1655	1.2221 1.1563	1.2511 1.1270	1.1552 1.0790	Ave		1.1573			0.6000	4.9		20.0			
Benzidine	0.6011 0.4451	0.5282	0.5577	0.5160	0.5431 0.4736	Ave		0.5235			0.0100	10.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Pyrene	1.2415 1.1337	1.2083	1.2989 1.1986	1.3191 1.1827	1.2348 1.1249	Ave		1.2158			0.6000	5.4		20.0			
Butyl benzyl phthalate	0.6659 0.6049	0.6528	0.6342	0.6974 0.6359	0.6612 0.5994	Ave		0.6440			0.0100	5.0		20.0			
Bis(2-ethylhexyl) phthalate	0.8966 0.7209	0.8659	0.8179	0.9620 0.7804	0.8932 0.7329	Ave		0.8337			0.0100	10.2		20.0			
3,3'-Dichlorobenzidine	0.3762 0.3488	0.3627	0.3705	0.3731	0.3624 0.3461	Ave		0.3628			0.0100	3.2		20.0			
Benzo[a]anthracene	1.2787 1.0407 1.0444	1.0924 1.0570	1.0691 1.0465	1.0986 1.0770	1.0372 1.0140	Ave		1.0778			0.8000	6.6		20.0			
Chrysene	1.0727 1.0412 0.9551	1.1414 1.0133	1.0850 1.0065	1.1229 1.0113	1.0160 0.9399	Ave		1.0368			0.7000	6.1		20.0			
Di-n-octyl phthalate	1.5604 1.4116	1.5617	1.5166	1.4888	1.5521 1.3868	Ave		1.4968			0.0100	4.8		20.0			
Benzo[b]fluoranthene	1.1283 1.0839 1.1796	0.9883 1.0149	1.0789 1.1232	0.9915 1.1748	1.0974 1.0847	Ave		1.0860			0.7000	6.1		20.0			
Benzo[k]fluoranthene	1.3945 1.1958 0.8288	1.2092 1.1438	1.3046 1.1439	1.2329 1.0820	1.2246 0.9766	Ave		1.1579			0.7000	13.4		20.0			
Benzo[a]pyrene	1.1545 1.1093 1.0720	1.0918 1.0918	1.1890 1.1033	1.1075 1.0899	1.1043 1.0418	Ave		1.1050			0.7000	3.5		20.0			
Dibenz(a,h)anthracene	1.0599 1.0283 1.0635	1.0461 1.0388	1.0772 1.0708	1.0682 1.0739	1.0162 1.0038	Ave		1.0497			0.4000	2.4		20.0			
Indeno[1,2,3-cd]pyrene	1.3125 1.2748 1.2410	1.2639 1.2773	1.3110 1.2359	1.3214 1.2588	1.2622 1.1743	Ave		1.2666			0.5000	3.3		20.0			
Benzo[g,h,i]perylene	1.0563 1.0748	1.0655	1.0773 1.0798	1.0574 1.0962	1.0486 1.0176	Ave		1.0637			0.5000	2.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Fluorophenol (Surr)	1.2251 1.2726	1.1809	0.2834 1.2492	0.8389 1.2606	0.9513 1.2295	Lin1	-1.003	1.2692			0.0100				0.9990		0.9900
Phenol-d5 (Surr)	1.5041 1.4078	1.3671	1.3639 1.4070	1.4473 1.4170	1.4117 1.3603	Ave		1.4096			0.0100	3.2		20.0			
Nitrobenzene-d5 (Surr)	0.3433 0.3187	0.3238	0.3381 0.3288	0.3374 0.3294	0.3146 0.3168	Ave		0.3279			0.0100	3.1		20.0			
2-Fluorobiphenyl	1.3240 1.1781	1.2251	1.3335 1.2323	1.3623 1.2287	1.2630 1.1704	Ave		1.2575			0.0100	5.5		20.0			
2,4,6-Tribromophenol (Surr)	0.1322 0.1372	0.1357	0.0929 0.1319	0.1129 0.1302	0.1206 0.1264	Ave		0.1245			0.0100	11.3		20.0			
Terphenyl-d14 (Surr)	0.7712 0.7147	0.7158	0.7510 0.7373	0.7841 0.7387	0.7313 0.7111	Ave		0.7395			0.0100	3.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 500-285942/3	L1STD02.d
Level 2	IC 500-285942/4	L1STD05.d
Level 3	IC 500-285942/5	L1STD1.d
Level 4	IC 500-285942/2	L1STD2.d
Level 5	IC 500-285942/6	L1STD5.d
Level 6	IC 500-285942/7	L1STD10.d
Level 7	IC 500-285942/8	L1STD20a.d
Level 8	ICIS 500-285942/9	L1STD40a.d
Level 9	IC 500-285942/10	L1STD50.d
Level 10	IC 500-285942/11	L1STD60.d
Level 11	IC 500-285942/12	L1STD70.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,4-Dioxane	DCB	Ave	34326 232608	65763	108626	163546	16221 189714	10.0 70.0	20.0	40.0	50.0	5.00 60.0
N-Nitrosodimethylamine	DCB	Ave	37821 236881	75654	126614	6403 182403	16990 215158	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Pyridine	DCB	Ave	78478 593492	163753	271827	412660	33539 501866	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzaldehyde	DCB	Qua2	59837 227064	115842	173716	216159	27870 227221	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Phenol	DCB	Ave	109387 764538	222061	374187	546524	49786 634795	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Aniline	DCB	Ave	131137 888296	262603	436795	633298	61883 726162	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Bis(2-chloroethyl)ether	DCB	Ave	89174 641269	173637	295179	18862 440967	42979 521138	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
n-Decane	DCB	Ave	73572 434239	140060	226077	16022 319600	36534 368546	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorophenol	DCB	Ave	98992 630046	195570	317284	457848	48425 525043	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,3-Dichlorobenzene	DCB	Ave	107536 719420	210661	349842	21422 511294	51626 598216	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
1,4-Dichlorobenzene	DCB	Ave	110759 728782	214562	360835	22848 519106	53884 609573	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Benzyl alcohol	DCB	Ave	51948 395752	109451	187481	8009 280728	+++++ 325311	10.0 70.0	20.0	40.0	2.00 50.0	+++++ 60.0
1,2-Dichlorobenzene	DCB	Ave	103222 664645	202937	337805	489355	50873 565204	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Indene	DCB	Ave	164869 948462	316533	509698	710208	79226 811405	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2-Methylphenol	DCB	Ave	69248 432992	145153	225233	14000 326450	36875 377123	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2,2'-oxybis[1-chloropropane]	DCB	Ave	112010 608911	210377	330536	24838 454781	57204 515817	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
N-Nitrosodi-n-propylamine	DCB	Ave	61077 375207	2757 120289	5955 195191	12541 274647	29580 314691	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Acetophenone	DCB	Ave	126842 753593	240732	12062 389031	24810 549398	60755 629446	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
3 & 4 Methylphenol	DCB	Ave	83211 526675	164467	277554	15388 388571	42155 443271	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Hexachloroethane	DCB	Ave	44500 287514	86996	144158	208386	21307 241456	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Nitrobenzene	NPT	Ave	91920 583289	170916	8723 286764	17367 421662	42892 486541	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Isophorone	NPT	Ave	163506 1116344	325601	536172	33363 786658	79363 916463	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2-Nitrophenol	NPT	Ave	49313 373363	101822	176006	261710	22351 305711	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4-Dimethylphenol	NPT	Ave	81881 619191	168490	286928	414951	40008 488309	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Bis(2-chloroethoxy)methane	NPT	Ave	103019 697744	201638	337514	20261 493571	49631 576030	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Benzoic acid	NPT	Ave	+++++ 190421	31033	62814	117086	+++++ 139518	+++++ 70.0	20.0	40.0	50.0	+++++ 60.0
2,4-Dichlorophenol	NPT	Ave	74930 540258	152813	259331	379088	33335 443671	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,2,4-Trichlorobenzene	NPT	Ave	77531 522323	150932	251463	15298 369673	36794 431145	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Naphthalene	NPT	Ave	286447 1862545	559624	29781 925009	57851 1336037	138803 1551164	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
4-Chloroaniline	NPT	Ave	123506 757579	241310	392096	547574	59253 633866	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,6-Dichlorophenol	NPT	Ave	72780 501361	146412	244037	352856	35729 411346	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Hexachlorobutadiene	NPT	Ave	38915 262806	76344	129270	187045	18899 219731	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Caprolactam	NPT	Ave	29508 216408	60251	110851	147817	14401 167460	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4-Chloro-3-methylphenol	NPT	Ave	79714 555722	159290	265680	392755	38055 452651	10.0 70.0	20.0	40.0	50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Methylnaphthalene	NPT	Ave	191899 1275367	8678 378810	18861 630000	39056 912126	92271 1051019	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
1-Methylnaphthalene	NPT	Ave	169058 1126747	331693	16344 553111	35200 803538	81217 924853	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Hexachlorocyclopentadiene	ANT	Ave	+++++ 126000	10593	32374	68496	+++++ 89885	+++++ 70.0	20.0	40.0	50.0	+++++ 60.0
1,2,4,5-Tetrachlorobenzene	ANT	Ave	71738 499817	141192	238604	353119	34545 405752	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4,6-Trichlorophenol	ANT	Ave	41238 322400	84594	145401	217064	18758 251462	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,4,5-Trichlorophenol	ANT	Ave	38098 320083	79725	144418	215728	18365 253030	10.0 70.0	20.0	40.0	50.0	5.00 60.0
1,1'-Biphenyl	ANT	Ave	224658 1493405	442262	733043	1061533	108468 1223610	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2-Chloronaphthalene	ANT	Ave	170772 1133944	336836	557323	34310 813138	83069 931335	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2-Nitroaniline	ANT	Ave	55947 380339	115088	193039	281466	26081 325076	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Dimethyl phthalate	ANT	Ave	193272 1250247	385531	640102	39851 946258	94148 1040199	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
m-Dinitrobenzene	ANT	Ave	30618 229677	65904	112765	167774	14011 188804	10.0 70.0	20.0	40.0	50.0	5.00 60.0
2,6-Dinitrotoluene	ANT	Ave	45237 299126	1545 90912	3567 153484	7852 224378	20655 248526	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Acenaphthylene	ANT	Ave	283098 1929382	565422	28534 931823	57740 1376795	136749 1572858	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
3-Nitroaniline	ANT	Ave	50904 349315	106806	177309	243220	23080 287739	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Acenaphthene	ANT	Ave	168377 1123438	333289	17039 553305	34164 806433	82572 917588	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2,4-Dinitrophenol	ANT	Qua2	12763 275663	44261	95685	176991	+++++ 209552	20.0 140	40.0	80.0	100	+++++ 120
4-Nitrophenol	ANT	Ave	22692 245394	63348	114693	175145	+++++ 202576	20.0 140	40.0	80.0	100	+++++ 120
Dibenzofuran	ANT	Ave	240792 1574002	474416	784024	48911 1136630	118278 1281988	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
2,4-Dinitrotoluene	ANT	Ave	60279 403183	124054	4255 205893	10002 291404	27660 333177	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	24120 200998	54509	100590	155221	10405 178944	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Hexadecane	ANT	Ave	153562 900188	293258	467551	659076	76749 753390	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Diethyl phthalate	ANT	Ave	199149 1208511	387998	642979	40865 893691	97465 1020739	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
4-Chlorophenyl phenyl ether	ANT	Ave	83293 529091	165266	276876	405318	40103 461166	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Fluorene	ANT	Ave	201245 1246737	398375	20119 660021	40924 947851	98578 1080515	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
4-Nitroaniline	ANT	Ave	55130 381374	111204	175845	259190	24183 284052	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4,6-Dinitro-2-methylphenol	PHN	Lin1	33668 372949	91183	175017	257372	+++++ 310950	20.0 140	40.0	80.0	100	+++++ 120

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
N-Nitrosodiphenylamine	PHN	Ave	290577 1747998	576975	28483 941195	59053 1347281	140614 1478156	20.0 140	40.0	2.00 80.0	4.00 100	10.0 120
1,2-Diphenylhydrazine	ANT	Ave	182223 1182919	357388	554920	1029363	87821 1165422	10.0 70.0	20.0	40.0	50.0	5.00 60.0
4-Bromophenyl phenyl ether	PHN	Ave	45250 312518	91810	155815	225080	22002 258704	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Hexachlorobenzene	PHN	Ave	48025 339525	2315 96341	4570 165717	9417 240013	22798 282416	10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Atrazine	PHN	Ave	50828 335356	96129	161582	239790	24229 273073	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Pentachlorophenol	PHN	Ave	5167 230254	25569	69324	133458	+++++ 168919	20.0 140	40.0	80.0	100	+++++ 120
n-Octadecane	PHN	Ave	82696 434856	159528	252669	17197 351904	41029 381462	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Phenanthrene	PHN	Ave	266071 1762443	541018	26584 904084	52964 1290060	128533 1455870	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Anthracene	PHN	Ave	278485 1760485	544963	27530 890106	57110 1291661	134509 1466968	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Carbazole	PHN	Ave	255900 1670936	488865	813389	1212738	128140 1328698	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Di-n-butyl phthalate	PHN	Ave	337946 2106441	639662	1048493	68036 1523039	162264 1752146	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Fluoranthene	PHN	Ave	274573 1789581	542295	26884 898692	54639 1284294	131557 1489737	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzidine	CRY	Ave	138814 730166	246810	433976	586656	61403 651936	10.0 70.0	20.0	40.0	50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Pyrene	CRY	Ave	286718 1859917	564552	28585 932760	57502 1344593	139610 1548666	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Butyl benzyl phthalate	CRY	Ave	153781 992420	305002	493500	30399 722943	74757 825161	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	207071 1182786	404567	636502	41935 887223	100986 1008976	10.0 70.0	20.0	40.0	2.00 50.0	5.00 60.0
3,3'-Dichlorobenzidine	CRY	Ave	86869 572314	169471	288330	424130	40969 476452	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzo[a]anthracene	CRY	Ave	5356 240337 1713381	11673 493834	23527 814415	47889 1224352	117269 1395905	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Chrysene	CRY	Ave	4493 240455 1567013	12196 473432	23877 783234	48949 1149694	114873 1293989	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Di-n-octyl phthalate	PHN	Ave	365160 2325895	726621	1178645	1696592	176754 1914700	10.0 70.0	20.0	40.0	50.0	5.00 60.0
Benzo[b]fluoranthene	PRY	Ave	4484 236290 1905442	10007 456484	22098 837977	40935 1314471	115968 1458957	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[k]fluoranthene	PRY	Ave	5542 260676 1338833	12243 514450	26720 853446	50902 1210560	129405 1313459	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[a]pyrene	PRY	Ave	4588 241817 1731594	11055 491069	24353 823104	45725 1219376	116691 1401140	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Dibenz(a,h)anthracene	PRY	Ave	4212 224156 1717868	10592 467231	22063 798900	44101 1201537	107389 1350045	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Indeno[1,2,3-cd]pyrene	PRY	Ave	5216 277908 2004602	12797 574476	26851 922041	54558 1408380	133377 1579369	0.200 10.0 70.0	0.500 20.0	1.00 40.0	2.00 50.0	5.00 60.0
Benzo[g,h,i]perylene	PRY	Ave	230272 1736178	479218	22064 805591	43657 1226472	110813 1368649	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 285942

SDG No.: 15-07.01

Instrument ID: CMS23 GC Column: ZB5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2015 10:54 Calibration End Date: 04/29/2015 14:16 Calibration ID: 18540

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Fluorophenol (Surr)	DCB	Lin1	87794 641886	168426	1999 300339	11463 442814	33318 527860	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Phenol-d5 (Surr)	DCB	Ave	107788 710111	194993	9620 338278	19776 497766	49443 584027	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Nitrobenzene-d5 (Surr)	NPT	Ave	96507 632829	180864	9275 307852	18247 448109	43678 526302	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2-Fluorobiphenyl	ANT	Ave	201435 1268040	371548	19331 633768	39367 910784	94847 1061493	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	20108 147720	41144	1347 67855	3264 96525	9058 114602	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0
Terphenyl-d14 (Surr)	CRY	Ave	178093 1172629	334422	16528 573771	34180 839767	82686 978926	10.0 70.0	20.0	1.00 40.0	2.00 50.0	5.00 60.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua2 = Quadratic 1/conc^2 ISTD

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD2.d
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Apr-2015 10:54:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Misc. Info.: 500-0030573-002
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:28 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:33:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	95	54656	8.00	8.00	
* 2 Naphthalene-d8	136	5.400	5.400	0.000	99	216310	8.00	8.00	
* 3 Acenaphthene-d10	164	6.763	6.763	0.000	93	115593	8.00	8.00	
* 4 Phenanthrene-d10	188	7.984	7.984	0.000	97	174685	8.00	8.00	
* 5 Chrysene-d12	240	10.234	10.213	0.021	84	174362	8.00	8.00	
* 6 Perylene-d12	264	11.510	11.459	0.051	96	165147	8.00	8.00	
$ 7 2-Fluorophenol	112	3.563	3.535	0.028	67	11463	2.00	2.11	
$ 8 Phenol-d5	99	4.218	4.208	0.010	92	19776	2.00	2.05	
$ 9 Nitrobenzene-d5	82	4.878	4.875	0.003	93	18247	2.00	2.06	
$ 10 2-Fluorobiphenyl	172	6.218	6.218	0.000	99	39367	2.00	2.17	
$ 11 2,4,6-Tribromophenol	330	7.413	7.410	0.003	47	3264	2.00	1.82	
$ 12 Terphenyl-d14	244	9.304	9.301	0.003	95	34180	2.00	2.12	
31 N-Nitrosodimethylamine	42	2.457	2.454	0.003	81	6403	2.00	1.86	
48 Bis(2-chloroethyl)ether	93	4.269	4.269	0.000	85	18862	2.00	2.20	
126 n-Decane	43	4.315	4.320	-0.006	81	16022	2.00	2.41	
51 1,3-Dichlorobenzene	146	4.422	4.419	0.003	75	21422	2.00	2.13	
53 1,4-Dichlorobenzene	146	4.475	4.473	0.002	78	22848	2.00	2.21	
54 Benzyl alcohol	108	4.585	4.569	0.016	23	8009	2.00	1.58	
57 2-Methylphenol	107	4.656	4.648	0.008	90	14000	2.00	2.14	
58 2,2'-oxybis[1-chloropropan	45	4.648	4.651	-0.003	96	24838	2.00	2.51	
60 N-Nitrosodi-n-propylamine	70	4.750	4.755	-0.005	93	12541	2.00	2.24	
59 3 & 4 Methylphenol	108	4.778	4.760	0.018	68	15388	2.00	2.01	
62 Acetophenone	105	4.763	4.763	0.000	79	24810	2.00	2.20	
65 Nitrobenzene	77	4.893	4.890	0.003	95	17367	2.00	2.08	
66 Isophorone	82	5.056	5.064	-0.008	90	33363	2.00	2.14	
74 Bis(2-chloroethoxy)methane	93	5.206	5.206	0.000	94	20261	2.00	2.08	
78 1,2,4-Trichlorobenzene	180	5.357	5.357	0.000	92	15298	2.00	2.10	
77 Naphthalene	128	5.415	5.418	-0.003	92	57851	2.00	2.14	
94 2-Methylnaphthalene	142	5.943	5.940	0.003	83	39056	2.00	2.15	
97 1-Methylnaphthalene	142	6.019	6.017	0.002	86	35200	2.00	2.20	

Report Date: 29-Apr-2015 16:50:28 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD2.d

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
106 2-Chloronaphthalene	162	6.328	6.325	0.003	92	34310	2.00	2.16	
111 Dimethyl phthalate	163	6.534	6.539	-0.005	96	39851	2.00	2.21	
113 2,6-Dinitrotoluene	165	6.600	6.605	-0.005	85	7852	2.00	1.97	
115 Acenaphthylene	152	6.656	6.656	0.000	91	57740	2.00	2.15	
119 Acenaphthene	154	6.789	6.791	-0.002	82	34164	2.00	2.15	
123 Dibenzofuran	168	6.931	6.931	0.000	86	48911	2.00	2.19	
121 2,4-Dinitrotoluene	165	6.944	6.939	0.005	77	10002	2.00	1.86	
127 Diethyl phthalate	149	7.094	7.105	-0.011	98	40865	2.00	2.26	
133 Fluorene	166	7.209	7.212	-0.003	80	40924	2.00	2.19	
136 N-Nitrosodiphenylamine	169	7.296	7.306	-0.010	97	59053	4.00	4.47	
143 Hexachlorobenzene	284	7.663	7.663	0.000	76	9417	2.00	2.07	
148 n-Octadecane	43	7.849	7.849	0.000	82	17197	2.00	2.40	
149 Phenanthrene	178	8.004	8.004	0.000	77	52964	2.00	2.13	
150 Anthracene	178	8.050	8.050	0.000	95	57110	2.00	2.24	
155 Di-n-butyl phthalate	149	8.440	8.437	0.003	98	68036	2.00	2.26	
161 Fluoranthene	202	9.003	8.998	0.005	98	54639	2.00	2.16	
164 Pyrene	202	9.197	9.192	0.005	94	57502	2.00	2.17	
168 Butyl benzyl phthalate	149	9.709	9.699	0.010	94	30399	2.00	2.17	
171 Bis(2-ethylhexyl) phthalat	149	10.190	10.168	0.022	94	41935	2.00	2.31	
173 Benzo[a]anthracene	228	10.224	10.206	0.018	96	47889	2.00	2.04	
174 Chrysene	228	10.257	10.239	0.018	79	48949	2.00	2.17	
178 Benzo[b]fluoranthene	252	11.161	11.118	0.043	93	40935	2.00	1.83	
179 Benzo[k]fluoranthene	252	11.182	11.141	0.041	98	50902	2.00	2.13	
180 Benzo[a]pyrene	252	11.462	11.416	0.046	68	45725	2.00	2.00	
183 Dibenz(a,h)anthracene	278	12.698	12.654	0.044	50	44101	2.00	2.04	
182 Indeno[1,2,3-cd]pyrene	276	12.705	12.662	0.043	86	54558	2.00	2.09	
185 Benzo[g,h,i]perylene	276	13.070	13.014	0.056	88	43657	2.00	1.99	
S 186 Total Cresols, TCEQ Defini	1				0			4.15	

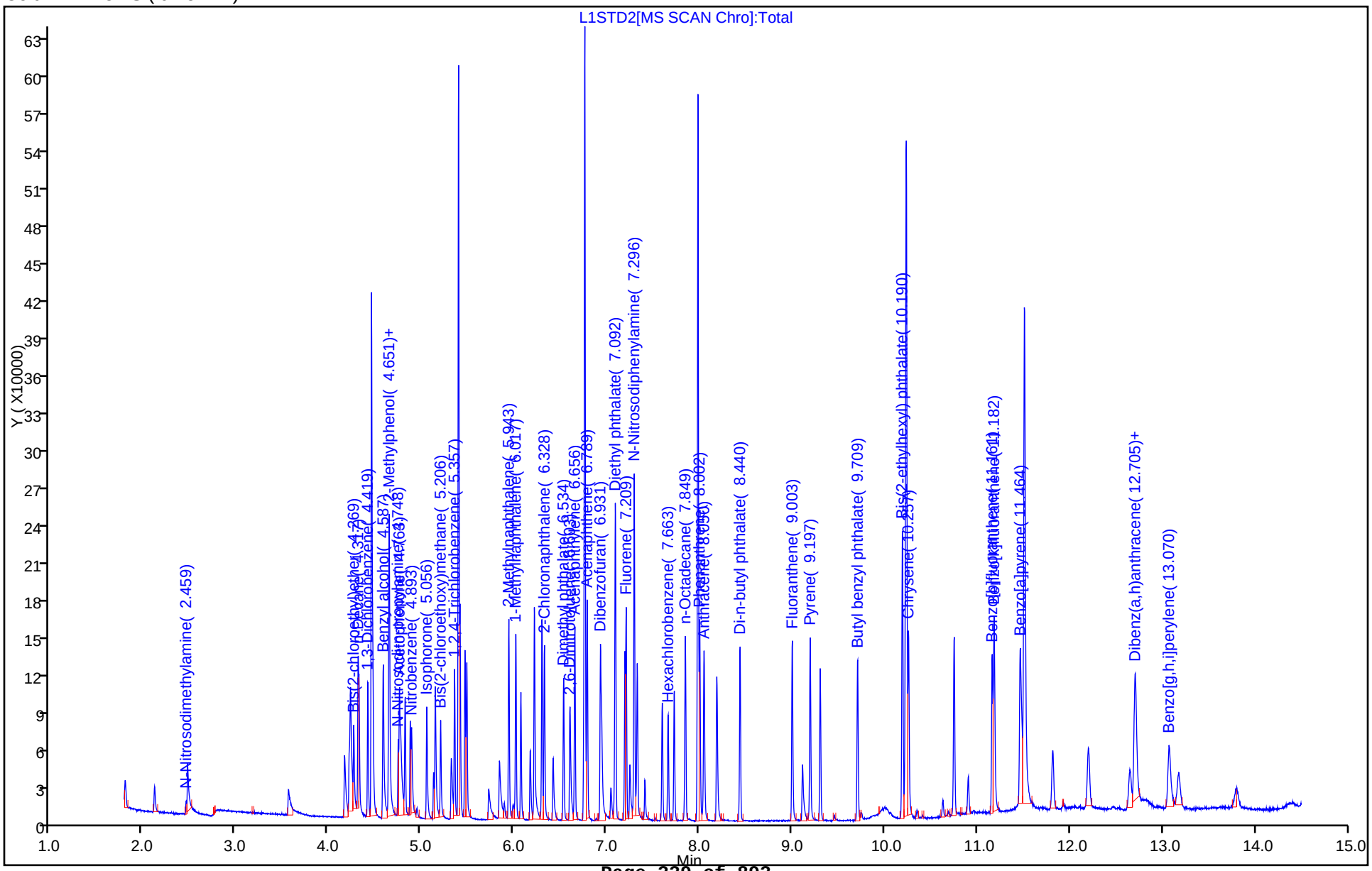
Reagents:

SMlst1_1uLL4_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:28 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD2.d				
Injection Date:	29-Apr-2015 10:54:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD02.d				
Lims ID:	ic				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	29-Apr-2015 11:13:30	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	STD02				
Misc. Info.:	500-0030573-003				
Operator ID:	DA	Instrument ID:	CMS23		
Sublist:	chrom-23-8270*sub79				
Method:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	29-Apr-2015 16:50:29	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:33:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	95	52291	8.00	8.00	
* 2 Naphthalene-d8	136	5.400	5.400	0.000	99	206728	8.00	8.00	
* 3 Acenaphthene-d10	164	6.761	6.763	-0.002	93	111042	8.00	8.00	
* 4 Phenanthrene-d10	188	7.979	7.984	-0.005	97	169088	8.00	8.00	
* 5 Chrysene-d12	240	10.208	10.213	-0.005	84	167546	8.00	8.00	
* 6 Perylene-d12	264	11.454	11.459	-0.005	96	158962	8.00	8.00	
173 Benzo[a]anthracene	228	10.198	10.206	-0.008	36	5356	0.2000	0.2373	
174 Chrysene	228	10.234	10.239	-0.005	37	4493	0.2000	0.2069	
178 Benzo[b]fluoranthene	252	11.113	11.118	-0.005	73	4484	0.2000	0.2078	
179 Benzo[k]fluoranthene	252	11.138	11.141	-0.003	68	5542	0.2000	0.2409	
180 Benzo[a]pyrene	252	11.408	11.416	-0.008	1	4588	0.2000	0.2090	
183 Dibenz(a,h)anthracene	278	12.652	12.654	-0.002	29	4212	0.2000	0.2019	
182 Indeno[1,2,3-cd]pyrene	276	12.662	12.662	0.000	68	5216	0.2000	0.2072	

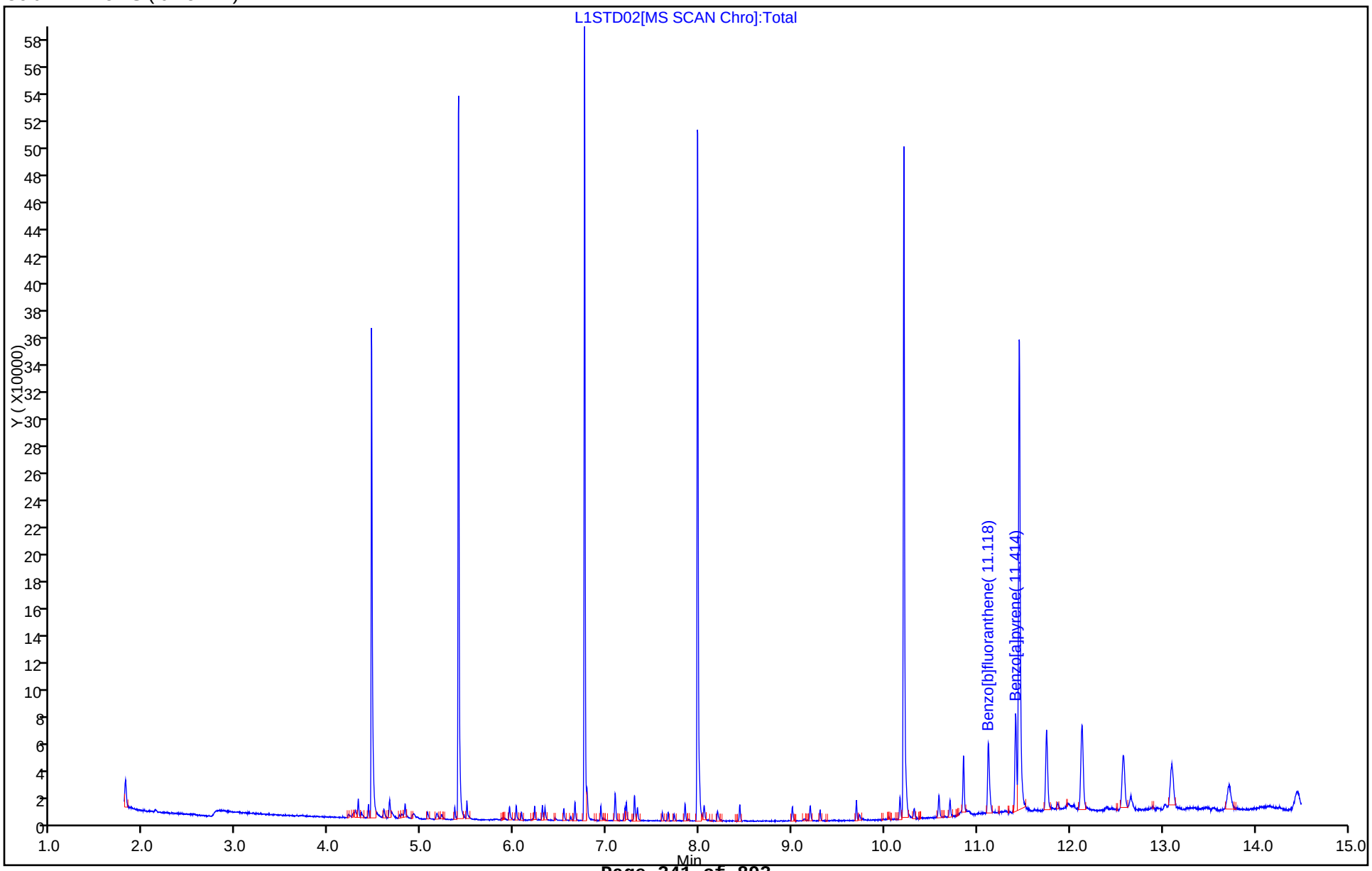
Reagents:

SMlst1_1uLL1_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:30 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD02.d				
Injection Date:	29-Apr-2015 11:13:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



Report Date: 29-Apr-2015 16:50:59 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD05.d				
Lims ID:	ic				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	29-Apr-2015 11:31:30	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	STD05				
Misc. Info.:	500-0030573-004				
Operator ID:	DA	Instrument ID:	CMS23		
Sublist:	chrom-23-8270*sub79				
Method:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	29-Apr-2015 16:50:58	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:50:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	95	54008	8.00	8.00	
* 2 Naphthalene-d8	136	5.398	5.400	-0.002	99	213372	8.00	8.00	
* 3 Acenaphthene-d10	164	6.761	6.763	-0.002	92	113949	8.00	8.00	
* 4 Phenanthrene-d10	188	7.979	7.984	-0.005	97	172510	8.00	8.00	
* 5 Chrysene-d12	240	10.206	10.213	-0.007	92	170965	8.00	8.00	
* 6 Perylene-d12	264	11.447	11.459	-0.012	96	162004	8.00	8.00	
60 N-Nitrosodi-n-propylamine	70	4.753	4.755	-0.002	76	2757	0.5000	0.4987	
94 2-Methylnaphthalene	142	5.945	5.940	0.005	73	8678	0.5000	0.4853	
113 2,6-Dinitrotoluene	165	6.605	6.605	0.000	36	1545	0.5000	0.3930	
143 Hexachlorobenzene	284	7.663	7.663	0.000	56	2315	0.5000	0.5149	
173 Benzo[a]anthracene	228	10.198	10.206	-0.008	52	11673	0.5000	0.5068	
174 Chrysene	228	10.229	10.239	-0.010	62	12196	0.5000	0.5504	
178 Benzo[b]fluoranthene	252	11.108	11.118	-0.010	84	10007	0.5000	0.4550	
179 Benzo[k]fluoranthene	252	11.128	11.141	-0.013	86	12243	0.5000	0.5221	
180 Benzo[a]pyrene	252	11.401	11.416	-0.015	35	11055	0.5000	0.4940	
183 Dibenz(a,h)anthracene	278	12.639	12.654	-0.015	26	10592	0.5000	0.4983	
182 Indeno[1,2,3-cd]pyrene	276	12.644	12.662	-0.018	90	12797	0.5000	0.4989	

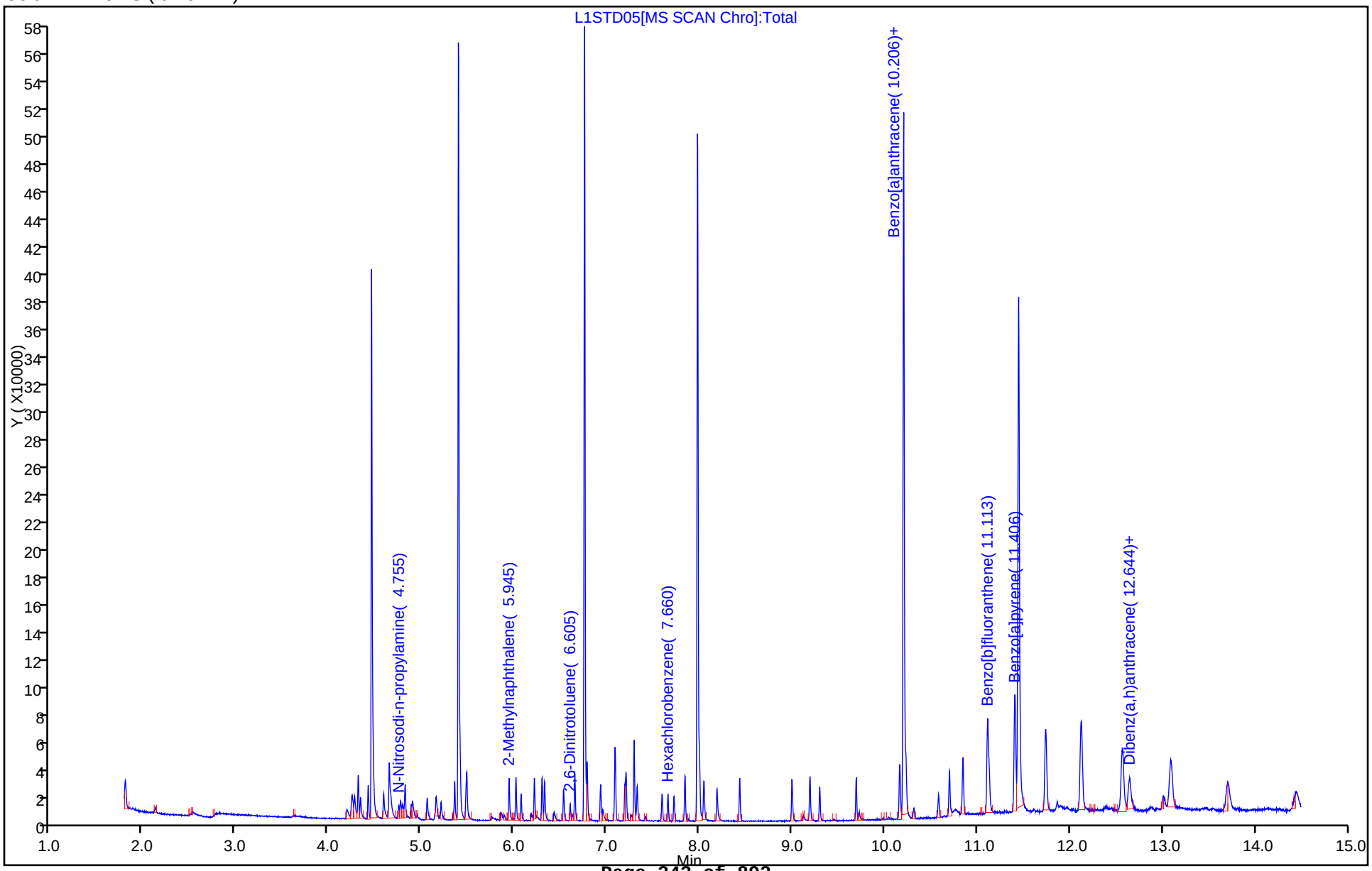
Reagents:

SMlst1_1uLL2_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:59 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD05.d				
Injection Date:	29-Apr-2015 11:31:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD1.d
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Apr-2015 11:50:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Misc. Info.: 500-0030573-005
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:33 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:34:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	95	56427	8.00	8.00	
* 2 Naphthalene-d8	136	5.398	5.400	-0.002	99	219467	8.00	8.00	
* 3 Acenaphthene-d10	164	6.761	6.763	-0.002	92	115975	8.00	8.00	
* 4 Phenanthrene-d10	188	7.979	7.984	-0.005	97	175983	8.00	8.00	
* 5 Chrysene-d12	240	10.206	10.213	-0.007	96	176054	8.00	8.00	
* 6 Perylene-d12	264	11.447	11.459	-0.012	95	163851	8.00	8.00	
$ 7 2-Fluorophenol	112	3.591	3.535	0.056	12	1999	1.00	1.01	
$ 8 Phenol-d5	99	4.225	4.208	0.017	74	9620	1.00	0.9676	
$ 9 Nitrobenzene-d5	82	4.883	4.875	0.008	79	9275	1.00	1.03	
$ 10 2-Fluorobiphenyl	172	6.218	6.218	0.000	99	19331	1.00	1.06	
$ 11 2,4,6-Tribromophenol	330	7.413	7.410	0.003	1	1347	1.00	0.7466	
$ 12 Terphenyl-d14	244	9.299	9.301	-0.002	90	16528	1.00	1.02	
60 N-Nitrosodi-n-propylamine	70	4.750	4.755	-0.005	87	5955	1.00	1.03	
62 Acetophenone	105	4.766	4.763	0.003	72	12062	1.00	1.04	
65 Nitrobenzene	77	4.898	4.890	0.008	89	8723	1.00	1.03	
77 Naphthalene	128	5.415	5.418	-0.003	83	29781	1.00	1.08	
94 2-Methylnaphthalene	142	5.943	5.940	0.003	79	18861	1.00	1.03	
97 1-Methylnaphthalene	142	6.017	6.017	0.000	88	16344	1.00	1.01	
113 2,6-Dinitrotoluene	165	6.603	6.605	-0.002	68	3567	1.00	0.8915	
115 Acenaphthylene	152	6.654	6.656	-0.002	89	28534	1.00	1.06	
119 Acenaphthene	154	6.786	6.791	-0.005	81	17039	1.00	1.07	
121 2,4-Dinitrotoluene	165	6.952	6.939	0.013	54	4255	1.00	0.7889	
133 Fluorene	166	7.207	7.212	-0.005	78	20119	1.00	1.07	
136 N-Nitrosodiphenylamine	169	7.293	7.306	-0.013	96	28483	2.00	2.14	
143 Hexachlorobenzene	284	7.660	7.663	-0.003	73	4570	1.00	1.00	
149 Phenanthrene	178	7.999	8.004	-0.005	70	26584	1.00	1.06	
150 Anthracene	178	8.048	8.050	-0.002	93	27530	1.00	1.07	
161 Fluoranthene	202	8.998	8.998	0.000	96	26884	1.00	1.06	
164 Pyrene	202	9.192	9.192	0.000	92	28585	1.00	1.07	
173 Benzo[a]anthracene	228	10.198	10.206	-0.008	83	23527	1.00	0.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
174 Chrysene	228	10.231	10.239	-0.008	73	23877	1.00	1.05	
178 Benzo[b]fluoranthene	252	11.105	11.118	-0.013	85	22098	1.00	0.99	
179 Benzo[k]fluoranthene	252	11.128	11.141	-0.013	97	26720	1.00	1.13	
180 Benzo[a]pyrene	252	11.403	11.416	-0.013	55	24353	1.00	1.08	
183 Dibenz(a,h)anthracene	278	12.634	12.654	-0.020	40	22063	1.00	1.03	
182 Indeno[1,2,3-cd]pyrene	276	12.644	12.662	-0.018	92	26851	1.00	1.04	
185 Benzo[g,h,i]perylene	276	13.006	13.014	-0.008	81	22064	1.00	1.01	

Reagents:

SMlst1_1uLL3_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD1.d

Injection Date: 29-Apr-2015 11:50:30 Instrument ID: CMS23 Operator ID: DA

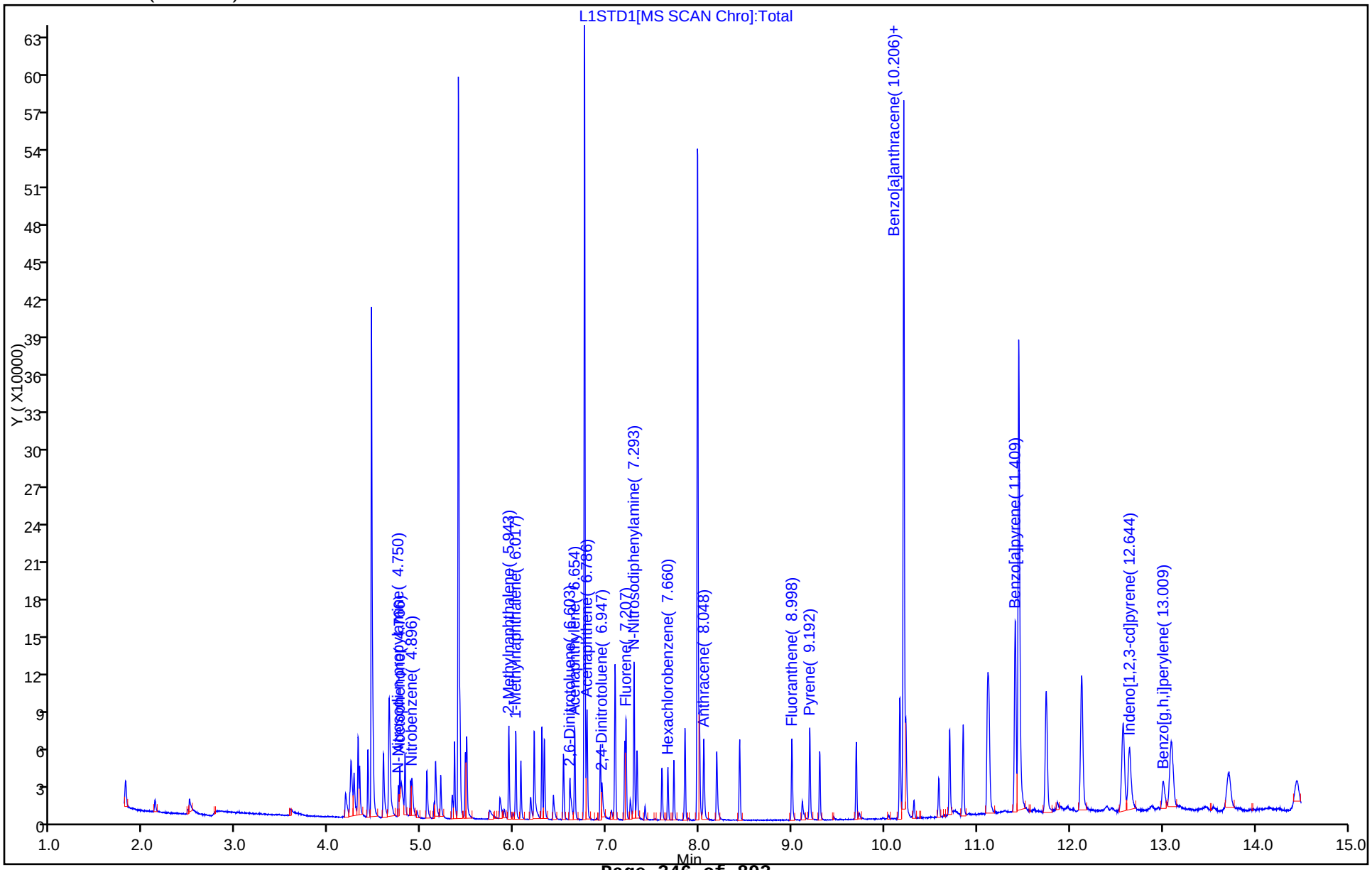
Lims ID: ic Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 5

Method: 23-8270 Limit Group: MSBNA_8270D_ICAL

Column: ZB5MS (0.25 mm)



Report Date: 29-Apr-2015 16:50:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD5.d
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Apr-2015 12:09:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 500-0030573-006
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:34 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:35:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	95	56039	8.00	8.00	
* 2 Naphthalene-d8	136	5.397	5.400	-0.003	96	222164	8.00	8.00	
* 3 Acenaphthene-d10	164	6.761	6.763	-0.002	92	120156	8.00	8.00	
* 4 Phenanthrene-d10	188	7.981	7.984	-0.003	98	182212	8.00	8.00	
* 5 Chrysene-d12	240	10.208	10.213	-0.005	83	180902	8.00	8.00	
* 6 Perylene-d12	264	11.449	11.459	-0.010	95	169076	8.00	8.00	
$ 7 2-Fluorophenol	112	3.550	3.535	0.015	85	33318	5.00	4.54	
$ 8 Phenol-d5	99	4.210	4.208	0.002	95	49443	5.00	5.01	
$ 9 Nitrobenzene-d5	82	4.873	4.875	-0.003	93	43678	5.00	4.80	
$ 10 2-Fluorobiphenyl	172	6.215	6.218	-0.003	99	94847	5.00	5.02	
$ 11 2,4,6-Tribromophenol	330	7.408	7.410	-0.002	75	9058	5.00	4.85	
$ 12 Terphenyl-d14	244	9.296	9.301	-0.005	98	82686	5.00	4.94	
30 1,4-Dioxane	88	2.118	2.118	0.000	87	16221	5.00	5.03	
31 N-Nitrosodimethylamine	42	2.449	2.454	-0.005	91	16990	5.00	4.82	
32 Pyridine	79	2.462	2.454	0.008	76	33539	5.00	4.27	
45 Benzaldehyde	77	4.162	4.159	0.003	82	27870	5.00	5.04	
46 Phenol	94	4.220	4.218	0.002	84	49786	5.00	4.69	
47 Aniline	93	4.228	4.230	-0.002	82	61883	5.00	4.94	
48 Bis(2-chloroethyl)ether	93	4.266	4.269	-0.003	85	42979	5.00	4.89	
49 2-Chlorophenol	128	4.320	4.317	0.003	89	48425	5.00	5.24	
126 n-Decane	43	4.314	4.320	-0.006	82	36534	5.00	5.35	
51 1,3-Dichlorobenzene	146	4.419	4.419	0.000	83	51626	5.00	5.02	
53 1,4-Dichlorobenzene	146	4.472	4.473	-0.001	93	53884	5.00	5.08	
54 Benzyl alcohol	108	4.572	4.569	0.003	80	22843	5.00	4.39	
56 1,2-Dichlorobenzene	146	4.585	4.585	0.000	93	50873	5.00	5.22	
104 Indene	116	4.646	4.646	0.000	83	79226	5.00	5.39	
57 2-Methylphenol	107	4.648	4.648	0.000	69	36875	5.00	5.49	
58 2,2'-oxybis[1-chloropropan	45	4.648	4.651	-0.003	94	57204	5.00	5.65	
60 N-Nitrosodi-n-propylamine	70	4.748	4.755	-0.007	92	29580	5.00	5.16	
59 3 & 4 Methylphenol	108	4.765	4.760	0.005	75	42155	5.00	5.36	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
62 Acetophenone	105	4.758	4.763	-0.005	93	60755	5.00	5.25	
63 Hexachloroethane	117	4.822	4.824	-0.002	90	21307	5.00	5.11	
65 Nitrobenzene	77	4.888	4.890	-0.002	95	42892	5.00	4.99	
66 Isophorone	82	5.053	5.064	-0.011	91	79363	5.00	4.95	
69 2-Nitrophenol	139	5.125	5.122	0.003	92	22351	5.00	4.43	
68 2,4-Dimethylphenol	122	5.145	5.145	0.000	77	40008	5.00	4.81	
74 Bis(2-chloroethoxy)methane	93	5.204	5.206	-0.002	95	49631	5.00	4.96	
76 2,4-Dichlorophenol	162	5.311	5.303	0.008	81	33335	5.00	4.48	
78 1,2,4-Trichlorobenzene	180	5.354	5.357	-0.003	93	36794	5.00	4.91	
77 Naphthalene	128	5.415	5.418	-0.003	99	138803	5.00	4.99	
81 4-Chloroaniline	127	5.461	5.461	0.000	81	59253	5.00	5.18	
37 2,6-Dichlorophenol	162	5.466	5.466	0.000	87	35729	5.00	5.01	
83 Hexachlorobutadiene	225	5.489	5.492	-0.003	87	18899	5.00	5.01	
90 Caprolactam	113	5.721	5.749	-0.028	79	14401	5.00	4.82	
92 4-Chloro-3-methylphenol	107	5.836	5.838	-0.002	93	38055	5.00	4.88	
94 2-Methylnaphthalene	142	5.940	5.940	0.000	88	92271	5.00	4.96	
97 1-Methylnaphthalene	142	6.017	6.017	0.000	87	81217	5.00	4.94	
99 1,2,4,5-Tetrachlorobenzene	216	6.070	6.070	0.000	97	34545	5.00	4.96	
100 2,4,6-Trichlorophenol	196	6.167	6.164	0.003	91	18758	5.00	4.48	
102 2,4,5-Trichlorophenol	196	6.213	6.208	0.005	43	18365	5.00	4.49	
103 1,1'-Biphenyl	154	6.297	6.300	-0.003	94	108468	5.00	5.07	
106 2-Chloronaphthalene	162	6.322	6.325	-0.003	91	83069	5.00	5.04	
108 2-Nitroaniline	65	6.414	6.414	0.000	80	26081	5.00	4.75	
111 Dimethyl phthalate	163	6.531	6.539	-0.008	98	94148	5.00	5.01	
112 1,3-Dinitrobenzene	168	6.600	6.603	-0.003	63	14011	5.00	4.44	
113 2,6-Dinitrotoluene	165	6.598	6.605	-0.007	81	20655	5.00	4.98	
115 Acenaphthylene	152	6.654	6.656	-0.002	91	136749	5.00	4.90	
116 3-Nitroaniline	138	6.743	6.748	-0.005	81	23080	5.00	4.66	
119 Acenaphthene	154	6.786	6.791	-0.005	89	82572	5.00	5.01	
123 Dibenzofuran	168	6.929	6.931	-0.002	87	118278	5.00	5.10	
121 2,4-Dinitrotoluene	165	6.936	6.939	-0.003	83	27660	5.00	4.95	
125 2,3,4,6-Tetrachlorophenol	232	7.038	7.038	0.000	65	10405	5.00	3.83	
18 Hexadecane	57	7.089	7.092	-0.003	78	76749	5.00	5.53	
127 Diethyl phthalate	149	7.092	7.105	-0.013	98	97465	5.00	5.19	
131 4-Chlorophenyl phenyl ethe	204	7.194	7.196	-0.002	95	40103	5.00	5.04	
133 Fluorene	166	7.207	7.212	-0.005	82	98578	5.00	5.06	
132 4-Nitroaniline	138	7.242	7.253	-0.010	66	24183	5.00	4.68	
135 4,6-Dinitro-2-methylphenol	198	7.280	7.283	-0.003	37	9931	10.0	11.4	
136 N-Nitrosodiphenylamine	169	7.293	7.306	-0.013	95	140614	10.0	10.2	
138 1,2-Diphenylhydrazine	77	7.326	7.334	-0.008	95	87821	5.00	4.87	
142 4-Bromophenyl phenyl ether	248	7.594	7.599	-0.005	70	22002	5.00	4.98	
143 Hexachlorobenzene	284	7.660	7.663	-0.003	85	22798	5.00	4.80	
144 Atrazine	200	7.724	7.737	-0.013	95	24229	5.00	5.11	
147 Pentachlorophenol	266	7.841	7.831	0.010	69	1321	10.0	1.28	
148 n-Octadecane	43	7.846	7.849	-0.003	84	41029	5.00	5.49	
149 Phenanthrene	178	7.999	8.004	-0.005	81	128533	5.00	4.95	
150 Anthracene	178	8.045	8.050	-0.005	95	134509	5.00	5.06	
152 Carbazole	167	8.182	8.183	-0.001	83	128140	5.00	5.35	
155 Di-n-butyl phthalate	149	8.435	8.437	-0.002	98	162264	5.00	5.16	
161 Fluoranthene	202	8.995	8.998	-0.003	99	131557	5.00	4.99	
162 Benzidine	184	9.105	9.113	-0.008	93	61403	5.00	5.19	
164 Pyrene	202	9.189	9.192	-0.003	95	139610	5.00	5.08	

Report Date: 29-Apr-2015 16:50:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD5.d

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
168 Butyl benzyl phthalate	149	9.694	9.699	-0.005	96	74757	5.00	5.13	
171 Bis(2-ethylhexyl) phthalat	149	10.162	10.168	-0.006	95	100986	5.00	5.36	
172 3,3'-Dichlorobenzidine	252	10.165	10.170	-0.005	67	40969	5.00	4.99	
173 Benzo[a]anthracene	228	10.198	10.206	-0.008	98	117269	5.00	4.81	
174 Chrysene	228	10.229	10.239	-0.010	84	114873	5.00	4.90	
176 Di-n-octyl phthalate	149	10.700	10.710	-0.010	99	176754	5.00	5.18	
178 Benzo[b]fluoranthene	252	11.103	11.118	-0.015	93	115968	5.00	5.05	
179 Benzo[k]fluoranthene	252	11.126	11.141	-0.015	98	129405	5.00	5.29	
180 Benzo[a]pyrene	252	11.401	11.416	-0.015	81	116691	5.00	5.00	
183 Dibenz(a,h)anthracene	278	12.626	12.654	-0.028	44	107389	5.00	4.84	
182 Indeno[1,2,3-cd]pyrene	276	12.631	12.662	-0.031	90	133377	5.00	4.98	
185 Benzo[g,h,i]perylene	276	12.993	13.014	-0.021	92	110813	5.00	4.93	
S 186 Total Cresols, TCEQ Defini	1				0			10.9	

Reagents:

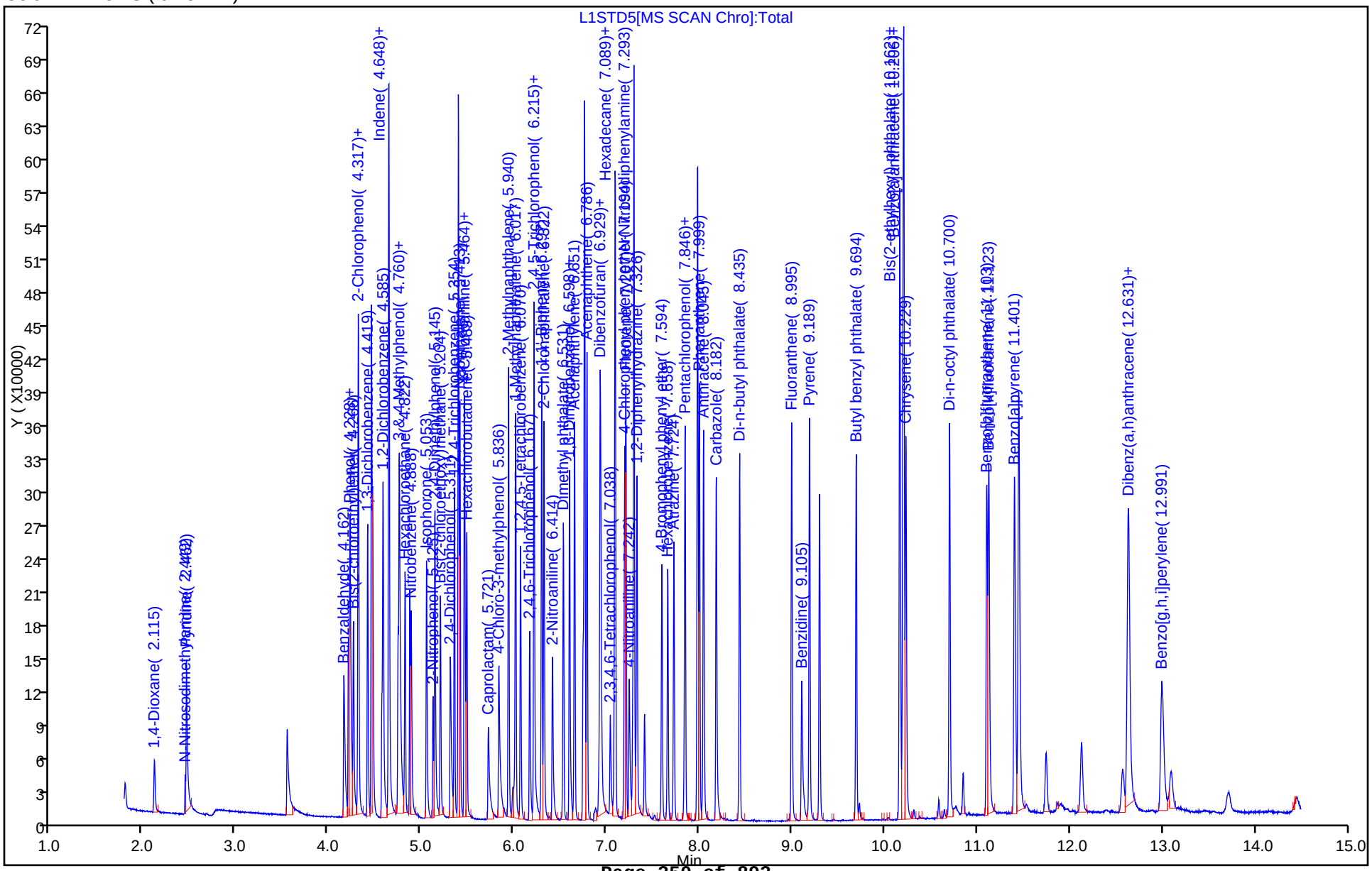
SMlst1_1uLL5_00015 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD5.d				
Injection Date:	29-Apr-2015 12:09:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



Report Date: 29-Apr-2015 16:50:37 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD10.d
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Apr-2015 12:28:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD10
Misc. Info.: 500-0030573-007
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:37 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:36:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	95	57331	8.00	8.00	
* 2 Naphthalene-d8	136	5.397	5.400	-0.003	97	224890	8.00	8.00	
* 3 Acenaphthene-d10	164	6.761	6.763	-0.002	93	121715	8.00	8.00	
* 4 Phenanthrene-d10	188	7.981	7.984	-0.003	97	187216	8.00	8.00	
* 5 Chrysene-d12	240	10.208	10.213	-0.005	83	184751	8.00	8.00	
* 6 Perylene-d12	264	11.449	11.459	-0.010	94	174395	8.00	8.00	
$ 7 2-Fluorophenol	112	3.542	3.535	0.007	91	87794	10.0	10.4	
$ 8 Phenol-d5	99	4.205	4.208	-0.003	95	107788	10.0	10.7	
$ 9 Nitrobenzene-d5	82	4.873	4.875	-0.003	94	96507	10.0	10.5	
$ 10 2-Fluorobiphenyl	172	6.215	6.218	-0.003	99	201435	10.0	10.5	
$ 11 2,4,6-Tribromophenol	330	7.408	7.410	-0.002	80	20108	10.0	10.6	
$ 12 Terphenyl-d14	244	9.296	9.301	-0.005	98	178093	10.0	10.4	
30 1,4-Dioxane	88	2.118	2.118	0.000	88	34326	10.0	10.4	
31 N-Nitrosodimethylamine	42	2.449	2.454	-0.005	94	37821	10.0	10.5	
32 Pyridine	79	2.459	2.454	0.005	76	78478	10.0	9.76	
45 Benzaldehyde	77	4.156	4.159	-0.003	82	59837	10.0	9.82	
46 Phenol	94	4.215	4.218	-0.003	84	109387	10.0	10.1	
47 Aniline	93	4.228	4.230	-0.002	90	131137	10.0	10.2	
48 Bis(2-chloroethyl)ether	93	4.264	4.269	-0.005	93	89174	10.0	9.92	
49 2-Chlorophenol	128	4.317	4.317	0.000	94	98992	10.0	10.5	
126 n-Decane	43	4.314	4.320	-0.006	83	73572	10.0	10.5	
51 1,3-Dichlorobenzene	146	4.416	4.419	-0.003	84	107536	10.0	10.2	
53 1,4-Dichlorobenzene	146	4.472	4.473	-0.001	92	110759	10.0	10.2	
54 Benzyl alcohol	108	4.567	4.569	-0.002	82	51948	10.0	9.76	
56 1,2-Dichlorobenzene	146	4.582	4.585	-0.003	94	103222	10.0	10.3	
104 Indene	116	4.646	4.646	0.000	83	164869	10.0	11.0	
57 2-Methylphenol	107	4.646	4.648	-0.002	65	69248	10.0	10.1	
58 2,2'-oxybis[1-chloropropan	45	4.648	4.651	-0.003	89	112010	10.0	10.8	
60 N-Nitrosodi-n-propylamine	70	4.748	4.755	-0.007	94	61077	10.0	10.4	
59 3 & 4 Methylphenol	108	4.760	4.760	0.000	55	83211	10.0	10.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
62 Acetophenone	105	4.758	4.763	-0.005	91	126842	10.0	10.7	
63 Hexachloroethane	117	4.822	4.824	-0.002	90	44500	10.0	10.4	
65 Nitrobenzene	77	4.888	4.890	-0.002	95	91920	10.0	10.6	
66 Isophorone	82	5.053	5.064	-0.011	88	163506	10.0	10.1	
69 2-Nitrophenol	139	5.122	5.122	0.000	93	49313	10.0	9.66	
68 2,4-Dimethylphenol	122	5.143	5.145	-0.002	92	81881	10.0	9.72	
74 Bis(2-chloroethoxy)methane	93	5.204	5.206	-0.002	95	103019	10.0	10.2	
72 Benzoic acid	122	5.239	5.262	-0.023	67	4336	10.0	1.98	
76 2,4-Dichlorophenol	162	5.306	5.303	0.003	94	74930	10.0	9.95	
78 1,2,4-Trichlorobenzene	180	5.354	5.357	-0.003	88	77531	10.0	10.2	
77 Naphthalene	128	5.415	5.418	-0.003	99	286447	10.0	10.2	
81 4-Chloroaniline	127	5.459	5.461	-0.002	83	123506	10.0	10.7	
37 2,6-Dichlorophenol	162	5.464	5.466	-0.002	88	72780	10.0	10.1	
83 Hexachlorobutadiene	225	5.489	5.492	-0.003	88	38915	10.0	10.2	
90 Caprolactam	113	5.729	5.749	-0.020	81	29508	10.0	9.75	
92 4-Chloro-3-methylphenol	107	5.833	5.838	-0.005	93	79714	10.0	10.1	
94 2-Methylnaphthalene	142	5.938	5.940	-0.002	89	191899	10.0	10.2	
97 1-Methylnaphthalene	142	6.017	6.017	0.000	89	169058	10.0	10.2	
98 Hexachlorocyclopentadiene	237	6.047	6.047	0.000	61	1803	10.0	1.46	
99 1,2,4,5-Tetrachlorobenzene	216	6.070	6.070	0.000	98	71738	10.0	10.2	
100 2,4,6-Trichlorophenol	196	6.164	6.164	0.000	94	41238	10.0	9.72	
102 2,4,5-Trichlorophenol	196	6.208	6.208	0.000	66	38098	10.0	9.20	
103 1,1'-Biphenyl	154	6.297	6.300	-0.003	94	224658	10.0	10.4	
106 2-Chloronaphthalene	162	6.322	6.325	-0.003	89	170772	10.0	10.2	
108 2-Nitroaniline	65	6.412	6.414	-0.002	82	55947	10.0	10.0	
111 Dimethyl phthalate	163	6.534	6.539	-0.005	98	193272	10.0	10.2	
112 1,3-Dinitrobenzene	168	6.598	6.603	-0.005	69	30618	10.0	9.57	
113 2,6-Dinitrotoluene	165	6.598	6.605	-0.007	79	45237	10.0	10.8	
115 Acenaphthylene	152	6.651	6.656	-0.005	91	283098	10.0	10.0	
116 3-Nitroaniline	138	6.743	6.748	-0.005	88	50904	10.0	10.1	
119 Acenaphthene	154	6.789	6.791	-0.002	88	168377	10.0	10.1	
118 2,4-Dinitrophenol	184	6.855	6.850	0.005	77	12763	20.0	20.0	
120 4-Nitrophenol	109	6.911	6.903	0.008	80	22692	20.0	14.1	
123 Dibenzofuran	168	6.929	6.931	-0.002	88	240792	10.0	10.3	
121 2,4-Dinitrotoluene	165	6.936	6.939	-0.003	86	60279	10.0	10.6	
125 2,3,4,6-Tetrachlorophenol	232	7.036	7.038	-0.002	66	24120	10.0	8.77	
18 Hexadecane	57	7.089	7.092	-0.003	82	153562	10.0	10.9	
127 Diethyl phthalate	149	7.094	7.105	-0.011	98	199149	10.0	10.5	
131 4-Chlorophenyl phenyl ethe	204	7.194	7.196	-0.002	96	83293	10.0	10.3	
133 Fluorene	166	7.207	7.212	-0.005	82	201245	10.0	10.2	
132 4-Nitroaniline	138	7.242	7.253	-0.010	75	55130	10.0	10.5	
135 4,6-Dinitro-2-methylphenol	198	7.275	7.283	-0.008	64	33668	20.0	19.7	
136 N-Nitrosodiphenylamine	169	7.296	7.306	-0.010	98	290577	20.0	20.5	
138 1,2-Diphenylhydrazine	77	7.326	7.334	-0.008	96	182223	10.0	9.98	
142 4-Bromophenyl phenyl ether	248	7.596	7.599	-0.003	68	45250	10.0	9.96	
143 Hexachlorobenzene	284	7.658	7.663	-0.005	85	48025	10.0	9.84	
144 Atrazine	200	7.726	7.737	-0.011	97	50828	10.0	10.4	
147 Pentachlorophenol	266	7.839	7.831	0.007	69	5167	20.0	4.86	
148 n-Octadecane	43	7.846	7.849	-0.003	86	82696	10.0	10.8	
149 Phenanthrene	178	8.002	8.004	-0.002	85	266071	10.0	9.96	
150 Anthracene	178	8.045	8.050	-0.005	97	278485	10.0	10.2	
152 Carbazole	167	8.180	8.183	-0.003	87	255900	10.0	10.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
155 Di-n-butyl phthalate	149	8.435	8.437	-0.002	98	337946	10.0	10.5	
161 Fluoranthene	202	8.995	8.998	-0.003	98	274573	10.0	10.1	
162 Benzidine	184	9.102	9.113	-0.011	89	138814	10.0	11.5	
164 Pyrene	202	9.189	9.192	-0.003	95	286718	10.0	10.2	
168 Butyl benzyl phthalate	149	9.694	9.699	-0.005	96	153781	10.0	10.3	
171 Bis(2-ethylhexyl) phthalat	149	10.165	10.168	-0.003	95	207071	10.0	10.8	
172 3,3'-Dichlorobenzidine	252	10.165	10.170	-0.005	67	86869	10.0	10.4	
173 Benzo[a]anthracene	228	10.198	10.206	-0.008	96	240337	10.0	9.66	
174 Chrysene	228	10.231	10.239	-0.008	86	240455	10.0	10.0	
176 Di-n-octyl phthalate	149	10.703	10.710	-0.007	99	365160	10.0	10.4	
178 Benzo[b]fluoranthene	252	11.105	11.118	-0.013	93	236290	10.0	9.98	
179 Benzo[k]fluoranthene	252	11.126	11.141	-0.015	98	260676	10.0	10.3	
180 Benzo[a]pyrene	252	11.401	11.416	-0.015	81	241817	10.0	10.0	
183 Dibenz(a,h)anthracene	278	12.629	12.654	-0.025	39	224156	10.0	9.80	
182 Indeno[1,2,3-cd]pyrene	276	12.637	12.662	-0.025	91	277908	10.0	10.1	
185 Benzo[g,h,i]perylene	276	12.993	13.014	-0.021	94	230272	10.0	9.93	
S 186 Total Cresols, TCEQ Defini	1				0			20.4	

Reagents:

SMlst1_1uLL6_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:37 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD10.d

Injection Date: 29-Apr-2015 12:28:30 Instrument ID: CMS23 Operator ID: DA

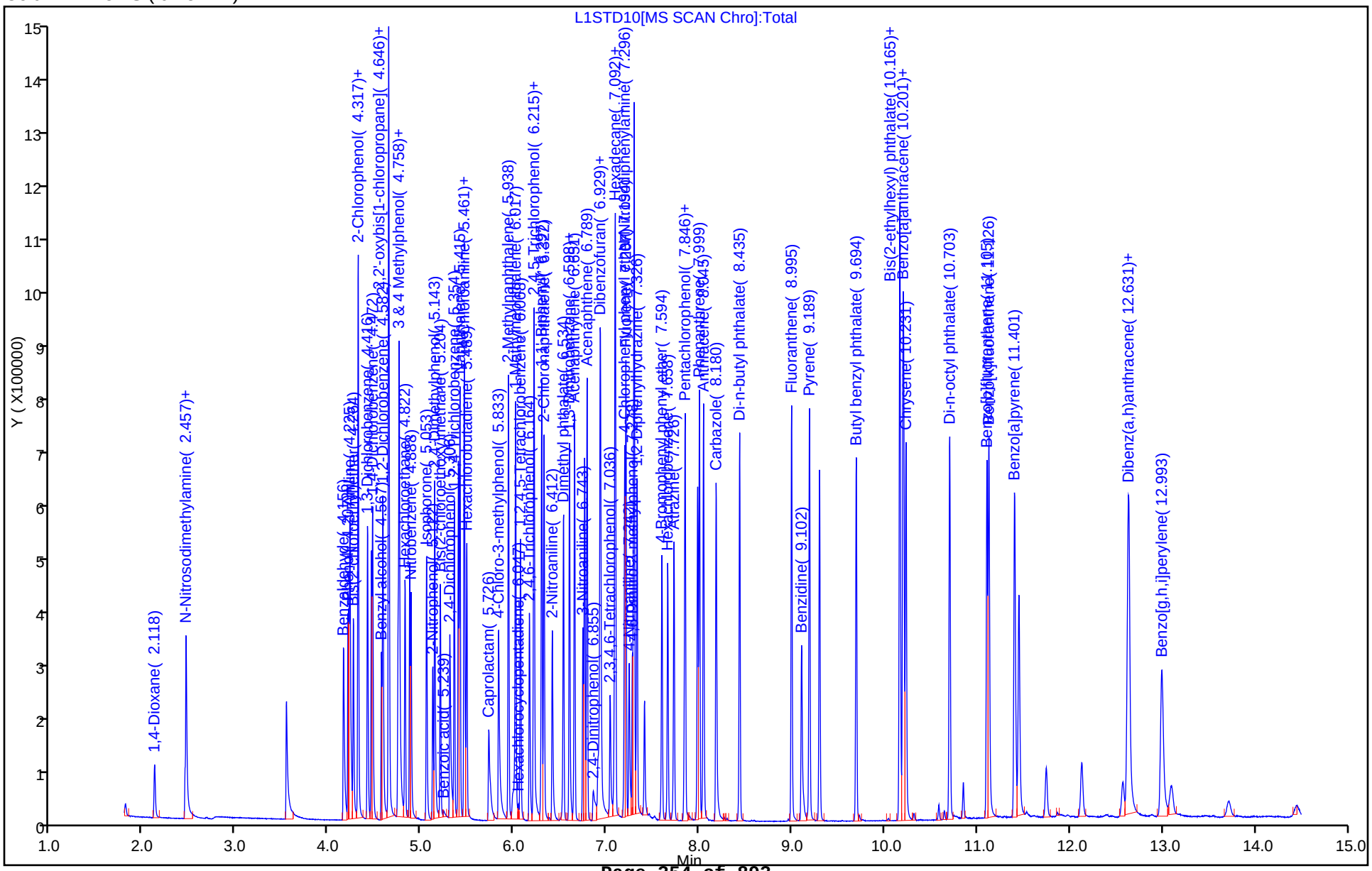
Lims ID: ic Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 7

Method: 23-8270 Limit Group: MSBNA_8270D_ICAL

Column: ZB5MS (0.25 mm)



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD20a.d
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Apr-2015 13:01:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD20
Misc. Info.: 500-0030573-008
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:39 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:37:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	95	57051	8.00	8.00	
* 2 Naphthalene-d8	136	5.400	5.400	0.000	96	223426	8.00	8.00	
* 3 Acenaphthene-d10	164	6.766	6.763	0.003	87	121308	8.00	8.00	
* 4 Phenanthrene-d10	188	7.986	7.984	0.002	98	186110	8.00	8.00	
* 5 Chrysene-d12	240	10.241	10.213	0.028	82	186889	8.00	8.00	
* 6 Perylene-d12	264	11.521	11.459	0.062	95	179908	8.00	8.00	
$ 7 2-Fluorophenol	112	3.535	3.535	0.000	92	168426	20.0	19.4	
$ 8 Phenol-d5	99	4.205	4.208	-0.003	82	194993	20.0	19.4	
$ 9 Nitrobenzene-d5	82	4.875	4.875	0.000	94	180864	20.0	19.8	
$ 10 2-Fluorobiphenyl	172	6.218	6.218	0.000	99	371548	20.0	19.5	
$ 11 2,4,6-Tribromophenol	330	7.413	7.410	0.003	79	41144	20.0	21.8	
$ 12 Terphenyl-d14	244	9.306	9.301	0.005	98	334422	20.0	19.4	
30 1,4-Dioxane	88	2.110	2.118	-0.008	90	65763	20.0	20.0	
31 N-Nitrosodimethylamine	42	2.444	2.454	-0.010	93	75654	20.0	21.1	
32 Pyridine	79	2.449	2.454	-0.005	77	163753	20.0	20.5	
45 Benzaldehyde	77	4.157	4.159	-0.002	84	115842	20.0	19.7	
46 Phenol	94	4.215	4.218	-0.003	85	222061	20.0	20.5	
47 Aniline	93	4.228	4.230	-0.002	92	262603	20.0	20.6	
48 Bis(2-chloroethyl)ether	93	4.266	4.269	-0.003	91	173637	20.0	19.4	
49 2-Chlorophenol	128	4.317	4.317	0.000	95	195570	20.0	20.8	
126 n-Decane	43	4.317	4.320	-0.003	84	140060	20.0	20.2	
51 1,3-Dichlorobenzene	146	4.419	4.419	0.000	89	210661	20.0	20.1	
53 1,4-Dichlorobenzene	146	4.473	4.473	-0.001	93	214562	20.0	19.9	
54 Benzyl alcohol	108	4.567	4.569	-0.002	81	109451	20.0	20.7	
56 1,2-Dichlorobenzene	146	4.585	4.585	0.000	95	202937	20.0	20.4	
104 Indene	116	4.646	4.646	0.000	83	316533	20.0	21.1	
57 2-Methylphenol	107	4.646	4.648	-0.002	66	145153	20.0	21.2	
58 2,2'-oxybis[1-chloropropan	45	4.651	4.651	0.000	94	210377	20.0	20.4	
60 N-Nitrosodi-n-propylamine	70	4.753	4.755	-0.002	93	120289	20.0	20.6	
59 3 & 4 Methylphenol	108	4.760	4.760	0.000	59	164467	20.0	20.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
62 Acetophenone	105	4.760	4.763	-0.003	91	240732	20.0	20.4	
63 Hexachloroethane	117	4.824	4.824	0.000	91	86996	20.0	20.5	
65 Nitrobenzene	77	4.888	4.890	-0.002	95	170916	20.0	19.8	
66 Isophorone	82	5.059	5.064	-0.005	91	325601	20.0	20.2	
69 2-Nitrophenol	139	5.122	5.122	0.000	93	101822	20.0	20.1	
68 2,4-Dimethylphenol	122	5.143	5.145	-0.002	77	168490	20.0	20.1	
74 Bis(2-chloroethoxy)methane	93	5.206	5.206	0.000	96	201638	20.0	20.0	
72 Benzoic acid	122	5.252	5.262	-0.010	88	31033	20.0	14.3	
76 2,4-Dichlorophenol	162	5.306	5.303	0.003	95	152813	20.0	20.4	
78 1,2,4-Trichlorobenzene	180	5.357	5.357	0.000	91	150932	20.0	20.0	
77 Naphthalene	128	5.418	5.418	0.000	99	559624	20.0	20.0	
81 4-Chloroaniline	127	5.461	5.461	0.000	82	241310	20.0	21.0	
37 2,6-Dichlorophenol	162	5.466	5.466	0.000	90	146412	20.0	20.4	
83 Hexachlorobutadiene	225	5.492	5.492	0.000	88	76344	20.0	20.1	
90 Caprolactam	113	5.741	5.749	-0.008	81	60251	20.0	20.0	
92 4-Chloro-3-methylphenol	107	5.836	5.838	-0.002	92	159290	20.0	20.3	
94 2-Methylnaphthalene	142	5.943	5.940	0.003	89	378810	20.0	20.2	
97 1-Methylnaphthalene	142	6.019	6.017	0.002	80	331693	20.0	20.0	
98 Hexachlorocyclopentadiene	237	6.050	6.047	0.003	66	10593	20.0	8.59	
99 1,2,4,5-Tetrachlorobenzene	216	6.073	6.070	0.003	98	141192	20.0	20.1	
100 2,4,6-Trichlorophenol	196	6.167	6.164	0.003	92	84594	20.0	20.0	
102 2,4,5-Trichlorophenol	196	6.208	6.208	0.000	85	79725	20.0	19.3	
103 1,1'-Biphenyl	154	6.302	6.300	0.002	95	442262	20.0	20.5	
106 2-Chloronaphthalene	162	6.328	6.325	0.003	90	336836	20.0	20.2	
108 2-Nitroaniline	65	6.414	6.414	0.000	84	115088	20.0	20.7	
111 Dimethyl phthalate	163	6.536	6.539	-0.003	98	385531	20.0	20.3	
112 1,3-Dinitrobenzene	168	6.600	6.603	-0.003	73	65904	20.0	20.7	
113 2,6-Dinitrotoluene	165	6.603	6.605	-0.002	77	90912	20.0	21.7	
115 Acenaphthylene	152	6.656	6.656	0.000	93	565422	20.0	20.1	
116 3-Nitroaniline	138	6.748	6.748	0.000	91	106806	20.0	21.4	
119 Acenaphthene	154	6.791	6.791	0.000	88	333289	20.0	20.0	
118 2,4-Dinitrophenol	184	6.852	6.850	0.002	85	44261	40.0	40.3	
120 4-Nitrophenol	109	6.903	6.903	0.000	87	63348	40.0	39.5	
123 Dibenzofuran	168	6.931	6.931	0.000	89	474416	20.0	20.3	
121 2,4-Dinitrotoluene	165	6.942	6.939	0.003	91	124054	20.0	22.0	
125 2,3,4,6-Tetrachlorophenol	232	7.041	7.038	0.003	55	54509	20.0	19.9	
18 Hexadecane	57	7.092	7.092	0.000	81	293258	20.0	20.9	
127 Diethyl phthalate	149	7.102	7.105	-0.003	98	387998	20.0	20.5	
131 4-Chlorophenyl phenyl ethe	204	7.199	7.196	0.003	96	165266	20.0	20.6	
133 Fluorene	166	7.212	7.212	0.000	78	398375	20.0	20.3	
132 4-Nitroaniline	138	7.250	7.253	-0.002	74	111204	20.0	21.3	
135 4,6-Dinitro-2-methylphenol	198	7.283	7.283	0.000	80	91183	40.0	40.1	
136 N-Nitrosodiphenylamine	169	7.303	7.306	-0.003	95	576975	40.0	41.0	
138 1,2-Diphenylhydrazine	77	7.334	7.334	0.000	94	357388	20.0	19.6	
142 4-Bromophenyl phenyl ether	248	7.599	7.599	0.000	68	91810	20.0	20.3	
143 Hexachlorobenzene	284	7.663	7.663	0.000	86	96341	20.0	19.9	
144 Atrazine	200	7.734	7.737	-0.003	97	96129	20.0	19.9	
147 Pentachlorophenol	266	7.839	7.831	0.008	67	25569	40.0	24.2	
148 n-Octadecane	43	7.851	7.849	0.002	86	159528	20.0	20.9	
149 Phenanthrene	178	8.007	8.004	0.003	87	541018	20.0	20.4	
150 Anthracene	178	8.050	8.050	0.000	97	544963	20.0	20.1	
152 Carbazole	167	8.188	8.183	0.005	88	488865	20.0	20.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
155 Di-n-butyl phthalate	149	8.442	8.437	0.005	99	639662	20.0	19.9	
161 Fluoranthene	202	9.003	8.998	0.005	99	542295	20.0	20.1	
162 Benzidine	184	9.113	9.113	0.000	93	246810	20.0	20.2	
164 Pyrene	202	9.197	9.192	0.005	95	564552	20.0	19.9	
168 Butyl benzyl phthalate	149	9.714	9.699	0.015	96	305002	20.0	20.3	
171 Bis(2-ethylhexyl) phthalat	149	10.198	10.168	0.030	95	404567	20.0	20.8	
172 3,3'-Dichlorobenzidine	252	10.198	10.170	0.028	69	169471	20.0	20.0	
173 Benzo[a]anthracene	228	10.231	10.206	0.025	94	493834	20.0	19.6	
174 Chrysene	228	10.264	10.239	0.025	86	473432	20.0	19.5	
176 Di-n-octyl phthalate	149	10.759	10.710	0.049	99	726621	20.0	20.9	
178 Benzo[b]fluoranthene	252	11.169	11.118	0.051	94	456484	20.0	18.7	
179 Benzo[k]fluoranthene	252	11.192	11.141	0.051	98	514450	20.0	19.8	
180 Benzo[a]pyrene	252	11.472	11.416	0.056	89	491069	20.0	19.8	
183 Dibenz(a,h)anthracene	278	12.718	12.654	0.064	43	467231	20.0	19.8	
182 Indeno[1,2,3-cd]pyrene	276	12.723	12.662	0.061	91	574476	20.0	20.2	
185 Benzo[g,h,i]perylene	276	13.077	13.014	0.063	92	479218	20.0	20.0	
S 186 Total Cresols, TCEQ Defini	1				0			41.8	

Reagents:

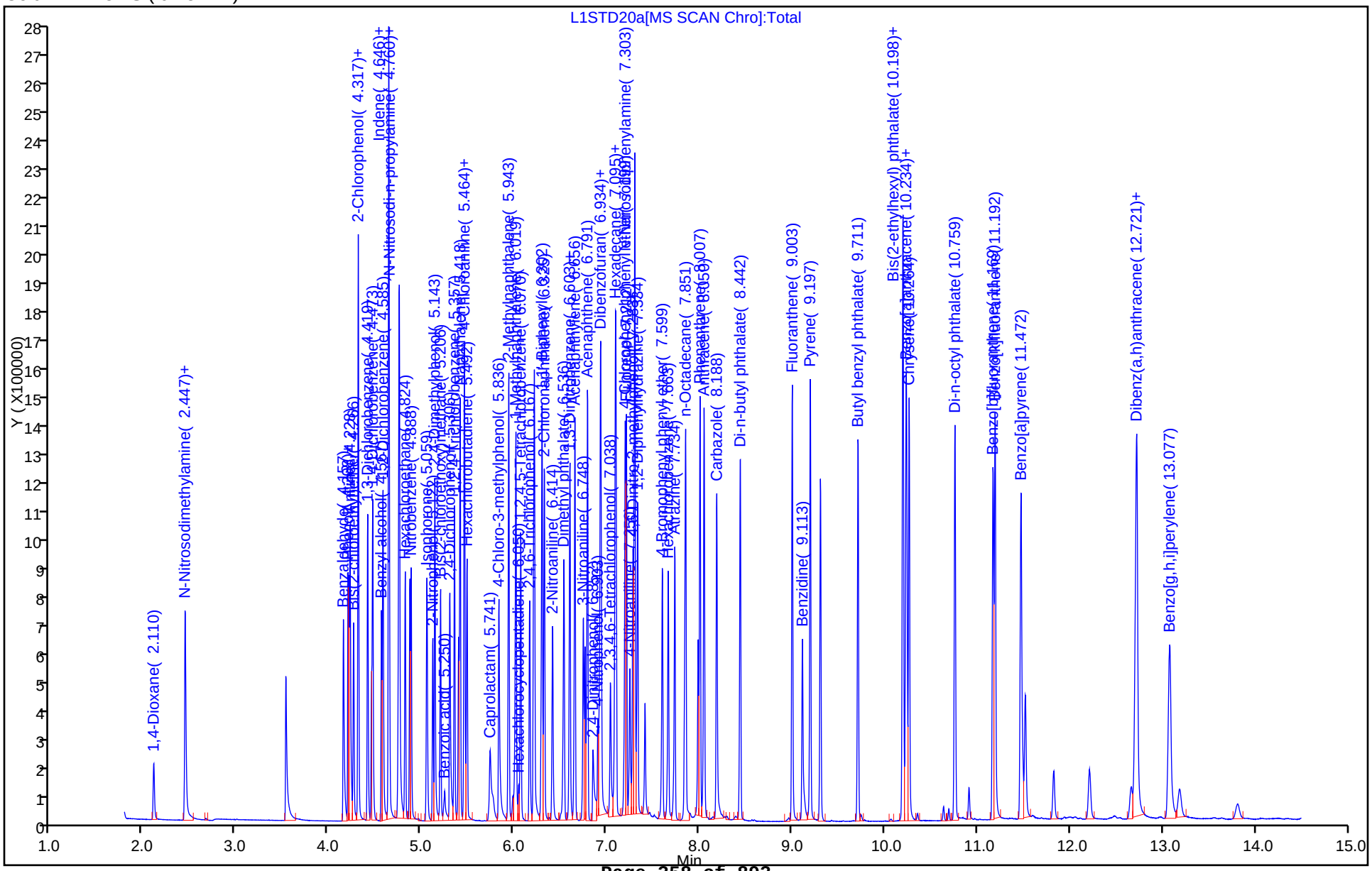
SMlst1_1uLL7_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:39 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD20a.d				
Injection Date:	29-Apr-2015 13:01:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD40a.d
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 8
Inject. Date: 29-Apr-2015 13:19:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD40
Misc. Info.: 500-0030573-009
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:41 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:31:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	95	48084	8.00	8.00	
* 2 Naphthalene-d8	136	5.400	5.400	0.000	92	187268	8.00	8.00	
* 3 Acenaphthene-d10	164	6.763	6.763	0.000	83	102862	8.00	8.00	
* 4 Phenanthrene-d10	188	7.984	7.984	0.000	97	155437	8.00	8.00	
* 5 Chrysene-d12	240	10.213	10.213	0.000	60	155641	8.00	8.00	
* 6 Perylene-d12	264	11.459	11.459	0.000	94	149214	8.00	8.00	
$ 7 2-Fluorophenol	112	3.535	3.535	0.000	93	300339	40.0	40.2	
$ 8 Phenol-d5	99	4.208	4.208	0.000	95	338278	40.0	39.9	
$ 9 Nitrobenzene-d5	82	4.875	4.875	0.000	94	307852	40.0	40.1	
$ 10 2-Fluorobiphenyl	172	6.218	6.218	0.000	99	633768	40.0	39.2	
$ 11 2,4,6-Tribromophenol	330	7.410	7.410	0.000	78	67855	40.0	42.4	
$ 12 Terphenyl-d14	244	9.301	9.301	0.000	99	573771	40.0	39.9	
30 1,4-Dioxane	88	2.118	2.118	0.000	90	108626	40.0	39.2	
31 N-Nitrosodimethylamine	42	2.454	2.454	0.000	74	126614	40.0	41.8	
32 Pyridine	79	2.454	2.454	0.000	78	271827	40.0	40.3	
45 Benzaldehyde	77	4.159	4.159	0.000	81	173716	40.0	43.8	
46 Phenol	94	4.218	4.218	0.000	84	374187	40.0	41.1	
47 Aniline	93	4.230	4.230	0.000	92	436795	40.0	40.7	
48 Bis(2-chloroethyl)ether	93	4.269	4.269	0.000	89	295179	40.0	39.1	
49 2-Chlorophenol	128	4.317	4.317	0.000	95	317284	40.0	40.0	
126 n-Decane	43	4.320	4.320	0.000	85	226077	40.0	38.6	
51 1,3-Dichlorobenzene	146	4.419	4.419	0.000	96	349842	40.0	39.6	
53 1,4-Dichlorobenzene	146	4.473	4.473	0.000	93	360835	40.0	39.7	
54 Benzyl alcohol	108	4.569	4.569	0.000	82	187481	40.0	42.0	
56 1,2-Dichlorobenzene	146	4.585	4.585	0.000	90	337805	40.0	40.4	
104 Indene	116	4.646	4.646	0.000	84	509698	40.0	40.4	
57 2-Methylphenol	107	4.648	4.648	0.000	68	225233	40.0	39.1	
58 2,2'-oxybis[1-chloropropan	45	4.651	4.651	0.000	95	330536	40.0	38.0	
60 N-Nitrosodi-n-propylamine	70	4.755	4.755	0.000	94	195191	40.0	39.7	
59 3 & 4 Methylphenol	108	4.760	4.760	0.000	74	277554	40.0	41.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
62 Acetophenone	105	4.763	4.763	0.000	92	389031	40.0	39.2	
63 Hexachloroethane	117	4.824	4.824	0.000	92	144158	40.0	40.3	
65 Nitrobenzene	77	4.890	4.890	0.000	95	286764	40.0	39.6	
66 Isophorone	82	5.064	5.064	0.000	91	536172	40.0	39.7	
69 2-Nitrophenol	139	5.122	5.122	0.000	93	176006	40.0	41.4	
68 2,4-Dimethylphenol	122	5.145	5.145	0.000	72	286928	40.0	40.9	
74 Bis(2-chloroethoxy)methane	93	5.206	5.206	0.000	96	337514	40.0	40.0	
72 Benzoic acid	122	5.262	5.262	0.000	79	62814	40.0	34.5	
76 2,4-Dichlorophenol	162	5.303	5.303	0.000	89	259331	40.0	41.4	
78 1,2,4-Trichlorobenzene	180	5.357	5.357	0.000	93	251463	40.0	39.8	
77 Naphthalene	128	5.418	5.418	0.000	99	925009	40.0	39.4	
81 4-Chloroaniline	127	5.461	5.461	0.000	82	392096	40.0	40.7	
37 2,6-Dichlorophenol	162	5.466	5.466	0.000	91	244037	40.0	40.6	
83 Hexachlorobutadiene	225	5.492	5.492	0.000	89	129270	40.0	40.6	
90 Caprolactam	113	5.749	5.749	0.000	82	110851	40.0	44.0	
92 4-Chloro-3-methylphenol	107	5.838	5.838	0.000	93	265680	40.0	40.4	
94 2-Methylnaphthalene	142	5.940	5.940	0.000	90	630000	40.0	40.1	
97 1-Methylnaphthalene	142	6.017	6.017	0.000	88	553111	40.0	39.9	
98 Hexachlorocyclopentadiene	237	6.047	6.047	0.000	68	32374	40.0	31.0	
99 1,2,4,5-Tetrachlorobenzene	216	6.070	6.070	0.000	98	238604	40.0	40.0	
100 2,4,6-Trichlorophenol	196	6.164	6.164	0.000	92	145401	40.0	40.6	
102 2,4,5-Trichlorophenol	196	6.208	6.208	0.000	71	144418	40.0	41.3	
103 1,1'-Biphenyl	154	6.300	6.300	0.000	95	733043	40.0	40.0	
106 2-Chloronaphthalene	162	6.325	6.325	0.000	97	557323	40.0	39.5	
108 2-Nitroaniline	65	6.414	6.414	0.000	85	193039	40.0	41.0	
111 Dimethyl phthalate	163	6.539	6.539	0.000	79	640102	40.0	39.8	
112 1,3-Dinitrobenzene	168	6.603	6.603	0.000	74	112765	40.0	41.7	
113 2,6-Dinitrotoluene	165	6.605	6.605	0.000	81	153484	40.0	43.3	
115 Acenaphthylene	152	6.656	6.656	0.000	89	931823	40.0	39.0	
116 3-Nitroaniline	138	6.748	6.748	0.000	91	177309	40.0	41.8	
119 Acenaphthene	154	6.791	6.791	0.000	91	553305	40.0	39.2	
118 2,4-Dinitrophenol	184	6.850	6.850	0.000	86	95685	80.0	76.4	
120 4-Nitrophenol	109	6.903	6.903	0.000	85	114693	80.0	84.4	
123 Dibenzofuran	168	6.931	6.931	0.000	88	784024	40.0	39.5	
121 2,4-Dinitrotoluene	165	6.939	6.939	0.000	90	205893	40.0	43.0	
125 2,3,4,6-Tetrachlorophenol	232	7.038	7.038	0.000	60	100590	40.0	43.3	
18 Hexadecane	57	7.092	7.092	0.000	81	467551	40.0	39.4	
127 Diethyl phthalate	149	7.105	7.105	0.000	98	642979	40.0	40.0	
131 4-Chlorophenyl phenyl ethe	204	7.196	7.196	0.000	88	276876	40.0	40.6	
133 Fluorene	166	7.212	7.212	0.000	78	660021	40.0	39.6	
132 4-Nitroaniline	138	7.253	7.253	0.000	63	175845	40.0	39.7	
135 4,6-Dinitro-2-methylphenol	198	7.283	7.283	0.000	86	175017	80.0	82.0	
136 N-Nitrosodiphenylamine	169	7.306	7.306	0.000	89	941195	80.0	80.1	
138 1,2-Diphenylhydrazine	77	7.334	7.334	0.000	95	554920	40.0	36.0	
142 4-Bromophenyl phenyl ether	248	7.599	7.599	0.000	65	155815	40.0	41.3	
143 Hexachlorobenzene	284	7.663	7.663	0.000	81	165717	40.0	40.9	
144 Atrazine	200	7.737	7.737	0.000	98	161582	40.0	40.0	
147 Pentachlorophenol	266	7.836	7.836	0.000	67	69324	80.0	78.5	
148 n-Octadecane	43	7.849	7.849	0.000	86	252669	40.0	39.6	
149 Phenanthrene	178	8.004	8.004	0.000	86	904084	40.0	40.8	
150 Anthracene	178	8.050	8.050	0.000	97	890106	40.0	39.2	
152 Carbazole	167	8.183	8.183	0.000	89	813389	40.0	39.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
155 Di-n-butyl phthalate	149	8.437	8.437	0.000	99	1048493	40.0	39.1	
161 Fluoranthene	202	8.998	8.998	0.000	99	898692	40.0	40.0	
162 Benzidine	184	9.105	9.105	0.000	96	433976	40.0	42.6	
164 Pyrene	202	9.192	9.192	0.000	96	932760	40.0	39.4	
168 Butyl benzyl phthalate	149	9.699	9.699	0.000	96	493500	40.0	39.4	
171 Bis(2-ethylhexyl) phthalat	149	10.168	10.168	0.000	95	636502	40.0	39.2	
172 3,3'-Dichlorobenzidine	252	10.170	10.170	0.000	60	288330	40.0	40.8	
173 Benzo[a]anthracene	228	10.206	10.206	0.000	94	814415	40.0	38.8	
174 Chrysene	228	10.239	10.239	0.000	88	783234	40.0	38.8	
176 Di-n-octyl phthalate	149	10.710	10.710	0.000	99	1178645	40.0	40.5	
178 Benzo[b]fluoranthene	252	11.118	11.118	0.000	94	837977	40.0	41.4	
179 Benzo[k]fluoranthene	252	11.141	11.141	0.000	98	853446	40.0	39.5	
180 Benzo[a]pyrene	252	11.416	11.416	0.000	86	823104	40.0	39.9	
183 Dibenz(a,h)anthracene	278	12.654	12.654	0.000	53	798900	40.0	40.8	
182 Indeno[1,2,3-cd]pyrene	276	12.662	12.662	0.000	91	922041	40.0	39.0	
185 Benzo[g,h,i]perylene	276	13.014	13.014	0.000	92	805591	40.0	40.6	

Reagents:

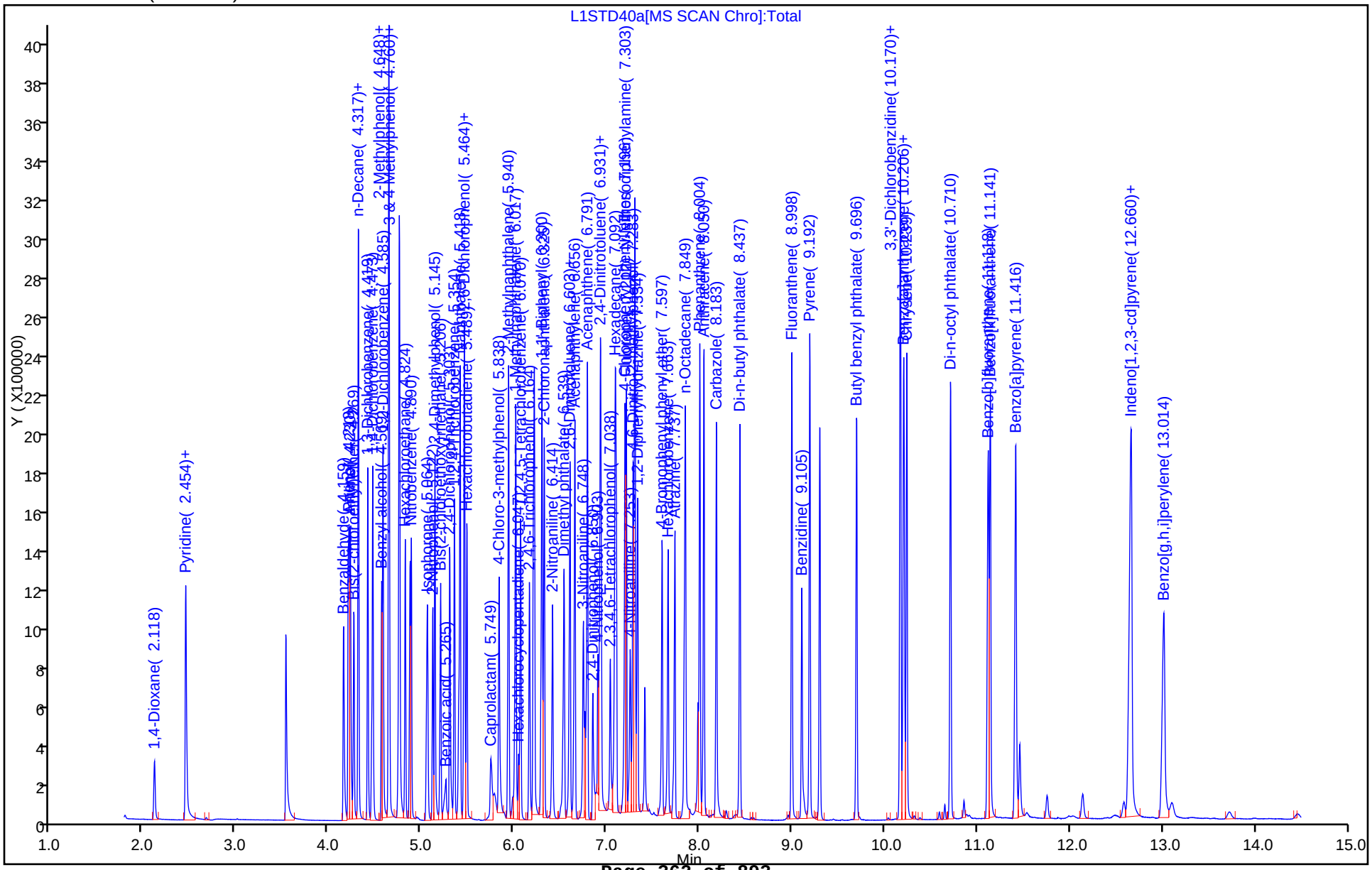
SMlst1_1uLL8_00015 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:42 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD40a.d				
Injection Date:	29-Apr-2015 13:19:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	icis			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



Report Date: 29-Apr-2015 16:52:54 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD50.d
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 29-Apr-2015 13:38:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD50
Misc. Info.: 500-0030573-010
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:52:53 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:39:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.462	4.460	0.002	95	56205	8.00	8.00	
* 2 Naphthalene-d8	136	5.400	5.400	0.000	85	217681	8.00	8.00	
* 3 Acenaphthene-d10	164	6.766	6.763	0.003	83	118603	8.00	8.00	
* 4 Phenanthrene-d10	188	7.986	7.984	0.002	98	182329	8.00	8.00	
* 5 Chrysene-d12	240	10.213	10.213	0.000	52	181899	8.00	8.00	
* 6 Perylene-d12	264	11.452	11.459	-0.007	93	179015	8.00	8.00	
$ 7 2-Fluorophenol	112	3.535	3.535	0.000	93	442814	50.0	50.4	
$ 8 Phenol-d5	99	4.213	4.208	0.005	98	497766	50.0	50.3	
$ 9 Nitrobenzene-d5	82	4.880	4.875	0.005	93	448109	50.0	50.2	
$ 10 2-Fluorobiphenyl	172	6.220	6.218	0.002	99	910784	50.0	48.9	
$ 11 2,4,6-Tribromophenol	330	7.416	7.410	0.006	76	96525	50.0	52.3	
$ 12 Terphenyl-d14	244	9.301	9.301	0.000	99	839767	50.0	49.9	
30 1,4-Dioxane	88	2.118	2.118	0.000	89	163546	50.0	50.5	
31 N-Nitrosodimethylamine	42	2.459	2.454	0.005	90	182403	50.0	51.6	
32 Pyridine	79	2.454	2.454	0.000	81	412660	50.0	52.4	
45 Benzaldehyde	77	4.159	4.159	0.000	84	216159	50.0	50.4	
46 Phenol	94	4.223	4.218	0.005	88	546524	50.0	51.3	
47 Aniline	93	4.233	4.230	0.003	91	633298	50.0	50.4	
48 Bis(2-chloroethyl)ether	93	4.274	4.269	0.005	89	440967	50.0	50.0	
49 2-Chlorophenol	128	4.320	4.317	0.003	92	457848	50.0	49.4	
126 n-Decane	43	4.320	4.320	0.000	87	319600	50.0	46.7	
51 1,3-Dichlorobenzene	146	4.421	4.419	0.002	96	511294	50.0	49.6	
53 1,4-Dichlorobenzene	146	4.475	4.473	0.002	94	519106	50.0	48.8	
54 Benzyl alcohol	108	4.572	4.569	0.003	84	280728	50.0	53.8	
56 1,2-Dichlorobenzene	146	4.585	4.585	0.000	95	489355	50.0	50.0	
104 Indene	116	4.648	4.646	0.002	84	710208	50.0	48.2	
57 2-Methylphenol	107	4.651	4.648	0.003	66	326450	50.0	48.5	
58 2,2'-oxybis[1-chloropropan	45	4.653	4.651	0.002	89	454781	50.0	44.8	
60 N-Nitrosodi-n-propylamine	70	4.760	4.755	0.005	86	274647	50.0	47.7	
59 3 & 4 Methylphenol	108	4.765	4.760	0.005	76	388571	50.0	49.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
62 Acetophenone	105	4.768	4.763	0.005	88	549398	50.0	47.4	
63 Hexachloroethane	117	4.824	4.824	0.000	92	208386	50.0	49.9	
65 Nitrobenzene	77	4.893	4.890	0.003	94	421662	50.0	50.1	
66 Isophorone	82	5.069	5.064	0.005	87	786658	50.0	50.1	
69 2-Nitrophenol	139	5.122	5.122	0.000	92	261710	50.0	53.0	
68 2,4-Dimethylphenol	122	5.148	5.145	0.003	71	414951	50.0	50.9	
74 Bis(2-chloroethoxy)methane	93	5.209	5.206	0.003	95	493571	50.0	50.4	
72 Benzoic acid	122	5.278	5.262	0.016	80	117086	50.0	55.4	
76 2,4-Dichlorophenol	162	5.306	5.303	0.003	95	379088	50.0	52.0	
78 1,2,4-Trichlorobenzene	180	5.357	5.357	0.000	91	369673	50.0	50.4	
77 Naphthalene	128	5.418	5.418	0.000	99	1336037	50.0	49.0	
81 4-Chloroaniline	127	5.464	5.461	0.003	82	547574	50.0	48.9	
37 2,6-Dichlorophenol	162	5.466	5.466	0.000	84	352856	50.0	50.5	
83 Hexachlorobutadiene	225	5.492	5.492	0.000	87	187045	50.0	50.6	
90 Caprolactam	113	5.762	5.749	0.013	82	147817	50.0	50.5	M
92 4-Chloro-3-methylphenol	107	5.843	5.838	0.005	94	392755	50.0	51.4	
94 2-Methylnaphthalene	142	5.943	5.940	0.003	90	912126	50.0	50.0	
97 1-Methylnaphthalene	142	6.019	6.017	0.002	79	803538	50.0	49.8	
98 Hexachlorocyclopentadiene	237	6.050	6.047	0.003	62	68496	50.0	56.8	
99 1,2,4,5-Tetrachlorobenzene	216	6.070	6.070	0.000	98	353119	50.0	51.3	
100 2,4,6-Trichlorophenol	196	6.167	6.164	0.003	92	217064	50.0	52.5	
102 2,4,5-Trichlorophenol	196	6.208	6.208	0.000	75	215728	50.0	53.4	
103 1,1'-Biphenyl	154	6.302	6.300	0.002	95	1061533	50.0	50.3	
106 2-Chloronaphthalene	162	6.327	6.325	0.002	97	813138	50.0	49.9	
108 2-Nitroaniline	65	6.417	6.414	0.003	84	281466	50.0	51.9	
111 Dimethyl phthalate	163	6.544	6.539	0.005	95	946258	50.0	51.0	
112 1,3-Dinitrobenzene	168	6.608	6.603	0.005	77	167774	50.0	53.8	
113 2,6-Dinitrotoluene	165	6.610	6.605	0.005	83	224378	50.0	54.8	
115 Acenaphthylene	152	6.659	6.656	0.003	91	1376795	50.0	50.0	
116 3-Nitroaniline	138	6.750	6.748	0.002	85	243220	50.0	49.7	
119 Acenaphthene	154	6.794	6.791	0.003	92	806433	50.0	49.5	
118 2,4-Dinitrophenol	184	6.852	6.850	0.002	83	176991	100.0	106.0	
120 4-Nitrophenol	109	6.911	6.903	0.008	82	175145	100.0	111.7	
123 Dibenzofuran	168	6.934	6.931	0.003	89	1136630	50.0	49.7	
121 2,4-Dinitrotoluene	165	6.944	6.939	0.005	68	291404	50.0	52.8	
125 2,3,4,6-Tetrachlorophenol	232	7.038	7.038	0.000	64	155221	50.0	57.9	
18 Hexadecane	57	7.092	7.092	0.000	83	659076	50.0	48.1	
127 Diethyl phthalate	149	7.107	7.105	0.002	98	893691	50.0	48.2	
131 4-Chlorophenyl phenyl ethe	204	7.199	7.196	0.003	93	405318	50.0	51.6	
133 Fluorene	166	7.214	7.212	0.002	82	947851	50.0	49.3	
132 4-Nitroaniline	138	7.263	7.253	0.011	68	259190	50.0	50.8	
135 4,6-Dinitro-2-methylphenol	198	7.291	7.283	0.008	61	257372	100.0	100.8	
136 N-Nitrosodiphenylamine	169	7.311	7.306	0.005	88	1347281	100.0	97.7	
138 1,2-Diphenylhydrazine	77	7.337	7.334	0.003	95	1029363	50.0	57.9	
142 4-Bromophenyl phenyl ether	248	7.599	7.599	0.000	65	225080	50.0	50.9	
143 Hexachlorobenzene	284	7.665	7.663	0.002	86	240013	50.0	50.5	
144 Atrazine	200	7.742	7.737	0.005	99	239790	50.0	50.6	
147 Pentachlorophenol	266	7.836	7.831	0.005	66	133458	100.0	128.8	
148 n-Octadecane	43	7.849	7.849	0.000	86	351904	50.0	47.1	
149 Phenanthrene	178	8.009	8.004	0.005	90	1290060	50.0	49.6	
150 Anthracene	178	8.053	8.050	0.003	97	1291661	50.0	48.5	
152 Carbazole	167	8.188	8.183	0.005	89	1212738	50.0	50.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
155 Di-n-butyl phthalate	149	8.437	8.437	0.000	99	1523039	50.0	48.4	
161 Fluoranthene	202	9.000	8.998	0.002	99	1284294	50.0	48.7	
162 Benzidine	184	9.107	9.113	-0.006	97	586656	50.0	49.3	
164 Pyrene	202	9.194	9.192	0.002	96	1344593	50.0	48.6	
168 Butyl benzyl phthalate	149	9.699	9.699	0.000	96	722943	50.0	49.4	
171 Bis(2-ethylhexyl) phthalat	149	10.167	10.168	-0.001	95	887223	50.0	46.8	
172 3,3'-Dichlorobenzidine	252	10.173	10.170	0.003	75	424130	50.0	51.4	
173 Benzo[a]anthracene	228	10.206	10.206	0.000	99	1224352	50.0	50.0	
174 Chrysene	228	10.239	10.239	0.000	85	1149694	50.0	48.8	
176 Di-n-octyl phthalate	149	10.708	10.710	-0.002	99	1696592	50.0	49.7	
178 Benzo[b]fluoranthene	252	11.115	11.118	-0.003	95	1314471	50.0	54.1	
179 Benzo[k]fluoranthene	252	11.138	11.141	-0.003	98	1210560	50.0	46.7	
180 Benzo[a]pyrene	252	11.413	11.416	-0.003	86	1219376	50.0	49.3	
183 Dibenz(a,h)anthracene	278	12.657	12.654	0.003	54	1201537	50.0	51.2	
182 Indeno[1,2,3-cd]pyrene	276	12.670	12.662	0.008	90	1408380	50.0	49.7	
185 Benzo[g,h,i]perylene	276	13.016	13.014	0.002	94	1226472	50.0	51.5	
S 186 Total Cresols, TCEQ Defini	1				0			97.8	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

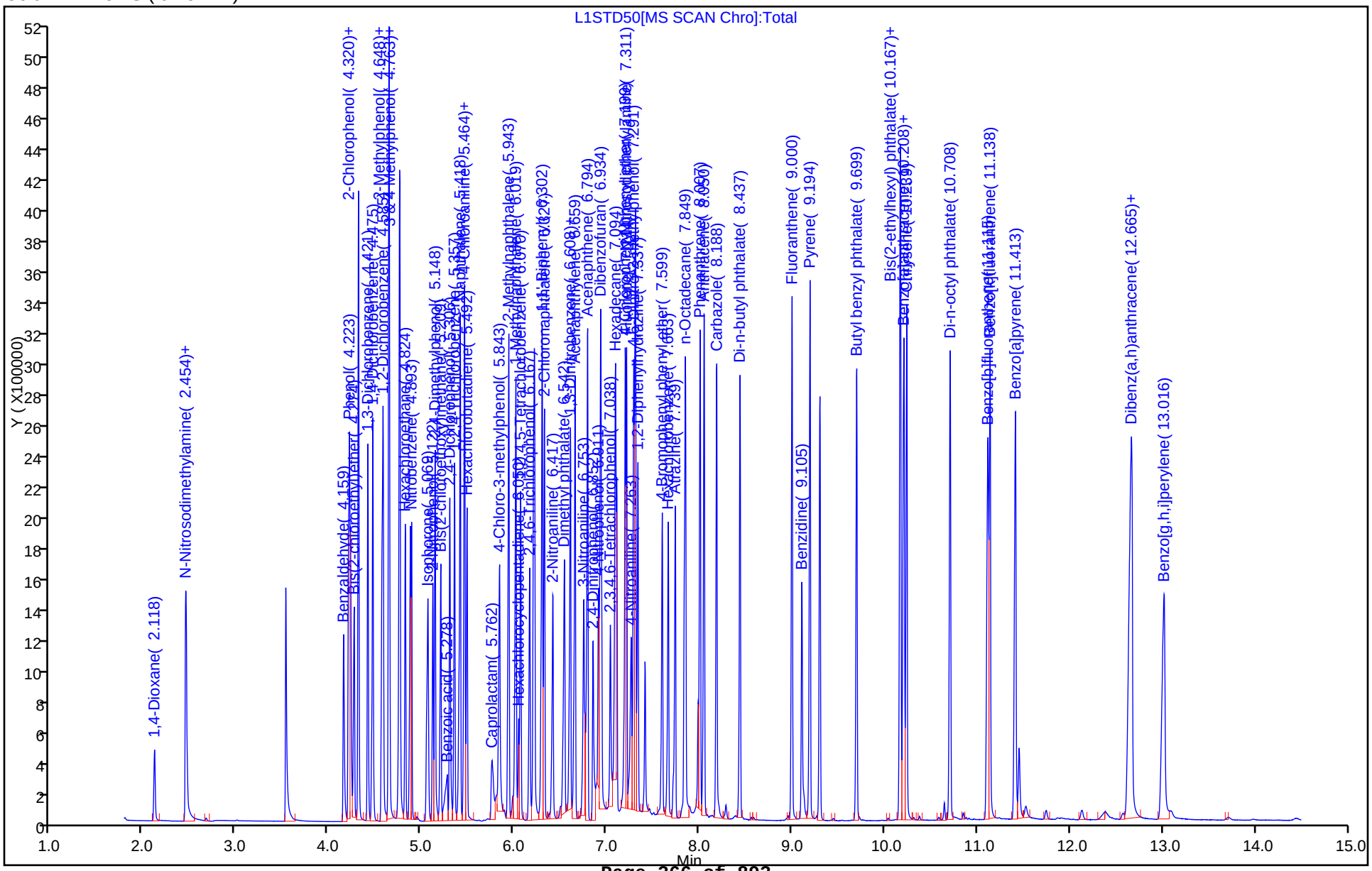
SMlst1_1uLL9_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:52:54 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD50.d				
Injection Date:	29-Apr-2015 13:38:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



Manual Integration/User Assign Peak Report

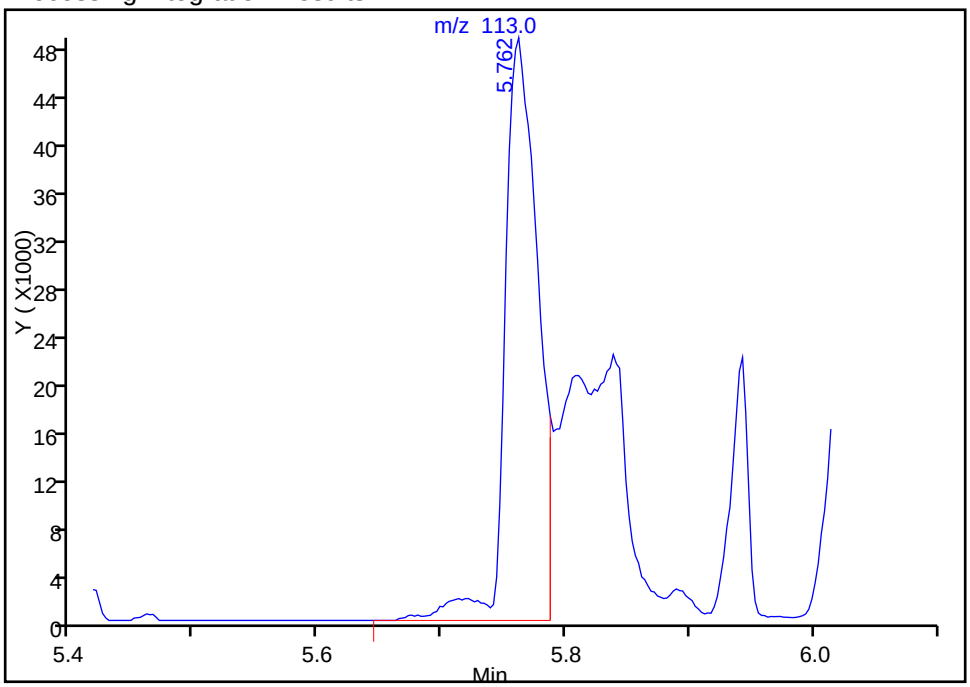
TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD50.d				
Injection Date:	29-Apr-2015 13:38:30	Instrument ID:	CMS23		
Lims ID:	ic				
Client ID:					
Operator ID:	DA	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

90 Caprolactam, CAS: 105-60-2

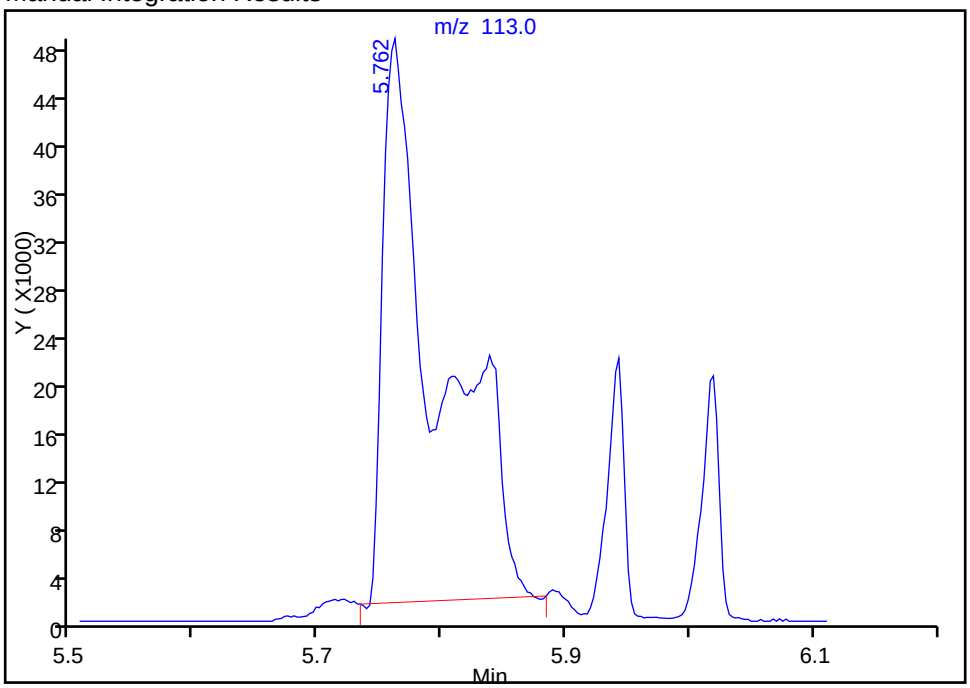
Processing Integration Results

RT: 5.76
Area: 90880
Amount: 32.859180
Amount Units: ug/ml



Manual Integration Results

RT: 5.76
Area: 147817
Amount: 50.476730
Amount Units: ug/ml



Reviewer: rynkarg, 29-Apr-2015 16:44:02
Audit Action: Manually Integrated
Audit Reason: Baseline

Report Date: 29-Apr-2015 16:50:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD60.d
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 29-Apr-2015 13:57:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD60
Misc. Info.: 500-0030573-011
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:46 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:39:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.462	4.460	0.002	94	57243	8.00	8.00	
* 2 Naphthalene-d8	136	5.403	5.400	0.003	79	221521	8.00	8.00	
* 3 Acenaphthene-d10	164	6.766	6.763	0.003	83	120931	8.00	8.00	
* 4 Phenanthrene-d10	188	7.986	7.984	0.002	97	184093	8.00	8.00	
* 5 Chrysene-d12	240	10.213	10.213	0.000	52	183556	8.00	8.00	
* 6 Perylene-d12	264	11.452	11.459	-0.007	94	179331	8.00	8.00	
$ 7 2-Fluorophenol	112	3.535	3.535	0.000	93	527860	60.0	58.9	
$ 8 Phenol-d5	99	4.213	4.208	0.005	98	584027	60.0	57.9	
$ 9 Nitrobenzene-d5	82	4.880	4.875	0.005	93	526302	60.0	58.0	
$ 10 2-Fluorobiphenyl	172	6.221	6.218	0.003	99	1061493	60.0	55.8	
$ 11 2,4,6-Tribromophenol	330	7.416	7.410	0.006	77	114602	60.0	60.9	
$ 12 Terphenyl-d14	244	9.301	9.301	0.000	99	978926	60.0	57.7	
30 1,4-Dioxane	88	2.116	2.118	-0.002	89	189714	60.0	57.6	
31 N-Nitrosodimethylamine	42	2.462	2.454	0.008	96	215158	60.0	59.7	
32 Pyridine	79	2.452	2.454	-0.002	80	501866	60.0	62.5	
45 Benzaldehyde	77	4.159	4.159	0.000	84	227221	60.0	55.7	
46 Phenol	94	4.223	4.218	0.005	91	634795	60.0	58.5	
47 Aniline	93	4.236	4.230	0.006	91	726162	60.0	56.8	
48 Bis(2-chloroethyl)ether	93	4.274	4.269	0.005	87	521138	60.0	58.0	
49 2-Chlorophenol	128	4.322	4.317	0.005	89	525043	60.0	55.6	
126 n-Decane	43	4.320	4.320	0.000	88	368546	60.0	52.9	
51 1,3-Dichlorobenzene	146	4.422	4.419	0.003	97	598216	60.0	56.9	
53 1,4-Dichlorobenzene	146	4.475	4.473	0.002	94	609573	60.0	56.3	
54 Benzyl alcohol	108	4.574	4.569	0.005	83	325311	60.0	61.2	
56 1,2-Dichlorobenzene	146	4.587	4.585	0.002	88	565204	60.0	56.7	
104 Indene	116	4.648	4.646	0.002	84	811405	60.0	54.0	
57 2-Methylphenol	107	4.651	4.648	0.003	65	377123	60.0	55.0	
58 2,2'-oxybis[1-chloropropan	45	4.653	4.651	0.002	96	515817	60.0	49.9	
60 N-Nitrosodi-n-propylamine	70	4.760	4.755	0.005	89	314691	60.0	53.7	
59 3 & 4 Methylphenol	108	4.768	4.760	0.008	75	443271	60.0	55.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
62 Acetophenone	105	4.768	4.763	0.005	88	629446	60.0	53.3	
63 Hexachloroethane	117	4.827	4.824	0.003	92	241456	60.0	56.7	
65 Nitrobenzene	77	4.896	4.890	0.006	93	486541	60.0	56.8	
66 Isophorone	82	5.071	5.064	0.007	87	916463	60.0	57.3	
69 2-Nitrophenol	139	5.125	5.122	0.003	92	305711	60.0	60.8	
68 2,4-Dimethylphenol	122	5.150	5.145	0.005	64	488309	60.0	58.8	
74 Bis(2-chloroethoxy)methane	93	5.209	5.206	0.003	93	576030	60.0	57.8	
72 Benzoic acid	122	5.285	5.262	0.023	65	139518	60.0	64.8	
76 2,4-Dichlorophenol	162	5.306	5.303	0.003	93	443671	60.0	59.8	
78 1,2,4-Trichlorobenzene	180	5.357	5.357	0.000	93	431145	60.0	57.8	
77 Naphthalene	128	5.420	5.418	0.002	99	1551164	60.0	55.9	
81 4-Chloroaniline	127	5.466	5.461	0.005	82	633866	60.0	55.6	
37 2,6-Dichlorophenol	162	5.469	5.466	0.003	86	411346	60.0	57.8	
83 Hexachlorobutadiene	225	5.492	5.492	0.000	89	219731	60.0	58.4	
90 Caprolactam	113	5.770	5.749	0.021	82	167460	60.0	56.2	M
92 4-Chloro-3-methylphenol	107	5.843	5.838	0.005	94	452651	60.0	58.2	
94 2-Methylnaphthalene	142	5.943	5.940	0.003	82	1051019	60.0	56.6	
97 1-Methylnaphthalene	142	6.019	6.017	0.002	79	924853	60.0	56.4	
98 Hexachlorocyclopentadiene	237	6.050	6.047	0.003	68	89885	60.0	73.1	
99 1,2,4,5-Tetrachlorobenzene	216	6.073	6.070	0.003	99	405752	60.0	57.8	
100 2,4,6-Trichlorophenol	196	6.170	6.164	0.006	91	251462	60.0	59.7	
102 2,4,5-Trichlorophenol	196	6.210	6.208	0.002	75	253030	60.0	61.5	
103 1,1'-Biphenyl	154	6.305	6.300	0.005	94	1223610	60.0	56.8	
106 2-Chloronaphthalene	162	6.330	6.325	0.005	97	931335	60.0	56.1	
108 2-Nitroaniline	65	6.419	6.414	0.005	84	325076	60.0	58.8	
111 Dimethyl phthalate	163	6.544	6.539	0.005	48	1040199	60.0	55.0	
112 1,3-Dinitrobenzene	168	6.610	6.603	0.007	75	188804	60.0	59.4	
113 2,6-Dinitrotoluene	165	6.613	6.605	0.008	81	248526	60.0	59.6	
115 Acenaphthylene	152	6.659	6.656	0.003	91	1572858	60.0	56.0	
116 3-Nitroaniline	138	6.753	6.748	0.005	91	287739	60.0	57.7	
119 Acenaphthene	154	6.796	6.791	0.005	92	917588	60.0	55.3	
118 2,4-Dinitrophenol	184	6.855	6.850	0.005	83	209552	120.0	117.4	
120 4-Nitrophenol	109	6.914	6.903	0.011	82	202576	120.0	126.8	
123 Dibenzofuran	168	6.937	6.931	0.006	89	1281988	60.0	54.9	
121 2,4-Dinitrotoluene	165	6.947	6.939	0.008	81	333177	60.0	59.2	
125 2,3,4,6-Tetrachlorophenol	232	7.041	7.038	0.003	68	178944	60.0	65.5	
18 Hexadecane	57	7.095	7.092	0.003	84	753390	60.0	54.0	
127 Diethyl phthalate	149	7.112	7.105	0.007	97	1020739	60.0	54.0	
131 4-Chlorophenyl phenyl ethe	204	7.202	7.196	0.006	77	461166	60.0	57.5	
133 Fluorene	166	7.217	7.212	0.005	81	1080515	60.0	55.2	
132 4-Nitroaniline	138	7.270	7.253	0.018	13	284052	60.0	54.6	
135 4,6-Dinitro-2-methylphenol	198	7.296	7.283	0.013	86	310950	120.0	119.1	
136 N-Nitrosodiphenylamine	169	7.314	7.306	0.008	92	1478156	120.0	106.2	
138 1,2-Diphenylhydrazine	77	7.339	7.334	0.005	95	1165422	60.0	64.3	
142 4-Bromophenyl phenyl ether	248	7.602	7.599	0.003	64	258704	60.0	57.9	
143 Hexachlorobenzene	284	7.665	7.663	0.002	87	282416	60.0	58.9	
144 Atrazine	200	7.744	7.737	0.007	98	273073	60.0	57.0	
147 Pentachlorophenol	266	7.839	7.836	0.003	66	168919	120.0	161.5	
148 n-Octadecane	43	7.851	7.849	0.002	87	381462	60.0	50.5	
149 Phenanthrene	178	8.009	8.004	0.005	87	1455870	60.0	55.4	
150 Anthracene	178	8.053	8.050	0.003	97	1466968	60.0	54.6	
152 Carbazole	167	8.188	8.183	0.005	89	1328698	60.0	54.9	

Report Date: 29-Apr-2015 16:50:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD60.d

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
155 Di-n-butyl phthalate	149	8.440	8.437	0.003	99	1752146	60.0	55.2	
161 Fluoranthene	202	9.001	8.998	0.003	99	1489737	60.0	55.9	
162 Benzidine	184	9.108	9.105	0.003	97	651936	60.0	54.3	
164 Pyrene	202	9.197	9.192	0.005	92	1548666	60.0	55.5	
168 Butyl benzyl phthalate	149	9.699	9.699	0.000	96	825161	60.0	55.8	
171 Bis(2-ethylhexyl) phthalat	149	10.168	10.168	0.000	94	1008976	60.0	52.7	
172 3,3'-Dichlorobenzidine	252	10.175	10.170	0.005	90	476452	60.0	57.2	
173 Benzo[a]anthracene	228	10.206	10.206	0.000	99	1395905	60.0	56.4	
174 Chrysene	228	10.241	10.239	0.002	85	1293989	60.0	54.4	
176 Di-n-octyl phthalate	149	10.708	10.710	-0.002	99	1914700	60.0	55.6	
178 Benzo[b]fluoranthene	252	11.115	11.118	-0.003	95	1458957	60.0	59.9	
179 Benzo[k]fluoranthene	252	11.141	11.141	0.000	95	1313459	60.0	50.6	
180 Benzo[a]pyrene	252	11.414	11.416	-0.002	82	1401140	60.0	56.6	
183 Dibenz(a,h)anthracene	278	12.662	12.654	0.008	49	1350045	60.0	57.4	
182 Indeno[1,2,3-cd]pyrene	276	12.672	12.662	0.010	94	1579369	60.0	55.6	
185 Benzo[g,h,i]perylene	276	13.021	13.014	0.007	94	1368649	60.0	57.4	
S 186 Total Cresols, TCEQ Defini	1				0			110.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

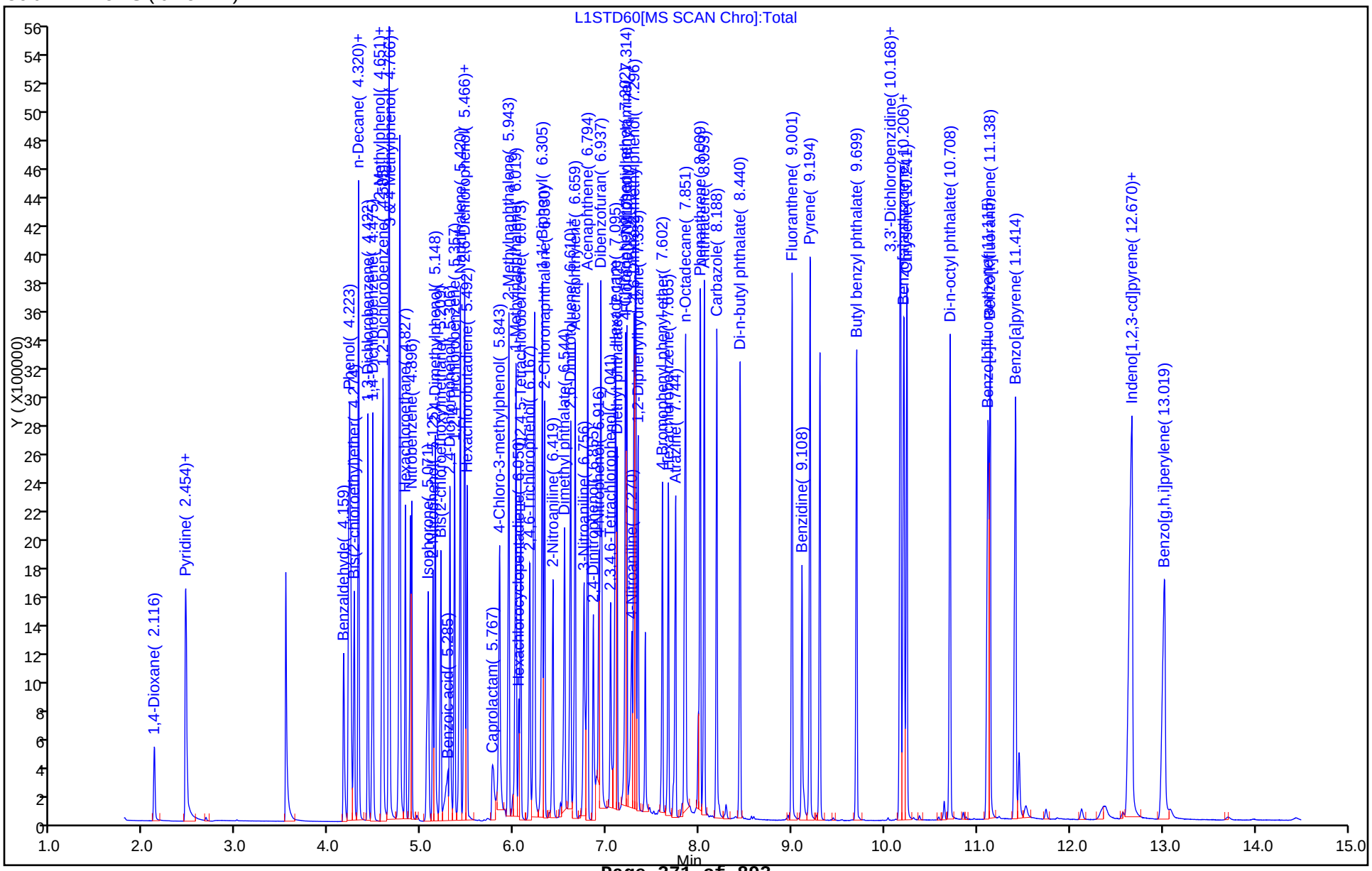
SMlst1_1uLL10_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD60.d				
Injection Date:	29-Apr-2015 13:57:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



Manual Integration/User Assign Peak Report

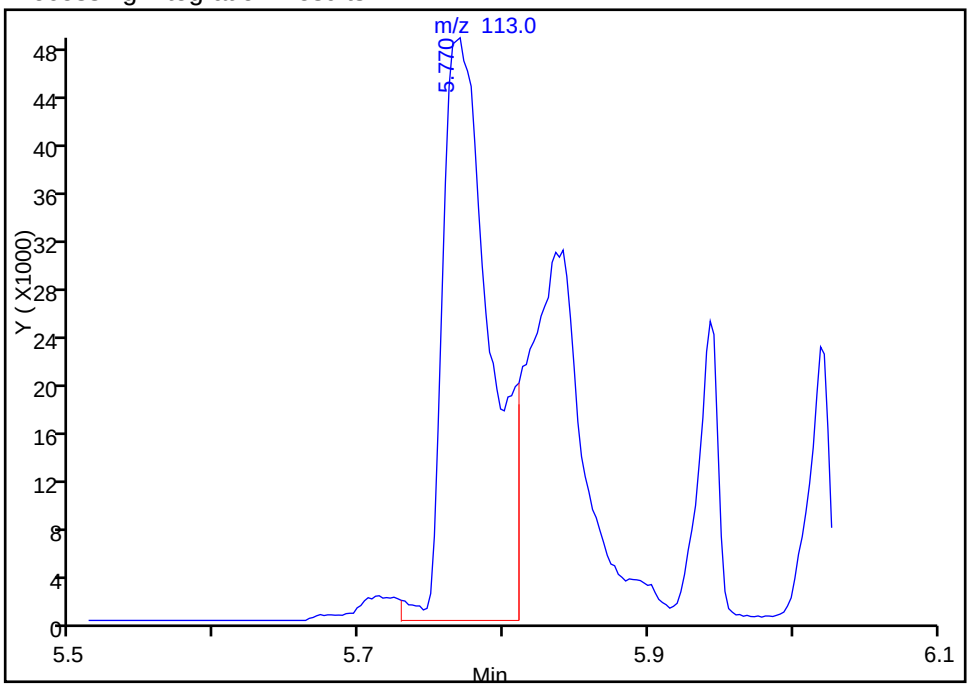
TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD60.d				
Injection Date:	29-Apr-2015 13:57:30	Instrument ID:	CMS23		
Lims ID:	ic				
Client ID:					
Operator ID:	DA	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

90 Caprolactam, CAS: 105-60-2

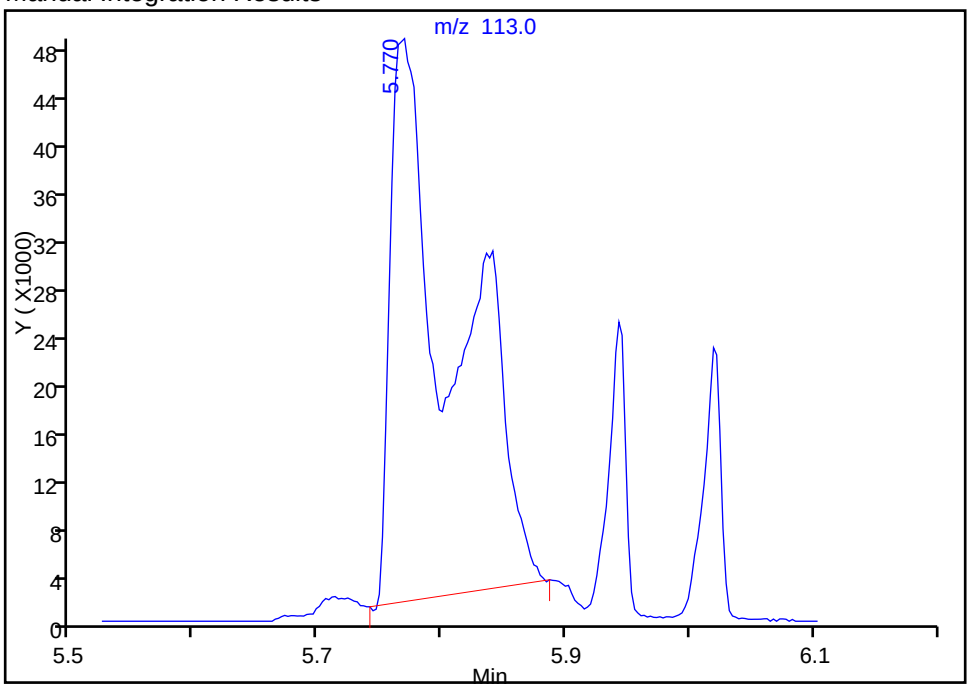
Processing Integration Results

RT: 5.77
Area: 112246
Amount: 41.834933
Amount Units: ug/ml



Manual Integration Results

RT: 5.77
Area: 167460
Amount: 56.193170
Amount Units: ug/ml



Reviewer: rynkarg, 29-Apr-2015 16:43:48
Audit Action: Manually Integrated
Audit Reason: Baseline

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 11
Inject. Date: 29-Apr-2015 14:16:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD70
Misc. Info.: 500-0030573-012
Operator ID: DA Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:48 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:43:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.462	4.460	0.002	95	57646	8.00	8.00	
* 2 Naphthalene-d8	136	5.403	5.400	0.003	96	226952	8.00	8.00	
* 3 Acenaphthene-d10	164	6.766	6.763	0.003	86	123015	8.00	8.00	
* 4 Phenanthrene-d10	188	7.989	7.984	0.005	89	188309	8.00	8.00	
* 5 Chrysene-d12	240	10.219	10.213	0.006	49	187499	8.00	8.00	
* 6 Perylene-d12	264	11.457	11.459	-0.002	93	184610	8.00	8.00	
$ 7 2-Fluorophenol	112	3.537	3.535	0.002	92	641886	70.0	71.0	
$ 8 Phenol-d5	99	4.218	4.208	0.010	94	710111	70.0	69.9	
$ 9 Nitrobenzene-d5	82	4.883	4.875	0.008	93	632829	70.0	68.0	
$ 10 2-Fluorobiphenyl	172	6.223	6.218	0.005	99	1268040	70.0	65.6	
$ 11 2,4,6-Tribromophenol	330	7.418	7.410	0.008	74	147720	70.0	77.2	
$ 12 Terphenyl-d14	244	9.304	9.301	0.003	99	1172629	70.0	67.7	
30 1,4-Dioxane	88	2.116	2.118	-0.002	90	232608	70.0	70.1	
31 N-Nitrosodimethylamine	42	2.465	2.454	0.011	96	236881	70.0	65.3	
32 Pyridine	79	2.455	2.454	0.001	80	593492	70.0	73.4	
45 Benzaldehyde	77	4.162	4.159	0.003	84	227064	70.0	54.1	
46 Phenol	94	4.228	4.218	0.010	89	764538	70.0	70.0	
47 Aniline	93	4.236	4.230	0.006	88	888296	70.0	69.0	
48 Bis(2-chloroethyl)ether	93	4.276	4.269	0.007	89	641269	70.0	70.9	
49 2-Chlorophenol	128	4.325	4.317	0.008	84	630046	70.0	66.3	
126 n-Decane	43	4.320	4.320	0.000	89	434239	70.0	61.9	
51 1,3-Dichlorobenzene	146	4.424	4.419	0.005	97	719420	70.0	68.0	
53 1,4-Dichlorobenzene	146	4.475	4.473	0.002	94	728782	70.0	66.8	
54 Benzyl alcohol	108	4.577	4.569	0.008	83	395752	70.0	73.9	
56 1,2-Dichlorobenzene	146	4.587	4.585	0.002	96	664645	70.0	66.2	
104 Indene	116	4.651	4.646	0.005	76	948462	70.0	62.7	
57 2-Methylphenol	107	4.656	4.648	0.008	85	432992	70.0	62.7	
58 2,2'-oxybis[1-chloropropan	45	4.656	4.651	0.005	88	608911	70.0	58.4	
60 N-Nitrosodi-n-propylamine	70	4.766	4.755	0.011	76	375207	70.0	63.6	
59 3 & 4 Methylphenol	108	4.771	4.760	0.011	81	526675	70.0	65.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
62 Acetophenone	105	4.773	4.763	0.010	85	753593	70.0	63.3	
63 Hexachloroethane	117	4.827	4.824	0.003	93	287514	70.0	67.1	
65 Nitrobenzene	77	4.898	4.890	0.008	93	583289	70.0	66.5	
66 Isophorone	82	5.077	5.064	0.013	87	1116344	70.0	68.2	
69 2-Nitrophenol	139	5.125	5.122	0.003	91	373363	70.0	72.5	
68 2,4-Dimethylphenol	122	5.150	5.145	0.005	84	619191	70.0	72.8	
74 Bis(2-chloroethoxy)methane	93	5.212	5.206	0.006	96	697744	70.0	68.3	
72 Benzoic acid	122	5.293	5.262	0.031	79	190421	70.0	86.4	
76 2,4-Dichlorophenol	162	5.308	5.303	0.005	95	540258	70.0	71.1	
78 1,2,4-Trichlorobenzene	180	5.359	5.357	0.002	92	522323	70.0	68.3	
77 Naphthalene	128	5.421	5.418	0.002	99	1862545	70.0	65.5	
81 4-Chloroaniline	127	5.466	5.461	0.005	82	757579	70.0	64.9	
37 2,6-Dichlorophenol	162	5.471	5.466	0.005	86	501361	70.0	68.8	
83 Hexachlorobutadiene	225	5.492	5.492	0.000	89	262806	70.0	68.2	
90 Caprolactam	113	5.775	5.749	0.026	82	216408	70.0	70.9	M
92 4-Chloro-3-methylphenol	107	5.846	5.838	0.008	93	555722	70.0	69.7	
94 2-Methylnaphthalene	142	5.945	5.940	0.005	83	1275367	70.0	67.1	
97 1-Methylnaphthalene	142	6.022	6.017	0.005	79	1126747	70.0	67.0	
98 Hexachlorocyclopentadiene	237	6.050	6.047	0.003	68	126000	70.0	100.8	
99 1,2,4,5-Tetrachlorobenzene	216	6.073	6.070	0.003	96	499817	70.0	70.0	
100 2,4,6-Trichlorophenol	196	6.170	6.164	0.006	91	322400	70.0	75.2	
102 2,4,5-Trichlorophenol	196	6.213	6.208	0.005	62	320083	70.0	76.4	
103 1,1'-Biphenyl	154	6.305	6.300	0.005	94	1493405	70.0	68.2	
106 2-Chloronaphthalene	162	6.330	6.325	0.005	97	1133944	70.0	67.1	
108 2-Nitroaniline	65	6.422	6.414	0.008	85	380339	70.0	67.6	
111 Dimethyl phthalate	163	6.547	6.539	0.008	71	1250247	70.0	65.0	
112 1,3-Dinitrobenzene	168	6.613	6.603	0.010	76	229677	70.0	71.0	
113 2,6-Dinitrotoluene	165	6.616	6.605	0.011	80	299126	70.0	70.5	
115 Acenaphthylene	152	6.661	6.656	0.005	91	1929382	70.0	67.6	
116 3-Nitroaniline	138	6.758	6.748	0.010	92	349315	70.0	68.9	
119 Acenaphthene	154	6.796	6.791	0.005	92	1123438	70.0	66.5	
118 2,4-Dinitrophenol	184	6.858	6.850	0.008	83	275663	140.0	139.8	
120 4-Nitrophenol	109	6.919	6.903	0.016	78	245394	140.0	151.0	
123 Dibenzofuran	168	6.937	6.931	0.006	88	1574002	70.0	66.3	
121 2,4-Dinitrotoluene	165	6.949	6.939	0.010	81	403183	70.0	70.5	
125 2,3,4,6-Tetrachlorophenol	232	7.041	7.038	0.003	67	200998	70.0	72.3	
18 Hexadecane	57	7.095	7.092	0.003	84	900188	70.0	63.4	
127 Diethyl phthalate	149	7.115	7.105	0.010	97	1208511	70.0	62.8	
131 4-Chlorophenyl phenyl ethe	204	7.204	7.196	0.008	92	529091	70.0	64.9	
133 Fluorene	166	7.219	7.212	0.007	80	1246737	70.0	62.6	
132 4-Nitroaniline	138	7.276	7.253	0.024	45	381374	70.0	72.0	
135 4,6-Dinitro-2-methylphenol	198	7.301	7.283	0.018	58	372949	140.0	138.3	
136 N-Nitrosodiphenylamine	169	7.316	7.306	0.010	92	1747998	140.0	122.8	
138 1,2-Diphenylhydrazine	77	7.342	7.334	0.008	93	1182919	70.0	64.1	
142 4-Bromophenyl phenyl ether	248	7.602	7.599	0.003	63	312518	70.0	68.4	
143 Hexachlorobenzene	284	7.668	7.663	0.005	86	339525	70.0	69.2	
144 Atrazine	200	7.747	7.737	0.010	98	335356	70.0	68.5	
147 Pentachlorophenol	266	7.839	7.836	0.003	65	230254	140.0	215.2	
148 n-Octadecane	43	7.851	7.849	0.002	88	434856	70.0	56.3	
149 Phenanthrene	178	8.012	8.004	0.008	86	1762443	70.0	65.6	
150 Anthracene	178	8.055	8.050	0.005	97	1760485	70.0	64.0	
152 Carbazole	167	8.190	8.183	0.007	88	1670936	70.0	67.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
155 Di-n-butyl phthalate	149	8.440	8.437	0.003	98	2106441	70.0	64.9	
161 Fluoranthene	202	9.003	8.998	0.005	99	1789581	70.0	65.7	
162 Benzidine	184	9.110	9.105	0.005	93	730166	70.0	59.5	
164 Pyrene	202	9.199	9.192	0.007	95	1859917	70.0	65.3	
168 Butyl benzyl phthalate	149	9.701	9.699	0.002	96	992420	70.0	65.8	
171 Bis(2-ethylhexyl) phthalat	149	10.170	10.168	0.002	94	1182786	70.0	60.5	
172 3,3'-Dichlorobenzidine	252	10.178	10.170	0.008	89	572314	70.0	67.3	
173 Benzo[a]anthracene	228	10.208	10.206	0.002	94	1713381	70.0	67.8	
174 Chrysene	228	10.244	10.239	0.005	86	1567013	70.0	64.5	
176 Di-n-octyl phthalate	149	10.710	10.710	0.000	99	2325895	70.0	66.0	
178 Benzo[b]fluoranthene	252	11.121	11.118	0.003	95	1905442	70.0	76.0	
179 Benzo[k]fluoranthene	252	11.144	11.141	0.003	99	1338833	70.0	50.1	
180 Benzo[a]pyrene	252	11.419	11.416	0.003	86	1731594	70.0	67.9	
183 Dibenz(a,h)anthracene	278	12.667	12.654	0.013	50	1717868	70.0	70.9	
182 Indeno[1,2,3-cd]pyrene	276	12.680	12.662	0.018	90	2004602	70.0	68.6	
185 Benzo[g,h,i]perylene	276	13.032	13.014	0.018	93	1736178	70.0	70.7	
S 186 Total Cresols, TCEQ Defini	1				0			127.8	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

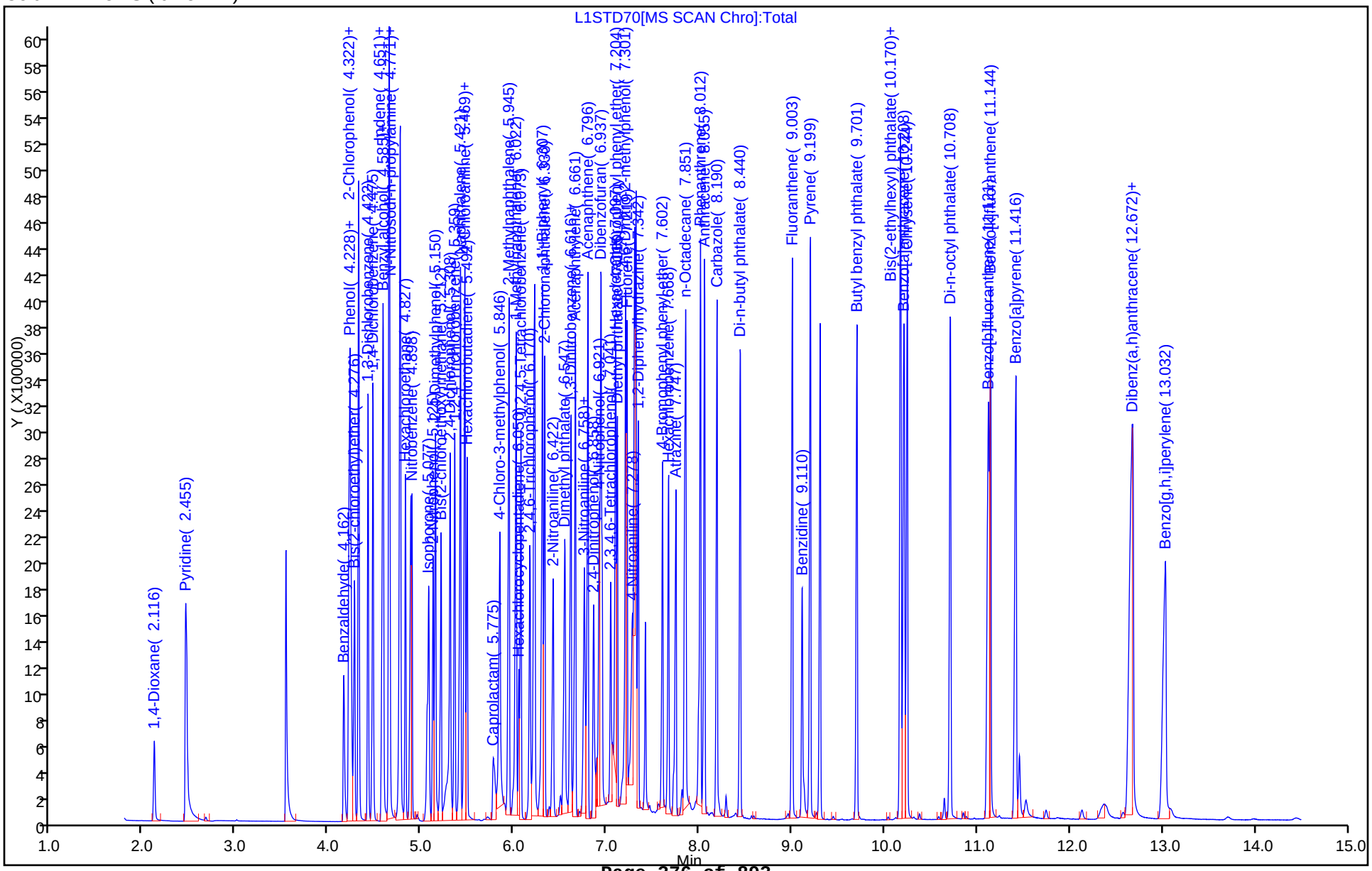
SMlst1_1uLL11_00014 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:48 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Injection Date:	29-Apr-2015 14:16:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

Column: ZB5MS (0.25 mm)



Manual Integration/User Assign Peak Report

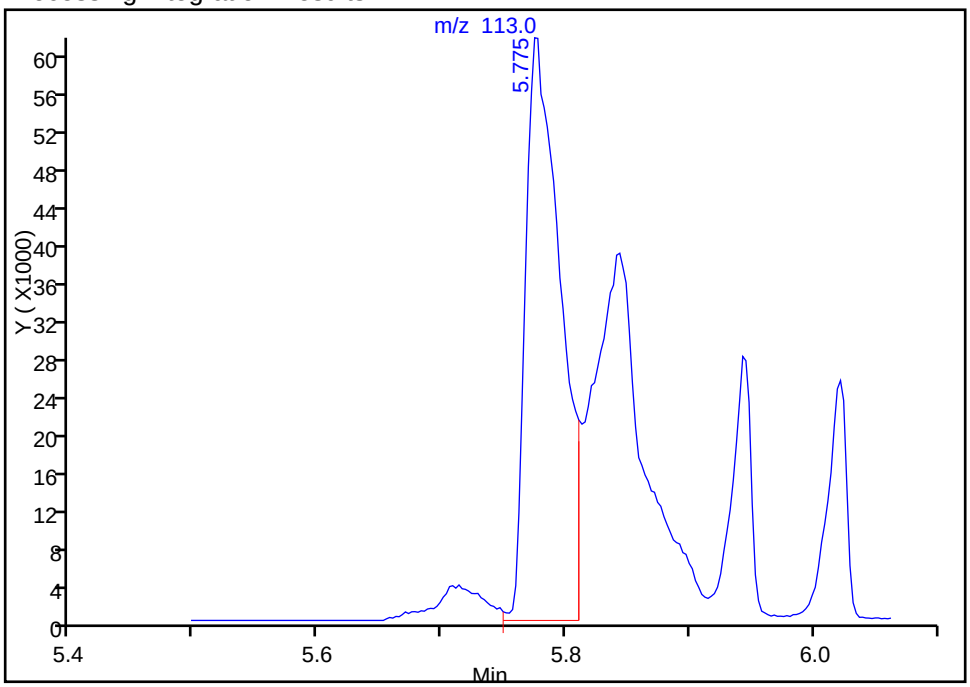
TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Injection Date:	29-Apr-2015 14:16:30	Instrument ID:	CMS23		
Lims ID:	ic				
Client ID:					
Operator ID:	DA	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column:	ZB5MS (0.25 mm)	Detector	MS SCAN		

90 Caprolactam, CAS: 105-60-2

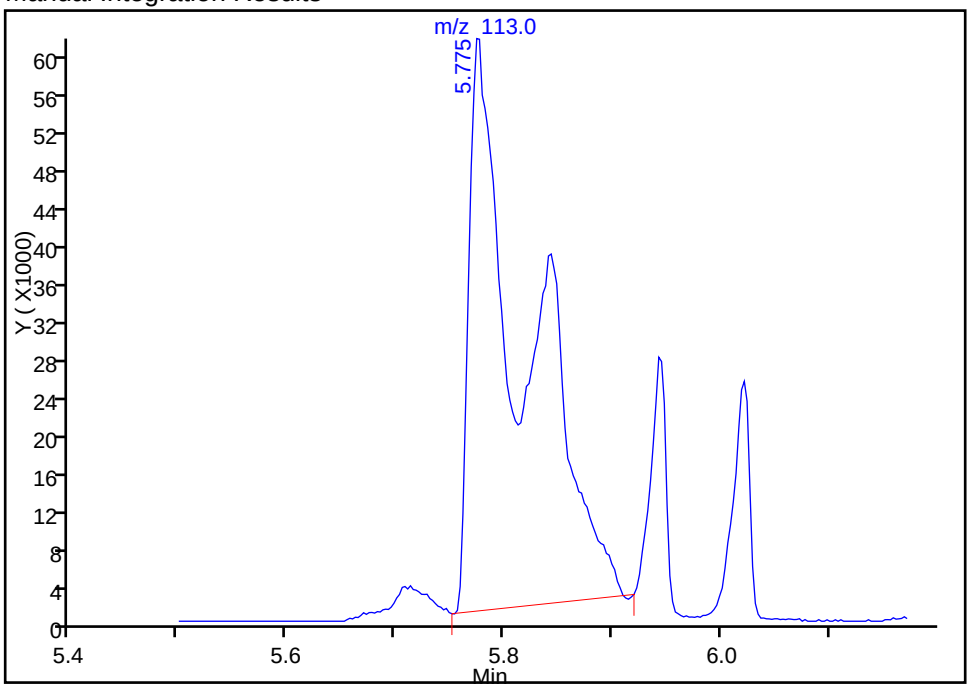
Processing Integration Results

RT: 5.77
Area: 121275
Amount: 47.471325
Amount Units: ug/ml



Manual Integration Results

RT: 5.77
Area: 216408
Amount: 70.880480
Amount Units: ug/ml



Reviewer: rynkarg, 29-Apr-2015 16:43:32
Audit Action: Manually Integrated
Audit Reason: Baseline

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID (1): CCVIS 500-286703/2 Instrument ID (1): CMS20

GC Column (1): ZB5MS ID: 0.25(mm) Date Analyzed (1): 05/05/2015 09:40

ANALYTE	RT	RESOLUTION (%)
2-Fluorophenol (Surr)	3.79	100.0
Phenol-d5 (Surr)	4.46	100.0
Nitrobenzene-d5 (Surr)	5.14	100.0
Naphthalene	5.69	100.0
2-Methylnaphthalene	6.22	100.0
1-Methylnaphthalene	6.30	100.0
2-Fluorobiphenyl (Surr)	6.50	100.0
Acenaphthylene	6.95	100.0
Acenaphthene	7.09	100.0
Fluorene	7.51	100.0
2,4,6-Tribromophenol (Surr)	7.70	100.0
Phenanthrene	8.30	100.0
Anthracene	8.35	100.0
Fluoranthene	9.30	100.0
Pyrene	9.49	100.0
Terphenyl-d14 (Surr)	9.59	100.0
Benzo[a]anthracene	10.49	100.0
Chrysene	10.52	100.0
Benzo[b]fluoranthene	11.42	60.30
Benzo[k]fluoranthene	11.45	100.0
Benzo[a]pyrene	11.76	100.0
Dibenz(a,h)anthracene	13.21	100.0
Indeno[1,2,3-cd]pyrene	13.22	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID (1): CCVIS 500-286746/2 Instrument ID (1): CMS21

GC Column (1): ZB5MS ID: 0.25(mm) Date Analyzed (1): 05/05/2015 12:34

ANALYTE	RT	RESOLUTION (%)
2-Fluorophenol (Surr)	3.96	100.0
Phenol-d5 (Surr)	4.61	100.0
Nitrobenzene-d5 (Surr)	5.29	100.0
Naphthalene	5.85	100.0
2-Methylnaphthalene	6.38	100.0
1-Methylnaphthalene	6.47	100.0
2-Fluorobiphenyl	6.66	100.0
Acenaphthylene	7.11	100.0
Acenaphthene	7.25	100.0
Fluorene	7.67	100.0
2,4,6-Tribromophenol (Surr)	7.87	100.0
Phenanthrene	8.47	100.0
Anthracene	8.52	100.0
Fluoranthene	9.47	100.0
Pyrene	9.66	100.0
Terphenyl-d14 (Surr)	9.75	100.0
Benzo[a]anthracene	10.66	100.0
Chrysene	10.69	100.0
Benzo[b]fluoranthene	11.63	36.80
Benzo[k]fluoranthene	11.66	100.0
Benzo[a]pyrene	11.99	100.0
Indeno[1,2,3-cd]pyrene	13.52	100.0
Dibenz(a,h)anthracene	13.52	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID (1): CCVIS 500-286895/2 Instrument ID (1): CMS23

GC Column (1): ZB5MS ID: 0.25(mm) Date Analyzed (1): 05/06/2015 09:36

ANALYTE	RT	RESOLUTION (%)
2-Fluorophenol (Surr)	3.47	100.0
Phenol-d5 (Surr)	4.13	100.0
Nitrobenzene-d5 (Surr)	4.78	100.0
Naphthalene	5.32	100.0
2-Methylnaphthalene	5.83	100.0
1-Methylnaphthalene	5.91	100.0
2-Fluorobiphenyl	6.11	100.0
Acenaphthylene	6.54	100.0
Acenaphthene	6.68	100.0
Fluorene	7.10	100.0
2,4,6-Tribromophenol (Surr)	7.30	100.0
Phenanthrene	7.89	100.0
Anthracene	7.93	100.0
Fluoranthene	8.88	100.0
Pyrene	9.07	100.0
Terphenyl-d14 (Surr)	9.18	100.0
Benzo[a]anthracene	10.08	100.0
Chrysene	10.12	100.0
Benzo[b]fluoranthene	10.99	32.90
Benzo[k]fluoranthene	11.01	100.0
Benzo[a]pyrene	11.27	100.0
Dibenz(a,h)anthracene	12.44	100.0
Indeno[1,2,3-cd]pyrene	12.45	100.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: ICV 500-281696/13 Calibration Date: 03/30/2015 16:43

Instrument ID: CMS20 Calib Start Date: 03/30/2015 12:14

GC Column: ZB5MS ID: 0.25(mm) Calib End Date: 03/30/2015 16:18

Lab File ID: L1ICV.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	0.9710	0.9505	0.7000	39.2	40.0	-2.1	30.0
2-Methylnaphthalene	Ave	0.6702	0.6242	0.4000	37.3	40.0	-6.9	30.0
1-Methylnaphthalene	Ave	0.5860	0.5914	0.0100	40.4	40.0	0.9	30.0
Acenaphthylene	Ave	1.794	1.743	0.9000	38.9	40.0	-2.8	30.0
Acenaphthene	Ave	1.109	1.085	0.9000	39.1	40.0	-2.2	30.0
Fluorene	Ave	1.266	1.207	0.9000	38.1	40.0	-4.7	30.0
Phenanthrene	Ave	1.002	0.9499	0.7000	37.9	40.0	-5.2	30.0
Anthracene	Ave	1.003	0.9513	0.7000	37.9	40.0	-5.1	30.0
Fluoranthene	Ave	1.112	1.073	0.6000	38.6	40.0	-3.6	30.0
Pyrene	Ave	1.222	1.168	0.6000	38.2	40.0	-4.4	30.0
Benzo[a]anthracene	Lin1		1.070	0.8000	42.8	40.0	7.0	30.0
Chrysene	Lin1		1.028	0.7000	43.9	40.0	9.7	30.0
Benzo[b]fluoranthene	Ave	1.113	1.082	0.7000	38.9	40.0	-2.8	30.0
Benzo[k]fluoranthene	Ave	1.150	1.018	0.7000	35.4	40.0	-11.5	30.0
Benzo[a]pyrene	Ave	1.028	1.020	0.7000	39.7	40.0	-0.7	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.095	1.118	0.5000	40.9	40.0	2.1	30.0
Dibenz(a,h)anthracene	Ave	0.9342	0.9701	0.4000	41.5	40.0	3.8	30.0
Benzo[g,h,i]perylene	Ave	0.9681	1.010	0.5000	41.7	40.0	4.3	30.0

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1ICV.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 30-Mar-2015 16:43:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV LST1
Misc. Info.: 500-0029969-013
Operator ID: DA Instrument ID: CMS20
Sublist:

Method: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 31-Mar-2015 08:18:48 Calib Date: 30-Mar-2015 16:18:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: rynkarg Date: 31-Mar-2015 08:09:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.194	5.194	0.000	84	73551	8.00	8.00	
* 2 Naphthalene-d8	136	6.156	6.156	0.000	91	287835	8.00	8.00	
* 3 Acenaphthene-d10	164	7.566	7.565	0.001	74	167745	8.00	8.00	
* 4 Phenanthrene-d10	188	8.809	8.808	0.000	90	312415	8.00	8.00	
* 5 Chrysene-d12	240	11.066	11.061	0.005	97	299986	8.00	8.00	
* 6 Perylene-d12	264	12.718	12.713	0.005	97	308199	8.00	8.00	
13 1,4-Dioxane	88	3.027	3.018	0.009	97	181713	40.0	39.9	
15 N-Nitrosodimethylamine	42	3.280	3.275	0.005	77	317588	40.0	35.8	
16 Pyridine	79	3.313	3.304	0.009	82	499944	40.0	44.1	
20 Benzaldehyde	77	4.880	4.880	0.000	27	14305	40.0	2.02	7
30 Phenol	94	4.889	4.889	0.000	59	562307	40.0	43.8	
33 Aniline	93	4.951	4.951	0.000	85	673450	40.0	40.8	
34 Bis(2-chloroethyl)ether	93	4.975	4.975	0.000	86	411944	40.0	39.7	
29 n-Decane	43	5.032	5.032	0.000	92	534400	40.0	35.4	
36 2-Chlorophenol	128	5.042	5.037	0.005	97	437569	40.0	41.0	
38 1,3-Dichlorobenzene	146	5.156	5.156	0.000	96	507844	40.0	39.7	
39 1,4-Dichlorobenzene	146	5.204	5.204	0.000	91	512764	40.0	39.6	
41 Benzyl alcohol	108	5.275	5.270	0.005	89	311057	40.0	41.3	
42 1,2-Dichlorobenzene	146	5.323	5.323	0.000	95	481707	40.0	40.4	
43 2-Methylphenol	107	5.332	5.332	0.000	91	374246	40.0	41.6	
44 2,2'-oxybis[1-chloropropan	45	5.361	5.361	0.000	76	819796	40.0	39.9	
19 Indene	116	5.385	5.385	0.001	76	761795	40.0	39.5	
46 3 & 4 Methylphenol	108	5.447	5.442	0.005	97	462235	40.0	41.3	
47 N-Nitrosodi-n-propylamine	70	5.470	5.465	0.005	84	342814	40.0	41.8	
49 Acetophenone	105	5.480	5.480	0.000	83	631380	40.0	40.3	
51 Hexachloroethane	117	5.575	5.575	0.000	91	221674	40.0	41.9	
52 Nitrobenzene	77	5.613	5.613	0.000	1	515244	40.0	41.3	
54 Isophorone	82	5.789	5.785	0.005	98	917789	40.0	41.4	
55 2,4-Dimethylphenol	122	5.847	5.842	0.005	91	432875	40.0	37.7	
56 2-Nitrophenol	139	5.851	5.851	0.000	89	248166	40.0	42.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
58 Benzoic acid	122	5.928	5.908	0.020	40	303953	40.0	42.0	
59 Bis(2-chloroethoxy)methane	93	5.923	5.923	0.000	94	511367	40.0	39.8	
62 2,4-Dichlorophenol	162	6.028	6.027	0.001	95	411102	40.0	41.0	
64 1,2,4-Trichlorobenzene	180	6.104	6.099	0.005	93	442282	40.0	40.0	
65 Naphthalene	128	6.175	6.175	0.000	84	1367862	40.0	39.2	
66 4-Chloroaniline	127	6.194	6.194	0.000	69	464653	40.0	34.4	
67 2,6-Dichlorophenol	162	6.204	6.204	0.000	77	383395	40.0	40.4	
69 Hexachlorobutadiene	225	6.247	6.246	0.001	93	263872	40.0	41.4	
28 Caprolactam	113	6.485	6.475	0.010	80	157446	40.0	43.2	
71 4-Chloro-3-methylphenol	107	6.547	6.546	0.001	92	439698	40.0	41.0	
76 2-Methylnaphthalene	142	6.713	6.713	0.000	89	898362	40.0	37.3	
31 1-Methylnaphthalene	142	6.794	6.794	0.000	88	851174	40.0	40.4	
77 Hexachlorocyclopentadiene	237	6.828	6.827	0.001	80	338457	40.0	44.6	
78 1,2,4,5-Tetrachlorobenzene	216	6.842	6.842	0.000	96	432492	40.0	41.2	
81 2,4,6-Trichlorophenol	196	6.923	6.923	0.000	91	329024	40.0	45.3	
83 2,4,5-Trichlorophenol	196	6.956	6.951	0.005	95	336832	40.0	43.8	
40 1,1'-Biphenyl	154	7.080	7.080	0.000	89	1147233	40.0	41.7	
61 2-Chloronaphthalene	162	7.113	7.108	0.005	96	875084	40.0	40.3	
85 2-Nitroaniline	65	7.180	7.175	0.005	82	315351	40.0	43.6	
88 Dimethyl phthalate	163	7.304	7.299	0.005	97	1053321	40.0	41.8	
89 1,3-Dinitrobenzene	168	7.347	7.342	0.005	83	181110	40.0	46.2	
104 2,6-Dinitrotoluene	165	7.366	7.361	0.005	85	244201	40.0	44.0	
93 Acenaphthylene	152	7.456	7.456	0.000	92	1461806	40.0	38.9	
95 3-Nitroaniline	138	7.513	7.508	0.005	91	251463	40.0	40.7	
98 2,4-Dinitrophenol	184	7.599	7.594	0.005	41	287669	80.0	93.7	
99 Acenaphthene	154	7.594	7.594	0.000	93	910104	40.0	39.1	
100 4-Nitrophenol	109	7.618	7.613	0.005	97	302747	80.0	81.1	
90 2,4-Dinitrotoluene	165	7.699	7.694	0.005	69	336787	40.0	45.6	
105 Dibenzofuran	168	7.737	7.737	0.000	89	1324898	40.0	40.2	
107 2,3,4,6-Tetrachlorophenol	232	7.823	7.818	0.005	70	280780	40.0	45.0	
186 Hexadecane	57	7.861	7.861	0.000	88	685242	40.0	39.5	
110 Diethyl phthalate	149	7.880	7.875	0.005	98	1018100	40.0	39.6	
113 4-Chlorophenyl phenyl ethe	204	7.999	7.994	0.005	80	518909	40.0	42.0	
115 Fluorene	166	8.023	8.018	0.005	75	1012459	40.0	38.1	
116 4-Nitroaniline	138	8.032	8.023	0.009	39	251027	40.0	41.0	
117 4,6-Dinitro-2-methylphenol	198	8.047	8.037	0.010	67	388407	80.0	89.2	
120 N-Nitrosodiphenylamine	169	8.099	8.094	0.005	92	1431429	80.0	75.6	
121 1,2-Diphenylhydrazine	77	8.132	8.132	0.000	98	1060707	40.0	42.5	
127 4-Bromophenyl phenyl ether	248	8.408	8.408	0.000	65	306938	40.0	42.7	
128 Hexachlorobenzene	284	8.480	8.480	0.000	83	332021	40.0	41.6	
72 Atrazine	200	8.513	8.513	0.000	64	274769	40.0	38.6	
123 n-Octadecane	43	8.628	8.627	0.001	96	438397	40.0	32.6	
130 Pentachlorophenol	266	8.637	8.632	0.005	47	410475	80.0	90.8	
134 Phenanthrene	178	8.832	8.832	0.000	89	1483848	40.0	37.9	
135 Anthracene	178	8.880	8.875	0.005	97	1486006	40.0	37.9	
136 Carbazole	167	8.994	8.994	0.000	83	1437752	40.0	39.6	
140 Di-n-butyl phthalate	149	9.232	9.232	0.000	99	1783941	40.0	40.4	
146 Fluoranthene	202	9.837	9.837	0.000	98	1675488	40.0	38.6	
147 Benzidine	184	9.918	9.918	0.000	89	388830	40.0	20.0	
149 Pyrene	202	10.037	10.037	0.000	95	1751324	40.0	38.2	
155 Butyl benzyl phthalate	149	10.509	10.504	0.005	96	802233	40.0	41.0	
161 Bis(2-ethylhexyl) phthalat	149	10.966	10.966	0.000	96	1074071	40.0	40.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
162 3,3'-Dichlorobenzidine	252	10.999	10.994	0.005	88	528450	40.0	40.3	
163 Benzo[a]anthracene	228	11.056	11.051	0.005	98	1604783	40.0	42.8	
164 Chrysene	228	11.089	11.085	0.004	88	1541786	40.0	43.9	
166 Di-n-octyl phthalate	149	11.599	11.594	0.005	99	1989280	40.0	46.2	
169 Benzo[b]fluoranthene	252	12.213	12.204	0.009	94	1667512	40.0	38.9	
170 Benzo[k]fluoranthene	252	12.247	12.237	0.010	99	1568246	40.0	35.4	
171 Benzo[a]pyrene	252	12.656	12.647	0.010	82	1571716	40.0	39.7	
174 Indeno[1,2,3-cd]pyrene	276	14.537	14.527	0.010	94	1723348	40.0	40.9	
175 Dibenz(a,h)anthracene	278	14.566	14.547	0.019	66	1494897	40.0	41.5	
176 Benzo[g,h,i]perylene	276	15.109	15.085	0.024	93	1556360	40.0	41.7	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

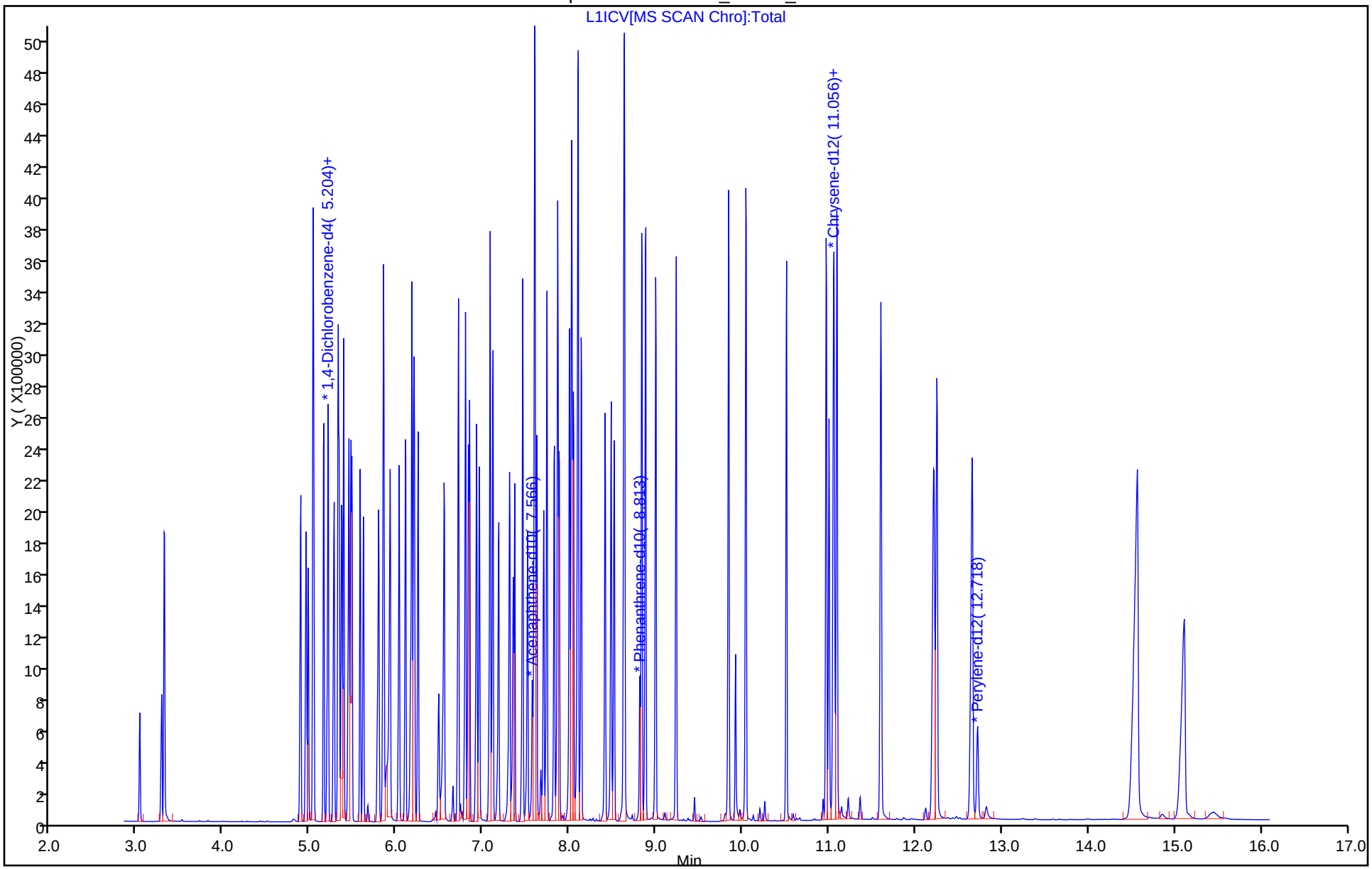
Reagents:

SMlst1_ICV_00012 Amount Added: 1.00 Units: mL

Report Date: 31-Mar-2015 08:18:50 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1ICV.D				
Injection Date:	30-Mar-2015 16:43:30	Instrument ID:	CMS20	Operator ID:	DA
Lims ID:	icv			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCVIS 500-286703/2 Calibration Date: 05/05/2015 09:40

Instrument ID: CMS20 Calib Start Date: 03/30/2015 12:14

GC Column: ZB5MS ID: 0.25(mm) Calib End Date: 03/30/2015 16:18

Lab File ID: 20C0505.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	0.9710	0.9347	0.7000	38.5	40.0	-3.7	20.0
2-Methylnaphthalene	Ave	0.6702	0.6361	0.4000	38.0	40.0	-5.1	20.0
1-Methylnaphthalene	Ave	0.5860	0.5606	0.0100	38.3	40.0	-4.3	20.0
Acenaphthylene	Ave	1.794	1.925	0.9000	42.9	40.0	7.3	20.0
Acenaphthene	Ave	1.109	1.139	0.9000	41.1	40.0	2.7	20.0
Fluorene	Ave	1.266	1.393	0.9000	44.0	40.0	10.0	20.0
Phenanthrene	Ave	1.002	1.010	0.7000	40.3	40.0	0.9	20.0
Anthracene	Ave	1.003	0.995	0.7000	39.7	40.0	-0.7	20.0
Fluoranthene	Ave	1.112	1.087	0.6000	39.1	40.0	-2.3	20.0
Pyrene	Ave	1.222	1.107	0.6000	36.2	40.0	-9.4	20.0
Benzo[a]anthracene	Lin1		1.087	0.8000	43.5	40.0	8.7	20.0
Chrysene	Lin1		0.9440	0.7000	40.3	40.0	0.7	20.0
Benzo[b]fluoranthene	Ave	1.113	1.138	0.7000	40.9	40.0	2.2	20.0
Benzo[k]fluoranthene	Ave	1.150	1.005	0.7000	35.0	40.0	-12.6	20.0
Benzo[a]pyrene	Ave	1.028	1.013	0.7000	39.4	40.0	-1.4	20.0
Dibenz(a,h)anthracene	Ave	0.9342	0.9525	0.4000	40.8	40.0	2.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.095	1.120	0.5000	40.9	40.0	2.3	20.0
Benzo[g,h,i]perylene	Ave	0.9681	0.9701	0.5000	40.1	40.0	0.2	20.0
2-Fluorophenol (Surr)	Ave	1.203	1.144	0.0100	38.0	40.0	-4.9	20.0
Phenol-d5 (Surr)	Ave	1.395	1.369	0.0100	39.3	40.0	-1.8	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3596	0.4083	0.0100	45.4	40.0	13.5	20.0
2-Fluorobiphenyl (Surr)	Ave	1.254	1.378	0.0100	43.9	40.0	9.8	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1774	0.2269	0.0100	51.2	40.0	27.9*	20.0
Terphenyl-d14 (Surr)	Ave	0.7336	0.6913	0.0100	37.7	40.0	-5.8	20.0

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20C0505.D
Lims ID: ccvis
Client ID:
Sample Type: CCVIS
Inject. Date: 05-May-2015 09:40:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 500-0030673-002
Operator ID: TW Instrument ID: CMS20
Sublist: chrom-20-8270*sub105

Method: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 06-May-2015 11:11:42 Calib Date: 31-Mar-2015 12:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150331-29992.b\20C0331a.D

Column 1 : Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: hamnerb Date: 06-May-2015 11:11:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.727	4.727	0.000	97	59165	8.00	8.00	
* 2 Naphthalene-d8	136	5.675	5.675	0.000	97	191136	8.00	8.00	
* 3 Acenaphthene-d10	164	7.056	7.056	0.000	85	97979	8.00	8.00	s
* 4 Phenanthrene-d10	188	8.285	8.285	0.000	97	196293	8.00	8.00	s
* 5 Chrysene-d12	240	10.499	10.499	0.000	97	199019	8.00	8.00	s
* 6 Perylene-d12	264	11.808	11.808	0.000	95	203913	8.00	8.00	s
$ 7 2-Fluorophenol	112	3.794	3.794	0.000	98	338467	40.0	38.0	
$ 8 Phenol-d5	99	4.456	4.456	0.000	59	405008	40.0	39.3	
$ 9 Nitrobenzene-d5	82	5.142	5.142	0.000	93	390190	40.0	45.4	
$ 10 2-Fluorobiphenyl	172	6.499	6.499	0.000	99	674853	40.0	43.9	
$ 11 2,4,6-Tribromophenol	330	7.704	7.704	0.000	70	111154	40.0	51.2	
$ 12 Terphenyl-d14	244	9.594	9.594	0.000	98	687917	40.0	37.7	
13 1,4-Dioxane	88	2.484	2.484	0.000	97	120771	40.0	32.9	
15 N-Nitrosodimethylamine	42	2.780	2.780	0.000	80	240060	40.0	33.6	
16 Pyridine	79	2.789	2.789	0.000	84	366609	40.0	40.2	
20 Benzaldehyde	77	4.423	4.423	0.000	70	33611	40.0	5.89	
30 Phenol	94	4.465	4.465	0.000	88	420021	40.0	40.7	
33 Aniline	93	4.499	4.499	0.000	82	474578	40.0	35.8	
34 Bis(2-chloroethyl)ether	93	4.532	4.532	0.000	88	318205	40.0	38.1	
29 n-Decane	43	4.580	4.580	0.000	92	465569	40.0	38.4	
36 2-Chlorophenol	128	4.580	4.580	0.000	77	348666	40.0	40.6	
38 1,3-Dichlorobenzene	146	4.689	4.689	0.000	96	400963	40.0	39.0	
39 1,4-Dichlorobenzene	146	4.742	4.742	0.000	91	408381	40.0	39.2	
41 Benzyl alcohol	108	4.827	4.827	0.000	83	240233	40.0	39.6	
42 1,2-Dichlorobenzene	146	4.856	4.856	0.000	91	391906	40.0	40.9	
43 2-Methylphenol	107	4.899	4.899	0.000	92	292599	40.0	40.4	
44 2,2'-oxybis[1-chloropropan	45	4.913	4.913	0.000	97	627895	40.0	37.9	
19 Indene	116	4.918	4.918	0.000	79	643461	40.0	41.5	
46 3 & 4 Methylphenol	108	5.013	5.013	0.000	89	360783	40.0	40.1	
47 N-Nitrosodi-n-propylamine	70	5.018	5.018	0.000	81	269898	40.0	40.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
49 Acetophenone	105	5.027	5.027	0.000	94	492992	40.0	39.1	
51 Hexachloroethane	117	5.099	5.099	0.000	85	169697	40.0	39.9	
52 Nitrobenzene	77	5.156	5.156	0.000	1	375930	40.0	45.4	
54 Isophorone	82	5.332	5.332	0.000	94	647316	40.0	44.0	
56 2-Nitrophenol	139	5.389	5.389	0.000	89	192338	40.0	49.1	
55 2,4-Dimethylphenol	122	5.399	5.399	0.000	95	319328	40.0	41.9	
59 Bis(2-chloroethoxy)methane	93	5.465	5.465	0.000	93	378961	40.0	44.5	
58 Benzoic acid	122	5.504	5.504	0.000	95	130935	40.0	27.3	
62 2,4-Dichlorophenol	162	5.565	5.565	0.000	95	267187	40.0	40.1	
64 1,2,4-Trichlorobenzene	180	5.627	5.627	0.000	93	274130	40.0	37.3	
65 Naphthalene	128	5.694	5.694	0.000	96	893299	40.0	38.5	
66 4-Chloroaniline	127	5.727	5.727	0.000	67	376647	40.0	42.0	
67 2,6-Dichlorophenol	162	5.732	5.732	0.000	70	252979	40.0	40.2	
69 Hexachlorobutadiene	225	5.765	5.765	0.000	90	161379	40.0	38.1	
28 Caprolactam	113	6.018	6.018	0.000	78	91986	40.0	38.0	
71 4-Chloro-3-methylphenol	107	6.094	6.094	0.000	96	271827	40.0	38.2	
76 2-Methylnaphthalene	142	6.223	6.223	0.000	90	607932	40.0	38.0	
31 1-Methylnaphthalene	142	6.304	6.304	0.000	89	535730	40.0	38.3	
77 Hexachlorocyclopentadiene	237	6.332	6.332	0.000	79	121902	40.0	27.5	
78 1,2,4,5-Tetrachlorobenzene	216	6.351	6.351	0.000	96	284064	40.0	46.3	
81 2,4,6-Trichlorophenol	196	6.442	6.442	0.000	91	180552	40.0	42.5	
83 2,4,5-Trichlorophenol	196	6.475	6.475	0.000	92	196330	40.0	43.8	
40 1,1'-Biphenyl	154	6.585	6.585	0.000	88	739485	40.0	46.0	
61 2-Chloronaphthalene	162	6.613	6.613	0.000	96	555791	40.0	43.9	
85 2-Nitroaniline	65	6.689	6.689	0.000	78	196960	40.0	46.7	
88 Dimethyl phthalate	163	6.818	6.818	0.000	98	622378	40.0	42.3	
89 1,3-Dinitrobenzene	168	6.870	6.870	0.000	78	103294	40.0	45.1	
104 2,6-Dinitrotoluene	165	6.880	6.880	0.000	89	142629	40.0	44.0	
93 Acenaphthylene	152	6.951	6.951	0.000	91	943183	40.0	42.9	
95 3-Nitroaniline	138	7.023	7.023	0.000	83	167625	40.0	46.4	
99 Acenaphthene	154	7.085	7.085	0.000	90	558156	40.0	41.1	
98 2,4-Dinitrophenol	184	7.113	7.113	0.000	55	204272	80.0	113.9	
100 4-Nitrophenol	109	7.161	7.161	0.000	68	163081	80.0	74.8	
90 2,4-Dinitrotoluene	165	7.213	7.213	0.000	82	193727	40.0	44.9	
105 Dibenzofuran	168	7.227	7.227	0.000	89	831710	40.0	43.2	
107 2,3,4,6-Tetrachlorophenol	232	7.323	7.323	0.000	70	165266	40.0	45.4	
186 Hexadecane	57	7.370	7.370	0.000	85	503629	40.0	49.6	
110 Diethyl phthalate	149	7.385	7.385	0.000	98	654994	40.0	43.6	
113 4-Chlorophenyl phenyl ethe	204	7.489	7.489	0.000	94	311734	40.0	43.1	
115 Fluorene	166	7.508	7.508	0.000	82	682188	40.0	44.0	
116 4-Nitroaniline	138	7.532	7.532	0.000	1	174433	40.0	48.7	
117 4,6-Dinitro-2-methylphenol	198	7.556	7.556	0.000	88	246540	80.0	90.2	
120 N-Nitrosodiphenylamine	169	7.594	7.594	0.000	90	980001	80.0	82.4	
121 1,2-Diphenylhydrazine	77	7.623	7.623	0.000	97	666907	40.0	45.7	
127 4-Bromophenyl phenyl ether	248	7.894	7.894	0.000	64	189165	40.0	41.9	
128 Hexachlorobenzene	284	7.956	7.956	0.000	85	208727	40.0	41.6	
72 Atrazine	200	8.018	8.018	0.000	74	168132	40.0	37.6	
130 Pentachlorophenol	266	8.123	8.123	0.000	91	221944	80.0	78.1	
123 n-Octadecane	43	8.132	8.132	0.000	95	435495	40.0	NQ	
134 Phenanthrene	178	8.304	8.304	0.000	88	991504	40.0	40.3	
135 Anthracene	178	8.346	8.346	0.000	97	976974	40.0	39.7	
136 Carbazole	167	8.475	8.475	0.000	88	911811	40.0	40.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
140 Di-n-butyl phthalate	149	8.723	8.723	0.000	99	1112871	40.0	40.1	
146 Fluoranthene	202	9.299	9.299	0.000	97	1066440	40.0	39.1	
147 Benzidine	184	9.394	9.394	0.000	96	298703	40.0	23.1	
149 Pyrene	202	9.489	9.489	0.000	96	1101343	40.0	36.2	
155 Butyl benzyl phthalate	149	9.985	9.985	0.000	96	500239	40.0	38.6	
161 Bis(2-ethylhexyl) phthalat	149	10.437	10.437	0.000	96	702552	40.0	40.0	
162 3,3'-Dichlorobenzidine	252	10.451	10.451	0.000	96	355483	40.0	40.8	
163 Benzo[a]anthracene	228	10.489	10.489	0.000	99	1081240	40.0	43.5	
164 Chrysene	228	10.523	10.523	0.000	85	939396	40.0	40.3	
166 Di-n-octyl phthalate	149	10.961	10.961	0.000	97	1249387	40.0	46.2	
169 Benzo[b]fluoranthene	252	11.423	11.423	0.000	93	1160042	40.0	40.9	
170 Benzo[k]fluoranthene	252	11.446	11.446	0.000	99	1024868	40.0	35.0	
171 Benzo[a]pyrene	252	11.761	11.761	0.000	87	1033059	40.0	39.4	
175 Dibenz(a,h)anthracene	278	13.213	13.213	0.000	76	971138	40.0	40.8	
174 Indeno[1,2,3-cd]pyrene	276	13.218	13.218	0.000	88	1141756	40.0	40.9	
176 Benzo[g,h,i]perylene	276	13.627	13.627	0.000	93	989121	40.0	40.1	

QC Flag Legend

Processing Flags

NQ - Not Quantifiable

s - Failed ISTD Recovery Test

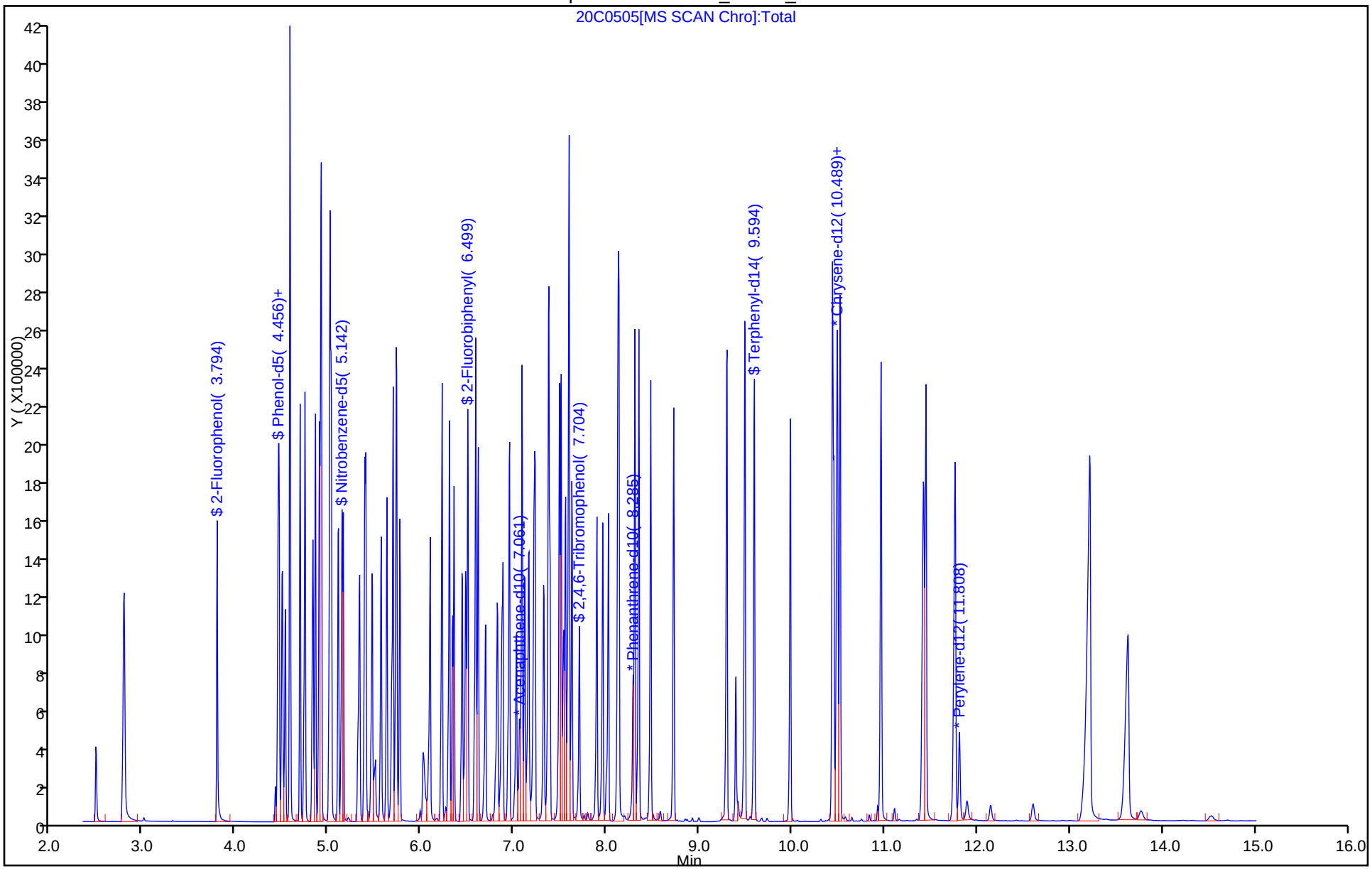
Reagents:

SMlst1_1uLL8_00014 Amount Added: 1.00 Units: mL

Report Date: 06-May-2015 11:11:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150505-30673.b\20C0505.D				
Injection Date:	05-May-2015 09:40:30	Instrument ID:	CMS20	Operator ID:	TW
Lims ID:	ccvis			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: ICV 500-285596/13 Calibration Date: 04/27/2015 16:42

Instrument ID: CMS21 Calib Start Date: 04/27/2015 13:03

GC Column: ZB5MS ID: 0.25(mm) Calib End Date: 04/27/2015 17:30

Lab File ID: L1STD60.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	0.9925	1.009	0.7000	40.7	40.0	1.7	30.0
2-Methylnaphthalene	Ave	0.6652	0.6653	0.4000	40.0	40.0	0.0	30.0
1-Methylnaphthalene	Ave	0.5958	0.6470	0.0100	43.4	40.0	8.6	30.0
Acenaphthylene	Ave	1.745	1.741	0.9000	39.9	40.0	-0.2	30.0
Acenaphthene	Ave	1.166	1.206	0.9000	41.4	40.0	3.4	30.0
Fluorene	Ave	1.266	1.254	0.9000	39.6	40.0	-1.0	30.0
Phenanthrene	Ave	1.138	1.139	0.7000	40.0	40.0	0.1	30.0
Anthracene	Ave	1.142	1.166	0.7000	40.8	40.0	2.0	30.0
Fluoranthene	Ave	1.245	1.287	0.6000	41.4	40.0	3.4	30.0
Pyrene	Ave	1.218	1.193	0.6000	39.2	40.0	-2.1	30.0
Benzo[a]anthracene	Ave	1.114	1.152	0.8000	41.4	40.0	3.4	30.0
Chrysene	Ave	1.019	1.031	0.7000	40.5	40.0	1.2	30.0
Benzo[b]fluoranthene	Ave	1.323	1.479	0.7000	44.7	40.0	11.8	30.0
Benzo[k]fluoranthene	Ave	1.267	1.355	0.7000	42.8	40.0	6.9	30.0
Benzo[a]pyrene	Ave	1.152	1.193	0.7000	41.4	40.0	3.6	30.0
Indeno[1,2,3-cd]pyrene	Lin1		0.8363	0.5000	34.6	40.0	-13.5	30.0
Dibenz(a,h)anthracene	Ave	0.7777	0.7213	0.4000	37.1	40.0	-7.2	30.0
Benzo[g,h,i]perylene	Ave	0.8687	0.6476	0.5000	29.8	40.0	-25.5	30.0

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD60.D
Lims ID: icv lst1
Client ID:
Sample Type: ICV
Inject. Date: 27-Apr-2015 16:42:30 ALS Bottle#: 11 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV mix1
Misc. Info.: 500-0030526-013
Operator ID: DA Instrument ID: CMS21
Sublist:

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:14:44 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: swaneyg Date: 27-Apr-2015 18:36:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.076	5.076	0.000	92	97226	8.00	8.00	
* 2 Naphthalene-d8	136	6.032	6.032	0.000	90	377707	8.00	8.00	
* 3 Acenaphthene-d10	164	7.426	7.426	0.000	82	223532	8.00	8.00	
* 4 Phenanthrene-d10	188	8.658	8.658	0.000	96	365314	8.00	8.00	
* 5 Chrysene-d12	240	10.880	10.880	0.000	97	416924	8.00	8.00	
* 6 Perylene-d12	264	12.379	12.379	0.000	97	278104	8.00	8.00	
13 1,4-Dioxane	88	2.887	2.883	0.004	87	218995	40.0	39.7	
14 N-Nitrosodimethylamine	42	3.139	3.140	-0.001	74	398201	40.0	34.9	
15 Pyridine	79	3.173	3.168	0.005	73	642382	40.0	41.6	
24 Benzaldehyde	77	4.757	4.757	0.000	97	17809	40.0	1.98	7M
26 Phenol	94	4.786	4.786	0.000	93	743238	40.0	42.2	
27 Aniline	93	4.833	4.833	0.000	88	905626	40.0	40.4	
28 Bis(2-chloroethyl)ether	93	4.857	4.857	0.000	85	545663	40.0	39.5	
30 2-Chlorophenol	128	4.928	4.928	0.000	98	648174	40.0	41.8	
16 n-Decane	43	4.938	4.938	0.000	91	758170	40.0	41.7	
32 1,3-Dichlorobenzene	146	5.042	5.043	-0.001	90	728644	40.0	40.3	
34 1,4-Dichlorobenzene	146	5.090	5.090	0.000	96	741756	40.0	40.0	
35 Benzyl alcohol	108	5.157	5.157	0.000	92	429992	40.0	42.3	
36 1,2-Dichlorobenzene	146	5.209	5.209	0.000	97	715722	40.0	41.0	
37 2-Methylphenol	107	5.228	5.223	0.005	89	509592	40.0	42.0	
38 2,2'-oxybis[1-chloropropan	45	5.252	5.252	0.000	1	1248731	40.0	39.6	
51 Indene	116	5.271	5.271	0.000	88	1053884	40.0	39.7	
39 3 & 4 Methylphenol	108	5.337	5.333	0.004	59	612411	40.0	42.4	
40 N-Nitrosodi-n-propylamine	70	5.352	5.352	0.000	82	390750	40.0	40.3	
43 Acetophenone	105	5.361	5.357	0.004	92	820557	40.0	41.5	
46 Hexachloroethane	117	5.461	5.461	0.000	92	298111	40.0	41.3	
47 Nitrobenzene	77	5.490	5.490	0.000	95	580397	40.0	41.3	
50 Isophorone	82	5.666	5.666	0.000	98	1173420	40.0	43.3	
53 2-Nitrophenol	139	5.728	5.728	0.000	85	347670	40.0	43.6	
52 2,4-Dimethylphenol	122	5.732	5.732	0.000	89	583765	40.0	40.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
56 Bis(2-chloroethoxy)methane	93	5.799	5.799	0.000	93	659720	40.0	41.2	
55 Benzoic acid	122	5.818	5.809	0.009	98	386422	40.0	45.4	
57 2,4-Dichlorophenol	162	5.908	5.909	0.000	84	564007	40.0	41.9	
59 1,2,4-Trichlorobenzene	180	5.980	5.980	0.000	93	613883	40.0	40.8	
60 Naphthalene	128	6.046	6.046	0.000	80	1905465	40.0	40.7	
61 4-Chloroaniline	127	6.065	6.066	-0.001	69	781853	40.0	38.6	
62 2,6-Dichlorophenol	162	6.080	6.080	0.000	87	565253	40.0	42.4	
64 Hexachlorobutadiene	225	6.137	6.137	0.000	93	344383	40.0	41.4	
58 Caprolactam	113	6.341	6.337	0.004	78	212446	40.0	43.2	
69 4-Chloro-3-methylphenol	107	6.427	6.422	0.005	89	552330	40.0	43.8	
73 2-Methylnaphthalene	142	6.584	6.584	0.000	95	1256386	40.0	40.0	
45 1-Methylnaphthalene	142	6.665	6.665	0.000	94	1221806	40.0	43.4	
74 Hexachlorocyclopentadiene	237	6.712	6.713	-0.001	23	380734	40.0	40.7	
75 1,2,4,5-Tetrachlorobenzene	216	6.722	6.722	0.000	98	561267	40.0	39.6	
76 2,4,6-Trichlorophenol	196	6.798	6.793	0.005	87	413636	40.0	42.7	
77 2,4,5-Trichlorophenol	196	6.831	6.827	0.004	95	436411	40.0	43.4	
71 1,1'-Biphenyl	154	6.946	6.946	0.000	87	1569281	40.0	40.9	
80 2-Chloronaphthalene	162	6.974	6.974	0.000	89	1239854	40.0	41.9	
81 2-Nitroaniline	65	7.036	7.031	0.005	88	396054	40.0	41.8	
84 Dimethyl phthalate	163	7.169	7.169	0.000	88	1393973	40.0	41.0	
85 1,3-Dinitrobenzene	168	7.198	7.198	0.000	81	219290	40.0	44.9	
86 2,6-Dinitrotoluene	165	7.221	7.222	-0.001	76	328300	40.0	40.9	
87 Acenaphthylene	152	7.317	7.317	0.000	93	1945938	40.0	39.9	
88 3-Nitroaniline	138	7.364	7.364	0.000	92	344456	40.0	38.6	
89 2,4-Dinitrophenol	184	7.450	7.450	0.000	73	387341	80.0	93.7	
90 Acenaphthene	154	7.459	7.455	0.004	86	1347639	40.0	41.4	
91 4-Nitrophenol	109	7.488	7.483	0.005	87	376393	80.0	89.3	
92 2,4-Dinitrotoluene	165	7.555	7.555	0.000	98	438768	40.0	42.8	
94 Dibenzofuran	168	7.597	7.593	0.004	88	1750224	40.0	41.3	
97 2,3,4,6-Tetrachlorophenol	232	7.688	7.688	0.000	68	388218	40.0	43.7	
100 Diethyl phthalate	149	7.740	7.735	0.005	97	1275349	40.0	39.4	
186 Hexadecane	57	7.740	7.740	0.000	75	843087	40.0	36.4	
102 4-Chlorophenyl phenyl ethe	204	7.854	7.854	0.000	83	681867	40.0	42.2	
104 4-Nitroaniline	138	7.883	7.873	0.010	9	381424	40.0	42.3	
105 Fluorene	166	7.878	7.878	0.000	96	1401101	40.0	39.6	
106 4,6-Dinitro-2-methylphenol	198	7.907	7.902	0.005	72	539763	80.0	87.5	
108 N-Nitrosodiphenylamine	169	7.954	7.950	0.004	86	1934580	80.0	78.7	
110 1,2-Diphenylhydrazine	77	7.992	7.988	0.004	99	1233362	40.0	42.5	
117 4-Bromophenyl phenyl ether	248	8.263	8.264	-0.001	62	419734	40.0	42.3	
119 Hexachlorobenzene	284	8.349	8.349	0.000	87	503702	40.0	43.5	
109 Atrazine	200	8.368	8.368	0.000	73	382472	40.0	40.2	
122 Pentachlorophenol	266	8.497	8.497	0.000	85	598418	80.0	92.7	
79 n-Octadecane	43	8.501	8.501	0.000	93	548517	40.0	30.6	
128 Phenanthrene	178	8.682	8.682	0.000	87	2080771	40.0	40.0	
130 Anthracene	178	8.725	8.725	0.000	97	2129194	40.0	40.8	
132 Carbazole	167	8.839	8.835	0.005	100	1942233	40.0	40.9	
134 Di-n-butyl phthalate	149	9.082	9.082	0.000	99	2500007	40.0	42.3	
140 Fluoranthene	202	9.681	9.677	0.004	97	2350876	40.0	41.4	
142 Benzidine	184	9.748	9.753	-0.005	97	461715	40.0	19.3	
143 Pyrene	202	9.876	9.876	0.000	94	2485974	40.0	39.2	
153 Butyl benzyl phthalate	149	10.343	10.343	0.000	95	1133993	40.0	40.7	
160 Bis(2-ethylhexyl) phthalat	149	10.804	10.804	0.000	95	1569570	40.0	40.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
161 3,3'-Dichlorobenzidine	252	10.818	10.818	0.000	97	617218	40.0	35.1	
162 Benzo[a]anthracene	228	10.871	10.871	0.000	97	2400865	40.0	41.4	
163 Chrysene	228	10.909	10.904	0.005	95	2149210	40.0	40.5	
165 Di-n-octyl phthalate	149	11.375	11.370	0.005	99	2533797	40.0	43.5	
167 Benzo[b]fluoranthene	252	11.927	11.922	0.005	98	2056209	40.0	44.7	
168 Benzo[k]fluoranthene	252	11.960	11.956	0.004	96	1883658	40.0	42.8	
170 Benzo[a]pyrene	252	12.322	12.317	0.005	96	1659354	40.0	41.4	
176 Indeno[1,2,3-cd]pyrene	276	13.992	13.987	0.005	88	1162824	40.0	34.6	
175 Dibenz(a,h)anthracene	278	13.996	13.992	0.004	74	1002983	40.0	37.1	
177 Benzo[g,h,i]perylene	276	14.477	14.472	0.005	95	900469	40.0	29.8	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

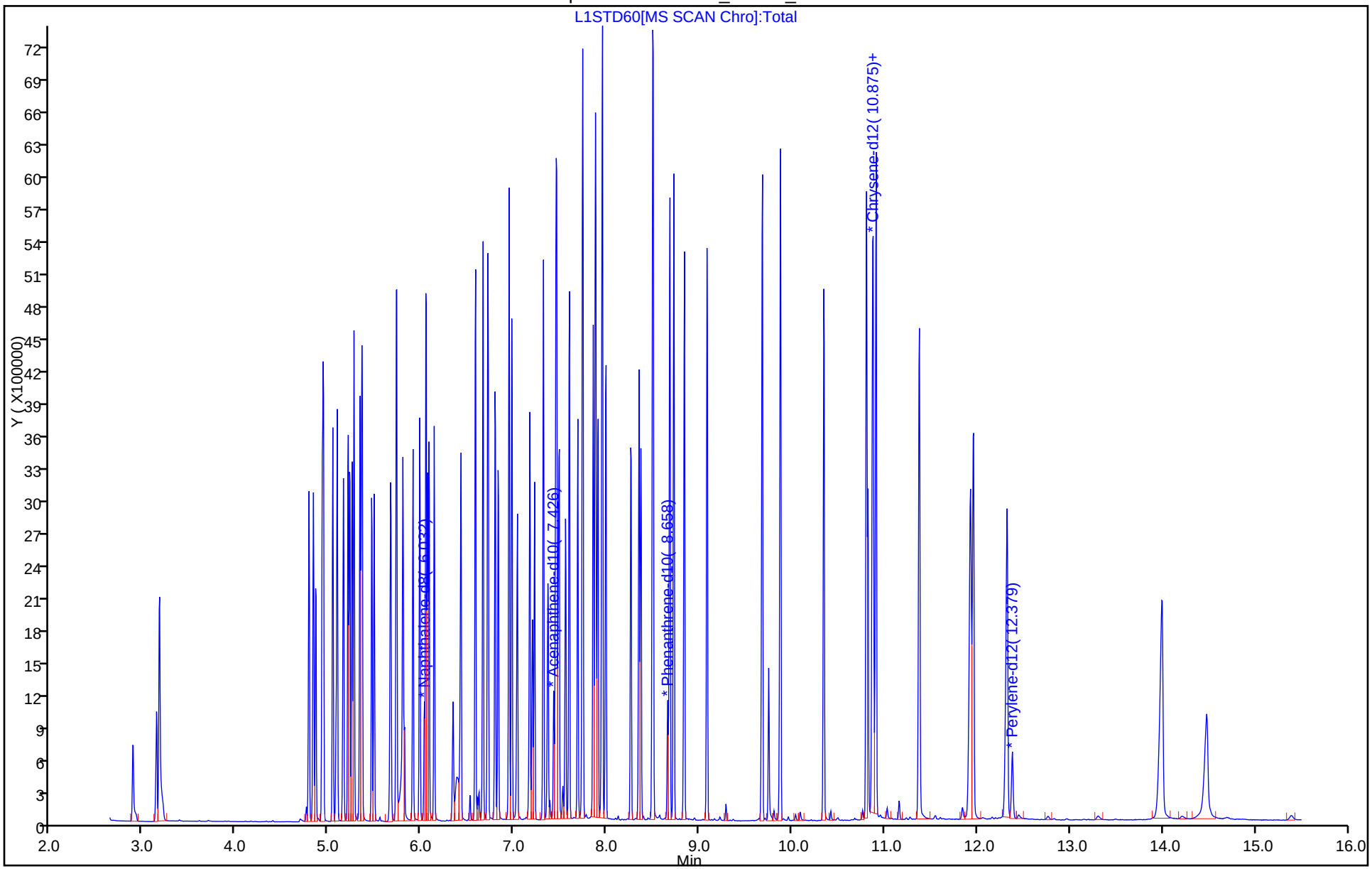
Reagents:

SMlst1_ICV_00012 Amount Added: 1.00 Units: mL

Report Date: 28-Apr-2015 09:14:46 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\L1STD60.D				
Injection Date:	27-Apr-2015 16:42:30	Instrument ID:	CMS21	Operator ID:	DA
Lims ID:	icv lst1			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCVIS 500-286746/2 Calibration Date: 05/05/2015 12:34

Instrument ID: CMS21 Calib Start Date: 04/27/2015 13:03

GC Column: ZB5MS ID: 0.25(mm) Calib End Date: 04/27/2015 17:30

Lab File ID: 21C0505.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	0.9925	0.9758	0.7000	39.3	40.0	-1.7	20.0
2-Methylnaphthalene	Ave	0.6652	0.7059	0.4000	42.4	40.0	6.1	20.0
1-Methylnaphthalene	Ave	0.5958	0.6192	0.0100	41.6	40.0	3.9	20.0
Acenaphthylene	Ave	1.745	1.975	0.9000	45.3	40.0	13.2	20.0
Acenaphthene	Ave	1.166	1.390	0.9000	47.7	40.0	19.2	20.0
Fluorene	Ave	1.266	1.460	0.9000	46.1	40.0	15.4	20.0
Hexachlorobenzene	Ave	0.2536	0.2643	0.1000	41.7	40.0	4.2	20.0
Phenanthrene	Ave	1.138	1.229	0.7000	43.2	40.0	8.0	20.0
Anthracene	Ave	1.142	1.181	0.7000	41.3	40.0	3.3	20.0
Fluoranthene	Ave	1.245	1.324	0.6000	42.6	40.0	6.4	20.0
Pyrene	Ave	1.218	1.158	0.6000	38.0	40.0	-4.9	20.0
Benzo[a]anthracene	Ave	1.114	1.117	0.8000	40.1	40.0	0.3	20.0
Chrysene	Ave	1.019	1.017	0.7000	39.9	40.0	-0.2	20.0
Benzo[b]fluoranthene	Ave	1.323	1.507	0.7000	45.6	40.0	13.9	20.0
Benzo[k]fluoranthene	Ave	1.267	1.503	0.7000	47.5	40.0	18.7	20.0
Benzo[a]pyrene	Ave	1.152	1.319	0.7000	45.8	40.0	14.5	20.0
Dibenz(a,h)anthracene	Ave	0.7777	0.8633	0.4000	44.4	40.0	11.0	20.0
Indeno[1,2,3-cd]pyrene	Lin1		0.9646	0.5000	39.9	40.0	-0.1	20.0
Benzo[g,h,i]perylene	Ave	0.8687	0.5424	0.5000	25.0	40.0	-37.6*	20.0
2-Fluorophenol (Surr)	Ave	1.222	1.179	0.0100	38.6	40.0	-3.5	20.0
Phenol-d5 (Surr)	Ave	1.491	1.562	0.0100	41.9	40.0	4.8	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3299	0.3577	0.0100	43.4	40.0	8.4	20.0
2-Fluorobiphenyl	Ave	1.240	1.411	0.0100	45.5	40.0	13.8	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.2080	0.2186	0.0100	42.0	40.0	5.1	20.0
Terphenyl-d14 (Surr)	Ave	0.7616	0.7553	0.0100	39.7	40.0	-0.8	20.0

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21C0505.D
Lims ID: ccvis
Client ID:
Sample Type: CCVIS
Inject. Date: 05-May-2015 12:34:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 500-0030679-002
Operator ID: AD Instrument ID: CMS21
Sublist: chrom-21-8270*sub113

Method: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 06-May-2015 08:45:21 Calib Date: 01-May-2015 11:27:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D

Column 1 : Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: lesiakk Date: 06-May-2015 08:45:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.885	4.885	0.000	88	70681	8.00	8.00	
* 2 Naphthalene-d8	136	5.832	5.832	0.000	96	284233	8.00	8.00	
* 3 Acenaphthene-d10	164	7.222	7.222	0.000	78	146012	8.00	8.00	
* 4 Phenanthrene-d10	188	8.449	8.449	0.000	96	247751	8.00	8.00	
* 5 Chrysene-d12	240	10.666	10.666	0.000	95	298402	8.00	8.00	
* 6 Perylene-d12	264	12.041	12.041	0.000	96	219011	8.00	8.00	
$ 7 2-Fluorophenol	112	3.962	3.962	0.000	94	416559	40.0	38.6	
$ 8 Phenol-d5	99	4.610	4.610	0.000	38	552138	40.0	41.9	
$ 9 Nitrobenzene-d5	82	5.290	5.290	0.000	90	508288	40.0	43.4	
$ 10 2-Fluorobiphenyl	172	6.660	6.660	0.000	100	1030413	40.0	45.5	
$ 11 2,4,6-Tribromophenol	330	7.873	7.873	0.000	69	159611	40.0	42.0	
$ 12 Terphenyl-d14	244	9.753	9.753	0.000	99	1126851	40.0	39.7	
13 1,4-Dioxane	88	2.664	2.664	0.000	84	126058	40.0	31.4	
14 N-Nitrosodimethylamine	42	2.940	2.940	0.000	69	372978	40.0	45.0	
15 Pyridine	79	2.963	2.963	0.000	70	388570	40.0	34.6	
24 Benzaldehyde	77	4.567	4.567	0.000	86	40662	40.0	5.27	
26 Phenol	94	4.619	4.619	0.000	94	560245	40.0	43.8	
27 Aniline	93	4.648	4.648	0.000	89	625044	40.0	38.4	
28 Bis(2-chloroethyl)ether	93	4.671	4.671	0.000	76	421751	40.0	42.0	
30 2-Chlorophenol	128	4.743	4.743	0.000	95	480610	40.0	42.7	
16 n-Decane	43	4.748	4.748	0.000	91	628695	40.0	51.8	
32 1,3-Dichlorobenzene	146	4.847	4.847	0.000	98	540018	40.0	41.0	
34 1,4-Dichlorobenzene	146	4.900	4.900	0.000	96	553722	40.0	41.1	
35 Benzyl alcohol	108	4.976	4.976	0.000	80	295281	40.0	39.9	
36 1,2-Dichlorobenzene	146	5.014	5.014	0.000	91	540903	40.0	42.6	
37 2-Methylphenol	107	5.052	5.052	0.000	80	359854	40.0	40.8	
38 2,2'-oxybis[1-chloropropan	45	5.062	5.062	0.000	52	979923	40.0	42.7	
51 Indene	116	5.076	5.076	0.000	88	856085	40.0	44.4	
39 3 & 4 Methylphenol	108	5.161	5.161	0.000	88	457063	40.0	43.5	
40 N-Nitrosodi-n-propylamine	70	5.166	5.166	0.000	79	308208	40.0	43.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.176	5.176	0.000	92	619903	40.0	43.1	
46 Hexachloroethane	117	5.266	5.266	0.000	82	225396	40.0	43.0	
47 Nitrobenzene	77	5.304	5.304	0.000	93	434695	40.0	41.1	
50 Isophorone	82	5.475	5.475	0.000	97	800368	40.0	39.2	
53 2-Nitrophenol	139	5.537	5.537	0.000	90	266899	40.0	44.5	
52 2,4-Dimethylphenol	122	5.552	5.552	0.000	92	451444	40.0	41.5	
56 Bis(2-chloroethoxy)methane	93	5.609	5.609	0.000	91	490399	40.0	40.7	
55 Benzoic acid	122	5.651	5.651	0.000	94	209616	40.0	32.7	
57 2,4-Dichlorophenol	162	5.723	5.723	0.000	85	411411	40.0	40.6	
59 1,2,4-Trichlorobenzene	180	5.785	5.785	0.000	93	427157	40.0	37.7	
60 Naphthalene	128	5.851	5.851	0.000	95	1386721	40.0	39.3	
61 4-Chloroaniline	127	5.875	5.875	0.000	79	579908	40.0	38.1	
62 2,6-Dichlorophenol	162	5.889	5.889	0.000	76	414676	40.0	41.3	
64 Hexachlorobutadiene	225	5.937	5.937	0.000	94	240746	40.0	38.5	
58 Caprolactam	113	6.156	6.156	0.000	75	126157	40.0	34.1	M
69 4-Chloro-3-methylphenol	107	6.246	6.246	0.000	92	389665	40.0	41.0	
73 2-Methylnaphthalene	142	6.384	6.384	0.000	94	1003171	40.0	42.4	
45 1-Methylnaphthalene	142	6.465	6.465	0.000	93	879931	40.0	41.6	
74 Hexachlorocyclopentadiene	237	6.513	6.513	0.000	1	194644	40.0	31.9	
75 1,2,4,5-Tetrachlorobenzene	216	6.522	6.522	0.000	98	450959	40.0	48.7	
76 2,4,6-Trichlorophenol	196	6.603	6.603	0.000	91	275325	40.0	43.5	
77 2,4,5-Trichlorophenol	196	6.641	6.641	0.000	93	285789	40.0	43.5	
71 1,1'-Biphenyl	154	6.746	6.746	0.000	92	1165789	40.0	46.5	
80 2-Chloronaphthalene	162	6.774	6.774	0.000	96	849864	40.0	43.9	
81 2-Nitroaniline	65	6.841	6.841	0.000	72	281646	40.0	45.5	
84 Dimethyl phthalate	163	6.974	6.974	0.000	52	995176	40.0	44.8	
85 1,3-Dinitrobenzene	168	7.012	7.012	0.000	78	150964	40.0	47.4	
86 2,6-Dinitrotoluene	165	7.026	7.026	0.000	88	226518	40.0	43.2	
87 Acenaphthylene	152	7.112	7.112	0.000	97	1441691	40.0	45.3	
88 3-Nitroaniline	138	7.174	7.174	0.000	91	255054	40.0	43.7	
90 Acenaphthene	154	7.250	7.250	0.000	92	1014689	40.0	47.7	
89 2,4-Dinitrophenol	184	7.264	7.264	0.000	65	261280	80.0	96.7	
91 4-Nitrophenol	109	7.317	7.317	0.000	75	229771	80.0	83.5	
92 2,4-Dinitrotoluene	165	7.364	7.364	0.000	92	280208	40.0	41.8	
94 Dibenzofuran	168	7.393	7.393	0.000	91	1285004	40.0	46.4	
97 2,3,4,6-Tetrachlorophenol	232	7.493	7.493	0.000	68	216752	40.0	37.4	
100 Diethyl phthalate	149	7.540	7.540	0.000	97	963116	40.0	45.6	
186 Hexadecane	57	7.540	7.540	0.000	76	745857	40.0	NQ	
102 4-Chlorophenyl phenyl ethe	204	7.650	7.650	0.000	84	447477	40.0	42.4	
105 Fluorene	166	7.674	7.674	0.000	94	1066044	40.0	46.1	
104 4-Nitroaniline	138	7.688	7.688	0.000	51	271089	40.0	46.1	
106 4,6-Dinitro-2-methylphenol	198	7.721	7.721	0.000	60	354820	80.0	84.8	
108 N-Nitrosodiphenylamine	169	7.750	7.750	0.000	77	1449027	80.0	87.0	
110 1,2-Diphenylhydrazine	77	7.783	7.783	0.000	95	858270	40.0	45.3	
117 4-Bromophenyl phenyl ether	248	8.054	8.054	0.000	66	275487	40.0	40.9	
119 Hexachlorobenzene	284	8.145	8.145	0.000	87	327421	40.0	41.7	
109 Atrazine	200	8.173	8.173	0.000	68	261358	40.0	40.5	
122 Pentachlorophenol	266	8.297	8.297	0.000	66	294774	80.0	67.3	
79 n-Octadecane	43	8.297	8.297	0.000	93	520802	40.0	NQ	
128 Phenanthrene	178	8.473	8.473	0.000	92	1521833	40.0	43.2	
130 Anthracene	178	8.516	8.516	0.000	98	1462411	40.0	41.3	
132 Carbazole	167	8.635	8.635	0.000	100	1427191	40.0	44.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	8.877	8.877	0.000	99	1697278	40.0	42.4	
140 Fluoranthene	202	9.467	9.467	0.000	98	1640322	40.0	42.6	
142 Benzidine	184	9.543	9.543	0.000	97	504717	40.0	29.5	
143 Pyrene	202	9.662	9.662	0.000	95	1728209	40.0	38.0	
153 Butyl benzyl phthalate	149	10.133	10.133	0.000	96	791880	40.0	39.7	
160 Bis(2-ethylhexyl) phthalat	149	10.590	10.590	0.000	96	1108606	40.0	40.0	
161 3,3'-Dichlorobenzidine	252	10.609	10.609	0.000	99	511025	40.0	40.6	
162 Benzo[a]anthracene	228	10.657	10.657	0.000	98	1666031	40.0	40.1	
163 Chrysene	228	10.690	10.690	0.000	97	1517146	40.0	39.9	
165 Di-n-octyl phthalate	149	11.123	11.123	0.000	99	1952125	40.0	49.5	
167 Benzo[b]fluoranthene	252	11.632	11.632	0.000	99	1650275	40.0	45.6	
168 Benzo[k]fluoranthene	252	11.660	11.660	0.000	98	1646222	40.0	47.5	
170 Benzo[a]pyrene	252	11.994	11.994	0.000	93	1444767	40.0	45.8	
175 Dibenz(a,h)anthracene	278	13.516	13.516	0.000	56	945404	40.0	44.4	
176 Indeno[1,2,3-cd]pyrene	276	13.516	13.516	0.000	87	1056261	40.0	39.9	
177 Benzo[g,h,i]perylene	276	13.954	13.954	0.000	95	593978	40.0	25.0	

QC Flag Legend

Processing Flags

NQ - Not Quantifiable

Review Flags

M - Manually Integrated

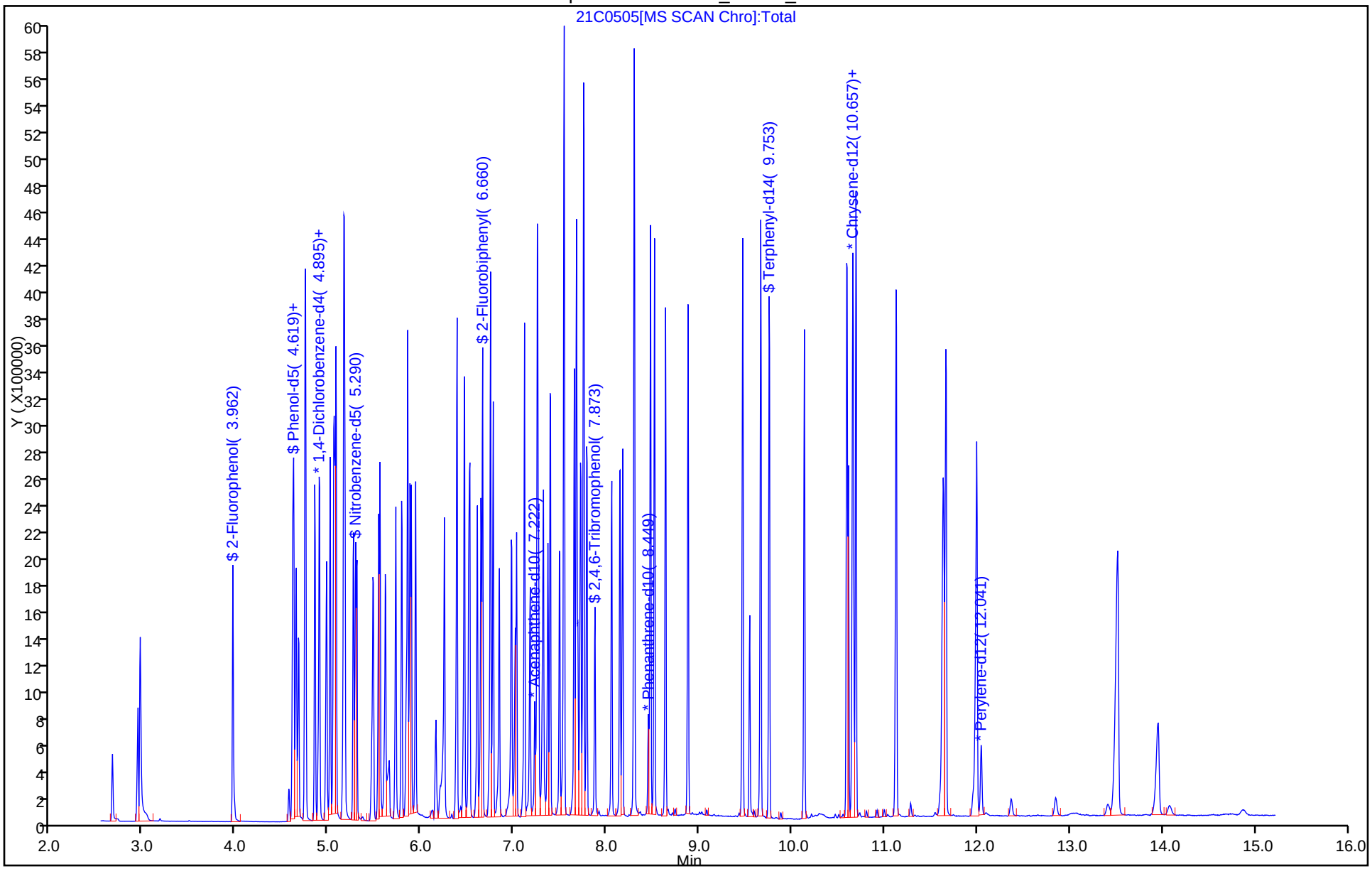
Reagents:

SMlst1_1uLL8_00015 Amount Added: 1.00 Units: mL

Report Date: 06-May-2015 08:45:21 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21C0505.D				
Injection Date:	05-May-2015 12:34:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	ccvis			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCVL 500-286746/4 Calibration Date: 05/05/2015 13:23

Instrument ID: CMS21 Calib Start Date: 04/27/2015 13:03

GC Column: ZB5MS ID: 0.25(mm) Calib End Date: 04/27/2015 17:30

Lab File ID: 21C0505B.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzo[g,h,i]perylene	Ave	0.8687	0.9333	0.5000	1.07	1.00	7.4	100.0

Report Date: 06-May-2015 08:46:51 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21C0505B.D
Lims ID: ccvl
Client ID:
Sample Type: CCVL
Inject. Date: 05-May-2015 13:23:30 ALS Bottle#: 2 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVL
Misc. Info.: 500-0030679-004
Operator ID: AD Instrument ID: CMS21
Sublist: chrom-21-8270*sub100

Method: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 06-May-2015 08:46:50 Calib Date: 01-May-2015 11:27:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D

Column 1 : Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: lesiakk Date: 06-May-2015 08:46:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.881	4.885	-0.004	94	70680	8.00	8.00	
* 2 Naphthalene-d8	136	5.828	5.832	-0.004	99	278536	8.00	8.00	
* 3 Acenaphthene-d10	164	7.217	7.222	-0.005	92	144938	8.00	8.00	
* 4 Phenanthrene-d10	188	8.444	8.449	-0.005	97	252681	8.00	8.00	
* 5 Chrysene-d12	240	10.657	10.666	-0.009	97	296336	8.00	8.00	
* 6 Perylene-d12	264	12.036	12.041	-0.005	97	241736	8.00	8.00	
$ 7 2-Fluorophenol	112	3.963	3.962	0.001	85	9805	1.00	0.9083	
$ 8 Phenol-d5	99	4.600	4.610	-0.010	64	12921	1.00	0.9808	
$ 9 Nitrobenzene-d5	82	5.280	5.290	-0.010	90	13009	1.00	1.13	
$ 10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	22955	1.00	1.02	
$ 11 2,4,6-Tribromophenol	330	7.864	7.873	-0.009	45	2916	1.00	0.7738	
$ 12 Terphenyl-d14	244	9.748	9.753	-0.005	95	24655	1.00	0.8740	
13 1,4-Dioxane	88	2.673	2.664	0.009	73	3619	1.00	0.9018	7
14 N-Nitrosodimethylamine	42	2.935	2.940	-0.005	64	10538	1.00	1.27	7
15 Pyridine	79	2.973	2.963	0.010	64	9726	1.00	0.8670	7
24 Benzaldehyde	77	4.567	4.567	0.000	94	9071	1.00	1.54	7
26 Phenol	94	4.610	4.619	-0.009	90	12815	1.00	1.00	
27 Aniline	93	4.638	4.648	-0.010	83	14249	1.00	0.8745	7
28 Bis(2-chloroethyl)ether	93	4.667	4.671	-0.004	78	10460	1.00	1.04	
30 2-Chlorophenol	128	4.738	4.743	-0.005	92	12532	1.00	1.11	
16 n-Decane	43	4.743	4.748	-0.005	87	23170	1.00	1.02	
32 1,3-Dichlorobenzene	146	4.843	4.847	-0.004	68	14043	1.00	1.07	
34 1,4-Dichlorobenzene	146	4.895	4.900	-0.005	88	14739	1.00	1.09	
35 Benzyl alcohol	108	4.966	4.976	-0.010	75	6642	1.00	0.8985	7
36 1,2-Dichlorobenzene	146	5.009	5.014	-0.005	86	13890	1.00	1.09	
37 2-Methylphenol	107	5.043	5.052	-0.009	91	8560	1.00	0.9712	
38 2,2'-oxybis[1-chloropropan	45	5.057	5.062	-0.005	27	31670	1.00	1.38	
51 Indene	116	5.071	5.076	-0.005	87	21445	1.00	1.11	7
39 3 & 4 Methylphenol	108	5.152	5.161	-0.009	57	10568	1.00	1.01	
40 N-Nitrosodi-n-propylamine	70	5.152	5.166	-0.014	73	7776	1.00	1.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
43 Acetophenone	105	5.161	5.176	-0.015	88	14926	1.00	1.04	
46 Hexachloroethane	117	5.261	5.266	-0.005	82	6159	1.00	1.17	
47 Nitrobenzene	77	5.295	5.304	-0.009	92	11364	1.00	1.10	
50 Isophorone	82	5.461	5.475	-0.014	93	19905	1.00	1.00	
53 2-Nitrophenol	139	5.533	5.537	-0.004	87	6456	1.00	1.10	7
52 2,4-Dimethylphenol	122	5.542	5.552	-0.010	93	11064	1.00	1.04	7
56 Bis(2-chloroethoxy)methane	93	5.604	5.609	-0.005	91	12191	1.00	1.03	
55 Benzoic acid	122	5.594	5.651	-0.057	1	839	1.00	0.1336	7
57 2,4-Dichlorophenol	162	5.718	5.723	-0.005	64	9468	1.00	0.9543	7
59 1,2,4-Trichlorobenzene	180	5.780	5.785	-0.005	86	11189	1.00	1.01	
60 Naphthalene	128	5.847	5.851	-0.004	78	36176	1.00	1.05	
61 4-Chloroaniline	127	5.866	5.875	-0.009	68	13689	1.00	0.9171	7
62 2,6-Dichlorophenol	162	5.885	5.889	-0.004	84	9805	1.00	1.00	
64 Hexachlorobutadiene	225	5.932	5.937	-0.005	89	6152	1.00	1.00	7
58 Caprolactam	113	6.108	6.156	-0.048	73	2874	1.00	0.7923	7
69 4-Chloro-3-methylphenol	107	6.232	6.246	-0.014	89	9303	1.00	1.00	7
73 2-Methylnaphthalene	142	6.379	6.384	-0.005	76	22683	1.00	0.9794	
45 1-Methylnaphthalene	142	6.456	6.465	-0.009	90	21299	1.00	1.03	
74 Hexachlorocyclopentadiene	237	6.508	6.513	-0.005	1	445	1.00	0.0734	
75 1,2,4,5-Tetrachlorobenzene	216	6.513	6.522	-0.009	95	9614	1.00	1.05	7
76 2,4,6-Trichlorophenol	196	6.598	6.603	-0.005	81	5517	1.00	0.8774	7
77 2,4,5-Trichlorophenol	196	6.632	6.641	-0.009	91	6043	1.00	0.9259	7
71 1,1'-Biphenyl	154	6.736	6.746	-0.010	92	27049	1.00	1.09	7
80 2-Chloronaphthalene	162	6.765	6.774	-0.009	83	20491	1.00	1.07	
81 2-Nitroaniline	65	6.831	6.841	-0.010	80	6885	1.00	1.12	
84 Dimethyl phthalate	163	6.955	6.974	-0.019	97	23372	1.00	1.06	
85 1,3-Dinitrobenzene	168	6.998	7.012	-0.014	74	3706	1.00	1.17	7
86 2,6-Dinitrotoluene	165	7.012	7.026	-0.014	67	5349	1.00	1.34	
87 Acenaphthylene	152	7.103	7.112	-0.009	90	32765	1.00	1.04	
88 3-Nitroaniline	138	7.160	7.174	-0.014	65	6229	1.00	1.08	7
90 Acenaphthene	154	7.241	7.250	-0.009	83	20712	1.00	0.9806	
89 2,4-Dinitrophenol	184	7.255	7.264	-0.009	1	1642	2.00	0.6124	
91 4-Nitrophenol	109	7.293	7.317	-0.024	90	4805	2.00	1.76	7
92 2,4-Dinitrotoluene	165	7.350	7.364	-0.014	91	7733	1.00	1.63	
94 Dibenzofuran	168	7.383	7.393	-0.010	85	30587	1.00	1.11	
97 2,3,4,6-Tetrachlorophenol	232	7.483	7.493	-0.010	35	4132	1.00	0.7181	7
100 Diethyl phthalate	149	7.521	7.540	-0.019	98	36618	1.00	1.75	
186 Hexadecane	57	7.531	7.540	-0.009	77	23803	1.00	0.7013	7
102 4-Chlorophenyl phenyl ethe	204	7.640	7.650	-0.010	92	10769	1.00	1.03	
105 Fluorene	166	7.664	7.674	-0.010	76	25325	1.00	1.10	
104 4-Nitroaniline	138	7.655	7.688	-0.034	66	6773	1.00	1.16	7
106 4,6-Dinitro-2-methylphenol	198	7.693	7.721	-0.028	77	4680	2.00	1.10	
108 N-Nitrosodiphenylamine	169	7.735	7.750	-0.015	72	36161	2.00	2.13	
110 1,2-Diphenylhydrazine	77	7.773	7.783	-0.010	94	21496	1.00	1.14	
117 4-Bromophenyl phenyl ether	248	8.049	8.054	-0.005	70	6322	1.00	0.9200	
119 Hexachlorobenzene	284	8.135	8.145	-0.010	79	6529	1.00	0.8151	
109 Atrazine	200	8.154	8.173	-0.019	66	6265	1.00	0.9510	
122 Pentachlorophenol	266	8.287	8.297	-0.010	1	1350	2.00	0.3023	7
79 n-Octadecane	43	8.292	8.297	-0.005	84	23055	1.00	1.00	7
128 Phenanthrene	178	8.463	8.473	-0.010	88	37458	1.00	1.04	
130 Anthracene	178	8.506	8.516	-0.010	96	37933	1.00	1.05	
132 Carbazole	167	8.625	8.635	-0.010	99	34306	1.00	1.04	

Report Date: 06-May-2015 08:46:51 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21C0505B.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
134 Di-n-butyl phthalate	149	8.872	8.877	-0.005	98	44273	1.00	1.08	
140 Fluoranthene	202	9.458	9.467	-0.009	97	36783	1.00	0.9356	
142 Benzidine	184	9.534	9.543	-0.009	89	14643	1.00	0.8606	7
143 Pyrene	202	9.653	9.662	-0.009	93	39339	1.00	0.8719	
153 Butyl benzyl phthalate	149	10.129	10.133	-0.004	94	20208	1.00	1.02	
160 Bis(2-ethylhexyl) phthalat	149	10.585	10.590	-0.005	92	30212	1.00	1.10	7
161 3,3'-Dichlorobenzidine	252	10.595	10.609	-0.014	96	13442	1.00	1.07	
162 Benzo[a]anthracene	228	10.647	10.657	-0.010	65	41768	1.00	1.01	
163 Chrysene	228	10.676	10.690	-0.014	93	35902	1.00	0.9514	
165 Di-n-octyl phthalate	149	11.113	11.123	-0.010	96	49725	1.00	1.24	7
167 Benzo[b]fluoranthene	252	11.613	11.632	-0.019	93	33219	1.00	0.8309	
168 Benzo[k]fluoranthene	252	11.637	11.660	-0.023	93	36819	1.00	0.9618	
170 Benzo[a]pyrene	252	11.970	11.994	-0.024	89	33500	1.00	0.9623	
175 Dibenz(a,h)anthracene	278	13.468	13.516	-0.048	38	28088	1.00	1.20	
176 Indeno[1,2,3-cd]pyrene	276	13.473	13.516	-0.043	90	33101	1.00	1.04	
177 Benzo[g,h,i]perylene	276	13.916	13.954	-0.038	85	28201	1.00	1.07	
S 179 Total Cresols, TCEQ Defini	1				0			1.98	
S 178 Methyl Phenols,Total	1				0			1.98	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

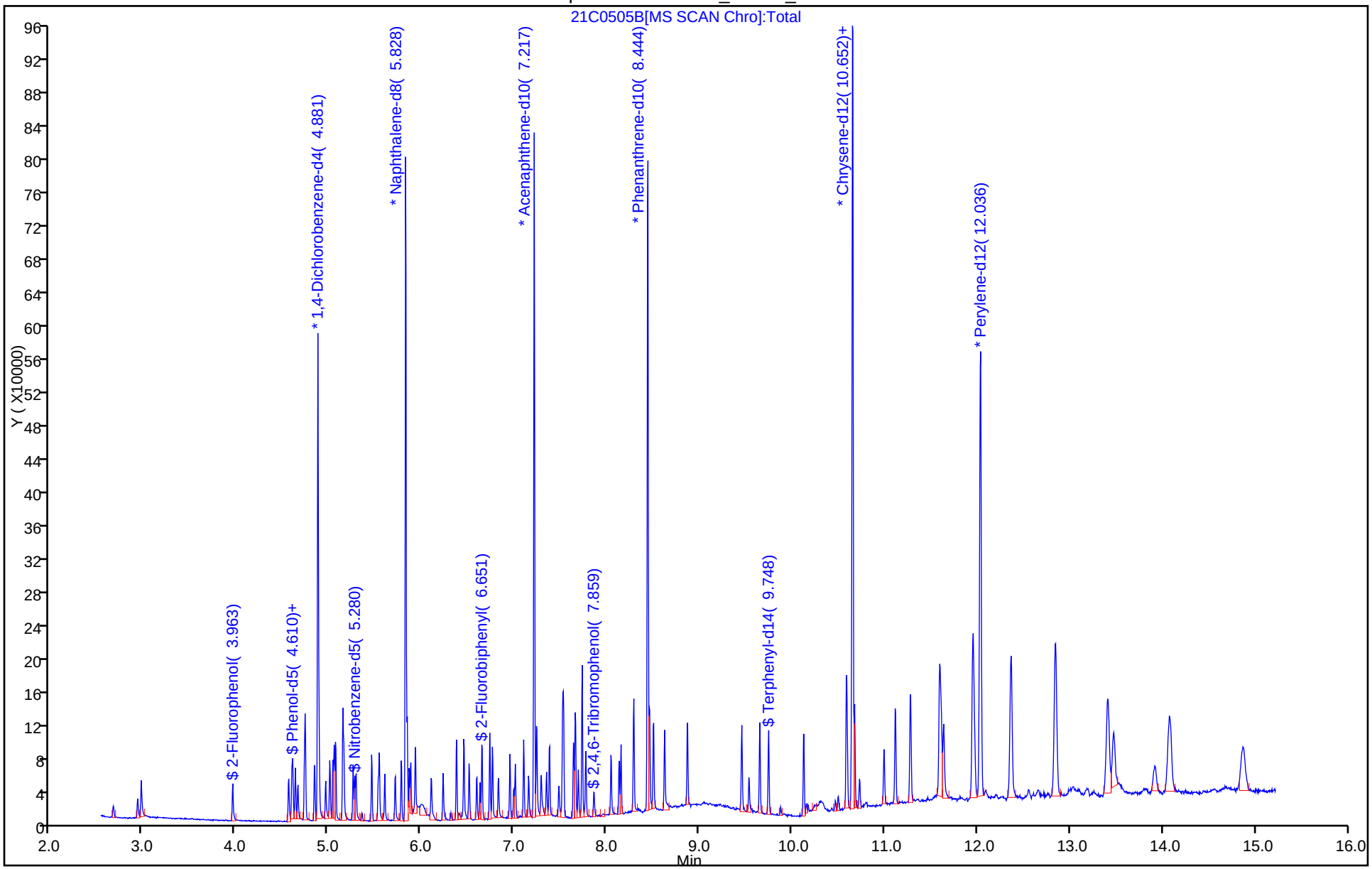
Reagents:

SMlst1_1uLL3_00014 Amount Added: 1.00 Units: mL

Report Date: 06-May-2015 08:46:51 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21C0505B.D				
Injection Date:	05-May-2015 13:23:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	ccvl			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: ICV 500-285942/13 Calibration Date: 04/29/2015 14:35

Instrument ID: CMS23 Calib Start Date: 04/29/2015 10:54

GC Column: ZB5MS ID: 0.25(mm) Calib End Date: 04/29/2015 14:16

Lab File ID: L1ICV.d Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.002	1.037	0.7000	41.4	40.0	3.5	30.0
2-Methylnaphthalene	Ave	0.6704	0.6762	0.4000	40.3	40.0	0.9	30.0
1-Methylnaphthalene	Ave	0.5925	0.6357	0.0100	42.9	40.0	7.3	30.0
Acenaphthylene	Ave	1.856	1.860	0.9000	40.1	40.0	0.2	30.0
Acenaphthene	Ave	1.098	1.144	0.9000	41.7	40.0	4.2	30.0
Fluorene	Ave	1.296	1.326	0.9000	40.9	40.0	2.3	30.0
Phenanthrene	Ave	1.141	1.151	0.7000	40.3	40.0	0.9	30.0
Anthracene	Ave	1.168	1.201	0.7000	41.1	40.0	2.8	30.0
Fluoranthene	Ave	1.157	1.201	0.6000	41.5	40.0	3.7	30.0
Pyrene	Ave	1.216	1.205	0.6000	39.7	40.0	-0.9	30.0
Benzo[a]anthracene	Ave	1.078	1.121	0.8000	41.6	40.0	4.0	30.0
Chrysene	Ave	1.037	1.076	0.7000	41.5	40.0	3.7	30.0
Benzo[b]fluoranthene	Ave	1.086	1.134	0.7000	41.8	40.0	4.4	30.0
Benzo[k]fluoranthene	Ave	1.158	1.234	0.7000	42.6	40.0	6.6	30.0
Benzo[a]pyrene	Ave	1.105	1.115	0.7000	40.4	40.0	0.9	30.0
Dibenz(a,h)anthracene	Ave	1.050	1.128	0.4000	43.0	40.0	7.5	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.267	1.331	0.5000	42.0	40.0	5.1	30.0
Benzo[g,h,i]perylene	Ave	1.064	1.127	0.5000	42.4	40.0	5.9	30.0

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1ICV.d
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 29-Apr-2015 14:35:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LST1 ICV
Misc. Info.: 500-0030573-013
Operator ID: DA Instrument ID: CMS23
Sublist:

Method: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 29-Apr-2015 16:50:48 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:46:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.460	4.460	0.000	96	55464	8.00	8.00	
* 2 Naphthalene-d8	136	5.400	5.400	0.000	90	216867	8.00	8.00	
* 3 Acenaphthene-d10	164	6.763	6.763	0.000	93	118404	8.00	8.00	
* 4 Phenanthrene-d10	188	7.984	7.984	0.000	97	175766	8.00	8.00	
* 5 Chrysene-d12	240	10.213	10.213	0.000	74	181427	8.00	8.00	
* 6 Perylene-d12	264	11.452	11.459	-0.007	95	174742	8.00	8.00	
30 1,4-Dioxane	88	2.118	2.118	0.000	89	135985	40.0	42.6	
31 N-Nitrosodimethylamine	42	2.457	2.454	0.003	67	128772	40.0	36.9	
32 Pyridine	79	2.455	2.454	0.000	80	348482	40.0	44.8	
45 Benzaldehyde	77	4.169	4.159	0.010	83	9915	40.0	2.42	7
46 Phenol	94	4.218	4.218	0.000	59	455822	40.0	43.4	
47 Aniline	93	4.231	4.230	0.001	91	481160	40.0	38.8	
48 Bis(2-chloroethyl)ether	93	4.269	4.269	0.000	88	355780	40.0	40.9	
49 2-Chlorophenol	128	4.320	4.317	0.003	94	382648	40.0	41.9	
126 n-Decane	43	4.317	4.320	-0.003	86	264722	40.0	39.2	
51 1,3-Dichlorobenzene	146	4.419	4.419	0.000	96	423806	40.0	41.6	
53 1,4-Dichlorobenzene	146	4.473	4.473	0.000	93	430902	40.0	41.1	
54 Benzyl alcohol	108	4.572	4.569	0.003	83	229571	40.0	44.6	
56 1,2-Dichlorobenzene	146	4.585	4.585	0.000	96	402882	40.0	41.7	
104 Indene	116	4.646	4.646	0.000	83	574537	40.0	39.5	
57 2-Methylphenol	107	4.648	4.648	0.000	69	270044	40.0	40.7	
58 2,2'-oxybis[1-chloropropan	45	4.651	4.651	0.000	95	387375	40.0	38.6	
60 N-Nitrosodi-n-propylamine	70	4.755	4.755	0.000	93	233131	40.0	41.1	
59 3 & 4 Methylphenol	108	4.763	4.760	0.003	70	340373	40.0	43.7	
62 Acetophenone	105	4.763	4.763	0.000	91	463358	40.0	40.5	
63 Hexachloroethane	117	4.824	4.824	0.000	93	173817	40.0	42.1	
65 Nitrobenzene	77	4.891	4.890	0.000	94	349554	40.0	41.7	
66 Isophorone	82	5.064	5.064	0.000	87	666935	40.0	42.6	
69 2-Nitrophenol	139	5.122	5.122	0.000	92	217215	40.0	44.1	
68 2,4-Dimethylphenol	122	5.145	5.145	0.000	74	338366	40.0	41.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
74 Bis(2-chloroethoxy)methane	93	5.206	5.206	0.000	96	405630	40.0	41.6	
72 Benzoic acid	122	5.270	5.262	0.008	79	97502	40.0	46.3	
76 2,4-Dichlorophenol	162	5.303	5.303	0.000	95	310745	40.0	42.8	
78 1,2,4-Trichlorobenzene	180	5.357	5.357	0.000	91	306554	40.0	41.9	
77 Naphthalene	128	5.418	5.418	0.000	99	1124817	40.0	41.4	
81 4-Chloroaniline	127	5.461	5.461	0.000	80	429983	40.0	38.5	
37 2,6-Dichlorophenol	162	5.464	5.466	-0.002	84	296077	40.0	42.5	
83 Hexachlorobutadiene	225	5.492	5.492	0.000	89	155757	40.0	42.3	
90 Caprolactam	113	5.754	5.749	0.005	82	133391	40.0	45.7	
92 4-Chloro-3-methylphenol	107	5.838	5.838	0.000	91	324550	40.0	42.6	
94 2-Methylnaphthalene	142	5.940	5.940	0.000	89	733269	40.0	40.3	
97 1-Methylnaphthalene	142	6.019	6.017	0.002	80	689291	40.0	42.9	
98 Hexachlorocyclopentadiene	237	6.047	6.047	0.000	61	48732	40.0	40.5	
99 1,2,4,5-Tetrachlorobenzene	216	6.070	6.070	0.000	99	290920	40.0	42.3	
100 2,4,6-Trichlorophenol	196	6.165	6.164	0.001	92	179106	40.0	43.4	
102 2,4,5-Trichlorophenol	196	6.208	6.208	0.000	92	190489	40.0	47.3	
103 1,1'-Biphenyl	154	6.300	6.300	0.000	95	881711	40.0	41.8	
106 2-Chloronaphthalene	162	6.325	6.325	0.000	97	676859	40.0	41.6	
108 2-Nitroaniline	65	6.414	6.414	0.000	83	234182	40.0	43.2	
111 Dimethyl phthalate	163	6.539	6.539	0.000	60	728575	40.0	39.4	
112 1,3-Dinitrobenzene	168	6.603	6.603	0.000	75	139959	40.0	45.0	
113 2,6-Dinitrotoluene	165	6.605	6.605	0.000	80	187065	40.0	45.8	
115 Acenaphthylene	152	6.656	6.656	0.000	91	1100879	40.0	40.1	
116 3-Nitroaniline	138	6.748	6.748	0.000	83	185719	40.0	38.0	
119 Acenaphthene	154	6.791	6.791	0.000	91	677185	40.0	41.7	
118 2,4-Dinitrophenol	184	6.850	6.850	0.000	82	136119	80.0	88.5	
120 4-Nitrophenol	109	6.906	6.903	0.003	82	135590	80.0	86.7	
123 Dibenzofuran	168	6.932	6.931	0.001	89	932933	40.0	40.8	
121 2,4-Dinitrotoluene	165	6.942	6.939	0.003	82	240084	40.0	43.6	
125 2,3,4,6-Tetrachlorophenol	232	7.039	7.038	0.001	62	122302	40.0	45.7	
18 Hexadecane	57	7.092	7.092	0.000	81	554324	40.0	40.6	
127 Diethyl phthalate	149	7.105	7.105	0.000	98	719074	40.0	38.9	
131 4-Chlorophenyl phenyl ethe	204	7.199	7.196	0.003	93	329986	40.0	42.0	
133 Fluorene	166	7.212	7.212	0.000	81	785281	40.0	40.9	
132 4-Nitroaniline	138	7.255	7.253	0.003	33	167707	40.0	32.9	
135 4,6-Dinitro-2-methylphenol	198	7.286	7.283	0.003	80	205945	80.0	85.0	
136 N-Nitrosodiphenylamine	169	7.306	7.306	0.000	95	1062765	80.0	80.0	
138 1,2-Diphenylhydrazine	77	7.334	7.334	0.000	96	669575	40.0	37.7	
142 4-Bromophenyl phenyl ether	248	7.599	7.599	0.000	65	180752	40.0	42.4	
143 Hexachlorobenzene	284	7.663	7.663	0.000	82	200994	40.0	43.9	
144 Atrazine	200	7.737	7.737	0.000	98	184262	40.0	40.3	
147 Pentachlorophenol	266	7.834	7.836	-0.002	66	101622	80.0	101.8	
148 n-Octadecane	43	7.846	7.849	-0.003	86	291795	40.0	40.5	
149 Phenanthrene	178	8.007	8.004	0.003	95	1011476	40.0	40.3	
150 Anthracene	178	8.050	8.050	0.000	97	1055176	40.0	41.1	
152 Carbazole	167	8.185	8.183	0.002	88	974534	40.0	42.2	
155 Di-n-butyl phthalate	149	8.437	8.437	0.000	99	1258015	40.0	41.5	
161 Fluoranthene	202	8.998	8.998	0.000	99	1055091	40.0	41.5	
162 Benzidine	184	9.105	9.105	0.000	96	231837	40.0	19.5	
164 Pyrene	202	9.192	9.192	0.000	96	1093473	40.0	39.7	
168 Butyl benzyl phthalate	149	9.696	9.699	-0.003	97	595098	40.0	40.7	
171 Bis(2-ethylhexyl) phthalat	149	10.165	10.168	-0.003	95	759206	40.0	40.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
172 3,3'-Dichlorobenzidine	252	10.170	10.170	0.000	64	292556	40.0	35.6	
173 Benzo[a]anthracene	228	10.203	10.206	-0.003	94	1017094	40.0	41.6	
174 Chrysene	228	10.236	10.239	-0.003	86	975714	40.0	41.5	
176 Di-n-octyl phthalate	149	10.705	10.710	-0.005	99	1436474	40.0	43.7	
178 Benzo[b]fluoranthene	252	11.110	11.118	-0.008	95	990481	40.0	41.8	
179 Benzo[k]fluoranthene	252	11.136	11.141	-0.005	98	1078363	40.0	42.6	
180 Benzo[a]pyrene	252	11.409	11.416	-0.007	87	974382	40.0	40.4	
183 Dibenz(a,h)anthracene	278	12.652	12.654	-0.002	58	985862	40.0	43.0	
182 Indeno[1,2,3-cd]pyrene	276	12.660	12.662	-0.002	92	1162639	40.0	42.0	
185 Benzo[g,h,i]perylene	276	13.011	13.014	-0.003	94	984494	40.0	42.4	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

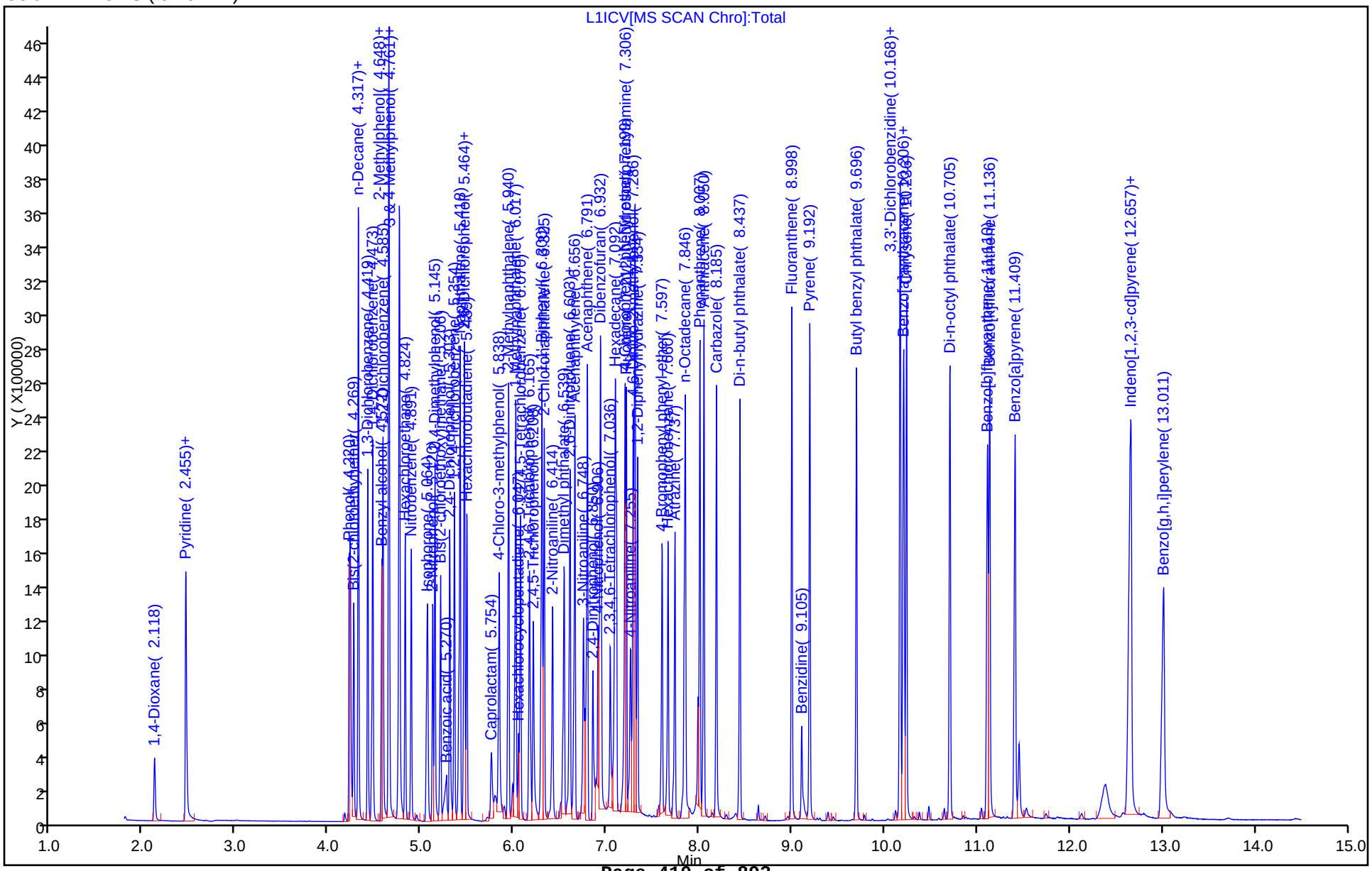
Reagents:

SMlst1_ICV_00012 Amount Added: 1.00 Units: mL

Report Date: 29-Apr-2015 16:50:51 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1ICV.d				
Injection Date:	29-Apr-2015 14:35:30	Instrument ID:	CMS23	Operator ID:	DA
Lims ID:	icv			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCVIS 500-286895/2 Calibration Date: 05/06/2015 09:36

Instrument ID: CMS23 Calib Start Date: 04/29/2015 10:54

GC Column: ZB5MS ID: 0.25(mm) Calib End Date: 04/29/2015 14:16

Lab File ID: 23C0506.d Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.002	1.035	0.7000	41.3	40.0	3.3	20.0
2-Methylnaphthalene	Ave	0.6704	0.6951	0.4000	41.5	40.0	3.7	20.0
1-Methylnaphthalene	Ave	0.5925	0.6052	0.0100	40.9	40.0	2.2	20.0
Acenaphthylene	Ave	1.856	1.882	0.9000	40.6	40.0	1.4	20.0
Acenaphthene	Ave	1.098	1.130	0.9000	41.1	40.0	2.9	20.0
Fluorene	Ave	1.296	1.352	0.9000	41.7	40.0	4.3	20.0
Phenanthrene	Ave	1.141	1.161	0.7000	40.7	40.0	1.8	20.0
Anthracene	Ave	1.168	1.219	0.7000	41.8	40.0	4.4	20.0
Fluoranthene	Ave	1.157	1.200	0.6000	41.5	40.0	3.7	20.0
Pyrene	Ave	1.216	1.214	0.6000	39.9	40.0	-0.2	20.0
Benzo[a]anthracene	Ave	1.078	1.094	0.8000	40.6	40.0	1.5	20.0
Chrysene	Ave	1.037	1.037	0.7000	40.0	40.0	-0.0	20.0
Benzo[b]fluoranthene	Ave	1.086	1.309	0.7000	48.2	40.0	20.6*	20.0
Benzo[k]fluoranthene	Ave	1.158	1.366	0.7000	47.2	40.0	17.9	20.0
Benzo[a]pyrene	Ave	1.105	1.200	0.7000	43.4	40.0	8.6	20.0
Dibenz(a,h)anthracene	Ave	1.050	1.013	0.4000	38.6	40.0	-3.5	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.267	1.181	0.5000	37.3	40.0	-6.8	20.0
Benzo[g,h,i]perylene	Ave	1.064	0.9233	0.5000	34.7	40.0	-13.2	20.0
2-Fluorophenol (Surr)	Lin1		1.334	0.0100	42.8	40.0	7.1	20.0
Phenol-d5 (Surr)	Ave	1.410	1.579	0.0100	44.8	40.0	12.0	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3279	0.3379	0.0100	41.2	40.0	3.1	20.0
2-Fluorobiphenyl	Ave	1.257	1.308	0.0100	41.6	40.0	4.1	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1245	0.1332	0.0100	42.8	40.0	7.0	20.0
Terphenyl-d14 (Surr)	Ave	0.7395	0.7622	0.0100	41.2	40.0	3.1	20.0

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\23C0506.d
Lims ID: ccvis
Client ID:
Sample Type: CCVIS
Inject. Date: 06-May-2015 09:36:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 500-0030710-002
Operator ID: TW Instrument ID: CMS23
Sublist: chrom-23-8270*sub79

Method: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 07-May-2015 11:21:55 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: hamnerb Date: 07-May-2015 11:21:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.369	4.369	0.000	94	35162	8.00	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	90	141527	8.00	8.00	
* 3 Acenaphthene-d10	164	6.650	6.650	0.000	88	75258	8.00	8.00	
* 4 Phenanthrene-d10	188	7.865	7.865	0.000	97	113585	8.00	8.00	
* 5 Chrysene-d12	240	10.090	10.090	0.000	66	115420	8.00	8.00	
* 6 Perylene-d12	264	11.315	11.315	0.000	90	97697	8.00	8.00	
$ 7 2-Fluorophenol	112	3.467	3.467	0.000	92	234603	40.0	42.8	
$ 8 Phenol-d5	99	4.127	4.127	0.000	95	277670	40.0	44.8	
$ 9 Nitrobenzene-d5	82	4.782	4.782	0.000	93	239106	40.0	41.2	
$ 10 2-Fluorobiphenyl	172	6.112	6.112	0.000	99	492353	40.0	41.6	
$ 11 2,4,6-Tribromophenol	330	7.299	7.299	0.000	78	50130	40.0	42.8	
$ 12 Terphenyl-d14	244	9.180	9.180	0.000	98	439873	40.0	41.2	
30 1,4-Dioxane	88	2.071	2.071	0.000	90	79825	40.0	39.4	
31 N-Nitrosodimethylamine	42	2.402	2.402	0.000	72	75756	40.0	34.2	
32 Pyridine	79	2.404	2.404	0.000	79	202565	40.0	41.1	
45 Benzaldehyde	77	4.071	4.071	0.000	85	133280	40.0	48.6	
46 Phenol	94	4.137	4.137	0.000	79	302688	40.0	45.4	
47 Aniline	93	4.142	4.142	0.000	85	361216	40.0	46.0	
48 Bis(2-chloroethyl)ether	93	4.180	4.180	0.000	90	236718	40.0	42.9	
126 n-Decane	43	4.226	4.226	0.000	84	195867	40.0	45.7	
49 2-Chlorophenol	128	4.231	4.231	0.000	82	263337	40.0	45.4	
51 1,3-Dichlorobenzene	146	4.328	4.328	0.000	97	271458	40.0	42.1	
53 1,4-Dichlorobenzene	146	4.379	4.379	0.000	93	278911	40.0	41.9	
54 Benzyl alcohol	108	4.479	4.479	0.000	74	156263	40.0	47.9	
56 1,2-Dichlorobenzene	146	4.489	4.489	0.000	95	265213	40.0	43.3	
104 Indene	116	4.553	4.553	0.000	84	437743	40.0	47.4	
58 2,2'-oxybis[1-chloropropan	45	4.558	4.558	0.000	74	302109	40.0	47.5	
57 2-Methylphenol	107	4.560	4.560	0.000	89	202032	40.0	48.0	
60 N-Nitrosodi-n-propylamine	70	4.662	4.662	0.000	93	158834	40.0	44.1	
62 Acetophenone	105	4.667	4.667	0.000	95	333870	40.0	46.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
59 3 & 4 Methylphenol	108	4.675	4.675	0.000	90	234488	40.0	47.5	
63 Hexachloroethane	117	4.723	4.723	0.000	91	112569	40.0	43.0	
65 Nitrobenzene	77	4.795	4.795	0.000	94	228522	40.0	41.8	
66 Isophorone	82	4.965	4.965	0.000	87	424732	40.0	41.6	
69 2-Nitrophenol	139	5.026	5.026	0.000	91	141502	40.0	44.1	
68 2,4-Dimethylphenol	122	5.052	5.052	0.000	82	231148	40.0	43.6	
74 Bis(2-chloroethoxy)methane	93	5.111	5.111	0.000	97	273156	40.0	42.9	
72 Benzoic acid	122	5.179	5.179	0.000	84	30822	40.0	22.4	
76 2,4-Dichlorophenol	162	5.210	5.210	0.000	95	197687	40.0	41.7	
78 1,2,4-Trichlorobenzene	180	5.256	5.256	0.000	92	197342	40.0	41.4	
77 Naphthalene	128	5.317	5.317	0.000	99	732733	40.0	41.3	
81 4-Chloroaniline	127	5.363	5.363	0.000	83	332389	40.0	45.6	
37 2,6-Dichlorophenol	162	5.368	5.368	0.000	90	195398	40.0	43.0	
83 Hexachlorobutadiene	225	5.388	5.388	0.000	89	96263	40.0	40.0	
90 Caprolactam	113	5.653	5.653	0.000	82	84213	40.0	44.2	
92 4-Chloro-3-methylphenol	107	5.740	5.740	0.000	92	205521	40.0	41.3	
94 2-Methylnaphthalene	142	5.834	5.834	0.000	82	491855	40.0	41.5	
97 1-Methylnaphthalene	142	5.911	5.911	0.000	83	428290	40.0	40.9	
98 Hexachlorocyclopentadiene	237	5.941	5.941	0.000	67	3282	40.0	4.29	
99 1,2,4,5-Tetrachlorobenzene	216	5.964	5.964	0.000	98	180789	40.0	41.4	
100 2,4,6-Trichlorophenol	196	6.064	6.064	0.000	91	111693	40.0	42.6	
102 2,4,5-Trichlorophenol	196	6.109	6.109	0.000	49	114798	40.0	44.8	
103 1,1'-Biphenyl	154	6.193	6.193	0.000	95	567260	40.0	42.3	
106 2-Chloronaphthalene	162	6.219	6.219	0.000	87	432561	40.0	41.9	
108 2-Nitroaniline	65	6.311	6.311	0.000	84	147896	40.0	43.0	
111 Dimethyl phthalate	163	6.430	6.430	0.000	98	480566	40.0	40.9	
113 2,6-Dinitrotoluene	165	6.502	6.502	0.000	74	118153	40.0	45.5	
112 1,3-Dinitrobenzene	168	6.504	6.504	0.000	76	88528	40.0	44.7	
115 Acenaphthylene	152	6.543	6.543	0.000	92	708335	40.0	40.6	
116 3-Nitroaniline	138	6.642	6.642	0.000	85	137303	40.0	44.3	
119 Acenaphthene	154	6.678	6.678	0.000	93	425025	40.0	41.1	
118 2,4-Dinitrophenol	184	6.752	6.752	0.000	86	68288	80.0	75.1	
120 4-Nitrophenol	109	6.815	6.815	0.000	95	57976	80.0	58.3	
123 Dibenzofuran	168	6.818	6.818	0.000	84	599566	40.0	41.3	
121 2,4-Dinitrotoluene	165	6.838	6.838	0.000	72	155765	40.0	44.5	
125 2,3,4,6-Tetrachlorophenol	232	6.930	6.930	0.000	50	56488	40.0	33.2	
18 Hexadecane	57	6.983	6.983	0.000	81	393888	40.0	45.3	
127 Diethyl phthalate	149	6.996	6.996	0.000	98	491733	40.0	41.8	
131 4-Chlorophenyl phenyl ethe	204	7.083	7.083	0.000	96	210272	40.0	42.2	
133 Fluorene	166	7.096	7.096	0.000	83	508658	40.0	41.7	
132 4-Nitroaniline	138	7.152	7.152	0.000	56	134397	40.0	41.5	
135 4,6-Dinitro-2-methylphenol	198	7.182	7.182	0.000	73	139173	80.0	88.5	
136 N-Nitrosodiphenylamine	169	7.192	7.192	0.000	98	745647	80.0	86.8	
138 1,2-Diphenylhydrazine	77	7.220	7.220	0.000	97	464840	40.0	41.2	
142 4-Bromophenyl phenyl ether	248	7.483	7.483	0.000	66	113318	40.0	41.1	
143 Hexachlorobenzene	284	7.549	7.549	0.000	86	120905	40.0	40.8	
144 Atrazine	200	7.628	7.628	0.000	98	117913	40.0	39.9	
147 Pentachlorophenol	266	7.725	7.725	0.000	66	37753	80.0	58.5	
148 n-Octadecane	43	7.735	7.735	0.000	84	198029	40.0	42.5	
149 Phenanthrene	178	7.888	7.888	0.000	88	659637	40.0	40.7	
150 Anthracene	178	7.931	7.931	0.000	97	692574	40.0	41.8	
152 Carbazole	167	8.069	8.069	0.000	89	675612	40.0	45.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
155 Di-n-butyl phthalate	149	8.324	8.324	0.000	99	836722	40.0	42.7	
161 Fluoranthene	202	8.877	8.877	0.000	99	681645	40.0	41.5	
162 Benzidine	184	8.986	8.986	0.000	98	342748	40.0	45.4	
164 Pyrene	202	9.070	9.070	0.000	96	700376	40.0	39.9	
168 Butyl benzyl phthalate	149	9.577	9.577	0.000	97	388284	40.0	41.8	
172 3,3'-Dichlorobenzidine	252	10.049	10.049	0.000	59	226908	40.0	43.3	
171 Bis(2-ethylhexyl) phthalat	149	10.049	10.049	0.000	96	547544	40.0	45.5	
173 Benzo[a]anthracene	228	10.079	10.079	0.000	93	631170	40.0	40.6	
174 Chrysene	228	10.115	10.115	0.000	86	598233	40.0	40.0	
176 Di-n-octyl phthalate	149	10.592	10.592	0.000	99	951480	40.0	44.8	
178 Benzo[b]fluoranthene	252	10.989	10.989	0.000	95	639645	40.0	48.2	
179 Benzo[k]fluoranthene	252	11.012	11.012	0.000	97	667123	40.0	47.2	
180 Benzo[a]pyrene	252	11.272	11.272	0.000	87	586135	40.0	43.4	
183 Dibenz(a,h)anthracene	278	12.439	12.439	0.000	52	495032	40.0	38.6	
182 Indeno[1,2,3-cd]pyrene	276	12.449	12.449	0.000	88	576726	40.0	37.3	
185 Benzo[g,h,i]perylene	276	12.780	12.780	0.000	94	451001	40.0	34.7	

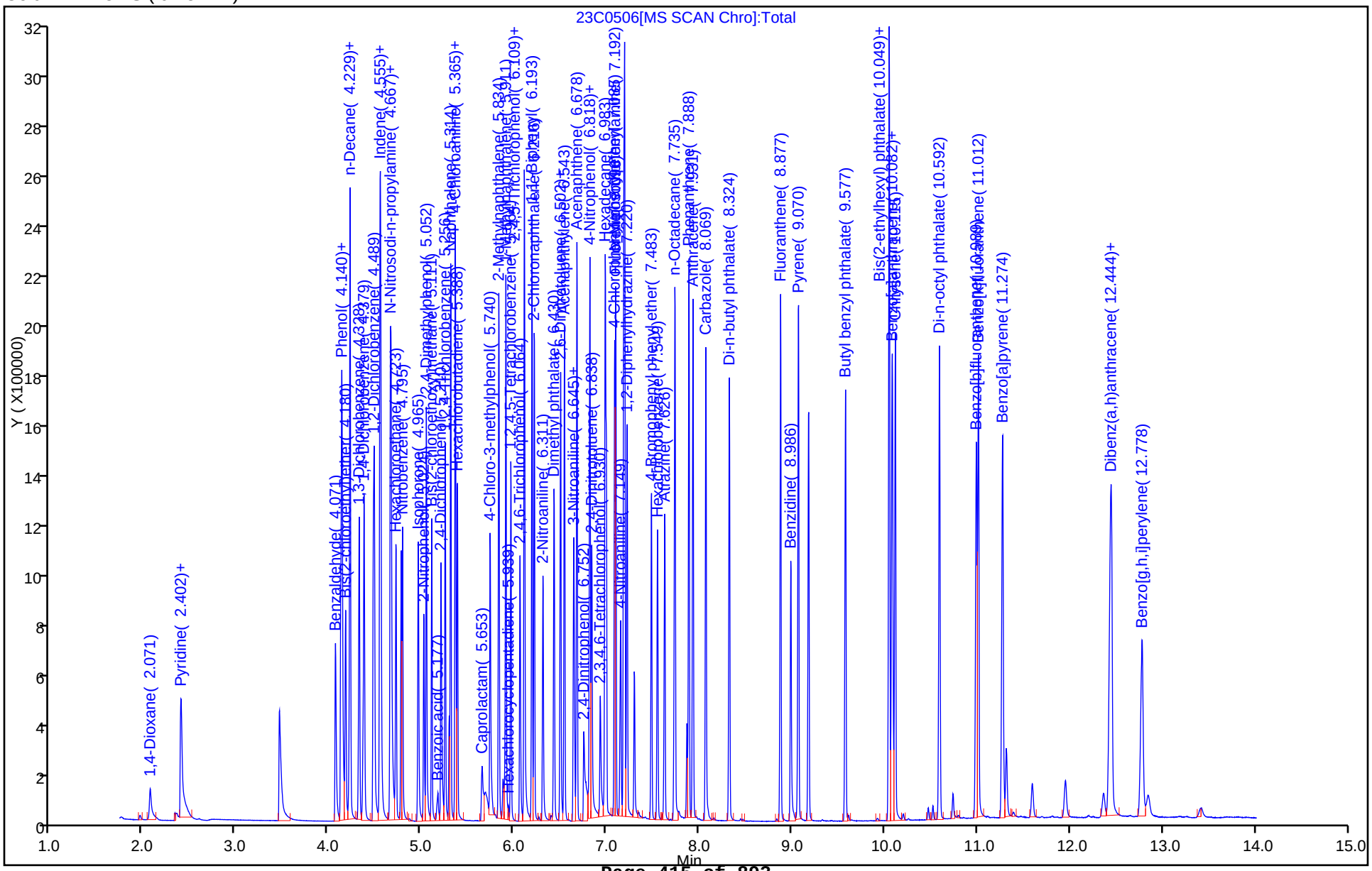
Reagents:

SMlst1_1uLL8X_00035 Amount Added: 1.00 Units: mL

Report Date: 07-May-2015 11:21:56 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23C0506.d				
Injection Date:	06-May-2015 09:36:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	ccvis			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\20D0330C.D				
Lims ID:	dftpp				
Client ID:					
Sample Type:	DFTPP				
Inject. Date:	30-Mar-2015 11:40:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	DFTPP				
Misc. Info.:	500-0029966-005				
Operator ID:	DA	Instrument ID:	CMS20		

Method:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\20-8270.m		
Limit Group:	MSBNA_8270D_ICAL		
Last Update:	31-Mar-2015 08:19:01	Calib Date:	30-Mar-2015 16:18:30
Integrator:	RTE	ID Type:	RT Order ID
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\L1STD70.D		

Column 1 :			Det: MS SCAN
Process Host:	XAWRK007		

First Level Reviewer: rynkarg Date: 30-Mar-2015 16:10:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
130 Pentachlorophenol	266	8.627	8.627	0.000	3	107447	NR	NR	7
147 Benzidine	184	9.923	9.923	0.000	97	758423	NR	NR	7
75 DFTPP									
97 4,4'-DDE	246	10.065	10.065	0.000	1	753		NR	
108 4,4'-DDD	235	10.351	10.351	0.000	50	2940		NR	
118 4,4'-DDT	235	10.608	10.608	0.000	94	312051	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

SMDFTPPWK_00083 Amount Added: 1.00 Units: mL

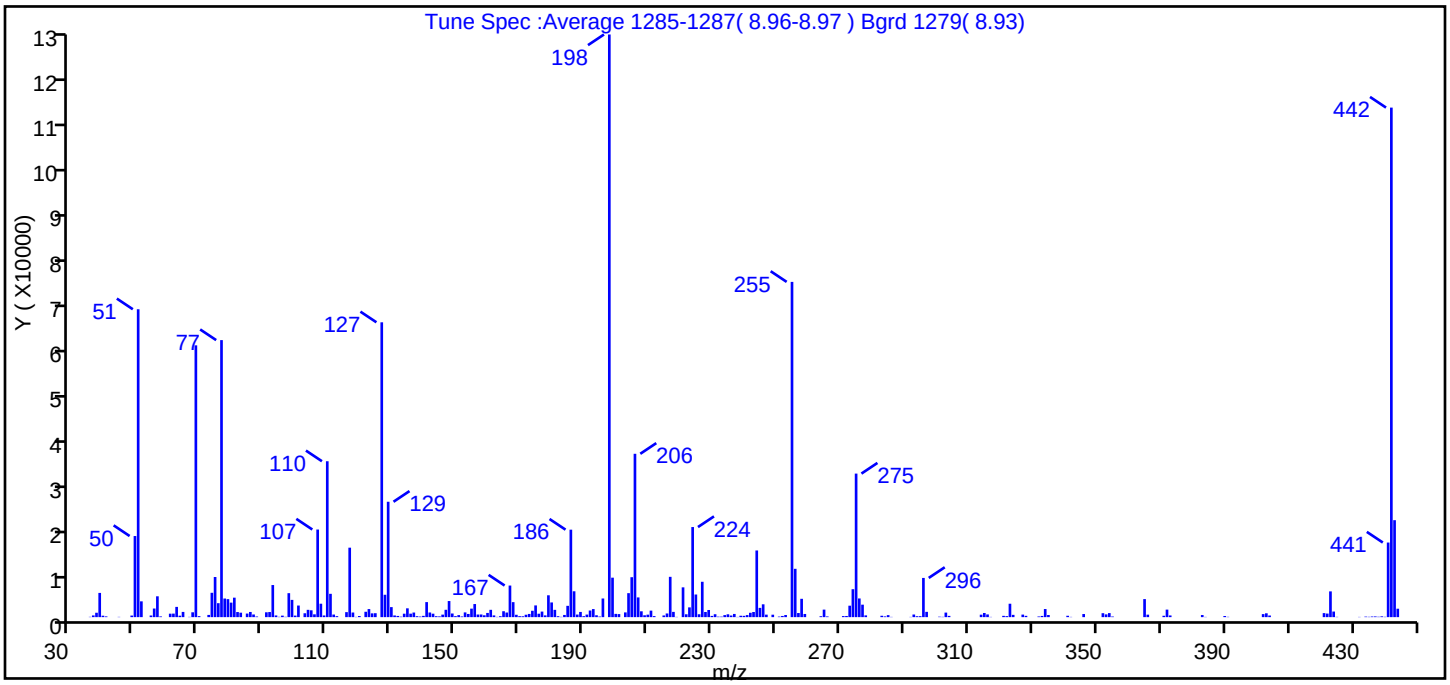
Report Date: 31-Mar-2015 08:19:01 Chrom Revision: 2.2 13-Mar-2015 11:20:44

MS Tune Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\20D0330C.D				
Injection Date:	30-Mar-2015 11:40:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		
Tune Method:	DFTPP Method 8270D, BP 198				

75 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >50% of 442	100.0 (114.3)
51	10-80% of the base peak	52.8
68	<2% of mass 69	0.8 (1.8)
69	Present	46.6
70	<2% of mass 69	0.2 (0.4)
127	10-80% of the base peak	50.6
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.8
275	10-60% of the base peak	24.6
365	>1% of mass 198	3.1
441	present but <24% of mass 442	12.8 (14.6)
442	base peak, or >50% of 198	87.5
443	15-24% of mass 442	16.6 (19.0)

Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20D0330C.D\20-8270.rslt\spectra.d
Injection Date: 30-Mar-2015 11:40:30
Spectrum: Tune Spec :Average 1285-1287(8.96-8.97) Bgrd 1279(8.93)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	66	124.00	835	193.00	1774	277.00	2745
37.00	377	125.00	867	194.00	416	278.00	387
38.00	968	127.00	64904	195.00	132	283.00	305
39.00	5333	128.00	4927	196.00	4105	284.00	161
40.00	316	129.00	25400	198.00	128264	285.00	440
41.00	163	130.00	2208	199.00	8689	286.00	54
45.00	58	131.00	368	200.00	718	292.00	52
49.00	346	132.00	265	201.00	674	293.00	579
50.00	17856	133.00	100	203.00	1044	294.00	204
51.00	67776	134.00	758	204.00	5280	295.00	208
52.00	3479	135.00	1941	205.00	8792	296.00	8632
55.00	361	136.00	765	206.00	35960	297.00	1165
56.00	1897	137.00	1014	207.00	4343	301.00	101
57.00	4589	138.00	204	208.00	1287	302.00	65
58.00	160	139.00	124	209.00	411	303.00	1001
61.00	762	140.00	284	210.00	545	304.00	278
62.00	780	141.00	3311	211.00	1433	314.00	540
63.00	2257	142.00	1022	212.00	230	315.00	914
64.00	320	143.00	759	215.00	370	316.00	594
65.00	1150	144.00	204	216.00	808	317.00	52
67.00	58	145.00	167	217.00	8874	321.00	285
68.00	1068	146.00	553	218.00	1158	322.00	223
69.00	59832	147.00	1620	219.00	54	323.00	2954
70.00	221	148.00	3545	221.00	6559	324.00	504
73.00	489	149.00	802	222.00	632	327.00	561
74.00	5359	150.00	220	223.00	2152	328.00	288
75.00	8836	151.00	446	224.00	19832	332.00	146
76.00	3073	152.00	147	225.00	4984	333.00	266
77.00	60984	153.00	1042	226.00	636	334.00	1785
78.00	4098	154.00	701	227.00	7785	335.00	469
79.00	3965	155.00	1872	228.00	1137	341.00	302
80.00	3194	156.00	2883	229.00	1574	342.00	55
81.00	4287	157.00	575	230.00	275	346.00	685

Report Date: 31-Mar-2015 08:19:01 Chrom Revision: 2.2 13-Mar-2015 11:20:44
Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20D0330C.D\20-8270.rslt\spectra.d
Injection Date: 30-Mar-2015 11:40:30
Spectrum: Tune Spec :Average 1285-1287(8.96-8.97) Bgrd 1279(8.93)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	1123	158.00	585	231.00	641	352.00	869
83.00	980	159.00	407	232.00	109	353.00	609
85.00	790	160.00	926	233.00	113	354.00	891
86.00	1142	161.00	1612	234.00	449	355.00	137
87.00	586	162.00	381	235.00	626	365.00	3972
88.00	138	163.00	58	236.00	358	366.00	545
91.00	1070	164.00	203	237.00	703	371.00	304
92.00	1123	165.00	1303	238.00	50	372.00	1658
93.00	7067	166.00	1014	239.00	308	373.00	371
94.00	373	167.00	6955	240.00	286	383.00	464
95.00	69	168.00	3301	241.00	451	384.00	51
96.00	331	169.00	520	242.00	958	390.00	246
97.00	71	170.00	218	243.00	1132	391.00	69
98.00	5278	171.00	190	244.00	14676	402.00	668
99.00	3798	172.00	531	245.00	2039	403.00	847
100.00	339	173.00	704	246.00	2826	404.00	360
101.00	2555	174.00	1400	247.00	548	421.00	887
103.00	854	175.00	2581	249.00	539	422.00	786
104.00	1609	176.00	752	251.00	121	423.00	5670
105.00	1506	177.00	1225	252.00	261	424.00	1233
106.00	620	178.00	387	253.00	468	425.00	62
107.00	19288	179.00	4812	255.00	73800	432.00	50
108.00	2956	180.00	3236	256.00	10639	434.00	117
109.00	367	181.00	1607	257.00	904	435.00	74
110.00	34320	182.00	208	258.00	4037	436.00	137
111.00	5134	183.00	60	259.00	698	437.00	154
112.00	571	184.00	483	264.00	201	438.00	85
113.00	219	185.00	2490	265.00	1658	439.00	175
116.00	1101	186.00	19256	266.00	154	440.00	76
117.00	15292	187.00	5694	271.00	236	441.00	16424
118.00	1019	188.00	570	272.00	255	442.00	112168
119.00	55	189.00	1145	273.00	2521	443.00	21344
120.00	247	190.00	209	274.00	6152	444.00	1855
122.00	1183	191.00	563	275.00	31600		

Report Date: 31-Mar-2015 08:19:01 Chrom Revision: 2.2 13-Mar-2015 11:20:44
Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20D0330C.D\20-8270.rslt\spectra.d
Injection Date: 30-Mar-2015 11:40:30
Spectrum: Tune Spec :Average 1285-1287(8.96-8.97) Bgrd 1279(8.93)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

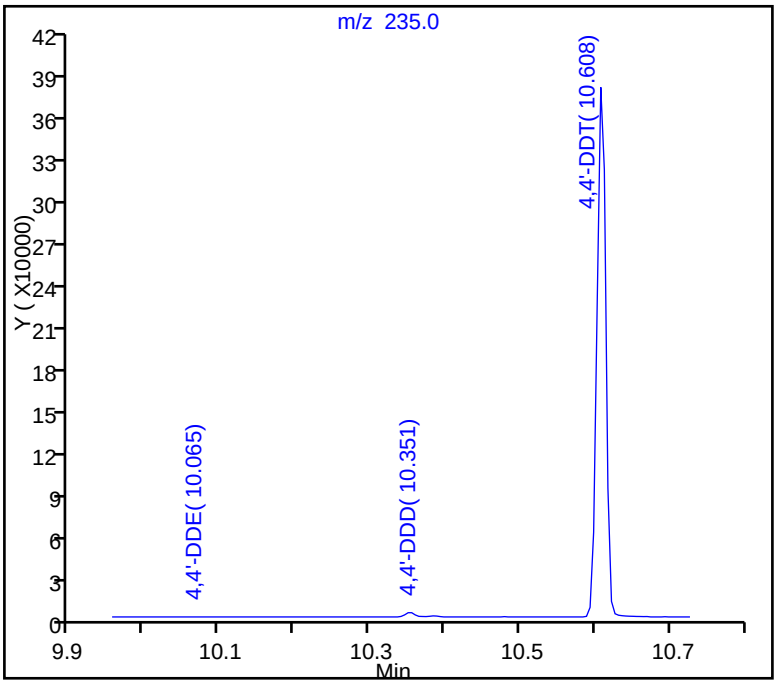
m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	1776	192.00	1459	276.00	4113		

Breakdown Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\20D0330C.D				
Injection Date:	30-Mar-2015 11:40:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		

118 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

118 4,4'-DDT, Area = 312051
108 4,4'-DDD, Area = 2940
97 4,4'-DDE, Area = 753

%Breakdown: 1.17%, Max Limit: 20.00%
Passed

Report Date: 31-Mar-2015 08:19:01 Chrom Revision: 2.2 13-Mar-2015 11:20:44

Peak Tailing Report

TestAmerica Chicago

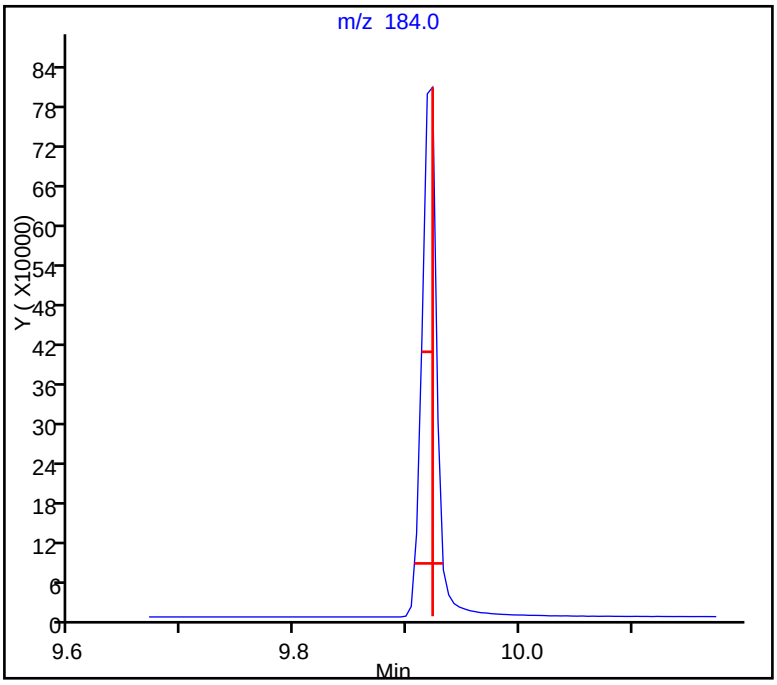
Data File: \\chi-svr07\chromdata\CMS20\20150330-29969.b\20D0330C.D
Injection Date: 30-Mar-2015 11:40:30 Instrument ID: CMS20
Lims ID: dftpp
Client ID:
Operator ID: DA ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 20-8270 Limit Group: MSBNA_8270D_ICAL

147 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.009 (min.)
Front Width = 0.016 (min.)

Tailing Factor = 0.6, Max. Tailing < 2.00
Passed



Report Date: 31-Mar-2015 08:19:01 Chrom Revision: 2.2 13-Mar-2015 11:20:44

Peak Tailing Report

TestAmerica Chicago

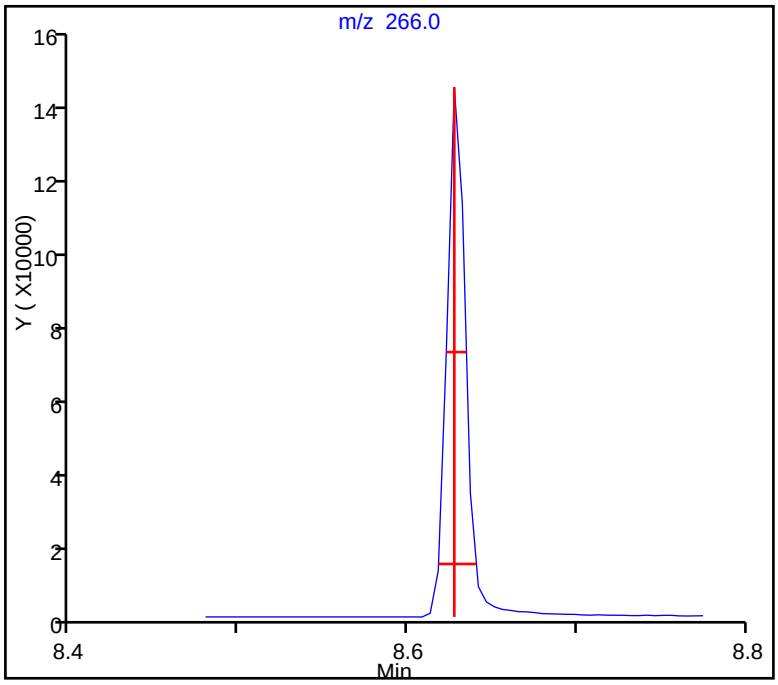
Data File:	\\chi-svr07\chromdata\CMS20\20150330-29969.b\20D0330C.D				
Injection Date:	30-Mar-2015 11:40:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		

130 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.013 (min.)
Front Width = 0.009 (min.)

Tailing Factor = 1.4, Max. Tailing < 2.00
Passed



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150430-30597.b\20D0430.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 30-Apr-2015 09:49:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Misc. Info.: 500-0030597-001
Operator ID: TW Instrument ID: CMS20

Method: \\chi-svr07\chromdata\CMS20\20150430-30597.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 30-Apr-2015 11:17:04 Calib Date: 31-Mar-2015 12:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150331-29992.b\20C0331a.D

Column 1 : Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: hamnerb Date: 30-Apr-2015 11:17:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
130 Pentachlorophenol	266	8.166	8.166	0.000	1	203255	NR	NR	7
147 Benzidine	184	9.446	9.446	0.000	98	1780181	NR	NR	7
75 DFTPP									
108 4,4'-DDD	235	9.866	9.866	0.000	60	4378		NR	
118 4,4'-DDT	235	10.118	10.118	0.000	94	735795	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

SMDFTPPWK_00083 Amount Added: 1.00 Units: mL

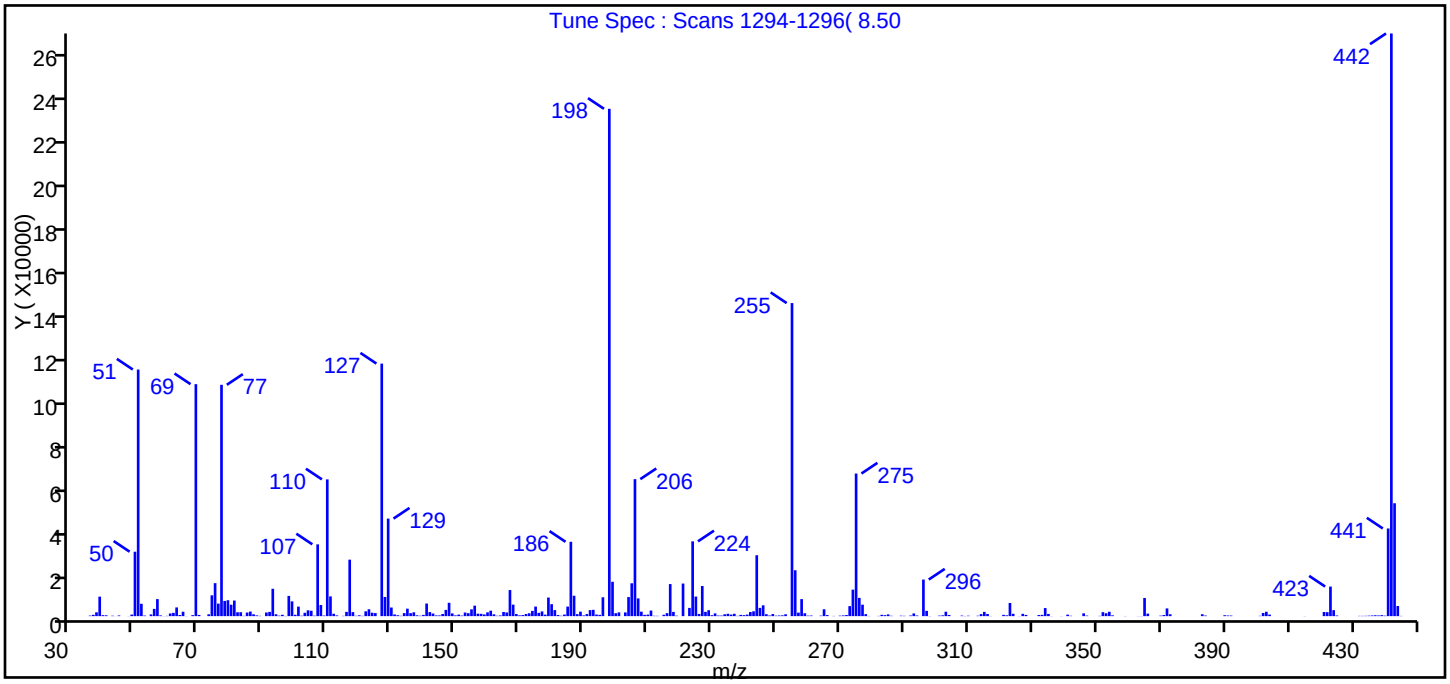
Report Date: 30-Apr-2015 11:17:05 Chrom Revision: 2.2 09-Apr-2015 10:05:40

MS Tune Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150430-30597.b\20D0430.D				
Injection Date:	30-Apr-2015 09:49:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		
Tune Method:	DFTPP Method 8270D, BP 198				

75 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >90% of 442	100.0 (87.1)
51	10-80% of the base peak	48.6
68	<2% of mass 69	0.2 (0.4)
69	Present	45.7
70	<2% of mass 69	0.2 (0.5)
127	10-80% of the base peak	49.8
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.8
275	10-60% of the base peak	28.1
365	>1% of mass 198	3.6
441	present but <24% of mass 442	17.3 (15.0)
442	base peak, or >50% of 198	114.8
443	15-24% of mass 442	22.3 (19.4)

Data File: \\chi-svr07\chromdata\CMS20\20150430-30597.b\20D0430.D\20-8270.rslt\spectra.d
Injection Date: 30-Apr-2015 09:49:30
Spectrum: Tune Spec : Scans 1294-1296(8.50
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	255	123.00	3071	204.00	8540	296.00	16381
37.00	593	124.00	1538	205.00	14712	297.00	2364
38.00	1712	125.00	1381	206.00	61336	298.00	72
39.00	8733	127.00	113072	207.00	7946	301.00	240
40.00	445	128.00	8591	208.00	1999	302.00	372
41.00	389	129.00	43672	209.00	590	303.00	1974
43.00	195	130.00	3863	210.00	690	304.00	531
44.00	24	131.00	761	211.00	2506	308.00	259
45.00	306	132.00	407	212.00	166	309.00	71
48.00	50	133.00	147	213.00	138	310.00	201
49.00	705	134.00	1346	215.00	608	313.00	191
50.00	28848	135.00	3349	216.00	1344	314.00	904
51.00	110408	136.00	1341	217.00	14356	315.00	1911
52.00	5534	137.00	1726	218.00	1902	316.00	976
53.00	266	138.00	376	219.00	210	317.00	80
55.00	763	139.00	186	221.00	14593	321.00	579
56.00	3260	140.00	552	223.00	3684	322.00	375
57.00	7631	141.00	5645	224.00	33488	323.00	5898
58.00	337	142.00	1819	225.00	8766	324.00	1050
59.00	51	143.00	1170	226.00	982	326.00	58
60.00	135	144.00	332	227.00	13489	327.00	1036
61.00	1200	145.00	337	228.00	1914	328.00	549
62.00	1469	146.00	967	229.00	2659	332.00	496
63.00	3900	147.00	2792	230.00	418	333.00	572
64.00	524	148.00	5973	231.00	1247	334.00	3616
65.00	1972	149.00	1229	232.00	271	335.00	992
66.00	56	150.00	356	233.00	261	336.00	56
68.00	445	151.00	683	234.00	833	339.00	50
69.00	103864	152.00	261	235.00	1062	341.00	665
70.00	548	153.00	1622	236.00	697	342.00	168
73.00	826	154.00	1320	237.00	1051	346.00	1260
74.00	9323	155.00	3037	238.00	133	347.00	244
75.00	14767	156.00	4693	239.00	562	351.00	127

Report Date: 30-Apr-2015 11:17:05 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS20\20150430-30597.b\20D0430.D\20-8270.rslt\spectra.d
Injection Date: 30-Apr-2015 09:49:30
Spectrum: Tune Spec : Scans 1294-1296(8.50
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	5612	157.00	1097	240.00	452	352.00	1786
77.00	103576	158.00	1029	241.00	700	353.00	1296
78.00	6802	159.00	753	242.00	1843	354.00	1962
79.00	7124	160.00	1703	243.00	2171	355.00	369
80.00	5122	161.00	2445	244.00	27272	359.00	76
81.00	6985	162.00	807	245.00	3701	363.00	53
82.00	1742	163.00	178	246.00	4852	364.00	69
83.00	1757	164.00	306	247.00	872	365.00	8133
84.00	137	165.00	1859	248.00	299	366.00	1126
85.00	1621	166.00	1658	249.00	943	370.00	225
86.00	2049	167.00	11687	250.00	209	371.00	499
87.00	833	168.00	5143	251.00	299	372.00	3460
88.00	341	169.00	944	252.00	362	373.00	833
89.00	135	170.00	364	253.00	836	383.00	851
91.00	1630	171.00	489	255.00	140160	384.00	276
92.00	1903	172.00	940	256.00	20544	390.00	415
93.00	12257	173.00	1282	257.00	1566	391.00	287
94.00	841	174.00	2347	258.00	7627	392.00	259
95.00	223	175.00	4287	259.00	1300	401.00	154
96.00	605	176.00	1477	260.00	229	402.00	1422
97.00	92	177.00	2117	261.00	270	403.00	1967
98.00	9058	178.00	667	264.00	235	404.00	696
99.00	6616	179.00	8324	265.00	3082	415.00	57
100.00	609	180.00	5355	266.00	478	421.00	1852
101.00	4268	181.00	2701	268.00	100	422.00	1785
102.00	195	182.00	505	270.00	230	423.00	13250
103.00	1503	183.00	181	271.00	326	424.00	2689
104.00	2614	184.00	720	272.00	492	425.00	292
105.00	2416	185.00	4283	273.00	4483	432.00	123
106.00	213	186.00	33288	274.00	11865	433.00	120
107.00	32144	187.00	9127	275.00	63848	434.00	152
108.00	4984	188.00	892	276.00	8172	435.00	214
109.00	267	189.00	2005	277.00	5137	436.00	304
110.00	61224	190.00	326	278.00	894	437.00	391

Report Date: 30-Apr-2015 11:17:05 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS20\20150430-30597.b\20D0430.D\20-8270.rslt\spectra.d
Injection Date: 30-Apr-2015 09:49:30
Spectrum: Tune Spec : Scans 1294-1296(8.50
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 309

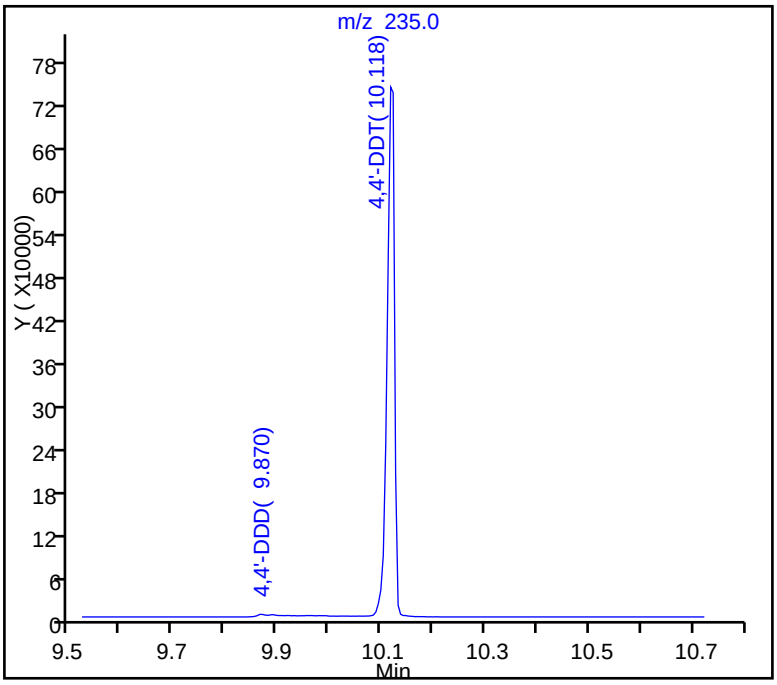
m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	8836	191.00	917	279.00	81	438.00	303
112.00	1074	192.00	2711	282.00	107	439.00	451
113.00	339	193.00	2830	283.00	598	440.00	216
115.00	127	194.00	726	284.00	446	441.00	39248
116.00	1904	195.00	577	285.00	776	442.00	260864
117.00	25288	196.00	8448	286.00	160	443.00	50544
118.00	1798	198.00	227136	289.00	201	444.00	4538
119.00	157	199.00	15377	290.00	146	445.00	105
120.00	383	200.00	1305	292.00	285		
121.00	133	201.00	1676	293.00	1216		
122.00	2164	203.00	1671	294.00	286		

Breakdown Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150430-30597.b\20D0430.D				
Injection Date:	30-Apr-2015 09:49:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		

118 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

118 4,4'-DDT, Area = 735795
108 4,4'-DDD, Area = 4378
97 4,4'-DDE, Area = 0

%Breakdown: 0.59%, Max Limit: 20.00%
Passed

Report Date: 30-Apr-2015 11:17:05 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

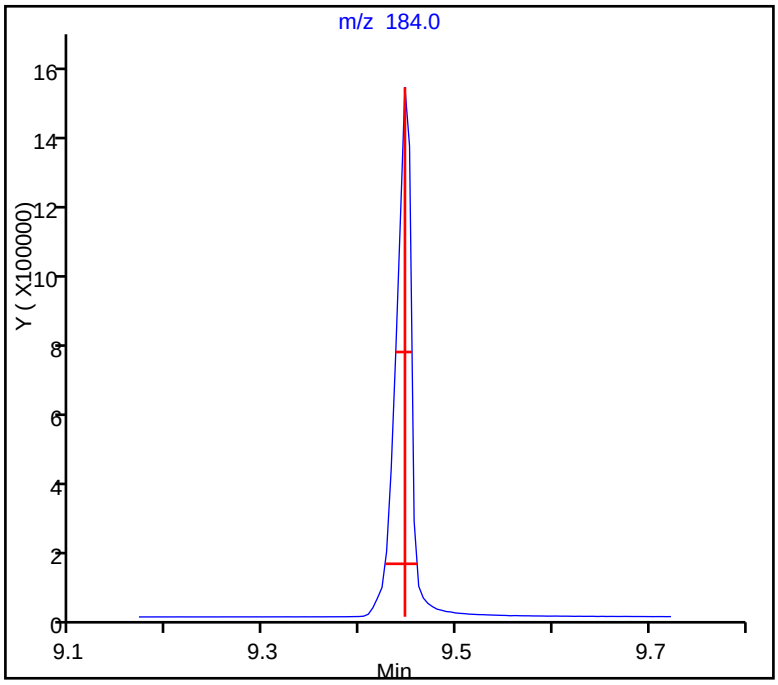
Data File: \\chi-svr07\chromdata\CMS20\20150430-30597.b\20D0430.D
Injection Date: 30-Apr-2015 09:49:30 Instrument ID: CMS20
Lims ID: dftpp
Client ID:
Operator ID: TW ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 20-8270 Limit Group: MSBNA_8270D_ICAL

147 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.013 (min.)
Front Width = 0.021 (min.)

Tailing Factor = 0.6, Max. Tailing < 2.00
Passed



Report Date: 30-Apr-2015 11:17:05 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

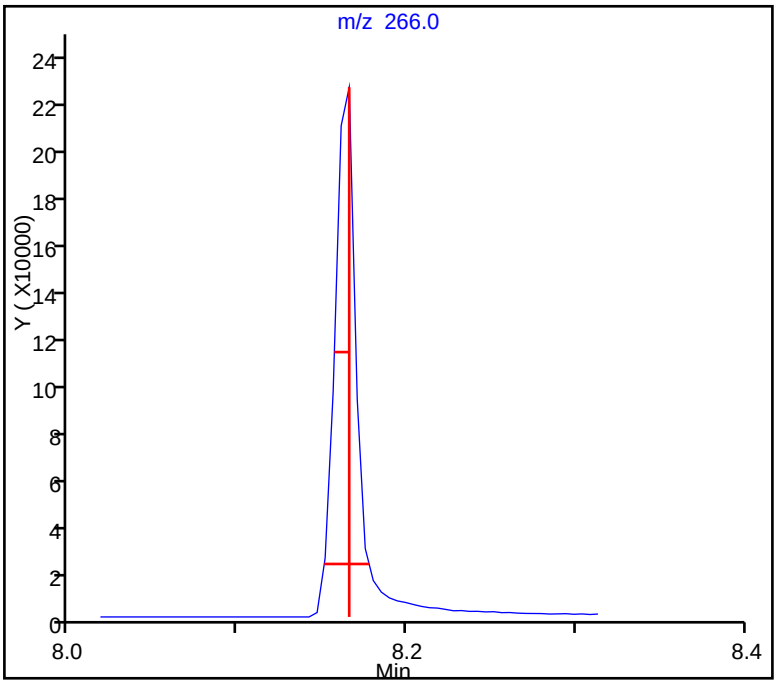
Data File:	\\chi-svr07\chromdata\CMS20\20150430-30597.b\20D0430.D				
Injection Date:	30-Apr-2015 09:49:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		

130 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.012 (min.)
Front Width = 0.015 (min.)

Tailing Factor = 0.8, Max. Tailing < 2.00
Passed



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20D0505.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 05-May-2015 09:17:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Misc. Info.: 500-0030673-001
Operator ID: TW Instrument ID: CMS20

Method: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 06-May-2015 11:11:27 Calib Date: 31-Mar-2015 12:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150331-29992.b\20C0331a.D

Column 1 : Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: hamnerb Date: 06-May-2015 11:11:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
130 Pentachlorophenol	266	8.113	8.113	0.000	1	95432	NR	NR	7
147 Benzidine	184	9.394	9.394	0.000	98	821607	NR	NR	7
75 DFTPP									
108 4,4'-DDD	235	10.070	10.070	0.000	94	347252		NR	
118 4,4'-DDT	235	10.070	10.070	0.000	95	347252	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

SMDFTPPWK_00083 Amount Added: 1.00 Units: mL

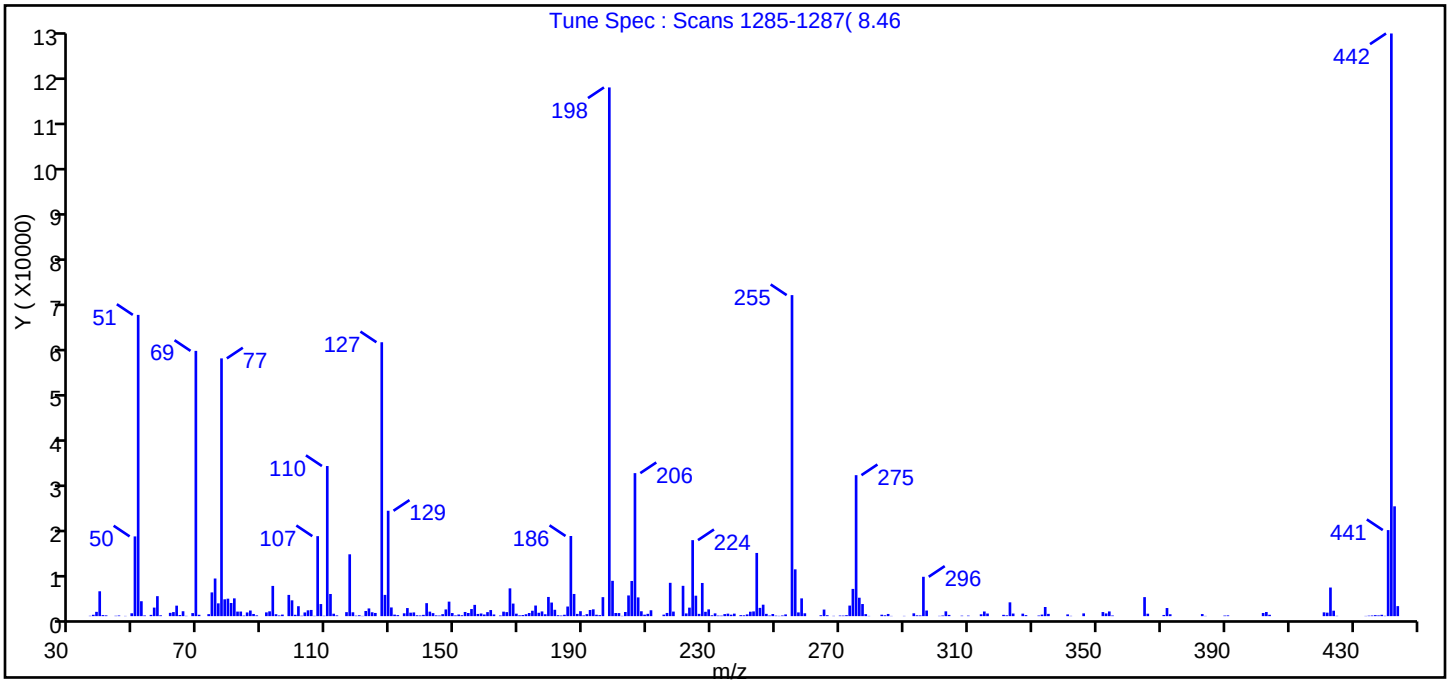
Report Date: 06-May-2015 11:11:27 Chrom Revision: 2.2 09-Apr-2015 10:05:40

MS Tune Report

TestAmerica Chicago

Data File: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20D0505.D
Injection Date: 05-May-2015 09:17:30 Instrument ID: CMS20
Lims ID: dftpp
Client ID:
Operator ID: TW ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 20-8270 Limit Group: MSBNA_8270D_ICAL
Tune Method: DFTPP Method 8270D, BP 198

75 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >50% of 442	100.0 (90.7)
51	10-80% of the base peak	57.0
68	<2% of mass 69	0.6 (1.1)
69	Present	50.2
70	<2% of mass 69	0.3 (0.5)
127	10-80% of the base peak	51.8
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.7
275	10-60% of the base peak	26.7
365	>1% of mass 198	3.6
441	present but <24% of mass 442	16.3 (14.8)
442	base peak, or >50% of 198	110.2
443	15-24% of mass 442	20.8 (18.8)

Data File: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20D0505.D\20-8270.rslt\spectra.d
Injection Date: 05-May-2015 09:17:30
Spectrum: Tune Spec : Scans 1285-1287(8.46
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 276

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	74	120.00	196	192.00	1355	275.00	31088
37.00	301	121.00	50	193.00	1502	276.00	4062
38.00	947	122.00	1137	194.00	313	277.00	2671
39.00	5484	123.00	1699	195.00	225	278.00	446
40.00	233	124.00	855	196.00	4189	279.00	50
41.00	170	125.00	701	198.00	116592	283.00	318
44.00	79	127.00	60400	199.00	7788	284.00	186
45.00	140	128.00	4687	200.00	691	285.00	481
47.00	50	129.00	23240	201.00	676	286.00	50
49.00	633	130.00	1919	202.00	57	290.00	54
50.00	17584	131.00	335	203.00	915	293.00	624
51.00	66432	132.00	225	204.00	4566	294.00	179
52.00	3291	134.00	626	205.00	7756	295.00	152
53.00	150	135.00	1784	206.00	31536	296.00	8680
55.00	277	136.00	763	207.00	4136	297.00	1240
56.00	1885	137.00	822	208.00	1076	301.00	63
57.00	4407	138.00	191	209.00	327	302.00	137
58.00	182	139.00	148	210.00	507	303.00	1061
61.00	726	140.00	287	211.00	1297	304.00	274
62.00	896	141.00	2865	215.00	332	308.00	103
63.00	2315	142.00	994	216.00	704	310.00	114
64.00	242	143.00	664	217.00	7349	314.00	405
65.00	1081	144.00	167	218.00	1007	315.00	1027
66.00	62	145.00	135	221.00	6686	316.00	577
68.00	671	146.00	438	222.00	603	321.00	290
69.00	58496	147.00	1479	223.00	1875	322.00	176
70.00	301	148.00	3200	224.00	16760	323.00	3046
73.00	438	149.00	684	225.00	4510	324.00	575
74.00	5235	150.00	162	226.00	504	327.00	551
75.00	8298	151.00	362	227.00	7315	328.00	220
76.00	2822	152.00	200	228.00	959	332.00	136
77.00	56840	153.00	920	229.00	1494	333.00	340
78.00	3715	154.00	694	230.00	192	334.00	2016

Report Date: 06-May-2015 11:11:27 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20D0505.D\20-8270.rslt\spectra.d
Injection Date: 05-May-2015 09:17:30
Spectrum: Tune Spec : Scans 1285-1287(8.46
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 276

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	3851	155.00	1567	231.00	614	335.00	498
80.00	2897	156.00	2484	232.00	125	341.00	385
81.00	3921	157.00	486	233.00	111	342.00	63
82.00	1005	158.00	586	234.00	450	346.00	608
83.00	1015	159.00	361	235.00	549	352.00	902
84.00	124	160.00	888	236.00	323	353.00	600
85.00	817	161.00	1342	237.00	553	354.00	1041
86.00	1240	162.00	370	239.00	219	355.00	143
87.00	480	164.00	140	240.00	188	365.00	4197
88.00	170	165.00	989	241.00	384	366.00	536
91.00	831	166.00	887	242.00	979	371.00	261
92.00	1062	167.00	6129	243.00	1044	372.00	1791
93.00	6665	168.00	2771	244.00	13936	373.00	416
94.00	426	169.00	544	245.00	1824	383.00	462
95.00	149	170.00	182	246.00	2526	384.00	51
96.00	341	171.00	246	247.00	503	390.00	127
98.00	4683	172.00	418	248.00	133	391.00	165
99.00	3488	173.00	692	249.00	473	402.00	696
100.00	298	174.00	1191	250.00	109	403.00	915
101.00	2191	175.00	2339	251.00	64	404.00	301
102.00	87	176.00	744	252.00	147	421.00	836
103.00	815	177.00	1041	253.00	384	422.00	770
104.00	1285	178.00	414	255.00	70792	423.00	6312
105.00	1367	179.00	4231	256.00	10321	424.00	1199
106.00	65	180.00	2999	257.00	819	425.00	68
107.00	17640	181.00	1405	258.00	3920	434.00	50
108.00	2666	182.00	208	259.00	630	435.00	103
109.00	83	183.00	130	264.00	200	436.00	141
110.00	33104	184.00	306	265.00	1453	437.00	223
111.00	4885	185.00	2121	266.00	203	438.00	158
112.00	536	186.00	17672	268.00	63	439.00	296
113.00	166	187.00	4891	270.00	131	440.00	73
116.00	881	188.00	496	271.00	121	441.00	18976
117.00	13638	189.00	1088	272.00	210	442.00	128488

Report Date: 06-May-2015 11:11:27 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20D0505.D\20-8270.rslt\spectra.d
Injection Date: 05-May-2015 09:17:30
Spectrum: Tune Spec : Scans 1285-1287(8.46
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 276

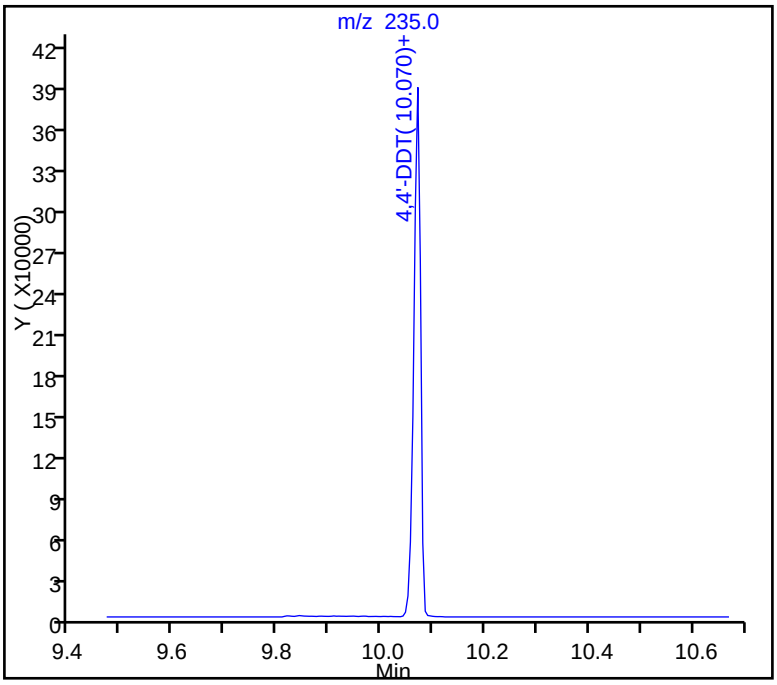
m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	852	190.00	158	273.00	2330	443.00	24216
119.00	104	191.00	442	274.00	6005	444.00	2210

Breakdown Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150505-30673.b\20D0505.D				
Injection Date:	05-May-2015 09:17:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		

118 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

118 4,4'-DDT, Area = 347252
108 4,4'-DDD, Area = 347252
97 4,4'-DDE, Area = 0

%Breakdown:* 50.00%, Max Limit: 20.00%
Failed

Report Date: 06-May-2015 11:11:27 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

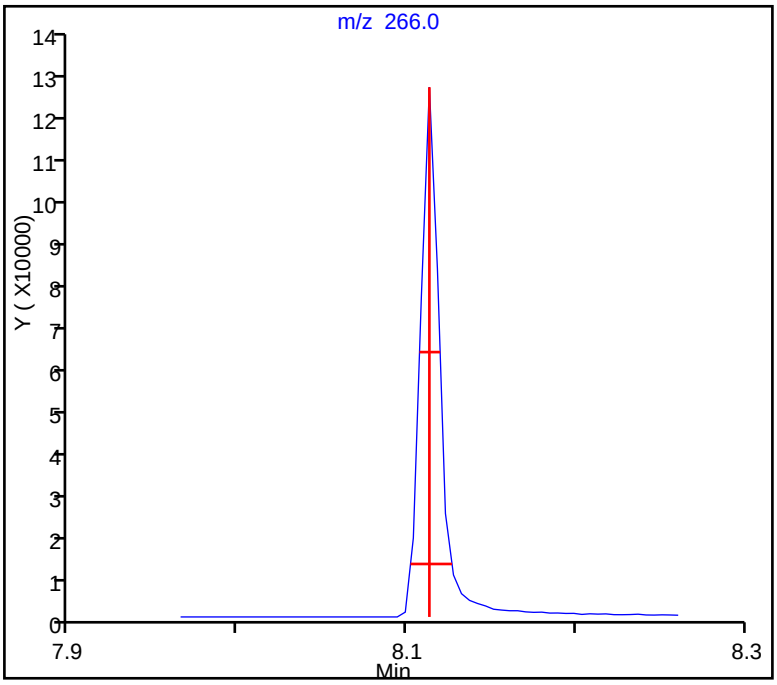
Data File:	\\chi-svr07\chromdata\CMS20\20150505-30673.b\20D0505.D				
Injection Date:	05-May-2015 09:17:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		

130 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.013 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.2, Max. Tailing < 2.00
Passed



Report Date: 06-May-2015 11:11:27 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

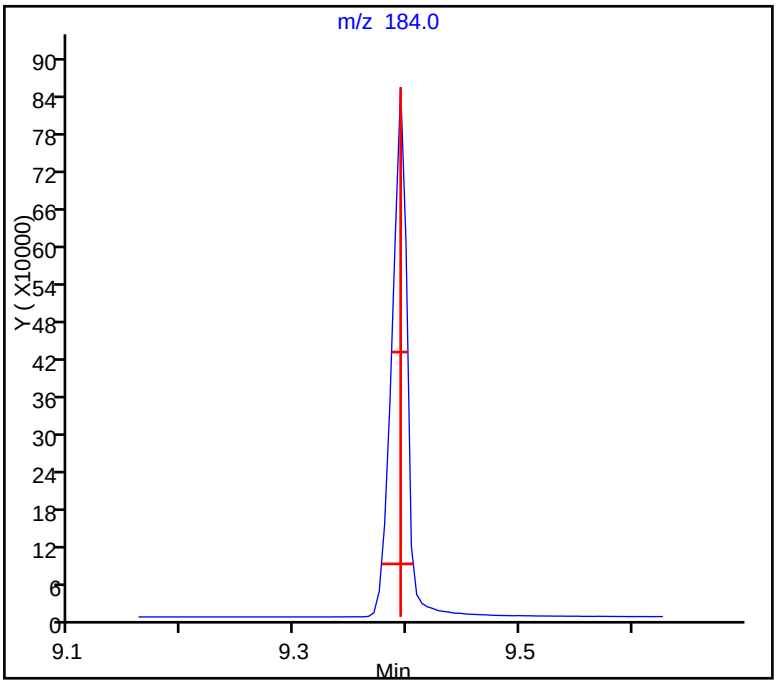
Data File:	\\chi-svr07\chromdata\CMS20\20150505-30673.b\20D0505.D				
Injection Date:	05-May-2015 09:17:30	Instrument ID:	CMS20		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		

147 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.017 (min.)

Tailing Factor = 0.7, Max. Tailing < 2.00
Passed



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21D0427B.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 27-Apr-2015 12:38:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Misc. Info.: 500-0030521-005
Operator ID: DA Instrument ID: CMS21

Method: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 28-Apr-2015 09:15:32 Calib Date: 27-Apr-2015 17:30:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\ICVMIX1.D

Column 1 : Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: rynkarg Date: 28-Apr-2015 09:14:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
122 Pentachlorophenol	266	8.492	8.492	0.000	88	344044	NR	NR	7
142 Benzidine	184	9.758	9.758	0.000	97	2023292	NR	NR	7
131 DFTPP									
146 4,4'-DDE	246	9.915	9.915	0.000	1	1001		NR	
150 4,4'-DDD	235	10.195	10.195	0.000	88	11686		NR	
156 4,4'-DDT	235	10.457	10.457	0.000	99	961555	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

SMDFTPPWK_00083 Amount Added: 1.00 Units: mL

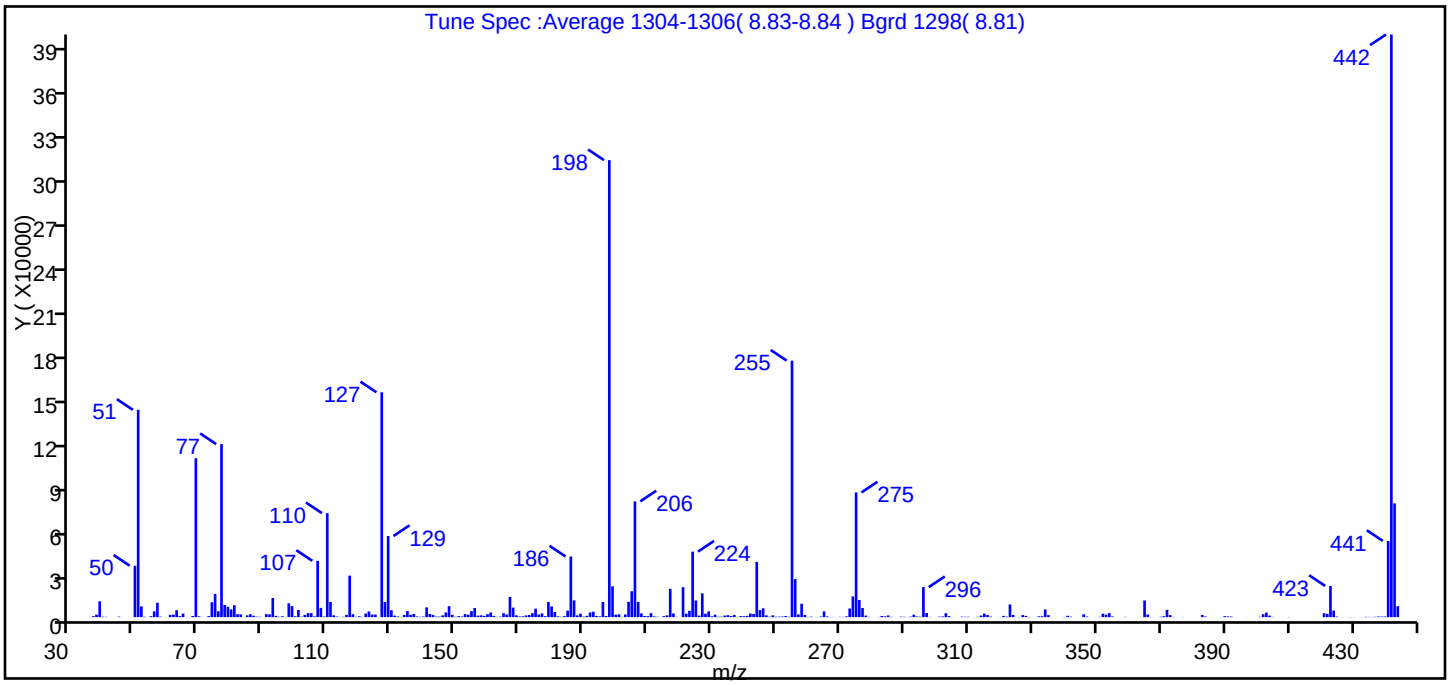
Report Date: 28-Apr-2015 09:15:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40

MS Tune Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\21D0427B.D				
Injection Date:	27-Apr-2015 12:38:30	Instrument ID:	CMS21		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Tune Method:	DFTPP Method 8270D, BP 198				

131 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >50% of 442	100.0 (78.4)
51	10-80% of the base peak	45.4
68	<2% of mass 69	0.2 (0.7)
69	Present	34.8
70	<2% of mass 69	0.2 (0.5)
127	10-80% of the base peak	49.2
197	<2% of mass 198	0.3
199	5-9% of mass 198	6.7
275	10-60% of the base peak	27.3
365	>1% of mass 198	3.6
441	present but <24% of mass 442	16.7 (13.1)
442	base peak, or >50% of 198	127.5
443	15-24% of mass 442	24.9 (19.5)

Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21D0427B.D\21-8270.rslt\spectra.d
Injection Date: 27-Apr-2015 12:38:30
Spectrum: Tune Spec :Average 1304-1306(8.83-8.84) Bgrd 1298(8.81)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	89	132.00	462	215.00	698	308.00	291
37.00	662	133.00	138	216.00	1212	309.00	277
38.00	1701	134.00	1480	217.00	19120	310.00	280
39.00	10651	135.00	4110	218.00	2453	312.00	67
40.00	270	136.00	1613	219.00	202	313.00	215
41.00	202	137.00	2175	221.00	20256	314.00	1050
45.00	364	138.00	440	222.00	2344	315.00	2388
50.00	34744	139.00	214	223.00	4291	316.00	1448
51.00	140032	140.00	420	224.00	44256	317.00	370
52.00	7290	141.00	6608	225.00	11252	319.00	50
53.00	258	142.00	2195	226.00	1031	320.00	57
55.00	637	143.00	1522	227.00	16075	321.00	869
56.00	3921	144.00	368	228.00	2329	322.00	341
57.00	9705	145.00	361	229.00	3876	323.00	8555
58.00	336	146.00	1186	230.00	567	324.00	1520
60.00	51	147.00	3168	231.00	1683	325.00	61
61.00	1555	148.00	7392	232.00	262	326.00	134
62.00	1709	149.00	1579	233.00	309	327.00	1412
63.00	4728	150.00	240	234.00	1062	328.00	859
64.00	699	151.00	677	235.00	1336	329.00	121
65.00	2418	152.00	408	236.00	804	332.00	553
66.00	126	153.00	2041	237.00	1451	333.00	622
67.00	52	154.00	1669	238.00	159	334.00	5188
68.00	754	155.00	4042	239.00	713	335.00	1348
69.00	107360	156.00	6141	240.00	632	336.00	52
70.00	557	157.00	1003	241.00	879	340.00	119
73.00	690	158.00	1209	242.00	2441	341.00	934
74.00	10080	159.00	863	243.00	2105	342.00	316
75.00	15719	160.00	2025	244.00	37352	346.00	1944
76.00	3995	161.00	3136	245.00	4786	347.00	407
77.00	116872	162.00	864	246.00	6010	350.00	56
78.00	8199	163.00	174	247.00	1209	351.00	197
79.00	7027	164.00	330	248.00	283	352.00	2347

Report Date: 28-Apr-2015 09:15:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21D0427B.D\21-8270.rslt\spectra.d
Injection Date: 27-Apr-2015 12:38:30
Spectrum: Tune Spec :Average 1304-1306(8.83-8.84) Bgrd 1298(8.81)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	5303	165.00	2676	249.00	1214	353.00	1702
81.00	8055	166.00	1825	250.00	318	354.00	2735
82.00	1990	167.00	13660	251.00	355	355.00	484
83.00	1861	168.00	6439	252.00	398	359.00	202
85.00	1215	169.00	1229	253.00	786	365.00	11254
86.00	1991	170.00	421	254.00	232	366.00	1736
87.00	965	171.00	540	255.00	173248	367.00	109
88.00	317	172.00	1174	256.00	25712	370.00	258
89.00	238	173.00	1429	257.00	1811	371.00	652
91.00	2064	174.00	2679	258.00	9050	372.00	4906
92.00	1895	175.00	5747	259.00	1502	373.00	1388
93.00	12881	176.00	1767	260.00	149	374.00	162
94.00	837	177.00	2511	261.00	306	377.00	104
95.00	220	178.00	664	263.00	60	383.00	1502
96.00	579	179.00	10209	264.00	395	384.00	438
97.00	106	180.00	7209	265.00	3866	390.00	696
98.00	9367	181.00	3467	266.00	485	391.00	490
99.00	7441	182.00	517	267.00	54	392.00	411
100.00	602	183.00	216	268.00	108	397.00	61
101.00	4860	184.00	707	270.00	186	401.00	255
102.00	304	185.00	4414	271.00	171	402.00	1976
103.00	1568	186.00	40976	272.00	518	403.00	3058
104.00	2736	187.00	11364	273.00	5825	404.00	1064
105.00	2713	188.00	1191	274.00	14015	405.00	143
106.00	467	189.00	2365	275.00	84224	410.00	141
107.00	38016	190.00	338	276.00	11562	421.00	2693
108.00	6274	191.00	900	277.00	6163	422.00	2247
109.00	387	192.00	3178	278.00	1054	423.00	21096
110.00	70224	193.00	3702	279.00	210	424.00	4414
111.00	10270	194.00	814	282.00	124	425.00	396
112.00	1247	195.00	514	283.00	787	427.00	101
113.00	407	196.00	10179	284.00	554	429.00	105
114.00	135	197.00	786	285.00	1149	430.00	53
115.00	221	198.00	308672	286.00	221	432.00	50

Report Date: 28-Apr-2015 09:15:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21D0427B.D\21-8270.rslt\spectra.d
Injection Date: 27-Apr-2015 12:38:30
Spectrum: Tune Spec :Average 1304-1306(8.83-8.84) Bgrd 1298(8.81)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 325

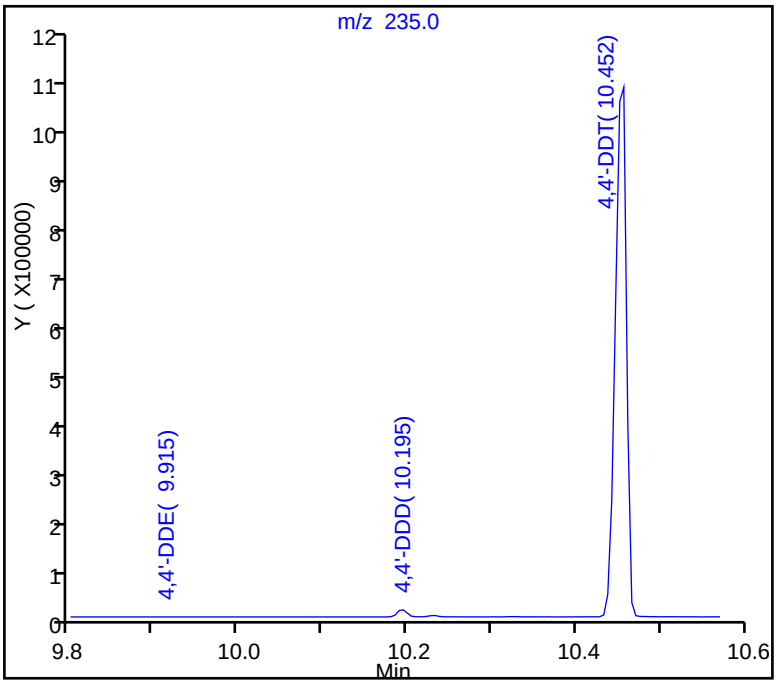
m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	1545	199.00	20808	289.00	300	433.00	58
117.00	28040	200.00	1658	290.00	239	434.00	190
118.00	1982	201.00	1905	291.00	65	435.00	185
119.00	214	202.00	185	292.00	354	436.00	136
120.00	573	203.00	1828	293.00	1638	437.00	234
121.00	133	204.00	10362	294.00	444	438.00	422
122.00	2419	205.00	17496	295.00	266	439.00	387
123.00	3825	206.00	78184	296.00	20272	440.00	417
124.00	1716	207.00	10209	297.00	2810	441.00	51472
125.00	1744	208.00	2478	298.00	159	442.00	393536
127.00	151872	209.00	766	301.00	316	443.00	76840
128.00	10283	210.00	701	302.00	459	444.00	7400
129.00	54784	211.00	2672	303.00	2632		
130.00	4664	212.00	513	304.00	693		
131.00	998	213.00	249	305.00	62		

Breakdown Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\21D0427B.D				
Injection Date:	27-Apr-2015 12:38:30	Instrument ID:	CMS21		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		

156 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

156 4,4'-DDT, Area = 961555
150 4,4'-DDD, Area = 11686
146 4,4'-DDE, Area = 1001

%Breakdown: 1.30%, Max Limit: 20.00%
Passed

Report Date: 28-Apr-2015 09:15:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

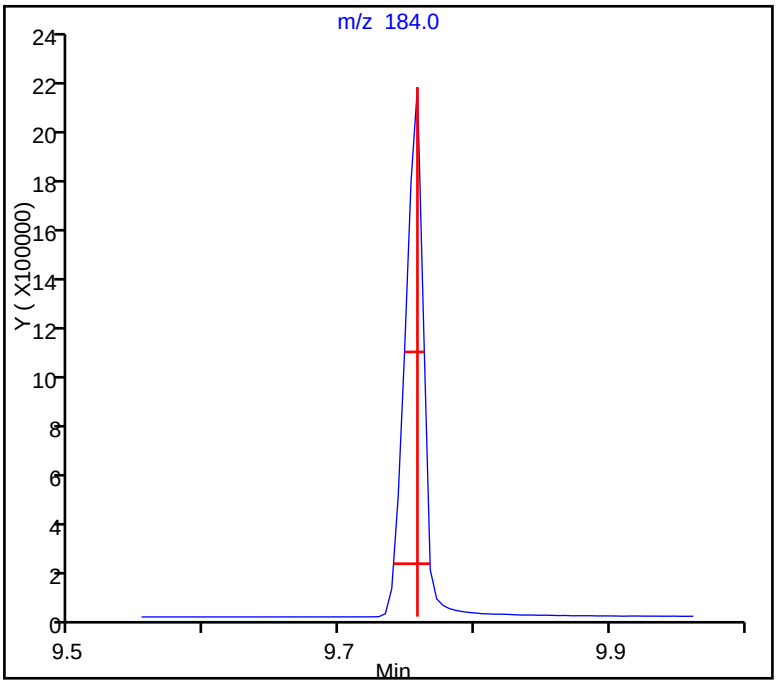
Data File:	\\chi-svr07\chromdata\CMS21\20150427-30526.b\21D0427B.D				
Injection Date:	27-Apr-2015 12:38:30	Instrument ID:	CMS21		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		

142 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.009 (min.)
Front Width = 0.018 (min.)

Tailing Factor = 0.5, Max. Tailing < 2.00
Passed



Report Date: 28-Apr-2015 09:15:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

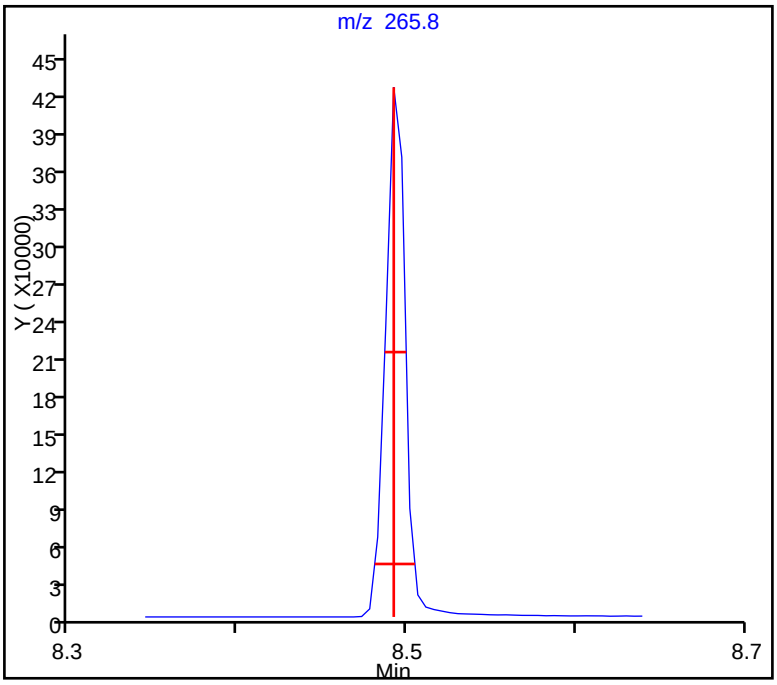
Data File: \\chi-svr07\chromdata\CMS21\20150427-30526.b\21D0427B.D
Injection Date: 27-Apr-2015 12:38:30 Instrument ID: CMS21
Lims ID: dftpp
Client ID:
Operator ID: DA ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 21-8270 Limit Group: MSBNA_8270D_ICAL

122 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.013 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00
Passed



TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21D0505.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 05-May-2015 12:10:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Misc. Info.: 500-0030679-001
Operator ID: AD Instrument ID: CMS21

Method: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 06-May-2015 08:36:30 Calib Date: 01-May-2015 11:27:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D

Column 1 : Det: MS SCAN
Process Host: XAWRK016

First Level Reviewer: lesiakk Date: 06-May-2015 08:36:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
122 Pentachlorophenol	266	8.292	8.292	0.000	89	199853	NR	NR	7
142 Benzidine	184	9.548	9.548	0.000	98	1765436	NR	NR	7
131 DFTPP									
146 4,4'-DDE	246	9.700	9.700	0.000	1	244		NR	
150 4,4'-DDD	235	10.010	10.010	0.000	49	2393		NR	
156 4,4'-DDT	235	10.238	10.238	0.000	98	845975	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
7 - Failed Limit of Detection

Reagents:

SMDFTPPWK_00082 Amount Added: 1.00 Units: mL

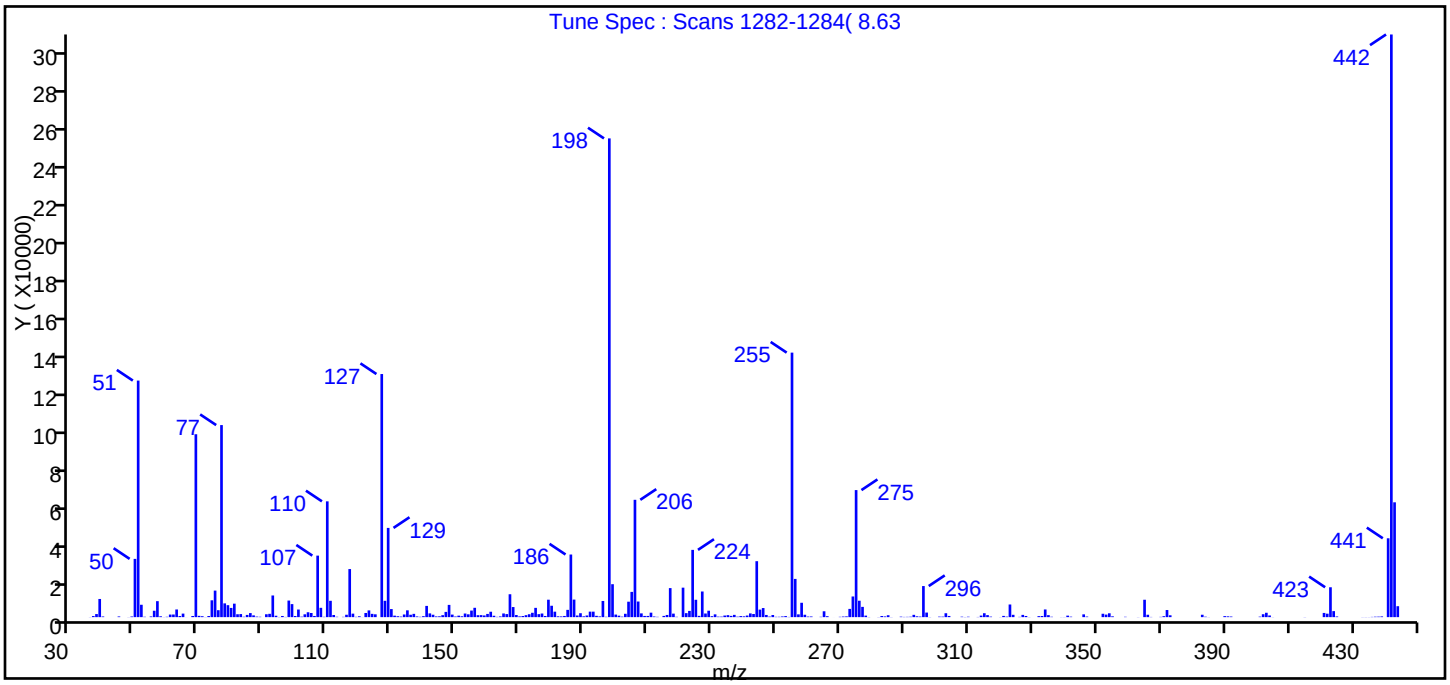
Report Date: 06-May-2015 08:36:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40

MS Tune Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21D0505.D				
Injection Date:	05-May-2015 12:10:30	Instrument ID:	CMS21		
Lims ID:	dftpp				
Client ID:					
Operator ID:	AD	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		
Tune Method:	DFTPP Method 8270D, BP 198				

131 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >90% of 442	100.0 (82.2)
51	10-80% of the base peak	49.4
68	<2% of mass 69	0.2 (0.6)
69	Present	38.2
70	<2% of mass 69	0.3 (0.7)
127	10-80% of the base peak	50.8
197	<2% of mass 198	0.1
199	5-9% of mass 198	6.9
275	10-60% of the base peak	26.5
365	>1% of mass 198	3.6
441	present but <24% of mass 442	16.5 (13.5)
442	base peak, or >50% of 198	121.7
443	15-24% of mass 442	24.0 (19.7)

Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21D0505.D\21-8270.rslt\spectra.d
Injection Date: 05-May-2015 12:10:30
Spectrum: Tune Spec : Scans 1282-1284(8.63
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 316

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	58	124.00	1708	204.00	8038	293.00	1198
37.00	567	125.00	1477	205.00	13142	294.00	428
38.00	1606	127.00	126520	206.00	61064	295.00	280
39.00	9457	128.00	8502	207.00	8127	296.00	16179
40.00	352	129.00	46440	208.00	1956	297.00	2380
45.00	362	130.00	4200	209.00	629	298.00	74
48.00	53	131.00	769	210.00	626	301.00	269
49.00	338	132.00	475	211.00	2326	302.00	264
50.00	30320	133.00	285	212.00	335	303.00	2035
51.00	123112	134.00	1384	213.00	162	304.00	615
52.00	6444	135.00	3546	215.00	642	308.00	241
53.00	199	136.00	1248	216.00	1135	309.00	79
55.00	365	137.00	1712	217.00	15112	310.00	223
56.00	3324	138.00	360	218.00	1831	313.00	97
57.00	8319	139.00	167	219.00	177	314.00	807
58.00	447	140.00	504	221.00	15342	315.00	2042
59.00	50	141.00	5848	222.00	2084	316.00	1059
60.00	185	142.00	1956	223.00	3248	317.00	269
61.00	1344	143.00	1259	224.00	35008	320.00	55
62.00	1372	144.00	371	225.00	9035	321.00	646
63.00	3995	145.00	438	226.00	671	322.00	269
64.00	569	146.00	1020	227.00	13347	323.00	6586
65.00	1843	147.00	2727	228.00	1894	324.00	1216
66.00	23	148.00	6376	229.00	3341	326.00	136
67.00	3	149.00	1324	230.00	491	327.00	1175
68.00	598	150.00	320	231.00	1449	328.00	602
69.00	95192	151.00	771	232.00	268	329.00	62
70.00	675	152.00	453	233.00	276	332.00	516
71.00	476	153.00	1883	234.00	832	333.00	579
72.00	60	154.00	1463	235.00	1033	334.00	3998
73.00	580	155.00	3424	236.00	658	335.00	1032
74.00	8766	156.00	4864	237.00	1183	336.00	202
75.00	13817	157.00	1015	238.00	245	339.00	51

Report Date: 06-May-2015 08:36:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21D0505.D\21-8270.rslt\spectra.d
Injection Date: 05-May-2015 12:10:30
Spectrum: Tune Spec : Scans 1282-1284(8.63
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 316

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	3617	158.00	1054	239.00	551	340.00	58
77.00	99952	159.00	871	240.00	418	341.00	784
78.00	7166	160.00	1677	241.00	831	342.00	252
79.00	6228	161.00	2822	242.00	1945	346.00	1450
80.00	4797	162.00	719	243.00	1640	347.00	298
81.00	7016	163.00	150	244.00	29120	352.00	1764
82.00	1504	164.00	370	245.00	3919	353.00	1331
83.00	1600	165.00	1911	246.00	4734	354.00	2008
84.00	211	166.00	1595	247.00	1136	355.00	424
85.00	1157	167.00	11918	248.00	298	359.00	183
86.00	2114	168.00	5252	249.00	1110	363.00	56
87.00	924	169.00	1101	250.00	170	365.00	9054
88.00	286	170.00	389	251.00	187	366.00	1245
89.00	190	171.00	583	252.00	361	367.00	109
91.00	1504	172.00	1025	253.00	554	370.00	142
92.00	1726	173.00	1510	254.00	110	371.00	494
93.00	11276	174.00	2271	255.00	137664	372.00	3704
94.00	728	175.00	4831	256.00	19896	373.00	961
95.00	90	176.00	1559	257.00	1446	383.00	1247
96.00	604	177.00	1891	258.00	7480	384.00	233
97.00	104	178.00	603	259.00	1248	385.00	51
98.00	8634	179.00	9076	260.00	304	390.00	526
99.00	6783	180.00	5927	261.00	338	391.00	413
100.00	590	181.00	2847	264.00	178	392.00	317
101.00	3963	182.00	432	265.00	3052	401.00	263
102.00	245	183.00	375	266.00	487	402.00	1522
103.00	1476	184.00	615	268.00	9	403.00	2284
104.00	2538	185.00	3788	270.00	173	404.00	872
105.00	2160	186.00	32592	271.00	311	405.00	50
106.00	608	187.00	9138	272.00	390	415.00	61
107.00	32016	188.00	854	273.00	4291	421.00	2187
108.00	4854	189.00	2046	274.00	10756	422.00	1799
109.00	173	190.00	415	275.00	66120	423.00	15553
110.00	60264	191.00	864	276.00	8544	424.00	3136

Report Date: 06-May-2015 08:36:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21D0505.D\21-8270.rslt\spectra.d
Injection Date: 05-May-2015 12:10:30
Spectrum: Tune Spec : Scans 1282-1284(8.63
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 316

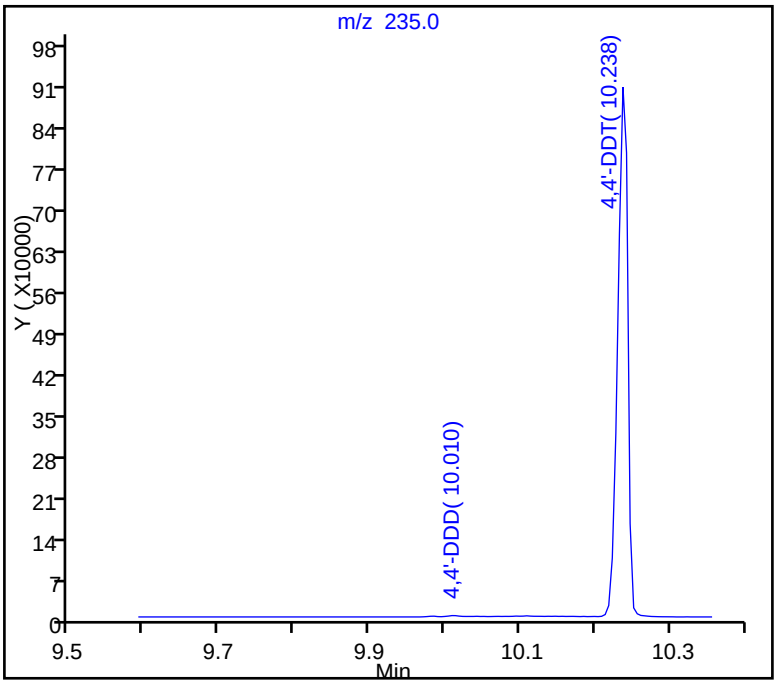
m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	8507	192.00	2864	277.00	5342	425.00	350
112.00	1117	193.00	2856	278.00	791	433.00	54
113.00	193	194.00	690	279.00	80	434.00	57
115.00	151	195.00	386	282.00	70	435.00	52
116.00	1244	196.00	8411	283.00	590	436.00	133
117.00	25024	197.00	185	284.00	365	437.00	231
118.00	1823	198.00	249152	285.00	991	438.00	270
119.00	162	199.00	17144	286.00	64	439.00	377
120.00	450	200.00	1339	289.00	256	441.00	41040
121.00	35	201.00	757	290.00	119	442.00	303232
122.00	2161	202.00	257	291.00	155	443.00	59760
123.00	3511	203.00	1748	292.00	224	444.00	5694

Breakdown Report

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21D0505.D				
Injection Date:	05-May-2015 12:10:30	Instrument ID:	CMS21		
Lims ID:	dftpp				
Client ID:					
Operator ID:	AD	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		

156 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

156 4,4'-DDT, Area = 845975
150 4,4'-DDD, Area = 2393
146 4,4'-DDE, Area = 244

%Breakdown: 0.31%, Max Limit: 20.00%
Passed

Report Date: 06-May-2015 08:36:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

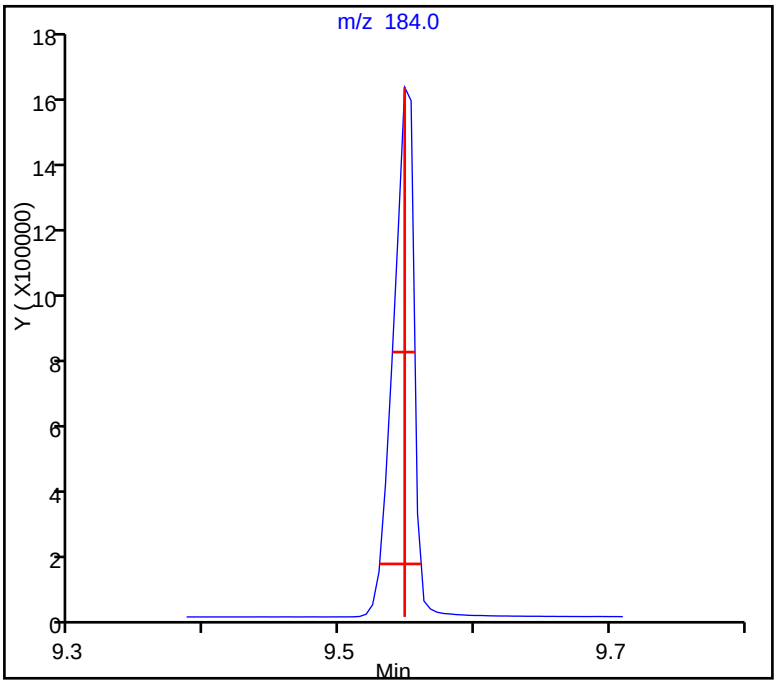
Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21D0505.D				
Injection Date:	05-May-2015 12:10:30	Instrument ID:	CMS21		
Lims ID:	dftpp				
Client ID:					
Operator ID:	AD	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		

142 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.012 (min.)
Front Width = 0.019 (min.)

Tailing Factor = 0.7, Max. Tailing < 2.00
Passed



Report Date: 06-May-2015 08:36:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

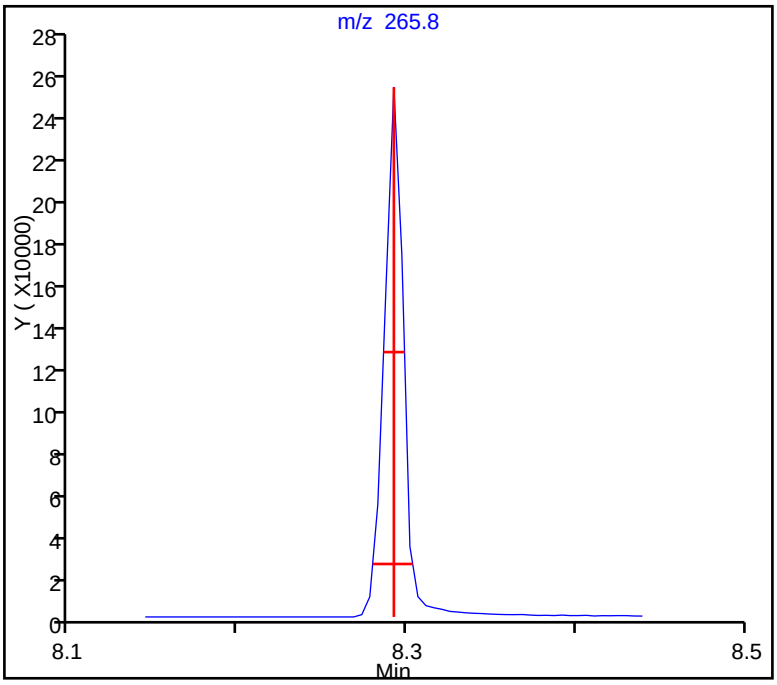
Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\21D0505.D				
Injection Date:	05-May-2015 12:10:30	Instrument ID:	CMS21		
Lims ID:	dftpp				
Client ID:					
Operator ID:	AD	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		

122 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.013 (min.)

Tailing Factor = 0.9, Max. Tailing < 2.00
Passed



TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\23D0429B.d				
Lims ID:	dftpp				
Client ID:					
Sample Type:	DFTPP				
Inject. Date:	29-Apr-2015 10:23:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	DFTPP				
Misc. Info.:	500-0030567-004				
Operator ID:	DA	Instrument ID:	CMS23		
Method:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	29-Apr-2015 16:52:56	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK036				

First Level Reviewer: rynkarg Date: 29-Apr-2015 16:49:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
147 Pentachlorophenol	266	7.831	7.831	0.000	1	76991	NR	NR	7
162 Benzidine	184	9.113	9.113	0.000	97	1212027	NR	NR	7
151 DFTPP									
165 4,4'-DDE	246	9.248	9.248	0.000	1	283		NR	7
169 4,4'-DDT	235	9.785	9.785	0.000	93	454610	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

SMDFTPPWK_00083 Amount Added: 1.00 Units: mL

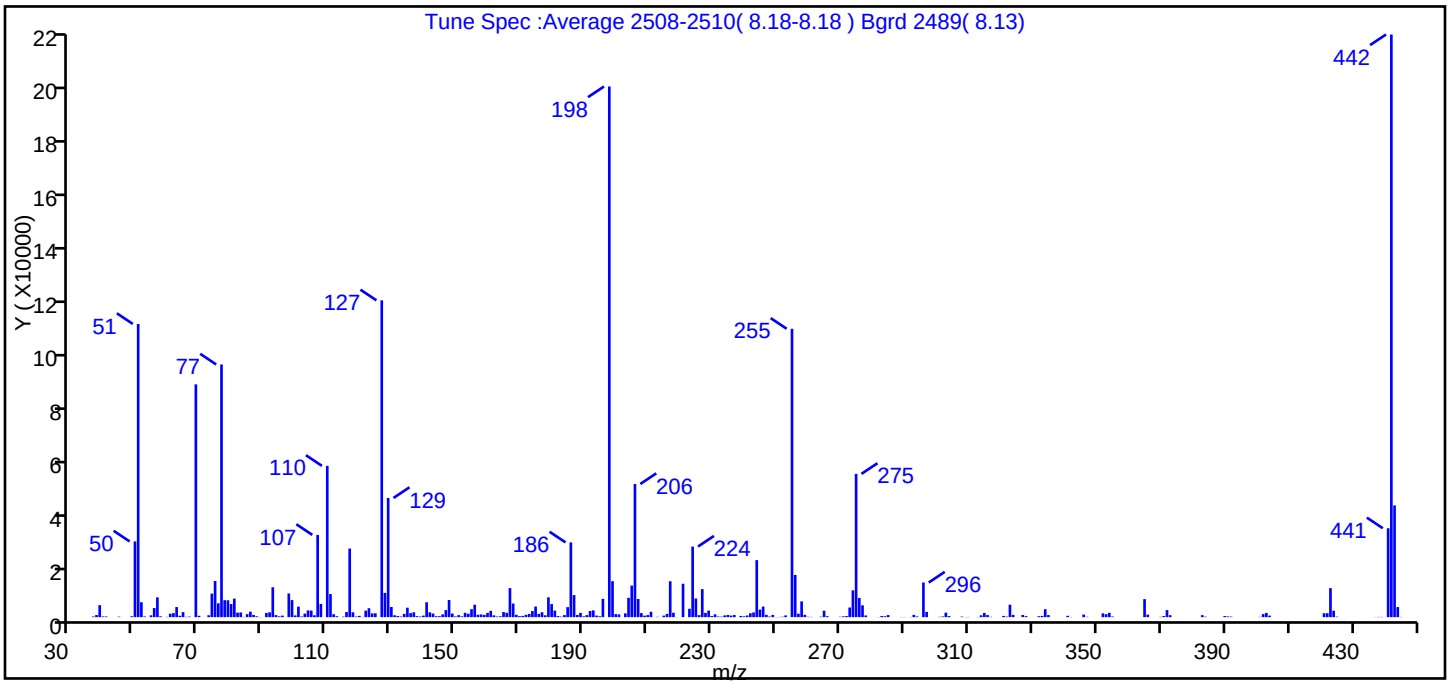
Report Date: 29-Apr-2015 16:52:57 Chrom Revision: 2.2 09-Apr-2015 10:05:40

MS Tune Report

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\23D0429B.d				
Injection Date:	29-Apr-2015 10:23:30	Instrument ID:	CMS23		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Tune Method:	DFTPP Method 8270D, BP 198				

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >90% of 442	100.0 (91.1)
51	10-80% of the base peak	55.3
68	<2% of mass 69	0.0 (0.0)
69	Present	43.9
70	<2% of mass 69	0.3 (0.6)
127	10-80% of the base peak	59.7
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.8
275	10-60% of the base peak	27.0
365	>1% of mass 198	3.4
441	present but <24% of mass 442	16.8 (15.3)
442	base peak, or >50% of 198	109.8
443	15-24% of mass 442	21.1 (19.2)

Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23D0429B.d\23-8270.rslt\spectra.d
Injection Date: 29-Apr-2015 10:23:30
Spectrum: Tune Spec :Average 2508-2510(8.18-8.18) Bgrd 2489(8.13)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	243	123.00	3262	195.00	334	282.00	51
38.00	777	124.00	1381	196.00	6708	283.00	419
39.00	4385	125.00	1416	198.00	194496	284.00	333
40.00	265	127.00	116120	199.00	13175	285.00	769
41.00	251	128.00	8889	200.00	1109	289.00	62
45.00	176	129.00	43688	201.00	986	290.00	68
49.00	319	130.00	3724	203.00	1379	292.00	70
50.00	27744	131.00	689	204.00	7082	293.00	832
51.00	107464	132.00	429	205.00	11576	294.00	261
52.00	5474	133.00	215	206.00	48800	296.00	12691
53.00	249	134.00	1206	207.00	6657	297.00	1928
55.00	667	135.00	3462	208.00	1487	301.00	118
56.00	3337	136.00	1467	209.00	550	302.00	236
57.00	7251	137.00	1776	210.00	763	303.00	1652
58.00	302	138.00	360	211.00	1978	304.00	410
60.00	111	139.00	233	213.00	119	308.00	200
61.00	1265	140.00	570	215.00	557	309.00	51
62.00	1478	141.00	5447	216.00	1186	310.00	77
63.00	3699	142.00	1765	217.00	13153	313.00	68
64.00	518	143.00	1310	218.00	1619	314.00	670
65.00	1843	144.00	336	219.00	57	315.00	1550
66.00	116	145.00	350	221.00	12243	316.00	778
67.00	200	146.00	1011	223.00	3077	317.00	125
69.00	85320	147.00	2593	224.00	25864	321.00	454
70.00	499	148.00	6278	225.00	6829	322.00	204
73.00	691	149.00	1323	226.00	742	323.00	4560
74.00	8612	150.00	264	227.00	10274	324.00	815
75.00	13235	151.00	738	228.00	1575	327.00	794
76.00	5062	152.00	306	229.00	2404	328.00	378
77.00	92616	153.00	1593	230.00	411	332.00	345
78.00	6216	154.00	1248	231.00	1032	333.00	437
79.00	6183	155.00	2909	232.00	228	334.00	2904
80.00	4802	156.00	4544	233.00	191	335.00	756

Report Date: 29-Apr-2015 16:52:57 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23D0429B.d\23-8270.rslt\spectra.d
Injection Date: 29-Apr-2015 10:23:30
Spectrum: Tune Spec :Average 2508-2510(8.18-8.18) Bgrd 2489(8.13)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	6800	157.00	877	234.00	648	341.00	494
82.00	1642	158.00	989	235.00	808	342.00	69
83.00	1710	159.00	817	236.00	576	346.00	936
84.00	82	160.00	1554	237.00	774	347.00	125
85.00	1094	161.00	2324	239.00	448	352.00	1369
86.00	2014	162.00	659	240.00	300	353.00	1072
87.00	799	163.00	228	241.00	602	354.00	1583
88.00	295	164.00	301	242.00	1414	355.00	233
89.00	67	165.00	1871	243.00	1717	365.00	6596
91.00	1542	166.00	1590	244.00	20904	366.00	934
92.00	1764	167.00	10638	245.00	2777	370.00	115
93.00	10950	168.00	4988	246.00	3875	371.00	400
94.00	754	169.00	861	247.00	827	372.00	2583
95.00	303	170.00	377	248.00	220	373.00	696
96.00	558	171.00	476	249.00	810	383.00	728
98.00	8676	172.00	858	250.00	62	384.00	176
99.00	6261	173.00	1173	251.00	76	390.00	398
100.00	627	174.00	2218	252.00	155	391.00	277
101.00	3858	175.00	3889	253.00	634	392.00	190
102.00	239	176.00	1194	255.00	105696	401.00	108
103.00	1302	177.00	1821	256.00	15458	402.00	1118
104.00	2459	178.00	691	257.00	1259	403.00	1538
105.00	2424	179.00	7270	258.00	5782	404.00	572
106.00	681	180.00	4791	259.00	866	421.00	1426
107.00	30144	181.00	2396	260.00	141	422.00	1455
108.00	4853	182.00	405	261.00	88	423.00	10637
110.00	55448	183.00	190	264.00	163	424.00	2346
111.00	8465	184.00	756	265.00	2359	425.00	175
112.00	1060	185.00	3673	266.00	349	437.00	59
113.00	345	186.00	27400	270.00	131	438.00	80
115.00	175	187.00	8082	271.00	294	439.00	97
116.00	1880	188.00	817	272.00	393	441.00	32584
117.00	25152	189.00	1556	273.00	3538	442.00	213568
118.00	1778	190.00	297	274.00	9828	443.00	40944

Report Date: 29-Apr-2015 16:52:57 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\23D0429B.d\23-8270.rslt\spectra.d
Injection Date: 29-Apr-2015 10:23:30
Spectrum: Tune Spec :Average 2508-2510(8.18-8.18) Bgrd 2489(8.13)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 282

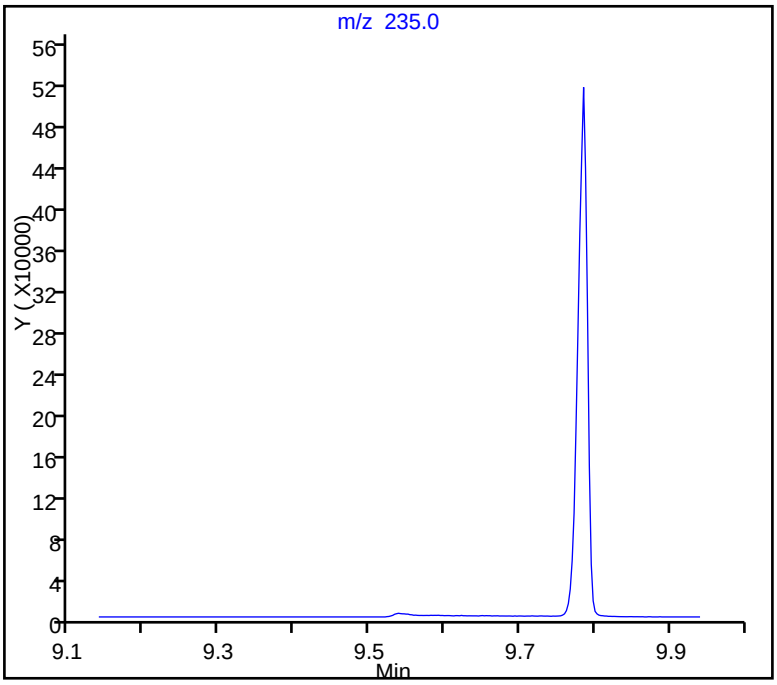
m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	223	191.00	760	275.00	52512	444.00	3701
120.00	462	192.00	2251	276.00	7028	445.00	85
121.00	70	193.00	2471	277.00	4327		
122.00	2378	194.00	578	278.00	627		

Breakdown Report

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\23D0429B.d				
Injection Date:	29-Apr-2015 10:23:30	Instrument ID:	CMS23		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

169 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

169 4,4'-DDT, Area = 454610
165 4,4'-DDE, Area = 283
166 4,4'-DDD, Area = 0

%Breakdown: 0.06%, Max Limit: 20.00%
Passed

Report Date: 29-Apr-2015 16:52:57 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

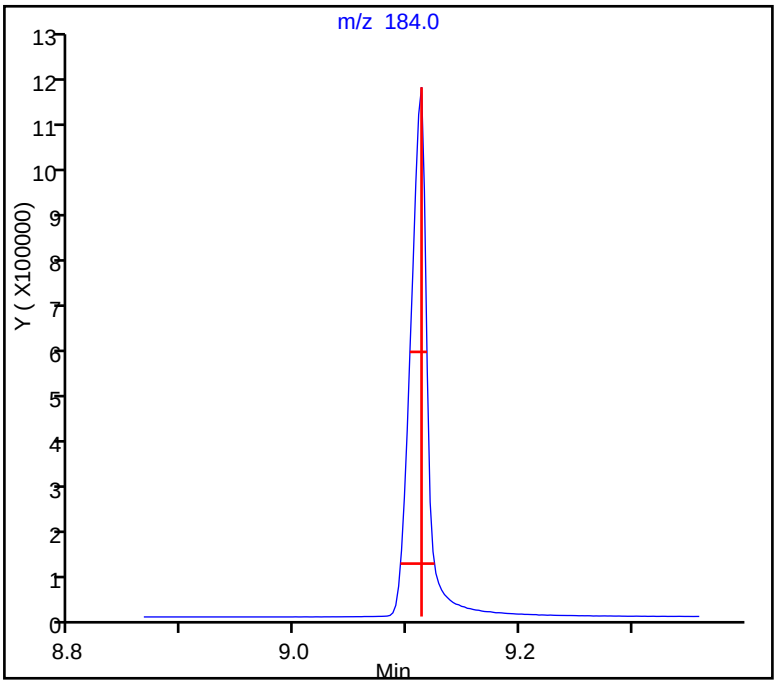
Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\23D0429B.d				
Injection Date:	29-Apr-2015 10:23:30	Instrument ID:	CMS23		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

162 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.012 (min.)
Front Width = 0.019 (min.)

Tailing Factor = 0.6, Max. Tailing < 2.00
Passed



Report Date: 29-Apr-2015 16:52:57 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

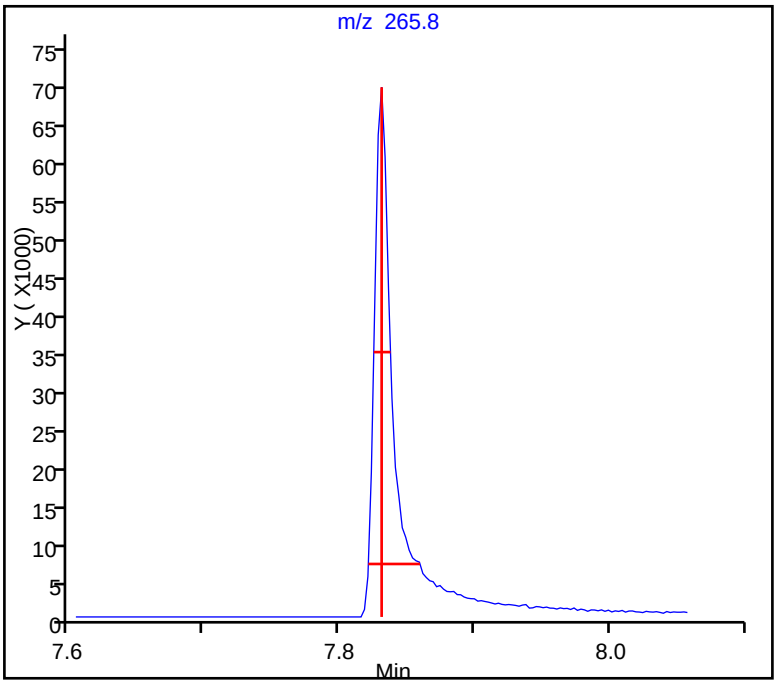
Data File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\23D0429B.d				
Injection Date:	29-Apr-2015 10:23:30	Instrument ID:	CMS23		
Lims ID:	dftpp				
Client ID:					
Operator ID:	DA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

147 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.028 (min.)
Front Width = 0.010 (min.)

Tailing Factor = * 2.9, Max. Tailing < 2.00
Failed



TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23D0506.d				
Lims ID:	dftpp				
Client ID:					
Sample Type:	DFTPP				
Inject. Date:	06-May-2015 09:18:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	DFTPP				
Misc. Info.:	500-0030710-001				
Operator ID:	TW	Instrument ID:	CMS23		
Method:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	07-May-2015 11:20:41	Calib Date:	29-Apr-2015 14:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d				
Column 1 :	ZB5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK053				

First Level Reviewer: hamnerb Date: 07-May-2015 11:20:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
147 Pentachlorophenol	266	7.725	7.725	0.000	1	29487	NR	NR	7
162 Benzidine	184	8.996	8.996	0.000	98	815217	NR	NR	7
151 DFTPP									
166 4,4'-DDD	235	9.506	9.506	0.000	1	159		NR	7
169 4,4'-DDT	235	9.684	9.684	0.000	93	293997	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

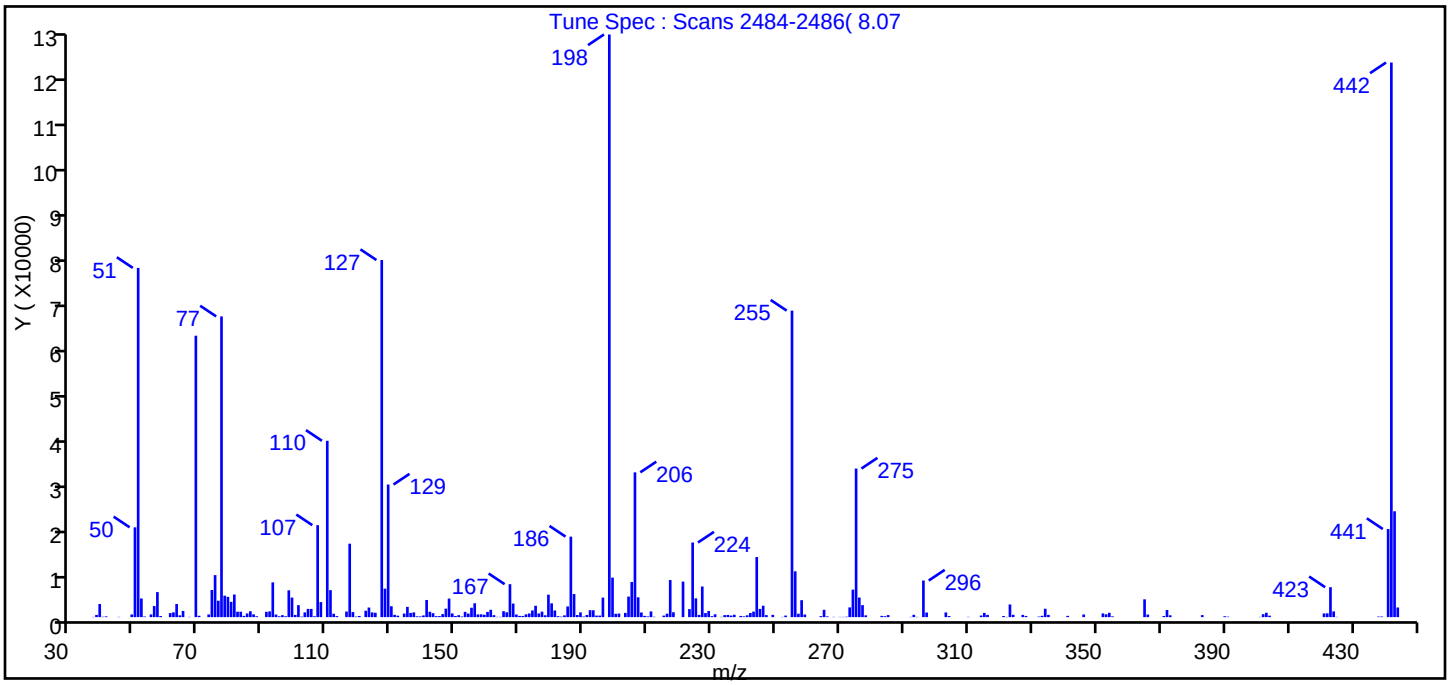
SMDFTPPWK_00083 Amount Added: 1.00 Units: mL

MS Tune Report

TestAmerica Chicago

Data File: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\23D0506.d
Injection Date: 06-May-2015 09:18:30 Instrument ID: CMS23
Lims ID: dftpp
Client ID:
Operator ID: TW ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 23-8270 Limit Group: MSBNA_8270D_ICAL
Tune Method: DFTPP Method 8270D, BP 198

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >90% of 442	100.0 (105.1)
51	10-80% of the base peak	59.9
68	<2% of mass 69	0.0 (0.0)
69	Present	48.3
70	<2% of mass 69	0.2 (0.5)
127	10-80% of the base peak	61.3
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.8
275	10-60% of the base peak	25.5
365	>1% of mass 198	3.1
441	present but <24% of mass 442	15.1 (15.9)
442	base peak, or >50% of 198	95.2
443	15-24% of mass 442	18.2 (19.1)

Data File: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\23D0506.d\23-8270.rslt\spectra.d
Injection Date: 06-May-2015 09:18:30
Spectrum: Tune Spec : Scans 2484-2486(8.07
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 255

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	54	119.00	122	186.00	17824	268.00	59
38.00	491	120.00	259	187.00	5111	270.00	55
39.00	2907	122.00	1416	188.00	476	271.00	51
40.00	80	123.00	2123	189.00	1056	272.00	99
41.00	172	124.00	1054	190.00	126	273.00	2159
45.00	59	125.00	966	191.00	484	274.00	6086
49.00	590	127.00	79040	192.00	1546	275.00	32888
50.00	19880	128.00	6304	193.00	1522	276.00	4336
51.00	77296	129.00	29352	194.00	351	277.00	2657
52.00	4131	130.00	2417	195.00	348	278.00	400
53.00	142	131.00	516	196.00	4325	283.00	281
55.00	600	132.00	326	198.00	128960	284.00	207
56.00	2456	134.00	789	199.00	8747	285.00	457
57.00	5546	135.00	2270	200.00	747	292.00	56
58.00	249	136.00	936	201.00	798	293.00	518
61.00	903	137.00	1058	203.00	939	294.00	58
62.00	1064	138.00	182	204.00	4555	296.00	8103
63.00	2904	139.00	161	205.00	7772	297.00	1024
64.00	394	140.00	379	206.00	32048	303.00	1044
65.00	1372	141.00	3803	207.00	4394	304.00	240
67.00	61	142.00	1195	208.00	1030	310.00	64
69.00	62288	143.00	871	209.00	287	314.00	364
70.00	305	144.00	220	210.00	162	315.00	939
73.00	587	145.00	238	211.00	1273	316.00	504
74.00	6005	146.00	670	212.00	81	321.00	250
75.00	9308	147.00	1887	215.00	345	322.00	52
76.00	3633	148.00	4103	216.00	768	323.00	2809
77.00	66560	149.00	820	217.00	8212	324.00	527
78.00	4751	150.00	261	218.00	1083	327.00	498
79.00	4480	151.00	440	221.00	7874	328.00	266
80.00	3389	152.00	141	223.00	1784	332.00	117
81.00	5005	153.00	1169	224.00	16520	333.00	295
82.00	1203	154.00	794	225.00	4163	334.00	1863

Report Date: 07-May-2015 11:20:42 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\23D0506.d\23-8270.rslt\spectra.d
Injection Date: 06-May-2015 09:18:30
Spectrum: Tune Spec : Scans 2484-2486(8.07
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 255

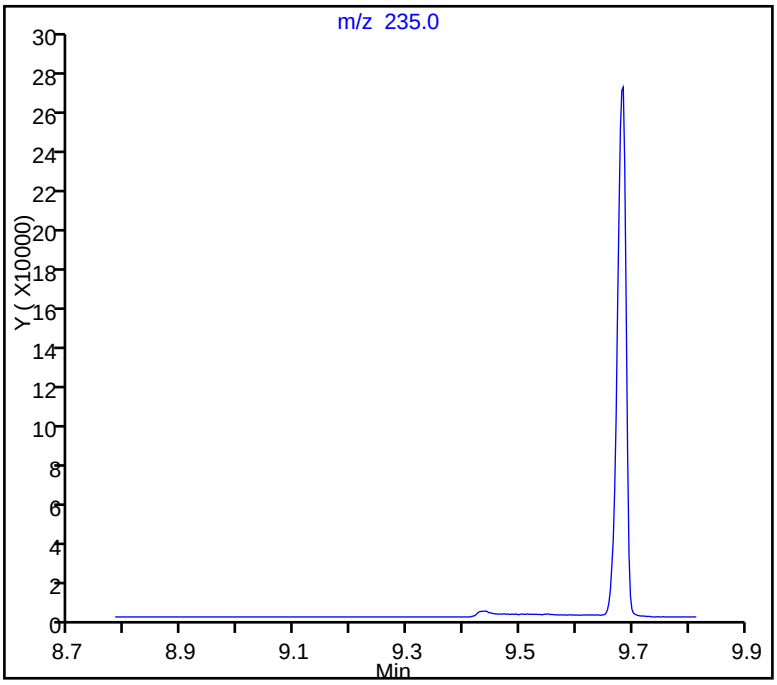
m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1199	155.00	2084	226.00	499	335.00	504
84.00	279	156.00	3066	227.00	6779	341.00	284
85.00	806	157.00	600	228.00	904	346.00	594
86.00	1307	158.00	626	229.00	1362	352.00	828
87.00	617	159.00	534	230.00	216	353.00	632
88.00	196	160.00	1153	231.00	634	354.00	959
91.00	1182	161.00	1629	233.00	63	355.00	173
92.00	1274	162.00	436	234.00	452	365.00	3941
93.00	7694	163.00	65	235.00	487	366.00	572
94.00	574	164.00	58	236.00	349	371.00	240
95.00	193	165.00	1320	237.00	532	372.00	1573
96.00	437	166.00	1080	239.00	272	373.00	411
97.00	193	167.00	7296	240.00	172	383.00	452
98.00	5939	168.00	3003	241.00	406	390.00	195
99.00	4326	169.00	579	242.00	915	391.00	106
100.00	489	170.00	275	243.00	1229	401.00	56
101.00	2656	171.00	271	244.00	13306	402.00	651
102.00	111	172.00	612	245.00	1826	403.00	969
103.00	1050	173.00	815	246.00	2526	404.00	331
104.00	1828	174.00	1484	247.00	451	421.00	822
105.00	1823	175.00	2517	249.00	503	422.00	842
106.00	193	176.00	813	252.00	53	423.00	6631
107.00	20352	177.00	1221	253.00	347	424.00	1270
108.00	3330	178.00	413	255.00	67840	425.00	59
110.00	39032	179.00	4972	256.00	10142	438.00	125
111.00	5979	180.00	3057	257.00	754	439.00	134
112.00	754	181.00	1478	258.00	3755	441.00	19504
113.00	232	182.00	217	259.00	578	442.00	122752
116.00	1244	183.00	107	264.00	225	443.00	23432
117.00	16257	184.00	392	265.00	1629	444.00	2141
118.00	1121	185.00	2369	266.00	167		

Breakdown Report

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23D0506.d				
Injection Date:	06-May-2015 09:18:30	Instrument ID:	CMS23		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

169 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

169 4,4'-DDT, Area = 293997
165 4,4'-DDE, Area = 0
166 4,4'-DDD, Area = 159

%Breakdown: 0.05%, Max Limit: 20.00%
Passed

Report Date: 07-May-2015 11:20:42 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

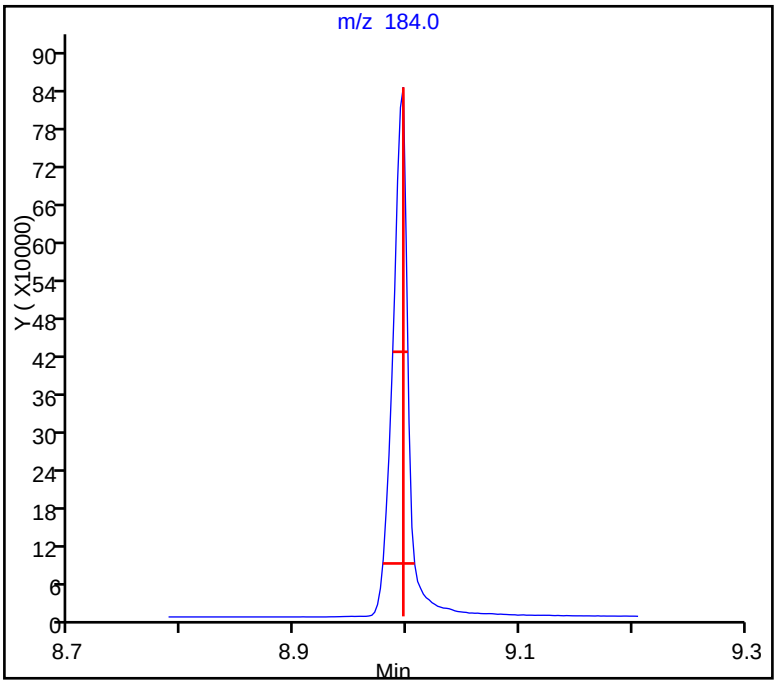
Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23D0506.d				
Injection Date:	06-May-2015 09:18:30	Instrument ID:	CMS23		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

162 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.018 (min.)

Tailing Factor = 0.6, Max. Tailing < 2.00
Passed



Report Date: 07-May-2015 11:20:42 Chrom Revision: 2.2 09-Apr-2015 10:05:40

Peak Tailing Report

TestAmerica Chicago

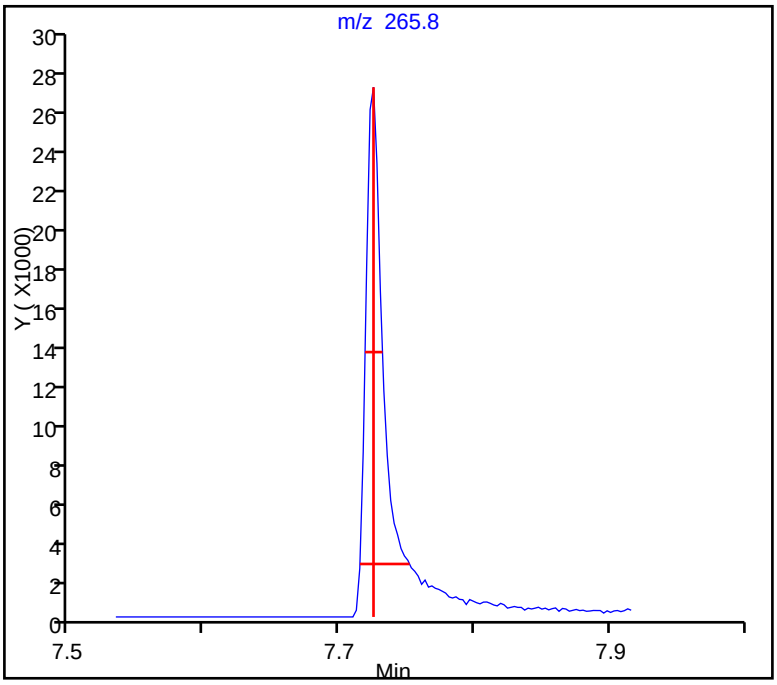
Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\23D0506.d				
Injection Date:	06-May-2015 09:18:30	Instrument ID:	CMS23		
Lims ID:	dftpp				
Client ID:					
Operator ID:	TW	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		

147 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.027 (min.)
Front Width = 0.010 (min.)

Tailing Factor = * 2.7, Max. Tailing < 2.00
Failed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: | Lab Sample ID: MB 500-286634/1-A
Matrix: Solid | Lab File ID: MB 286634.D
Analysis Method: 8270D | Date Collected:
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.0000(g) | Date Analyzed: 05/05/2015 12:24
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286703 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	<0.033		0.033	
208-96-8	Acenaphthylene	<0.033		0.033	
120-12-7	Anthracene	<0.033		0.033	
56-55-3	Benzo[a]anthracene	<0.033		0.033	
50-32-8	Benzo[a]pyrene	<0.033		0.033	
205-99-2	Benzo[b]fluoranthene	<0.033		0.033	
191-24-2	Benzo[g,h,i]perylene	<0.033		0.033	
207-08-9	Benzo[k]fluoranthene	<0.033		0.033	
218-01-9	Chrysene	<0.033		0.033	
53-70-3	Dibenz(a,h)anthracene	<0.033		0.033	
206-44-0	Fluoranthene	<0.033		0.033	
86-73-7	Fluorene	<0.033		0.033	
193-39-5	Indeno[1,2,3-cd]pyrene	<0.033		0.033	
90-12-0	1-Methylnaphthalene	<0.033		0.033	
91-57-6	2-Methylnaphthalene	<0.033		0.033	
91-20-3	Naphthalene	<0.033		0.033	
85-01-8	Phenanthrene	<0.033		0.033	
129-00-0	Pyrene	<0.033		0.033	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	79		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	72		25-115
1718-51-0	Terphenyl-d14 (Surr)	95		36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\chi-svr07\chromdata\CMS20\20150505-30673.b\MB 286634.D				
Lims ID:	MB 500-286634/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	05-May-2015 12:24:30	ALS Bottle#:	7	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	mb 500-286634/1-a				
Misc. Info.:	500-0030673-010				
Operator ID:	TW	Instrument ID:	CMS20		
Method:	\\chi-svr07\chromdata\CMS20\20150505-30673.b\20-8270.m				
Limit Group:	MSBNA_8270D_ICAL				
Last Update:	05-May-2015 16:25:03	Calib Date:	31-Mar-2015 12:16:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chi-svr07\chromdata\CMS20\20150331-29992.b\20C0331a.D				
Column 1 :			Det: MS SCAN		
Process Host:	XAWRK007				
First Level Reviewer: swaneyg		Date:	05-May-2015 16:25:03		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.727	4.727	0.000	95	34489	8.00	8.00	
* 2 Naphthalene-d8	136	5.670	5.675	-0.005	99	129999	8.00	8.00	
* 3 Acenaphthene-d10	164	7.051	7.056	-0.005	95	71549	8.00	8.00	
* 4 Phenanthrene-d10	188	8.280	8.285	-0.005	97	136530	8.00	8.00	
* 5 Chrysene-d12	240	10.489	10.499	-0.010	98	141348	8.00	8.00	
* 6 Perylene-d12	264	11.804	11.808	-0.004	97	130478	8.00	8.00	
$ 7 2-Fluorophenol	112	3.803	3.794	0.009	98	95608	25.0	18.4	
$ 8 Phenol-d5	99	4.446	4.456	-0.010	49	125219	25.0	20.8	
$ 9 Nitrobenzene-d5	82	5.132	5.142	-0.010	95	105797	25.0	18.1	
$ 10 2-Fluorobiphenyl	172	6.499	6.499	0.000	100	222031	25.0	19.8	
$ 11 2,4,6-Tribromophenol	330	7.699	7.704	-0.005	75	30734	25.0	19.4	
$ 12 Terphenyl-d14	244	9.594	9.594	0.000	99	308345	25.0	23.8	

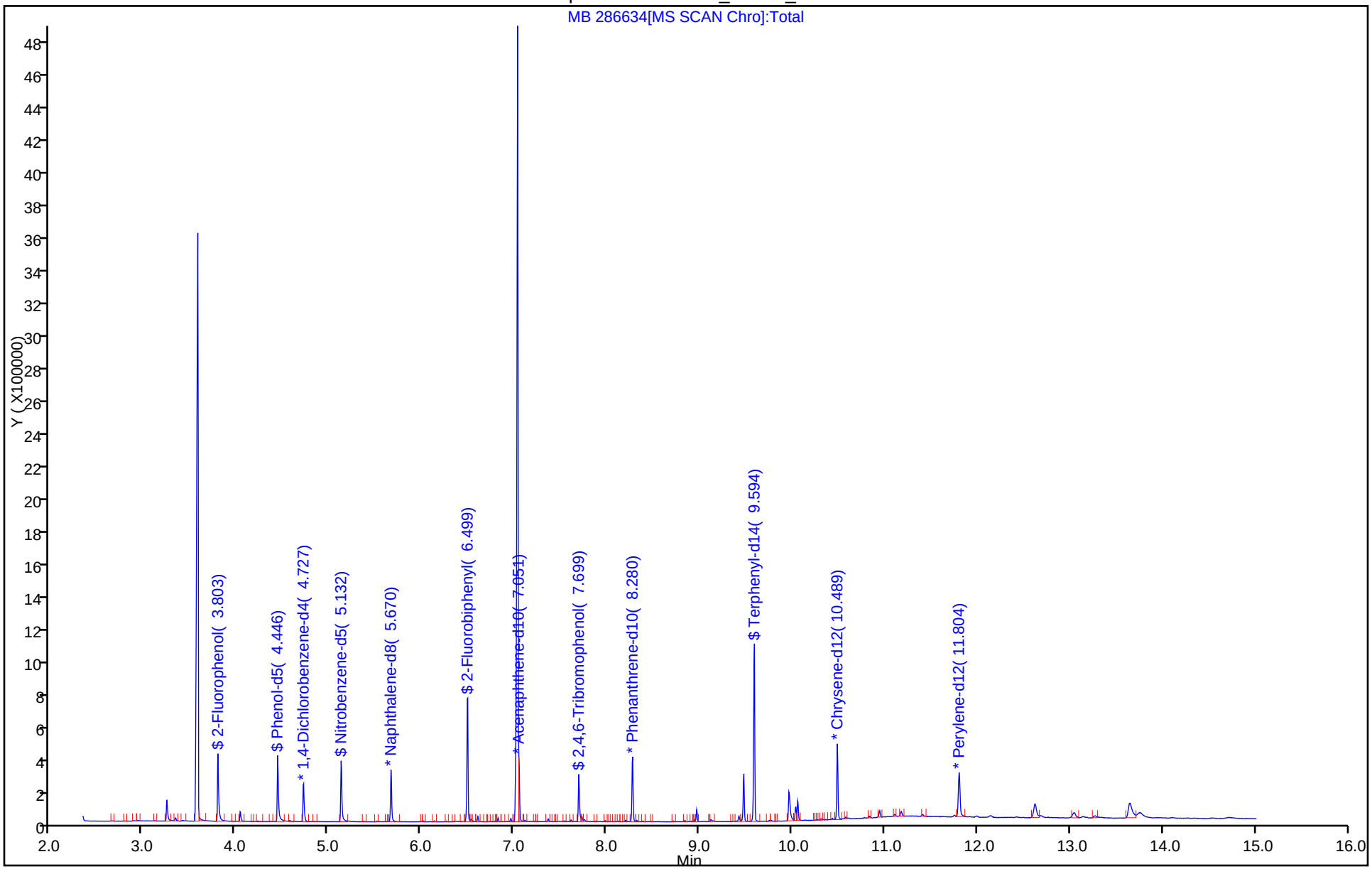
Reagents:

SMISTDWORK_00288 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 05-May-2015 16:25:03 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150505-30673.b\MB 286634.D				
Injection Date:	05-May-2015 12:24:30	Instrument ID:	CMS20	Operator ID:	TW
Lims ID:	MB 500-286634/1-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID:
Lab Sample ID: LCS 500-286634/2-A
Matrix: Solid
Lab File ID: LCS 286634.D
Analysis Method: 8270D
Date Collected:
Extract. Method: 3541
Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.0000(g)
Date Analyzed: 05/05/2015 10:50
Con. Extract Vol.: 0.5(mL)
Dilution Factor: 1
Injection Volume: 1(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 286703
Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	1.21		0.033	
208-96-8	Acenaphthylene	1.27		0.033	
120-12-7	Anthracene	1.28		0.033	
56-55-3	Benzo[a]anthracene	1.32		0.033	
50-32-8	Benzo[a]pyrene	1.24		0.033	
205-99-2	Benzo[b]fluoranthene	1.24		0.033	
191-24-2	Benzo[g,h,i]perylene	1.13		0.033	
207-08-9	Benzo[k]fluoranthene	1.24		0.033	
218-01-9	Chrysene	1.27		0.033	
53-70-3	Dibenz(a,h)anthracene	1.16		0.033	
206-44-0	Fluoranthene	1.24		0.033	
86-73-7	Fluorene	1.36		0.033	
193-39-5	Indeno[1,2,3-cd]pyrene	1.18		0.033	
90-12-0	1-Methylnaphthalene	1.11		0.033	
91-57-6	2-Methylnaphthalene	1.11		0.033	
91-20-3	Naphthalene	1.08		0.033	
85-01-8	Phenanthrene	1.25		0.033	
129-00-0	Pyrene	1.14		0.033	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	94		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	81		25-115
1718-51-0	Terphenyl-d14 (Surr)	99		36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS20\20150505-30673.b\LCS 286634.D
Lims ID: LCS 500-286634/2-A
Client ID:
Sample Type: LCS
Inject. Date: 05-May-2015 10:50:30 ALS Bottle#: 8 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs 500-286634/2-a
Misc. Info.: 500-0030673-011
Operator ID: TW Instrument ID: CMS20

Method: \\chi-svr07\chromdata\CMS20\20150505-30673.b\20-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 05-May-2015 16:28:15 Calib Date: 31-Mar-2015 12:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS20\20150331-29992.b\20C0331a.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: swaneyg Date: 05-May-2015 16:28:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.727	4.727	0.000	96	34941	8.00	8.00	
* 2 Naphthalene-d8	136	5.675	5.675	0.000	99	135194	8.00	8.00	
* 3 Acenaphthene-d10	164	7.056	7.056	0.000	72	70434	8.00	8.00	
* 4 Phenanthrene-d10	188	8.280	8.285	-0.005	91	139967	8.00	8.00	
* 5 Chrysene-d12	240	10.494	10.499	-0.005	72	144678	8.00	8.00	
* 6 Perylene-d12	264	11.809	11.808	0.001	95	131150	8.00	8.00	
$ 7 2-Fluorophenol	112	3.804	3.794	0.010	99	128014	25.0	24.4	
$ 8 Phenol-d5	99	4.456	4.456	0.000	55	160783	25.0	26.4	
$ 9 Nitrobenzene-d5	82	5.137	5.142	-0.005	95	123116	25.0	20.3	
$ 10 2-Fluorobiphenyl	172	6.499	6.499	0.000	100	258457	25.0	23.4	
$ 11 2,4,6-Tribromophenol	330	7.704	7.704	0.000	69	43905	25.0	28.1	
$ 12 Terphenyl-d14	244	9.594	9.594	0.000	99	327554	25.0	24.7	
13 1,4-Dioxane	88	2.537	2.484	0.053	96	28448	40.0	13.1	
15 N-Nitrosodimethylamine	42	2.799	2.780	0.019	80	126848	40.0	30.1	
16 Pyridine	79	2.827	2.789	0.038	81	132248	40.0	24.6	
20 Benzaldehyde	77	4.423	4.423	0.000	69	28945	40.0	8.59	
30 Phenol	94	4.466	4.465	0.001	88	267736	40.0	43.9	
33 Aniline	93	4.494	4.499	-0.005	81	244160	40.0	31.2	
34 Bis(2-chloroethyl)ether	93	4.523	4.532	-0.009	83	199790	40.0	40.5	
29 n-Decane	43	4.580	4.580	0.000	92	190223	40.0	26.5	
36 2-Chlorophenol	128	4.585	4.580	0.005	96	193767	40.0	38.2	
38 1,3-Dichlorobenzene	146	4.689	4.689	0.000	95	179405	40.0	29.6	
39 1,4-Dichlorobenzene	146	4.742	4.742	0.000	92	186043	40.0	30.3	
41 Benzyl alcohol	108	4.827	4.827	0.000	84	125543	40.0	35.1	
42 1,2-Dichlorobenzene	146	4.851	4.856	-0.005	86	182557	40.0	32.2	
43 2-Methylphenol	107	4.899	4.899	0.000	94	156352	40.0	36.5	
44 2,2'-oxybis[1-chloropropan	45	4.908	4.913	-0.005	97	355456	40.0	36.4	
19 Indene	116	4.918	4.918	0.000	79	306275	40.0	33.4	
46 3 & 4 Methylphenol	108	5.008	5.013	-0.005	90	194660	40.0	36.6	
47 N-Nitrosodi-n-propylamine	70	5.013	5.018	-0.005	79	144230	40.0	37.0	
49 Acetophenone	105	5.023	5.027	-0.004	95	236733	40.0	31.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
51 Hexachloroethane	117	5.099	5.099	0.000	85	76543	40.0	30.4	
52 Nitrobenzene	77	5.151	5.156	-0.005	1	196509	40.0	33.5	
54 Isophorone	82	5.323	5.332	-0.009	89	337330	40.0	32.4	
56 2-Nitrophenol	139	5.385	5.389	-0.004	68	103407	40.0	37.3	
55 2,4-Dimethylphenol	122	5.394	5.399	-0.005	87	181699	40.0	33.7	
59 Bis(2-chloroethoxy)methane	93	5.466	5.465	0.001	94	210657	40.0	35.0	
58 Benzoic acid	122	5.475	5.504	-0.029	96	18307	40.0	5.39	
62 2,4-Dichlorophenol	162	5.561	5.565	-0.004	89	164806	40.0	35.0	
64 1,2,4-Trichlorobenzene	180	5.623	5.627	-0.004	93	161896	40.0	31.2	
65 Naphthalene	128	5.689	5.694	-0.005	99	530889	40.0	32.4	
66 4-Chloroaniline	127	5.728	5.727	0.001	69	192667	40.0	30.4	
67 2,6-Dichlorophenol	162	5.732	5.732	0.000	76	160212	40.0	36.0	
69 Hexachlorobutadiene	225	5.766	5.765	0.001	92	94005	40.0	31.4	
28 Caprolactam	113	6.008	6.018	-0.010	79	61800	40.0	36.1	
71 4-Chloro-3-methylphenol	107	6.089	6.094	-0.005	95	178568	40.0	35.5	
76 2-Methylnaphthalene	142	6.223	6.223	0.000	90	376785	40.0	33.3	
31 1-Methylnaphthalene	142	6.299	6.304	-0.005	89	331134	40.0	33.4	
77 Hexachlorocyclopentadiene	237	6.332	6.332	0.000	79	53723	40.0	16.9	
78 1,2,4,5-Tetrachlorobenzene	216	6.351	6.351	0.000	95	174222	40.0	39.5	
81 2,4,6-Trichlorophenol	196	6.437	6.442	-0.005	93	115113	40.0	37.7	
83 2,4,5-Trichlorophenol	196	6.475	6.475	0.000	94	127709	40.0	39.6	
40 1,1'-Biphenyl	154	6.585	6.585	0.001	90	465165	40.0	40.2	
61 2-Chloronaphthalene	162	6.608	6.613	-0.005	97	348669	40.0	38.3	
85 2-Nitroaniline	65	6.689	6.689	0.000	82	132041	40.0	43.5	
88 Dimethyl phthalate	163	6.818	6.818	0.000	97	420211	40.0	39.7	
89 1,3-Dinitrobenzene	168	6.866	6.870	-0.004	81	68898	40.0	41.8	
104 2,6-Dinitrotoluene	165	6.875	6.880	-0.005	90	94925	40.0	40.7	
93 Acenaphthylene	152	6.947	6.951	-0.004	92	600639	40.0	38.0	
95 3-Nitroaniline	138	7.018	7.023	-0.005	88	94900	40.0	36.6	
99 Acenaphthene	154	7.085	7.085	0.001	91	353207	40.0	36.2	
98 2,4-Dinitrophenol	184	7.113	7.113	0.000	52	60710	80.0	47.1	
100 4-Nitrophenol	109	7.151	7.161	-0.010	74	106029	80.0	67.6	
90 2,4-Dinitrotoluene	165	7.208	7.213	-0.005	73	131922	40.0	42.6	
105 Dibenzofuran	168	7.223	7.227	-0.004	90	544308	40.0	39.4	
107 2,3,4,6-Tetrachlorophenol	232	7.318	7.323	-0.005	60	99623	40.0	38.1	
186 Hexadecane	57	7.370	7.370	0.000	87	329856	40.0	45.2	
110 Diethyl phthalate	149	7.385	7.385	0.000	98	450368	40.0	41.7	
113 4-Chlorophenyl phenyl ethe	204	7.489	7.489	0.000	89	205921	40.0	39.6	
115 Fluorene	166	7.504	7.508	-0.004	78	455092	40.0	40.8	
116 4-Nitroaniline	138	7.528	7.532	-0.004	1	111380	40.0	43.3	
117 4,6-Dinitro-2-methylphenol	198	7.547	7.556	-0.009	83	106862	80.0	54.8	
120 N-Nitrosodiphenylamine	169	7.589	7.594	-0.005	95	670890	80.0	79.1	
121 1,2-Diphenylhydrazine	77	7.623	7.623	0.000	99	447597	40.0	42.7	
127 4-Bromophenyl phenyl ether	248	7.894	7.894	0.000	64	128024	40.0	39.8	
128 Hexachlorobenzene	284	7.956	7.956	0.000	91	137629	40.0	38.5	
72 Atrazine	200	8.018	8.018	0.000	69	110842	40.0	34.8	
130 Pentachlorophenol	266	8.118	8.113	0.005	76	115017	80.0	56.8	
123 n-Octadecane	43	8.132	8.132	0.000	95	302760	40.0	NQ	
134 Phenanthrene	178	8.304	8.304	0.000	84	655728	40.0	37.4	
135 Anthracene	178	8.347	8.346	0.001	98	672686	40.0	38.3	
136 Carbazole	167	8.475	8.475	0.000	88	631675	40.0	38.8	
140 Di-n-butyl phthalate	149	8.723	8.723	0.000	99	762179	40.0	38.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
146 Fluoranthene	202	9.294	9.299	-0.005	98	726488	40.0	37.3	
147 Benzidine	184	9.394	9.394	0.000	74	61712	40.0	6.57	
149 Pyrene	202	9.489	9.489	0.000	96	758734	40.0	34.3	
155 Butyl benzyl phthalate	149	9.985	9.985	0.000	96	354809	40.0	37.6	
161 Bis(2-ethylhexyl) phthalat	149	10.437	10.437	0.000	95	498507	40.0	39.0	
162 3,3'-Dichlorobenzidine	252	10.447	10.451	-0.004	99	195216	40.0	30.8	
163 Benzo[a]anthracene	228	10.489	10.489	0.000	96	718603	40.0	39.7	
164 Chrysene	228	10.518	10.523	-0.005	86	644237	40.0	38.0	
166 Di-n-octyl phthalate	149	10.961	10.961	0.000	97	851698	40.0	44.1	
169 Benzo[b]fluoranthene	252	11.418	11.423	-0.005	94	676209	40.0	37.1	
170 Benzo[k]fluoranthene	252	11.442	11.446	-0.004	99	701032	40.0	37.2	
171 Benzo[a]pyrene	252	11.756	11.761	-0.005	88	627747	40.0	37.3	
175 Dibenz(a,h)anthracene	278	13.199	13.213	-0.014	65	534339	40.0	34.9	
174 Indeno[1,2,3-cd]pyrene	276	13.199	13.218	-0.019	86	635192	40.0	35.4	
176 Benzo[g,h,i]perylene	276	13.613	13.627	-0.014	94	537174	40.0	33.8	

QC Flag Legend

Processing Flags

NQ - Not Quantifiable

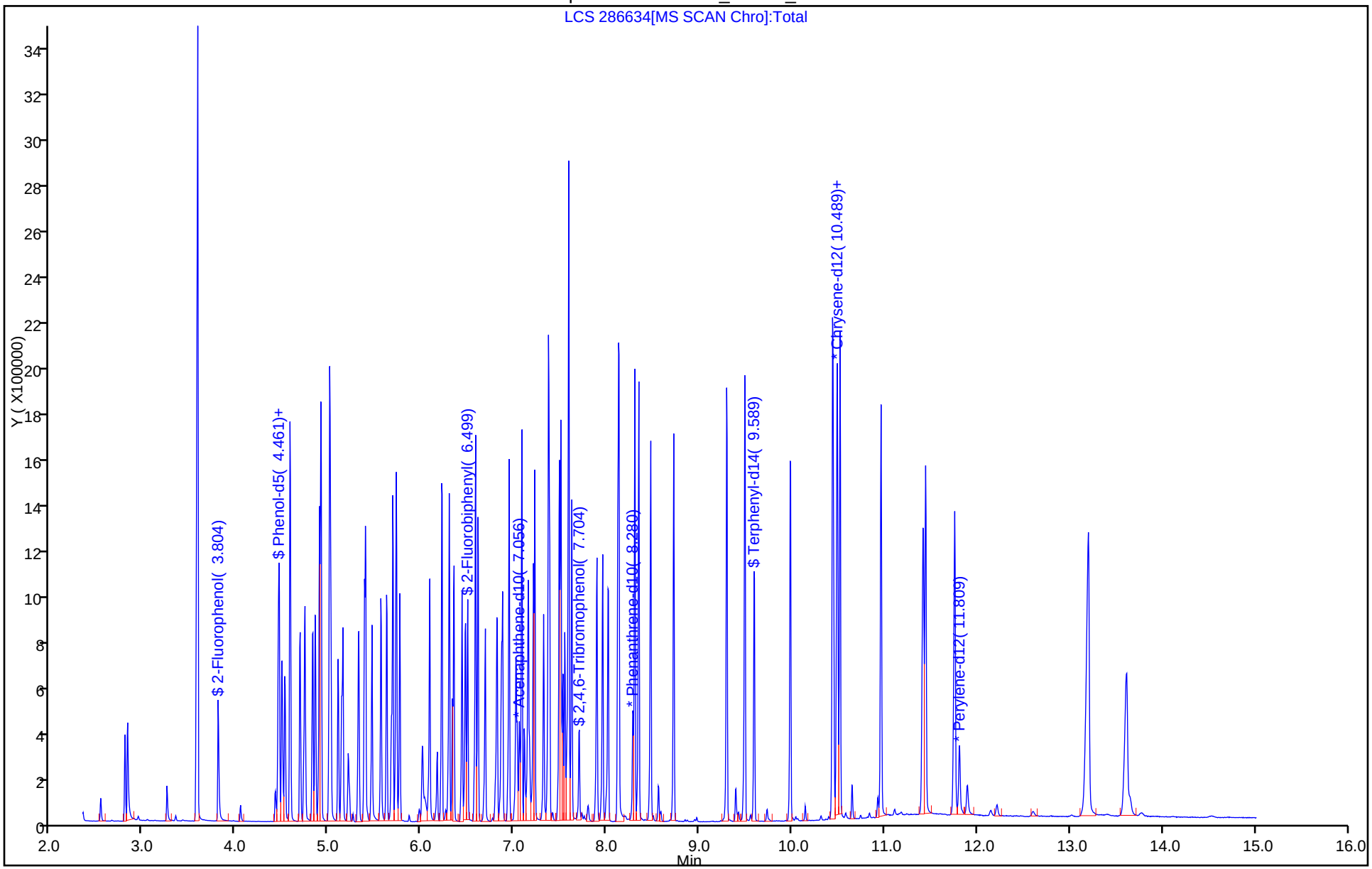
Reagents:

SMISTDWORK_00288 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 05-May-2015 16:28:15 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS20\20150505-30673.b\LCS 286634.D				
Injection Date:	05-May-2015 10:50:30	Instrument ID:	CMS20	Operator ID:	TW
Lims ID:	LCS 500-286634/2-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	20-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-10 MS | Lab Sample ID: 500-95474-10 MS
Matrix: Solid | Lab File ID: 95474-10MS.d
Analysis Method: 8270D | Date Collected: 04/30/2015 16:05
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.3133(g) | Date Analyzed: 05/06/2015 17:30
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 21.7 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	1.08		0.041	
208-96-8	Acenaphthylene	1.03		0.041	
120-12-7	Anthracene	1.06		0.041	
56-55-3	Benzo[a]anthracene	1.16		0.041	
50-32-8	Benzo[a]pyrene	1.12		0.041	
205-99-2	Benzo[b]fluoranthene	1.25		0.041	
191-24-2	Benzo[g,h,i]perylene	1.08		0.041	
207-08-9	Benzo[k]fluoranthene	1.21		0.041	
218-01-9	Chrysene	1.14		0.041	
53-70-3	Dibenz(a,h)anthracene	1.13		0.041	
206-44-0	Fluoranthene	0.971		0.041	
86-73-7	Fluorene	1.15		0.041	
193-39-5	Indeno[1,2,3-cd]pyrene	1.12		0.041	
90-12-0	1-Methylnaphthalene	0.932		0.041	
91-57-6	2-Methylnaphthalene	0.937		0.041	
91-20-3	Naphthalene	0.857		0.041	
85-01-8	Phenanthrene	1.08		0.041	
129-00-0	Pyrene	1.65		0.041	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	58		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	49		25-115
1718-51-0	Terphenyl-d14 (Surr)	111		36-134

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-10MS.d
Lims ID: 500-95474-A-10-G MS
Client ID: DS-10
Sample Type: MS
Inject. Date: 06-May-2015 17:30:30 ALS Bottle#: 19 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 500-95474-a-10-g ms
Misc. Info.: 500-0030710-022
Operator ID: TW Instrument ID: CMS23

Method: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 07-May-2015 15:48:29 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: lesiakk Date: 07-May-2015 15:49:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.366	4.369	-0.003	95	35943	8.00	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	99	139956	8.00	8.00	
* 3 Acenaphthene-d10	164	6.652	6.650	0.002	95	70692	8.00	8.00	
* 4 Phenanthrene-d10	188	7.865	7.865	0.000	97	114213	8.00	8.00	
* 5 Chrysene-d12	240	10.089	10.090	-0.001	95	62342	8.00	8.00	
* 6 Perylene-d12	264	11.310	11.315	-0.005	95	50551	8.00	8.00	
$ 9 Nitrobenzene-d5	82	4.779	4.782	-0.003	94	69612	25.0	12.1	
$ 10 2-Fluorobiphenyl	172	6.112	6.112	0.000	99	161753	25.0	14.6	
$ 12 Terphenyl-d14	244	9.180	9.180	0.000	98	159712	25.0	27.7	
77 Naphthalene	128	5.314	5.317	-0.003	99	360413	40.0	20.6	
94 2-Methylnaphthalene	142	5.837	5.834	0.003	83	263717	40.0	22.5	
97 1-Methylnaphthalene	142	5.911	5.911	0.000	80	231793	40.0	22.4	
115 Acenaphthylene	152	6.545	6.543	0.002	92	406701	40.0	24.8	
119 Acenaphthene	154	6.678	6.678	0.000	92	250401	40.0	25.8	
133 Fluorene	166	7.095	7.096	-0.001	83	315936	40.0	27.6	
149 Phenanthrene	178	7.888	7.888	0.000	94	420287	40.0	25.8	
150 Anthracene	178	7.931	7.931	0.000	98	422412	40.0	25.3	
161 Fluoranthene	202	8.879	8.877	0.002	99	384905	40.0	23.3	
164 Pyrene	202	9.070	9.070	0.000	97	374587	40.0	39.5	
173 Benzo[a]anthracene	228	10.079	10.079	0.000	94	233711	40.0	27.8	
174 Chrysene	228	10.110	10.115	-0.005	94	220229	40.0	27.3	
178 Benzo[b]fluoranthene	252	10.981	10.989	-0.008	95	205501	40.0	29.9	
179 Benzo[k]fluoranthene	252	11.002	11.012	-0.010	97	212996	40.0	29.1	
180 Benzo[a]pyrene	252	11.267	11.272	-0.005	85	187052	40.0	26.8	
183 Dibenz(a,h)anthracene	278	12.423	12.439	-0.016	51	179647	40.0	27.1	
182 Indeno[1,2,3-cd]pyrene	276	12.436	12.449	-0.013	92	214540	40.0	26.8	
185 Benzo[g,h,i]perylene	276	12.775	12.780	-0.005	95	173850	40.0	25.9	

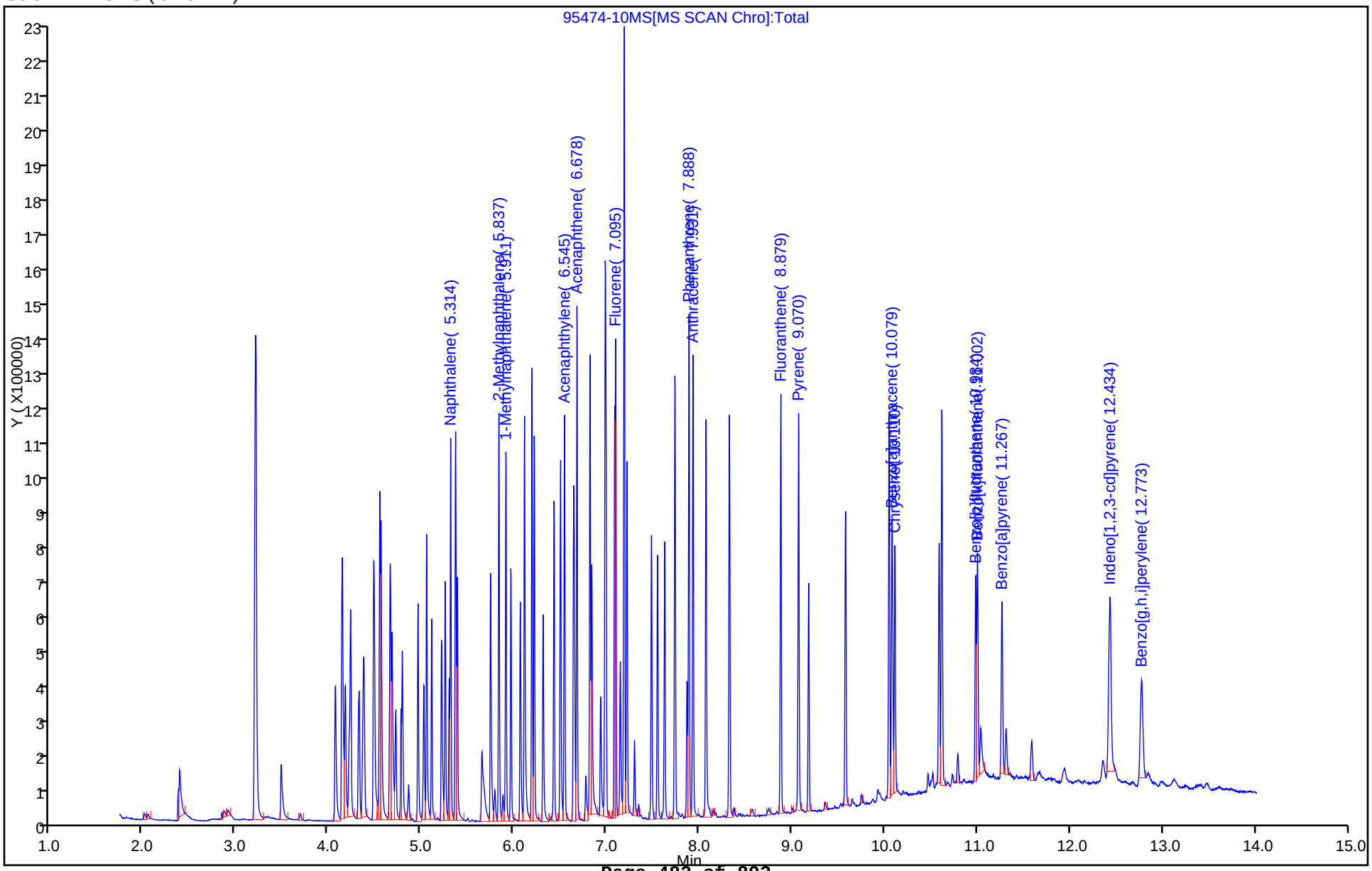
Reagents:

SMISTDWORK_00278 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-May-2015 15:49:10 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-10MS.d				
Injection Date:	06-May-2015 17:30:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-A-10-G MS			Worklist Smp#:	22
Client ID:	DS-10				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-10 MSD | Lab Sample ID: 500-95474-10 MSD
Matrix: Solid | Lab File ID: 95474-10MSD.D
Analysis Method: 8270D | Date Collected: 04/30/2015 16:05
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.0274(g) | Date Analyzed: 05/05/2015 22:43
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 21.7 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286746 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	1.37		0.042	
208-96-8	Acenaphthylene	1.38		0.042	
120-12-7	Anthracene	1.30		0.042	
56-55-3	Benzo[a]anthracene	1.36		0.042	
50-32-8	Benzo[a]pyrene	1.20		0.042	
205-99-2	Benzo[b]fluoranthene	1.08		0.042	
191-24-2	Benzo[g,h,i]perylene	2.12		0.042	
207-08-9	Benzo[k]fluoranthene	1.07		0.042	
218-01-9	Chrysene	1.27		0.042	
53-70-3	Dibenz(a,h)anthracene	2.45		0.042	
206-44-0	Fluoranthene	1.31		0.042	
86-73-7	Fluorene	1.45		0.042	
193-39-5	Indeno[1,2,3-cd]pyrene	2.35		0.042	
90-12-0	1-Methylnaphthalene	1.15		0.042	
91-57-6	2-Methylnaphthalene	1.15		0.042	
91-20-3	Naphthalene	1.03		0.042	
85-01-8	Phenanthrene	1.33		0.042	
129-00-0	Pyrene	2.74		0.042	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	74		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	65		25-115
1718-51-0	Terphenyl-d14 (Surr)	171	X *	36-134

Report Date: 11-May-2015 10:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-10MSD.D
Lims ID: 500-95474-B-10-G MSD
Client ID: DS-10
Sample Type: MSD
Inject. Date: 05-May-2015 22:43:30 ALS Bottle#: 20 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 500-95474-b-10-g msd
Misc. Info.: 500-0030679-022
Operator ID: AD Instrument ID: CMS21

Method: \\chi-svr07\chromdata\CMS21\20150505-30679.b\21-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 07-May-2015 15:39:37 Calib Date: 01-May-2015 11:27:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chi-svr07\chromdata\CMS21\20150501-30616.b\21C0501A.D

Column 1 : Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: hamnerb Date: 11-May-2015 10:50:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.881	4.885	-0.004	94	42205	8.00	8.00	
* 2 Naphthalene-d8	136	5.832	5.832	0.000	98	168137	8.00	8.00	
* 3 Acenaphthene-d10	164	7.221	7.222	-0.001	86	85573	8.00	8.00	
* 4 Phenanthrene-d10	188	8.449	8.449	0.000	89	156789	8.00	8.00	
* 5 Chrysene-d12	240	10.661	10.666	-0.005	98	76029	8.00	8.00	s
* 6 Perylene-d12	264	12.036	12.041	-0.005	97	50633	8.00	8.00	s
$ 9 Nitrobenzene-d5	82	5.280	5.290	-0.010	89	113074	25.0	16.3	
$ 10 2-Fluorobiphenyl	172	6.655	6.660	-0.005	99	246607	25.0	18.6	
$ 12 Terphenyl-d14	244	9.753	9.753	0.000	99	309693	25.0	42.8	
60 Naphthalene	128	5.846	5.851	-0.005	80	505667	40.0	24.2	
73 2-Methylnaphthalene	142	6.379	6.384	-0.005	91	378237	40.0	27.1	
45 1-Methylnaphthalene	142	6.460	6.465	-0.005	95	339313	40.0	27.1	
87 Acenaphthylene	152	7.107	7.112	-0.005	93	605575	40.0	32.5	
90 Acenaphthene	154	7.250	7.250	0.000	92	401258	40.0	32.2	
105 Fluorene	166	7.669	7.674	-0.005	97	462058	40.0	34.1	
128 Phenanthrene	178	8.468	8.473	-0.005	94	700155	40.0	31.4	
130 Anthracene	178	8.511	8.516	-0.005	99	687205	40.0	30.7	
140 Fluoranthene	202	9.467	9.467	0.000	97	752158	40.0	30.8	
143 Pyrene	202	9.662	9.662	0.000	94	746621	40.0	64.5	
162 Benzo[a]anthracene	228	10.652	10.657	-0.005	98	339215	40.0	32.0	
163 Chrysene	228	10.680	10.690	-0.010	96	289385	40.0	29.9	
167 Benzo[b]fluoranthene	252	11.622	11.632	-0.010	92	213501	40.0	25.5	
168 Benzo[k]fluoranthene	252	11.646	11.660	-0.014	96	202165	40.0	25.2	
170 Benzo[a]pyrene	252	11.979	11.994	-0.015	85	205943	40.0	28.2	
175 Dibenz(a,h)anthracene	278	13.502	13.516	-0.014	61	283302	40.0	57.6	
176 Indeno[1,2,3-cd]pyrene	276	13.502	13.516	-0.014	92	337555	40.0	55.2	
177 Benzo[g,h,i]perylene	276	13.954	13.954	0.000	94	274093	40.0	49.9	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

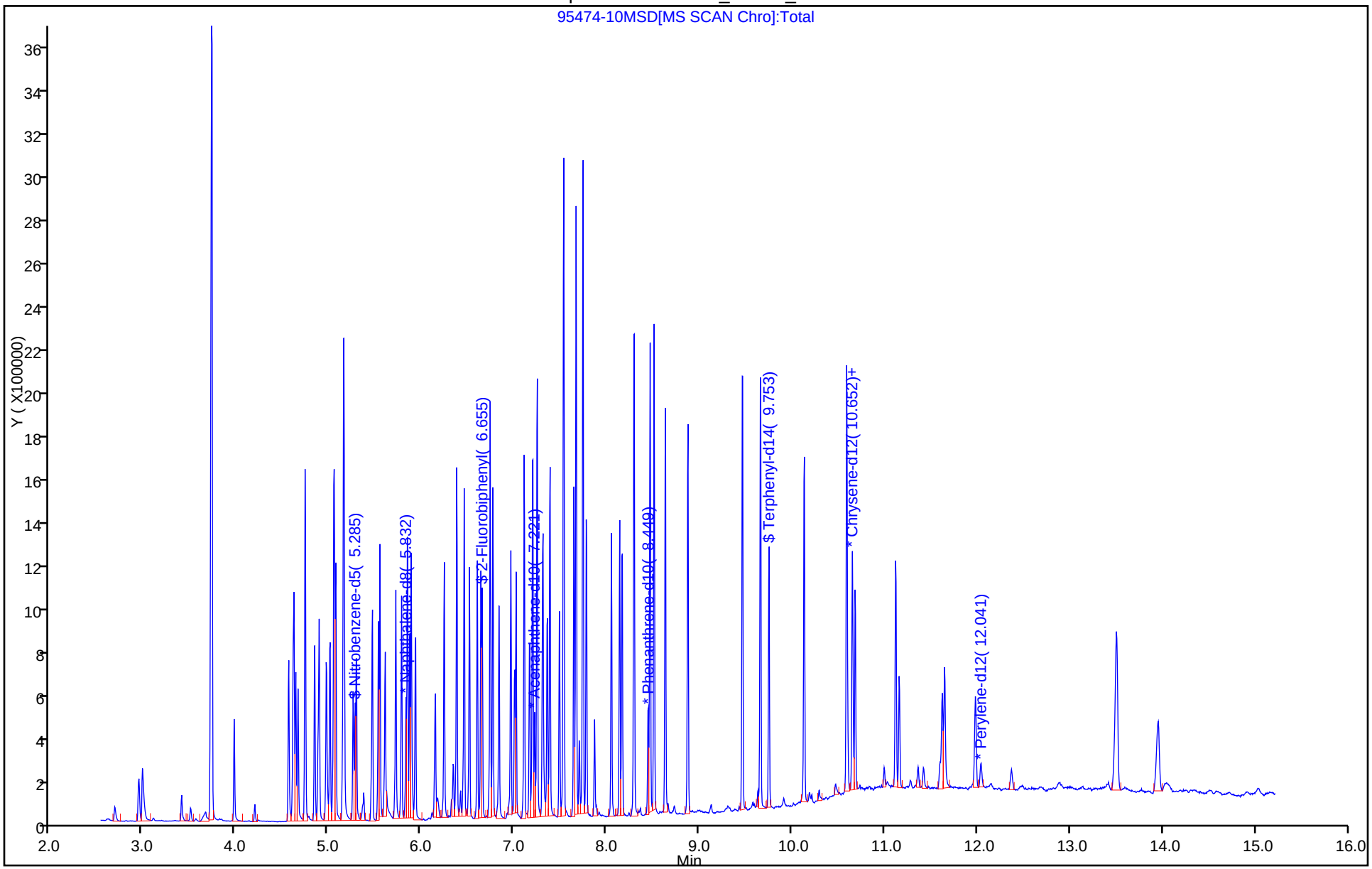
Reagents:

SMISTDWORK_00281	Amount Added: 10.00	Units: uL	Run Reagent

Report Date: 11-May-2015 10:52:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\chi-svr07\chromdata\CMS21\20150505-30679.b\95474-10MSD.D				
Injection Date:	05-May-2015 22:43:30	Instrument ID:	CMS21	Operator ID:	AD
Lims ID:	500-95474-B-10-G MSD			Worklist Smp#:	22
Client ID:	DS-10				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	21-8270	Limit Group:	MSBNA_8270D_ICAL		



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID: DS-10 MSD RA | Lab Sample ID: 500-95474-10 MSD RA
Matrix: Solid | Lab File ID: 95474-10MSD.d
Analysis Method: 8270D | Date Collected: 04/30/2015 16:05
Extract. Method: 3541 | Date Extracted: 05/04/2015 16:01
Sample wt/vol: 15.0274(g) | Date Analyzed: 05/06/2015 17:50
Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1
Injection Volume: 1(uL) | Level: (low/med) Low
% Moisture: 21.7 | GPC Cleanup:(Y/N) N
Analysis Batch No.: 286895 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
83-32-9	Acenaphthene	1.23		0.042	
208-96-8	Acenaphthylene	1.19		0.042	
120-12-7	Anthracene	1.19		0.042	
56-55-3	Benzo[a]anthracene	1.28		0.042	
50-32-8	Benzo[a]pyrene	1.27		0.042	
205-99-2	Benzo[b]fluoranthene	1.73		0.042	
191-24-2	Benzo[g,h,i]perylene	0.770		0.042	
207-08-9	Benzo[k]fluoranthene	1.63		0.042	
218-01-9	Chrysene	1.22		0.042	
53-70-3	Dibenz(a,h)anthracene	0.828		0.042	
206-44-0	Fluoranthene	1.07		0.042	
86-73-7	Fluorene	1.29		0.042	
193-39-5	Indeno[1,2,3-cd]pyrene	0.819		0.042	
90-12-0	1-Methylnaphthalene	1.11		0.042	
91-57-6	2-Methylnaphthalene	1.11		0.042	
91-20-3	Naphthalene	1.04		0.042	
85-01-8	Phenanthrene	1.20		0.042	
129-00-0	Pyrene	2.28		0.042	

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	69		25-119
4165-60-0	Nitrobenzene-d5 (Surr)	58		25-115
1718-51-0	Terphenyl-d14 (Surr)	149	* X	36-134

Report Date: 07-May-2015 15:49:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-10MSD.d
Lims ID: 500-95474-B-10-G MSD
Client ID: DS-10
Sample Type: MSD
Inject. Date: 06-May-2015 17:50:30 ALS Bottle#: 20 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 500-95474-b-10-g msd
Misc. Info.: 500-0030710-023
Operator ID: TW Instrument ID: CMS23

Method: \\Chi-svr07\ChromData\CMS23\20150506-30710.b\23-8270.m
Limit Group: MSBNA_8270D_ICAL
Last Update: 07-May-2015 15:48:29 Calib Date: 29-Apr-2015 14:16:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\CMS23\20150429-30573.b\L1STD70.d

Column 1 : ZB5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK036

First Level Reviewer: lesiakk Date: 07-May-2015 15:49:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.371	4.369	0.002	95	33248	8.00	8.00	
* 2 Naphthalene-d8	136	5.299	5.299	0.000	97	130977	8.00	8.00	
* 3 Acenaphthene-d10	164	6.652	6.650	0.002	95	67367	8.00	8.00	
* 4 Phenanthrene-d10	188	7.867	7.865	0.002	97	106724	8.00	8.00	
* 5 Chrysene-d12	240	10.087	10.090	-0.003	80	46045	8.00	8.00	s
* 6 Perylene-d12	264	11.313	11.315	-0.002	94	16533	8.00	8.00	s
$ 9 Nitrobenzene-d5	82	4.779	4.782	-0.003	93	77576	25.0	14.5	
$ 10 2-Fluorobiphenyl	172	6.112	6.112	0.000	99	181433	25.0	17.1	
$ 12 Terphenyl-d14	244	9.180	9.180	0.000	98	158322	25.0	37.2	
77 Naphthalene	128	5.314	5.317	-0.003	99	403305	40.0	24.6	
94 2-Methylnaphthalene	142	5.837	5.834	0.003	83	285900	40.0	26.0	
97 1-Methylnaphthalene	142	5.911	5.911	0.000	81	253564	40.0	26.1	
115 Acenaphthylene	152	6.545	6.543	0.002	91	437215	40.0	28.0	
119 Acenaphthene	154	6.678	6.678	0.000	92	268459	40.0	29.0	
133 Fluorene	166	7.095	7.096	-0.001	78	332568	40.0	30.5	
149 Phenanthrene	178	7.888	7.888	0.000	91	430483	40.0	28.3	
150 Anthracene	178	7.931	7.931	0.000	97	436915	40.0	28.0	
161 Fluoranthene	202	8.879	8.877	0.002	99	389242	40.0	25.2	
164 Pyrene	202	9.070	9.070	0.000	96	375158	40.0	53.6	
173 Benzo[a]anthracene	228	10.079	10.079	0.000	94	187448	40.0	30.2	
174 Chrysene	228	10.110	10.115	-0.005	90	171503	40.0	28.7	
178 Benzo[b]fluoranthene	252	10.984	10.989	-0.005	94	91415	40.0	40.7	
179 Benzo[k]fluoranthene	252	11.002	11.012	-0.010	97	91711	40.0	38.3	
180 Benzo[a]pyrene	252	11.264	11.272	-0.008	71	68445	40.0	30.0	
183 Dibenz(a,h)anthracene	278	12.426	12.439	-0.013	59	42264	40.0	19.5	
182 Indeno[1,2,3-cd]pyrene	276	12.431	12.449	-0.018	89	50467	40.0	19.3	
185 Benzo[g,h,i]perylene	276	12.778	12.780	-0.002	94	39867	40.0	18.1	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

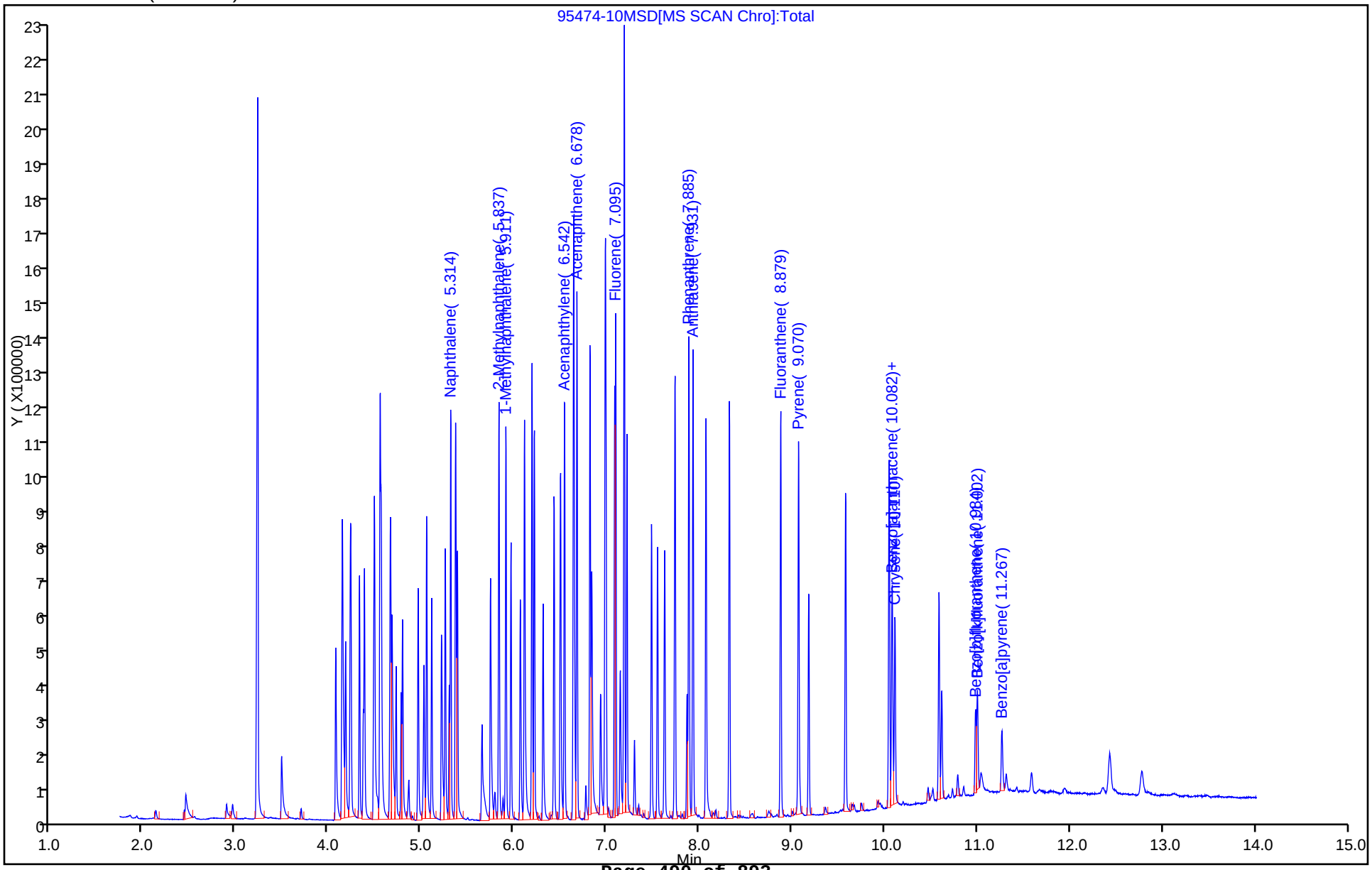
Reagents:

SMISTDWORK_00278	Amount Added: 10.00	Units: uL	Run Reagent

Report Date: 07-May-2015 15:49:53 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\CMS23\20150506-30710.b\95474-10MSD.d				
Injection Date:	06-May-2015 17:50:30	Instrument ID:	CMS23	Operator ID:	TW
Lims ID:	500-95474-B-10-G MSD			Worklist Smp#:	23
Client ID:	DS-10				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	23-8270	Limit Group:	MSBNA_8270D_ICAL		
Column: ZB5MS (0.25 mm)					



GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS20 Start Date: 03/30/2015 11:40

Analysis Batch Number: 281696 End Date: 03/30/2015 16:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 500-281696/1		03/30/2015 11:40	1	20D0330C.D	ZB5MS 0.25(mm)
IC 500-281696/2		03/30/2015 12:14	1	L1STD2.D	ZB5MS 0.25(mm)
IC 500-281696/3		03/30/2015 12:38	1	L1STD02.D	ZB5MS 0.25(mm)
IC 500-281696/4		03/30/2015 13:03	1	L1STD05.D	ZB5MS 0.25(mm)
IC 500-281696/5		03/30/2015 13:27	1	L1STD1.D	ZB5MS 0.25(mm)
IC 500-281696/6		03/30/2015 13:51	1	L1STD5.D	ZB5MS 0.25(mm)
IC 500-281696/7		03/30/2015 14:16	1	L1STD10.D	ZB5MS 0.25(mm)
IC 500-281696/8		03/30/2015 14:40	1	L1STD20.D	ZB5MS 0.25(mm)
ICIS 500-281696/9		03/30/2015 15:05	1	L1STD40.D	ZB5MS 0.25(mm)
IC 500-281696/10		03/30/2015 15:29	1	L1STD50.D	ZB5MS 0.25(mm)
IC 500-281696/11		03/30/2015 15:54	1	L1STD60.D	ZB5MS 0.25(mm)
IC 500-281696/12		03/30/2015 16:18	1	L1STD70.D	ZB5MS 0.25(mm)
ICV 500-281696/13		03/30/2015 16:43	1	L1ICV.D	ZB5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS20 Start Date: 04/30/2015 09:49

Analysis Batch Number: 286125 End Date: 04/30/2015 21:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 500-286125/1		04/30/2015 09:49	1	20D0430.D	ZB5MS 0.25(mm)
CCVIS 500-286125/2		04/30/2015 10:12	1		ZB5MS 0.25(mm)
CCVL 500-286125/3		04/30/2015 10:35	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 10:59	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 11:22	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 11:45	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 12:08	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 12:32	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 13:18	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 13:41	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 14:05	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 14:28	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 14:51	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 15:37	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 16:00	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 16:47	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 17:10	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 17:33	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 18:20	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 18:43	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 19:06	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 19:30	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 19:53	10		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 20:39	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 21:02	1		ZB5MS 0.25(mm)
ZZZZZ		04/30/2015 21:49	1		ZB5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS20 Start Date: 05/05/2015 09:17

Analysis Batch Number: 286703 End Date: 05/05/2015 19:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 500-286703/1		05/05/2015 09:17	1	20D0505.D	ZB5MS 0.25(mm)
CCVIS 500-286703/2		05/05/2015 09:40	1	20C0505.D	ZB5MS 0.25(mm)
CCVL 500-286703/3		05/05/2015 10:04	1		ZB5MS 0.25(mm)
LCS 500-286634/2-A		05/05/2015 10:50	1	LCS 286634.D	ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 11:14	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 12:00	1		ZB5MS 0.25(mm)
MB 500-286634/1-A		05/05/2015 12:24	1	MB 286634.D	ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 13:10	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 13:34	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 13:57	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 14:21	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 14:44	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 15:08	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 15:31	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 16:18	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 17:29	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 18:21	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 18:45	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 19:08	1		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 19:32	1		ZB5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS21 Start Date: 04/27/2015 12:38

Analysis Batch Number: 285596 End Date: 04/27/2015 17:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 500-285596/1		04/27/2015 12:38	1	21D0427B.D	ZB5MS 0.25(mm)
IC 500-285596/2		04/27/2015 13:03	1	L1STD2.D	ZB5MS 0.25(mm)
IC 500-285596/3		04/27/2015 13:27	1	L1STD02.D	ZB5MS 0.25(mm)
IC 500-285596/4		04/27/2015 13:51	1	L1STD05.D	ZB5MS 0.25(mm)
IC 500-285596/5		04/27/2015 14:16	1	L1STD1.D	ZB5MS 0.25(mm)
IC 500-285596/6		04/27/2015 14:40	1	L1STD5.D	ZB5MS 0.25(mm)
IC 500-285596/7		04/27/2015 15:05	1	L1STD10.D	ZB5MS 0.25(mm)
IC 500-285596/8		04/27/2015 15:29	1	L1STD20.D	ZB5MS 0.25(mm)
ICIS 500-285596/9		04/27/2015 15:53	1	L1STD40.D	ZB5MS 0.25(mm)
IC 500-285596/10		04/27/2015 16:18	1	L1STD50.D	ZB5MS 0.25(mm)
ICV 500-285596/13		04/27/2015 16:42	1	L1STD60.D	ZB5MS 0.25(mm)
IC 500-285596/12		04/27/2015 17:06	1	L1STD70.D	ZB5MS 0.25(mm)
IC 500-285596/11		04/27/2015 17:30	1	ICVMIX1.D	ZB5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS21 Start Date: 05/05/2015 12:10

Analysis Batch Number: 286746 End Date: 05/05/2015 22:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 500-286746/1		05/05/2015 12:10	1	21D0505.D	ZB5MS 0.25(mm)
CCVIS 500-286746/2		05/05/2015 12:34	1	21C0505.D	ZB5MS 0.25(mm)
CCVL 500-286746/3		05/05/2015 12:59	1		ZB5MS 0.25(mm)
CCVL 500-286746/4		05/05/2015 13:23	1	21C0505B.D	ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 14:12	10		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 14:36	10		ZB5MS 0.25(mm)
500-95474-1	DS-1	05/05/2015 15:00	1	95474-1.D	ZB5MS 0.25(mm)
500-95474-2	DS-2	05/05/2015 15:25	1	95474-2.D	ZB5MS 0.25(mm)
500-95474-3	DS-3	05/05/2015 15:49	1	95474-3.D	ZB5MS 0.25(mm)
500-95474-4	DS-4	05/05/2015 16:14	1	95474-4.D	ZB5MS 0.25(mm)
500-95474-6	DS-6	05/05/2015 17:03	1	95474-6.D	ZB5MS 0.25(mm)
500-95474-7 RA	DS-7 RA	05/05/2015 17:28	1	95474-7.D	ZB5MS 0.25(mm)
500-95474-9	DS-9	05/05/2015 18:17	1	95474-9.D	ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 19:30	10		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 20:19	10		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 20:43	10		ZB5MS 0.25(mm)
ZZZZZ		05/05/2015 21:31	10		ZB5MS 0.25(mm)
500-95474-10 MSD	DS-10 MSD	05/05/2015 22:43	1	95474-10MSD.D	ZB5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS23 Start Date: 04/29/2015 10:23

Analysis Batch Number: 285942 End Date: 04/29/2015 14:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 500-285942/1		04/29/2015 10:23	1	23D0429B.d	ZB5MS 0.25(mm)
IC 500-285942/2		04/29/2015 10:54	1	L1STD2.d	ZB5MS 0.25(mm)
IC 500-285942/3		04/29/2015 11:13	1	L1STD02.d	ZB5MS 0.25(mm)
IC 500-285942/4		04/29/2015 11:31	1	L1STD05.d	ZB5MS 0.25(mm)
IC 500-285942/5		04/29/2015 11:50	1	L1STD1.d	ZB5MS 0.25(mm)
IC 500-285942/6		04/29/2015 12:09	1	L1STD5.d	ZB5MS 0.25(mm)
IC 500-285942/7		04/29/2015 12:28	1	L1STD10.d	ZB5MS 0.25(mm)
IC 500-285942/8		04/29/2015 13:01	1	L1STD20a.d	ZB5MS 0.25(mm)
ICIS 500-285942/9		04/29/2015 13:19	1	L1STD40a.d	ZB5MS 0.25(mm)
IC 500-285942/10		04/29/2015 13:38	1	L1STD50.d	ZB5MS 0.25(mm)
IC 500-285942/11		04/29/2015 13:57	1	L1STD60.d	ZB5MS 0.25(mm)
IC 500-285942/12		04/29/2015 14:16	1	L1STD70.d	ZB5MS 0.25(mm)
ICV 500-285942/13		04/29/2015 14:35	1	L1ICV.d	ZB5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: CMS23 Start Date: 05/06/2015 09:18

Analysis Batch Number: 286895 End Date: 05/06/2015 17:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 500-286895/1		05/06/2015 09:18	1	23D0506.d	ZB5MS 0.25(mm)
CCVIS 500-286895/2		05/06/2015 09:36	1	23C0506.d	ZB5MS 0.25(mm)
CCVL 500-286895/3		05/06/2015 10:01	1		ZB5MS 0.25(mm)
ZZZZZ		05/06/2015 10:20	1		ZB5MS 0.25(mm)
ZZZZZ		05/06/2015 10:59	1		ZB5MS 0.25(mm)
ZZZZZ		05/06/2015 11:37	1		ZB5MS 0.25(mm)
ZZZZZ		05/06/2015 11:57	1		ZB5MS 0.25(mm)
500-95474-1 RA	DS-1 RA	05/06/2015 12:16	1	95474-1.d	ZB5MS 0.25(mm)
500-95474-2 RA	DS-2 RA	05/06/2015 12:36	1	95474-2.d	ZB5MS 0.25(mm)
500-95474-3 RA	DS-3 RA	05/06/2015 12:55	1	95474-3.d	ZB5MS 0.25(mm)
500-95474-4 RA	DS-4 RA	05/06/2015 13:15	1	95474-4.d	ZB5MS 0.25(mm)
500-95474-5	DS-5	05/06/2015 13:34	1	95474-5.d	ZB5MS 0.25(mm)
500-95474-6 RA	DS-6 RA	05/06/2015 13:54	1	95474-6.d	ZB5MS 0.25(mm)
500-95474-7	DS-7	05/06/2015 14:13	1	95474-7.d	ZB5MS 0.25(mm)
500-95474-8	DS-8	05/06/2015 14:33	1	95474-8.d	ZB5MS 0.25(mm)
500-95474-9 RA	DS-9 RA	05/06/2015 14:53	1	95474-9.d	ZB5MS 0.25(mm)
500-95474-10	DS-10	05/06/2015 15:12	1	95474-10.d	ZB5MS 0.25(mm)
500-95474-11	DS-DUP	05/06/2015 15:32	1	95474-11.d	ZB5MS 0.25(mm)
ZZZZZ		05/06/2015 16:31	5		ZB5MS 0.25(mm)
ZZZZZ		05/06/2015 16:51	10		ZB5MS 0.25(mm)
ZZZZZ		05/06/2015 17:10	10		ZB5MS 0.25(mm)
500-95474-10 MS	DS-10 MS	05/06/2015 17:30	1	95474-10MS.d	ZB5MS 0.25(mm)
500-95474-10 MSD RA	DS-10 MSD RA	05/06/2015 17:50	1	95474-10MSD.d	ZB5MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Batch Number: 286634 Batch Start Date: 05/04/15 16:01 Batch Analyst: Allen, Deavon E

Batch Method: 3541 Batch End Date: 05/04/15 18:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	SoxThermPosition	EXBNAL1SPW 00103	EXBNASUW 00370	
MB 500-286634/1		3541, 8270D		15.0000 g	0.5 mL	7		250 uL	
LCS 500-286634/2		3541, 8270D		15.0000 g	0.5 mL	8	500 uL	250 uL	
500-95474-B-1	DS-1	3541, 8270D	T	15.4848 g	0.5 mL	21		250 uL	
500-95474-A-2	DS-2	3541, 8270D	T	15.5790 g	0.5 mL	22		250 uL	
500-95474-B-3	DS-3	3541, 8270D	T	15.2074 g	0.5 mL	23		250 uL	
500-95474-B-4	DS-4	3541, 8270D	T	15.2779 g	0.5 mL	24		250 uL	
500-95474-B-5	DS-5	3541, 8270D	T	15.8345 g	0.5 mL	25		250 uL	
500-95474-B-6	DS-6	3541, 8270D	T	15.6065 g	0.5 mL	26		250 uL	
500-95474-B-7	DS-7	3541, 8270D	T	15.7229 g	0.5 mL	27		250 uL	
500-95474-A-8	DS-8	3541, 8270D	T	15.1946 g	0.5 mL	28		250 uL	
500-95474-B-9	DS-9	3541, 8270D	T	15.8016 g	0.5 mL	29		250 uL	
500-95474-B-10	DS-10	3541, 8270D	T	15.4626 g	0.5 mL	30		250 uL	
500-95474-A-10 MS	DS-10	3541, 8270D	T	15.3133 g	0.5 mL	31	500 uL	250 uL	
500-95474-B-10 MSD	DS-10	3541, 8270D	T	15.0274 g	0.5 mL	32	500 uL	250 uL	
500-95474-A-11	DS-DUP	3541, 8270D	T	15.9990 g	0.5 mL	33		250 uL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Batch Number: 286634 Batch Start Date: 05/04/15 16:01 Batch Analyst: Allen, Deavon E

Batch Method: 3541 Batch End Date: 05/04/15 18:00

Batch Notes	
Balance ID	1951
Concentration End Time	2045
Concentration Start Time	1830
Person's name who did the concentration	LK,DA
First End time	18:00
Glass Wool ID	3099917
Vendor lot number	3230200
N-evap #	C-2091
N-evap temperature	29.8 Degrees C
Na2SO4 Lot Number	3216973
Person's name who did the prep	DA
Solvent	DCM/Acetone
Soxtherm Temperature	136.7 136.8 137.1 136.9
Soxtherm Unit	C 2482 C 2372 C 2290 C 2291
First Start time	16:01
Syringe Lot #	A43 A47
ID number of the thermometer	C 2484
Uncorrected N-evap Temperature	30 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8082

Polychlorinated Biphenyls (PCBs) by Gas Chromatography by Method 8082

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low

GC Column (1): RTX-5 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	TCX1 #	DCB1 #
DS-1	500-95474-1	73	80
DS-2	500-95474-2	75	87
DS-3	500-95474-3	82	92
DS-4	500-95474-4	71	87
DS-5	500-95474-5	83	90
DS-6	500-95474-6	72	86
DS-7	500-95474-7	73	92
DS-8	500-95474-8	77	92
DS-9	500-95474-9	75	91
DS-10	500-95474-10	65	81
DS-DUP	500-95474-11	81	89
	MB 500-286408/1-A	64	65
	LCS 500-286408/2-A	77	82
DS-10 MS	500-95474-10 MS	87	96
DS-10 MSD	500-95474-10 MSD	75	89

	QC LIMITS
TCX = Tetrachloro-m-xylene	50-116
DCB = DCB Decachlorobiphenyl	48-142

Column to be used to flag recovery values

FORM II 8082

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low Lab File ID: 042415_259.D

Lab ID: LCS 500-286408/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC	QC LIMITS REC	#
PCB-1016	0.167	0.140	84	59-110	
PCB-1260	0.167	0.143	86	69-120	

Column to be used to flag recovery and RPD values

FORM III 8082

FORM III
PCBS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low Lab File ID: 042415_286.D

Lab ID: 500-95474-10 MS Client ID: DS-10 MS

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	MS CONCENTRATION (mg/Kg)	MS % REC	QC LIMITS REC	#
PCB-1016	0.213	<0.020	0.207	97	59-110	
PCB-1260	0.213	<0.020	0.214	101	69-120	

Column to be used to flag recovery and RPD values

FORM III 8082

FORM III
PCBS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Matrix: Solid Level: Low Lab File ID: 042415_287.D

Lab ID: 500-95474-10 MSD Client ID: DS-10 MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
PCB-1016	0.205	0.193	94	7	30	59-110	
PCB-1260	0.205	0.206	100	4	30	69-120	

Column to be used to flag recovery and RPD values

FORM III 8082

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: MB 500-286408/1-A

Matrix: Solid Date Extracted: 05/01/2015 16:26

Lab File ID:(1) 042415_258.D Lab File ID:(2)

Date Analyzed:(1) 05/02/2015 00:25 Date Analyzed:(2)

Instrument ID:(1) INST23-24 Instrument ID:(2)

GC Column:(1) RTX-5 ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 500-286408/2-A	05/02/2015 00:39	
DS-1	500-95474-1	05/02/2015 04:18	
DS-2	500-95474-2	05/02/2015 04:31	
DS-3	500-95474-3	05/02/2015 04:45	
DS-4	500-95474-4	05/02/2015 04:59	
DS-5	500-95474-5	05/02/2015 05:13	
DS-6	500-95474-6	05/02/2015 05:26	
DS-7	500-95474-7	05/02/2015 05:40	
DS-8	500-95474-8	05/02/2015 05:54	
DS-9	500-95474-9	05/02/2015 06:07	
DS-10	500-95474-10	05/02/2015 06:34	
DS-10 MS	500-95474-10 MS	05/02/2015 06:48	
DS-10 MSD	500-95474-10 MSD	05/02/2015 07:02	
DS-DUP	500-95474-11	05/02/2015 07:16	

FORM VIII
PCBS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Sample No.: STD16604 500-283260/3 Date Analyzed: 04/10/2015 09:03

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm)

Lab File ID (Standard): 040115_123.D Heated Purge: (Y/N) N

Calibration ID: 18362

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TCX	DCB	
				RT #	RT #	
INITIAL CALIBRATION SURROGATE				1.51	6.23	
UPPER LIMIT				1.54	6.26	
LOWER LIMIT				1.48	6.20	
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
STD16604 500-283260/3 ICRT		04/10/2015 09:03	040115_123.D	1.51	6.23	
MB 500-286408/1-A		05/02/2015 00:25	042415_258.D	1.50	6.18 *	
LCS 500-286408/2-A		05/02/2015 00:39	042415_259.D	1.52	6.18 *	
500-95474-1	DS-1	05/02/2015 04:18	042415_275.D	1.52	6.18 *	
500-95474-2	DS-2	05/02/2015 04:31	042415_276.D	1.51	6.18 *	
500-95474-3	DS-3	05/02/2015 04:45	042415_277.D	1.51	6.18 *	
500-95474-4	DS-4	05/02/2015 04:59	042415_278.D	1.51	6.18 *	
500-95474-5	DS-5	05/02/2015 05:13	042415_279.D	1.51	6.18 *	
500-95474-6	DS-6	05/02/2015 05:26	042415_280.D	1.52	6.18 *	
500-95474-7	DS-7	05/02/2015 05:40	042415_281.D	1.51	6.18 *	
500-95474-8	DS-8	05/02/2015 05:54	042415_282.D	1.51	6.18 *	
500-95474-9	DS-9	05/02/2015 06:07	042415_283.D	1.51	6.18 *	
500-95474-10	DS-10	05/02/2015 06:34	042415_285.D	1.51	6.18 *	
500-95474-10 MS	DS-10 MS	05/02/2015 06:48	042415_286.D	1.51	6.18 *	
500-95474-10 MSD	DS-10 MSD	05/02/2015 07:02	042415_287.D	1.51	6.18 *	
500-95474-11	DS-DUP	05/02/2015 07:16	042415_288.D	1.51	6.18 *	

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

TCX RT Limit = ± 0 minutes of surrogate RT
DCB RT Limit = ± 0 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8082

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-10 MS Lab Sample ID: 500-95474-10 MS

Instrument ID (1): INST23-24 Instrument ID (2):

Date Analyzed (1): 05/02/2015 06:48 Date Analyzed (2):

GC Column (1): RTX-5 ID: 0.53(mm) GC Column (2): ID:

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		
				FROM	TO	PEAK	MEAN	
PCB-1016	1	1	3.32	3.31	3.37	0.217	0.207	
		2	2.50	2.48	2.54	0.200		
		3	2.73	2.72	2.78	0.204		
		4	2.83	2.82	2.88	0.197		
		5	3.57	3.56	3.62	0.217		
PCB-1260	1	1	4.38	4.37	4.43	0.201	0.214	
		2	4.59	4.58	4.64	0.226		
		3	4.71	4.70	4.76	0.220		
		4	4.88	4.87	4.93	0.217		
		5	5.28	5.27	5.33	0.209		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-10 MSD Lab Sample ID: 500-95474-10 MSD

Instrument ID (1): INST23-24 Instrument ID (2):

Date Analyzed (1): 05/02/2015 07:02 Date Analyzed (2):

GC Column (1): RTX-5 ID: 0.53(mm) GC Column (2): ID:

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		
				FROM	TO	PEAK	MEAN	
PCB-1016	1	1	3.32	3.31	3.37	0.205	0.193	
		2	2.50	2.48	2.54	0.182		
		3	2.74	2.72	2.78	0.188		
		4	2.83	2.82	2.88	0.183		
		5	3.57	3.56	3.62	0.208		
PCB-1260	1	1	4.38	4.37	4.43	0.191	0.206	
		2	4.59	4.58	4.64	0.218		
		3	4.71	4.70	4.76	0.203		
		4	4.88	4.87	4.93	0.216		
		5	5.28	5.27	5.33	0.199		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: Lab Sample ID: LCS 500-286408/2-A

Instrument ID (1): INST23-24 Instrument ID (2):

Date Analyzed (1): 05/02/2015 00:39 Date Analyzed (2):

GC Column (1): RTX-5 ID: 0.53(mm) GC Column (2): ID:

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		
				FROM	TO	PEAK	MEAN	
PCB-1016	1	1	3.32	3.31	3.37	0.143	0.140	
		2	2.50	2.48	2.54	0.134		
		3	2.74	2.72	2.78	0.136		
		4	2.83	2.82	2.88	0.137		
		5	3.57	3.56	3.62	0.149		
PCB-1260	1	1	4.38	4.37	4.43	0.136	0.143	
		2	4.59	4.58	4.64	0.150		
		3	4.71	4.70	4.76	0.146		
		4	4.88	4.87	4.93	0.143		
		5	5.28	5.27	5.33	0.137		

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-1 | Lab Sample ID: 500-95474-1

Matrix: Solid | Lab File ID: 042415_275.D

Analysis Method: 8082 | Date Collected: 04/30/2015 14:20

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.0722(g) | Date Analyzed: 05/02/2015 04:18

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 24.0 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.022		0.022	
11104-28-2	PCB-1221	<0.022		0.022	
11141-16-5	PCB-1232	<0.022		0.022	
53469-21-9	PCB-1242	<0.022		0.022	
12672-29-6	PCB-1248	<0.022		0.022	
11097-69-1	PCB-1254	<0.022		0.022	
11096-82-5	PCB-1260	<0.022		0.022	
1336-36-3	Polychlorinated biphenyls, Total	<0.022		0.022	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	73		50-116
2051-24-3	DCB Decachlorobiphenyl	80		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_275.D
Lims ID: 500-95474-B-1-A Lab Sample ID: 500-95474-1
Client ID: DS-1
Sample Type: Client
Inject. Date: 02-May-2015 04:18:13 ALS Bottle#: 0 Worklist Smp#: 46
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-046
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:12:04 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 04:18:13
Column 2 : Det: Ch-B 02-May-2015 04:31:53
Process Host: XAWRK013

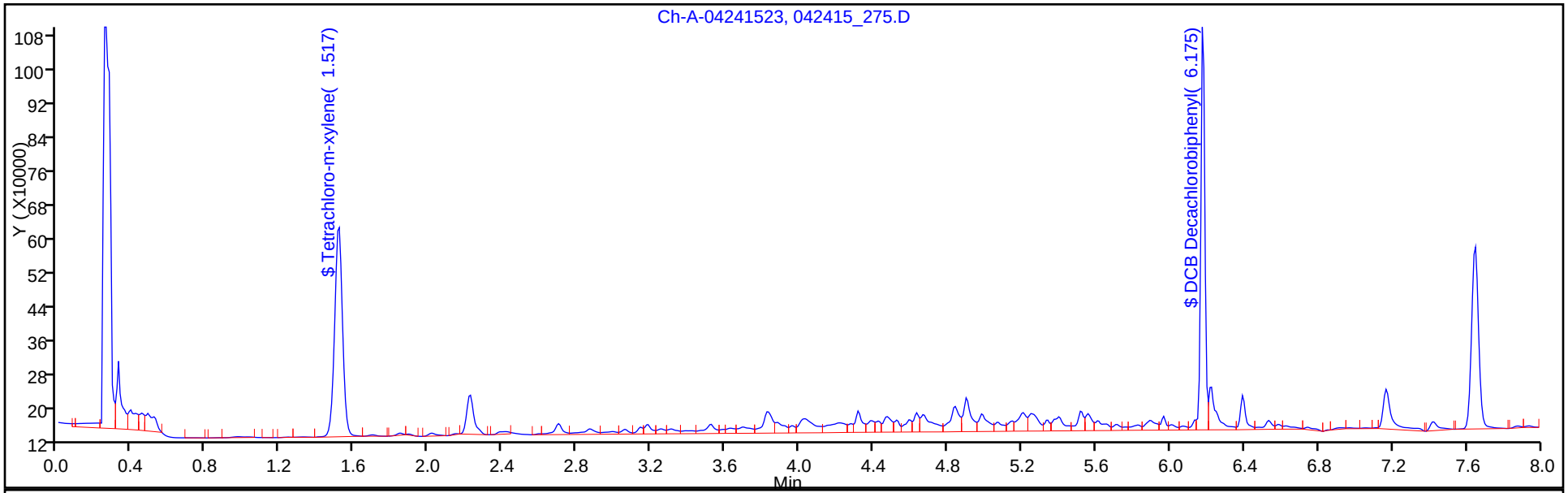
First Level Reviewer: orfg Date: 02-May-2015 11:12:23

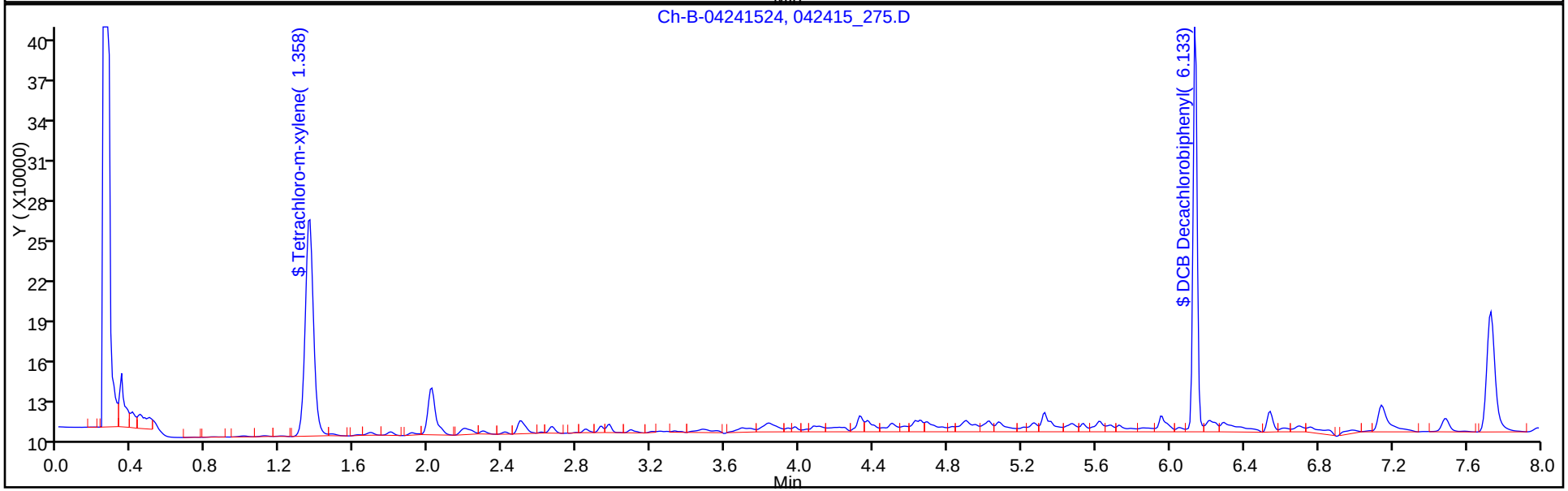
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.517	1.500	0.017	489412H	0.0292	
2	1.358	1.350	0.008	157469H	0.0277	
					RPD = 5.58	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	942445H	0.0320	a
2	6.133	6.142	-0.009	294706H	0.0249	
					RPD = 24.81	

Report Date: 02-May-2015 11:12:23 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_275.D				
Injection Date:	02-May-2015 04:18:13	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-B-1-A	Lab Sample ID:	500-95474-1	Worklist Smp#:	46
Client ID:	DS-1				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-2 | Lab Sample ID: 500-95474-2

Matrix: Solid | Lab File ID: 042415_276.D

Analysis Method: 8082 | Date Collected: 04/30/2015 14:30

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.3794(g) | Date Analyzed: 05/02/2015 04:31

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 22.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.021		0.021	
11104-28-2	PCB-1221	<0.021		0.021	
11141-16-5	PCB-1232	<0.021		0.021	
53469-21-9	PCB-1242	<0.021		0.021	
12672-29-6	PCB-1248	<0.021		0.021	
11097-69-1	PCB-1254	<0.021		0.021	
11096-82-5	PCB-1260	<0.021		0.021	
1336-36-3	Polychlorinated biphenyls, Total	<0.021		0.021	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	75		50-116
2051-24-3	DCB Decachlorobiphenyl	87		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_276.D
Lims ID: 500-95474-A-2-A Lab Sample ID: 500-95474-2
Client ID: DS-2
Sample Type: Client
Inject. Date: 02-May-2015 04:31:53 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-047
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:24 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 04:31:53
Column 2 : Det: Ch-B 02-May-2015 04:45:46
Process Host: XAWRK013

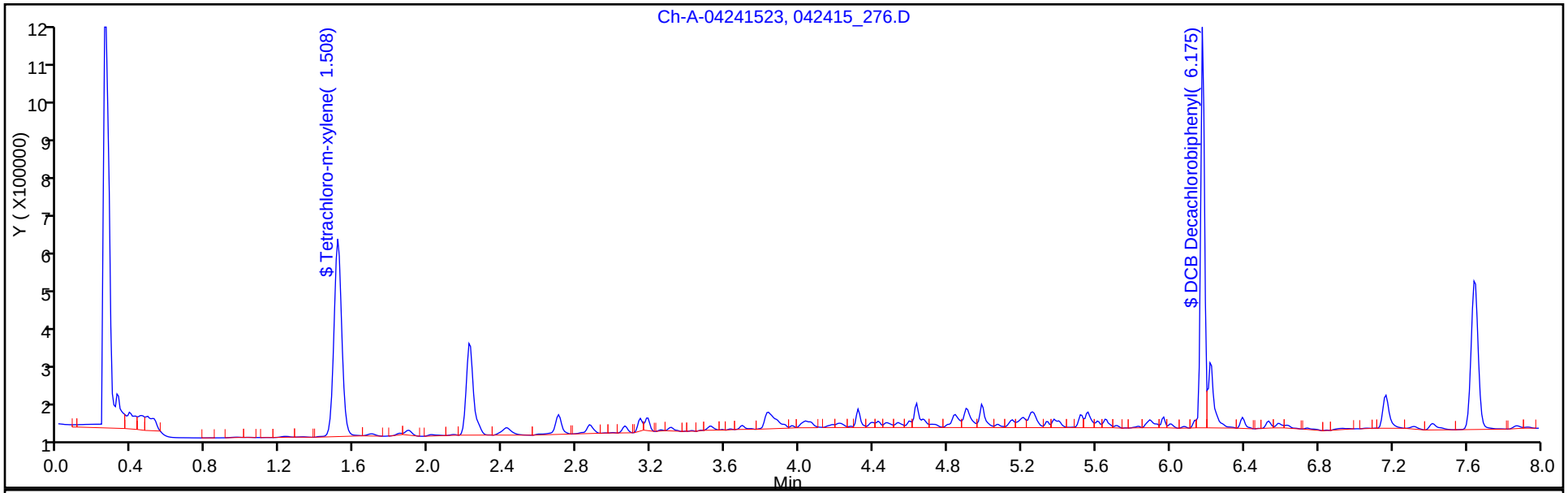
First Level Reviewer: orfg Date: 02-May-2015 10:57:20

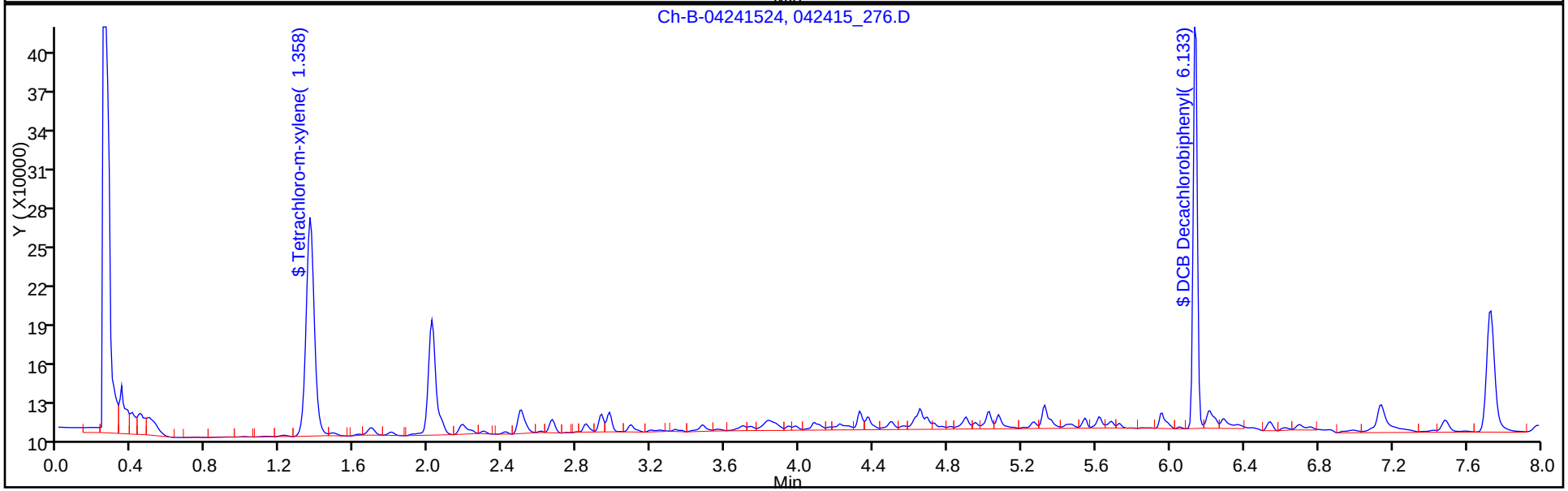
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	504827H	0.0302	
2	1.358	1.350	0.008	164865H	0.0290	
					RPD = 4.09	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1023353H	0.0348	a
2	6.133	6.142	-0.009	302601H	0.0256	
					RPD = 30.30	

Report Date: 02-May-2015 11:02:26 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_276.D				
Injection Date:	02-May-2015 04:31:53	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-A-2-A	Lab Sample ID:	500-95474-2	Worklist Smp#:	47
Client ID:	DS-2				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-3 | Lab Sample ID: 500-95474-3

Matrix: Solid | Lab File ID: 042415_277.D

Analysis Method: 8082 | Date Collected: 04/30/2015 14:35

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.1852(g) | Date Analyzed: 05/02/2015 04:45

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 24.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.022		0.022	
11104-28-2	PCB-1221	<0.022		0.022	
11141-16-5	PCB-1232	<0.022		0.022	
53469-21-9	PCB-1242	<0.022		0.022	
12672-29-6	PCB-1248	<0.022		0.022	
11097-69-1	PCB-1254	<0.022		0.022	
11096-82-5	PCB-1260	<0.022		0.022	
1336-36-3	Polychlorinated biphenyls, Total	<0.022		0.022	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	82		50-116
2051-24-3	DCB Decachlorobiphenyl	92		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_277.D
Lims ID: 500-95474-B-3-A Lab Sample ID: 500-95474-3
Client ID: DS-3
Sample Type: Client
Inject. Date: 02-May-2015 04:45:46 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-048
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:24 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 04:45:46
Column 2 : Det: Ch-B 02-May-2015 04:59:26
Process Host: XAWRK013

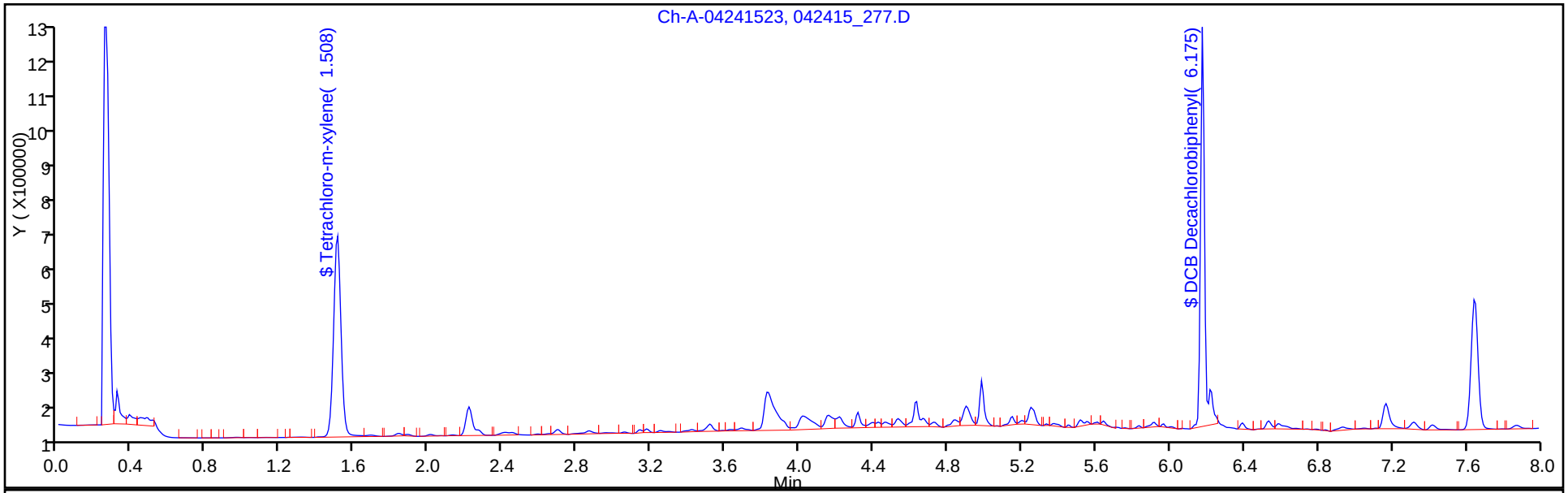
First Level Reviewer: orfg Date: 02-May-2015 10:57:49

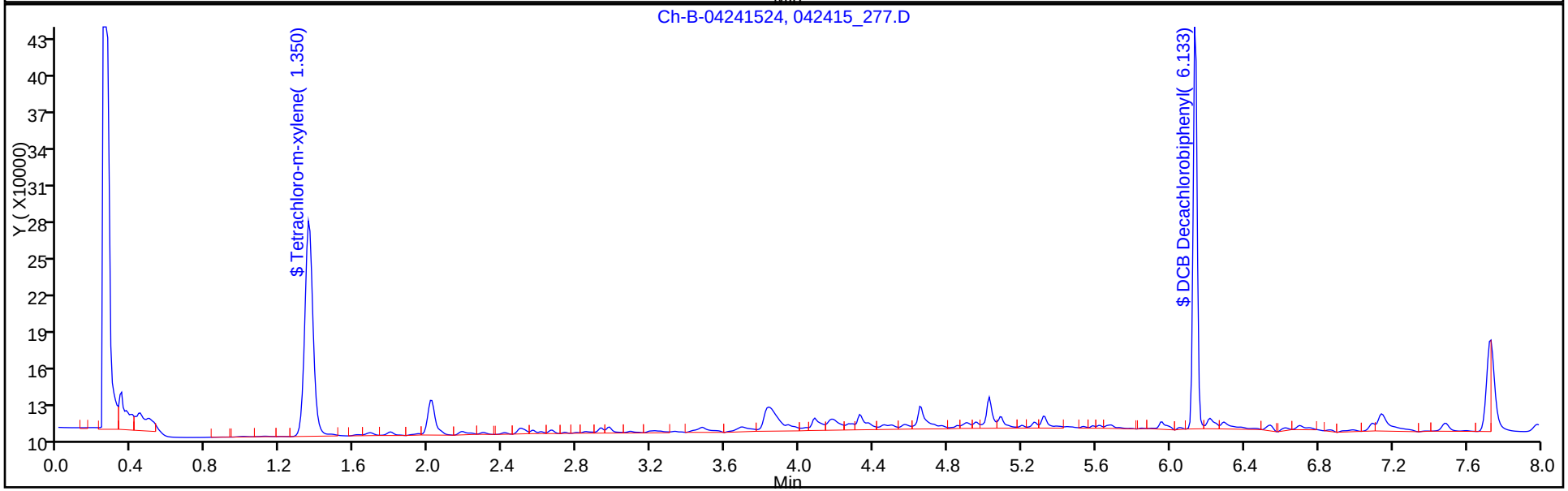
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	546122H	0.0326	
2	1.350	1.350	0.000	170696H	0.0300	
					RPD = 8.47	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1085969H	0.0369	
2	6.133	6.142	-0.009	318602H	0.0270	
					RPD = 31.07	

Report Date: 02-May-2015 11:02:27 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_277.D				
Injection Date:	02-May-2015 04:45:46	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-B-3-A	Lab Sample ID:	500-95474-3	Worklist Smp#:	48
Client ID:	DS-3				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-4 | Lab Sample ID: 500-95474-4

Matrix: Solid | Lab File ID: 042415_278.D

Analysis Method: 8082 | Date Collected: 04/30/2015 14:45

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.5144(g) | Date Analyzed: 05/02/2015 04:59

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 18.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.020		0.020	
11104-28-2	PCB-1221	<0.020		0.020	
11141-16-5	PCB-1232	<0.020		0.020	
53469-21-9	PCB-1242	<0.020		0.020	
12672-29-6	PCB-1248	<0.020		0.020	
11097-69-1	PCB-1254	<0.020		0.020	
11096-82-5	PCB-1260	<0.020		0.020	
1336-36-3	Polychlorinated biphenyls, Total	<0.020		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	71		50-116
2051-24-3	DCB Decachlorobiphenyl	87		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_278.D
Lims ID: 500-95474-A-4-A Lab Sample ID: 500-95474-4
Client ID: DS-4
Sample Type: Client
Inject. Date: 02-May-2015 04:59:26 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-049
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:24 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 04:59:26
Column 2 : Det: Ch-B 02-May-2015 05:13:04
Process Host: XAWRK013

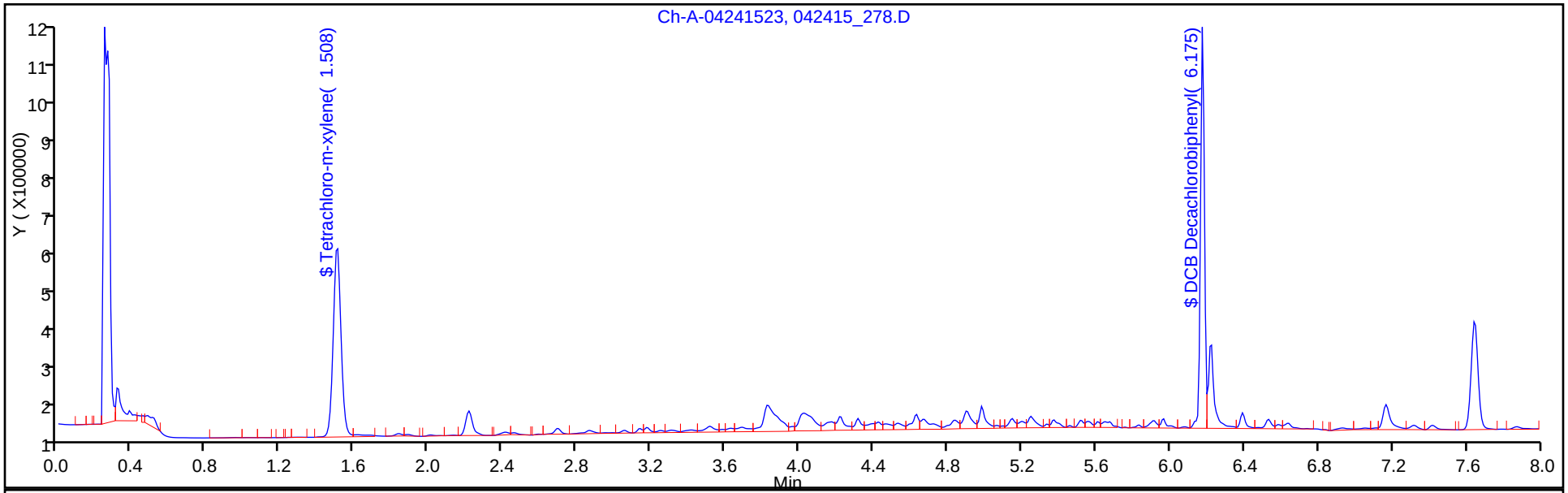
First Level Reviewer: orfg Date: 02-May-2015 10:58:05

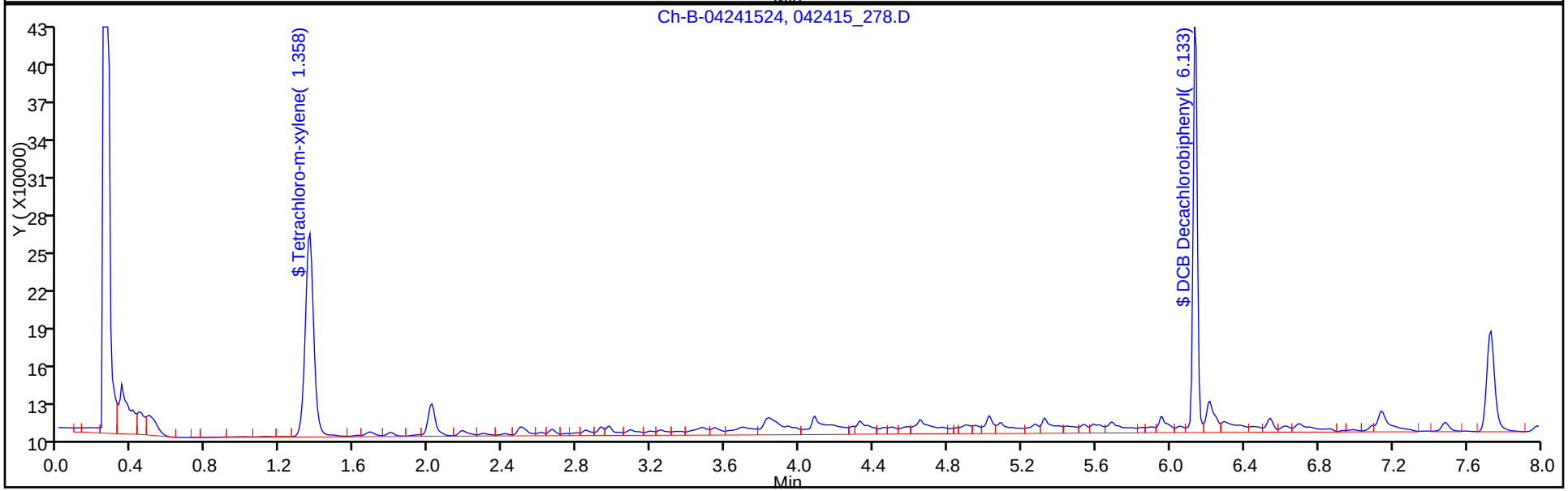
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	478491H	0.0286	
2	1.358	1.350	0.008	156853H	0.0275	
					RPD = 3.72	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1020125H	0.0346	a
2	6.133	6.142	-0.009	312930H	0.0265	
					RPD = 26.70	

Report Date: 02-May-2015 11:02:27 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_278.D				
Injection Date:	02-May-2015 04:59:26	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-A-4-A	Lab Sample ID:	500-95474-4	Worklist Smp#:	49
Client ID:	DS-4				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-5 | Lab Sample ID: 500-95474-5

Matrix: Solid | Lab File ID: 042415_279.D

Analysis Method: 8082 | Date Collected: 04/30/2015 15:05

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.1919(g) | Date Analyzed: 05/02/2015 05:13

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 20.8 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.021		0.021	
11104-28-2	PCB-1221	<0.021		0.021	
11141-16-5	PCB-1232	<0.021		0.021	
53469-21-9	PCB-1242	<0.021		0.021	
12672-29-6	PCB-1248	<0.021		0.021	
11097-69-1	PCB-1254	<0.021		0.021	
11096-82-5	PCB-1260	<0.021		0.021	
1336-36-3	Polychlorinated biphenyls, Total	<0.021		0.021	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	83		50-116
2051-24-3	DCB Decachlorobiphenyl	90		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_279.D
Lims ID: 500-95474-B-5-A Lab Sample ID: 500-95474-5
Client ID: DS-5
Sample Type: Client
Inject. Date: 02-May-2015 05:13:04 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-050
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:24 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 05:13:04
Column 2 : Det: Ch-B 02-May-2015 05:26:43
Process Host: XAWRK013

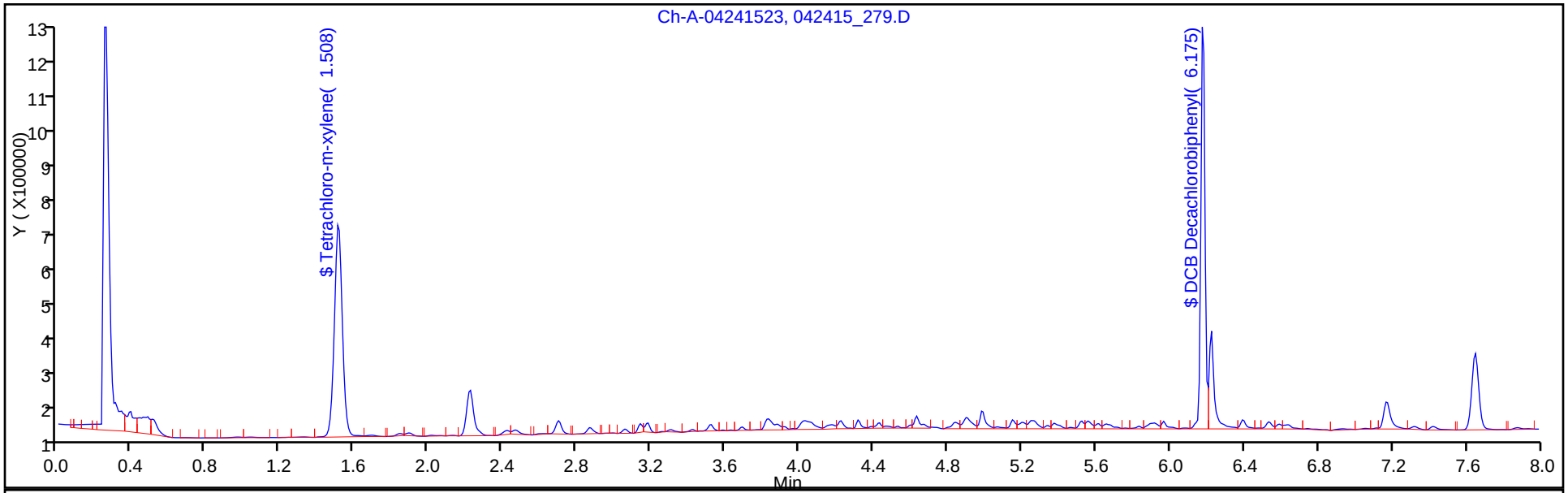
First Level Reviewer: orfg Date: 02-May-2015 10:58:24

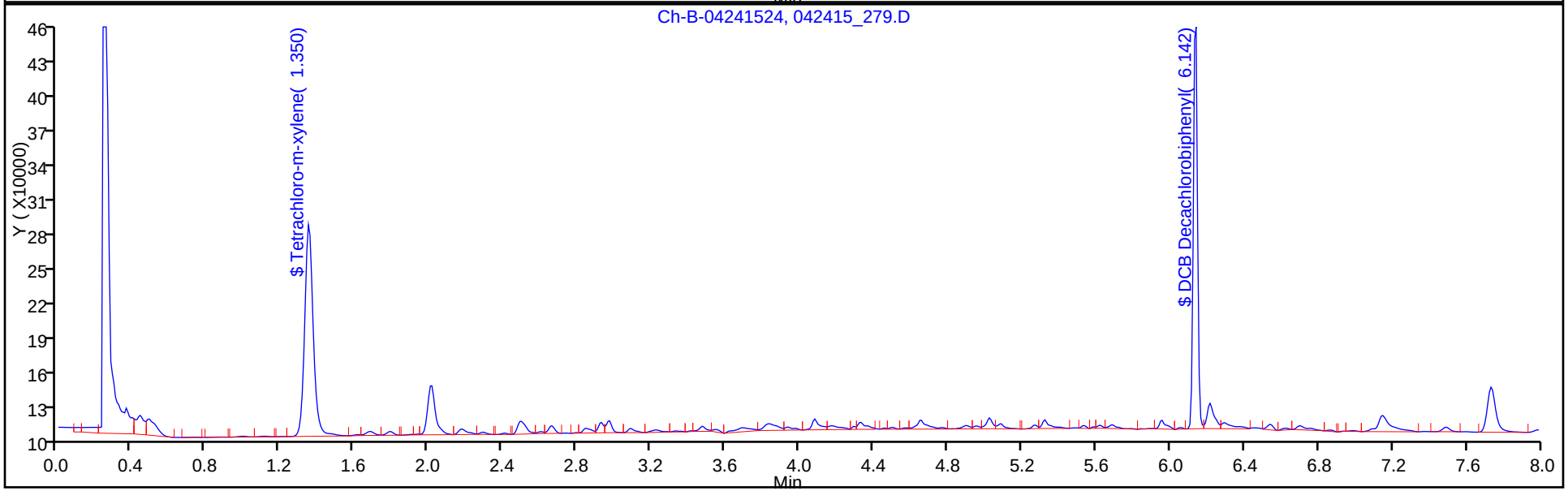
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	558776H	0.0334	
2	1.350	1.350	0.000	178187H	0.0313	
					RPD = 6.47	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1059821H	0.0360	a
2	6.142	6.142	0.000	338393H	0.0286	
					RPD = 22.76	

Report Date: 02-May-2015 11:02:28 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_279.D				
Injection Date:	02-May-2015 05:13:04	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-B-5-A	Lab Sample ID:	500-95474-5	Worklist Smp#:	50
Client ID:	DS-5				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-6 | Lab Sample ID: 500-95474-6

Matrix: Solid | Lab File ID: 042415_280.D

Analysis Method: 8082 | Date Collected: 04/30/2015 15:15

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.1254(g) | Date Analyzed: 05/02/2015 05:26

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 21.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.021		0.021	
11104-28-2	PCB-1221	<0.021		0.021	
11141-16-5	PCB-1232	<0.021		0.021	
53469-21-9	PCB-1242	<0.021		0.021	
12672-29-6	PCB-1248	<0.021		0.021	
11097-69-1	PCB-1254	<0.021		0.021	
11096-82-5	PCB-1260	<0.021		0.021	
1336-36-3	Polychlorinated biphenyls, Total	<0.021		0.021	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	72		50-116
2051-24-3	DCB Decachlorobiphenyl	86		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_280.D				
Lims ID:	500-95474-A-6-A	Lab Sample ID:	500-95474-6		
Client ID:	DS-6				
Sample Type:	Client				
Inject. Date:	02-May-2015 05:26:43	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	#: dc= Name: 042415,pcb23,500-0030606-051				
Operator ID:	werners	Instrument ID:	INST23-24		
Method:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m				
Limit Group:	GC_PCB_ICAL				
Method Label:	Test America Chicago				
Last Update:	02-May-2015 11:02:24	Calib Date:	10-Apr-2015 11:20:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D				
Column 1 :			Det: Ch-A 02-May-2015 05:26:43		
Column 2 :			Det: Ch-B 02-May-2015 05:40:21		
Process Host:	XAWRK013				

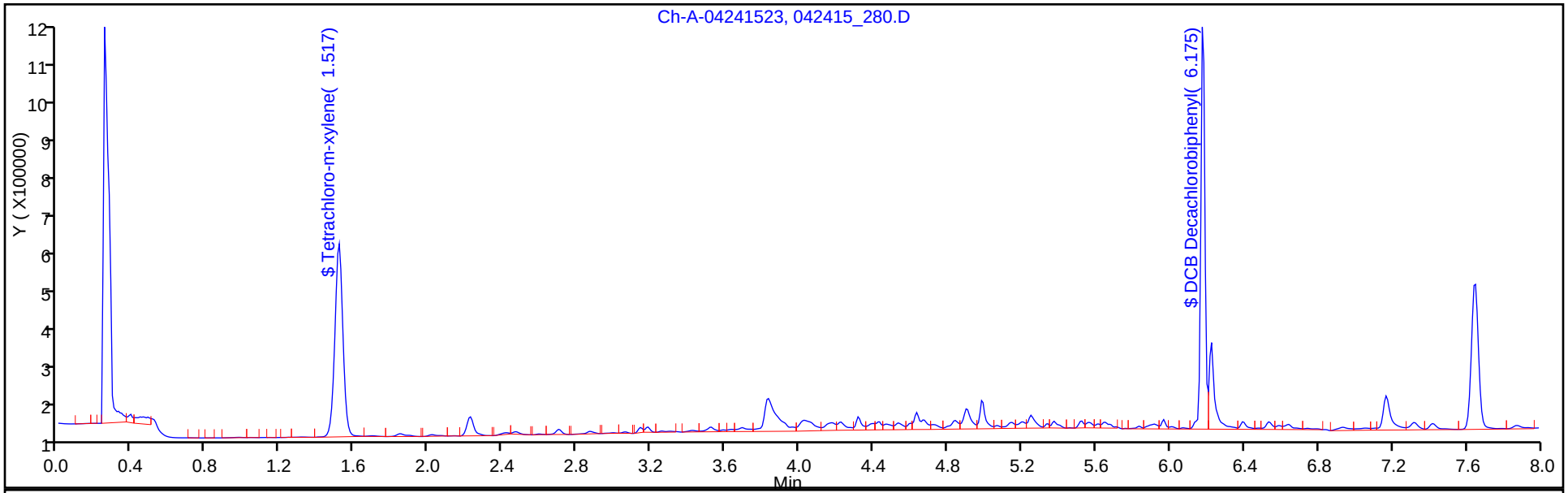
First Level Reviewer: orfg Date: 02-May-2015 10:58:40

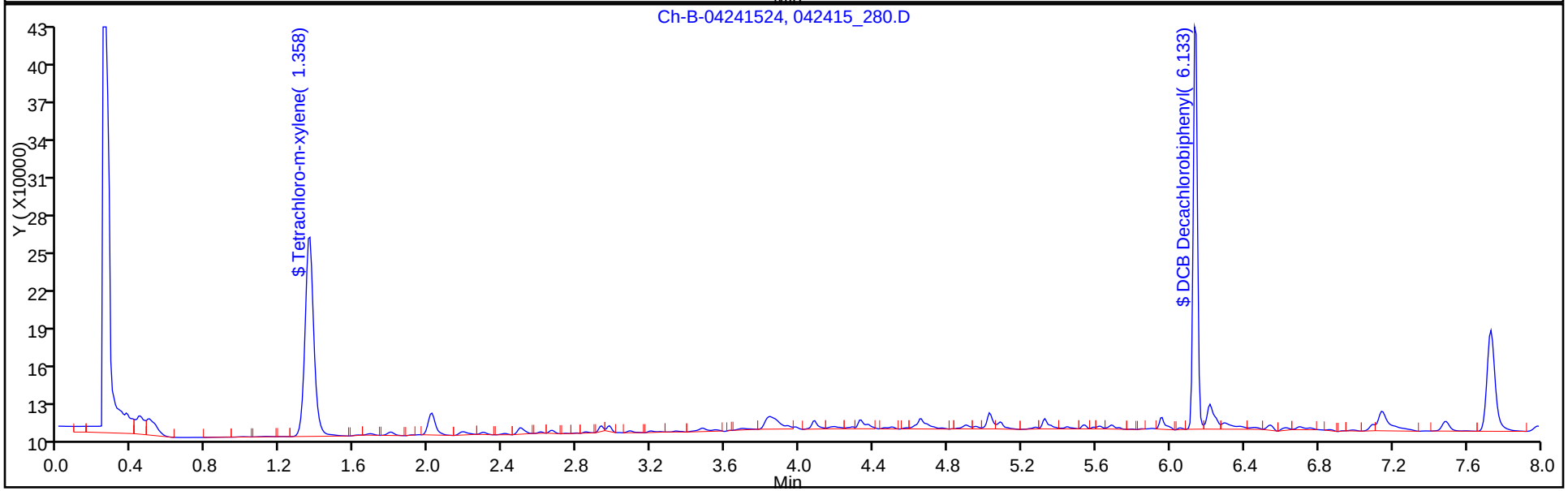
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.517	1.500	0.017	483894H	0.0289	
2	1.358	1.350	0.008	151619H	0.0266	
					RPD = 8.23	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1008050H	0.0342	a
2	6.133	6.142	-0.009	306328H	0.0259	
					RPD = 27.62	

Report Date: 02-May-2015 11:02:30 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_280.D				
Injection Date:	02-May-2015 05:26:43	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-A-6-A	Lab Sample ID:	500-95474-6	Worklist Smp#:	51
Client ID:	DS-6				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-7 | Lab Sample ID: 500-95474-7

Matrix: Solid | Lab File ID: 042415_281.D

Analysis Method: 8082 | Date Collected: 04/30/2015 15:25

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.7212(g) | Date Analyzed: 05/02/2015 05:40

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 21.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.020		0.020	
11104-28-2	PCB-1221	<0.020		0.020	
11141-16-5	PCB-1232	<0.020		0.020	
53469-21-9	PCB-1242	<0.020		0.020	
12672-29-6	PCB-1248	<0.020		0.020	
11097-69-1	PCB-1254	<0.020		0.020	
11096-82-5	PCB-1260	<0.020		0.020	
1336-36-3	Polychlorinated biphenyls, Total	<0.020		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	73		50-116
2051-24-3	DCB Decachlorobiphenyl	92		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_281.D				
Lims ID:	500-95474-B-7-A	Lab Sample ID:	500-95474-7		
Client ID:	DS-7				
Sample Type:	Client				
Inject. Date:	02-May-2015 05:40:21	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	#: dc= Name: 042415,pcb23,500-0030606-052				
Operator ID:	werners	Instrument ID:	INST23-24		

Method:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m		
Limit Group:	GC_PCB_ICAL		
Method Label:	Test America Chicago		
Last Update:	02-May-2015 11:02:24	Calib Date:	10-Apr-2015 11:20:35
Integrator:	Falcon		
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D		

Column 1 :		Det: Ch-A 02-May-2015 05:40:21
Column 2 :		Det: Ch-B 02-May-2015 05:54:15
Process Host:	XAWRK013	

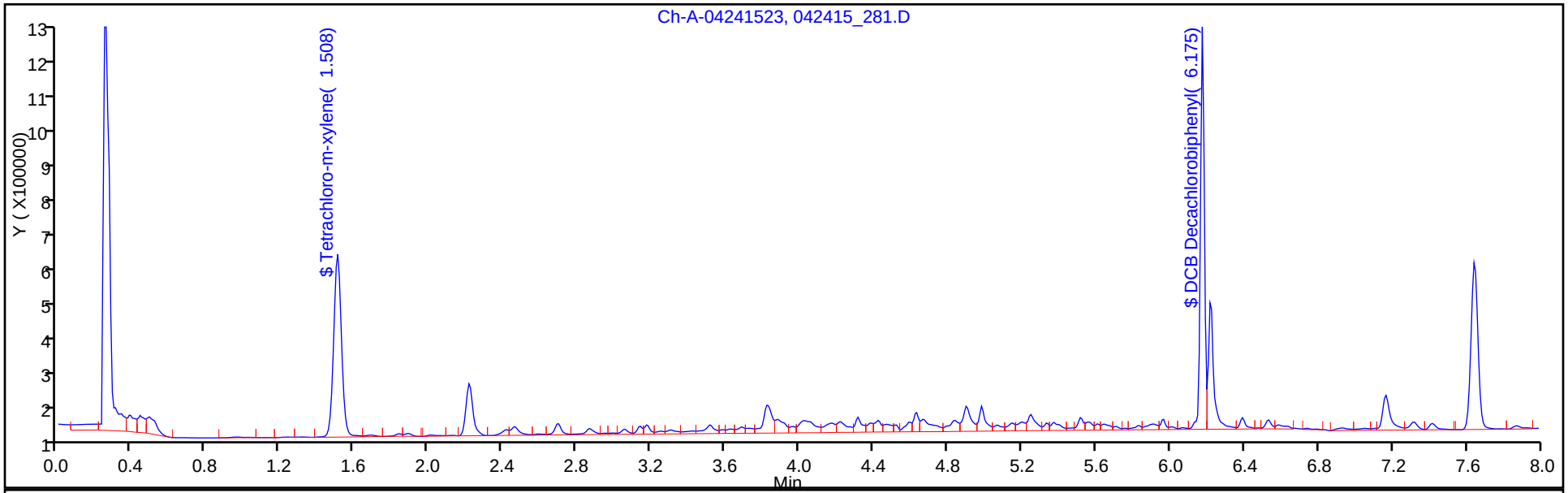
First Level Reviewer: orfg Date: 02-May-2015 10:58:56

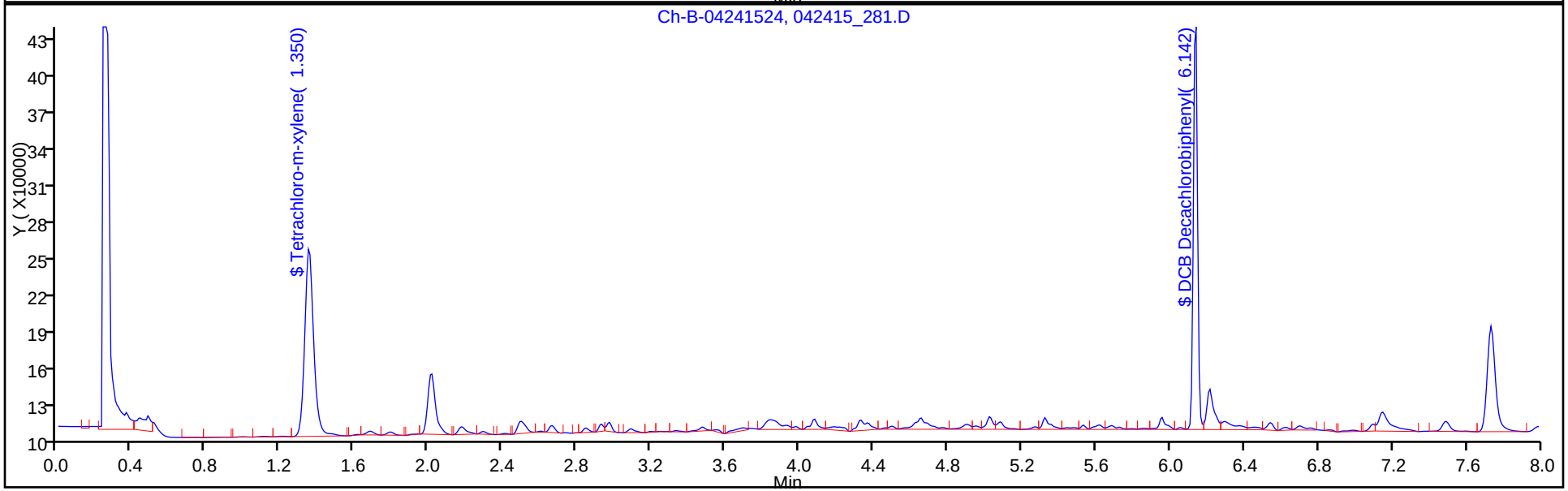
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	491973H	0.0294	
2	1.350	1.350	0.000	147550H	0.0259	
					RPD = 12.59	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1082025H	0.0367	a
2	6.142	6.142	0.000	317259H	0.0268	
					RPD = 31.12	

Report Date: 02-May-2015 11:02:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_281.D				
Injection Date:	02-May-2015 05:40:21	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-B-7-A	Lab Sample ID:	500-95474-7	Worklist Smp#:	52
Client ID:	DS-7				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-8 | Lab Sample ID: 500-95474-8

Matrix: Solid | Lab File ID: 042415_282.D

Analysis Method: 8082 | Date Collected: 04/30/2015 15:45

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.4312(g) | Date Analyzed: 05/02/2015 05:54

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 20.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.020		0.020	
11104-28-2	PCB-1221	<0.020		0.020	
11141-16-5	PCB-1232	<0.020		0.020	
53469-21-9	PCB-1242	<0.020		0.020	
12672-29-6	PCB-1248	<0.020		0.020	
11097-69-1	PCB-1254	<0.020		0.020	
11096-82-5	PCB-1260	<0.020		0.020	
1336-36-3	Polychlorinated biphenyls, Total	<0.020		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	77		50-116
2051-24-3	DCB Decachlorobiphenyl	92		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_282.D
Lims ID: 500-95474-A-8-A Lab Sample ID: 500-95474-8
Client ID: DS-8
Sample Type: Client
Inject. Date: 02-May-2015 05:54:15 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-053
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:24 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 05:54:15
Column 2 : Det: Ch-B 02-May-2015 06:07:49
Process Host: XAWRK013

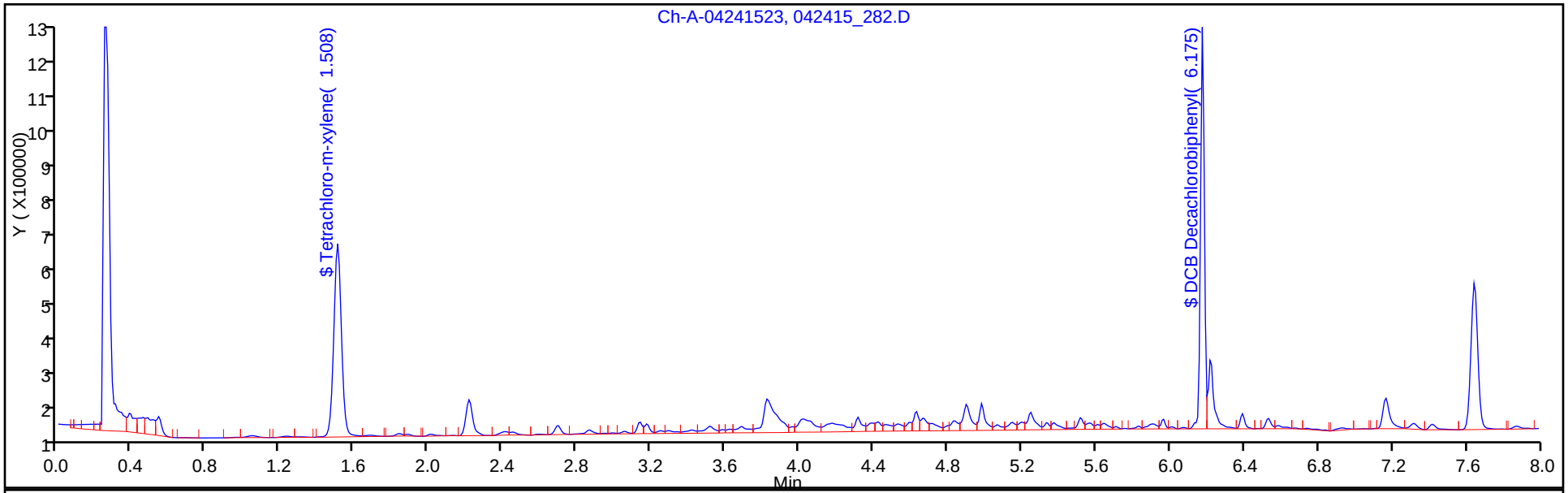
First Level Reviewer: orfg Date: 02-May-2015 10:59:15

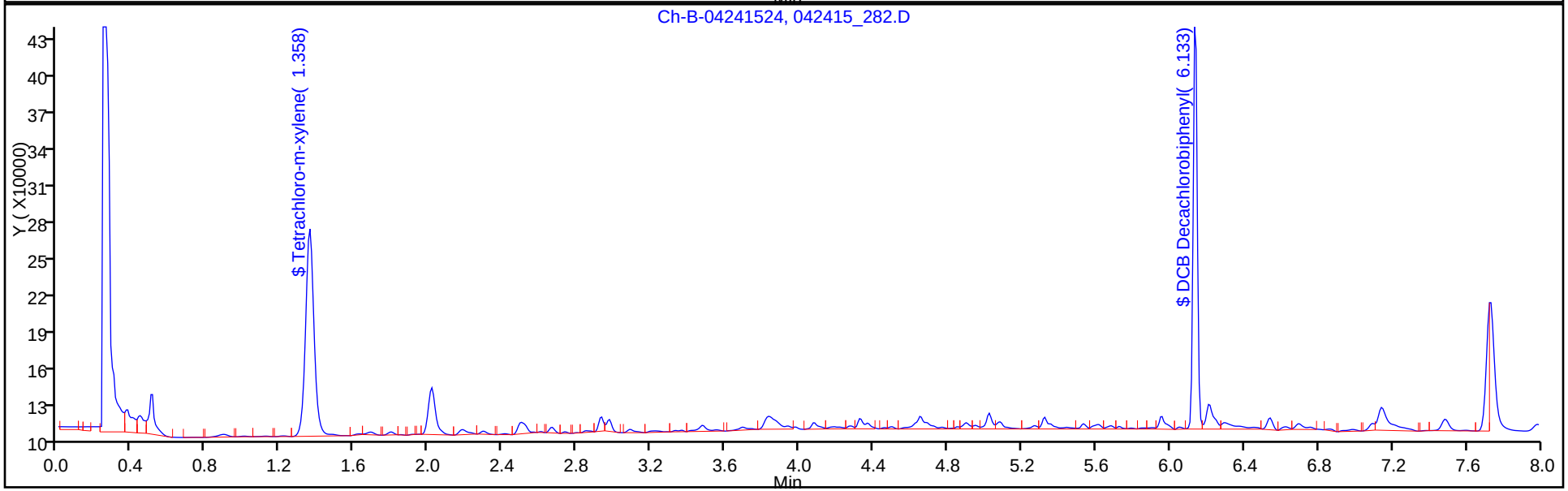
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	518496H	0.0310	
2	1.358	1.350	0.008	164459H	0.0289	
					RPD = 7.01	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1078149H	0.0366	a
2	6.133	6.142	-0.009	319118H	0.0270	
					RPD = 30.20	

Report Date: 02-May-2015 11:02:32 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_282.D				
Injection Date:	02-May-2015 05:54:15	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-A-8-A	Lab Sample ID:	500-95474-8	Worklist Smp#:	53
Client ID:	DS-8				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-9 | Lab Sample ID: 500-95474-9

Matrix: Solid | Lab File ID: 042415_283.D

Analysis Method: 8082 | Date Collected: 04/30/2015 15:50

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.6015(g) | Date Analyzed: 05/02/2015 06:07

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 21.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.021		0.021	
11104-28-2	PCB-1221	<0.021		0.021	
11141-16-5	PCB-1232	<0.021		0.021	
53469-21-9	PCB-1242	<0.021		0.021	
12672-29-6	PCB-1248	<0.021		0.021	
11097-69-1	PCB-1254	<0.021		0.021	
11096-82-5	PCB-1260	<0.021		0.021	
1336-36-3	Polychlorinated biphenyls, Total	<0.021		0.021	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	75		50-116
2051-24-3	DCB Decachlorobiphenyl	91		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_283.D				
Lims ID:	500-95474-B-9-A	Lab Sample ID:	500-95474-9		
Client ID:	DS-9				
Sample Type:	Client				
Inject. Date:	02-May-2015 06:07:49	ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	#: dc= Name: 042415,pcb23,500-0030606-054				
Operator ID:	werners	Instrument ID:	INST23-24		

Method:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m		
Limit Group:	GC_PCB_ICAL		
Method Label:	Test America Chicago		
Last Update:	02-May-2015 11:02:24	Calib Date:	10-Apr-2015 11:20:35
Integrator:	Falcon		
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D		

Column 1 :	Det: Ch-A 02-May-2015 06:07:49
Column 2 :	Det: Ch-B 02-May-2015 06:21:25
Process Host: XAWRK013	

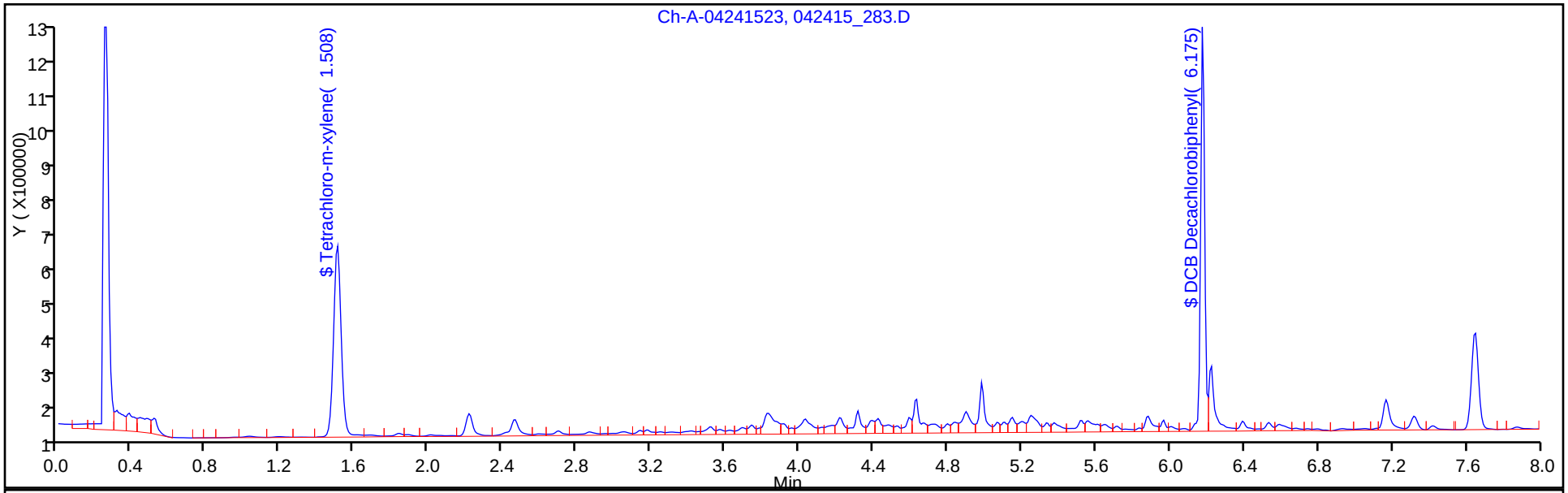
First Level Reviewer: orfg Date: 02-May-2015 10:59:41

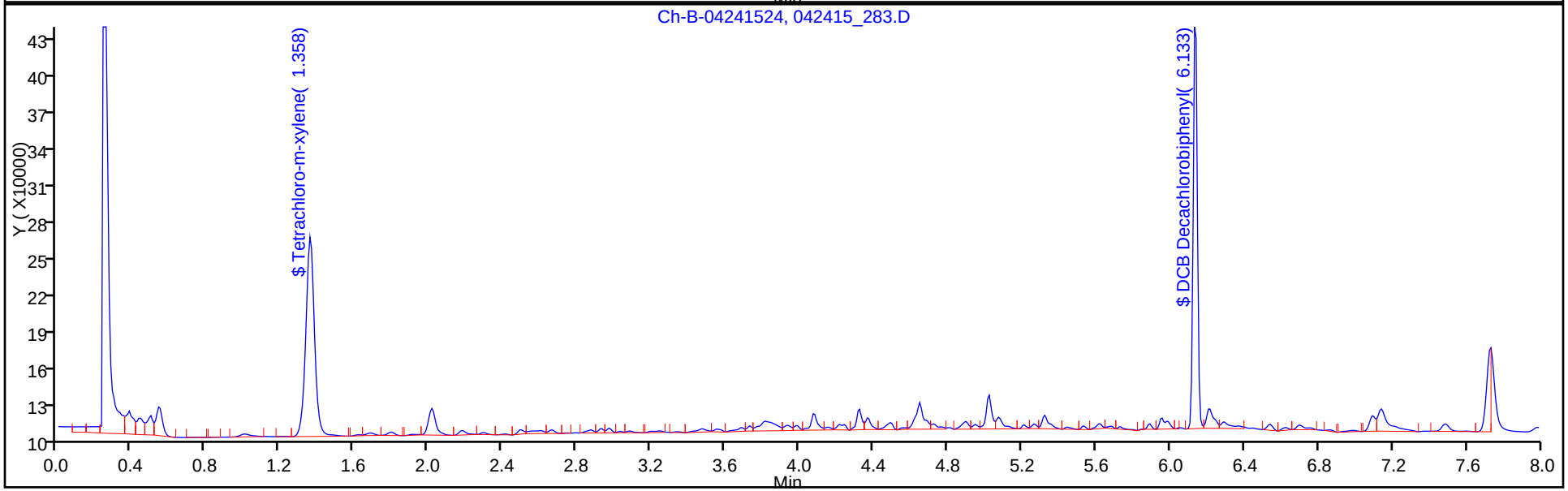
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	505056H	0.0302	
2	1.358	1.350	0.008	160063H	0.0281	
					RPD = 7.09	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1068462H	0.0363	a
2	6.133	6.142	-0.009	322273H	0.0273	
					RPD = 28.36	

Report Date: 02-May-2015 11:02:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_283.D				
Injection Date:	02-May-2015 06:07:49	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-B-9-A	Lab Sample ID:	500-95474-9	Worklist Smp#:	54
Client ID:	DS-9				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-10 | Lab Sample ID: 500-95474-10

Matrix: Solid | Lab File ID: 042415_285.D

Analysis Method: 8082 | Date Collected: 04/30/2015 16:05

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.9733(g) | Date Analyzed: 05/02/2015 06:34

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 21.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.020		0.020	
11104-28-2	PCB-1221	<0.020		0.020	
11141-16-5	PCB-1232	<0.020		0.020	
53469-21-9	PCB-1242	<0.020		0.020	
12672-29-6	PCB-1248	<0.020		0.020	
11097-69-1	PCB-1254	<0.020		0.020	
11096-82-5	PCB-1260	<0.020		0.020	
1336-36-3	Polychlorinated biphenyls, Total	<0.020		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	65		50-116
2051-24-3	DCB Decachlorobiphenyl	81		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_285.D
Lims ID: 500-95474-A-10-A Lab Sample ID: 500-95474-10
Client ID: DS-10
Sample Type: Client
Inject. Date: 02-May-2015 06:34:59 ALS Bottle#: 0 Worklist Smp#: 56
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-056
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:34 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 06:34:59
Column 2 : Det: Ch-B 02-May-2015 06:48:39
Process Host: XAWRK013

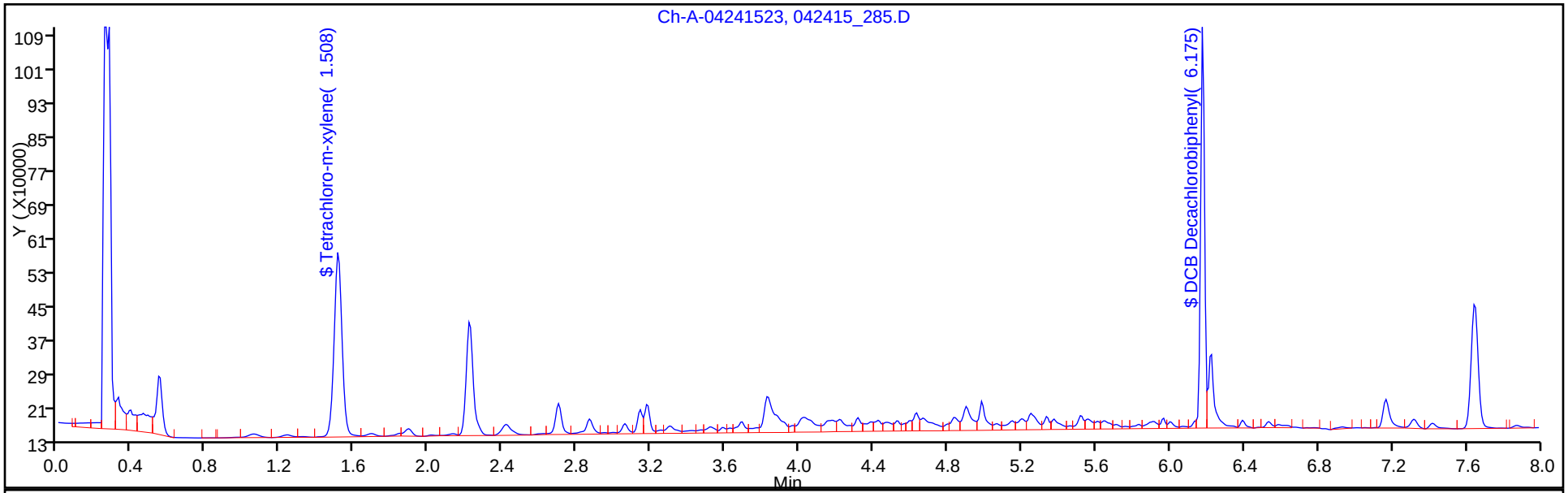
First Level Reviewer: orfg Date: 02-May-2015 11:00:29

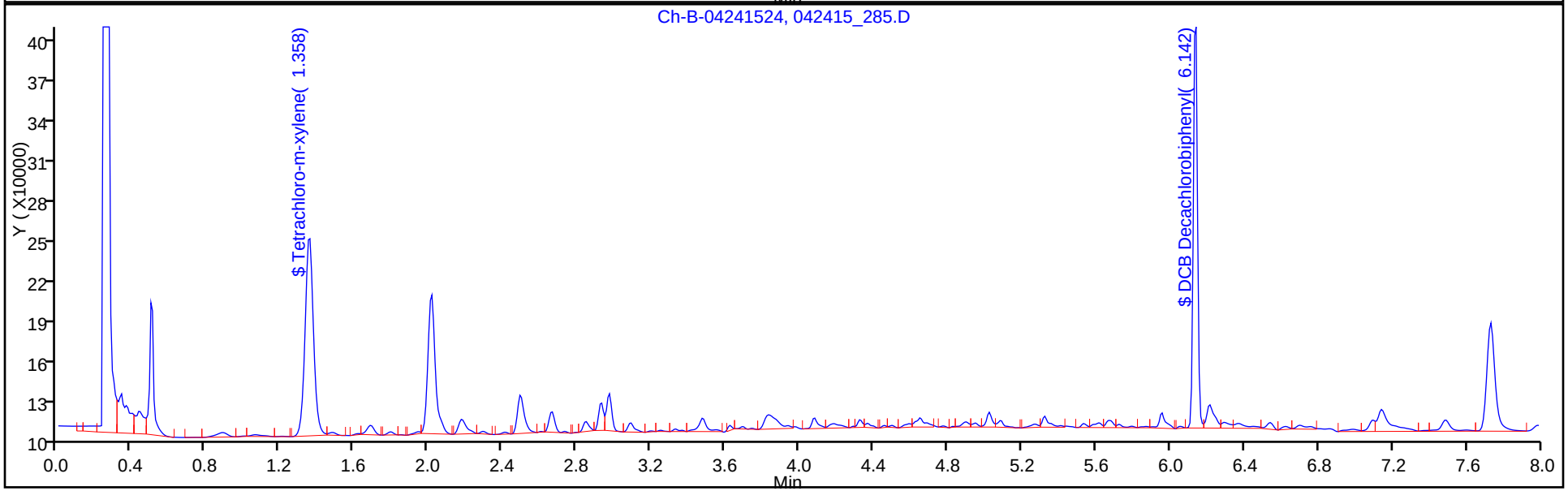
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	436526H	0.0261	
2	1.358	1.350	0.008	140182H	0.0246	
					RPD = 5.77	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	948551H	0.0322	a
2	6.142	6.142	0.000	285207H	0.0241	
					RPD = 28.66	

Report Date: 02-May-2015 11:02:36 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_285.D				
Injection Date:	02-May-2015 06:34:59	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-A-10-A	Lab Sample ID:	500-95474-10	Worklist Smp#:	56
Client ID:	DS-10				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-DUP | Lab Sample ID: 500-95474-11

Matrix: Solid | Lab File ID: 042415_288.D

Analysis Method: 8082 | Date Collected: 04/30/2015 00:00

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.7512(g) | Date Analyzed: 05/02/2015 07:16

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 24.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.021		0.021	
11104-28-2	PCB-1221	<0.021		0.021	
11141-16-5	PCB-1232	<0.021		0.021	
53469-21-9	PCB-1242	<0.021		0.021	
12672-29-6	PCB-1248	<0.021		0.021	
11097-69-1	PCB-1254	<0.021		0.021	
11096-82-5	PCB-1260	<0.021		0.021	
1336-36-3	Polychlorinated biphenyls, Total	<0.021		0.021	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	81		50-116
2051-24-3	DCB Decachlorobiphenyl	89		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_288.D
Lims ID: 500-95474-B-11-A Lab Sample ID: 500-95474-11
Client ID: DS-DUP
Sample Type: Client
Inject. Date: 02-May-2015 07:16:11 ALS Bottle#: 0 Worklist Smp#: 59
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-059
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:34 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 07:16:11
Column 2 : Det: Ch-B 02-May-2015 07:29:48
Process Host: XAWRK013

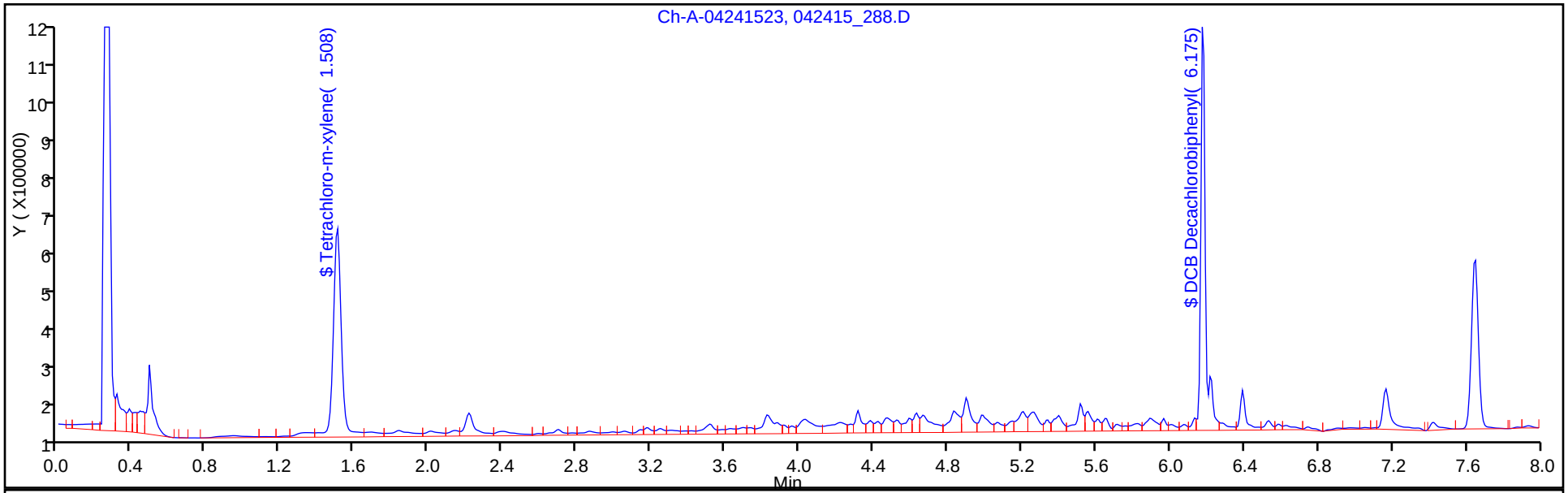
First Level Reviewer: orfg Date: 02-May-2015 11:01:13

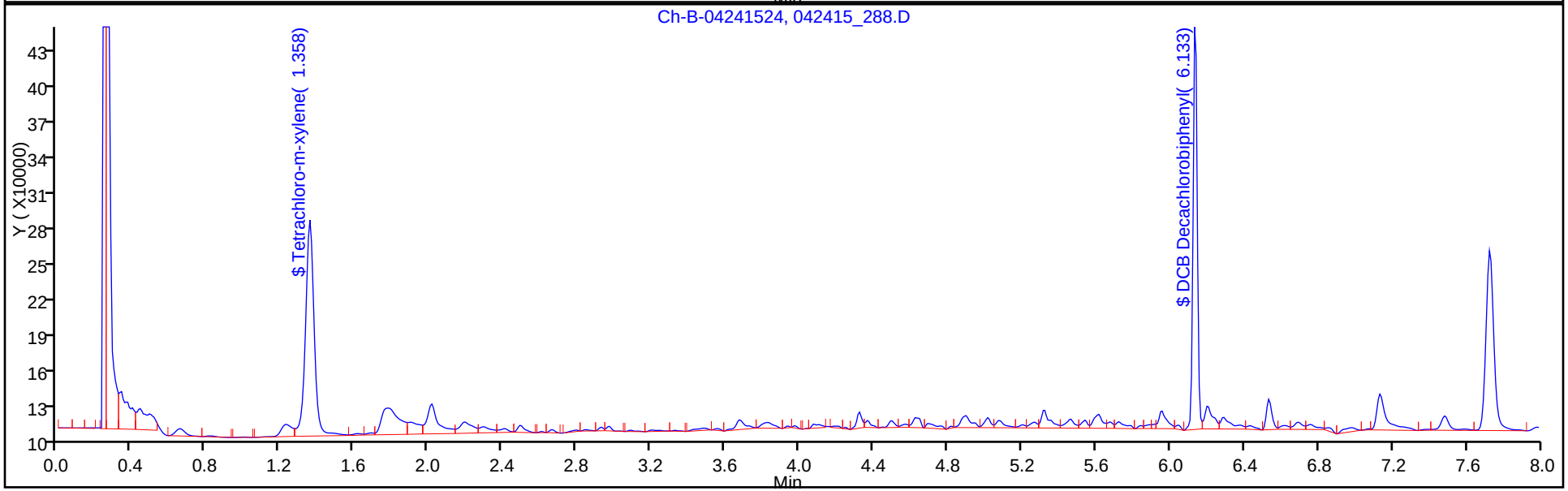
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene						
1	1.508	1.500	0.008	541293H	0.0323	
2	1.358	1.350	0.008	175450H	0.0308	
					RPD = 4.84	
$ 1 DCB Decachlorobiphenyl						
1	6.175	6.200	-0.025	1048234H	0.0356	
2	6.133	6.142	-0.009	326706H	0.0276	
					RPD = 25.14	

Report Date: 02-May-2015 11:02:42 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_288.D				
Injection Date:	02-May-2015 07:16:11	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-B-11-A	Lab Sample ID:	500-95474-11	Worklist Smp#:	59
Client ID:	DS-DUP				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 08:36 Calibration End Date: 04/10/2015 09:44 Calibration ID: 18362

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD16601 500-283260/6	040115_126.D
Level 2	STD16602 500-283260/5	040115_125.D
Level 3	STD16603 500-283260/4	040115_124.D
Level 4	STD16604 500-283260/3	040115_123.D
Level 5	STD16605 500-283260/2	040115_122.D
Level 6	STD16606 500-283260/1	040115_121.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1016 Peak 2	2.508	2.508	2.508	2.508	2.508	2.508					2.478 - 2.538	2.508
PCB-1016 Peak 3	2.750	2.750	2.750	2.750	2.750	2.750					2.720 - 2.780	2.750
PCB-1016 Peak 4	2.850	2.842	2.842	2.850	2.842	2.842					2.820 - 2.880	2.845
PCB-1016 Peak 1	3.342	3.342	3.333	3.342	3.342	3.342					3.312 - 3.372	3.341
PCB-1016 Peak 5	3.592	3.592	3.592	3.592	3.592	3.592					3.562 - 3.622	3.592
PCB-1260 Peak 1	4.417	4.417	4.417	4.417	4.417	4.417					4.387 - 4.447	4.417
PCB-1260 Peak 2	4.633	4.625	4.625	4.625	4.625	4.625					4.603 - 4.663	4.626
PCB-1260 Peak 3	4.750	4.742	4.742	4.750	4.750	4.750					4.720 - 4.780	4.747
PCB-1260 Peak 4	4.925	4.917	4.917	4.925	4.917	4.917					4.895 - 4.955	4.920
PCB-1260 Peak 5	5.325	5.325	5.325	5.325	5.325	5.325					5.295 - 5.355	5.325
Tetrachloro-m-xylene	1.508	1.500	1.500	1.508	1.508	1.508					1.478 - 1.538	1.505
DCB Decachlorobiphenyl	6.233	6.225	6.225	6.233	6.233	6.233					6.203 - 6.263	6.230

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 08:36 Calibration End Date: 04/10/2015 09:44 Calibration ID: 18362

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD16601 500-283260/6	040115_126.D
Level 2	STD16602 500-283260/5	040115_125.D
Level 3	STD16603 500-283260/4	040115_124.D
Level 4	STD16604 500-283260/3	040115_123.D
Level 5	STD16605 500-283260/2	040115_122.D
Level 6	STD16606 500-283260/1	040115_121.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1016 Peak 2	470075 469717	516500 460058	496424	470088	Ave		480477.056				4.5		20.0			
PCB-1016 Peak 3	1413825 1423719	1439520 1439496	1457016	1417038	Ave		1431768.94				1.2		20.0			
PCB-1016 Peak 4	671450 631105	672410 645222	688984	626670	Ave		655973.556				3.9		20.0			
PCB-1016 Peak 1	655800 606236	613460 601015	620088	610192	Ave		617798.500				3.2		20.0			
PCB-1016 Peak 5	446050 489191	493510 492581	524960	490688	Ave		489496.611				5.1		20.0			
PCB-1260 Peak 1	1813850 1710836	1777710 1691596	1688912	1682740	Ave		1727607.33				3.2		20.0			
PCB-1260 Peak 2	1651925 1915909	1901850 1744643	1991932	1893042	Ave		1849883.56				6.8		20.0			
PCB-1260 Peak 3	1189625 1252307	1226860 1185301	1277632	1265238	Ave		1232827.11				3.2		20.0			
PCB-1260 Peak 4	1175750 1273563	1378560 1339826	1422332	1265650	Ave		1309280.11				6.8		20.0			
PCB-1260 Peak 5	1487875 1623732	1592850 1655721	1605948	1637134	Ave		1600543.33				3.7		20.0			
Tetrachloro-m-xylene	17704000 16616933	16505875 16521550	16815800	16265875	Ave		16738338.9				3.0		20.0			
DCB Decachlorobiphenyl	33542750 28340900	32242375 21763900	30538150	30248000	Ave		29446012.5				14.1		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 08:36 Calibration End Date: 04/10/2015 09:44 Calibration ID: 18362

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD16601 500-283260/6	040115_126.D
Level 2	STD16602 500-283260/5	040115_125.D
Level 3	STD16603 500-283260/4	040115_124.D
Level 4	STD16604 500-283260/3	040115_123.D
Level 5	STD16605 500-283260/2	040115_122.D
Level 6	STD16606 500-283260/1	040115_121.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 2	Ave	18803 460058	51650	124106	235044	352288	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1016 Peak 3	Ave	56553 1439496	143952	364254	708519	1067789	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1016 Peak 4	Ave	26858 645222	67241	172246	313335	473329	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1016 Peak 1	Ave	26232 601015	61346	155022	305096	454677	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1016 Peak 5	Ave	17842 492581	49351	131240	245344	366893	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1260 Peak 1	Ave	72554 1691596	177771	422228	841370	1283127	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1260 Peak 2	Ave	66077 1744643	190185	497983	946521	1436932	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1260 Peak 3	Ave	47585 1185301	122686	319408	632619	939230	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1260 Peak 4	Ave	47030 1339826	137856	355583	632825	955172	0.0400 1.00	0.100	0.250	0.500	0.750
PCB-1260 Peak 5	Ave	59515 1655721	159285	401487	818567	1217799	0.0400 1.00	0.100	0.250	0.500	0.750
Tetrachloro-m-xylene	Ave	70816 1321724	132047	336316	650635	997016	0.00400 0.0800	0.00800	0.0200	0.0400	0.0600
DCB Decachlorobiphenyl	Ave	134171 1741112	257939	610763	1209920	1700454	0.00400 0.0800	0.00800	0.0200	0.0400	0.0600

Curve Type Legend:
Ave = Average by Height

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_121.D
Lims ID: STD16606
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Apr-2015 08:36:10 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-001
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:05 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 08:36:10
Column 2 : Det: Ch-B 10-Apr-2015 08:49:47
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 09:42:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.508	0.000	1321724H	0.0800	0.0790	
2	1.350	1.350	0.000	424336H	0.0800	0.0745	
						RPD = 5.80	
2 PCB-1016							
1	3.342	3.342	0.000	601015H	1.00	0.9728	
1	2.508	2.508	0.000	460058H	1.00	0.9575	
1	2.750	2.750	0.000	1439496H	1.00	1.01	
1	2.842	2.850	-0.008	645222H	1.00	0.9836	
1	3.592	3.592	0.000	492581H	1.00	1.01	
		Average of Peak Amounts =				0.9851	
2	3.583	3.583	0.000	175892H	1.00	0.8726	
2	2.750	2.750	0.000	428511H	1.00	1.00	
2	2.867	2.867	0.000	210956H	1.00	0.9790	
2	3.258	3.258	0.000	196607H	1.00	0.9357	
2	3.350	3.358	-0.008	201602H	1.00	0.9549	
		Average of Peak Amounts =				0.9485	
						RPD = 3.79	

Report Date: 14-Apr-2015 10:35:06 Chrom Revision: 2.2 13-Mar-2015 11:20:44
Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_121.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.417	4.417	0.000	1691596H	1.00	0.9792	
1	4.625	4.633	-0.008	1744643H	1.00	0.9431	
1	4.750	4.750	0.000	1185301H	1.00	0.9614	
1	4.917	4.925	-0.008	1339826H	1.00	1.02	
1	5.325	5.325	0.000	1655721H	1.00	1.03	
		Average of Peak Amounts =				0.9883	
2	4.217	4.217	0.000	484729H	1.00	0.9516	
2	4.367	4.375	-0.008	661100H	1.00	1.02	
2	5.075	5.075	0.000	1356999H	1.00	1.05	
2	4.625	4.625	0.000	630060H	1.00	1.02	
2	4.900	4.900	0.000	541788H	1.00	0.9162	
		Average of Peak Amounts =				0.99	
						RPD = 0.31	
$ 1 DCB Decachlorobiphenyl							
1	6.233	6.233	0.000	1741112H	0.0800	0.0591	
2	6.133	6.133	0.000	918199H	0.0800	0.0777	
						RPD = 27.15	
S 11 Polychlorinated biphenyls, Total							
1						1.97	

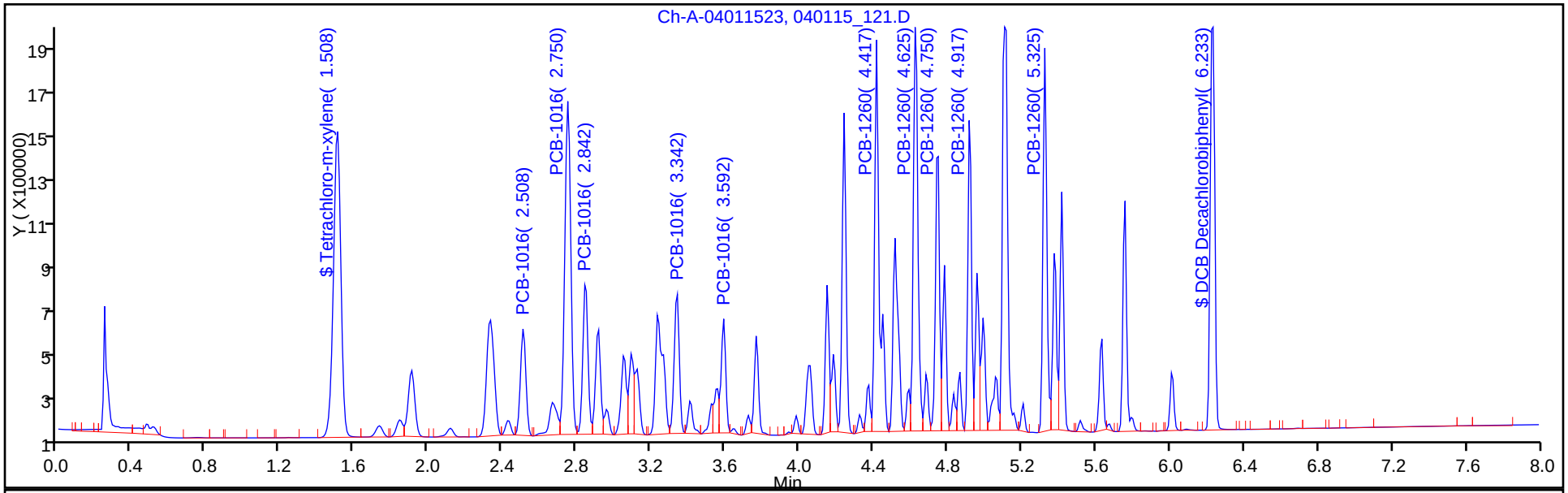
Reagents:

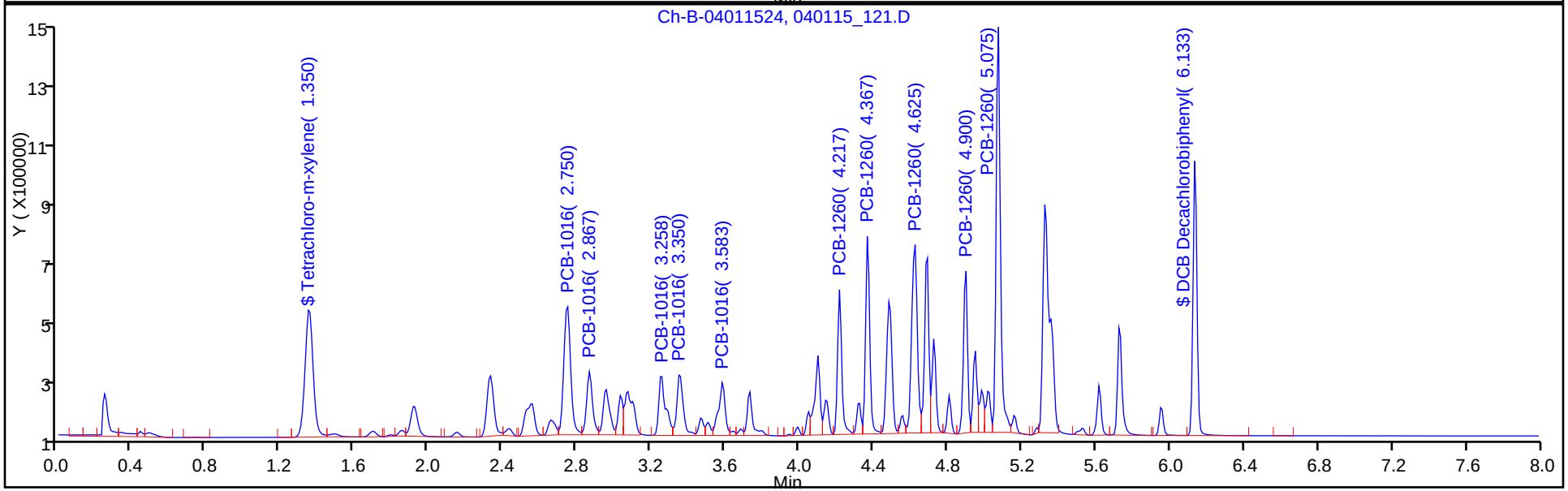
AR1660-6_00021 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:06 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_121.D				
Injection Date:	10-Apr-2015 08:36:10	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD16606			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_122.D
Lims ID: STD16605
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Apr-2015 08:49:47 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-002
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:07 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 08:49:47
Column 2 : Det: Ch-B 10-Apr-2015 09:03:25
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 09:51:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.508	0.000	997016H	0.0600	0.0596	
2	1.350	1.350	0.000	323999H	0.0600	0.0569	
						RPD = 4.58	
2 PCB-1016							
1	3.342	3.342	0.000	454677H	0.7500	0.7360	
1	2.508	2.508	0.000	352288H	0.7500	0.7332	
1	2.750	2.750	0.000	1067789H	0.7500	0.7458	
1	2.842	2.850	-0.008	473329H	0.7500	0.7216	
1	3.592	3.592	0.000	366893H	0.7500	0.7495	
		Average of Peak Amounts =				0.7372	
2	3.583	3.583	0.000	137684H	0.7500	0.6831	
2	2.750	2.750	0.000	314909H	0.7500	0.7350	
2	2.867	2.867	0.000	156354H	0.7500	0.7256	
2	3.258	3.258	0.000	148419H	0.7500	0.7064	
2	3.358	3.358	0.000	150003H	0.7500	0.7105	
		Average of Peak Amounts =				0.7121	
						RPD = 3.46	

Report Date: 14-Apr-2015 10:35:07 Chrom Revision: 2.2 13-Mar-2015 11:20:44
Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_122.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.417	4.417	0.000	1283127H	0.7500	0.7427	
1	4.625	4.633	-0.008	1436932H	0.7500	0.7768	
1	4.750	4.750	0.000	939230H	0.7500	0.7619	
1	4.917	4.925	-0.008	955172H	0.7500	0.7295	
1	5.325	5.325	0.000	1217799H	0.7500	0.7609	
		Average of Peak Amounts =				0.7543	
2	4.217	4.217	0.000	365144H	0.7500	0.7168	
2	4.367	4.375	-0.008	486771H	0.7500	0.7538	
2	5.075	5.075	0.000	1019820H	0.7500	0.7859	
2	4.625	4.625	0.000	462550H	0.7500	0.7484	
2	4.900	4.900	0.000	417164H	0.7500	0.7054	
		Average of Peak Amounts =				0.7421	
						RPD = 1.64	
$ 1 DCB Decachlorobiphenyl							
1	6.233	6.233	0.000	1700454H	0.0600	0.0577	
2	6.133	6.133	0.000	679575H	0.0600	0.0575	
						RPD = 0.41	
S 11 Polychlorinated biphenyls, Total							
1						1.49	

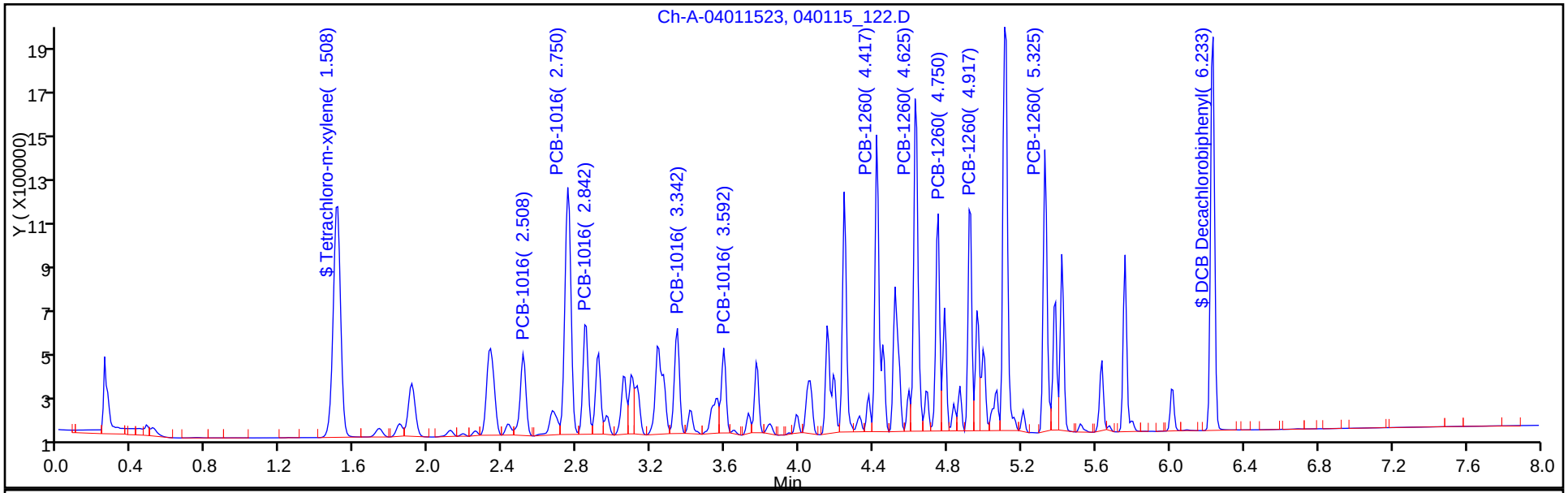
Reagents:

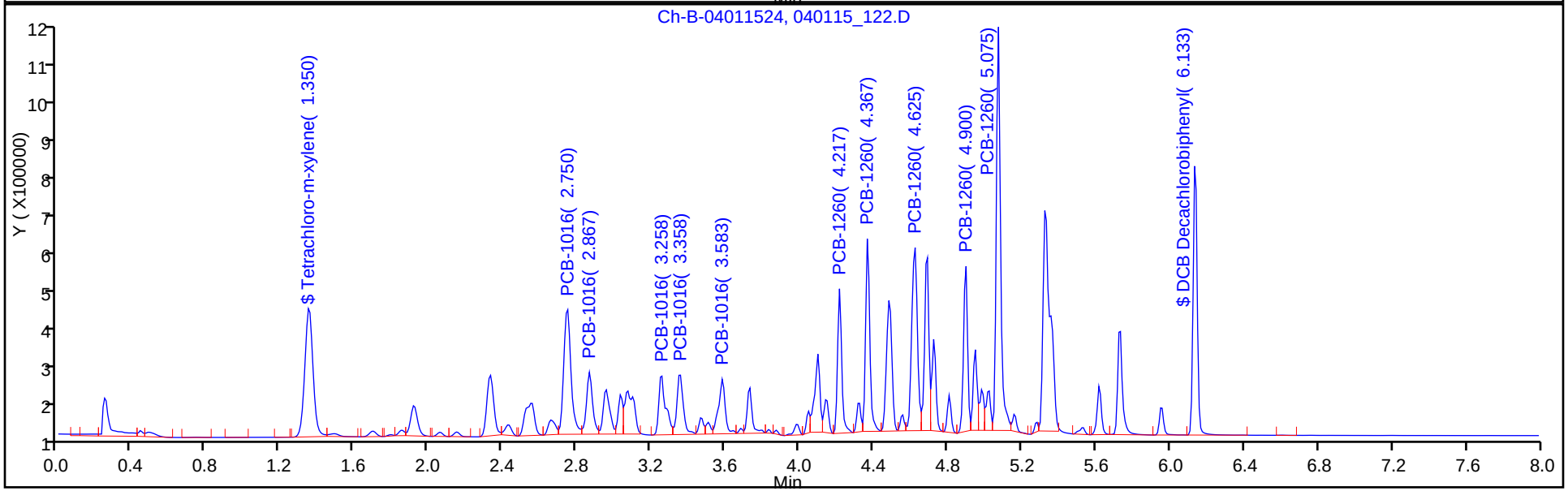
AR1660-5_00021 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:07 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_122.D				
Injection Date:	10-Apr-2015 08:49:47	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD16605			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_123.D
Lims ID: STD16604
Client ID:
Sample Type: ICRT Calib Level: 4
Inject. Date: 10-Apr-2015 09:03:25 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-003
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:08 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 09:03:25
Column 2 : Det: Ch-B 10-Apr-2015 09:17:06
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 09:51:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.508	0.000	650635H	0.0400	0.0389	a
2	1.350	1.350	0.000	218132H	0.0400	0.0383	
						RPD = 1.47	
2 PCB-1016							
1	3.342	3.342	0.000	305096H	0.5000	0.4938	a
1	2.508	2.508	0.000	235044H	0.5000	0.4892	a
1	2.750	2.750	0.000	708519H	0.5000	0.4949	a
1	2.850	2.850	0.000	313335H	0.5000	0.4777	a
1	3.592	3.592	0.000	245344H	0.5000	0.5012	a
		Average of Peak Amounts =				0.4914	
2	3.583	3.583	0.000	91437H	0.5000	0.4536	
2	2.750	2.750	0.000	211644H	0.5000	0.4940	
2	2.867	2.867	0.000	106286H	0.5000	0.4933	
2	3.258	3.258	0.000	101662H	0.5000	0.4838	
2	3.350	3.350	0.000	102772H	0.5000	0.4868	
		Average of Peak Amounts =				0.4823	
						RPD = 1.86	

Report Date: 14-Apr-2015 10:35:09 Chrom Revision: 2.2 13-Mar-2015 11:20:44
Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_123.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.417	4.417	0.000	841370H	0.5000	0.4870	a
1	4.625	4.625	0.000	946521H	0.5000	0.5117	a
1	4.750	4.750	0.000	632619H	0.5000	0.5131	a
1	4.925	4.925	0.000	632825H	0.5000	0.4833	a
1	5.325	5.325	0.000	818567H	0.5000	0.5114	a
		Average of Peak Amounts =				0.5013	
2	4.217	4.217	0.000	252683H	0.5000	0.4960	
2	4.367	4.367	0.000	330118H	0.5000	0.5112	
2	5.075	5.075	0.000	670997H	0.5000	0.5171	
2	4.625	4.625	0.000	314898H	0.5000	0.5095	
2	4.900	4.900	0.000	279753H	0.5000	0.4731	
		Average of Peak Amounts =				0.5014	
						RPD = 0.01	
$ 1 DCB Decachlorobiphenyl							
1	6.233	6.233	0.000	1209920H	0.0400	0.0411	a
2	6.133	6.133	0.000	466777H	0.0400	0.0395	a
						RPD = 3.94	

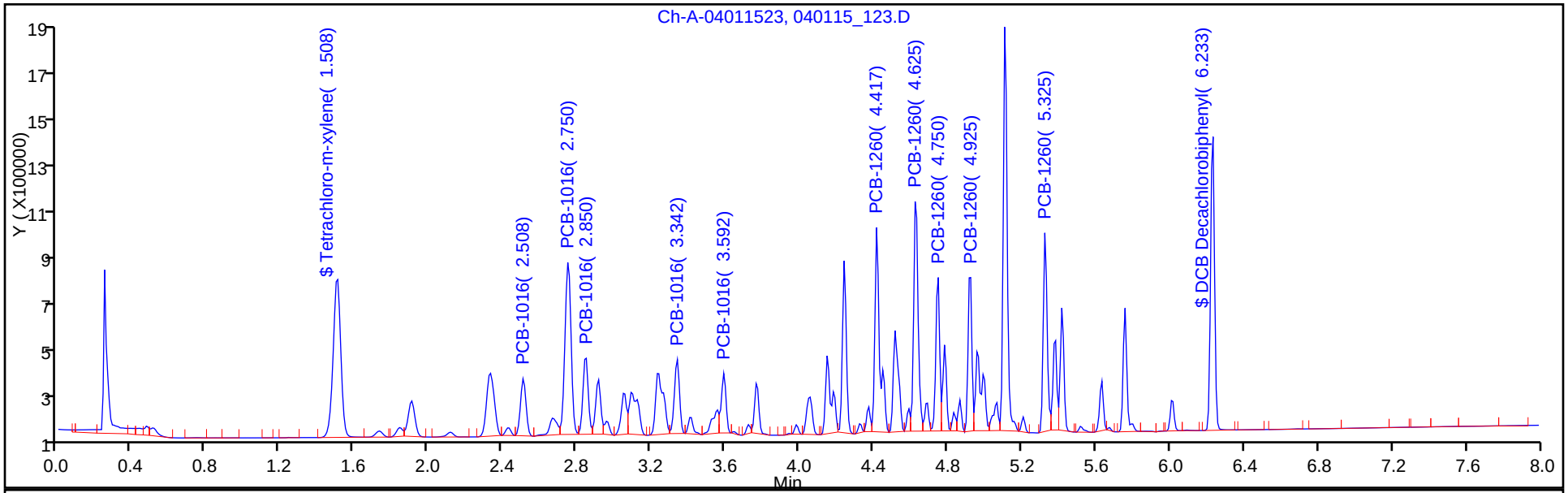
Reagents:

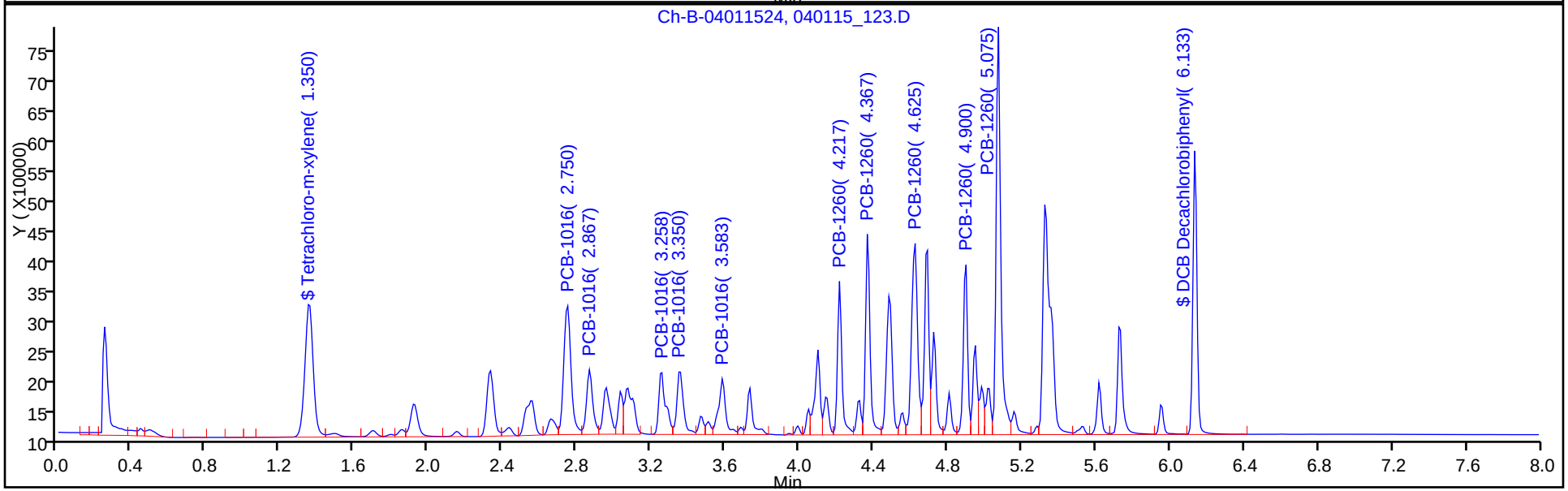
AR1660-4_00021 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:09 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_123.D				
Injection Date:	10-Apr-2015 09:03:25	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD16604			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_124.D
Lims ID: STD16603
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Apr-2015 09:17:06 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-004
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:09 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 09:17:06
Column 2 : Det: Ch-B 10-Apr-2015 09:31:02
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 09:51:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.500	1.508	-0.008	336316H	0.0200	0.0201	
2	1.350	1.350	0.000	115901H	0.0200	0.0204	
						RPD = 1.29	
2 PCB-1016							
1	3.333	3.342	-0.009	155022H	0.2500	0.2509	
1	2.508	2.508	0.000	124106H	0.2500	0.2583	
1	2.750	2.750	0.000	364254H	0.2500	0.2544	
1	2.842	2.850	-0.008	172246H	0.2500	0.2626	
1	3.592	3.592	0.000	131240H	0.2500	0.2681	
		Average of Peak Amounts =				0.2589	
2	3.583	3.583	0.000	46799H	0.2500	0.2322	
2	2.750	2.750	0.000	106165H	0.2500	0.2478	
2	2.867	2.867	0.000	53253H	0.2500	0.2471	
2	3.250	3.258	-0.008	52206H	0.2500	0.2485	
2	3.350	3.350	0.000	52889H	0.2500	0.2505	
		Average of Peak Amounts =				0.2452	
						RPD = 5.41	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.417	4.417	0.000	422228H	0.2500	0.2444	
1	4.625	4.625	0.000	497983H	0.2500	0.2692	
1	4.742	4.750	-0.008	319408H	0.2500	0.2591	
1	4.917	4.925	-0.008	355583H	0.2500	0.2716	
1	5.325	5.325	0.000	401487H	0.2500	0.2508	
		Average of Peak Amounts =				0.2590	
2	4.217	4.217	0.000	128686H	0.2500	0.2526	
2	4.367	4.367	0.000	163581H	0.2500	0.2533	
2	5.075	5.075	0.000	326474H	0.2500	0.2516	
2	4.625	4.625	0.000	155379H	0.2500	0.2514	
2	4.900	4.900	0.000	143281H	0.2500	0.2423	
		Average of Peak Amounts =				0.2502	
						RPD = 3.45	
$ 1 DCB Decachlorobiphenyl							
1	6.225	6.233	-0.008	610763H	0.0200	0.0207	
2	6.133	6.133	0.000	229174H	0.0200	0.0194	
						RPD = 6.71	
S 11 Polychlorinated biphenyls, Total							
1						0.5179	

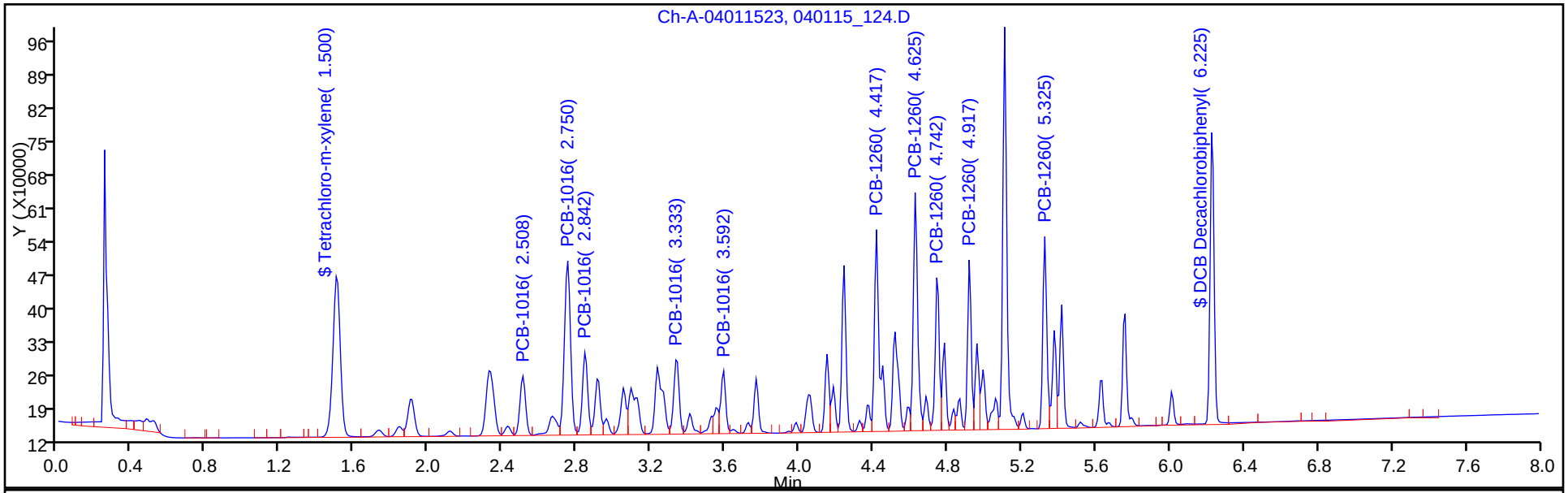
Reagents:

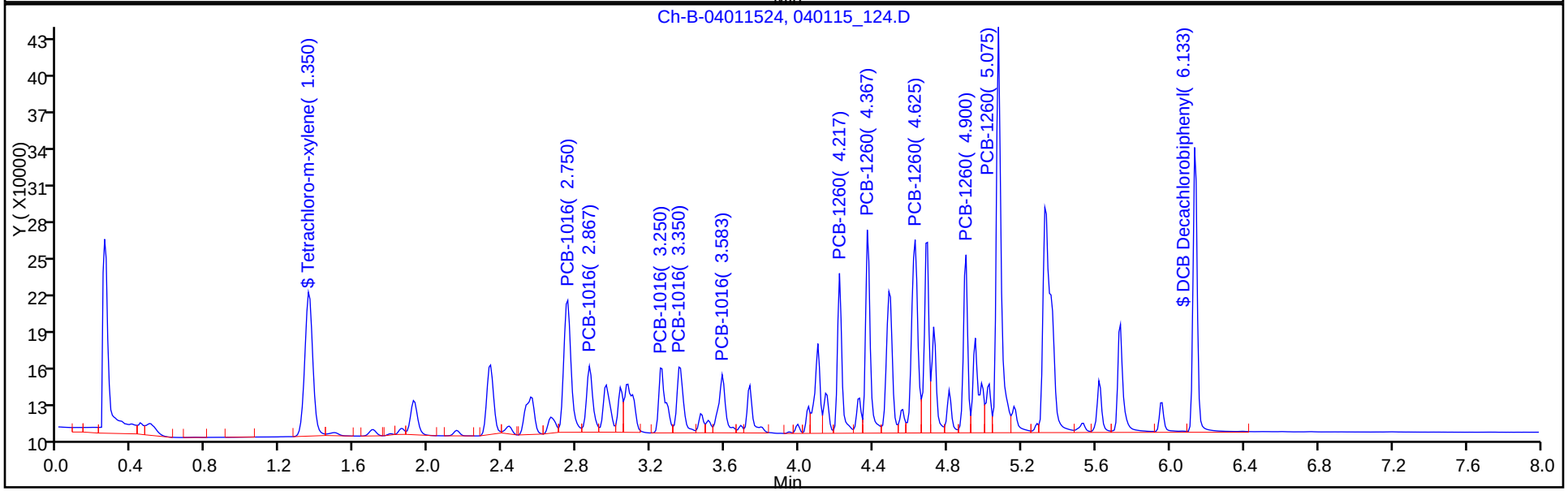
AR1660-3_00020 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:10 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_124.D				
Injection Date:	10-Apr-2015 09:17:06	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD16603			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_125.D
Lims ID: STD16602
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Apr-2015 09:31:02 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-005
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:11 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 09:31:02
Column 2 : Det: Ch-B 10-Apr-2015 09:44:42
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 10:12:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.500	1.508	-0.008	132047H	0.008000	0.007889	
2	1.350	1.350	0.000	47238H	0.008000	0.008295	
						RPD = 5.02	
2 PCB-1016							
1	3.342	3.342	0.000	61346H	0.1000	0.0993	
1	2.508	2.508	0.000	51650H	0.1000	0.1075	
1	2.750	2.750	0.000	143952H	0.1000	0.1005	
1	2.842	2.850	-0.008	67241H	0.1000	0.1025	
1	3.592	3.592	0.000	49351H	0.1000	0.1008	
		Average of Peak Amounts =				0.1021	
2	3.583	3.583	0.000	22372H	0.1000	0.1110	
2	2.750	2.750	0.000	42583H	0.1000	0.0994	
2	2.867	2.867	0.000	21603H	0.1000	0.1003	
2	3.258	3.258	0.000	22458H	0.1000	0.1069	
2	3.358	3.350	0.008	22340H	0.1000	0.1058	
		Average of Peak Amounts =				0.1047	
						RPD = 2.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.417	4.417	0.000	177771H	0.1000	0.1029	
1	4.625	4.625	0.000	190185H	0.1000	0.1028	
1	4.742	4.750	-0.008	122686H	0.1000	0.0995	
1	4.917	4.925	-0.008	137856H	0.1000	0.1053	
1	5.325	5.325	0.000	159285H	0.1000	0.0995	
		Average of Peak Amounts =				0.1020	
2	4.217	4.217	0.000	52832H	0.1000	0.1037	
2	4.367	4.367	0.000	62737H	0.1000	0.0971	
2	5.075	5.075	0.000	126405H	0.1000	0.0974	
2	4.625	4.625	0.000	61993H	0.1000	0.1003	
2	4.900	4.900	0.000	64364H	0.1000	0.1088	
		Average of Peak Amounts =				0.1015	
						RPD = 0.51	
$ 1 DCB Decachlorobiphenyl							
1	6.225	6.233	-0.008	257939H	0.008000	0.008760	
2	6.133	6.133	0.000	98695H	0.008000	0.008353	
						RPD = 4.76	
S 11 Polychlorinated biphenyls, Total							
1						0.2041	

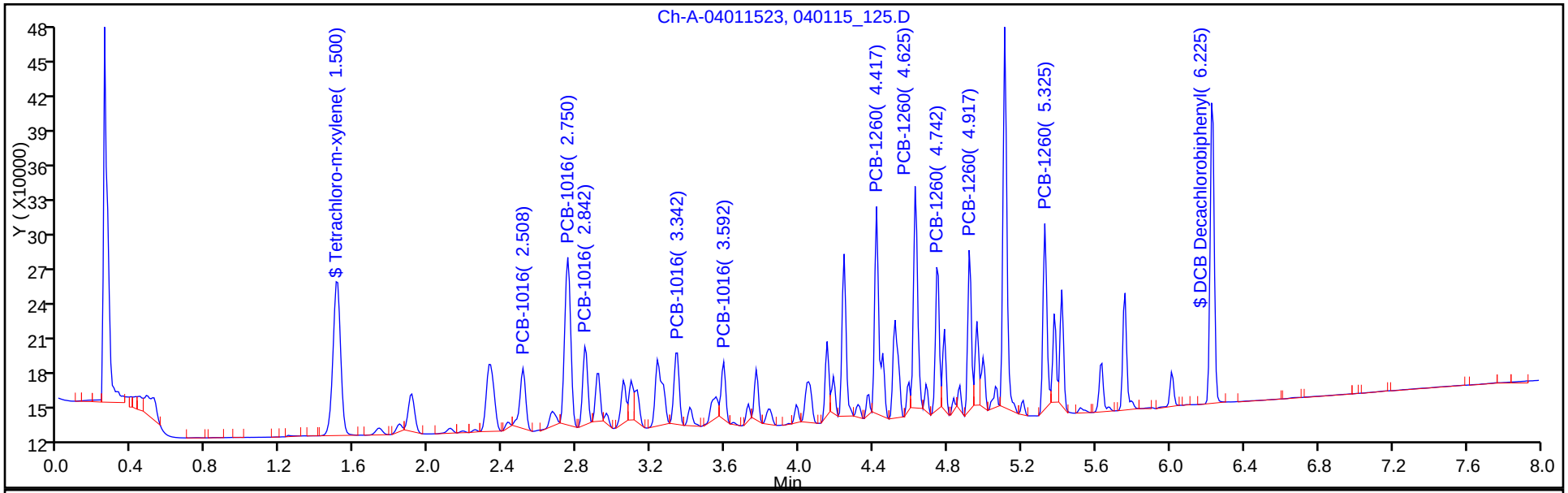
Reagents:

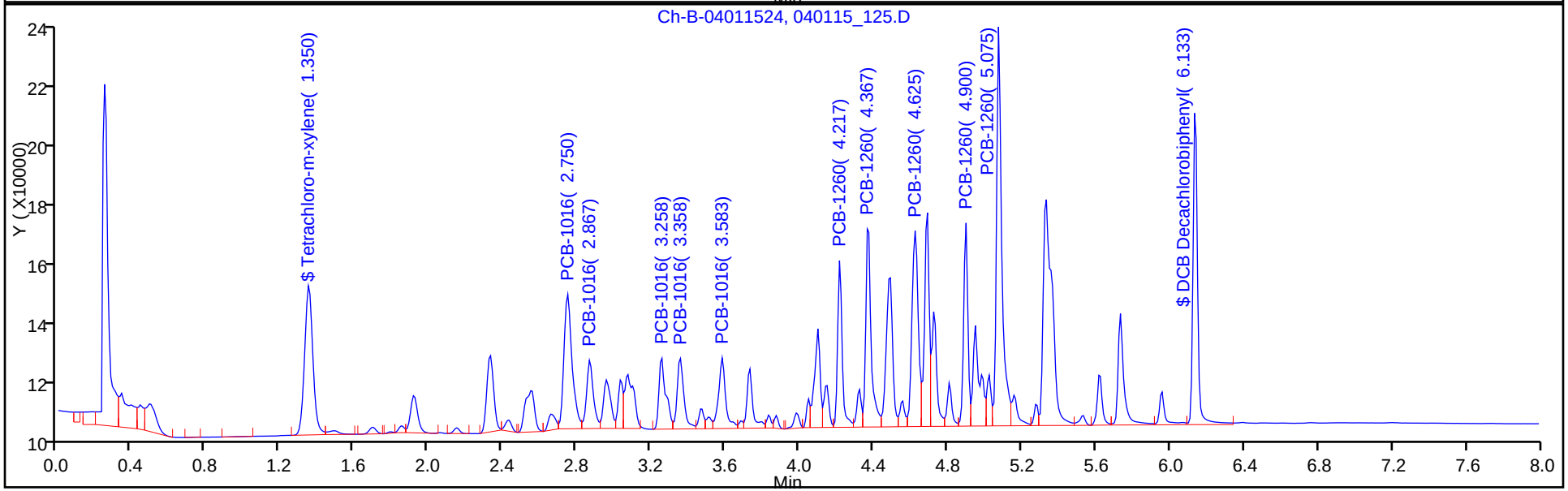
AR1660-2_00022 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:11 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_125.D				
Injection Date:	10-Apr-2015 09:31:02	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD16602			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_126.D
Lims ID: STD16601
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Apr-2015 09:44:42 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-006
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:12 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 09:44:42
Column 2 : Det: Ch-B 10-Apr-2015 09:58:23
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 10:17:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.508	0.000	70816H	0.004000	0.004231	
2	1.350	1.350	0.000	25243H	0.004000	0.004433	
						RPD = 4.66	
2 PCB-1016							
1	3.342	3.342	0.000	26232H	0.0400	0.0425	
1	2.508	2.508	0.000	18803H	0.0400	0.0391	
1	2.750	2.750	0.000	56553H	0.0400	0.0395	
1	2.850	2.850	0.000	26858H	0.0400	0.0409	
1	3.592	3.592	0.000	17842H	0.0400	0.0364	
		Average of Peak Amounts =				0.0397	
2	3.583	3.583	0.000	10246H	0.0400	0.0508	
2	2.750	2.750	0.000	17941H	0.0400	0.0419	
2	2.867	2.867	0.000	9273H	0.0400	0.0430	
2	3.258	3.258	0.000	9179H	0.0400	0.0437	
2	3.358	3.358	0.000	8983H	0.0400	0.0426	
		Average of Peak Amounts =				0.0444	
						RPD = 11.17	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.417	4.417	0.000	72554H	0.0400	0.0420	
1	4.633	4.633	0.000	66077H	0.0400	0.0357	
1	4.750	4.750	0.000	47585H	0.0400	0.0386	
1	4.925	4.925	0.000	47030H	0.0400	0.0359	
1	5.325	5.325	0.000	59515H	0.0400	0.0372	
		Average of Peak Amounts =				0.0379	
2	4.217	4.217	0.000	21457H	0.0400	0.0421	
2	4.375	4.375	0.000	24909H	0.0400	0.0386	
2	5.075	5.075	0.000	46269H	0.0400	0.0357	
2	4.625	4.625	0.000	23618H	0.0400	0.0382	
2	4.900	4.900	0.000	26953H	0.0400	0.0456	
		Average of Peak Amounts =				0.0400	
						RPD = 5.50	
$ 1 DCB Decachlorobiphenyl							
1	6.233	6.233	0.000	134171H	0.004000	0.004557	
2	6.133	6.133	0.000	50513H	0.004000	0.004275	
						RPD = 6.38	
S 11 Polychlorinated biphenyls, Total							
1						0.0776	

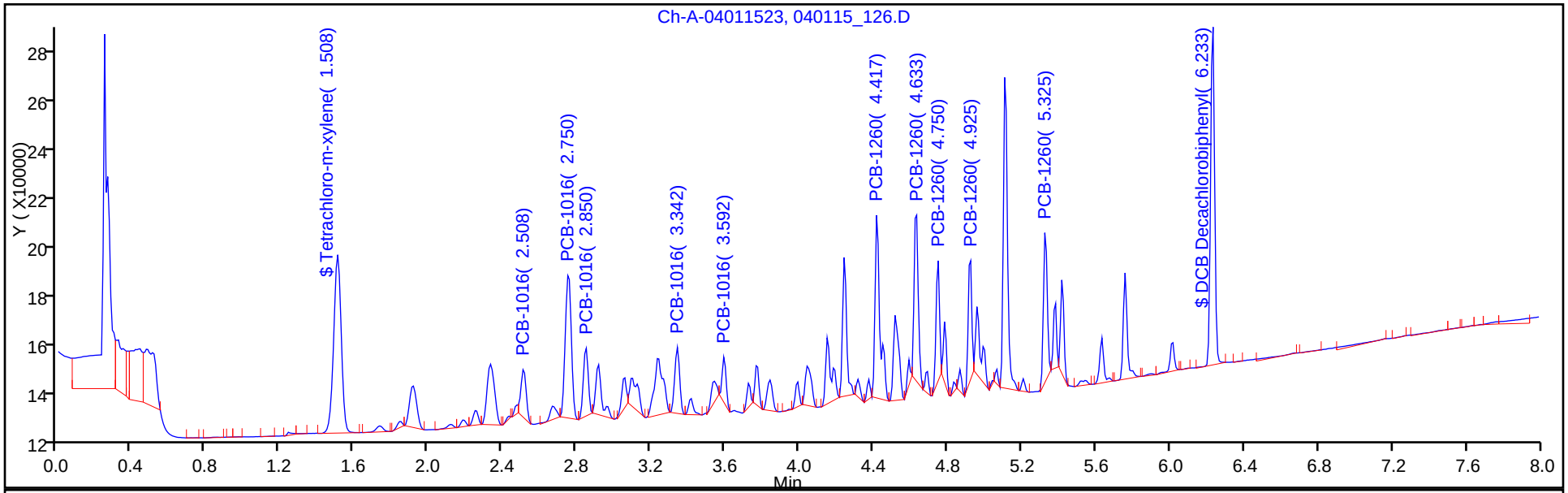
Reagents:

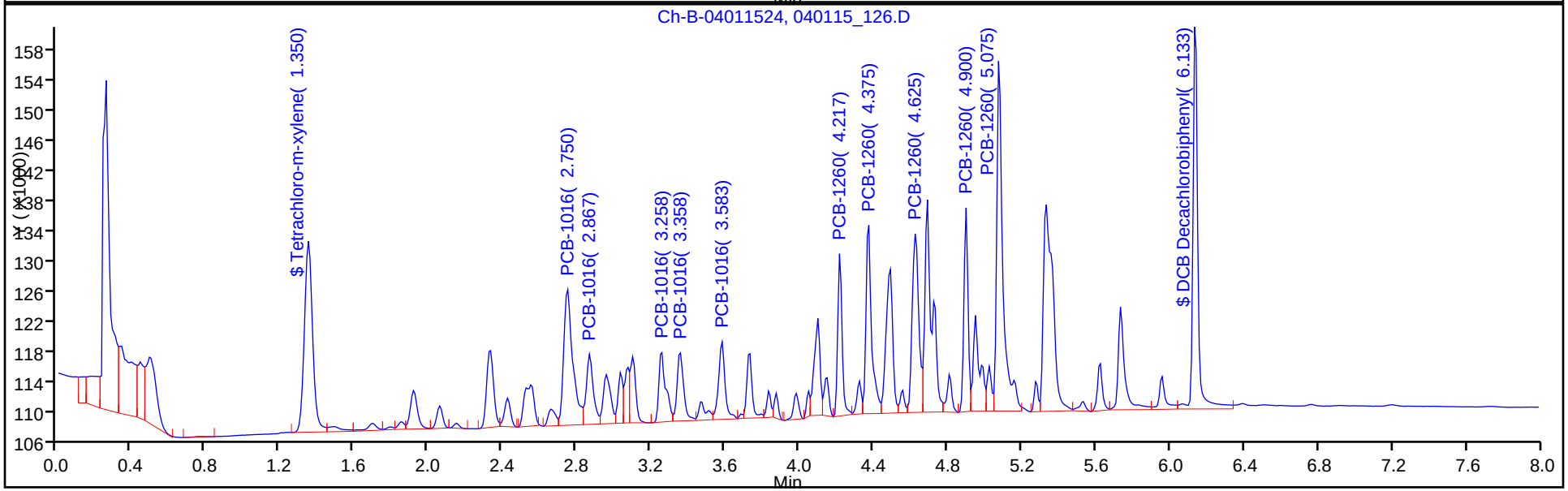
AR1660-1_00021 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:13 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_126.D				
Injection Date:	10-Apr-2015 09:44:42	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD16601			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 09:58 Calibration End Date: 04/10/2015 09:58 Calibration ID: 18366

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12544 500-283260/7	040115_127.D

ANALYTE	LVL 1										RT WINDOW	AVG RT
PCB-1254 Peak 1	3.592										3.541 - 3.643	3.592
PCB-1254 Peak 2	3.767										3.716 - 3.818	3.767
PCB-1254 Peak 3	4.058										4.007 - 4.109	4.058
PCB-1254 Peak 4	4.250										4.199 - 4.301	4.250
PCB-1254 Peak 5	4.625										4.574 - 4.676	4.625

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 09:58 Calibration End Date: 04/10/2015 09:58 Calibration ID: 18366

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12544 500-283260/7	040115_127.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1					B	M1	M2								
PCB-1254 Peak 1	1110602				Ave		1110602.00						20.0			
PCB-1254 Peak 2	1693070				Ave		1693070.00						20.0			
PCB-1254 Peak 3	2197812				Ave		2197812.00						20.0			
PCB-1254 Peak 4	1754396				Ave		1754396.00						20.0			
PCB-1254 Peak 5	1959462				Ave		1959462.00						20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 09:58 Calibration End Date: 04/10/2015 09:58 Calibration ID: 18366

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12544 500-283260/7	040115_127.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1					LVL 1				
PCB-1254 Peak 1	Ave	555301					0.500				
PCB-1254 Peak 2	Ave	846535					0.500				
PCB-1254 Peak 3	Ave	1098906					0.500				
PCB-1254 Peak 4	Ave	877198					0.500				
PCB-1254 Peak 5	Ave	979731					0.500				

Curve Type Legend:
Ave = Average by Height

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_127.D
Lims ID: STD12544
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Apr-2015 09:58:23 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-007
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub2

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:13 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 09:58:23
Column 2 : Det: Ch-B 10-Apr-2015 10:12:02
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 11:22:28

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
7 PCB-1254							
1	3.592	3.592	0.000	555301H	0.5000	0.5000	a
1	3.767	3.767	0.000	846535H	0.5000	0.5000	a
1	4.058	4.058	0.000	1098906H	0.5000	0.5000	a
1	4.250	4.250	0.000	877198H	0.5000	0.5000	a
1	4.625	4.625	0.000	979731H	0.5000	0.5000	a
		Average of Peak Amounts =				0.5000	
2	3.583	3.583	0.000	200636H	0.5000	0.5000	
2	3.733	3.733	0.000	226370H	0.5000	0.5000	
2	4.075	4.075	0.000	337807H	0.5000	0.5000	
2	4.367	4.367	0.000	184519H	0.5000	0.5000	
2	4.625	4.625	0.000	312562H	0.5000	0.5000	
		Average of Peak Amounts =				0.5000	
						RPD = 0.00	
S 11 Polychlorinated biphenyls, Total							
1						0.5000	

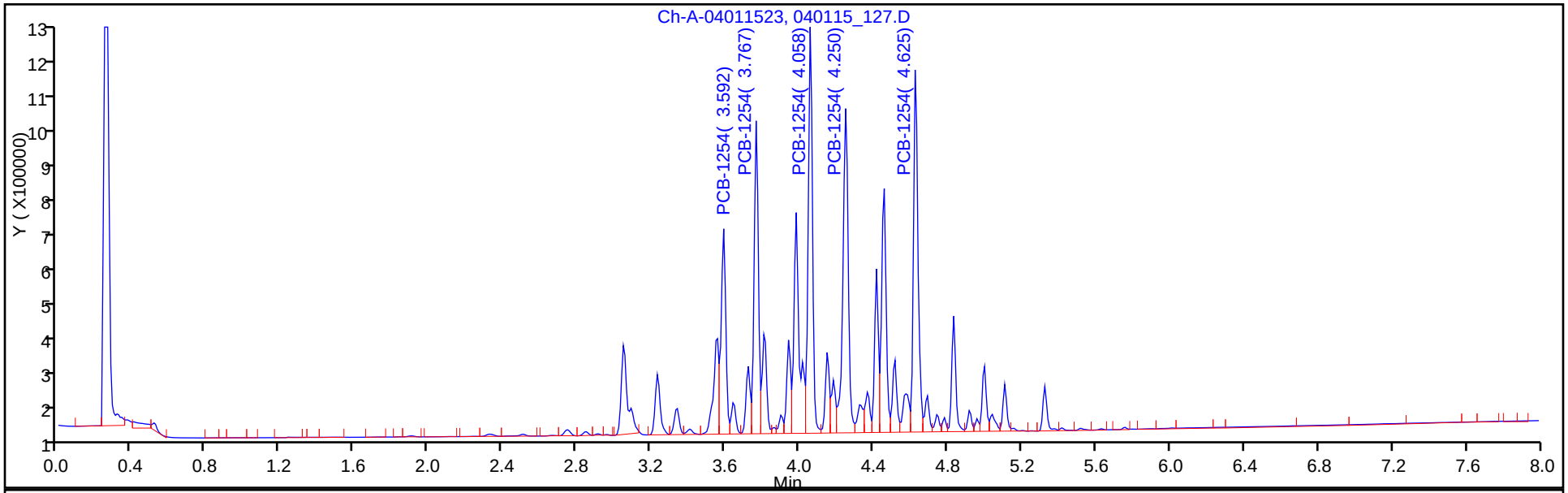
Reagents:

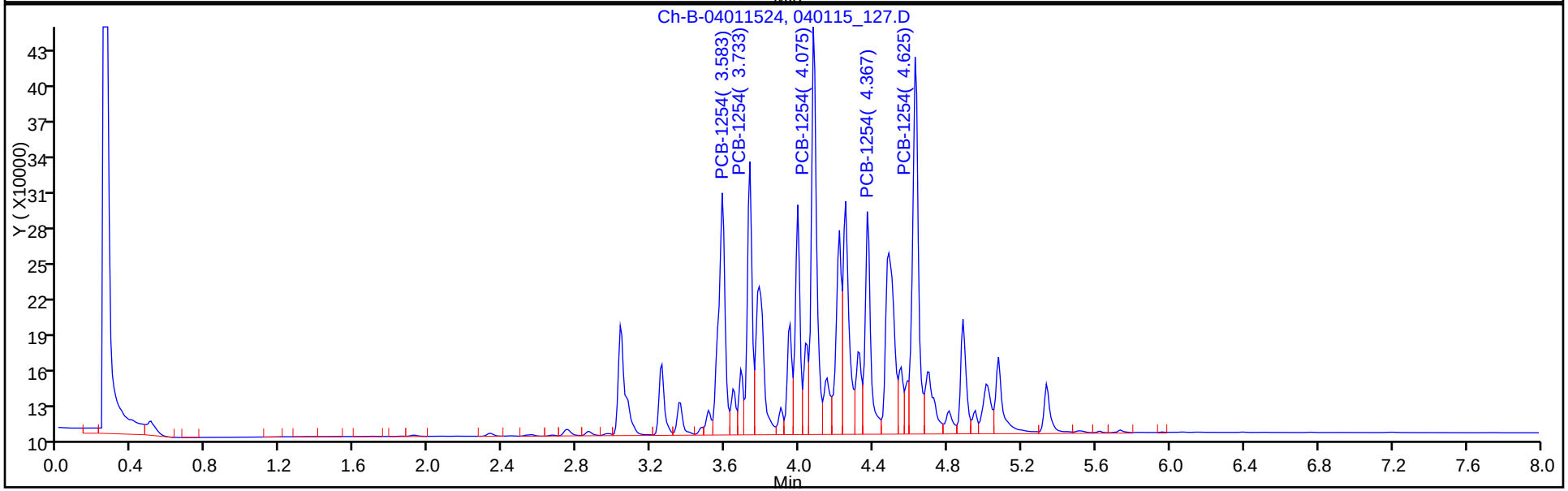
AR1254-4_00025 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:14 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_127.D				
Injection Date:	10-Apr-2015 09:58:23	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD12544			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:12 Calibration End Date: 04/10/2015 10:12 Calibration ID: 18370

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12484 500-283260/8	040115_128.D

ANALYTE	LVL 1										RT WINDOW	AVG RT
PCB-1248 Peak 1	2.750										2.699 - 2.801	2.750
PCB-1248 Peak 5	3.342										3.291 - 3.393	3.342
PCB-1248 Peak 3	3.592										3.541 - 3.643	3.592
PCB-1248 Peak 4	3.725										3.674 - 3.776	3.725
PCB-1248 Peak 2	4.058										4.007 - 4.109	4.058

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:12 Calibration End Date: 04/10/2015 10:12 Calibration ID: 18370

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12484 500-283260/8	040115_128.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1					B	M1	M2								
PCB-1248 Peak 1	704106				Ave		704106.000						20.0			
PCB-1248 Peak 5	731474				Ave		731474.000						20.0			
PCB-1248 Peak 3	973896				Ave		973896.000						20.0			
PCB-1248 Peak 4	793904				Ave		793904.000						20.0			
PCB-1248 Peak 2	515098				Ave		515098.000						20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:12 Calibration End Date: 04/10/2015 10:12 Calibration ID: 18370

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12484 500-283260/8	040115_128.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1					LVL 1				
PCB-1248 Peak 1	Ave	352053					0.500				
PCB-1248 Peak 5	Ave	365737					0.500				
PCB-1248 Peak 3	Ave	486948					0.500				
PCB-1248 Peak 4	Ave	396952					0.500				
PCB-1248 Peak 2	Ave	257549					0.500				

Curve Type Legend:
Ave = Average by Height

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_128.D
Lims ID: STD12484
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Apr-2015 10:12:02 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-008
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub3

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:15 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 10:12:02
Column 2 : Det: Ch-B 10-Apr-2015 10:25:44
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 11:25:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 PCB-1248							
1	2.750	2.750	0.000	352053H	0.5000	0.5000	a
1	4.058	4.058	0.000	257549H	0.5000	0.5000	a
1	3.592	3.592	0.000	486948H	0.5000	0.5000	a
1	3.725	3.725	0.000	396952H	0.5000	0.5000	a
1	3.342	3.342	0.000	365737H	0.5000	0.5000	a
		Average of Peak Amounts =				0.5000	
2	3.258	3.258	0.000	128302H	0.5000	0.5000	
2	2.742	2.742	0.000	105513H	0.5000	0.5000	
2	3.358	3.358	0.000	124149H	0.5000	0.5000	
2	3.592	3.592	0.000	141130H	0.5000	0.5000	
2	3.775	3.775	0.000	134094H	0.5000	0.5000	
		Average of Peak Amounts =				0.5000	
						RPD = 0.00	
S 11 Polychlorinated biphenyls, Total							
1						0.5000	

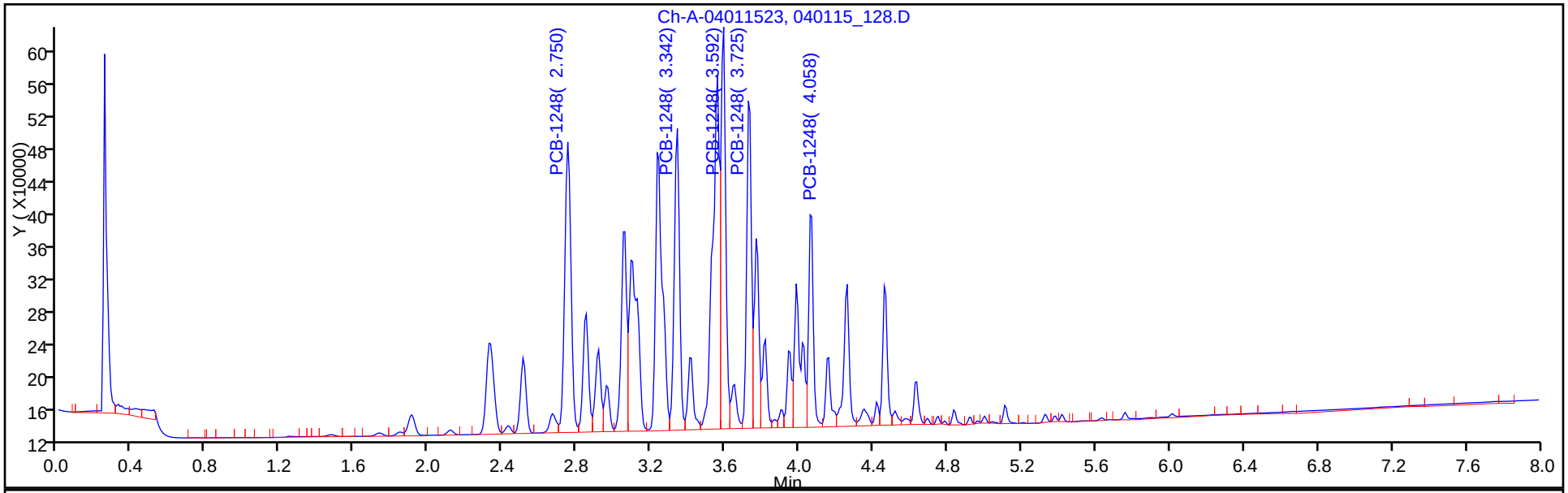
Reagents:

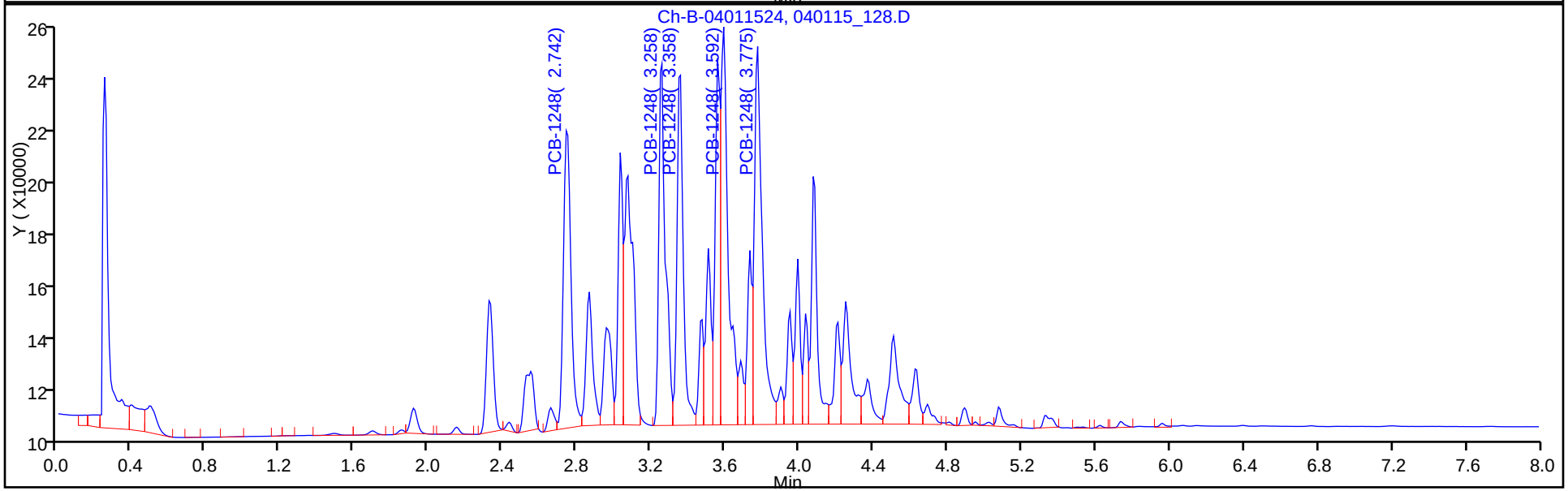
AR1248-4_00023 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:15 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_128.D				
Injection Date:	10-Apr-2015 10:12:02	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD12484			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:25 Calibration End Date: 04/10/2015 10:25 Calibration ID: 18374

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12424 500-283260/9	040115_129.D

ANALYTE	LVL 1										RT WINDOW	AVG RT
PCB-1242 Peak 2	2.333										2.282 - 2.384	2.333
PCB-1242 Peak 3	2.750										2.699 - 2.801	2.750
PCB-1242 Peak 4	2.842										2.791 - 2.893	2.842
PCB-1242 Peak 1	3.342										3.291 - 3.393	3.342
PCB-1242 Peak 5	3.725										3.674 - 3.776	3.725

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:25 Calibration End Date: 04/10/2015 10:25 Calibration ID: 18374

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12424 500-283260/9	040115_129.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1					B	M1	M2								
PCB-1242 Peak 2	407424				Ave		407424.000						20.0			
PCB-1242 Peak 3	1121560				Ave		1121560.00						20.0			
PCB-1242 Peak 4	514618				Ave		514618.000						20.0			
PCB-1242 Peak 1	488258				Ave		488258.000						20.0			
PCB-1242 Peak 5	535194				Ave		535194.000						20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:25 Calibration End Date: 04/10/2015 10:25 Calibration ID: 18374

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12424 500-283260/9	040115_129.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1					LVL 1				
PCB-1242 Peak 2	Ave	203712					0.500				
PCB-1242 Peak 3	Ave	560780					0.500				
PCB-1242 Peak 4	Ave	257309					0.500				
PCB-1242 Peak 1	Ave	244129					0.500				
PCB-1242 Peak 5	Ave	267597					0.500				

Curve Type Legend:
Ave = Average by Height

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_129.D
Lims ID: STD12424
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Apr-2015 10:25:44 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-009
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub4

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:16 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 10:25:44
Column 2 : Det: Ch-B 10-Apr-2015 10:39:37
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 11:26:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 PCB-1242							
1	3.342	3.342	0.000	244129H	0.5000	0.5000	a
1	2.333	2.333	0.000	203712H	0.5000	0.5000	a
1	2.750	2.750	0.000	560780H	0.5000	0.5000	a
1	2.842	2.842	0.000	257309H	0.5000	0.5000	a
1	3.725	3.725	0.000	267597H	0.5000	0.5000	a
		Average of Peak Amounts =				0.5000	
2	2.333	2.333	0.000	83319H	0.5000	0.5000	
2	2.750	2.750	0.000	159296H	0.5000	0.5000	
2	2.867	2.867	0.000	79553H	0.5000	0.5000	
2	3.775	3.775	0.000	77846H	0.5000	0.5000	
2	3.358	3.358	0.000	81556H	0.5000	0.5000	
		Average of Peak Amounts =				0.5000	
						RPD = 0.00	
S 11 Polychlorinated biphenyls, Total							
1						0.5000	

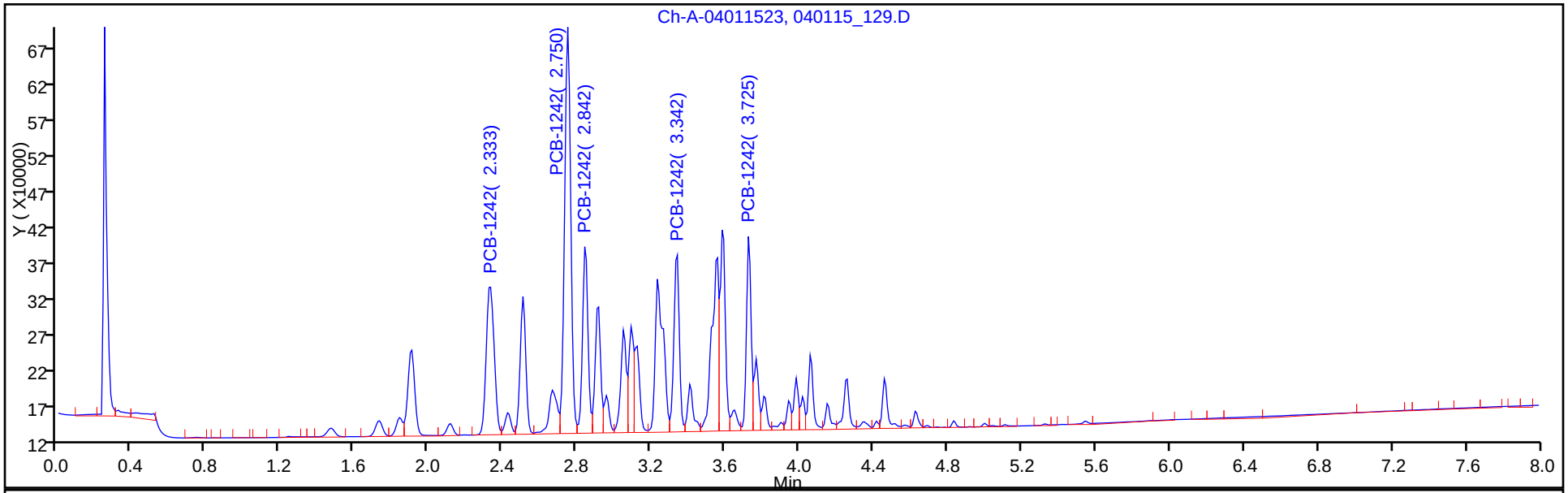
Reagents:

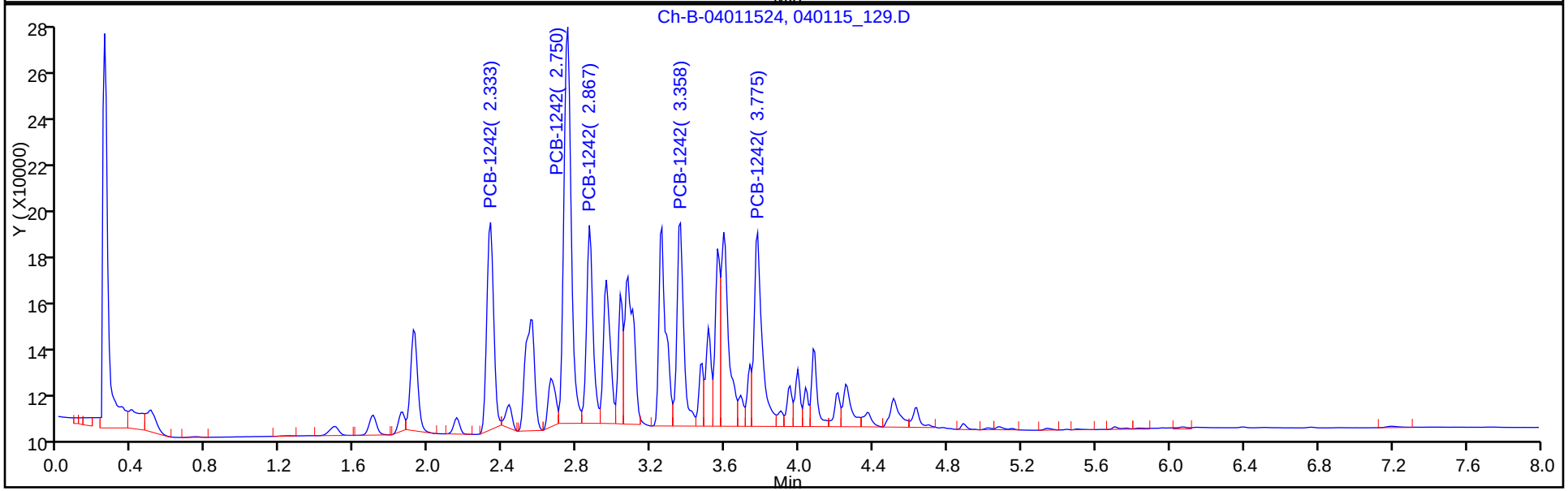
AR1242-4_00022 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:17 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_129.D				
Injection Date:	10-Apr-2015 10:25:44	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD12424			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:39 Calibration End Date: 04/10/2015 10:39 Calibration ID: 18378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12324 500-283260/10	040115_130.D

ANALYTE	LVL 1										RT WINDOW	AVG RT
PCB-1232 Peak 1	1.908										1.857 - 1.959	1.908
PCB-1232 Peak 2	2.750										2.699 - 2.801	2.750
PCB-1232 Peak 3	2.842										2.791 - 2.893	2.842
PCB-1232 Peak 4	3.342										3.291 - 3.393	3.342
PCB-1232 Peak 5	3.583										3.532 - 3.634	3.583

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:39 Calibration End Date: 04/10/2015 10:39 Calibration ID: 18378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12324 500-283260/10	040115_130.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1					B	M1	M2								
PCB-1232 Peak 1	343036				Ave		343036.000						20.0			
PCB-1232 Peak 2	595534				Ave		595534.000						20.0			
PCB-1232 Peak 3	284326				Ave		284326.000						20.0			
PCB-1232 Peak 4	227754				Ave		227754.000						20.0			
PCB-1232 Peak 5	263388				Ave		263388.000						20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:39 Calibration End Date: 04/10/2015 10:39 Calibration ID: 18378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12324 500-283260/10	040115_130.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1					LVL 1				
PCB-1232 Peak 1	Ave	171518					0.500				
PCB-1232 Peak 2	Ave	297767					0.500				
PCB-1232 Peak 3	Ave	142163					0.500				
PCB-1232 Peak 4	Ave	113877					0.500				
PCB-1232 Peak 5	Ave	131694					0.500				

Curve Type Legend:
Ave = Average by Height

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_130.D
Lims ID: STD12324
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Apr-2015 10:39:37 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-010
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub5

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:17 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 10:39:37
Column 2 : Det: Ch-B 10-Apr-2015 10:53:18
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 11:28:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
4 PCB-1232							
1	1.908	1.908	0.000	171518H	0.5000	0.5000	a
1	2.750	2.750	0.000	297767H	0.5000	0.5000	a
1	2.842	2.842	0.000	142163H	0.5000	0.5000	a
1	3.342	3.342	0.000	113877H	0.5000	0.5000	a
1	3.583	3.583	0.000	131694H	0.5000	0.5000	a
		Average of Peak Amounts =				0.5000	
2	2.333	2.333	0.000	47337H	0.5000	0.5000	
2	1.917	1.917	0.000	59198H	0.5000	0.5000	
2	2.867	2.867	0.000	43495H	0.5000	0.5000	
2	2.750	2.750	0.000	86922H	0.5000	0.5000	
2	3.775	3.775	0.000	34379H	0.5000	0.5000	
		Average of Peak Amounts =				0.5000	
						RPD = 0.00	
S 11 Polychlorinated biphenyls, Total							
1						0.5000	

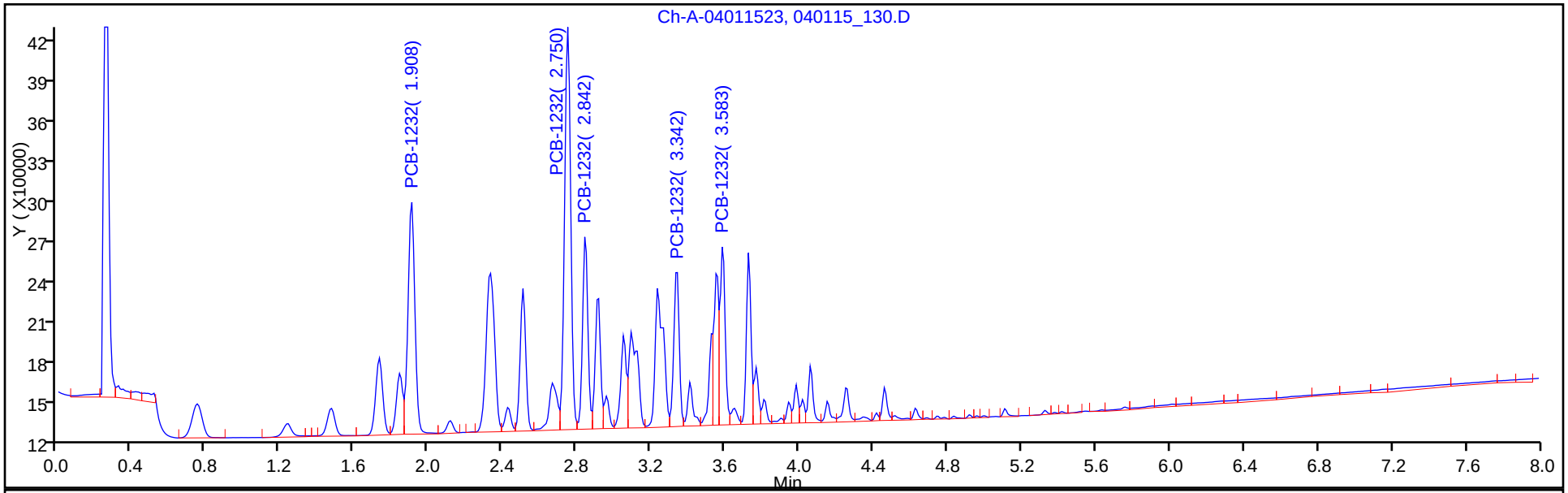
Reagents:

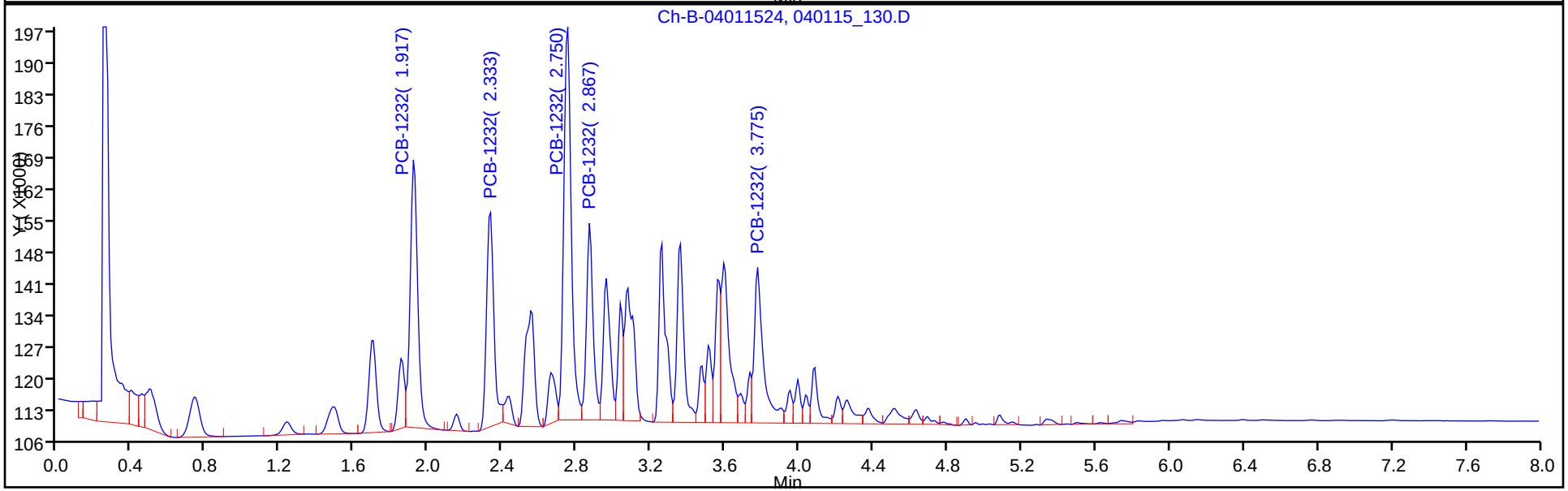
AR1232-4_00021 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:18 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_130.D				
Injection Date:	10-Apr-2015 10:39:37	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD12324			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:53 Calibration End Date: 04/10/2015 10:53 Calibration ID: 18382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12214 500-283260/11	040115_131.D

ANALYTE	LVL 1										RT WINDOW	AVG RT
PCB-1221 Peak 3	1.733										1.682 - 1.784	1.733
PCB-1221 Peak 2	1.842										1.791 - 1.893	1.842
PCB-1221 Peak 1	1.908										1.857 - 1.959	1.908

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:53 Calibration End Date: 04/10/2015 10:53 Calibration ID: 18382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12214 500-283260/11	040115_131.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1					B	M1	M2								
PCB-1221 Peak 3	159118				Ave		159118.000						20.0			
PCB-1221 Peak 2	111692				Ave		111692.000						20.0			
PCB-1221 Peak 1	402158				Ave		402158.000						20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Chicago Job No.: 500-95474-1 Analy Batch No.: 283260

SDG No.: 15-07.01

Instrument ID: INST23-24 GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/10/2015 10:53 Calibration End Date: 04/10/2015 10:53 Calibration ID: 18382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD12214 500-283260/11	040115_131.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1					LVL 1				
PCB-1221 Peak 3	Ave	79559					0.500				
PCB-1221 Peak 2	Ave	55846					0.500				
PCB-1221 Peak 1	Ave	201079					0.500				

Curve Type Legend:

Ave = Average by Height

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_131.D
Lims ID: STD12214
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Apr-2015 10:53:18 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-011
Operator ID: OrfG Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub6

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:19 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 10:53:18
Column 2 : Det: Ch-B 10-Apr-2015 11:06:58
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 11:30:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 PCB-1221							
1	1.908	1.908	0.000	201079H	0.5000	0.5000	a
1	1.842	1.842	0.000	55846H	0.5000	0.5000	a
1	1.733	1.733	0.000	79559H	0.5000	0.5000	a
		Average of Peak Amounts =				0.5000	
2	1.700	1.700	0.000	30552H	0.5000	0.5000	
2	1.858	1.858	0.000	20953H	0.5000	0.5000	
2	1.925	1.925	0.000	70165H	0.5000	0.5000	
		Average of Peak Amounts =				0.5000	
						RPD = 0.00	
S 11 Polychlorinated biphenyls, Total							
1						0.5000	

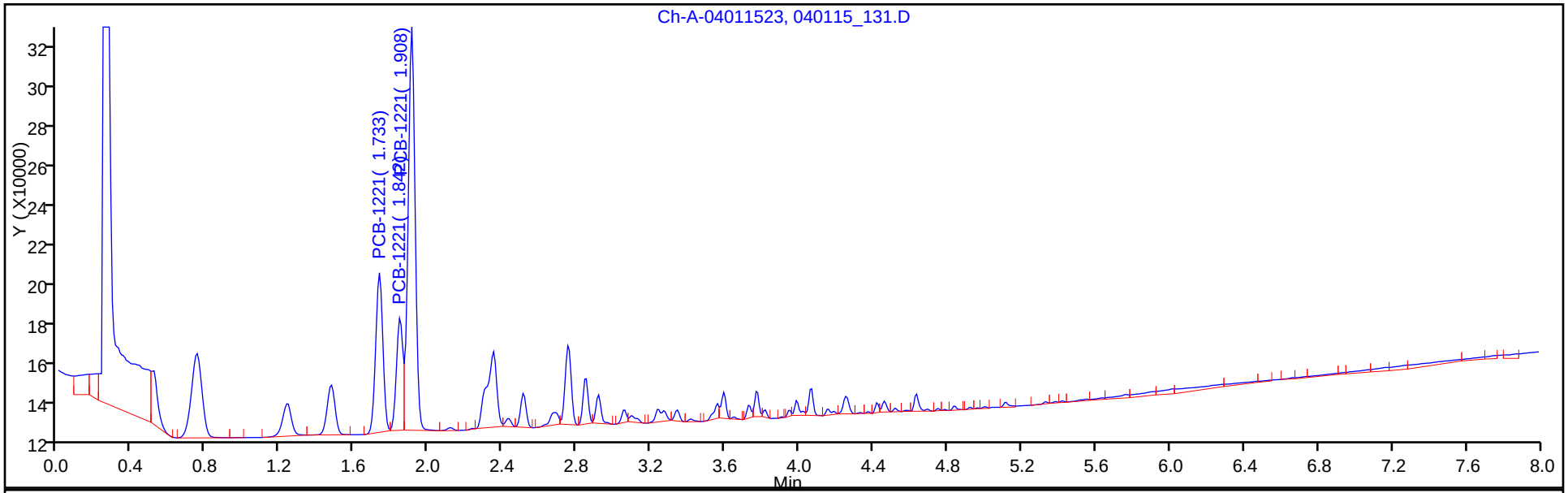
Reagents:

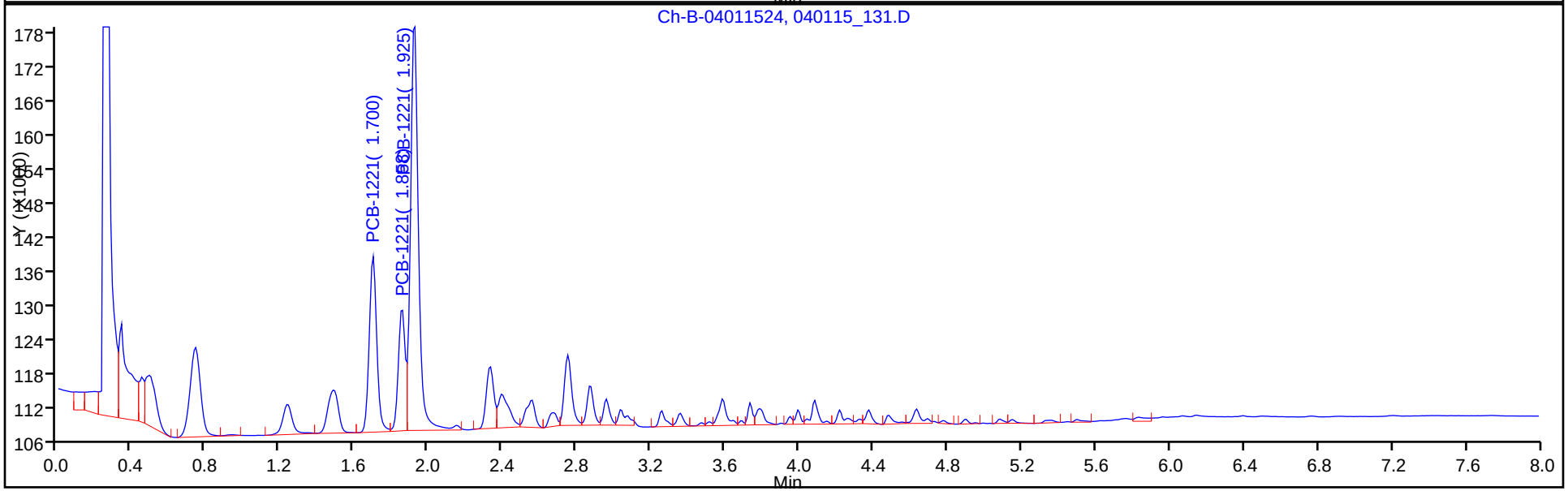
AR1221-4_00021 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:19 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_131.D				
Injection Date:	10-Apr-2015 10:53:18	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	STD12214			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: ICV 500-283260/14 Calibration Date: 04/10/2015 11:34

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 040115_134.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 2	Ave	480477	490292		0.255	0.250	2.0	15.0
PCB-1016 Peak 3	Ave	1431769	1429536		0.250	0.250	-0.2	15.0
PCB-1016 Peak 4	Ave	655974	647336		0.247	0.250	-1.3	15.0
PCB-1016 Peak 1	Ave	617799	539176		0.218	0.250	-12.7	15.0
PCB-1016 Peak 5	Ave	489497	444652		0.227	0.250	-9.2	15.0
PCB-1260 Peak 1	Ave	1727607	1639704		0.237	0.250	-5.1	15.0
PCB-1260 Peak 2	Ave	1849884	2032580		0.275	0.250	9.9	15.0
PCB-1260 Peak 3	Ave	1232827	992120		0.201	0.250	-19.5*	15.0
PCB-1260 Peak 4	Ave	1309280	1185068		0.226	0.250	-9.5	15.0
PCB-1260 Peak 5	Ave	1600543	1500440		0.234	0.250	-6.3	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: ICV 500-283260/14 Calibration Date: 04/10/2015 11:34

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 040115_134.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 2	2.51	2.48	2.54
PCB-1016 Peak 3	2.75	2.72	2.78
PCB-1016 Peak 4	2.85	2.82	2.88
PCB-1016 Peak 1	3.34	3.31	3.37
PCB-1016 Peak 5	3.59	3.56	3.62
PCB-1260 Peak 1	4.42	4.39	4.45
PCB-1260 Peak 2	4.63	4.60	4.66
PCB-1260 Peak 3	4.75	4.72	4.78
PCB-1260 Peak 4	4.92	4.90	4.96
PCB-1260 Peak 5	5.33	5.30	5.36

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_134.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 10-Apr-2015 11:34:10 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 040115,pcb23,500-0030185-014
Operator ID: OrfG Instrument ID: INST23-24
Sublist:

Method: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 14-Apr-2015 10:35:21 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 10-Apr-2015 11:34:10
Column 2 : Det: Ch-B 10-Apr-2015 11:48:01
Process Host: XAWRK015

First Level Reviewer: orfg Date: 10-Apr-2015 12:40:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 PCB-1016							
1	3.342	3.342	0.000	134794H	0.2500	0.2182	
1	2.508	2.508	0.000	122573H	0.2500	0.2551	
1	2.750	2.750	0.000	357384H	0.2500	0.2496	
1	2.850	2.850	0.000	161834H	0.2500	0.2467	
1	3.592	3.592	0.000	111163H	0.2500	0.2271	
		Average of Peak Amounts =				0.2393	
2	3.583	3.583	0.000	46078H	0.2500	0.2286	
2	2.750	2.750	0.000	102896H	0.2500	0.2402	
2	2.867	2.867	0.000	52205H	0.2500	0.2423	
2	3.258	3.258	0.000	51792H	0.2500	0.2465	
2	3.358	3.358	0.000	45197H	0.2500	0.2141	
		Average of Peak Amounts =				0.2343	
						RPD = 2.12	

Report Date: 14-Apr-2015 10:35:23 Chrom Revision: 2.2 13-Mar-2015 11:20:44
Data File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_134.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.417	4.417	0.000	409926H	0.2500	0.2373	
1	4.625	4.633	-0.008	508145H	0.2500	0.2747	
1	4.750	4.750	0.000	248030H	0.2500	0.2012	
1	4.917	4.925	-0.008	296267H	0.2500	0.2263	
1	5.325	5.325	0.000	375110H	0.2500	0.2344	
		Average of Peak Amounts =				0.2348	
2	4.217	4.217	0.000	120785H	0.2500	0.2371	
2	4.375	4.375	0.000	144454H	0.2500	0.2237	
2	5.075	5.075	0.000	270229H	0.2500	0.2083	
2	4.625	4.625	0.000	156711H	0.2500	0.2535	
2	4.900	4.900	0.000	127828H	0.2500	0.2162	
		Average of Peak Amounts =				0.2278	
						RPD = 3.03	

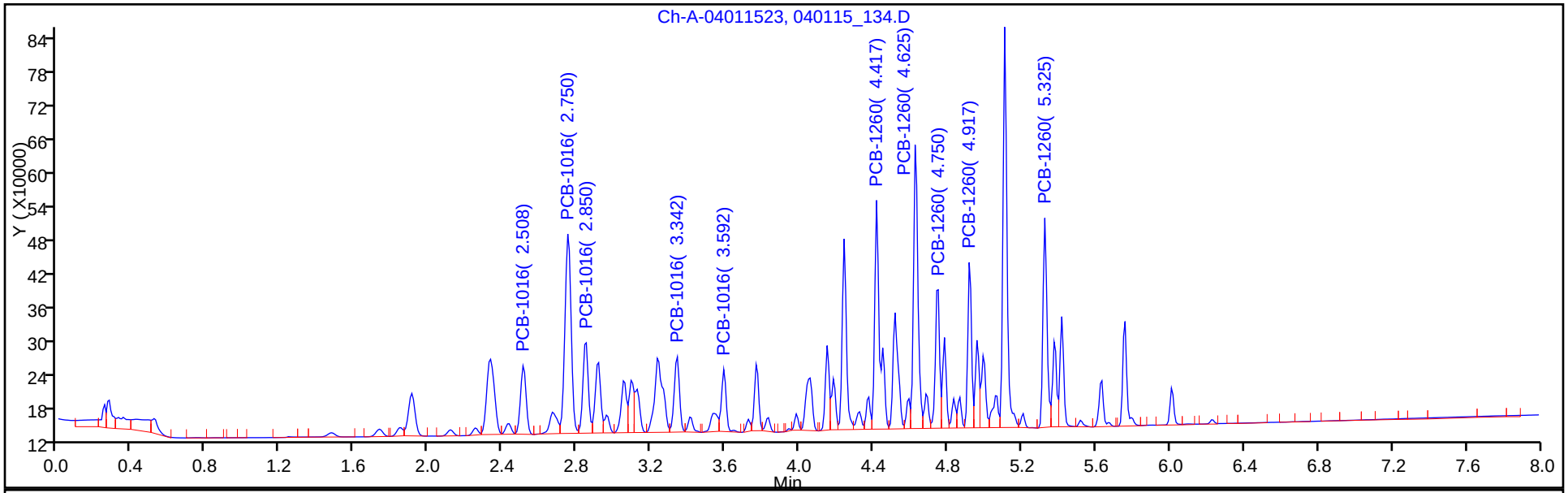
Reagents:

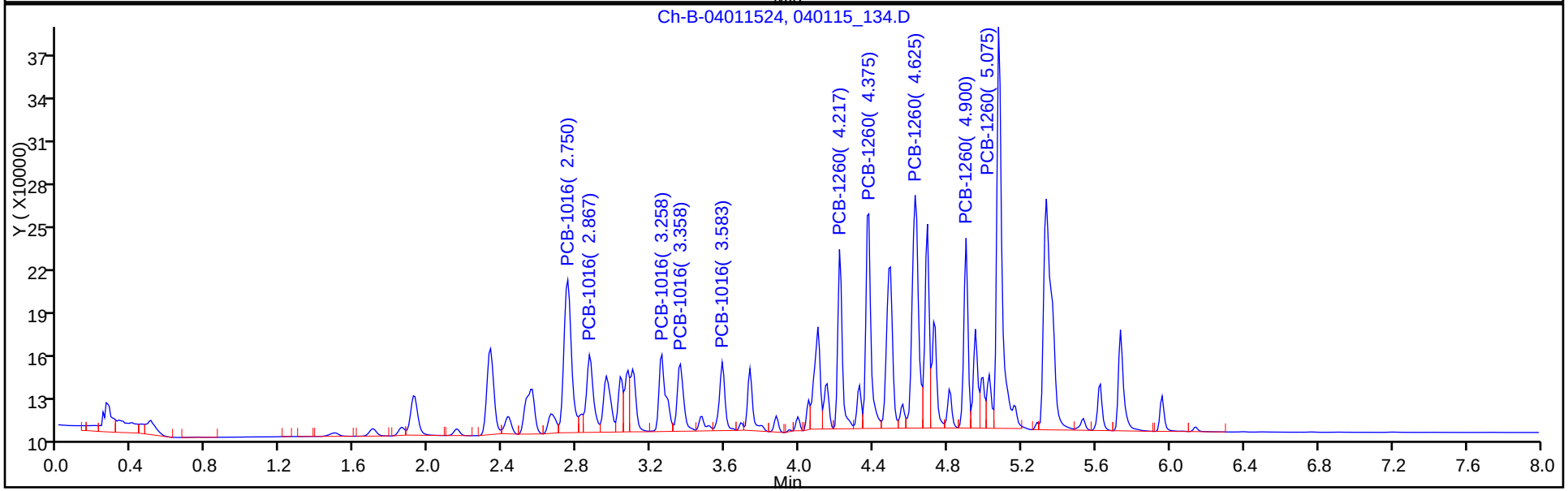
ICV1660-3_00024 Amount Added: 1.00 Units: mL

Report Date: 14-Apr-2015 10:35:23 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_134.D				
Injection Date:	10-Apr-2015 11:34:10	Instrument ID:	INST23-24	Operator ID:	OrfG
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/28 Calibration Date: 05/02/2015 00:11

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_257.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 2	Ave	480477	476914		0.496	0.500	-0.7	15.0
PCB-1016 Peak 3	Ave	1431769	1442702		0.504	0.500	0.8	15.0
PCB-1016 Peak 4	Ave	655974	665516		0.507	0.500	1.5	15.0
PCB-1016 Peak 1	Ave	617799	615276		0.498	0.500	-0.4	15.0
PCB-1016 Peak 5	Ave	489497	502378		0.513	0.500	2.6	15.0
PCB-1260 Peak 1	Ave	1727607	1524358		0.441	0.500	-11.8	15.0
PCB-1260 Peak 2	Ave	1849884	1824904		0.493	0.500	-1.4	15.0
PCB-1260 Peak 3	Ave	1232827	1168262		0.474	0.500	-5.2	15.0
PCB-1260 Peak 4	Ave	1309280	1298824		0.496	0.500	-0.8	15.0
PCB-1260 Peak 5	Ave	1600543	1408650		0.440	0.500	-12.0	15.0
Tetrachloro-m-xylene	Ave	16738339	16864500		0.0403	0.0400	0.8	15.0
DCB Decachlorobiphenyl	Ave	29446013	27458975		0.0373	0.0400	-6.7	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/28 Calibration Date: 05/02/2015 00:11

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_257.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 2	2.50	2.48	2.54
PCB-1016 Peak 3	2.74	2.72	2.78
PCB-1016 Peak 4	2.83	2.82	2.88
PCB-1016 Peak 1	3.32	3.31	3.37
PCB-1016 Peak 5	3.57	3.56	3.62
PCB-1260 Peak 1	4.38	4.37	4.43
PCB-1260 Peak 2	4.59	4.58	4.64
PCB-1260 Peak 3	4.72	4.70	4.76
PCB-1260 Peak 4	4.88	4.87	4.93
PCB-1260 Peak 5	5.29	5.27	5.33
Tetrachloro-m-xylene	1.51	1.47	1.53
DCB Decachlorobiphenyl	6.18	6.17	6.23

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_257.D
Lims ID: CCV AR1660
Client ID:
Sample Type: CCV
Inject. Date: 02-May-2015 00:11:53 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-028
Operator ID: werners Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:21:23 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 00:11:53
Column 2 : Det: Ch-B 02-May-2015 00:25:34
Process Host: XAWRK013

First Level Reviewer: orfg Date: 02-May-2015 11:20:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.500	0.008	674580H	0.0400	0.0403	
2	1.350	1.350	0.000	192661H	0.0400	0.0338	
						RPD = 17.45	
2 PCB-1016							
1	3.317	3.342	-0.025	307638H	0.5000	0.4980	
1	2.500	2.508	-0.008	238457H	0.5000	0.4963	
1	2.742	2.750	-0.008	721351H	0.5000	0.5038	
1	2.833	2.850	-0.017	332758H	0.5000	0.5073	
1	3.567	3.592	-0.025	251189H	0.5000	0.5132	
		Average of Peak Amounts =				0.5037	
2	3.583	3.583	0.000	78699H	0.5000	0.3904	
2	2.750	2.750	0.000	195043H	0.5000	0.4552	
2	2.867	2.867	0.000	96300H	0.5000	0.4469	
2	3.258	3.258	0.000	92114H	0.5000	0.4384	
2	3.358	3.358	0.000	94787H	0.5000	0.4490	
		Average of Peak Amounts =				0.4360	
						RPD = 14.41	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.383	4.400	-0.017	762179H	0.5000	0.4412	
1	4.592	4.608	-0.016	912452H	0.5000	0.4932	
1	4.717	4.725	-0.008	584131H	0.5000	0.4738	
1	4.883	4.900	-0.017	649412H	0.5000	0.4960	
1	5.292	5.300	-0.008	704325H	0.5000	0.4401	
		Average of Peak Amounts =				0.4689	
2	4.217	4.217	0.000	214894H	0.5000	0.4219	
2	4.375	4.367	0.008	294727H	0.5000	0.4564	
2	5.075	5.075	0.000	613243H	0.5000	0.4726	
2	4.625	4.625	0.000	302726H	0.5000	0.4898	
2	4.900	4.900	0.000	267816H	0.5000	0.4529	
		Average of Peak Amounts =				0.4587	
						RPD = 2.19	
$ 1 DCB Decachlorobiphenyl							
1	6.183	6.200	-0.017	1098359H	0.0400	0.0373	
2	6.142	6.142	0.000	335649H	0.0400	0.0284	
						RPD = 27.07	
S 11 Polychlorinated biphenyls, Total							
1						0.9726	

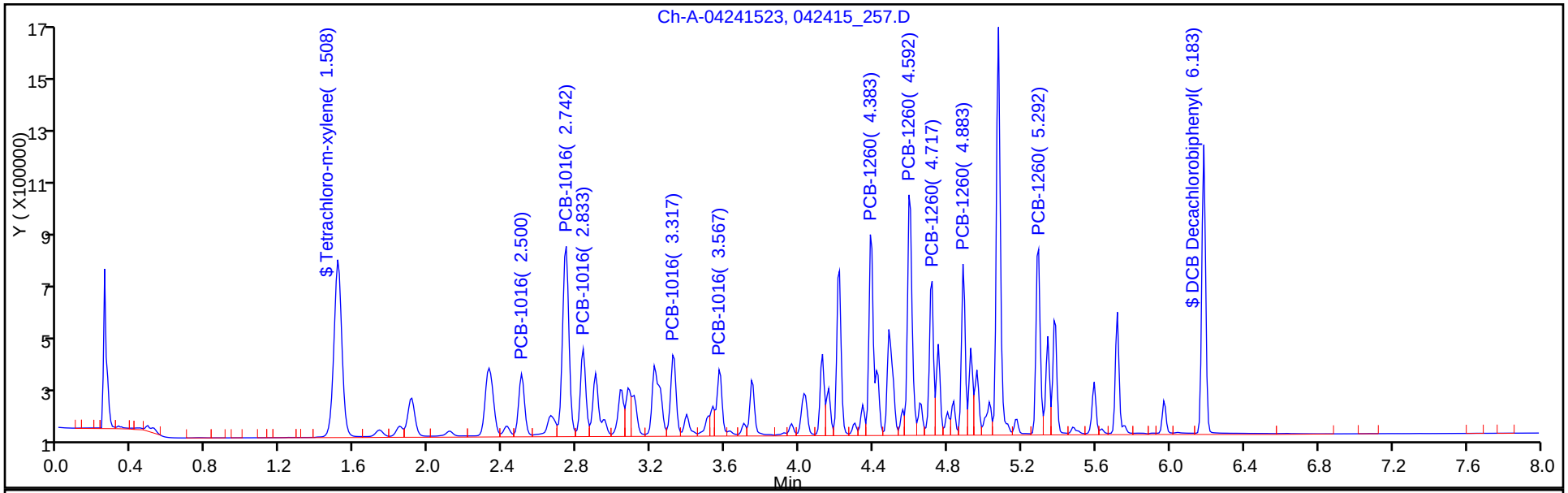
Reagents:

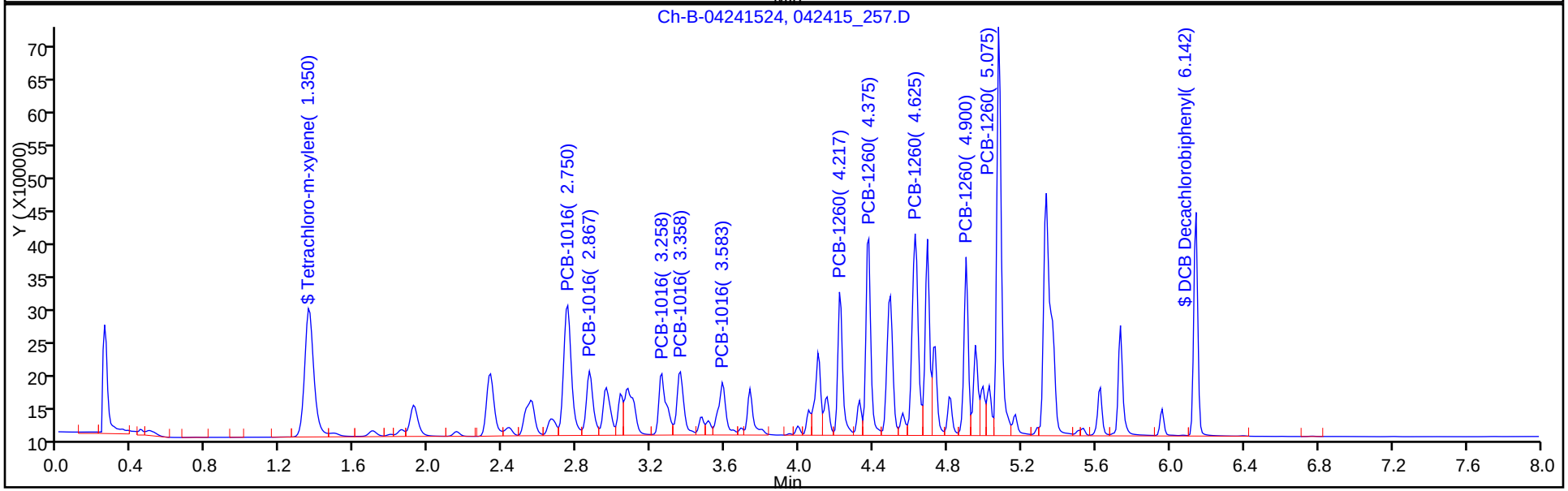
AR1660CCV4_00145 Amount Added: 1.00 Units: mL

Report Date: 02-May-2015 11:21:24 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_257.D				
Injection Date:	02-May-2015 00:11:53	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	CCV AR1660			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/37 Calibration Date: 05/02/2015 02:14

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_266.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 2	Ave	480477	453702		0.472	0.500	-5.6	15.0
PCB-1016 Peak 3	Ave	1431769	1439128		0.503	0.500	0.5	15.0
PCB-1016 Peak 4	Ave	655974	647740		0.494	0.500	-1.3	15.0
PCB-1016 Peak 1	Ave	617799	624746		0.506	0.500	1.1	15.0
PCB-1016 Peak 5	Ave	489497	500696		0.511	0.500	2.3	15.0
PCB-1260 Peak 1	Ave	1727607	1634320		0.473	0.500	-5.4	15.0
PCB-1260 Peak 2	Ave	1849884	1931224		0.522	0.500	4.4	15.0
PCB-1260 Peak 3	Ave	1232827	1240618		0.503	0.500	0.6	15.0
PCB-1260 Peak 4	Ave	1309280	1275996		0.487	0.500	-2.5	15.0
PCB-1260 Peak 5	Ave	1600543	1506256		0.471	0.500	-5.9	15.0
Tetrachloro-m-xylene	Ave	16738339	16478900		0.0394	0.0400	-1.5	15.0
DCB Decachlorobiphenyl	Ave	29446013	27273400		0.0370	0.0400	-7.4	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/37 Calibration Date: 05/02/2015 02:14

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_266.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 2	2.50	2.48	2.54
PCB-1016 Peak 3	2.73	2.72	2.78
PCB-1016 Peak 4	2.83	2.82	2.88
PCB-1016 Peak 1	3.32	3.31	3.37
PCB-1016 Peak 5	3.57	3.56	3.62
PCB-1260 Peak 1	4.38	4.37	4.43
PCB-1260 Peak 2	4.59	4.58	4.64
PCB-1260 Peak 3	4.71	4.70	4.76
PCB-1260 Peak 4	4.88	4.87	4.93
PCB-1260 Peak 5	5.28	5.27	5.33
Tetrachloro-m-xylene	1.51	1.47	1.53
DCB Decachlorobiphenyl	6.18	6.17	6.23

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_266.D
Lims ID: CCV AR1660
Client ID:
Sample Type: CCV
Inject. Date: 02-May-2015 02:14:59 ALS Bottle#: 0 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-037
Operator ID: werners Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:12:26 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 02:14:59
Column 2 : Det: Ch-B 02-May-2015 02:28:52
Process Host: XAWRK013

First Level Reviewer: orfg Date: 02-May-2015 11:11:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.500	0.008	659156H	0.0400	0.0394	
2	1.350	1.350	0.000	194250H	0.0400	0.0341	
						RPD = 14.34	
2 PCB-1016							
1	3.317	3.342	-0.025	312373H	0.5000	0.5056	
1	2.500	2.508	-0.008	226851H	0.5000	0.4721	
1	2.733	2.750	-0.017	719564H	0.5000	0.5026	
1	2.825	2.850	-0.025	323870H	0.5000	0.4937	
1	3.567	3.592	-0.025	250348H	0.5000	0.5114	
		Average of Peak Amounts =				0.4971	
2	3.583	3.583	0.000	72684H	0.5000	0.3606	
2	2.750	2.750	0.000	201772H	0.5000	0.4709	
2	2.867	2.867	0.000	99122H	0.5000	0.4600	
2	3.258	3.258	0.000	92406H	0.5000	0.4398	
2	3.358	3.358	0.000	95667H	0.5000	0.4532	
		Average of Peak Amounts =				0.4369	
						RPD = 12.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.383	4.400	-0.017	817160H	0.5000	0.4730	
1	4.592	4.608	-0.016	965612H	0.5000	0.5220	
1	4.708	4.725	-0.017	620309H	0.5000	0.5032	
1	4.883	4.900	-0.017	637998H	0.5000	0.4873	
1	5.283	5.300	-0.017	753128H	0.5000	0.4705	
		Average of Peak Amounts =				0.4912	
2	4.217	4.217	0.000	213872H	0.5000	0.4198	
2	4.367	4.367	0.000	297676H	0.5000	0.4609	
2	5.075	5.075	0.000	616405H	0.5000	0.4750	
2	4.625	4.625	0.000	303122H	0.5000	0.4904	
2	4.900	4.900	0.000	255770H	0.5000	0.4325	
		Average of Peak Amounts =				0.4558	
						RPD = 7.49	
$ 1 DCB Decachlorobiphenyl							
1	6.175	6.200	-0.025	1090936H	0.0400	0.0370	
2	6.142	6.142	0.000	338418H	0.0400	0.0286	
						RPD = 25.60	
S 11 Polychlorinated biphenyls, Total							
1						0.9883	

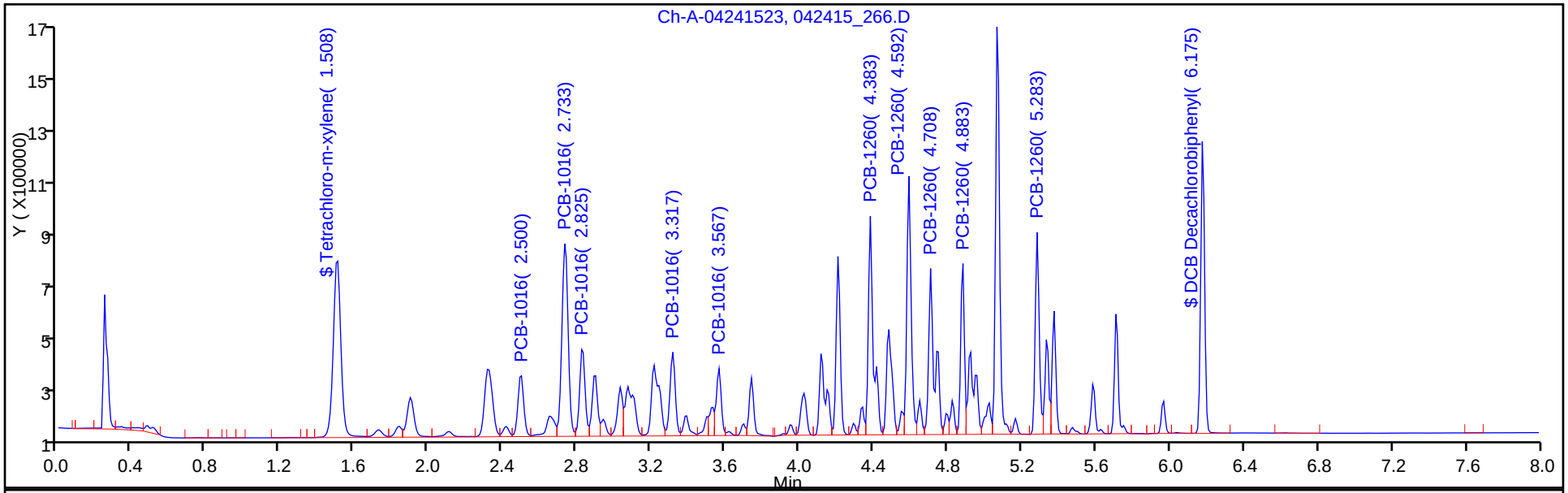
Reagents:

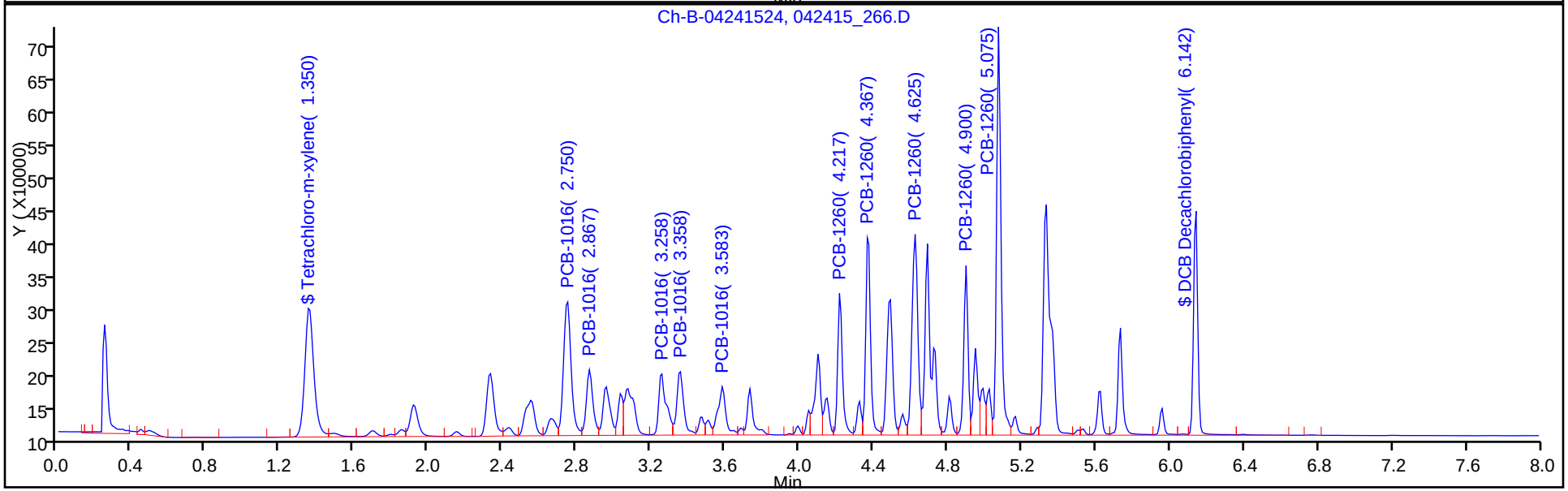
AR1660CCV4_00145 Amount Added: 1.00 Units: mL

Report Date: 02-May-2015 11:12:27 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_266.D				
Injection Date:	02-May-2015 02:14:59	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	CCV AR1660			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/45 Calibration Date: 05/02/2015 04:04

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_274.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 2	Ave	480477	473258		0.492	0.500	-1.5	15.0
PCB-1016 Peak 3	Ave	1431769	1444044		0.504	0.500	0.9	15.0
PCB-1016 Peak 4	Ave	655974	646188		0.493	0.500	-1.5	15.0
PCB-1016 Peak 1	Ave	617799	636756		0.515	0.500	3.1	15.0
PCB-1016 Peak 5	Ave	489497	510478		0.521	0.500	4.3	15.0
PCB-1260 Peak 1	Ave	1727607	1618588		0.468	0.500	-6.3	15.0
PCB-1260 Peak 2	Ave	1849884	1936422		0.523	0.500	4.7	15.0
PCB-1260 Peak 3	Ave	1232827	1258448		0.510	0.500	2.1	15.0
PCB-1260 Peak 4	Ave	1309280	1247054		0.476	0.500	-4.8	15.0
PCB-1260 Peak 5	Ave	1600543	1504440		0.470	0.500	-6.0	15.0
Tetrachloro-m-xylene	Ave	16738339	17725925		0.0424	0.0400	5.9	15.0
DCB Decachlorobiphenyl	Ave	29446013	27446500		0.0373	0.0400	-6.8	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/45 Calibration Date: 05/02/2015 04:04

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_274.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 2	2.50	2.48	2.54
PCB-1016 Peak 3	2.73	2.72	2.78
PCB-1016 Peak 4	2.83	2.82	2.88
PCB-1016 Peak 1	3.32	3.31	3.37
PCB-1016 Peak 5	3.57	3.56	3.62
PCB-1260 Peak 1	4.38	4.37	4.43
PCB-1260 Peak 2	4.59	4.58	4.64
PCB-1260 Peak 3	4.71	4.70	4.76
PCB-1260 Peak 4	4.88	4.87	4.93
PCB-1260 Peak 5	5.28	5.27	5.33
Tetrachloro-m-xylene	1.51	1.47	1.53
DCB Decachlorobiphenyl	6.18	6.17	6.23

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_274.D
Lims ID: CCV AR1660
Client ID:
Sample Type: CCV
Inject. Date: 02-May-2015 04:04:34 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-045
Operator ID: werners Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:12:32 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 04:04:34
Column 2 : Det: Ch-B 02-May-2015 04:18:13
Process Host: XAWRK013

First Level Reviewer: orfg Date: 02-May-2015 11:12:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.500	0.008	709037H	0.0400	0.0424	
2	1.350	1.350	0.000	194747H	0.0400	0.0342	
						RPD = 21.32	
2 PCB-1016							
1	3.317	3.342	-0.025	318378H	0.5000	0.5153	
1	2.500	2.508	-0.008	236629H	0.5000	0.4925	
1	2.733	2.750	-0.017	722022H	0.5000	0.5043	
1	2.833	2.850	-0.017	323094H	0.5000	0.4925	
1	3.567	3.592	-0.025	255239H	0.5000	0.5214	
		Average of Peak Amounts =				0.5052	
2	3.583	3.583	0.000	73404H	0.5000	0.3642	
2	2.750	2.750	0.000	196473H	0.5000	0.4586	
2	2.867	2.867	0.000	97834H	0.5000	0.4540	
2	3.258	3.258	0.000	91786H	0.5000	0.4368	
2	3.358	3.358	0.000	94727H	0.5000	0.4487	
		Average of Peak Amounts =				0.4325	
						RPD = 15.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.383	4.400	-0.017	809294H	0.5000	0.4684	
1	4.592	4.608	-0.016	968211H	0.5000	0.5234	
1	4.708	4.725	-0.017	629224H	0.5000	0.5104	
1	4.883	4.900	-0.017	623527H	0.5000	0.4762	
1	5.283	5.300	-0.017	752220H	0.5000	0.4700	
		Average of Peak Amounts =				0.4897	
2	4.217	4.217	0.000	222630H	0.5000	0.4370	
2	4.367	4.367	0.000	301208H	0.5000	0.4664	
2	5.075	5.075	0.000	623663H	0.5000	0.4806	
2	4.625	4.625	0.000	305643H	0.5000	0.4945	
2	4.900	4.900	0.000	264185H	0.5000	0.4467	
		Average of Peak Amounts =				0.4651	
						RPD = 5.16	
$ 1 DCB Decachlorobiphenyl							
1	6.175	6.200	-0.025	1097860H	0.0400	0.0373	
2	6.142	6.142	0.000	347336H	0.0400	0.0294	
						RPD = 23.66	
S 11 Polychlorinated biphenyls, Total							
1						0.99	

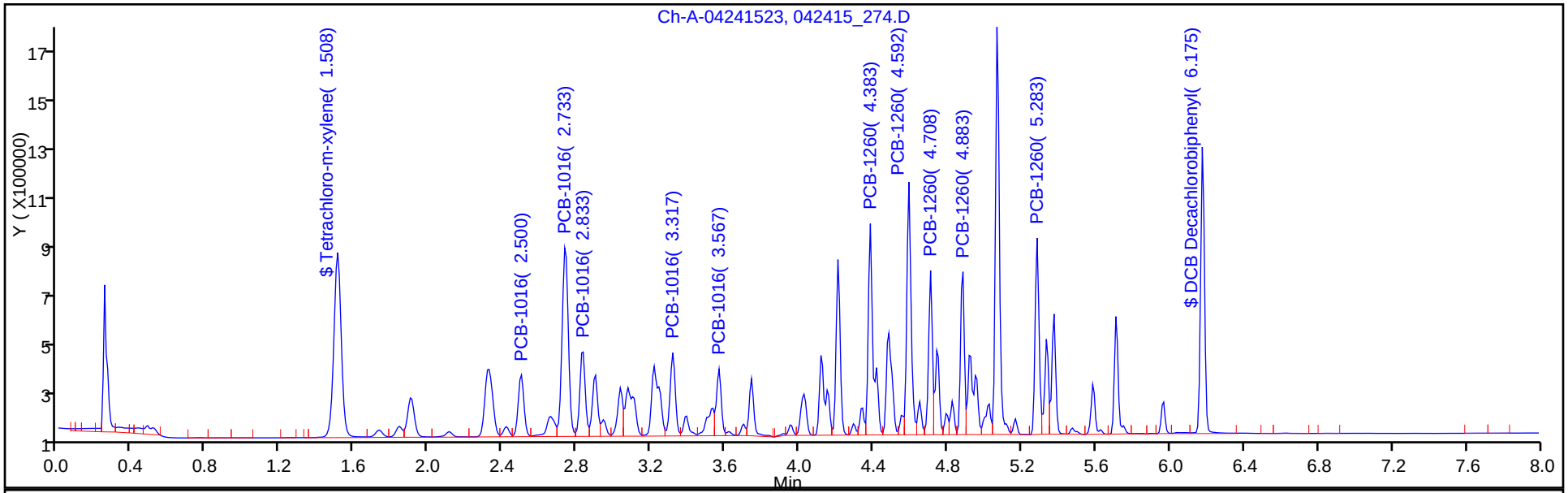
Reagents:

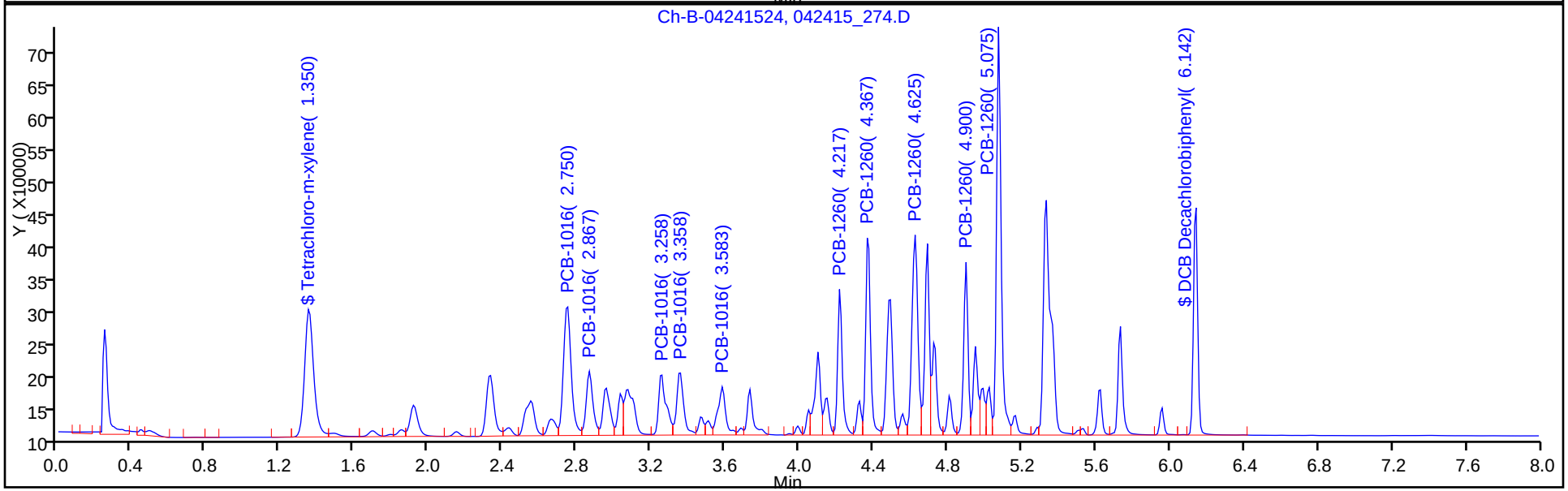
AR1660CCV4_00145 Amount Added: 1.00 Units: mL

Report Date: 02-May-2015 11:12:32 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_274.D				
Injection Date:	02-May-2015 04:04:34	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	CCV AR1660			Worklist Smp#:	45
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/55 Calibration Date: 05/02/2015 06:21

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_284.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 2	Ave	480477	453012		0.471	0.500	-5.7	15.0
PCB-1016 Peak 3	Ave	1431769	1445996		0.505	0.500	1.0	15.0
PCB-1016 Peak 4	Ave	655974	663730		0.506	0.500	1.2	15.0
PCB-1016 Peak 1	Ave	617799	611318		0.495	0.500	-1.0	15.0
PCB-1016 Peak 5	Ave	489497	506944		0.518	0.500	3.6	15.0
PCB-1260 Peak 1	Ave	1727607	1599450		0.463	0.500	-7.4	15.0
PCB-1260 Peak 2	Ave	1849884	1877454		0.507	0.500	1.5	15.0
PCB-1260 Peak 3	Ave	1232827	1192140		0.483	0.500	-3.3	15.0
PCB-1260 Peak 4	Ave	1309280	1327540		0.507	0.500	1.4	15.0
PCB-1260 Peak 5	Ave	1600543	1482832		0.463	0.500	-7.4	15.0
Tetrachloro-m-xylene	Ave	16738339	16321725		0.0390	0.0400	-2.5	15.0
DCB Decachlorobiphenyl	Ave	29446013	25435075		0.0346	0.0400	-13.6	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/55 Calibration Date: 05/02/2015 06:21

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_284.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 2	2.50	2.48	2.54
PCB-1016 Peak 3	2.74	2.72	2.78
PCB-1016 Peak 4	2.83	2.82	2.88
PCB-1016 Peak 1	3.33	3.31	3.37
PCB-1016 Peak 5	3.57	3.56	3.62
PCB-1260 Peak 1	4.38	4.37	4.43
PCB-1260 Peak 2	4.59	4.58	4.64
PCB-1260 Peak 3	4.71	4.70	4.76
PCB-1260 Peak 4	4.88	4.87	4.93
PCB-1260 Peak 5	5.28	5.27	5.33
Tetrachloro-m-xylene	1.52	1.47	1.53
DCB Decachlorobiphenyl	6.18	6.17	6.23

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_284.D
Lims ID: CCV AR1660
Client ID:
Sample Type: CCV
Inject. Date: 02-May-2015 06:21:25 ALS Bottle#: 0 Worklist Smp#: 55
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-055
Operator ID: werners Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:34 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 06:21:25
Column 2 : Det: Ch-B 02-May-2015 06:34:59
Process Host: XAWRK013

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.517	1.500	0.017	652869H	0.0400	0.0390	
2	1.358	1.350	0.008	201544H	0.0400	0.0354	
						RPD = 9.71	
2 PCB-1016							
1	3.325	3.342	-0.017	305659H	0.5000	0.4948	
1	2.500	2.508	-0.008	226506H	0.5000	0.4714	
1	2.742	2.750	-0.008	722998H	0.5000	0.5050	
1	2.833	2.850	-0.017	331865H	0.5000	0.5059	
1	3.567	3.592	-0.025	253472H	0.5000	0.5178	
		Average of Peak Amounts =				0.4990	
2	3.583	3.583	0.000	67930H	0.5000	0.3370	
2	2.750	2.750	0.000	202536H	0.5000	0.4727	
2	2.867	2.867	0.000	98792H	0.5000	0.4585	
2	3.258	3.258	0.000	93266H	0.5000	0.4439	
2	3.358	3.358	0.000	95507H	0.5000	0.4524	
		Average of Peak Amounts =				0.4329	
						RPD = 14.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.383	4.400	-0.017	799725H	0.5000	0.4629	
1	4.592	4.608	-0.016	938727H	0.5000	0.5075	
1	4.708	4.725	-0.017	596070H	0.5000	0.4835	
1	4.883	4.900	-0.017	663770H	0.5000	0.5070	
1	5.283	5.300	-0.017	741416H	0.5000	0.4632	
		Average of Peak Amounts =				0.4848	
2	4.217	4.217	0.000	220870H	0.5000	0.4336	
2	4.367	4.367	0.000	306810H	0.5000	0.4751	
2	5.075	5.075	0.000	633594H	0.5000	0.4883	
2	4.625	4.625	0.000	309386H	0.5000	0.5006	
2	4.900	4.900	0.000	265092H	0.5000	0.4483	
		Average of Peak Amounts =				0.4692	
						RPD = 3.28	
$ 1 DCB Decachlorobiphenyl							
1	6.175	6.200	-0.025	1017403H	0.0400	0.0346	
2	6.142	6.142	0.000	362740H	0.0400	0.0307	
						RPD = 11.81	
S 11 Polychlorinated biphenyls, Total							
1						0.9838	

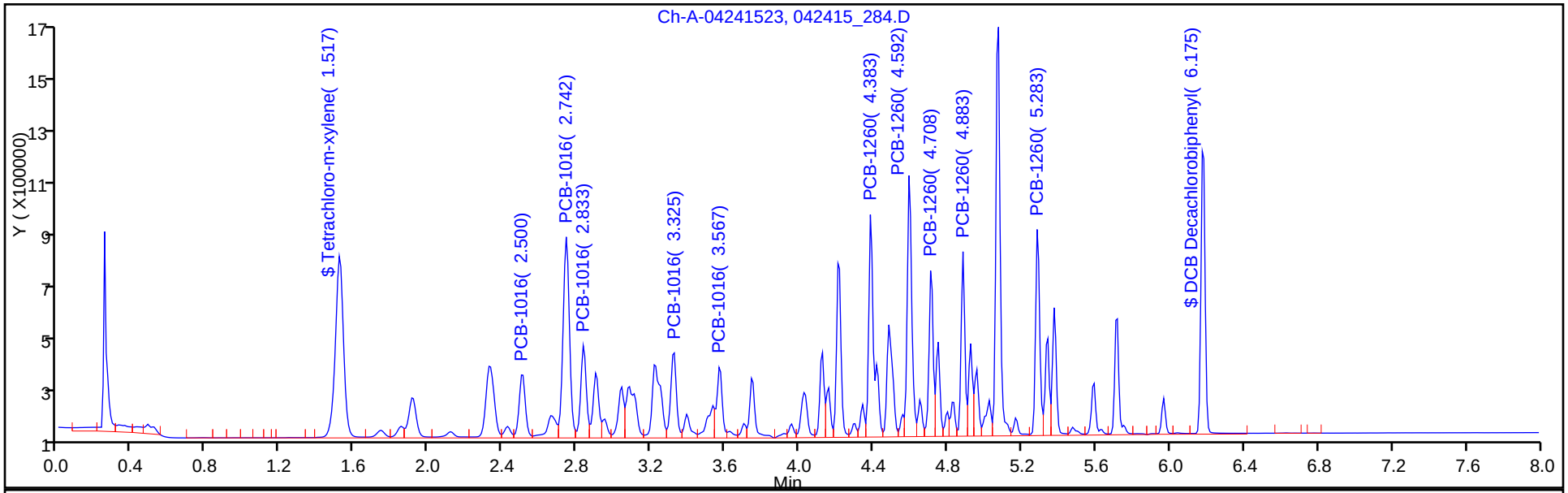
Reagents:

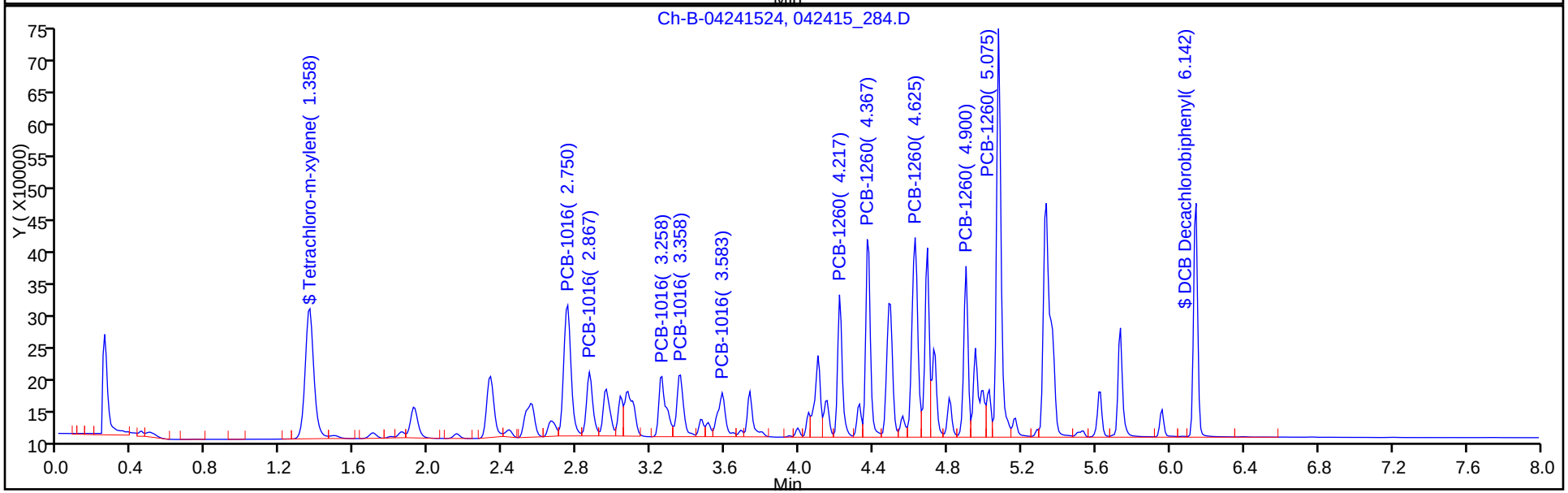
AR1660CCV4_00145 Amount Added: 1.00 Units: mL

Report Date: 02-May-2015 11:02:34 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_284.D				
Injection Date:	02-May-2015 06:21:25	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	CCV AR1660			Worklist Smp#:	55
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/60 Calibration Date: 05/02/2015 07:29

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_289.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 2	Ave	480477	470236		0.489	0.500	-2.1	15.0
PCB-1016 Peak 3	Ave	1431769	1439102		0.503	0.500	0.5	15.0
PCB-1016 Peak 4	Ave	655974	655786		0.500	0.500	-0.0	15.0
PCB-1016 Peak 1	Ave	617799	634992		0.514	0.500	2.8	15.0
PCB-1016 Peak 5	Ave	489497	510806		0.522	0.500	4.4	15.0
PCB-1260 Peak 1	Ave	1727607	1623160		0.470	0.500	-6.0	15.0
PCB-1260 Peak 2	Ave	1849884	1916308		0.518	0.500	3.6	15.0
PCB-1260 Peak 3	Ave	1232827	1261486		0.512	0.500	2.3	15.0
PCB-1260 Peak 4	Ave	1309280	1245846		0.476	0.500	-4.8	15.0
PCB-1260 Peak 5	Ave	1600543	1534602		0.479	0.500	-4.1	15.0
Tetrachloro-m-xylene	Ave	16738339	16987825		0.0406	0.0400	1.5	15.0
DCB Decachlorobiphenyl	Ave	29446013	28047025		0.0381	0.0400	-4.8	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: CCV 500-286255/60 Calibration Date: 05/02/2015 07:29

Instrument ID: INST23-24 Calib Start Date: 04/10/2015 08:36

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/10/2015 09:44

Lab File ID: 042415_289.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 2	2.50	2.48	2.54
PCB-1016 Peak 3	2.73	2.72	2.78
PCB-1016 Peak 4	2.83	2.82	2.88
PCB-1016 Peak 1	3.32	3.31	3.37
PCB-1016 Peak 5	3.57	3.56	3.62
PCB-1260 Peak 1	4.38	4.37	4.43
PCB-1260 Peak 2	4.59	4.58	4.64
PCB-1260 Peak 3	4.71	4.70	4.76
PCB-1260 Peak 4	4.88	4.87	4.93
PCB-1260 Peak 5	5.28	5.27	5.33
Tetrachloro-m-xylene	1.51	1.47	1.53
DCB Decachlorobiphenyl	6.18	6.17	6.23

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_289.D
Lims ID: CCV AR1660
Client ID:
Sample Type: CCV
Inject. Date: 02-May-2015 07:29:48 ALS Bottle#: 0 Worklist Smp#: 60
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-060
Operator ID: werners Instrument ID: INST23-24
Sublist: chrom-8082_23-24*sub1

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:43 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 07:29:48
Column 2 : Det: Ch-B 02-May-2015 07:43:26
Process Host: XAWRK013

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.500	0.008	679513H	0.0400	0.0406	
2	1.350	1.350	0.000	202736H	0.0400	0.0356	
						RPD = 13.11	
2 PCB-1016							
1	3.317	3.342	-0.025	317496H	0.5000	0.5139	
1	2.500	2.508	-0.008	235118H	0.5000	0.4893	
1	2.733	2.750	-0.017	719551H	0.5000	0.5026	
1	2.833	2.850	-0.017	327893H	0.5000	0.4999	
1	3.567	3.592	-0.025	255403H	0.5000	0.5218	
		Average of Peak Amounts =				0.5055	
2	3.583	3.583	0.000	67241H	0.5000	0.3336	
2	2.750	2.750	0.000	205272H	0.5000	0.4791	
2	2.867	2.867	0.000	101042H	0.5000	0.4689	
2	3.250	3.258	-0.008	92774H	0.5000	0.4415	
2	3.350	3.358	-0.008	96393H	0.5000	0.4566	
		Average of Peak Amounts =				0.4359	
						RPD = 14.77	

Report Date: 02-May-2015 11:02:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40
Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_289.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.383	4.400	-0.017	811580H	0.5000	0.4698	
1	4.592	4.608	-0.016	958154H	0.5000	0.5180	
1	4.708	4.725	-0.017	630743H	0.5000	0.5116	
1	4.883	4.900	-0.017	622923H	0.5000	0.4758	
1	5.283	5.300	-0.017	767301H	0.5000	0.4794	
		Average of Peak Amounts =				0.4909	
2	4.217	4.217	0.000	224021H	0.5000	0.4398	
2	4.367	4.367	0.000	313860H	0.5000	0.4860	
2	5.075	5.075	0.000	652070H	0.5000	0.5025	
2	4.625	4.625	0.000	309503H	0.5000	0.5007	
2	4.900	4.900	0.000	268258H	0.5000	0.4536	
		Average of Peak Amounts =				0.4765	
						RPD = 2.97	
$ 1 DCB Decachlorobiphenyl							
1	6.175	6.200	-0.025	1121881H	0.0400	0.0381	
2	6.142	6.142	0.000	362010H	0.0400	0.0306	
						RPD = 21.71	
S 11 Polychlorinated biphenyls, Total							
1						1.00	

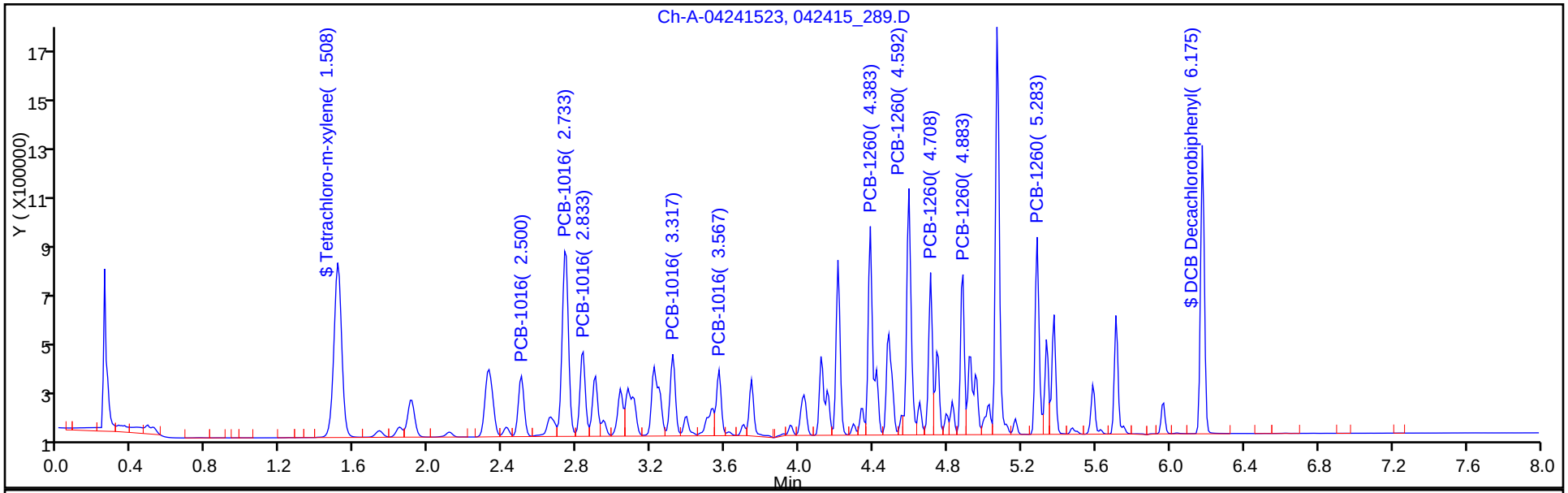
Reagents:

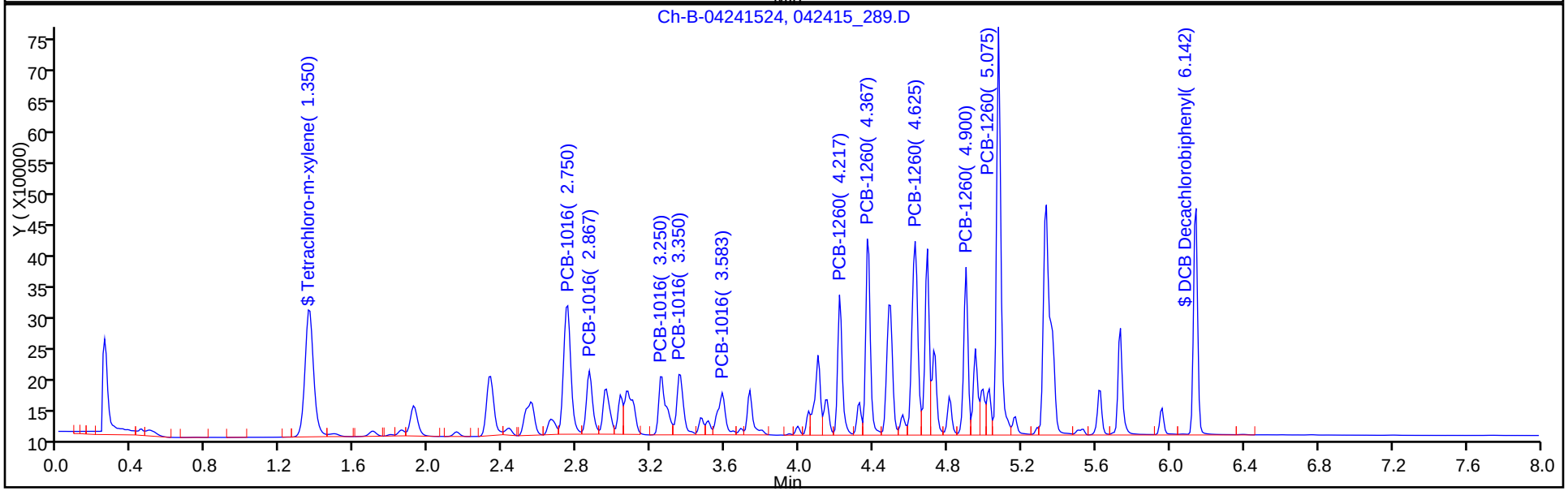
AR1660CCV4_00145 Amount Added: 1.00 Units: mL

Report Date: 02-May-2015 11:02:43 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_289.D				
Injection Date:	02-May-2015 07:29:48	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	CCV AR1660			Worklist Smp#:	60
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: | Lab Sample ID: MB 500-286408/1-A

Matrix: Solid | Lab File ID: 042415_258.D

Analysis Method: 8082 | Date Collected:

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.0000(g) | Date Analyzed: 05/02/2015 00:25

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	<0.017		0.017	
11104-28-2	PCB-1221	<0.017		0.017	
11141-16-5	PCB-1232	<0.017		0.017	
53469-21-9	PCB-1242	<0.017		0.017	
12672-29-6	PCB-1248	<0.017		0.017	
11097-69-1	PCB-1254	<0.017		0.017	
11096-82-5	PCB-1260	<0.017		0.017	
1336-36-3	Polychlorinated biphenyls, Total	<0.017		0.017	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	64		50-116
2051-24-3	DCB Decachlorobiphenyl	65		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_258.D
Lims ID: MB 500-286408/1-A
Client ID:
Sample Type: MB
Inject. Date: 02-May-2015 00:25:34 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-029
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 10:02:32 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

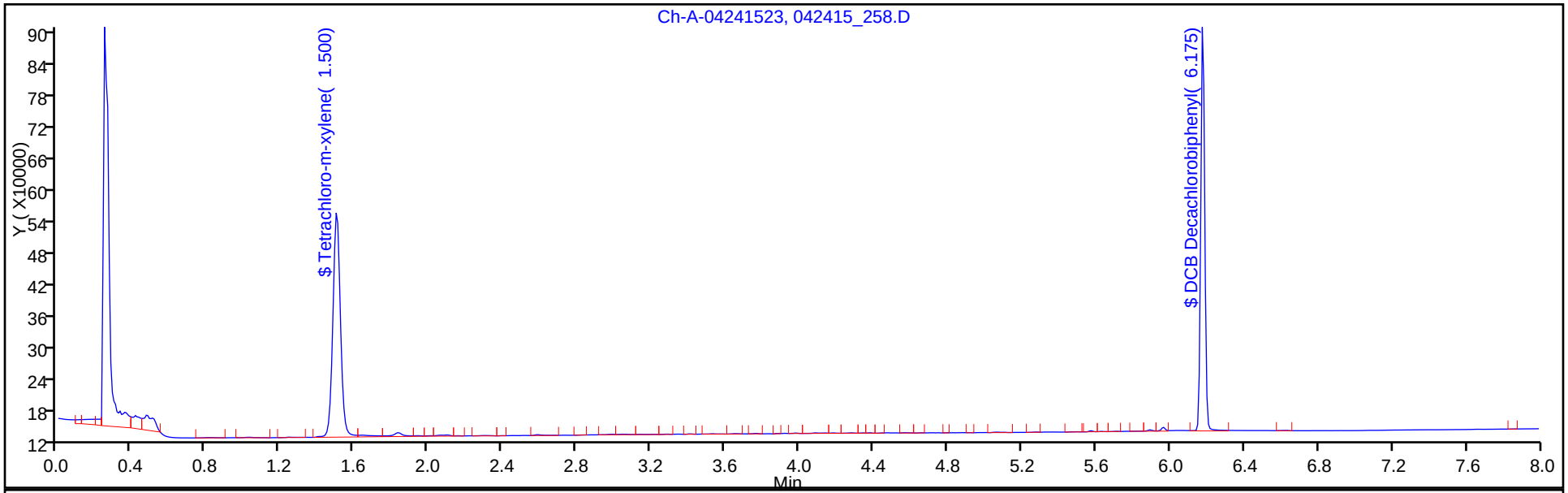
Column 1 : Det: Ch-A 02-May-2015 00:25:34
Column 2 : Det: Ch-B 02-May-2015 00:39:13
Process Host: XAWRK013

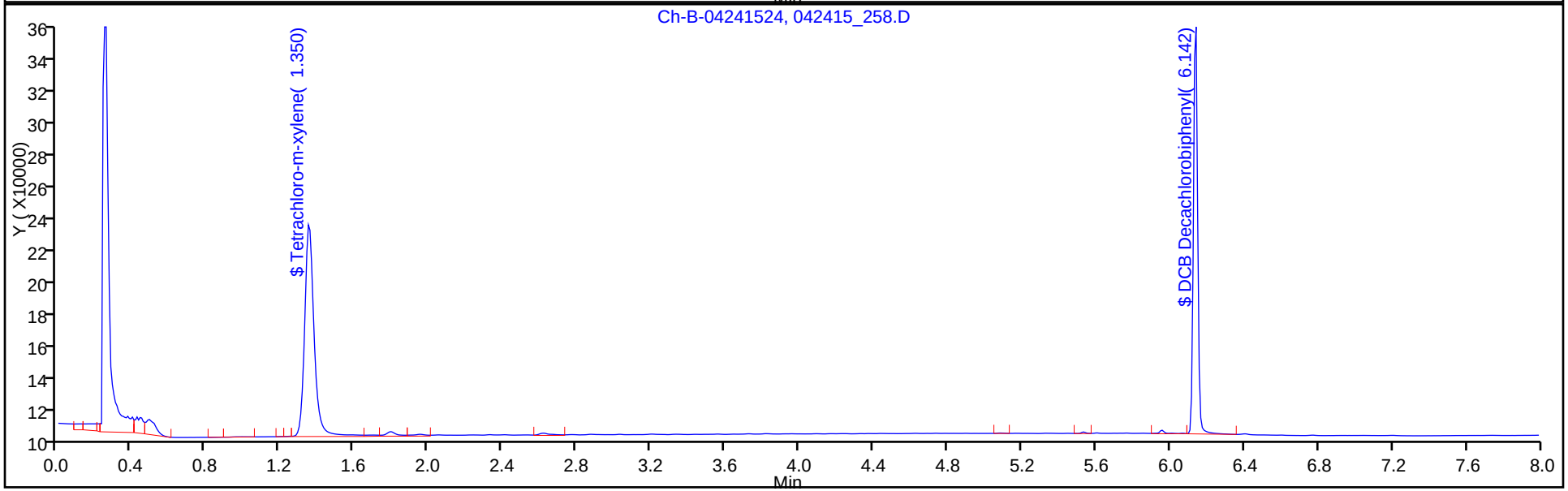
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.500	1.500	0.000	426474H	0.0400	0.0255	
2	1.350	1.350	0.000	127010H	0.0400	0.0223	
						RPD = 13.29	
$ 1 DCB Decachlorobiphenyl							
1	6.175	6.200	-0.025	768220H	0.0400	0.0261	
2	6.142	6.142	0.000	244158H	0.0400	0.0207	
						RPD = 23.21	

Report Date: 02-May-2015 10:02:33 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_258.D				
Injection Date:	02-May-2015 00:25:34	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	MB 500-286408/1-A			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG No.: 15-07.01
Client Sample ID:
Lab Sample ID: LCS 500-286408/2-A
Matrix: Solid
Lab File ID: 042415_259.D
Analysis Method: 8082
Date Collected:
Extraction Method: 3541
Date Extracted: 05/01/2015 16:26
Sample wt/vol: 15.0000(g)
Date Analyzed: 05/02/2015 00:39
Con. Extract Vol.: 5.0(mL)
Dilution Factor: 1
Injection Volume: 1(uL)
GC Column: RTX-5 ID: 0.53(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 286255
Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	0.140		0.017	
11096-82-5	PCB-1260	0.143		0.017	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	77		50-116
2051-24-3	DCB Decachlorobiphenyl	82		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_259.D
Lims ID: LCS 500-286408/2-A
Client ID:
Sample Type: LCS
Inject. Date: 02-May-2015 00:39:13 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-030
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 10:02:32 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 00:39:13
Column 2 : Det: Ch-B 02-May-2015 00:52:51
Process Host: XAWRK013

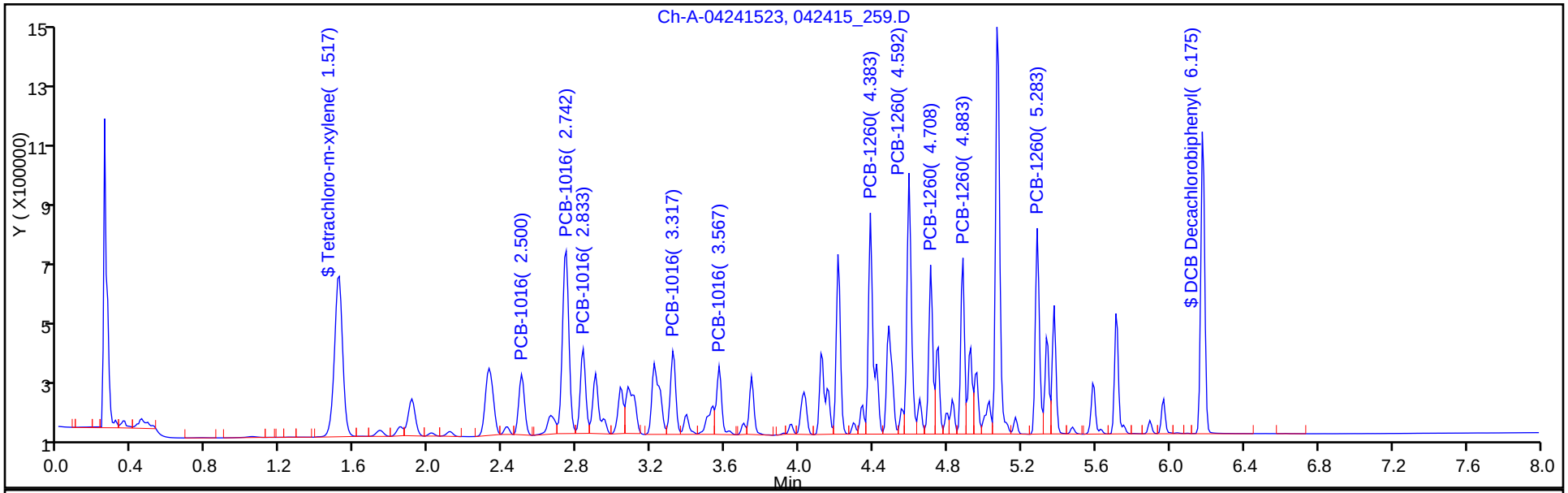
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.517	1.500	0.017	512427H	0.0400	0.0306	
2	1.350	1.350	0.000	156890H	0.0400	0.0276	
						RPD = 10.53	
2 PCB-1016							
1	3.317	3.342	-0.025	265717H	0.5000	0.4301	
1	2.500	2.508	-0.008	192883H	0.5000	0.4014	
1	2.742	2.750	-0.008	583666H	0.5000	0.4077	
1	2.833	2.850	-0.017	270438H	0.5000	0.4123	
1	3.567	3.592	-0.025	218144H	0.5000	0.4456	
		Average of Peak Amounts =				0.4194	
2	3.583	3.583	0.000	72072H	0.5000	0.3576	
2	2.750	2.750	0.000	167401H	0.5000	0.3907	
2	2.867	2.867	0.000	86523H	0.5000	0.4015	
2	3.258	3.258	0.000	80971H	0.5000	0.3854	
2	3.358	3.358	0.000	83142H	0.5000	0.3938	
		Average of Peak Amounts =				0.3858	
						RPD = 8.35	

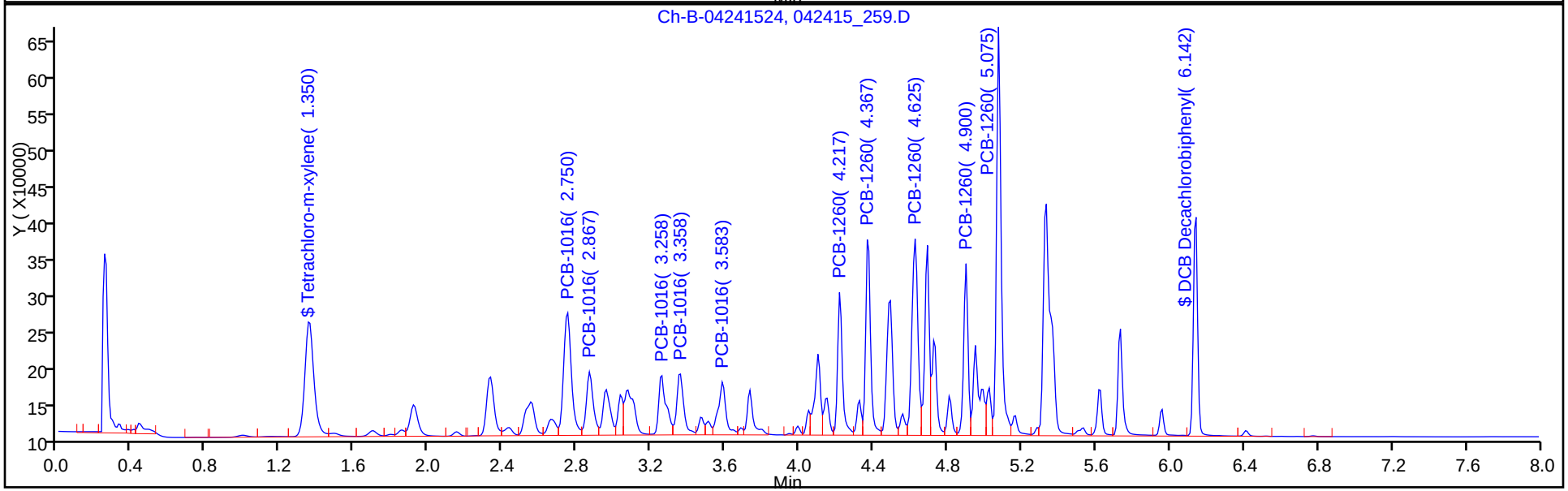
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.383	4.400	-0.017	706547H	0.5000	0.4090	
1	4.592	4.608	-0.016	833846H	0.5000	0.4508	
1	4.708	4.725	-0.017	540159H	0.5000	0.4381	
1	4.883	4.900	-0.017	562407H	0.5000	0.4296	
1	5.283	5.300	-0.017	657636H	0.5000	0.4109	
		Average of Peak Amounts =				0.4277	
2	4.217	4.217	0.000	195124H	0.5000	0.3830	
2	4.367	4.367	0.000	267441H	0.5000	0.4141	
2	5.075	5.075	0.000	558592H	0.5000	0.4305	
2	4.625	4.625	0.000	268559H	0.5000	0.4345	
2	4.900	4.900	0.000	234943H	0.5000	0.3973	
		Average of Peak Amounts =				0.4119	
						RPD = 3.76	
$ 1 DCB Decachlorobiphenyl							
1	6.175	6.200	-0.025	964529H	0.0400	0.0328	
2	6.142	6.142	0.000	299215H	0.0400	0.0253	
						RPD = 25.60	

Report Date: 02-May-2015 10:02:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_259.D				
Injection Date:	02-May-2015 00:39:13	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	LCS 500-286408/2-A			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





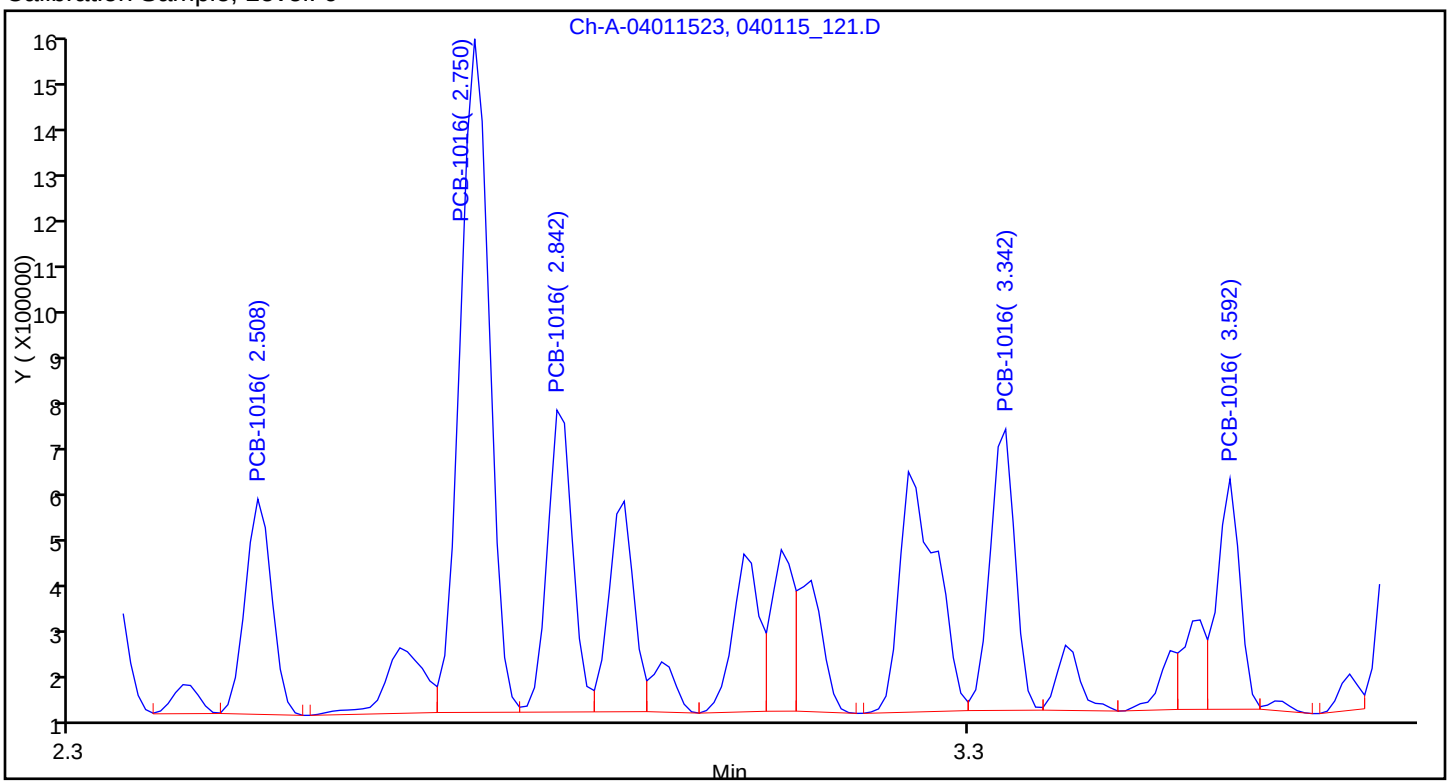
Report Date: 02-May-2015 10:02:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_259.D				
Injection Date:	02-May-2015 00:39:13	Instrument ID:	INST23-24		
Lims ID:	LCS 500-286408/2-A				
Client ID:					
Operator ID:	werners	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		
Column:		Detector	Ch-A		

2 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 6



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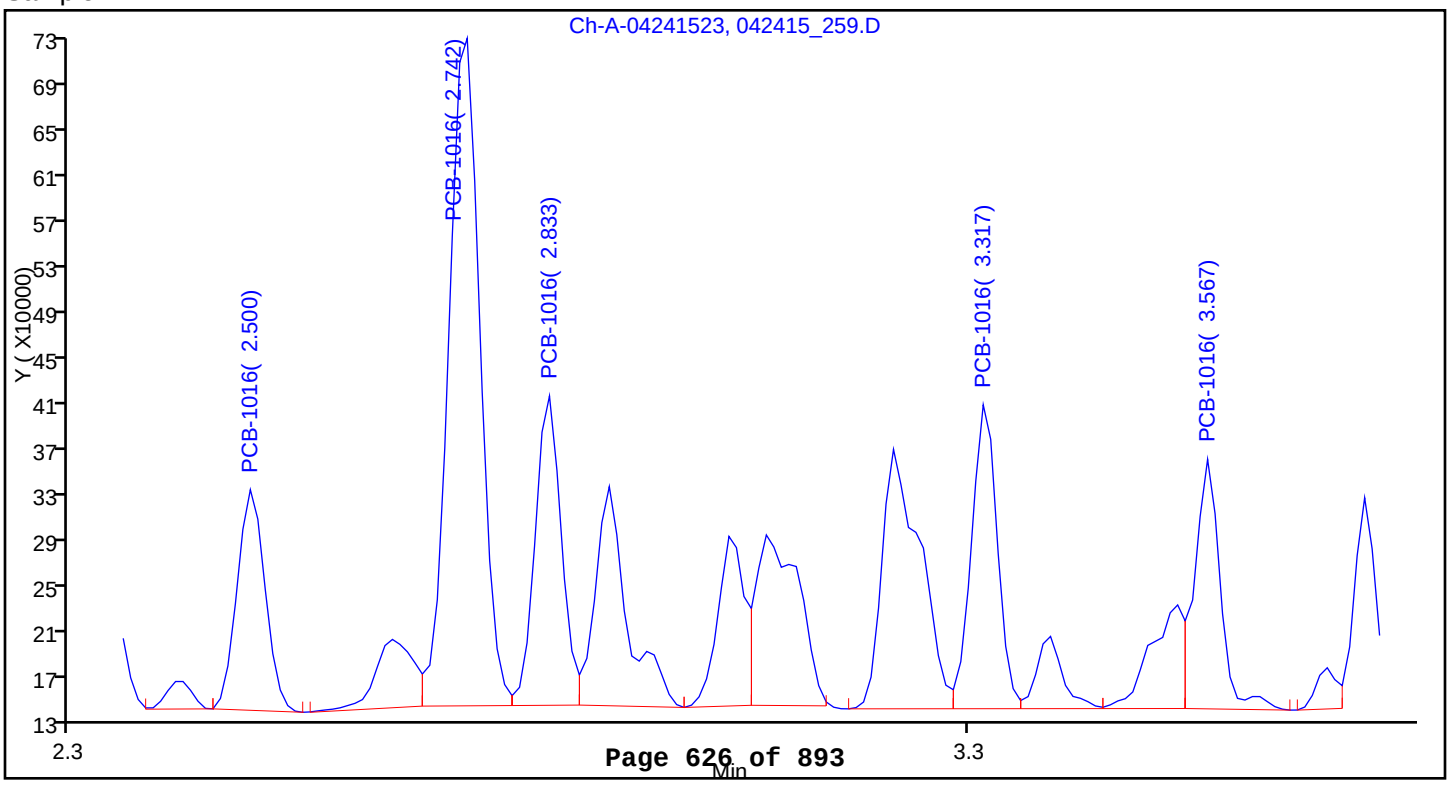


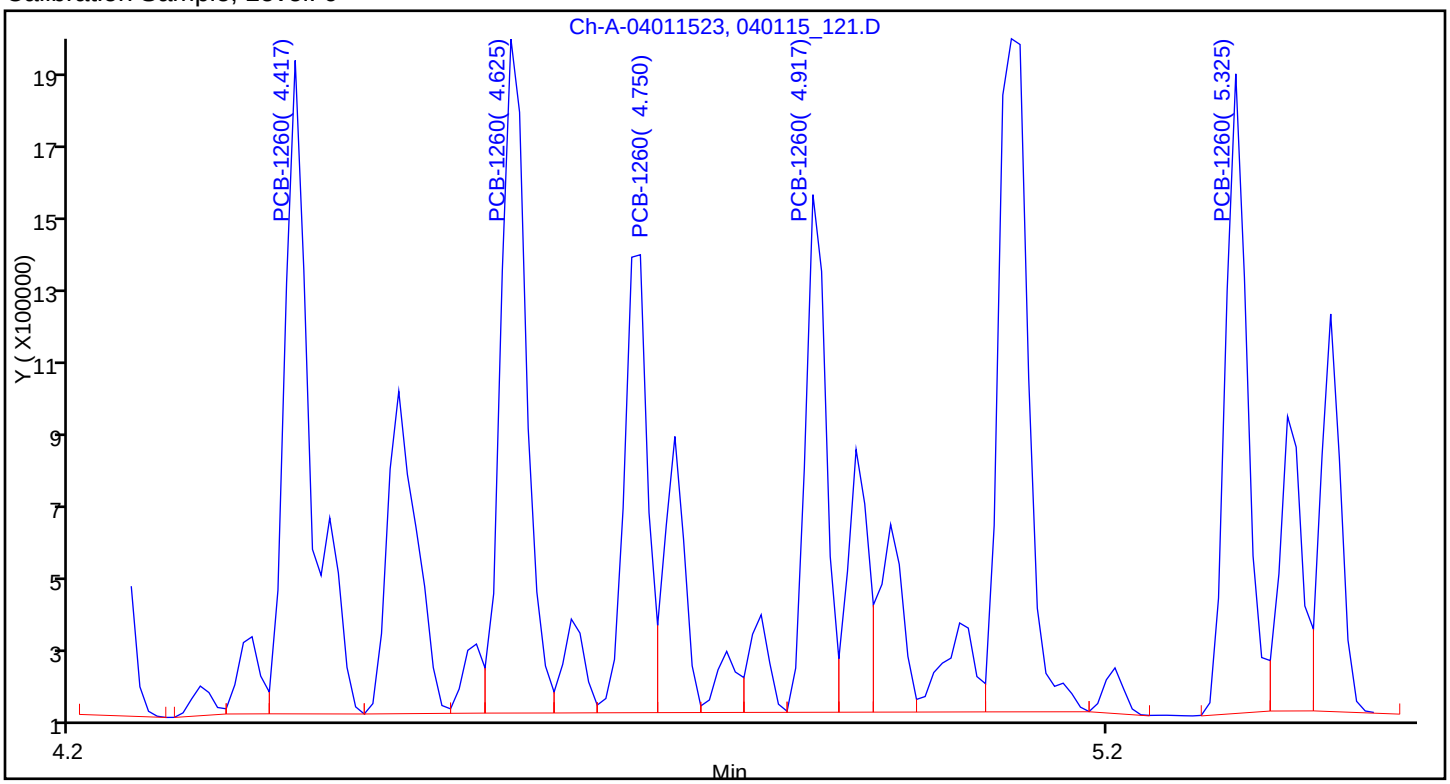
Report Date: 02-May-2015 10:02:35 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_259.D				
Injection Date:	02-May-2015 00:39:13	Instrument ID:	INST23-24		
Lims ID:	LCS 500-286408/2-A				
Client ID:					
Operator ID:	werners	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		
Column:		Detector	Ch-A		

8 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



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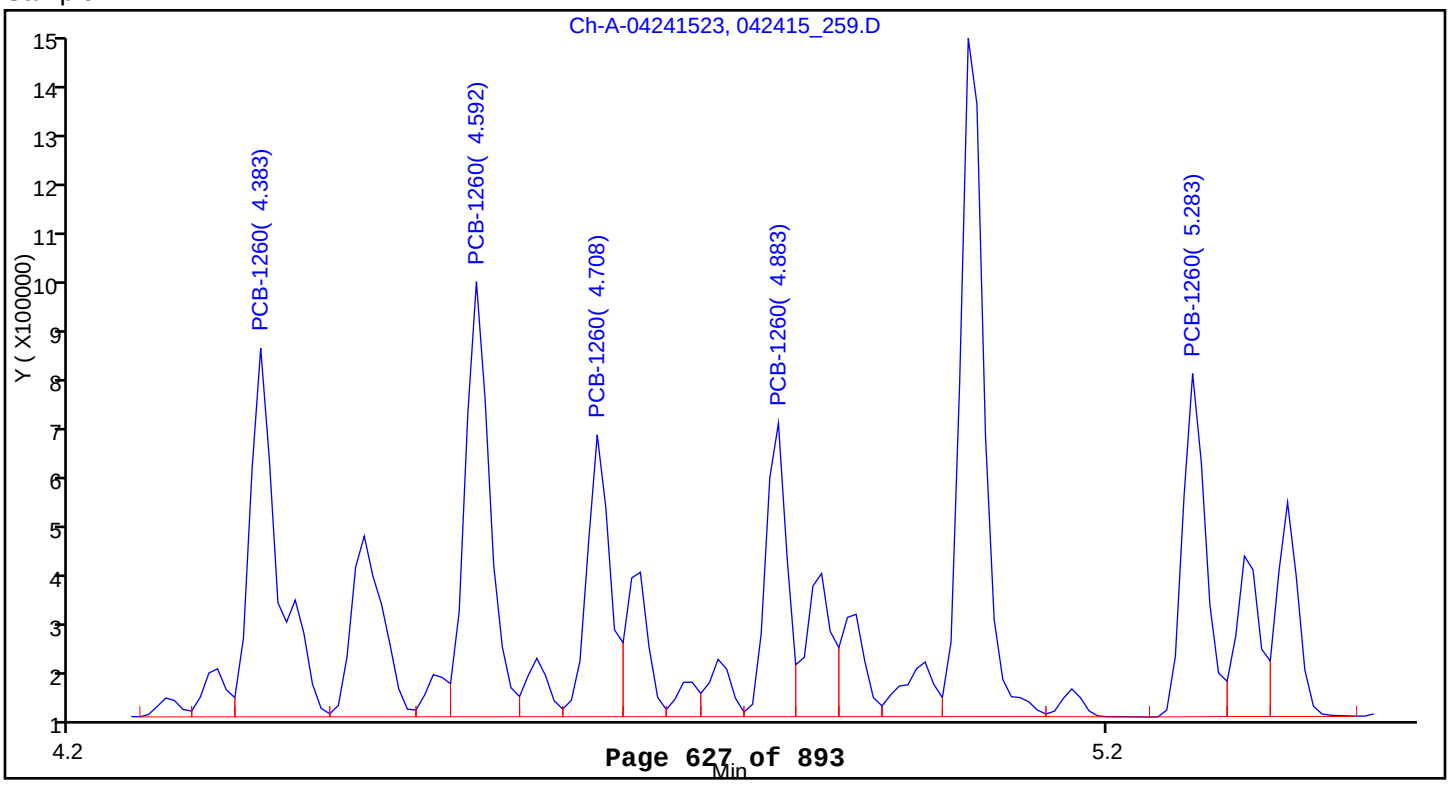


FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-10 MS | Lab Sample ID: 500-95474-10 MS

Matrix: Solid | Lab File ID: 042415_286.D

Analysis Method: 8082 | Date Collected: 04/30/2015 16:05

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.0151(g) | Date Analyzed: 05/02/2015 06:48

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 21.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	0.207		0.021	
11104-28-2	PCB-1221	<0.021		0.021	
11141-16-5	PCB-1232	<0.021		0.021	
53469-21-9	PCB-1242	<0.021		0.021	
12672-29-6	PCB-1248	<0.021		0.021	
11097-69-1	PCB-1254	<0.021		0.021	
11096-82-5	PCB-1260	0.214		0.021	
1336-36-3	Polychlorinated biphenyls, Total	0.421		0.021	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	87		50-116
2051-24-3	DCB Decachlorobiphenyl	96		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_286.D
Lims ID: 500-95474-A-10-B MS
Client ID: DS-10
Sample Type: MS
Inject. Date: 02-May-2015 06:48:39 ALS Bottle#: 0 Worklist Smp#: 57
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-057
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 05-May-2015 10:07:22 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 06:48:39
Column 2 : Det: Ch-B 02-May-2015 07:02:31
Process Host: XAWRK050

First Level Reviewer: orfg Date: 02-May-2015 11:00:43

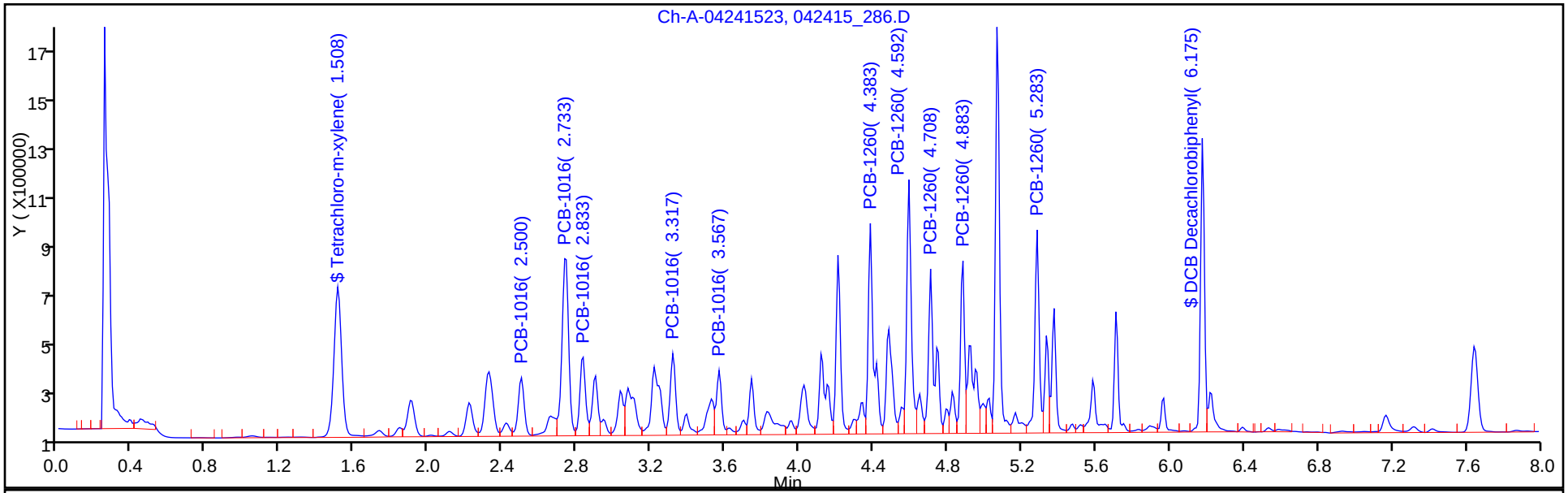
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.500	0.008	582400H	0.0400	0.0348	
2	1.358	1.350	0.008	181707H	0.0400	0.0319	
						RPD = 8.65	
2 PCB-1016							
1	3.317	3.342	-0.025	315568H	0.5000	0.5108	
1	2.500	2.508	-0.008	226144H	0.5000	0.4707	
1	2.733	2.750	-0.017	685552H	0.5000	0.4788	
1	2.833	2.850	-0.017	303673H	0.5000	0.4629	
1	3.567	3.592	-0.025	249312H	0.5000	0.5093	
		Average of Peak Amounts =				0.4865	
2	3.583	3.583	0.000	73429H	0.5000	0.3643	
2	2.750	2.750	0.000	199132H	0.5000	0.4648	
2	2.867	2.867	0.000	102373H	0.5000	0.4751	
2	3.250	3.258	-0.008	93345H	0.5000	0.4443	
2	3.350	3.358	-0.008	97013H	0.5000	0.4595	
		Average of Peak Amounts =				0.4416	
						RPD = 9.68	

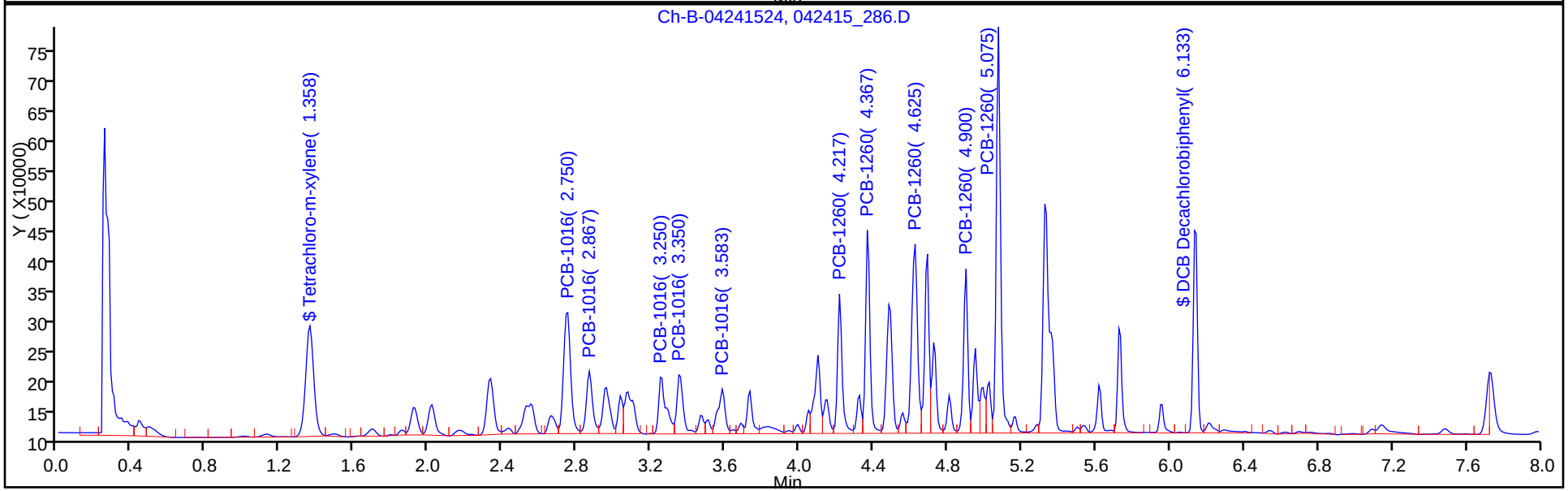
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.383	4.400	-0.017	814924H	0.5000	0.4717	
1	4.592	4.608	-0.016	982574H	0.5000	0.5312	
1	4.708	4.725	-0.017	637321H	0.5000	0.5170	
1	4.883	4.900	-0.017	667414H	0.5000	0.5098	
1	5.283	5.300	-0.017	786012H	0.5000	0.4911	
		Average of Peak Amounts =				0.5041	
2	4.217	4.217	0.000	229665H	0.5000	0.4508	
2	4.367	4.367	0.000	334551H	0.5000	0.5180	
2	5.075	5.075	0.000	668314H	0.5000	0.5151	
2	4.625	4.625	0.000	311264H	0.5000	0.5036	
2	4.900	4.900	0.000	270401H	0.5000	0.4573	
		Average of Peak Amounts =				0.4890	
						RPD = 3.06	
$ 1 DCB Decachlorobiphenyl							
1	6.175	6.200	-0.025	1136467H	0.0400	0.0386	a
2	6.133	6.142	-0.009	332916H	0.0400	0.0282	
						RPD = 31.21	
S 11 Polychlorinated biphenyls, Total							
1						0.99	

Report Date: 05-May-2015 10:07:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_286.D				
Injection Date:	02-May-2015 06:48:39	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-A-10-B MS			Worklist Smp#:	57
Client ID:	DS-10				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





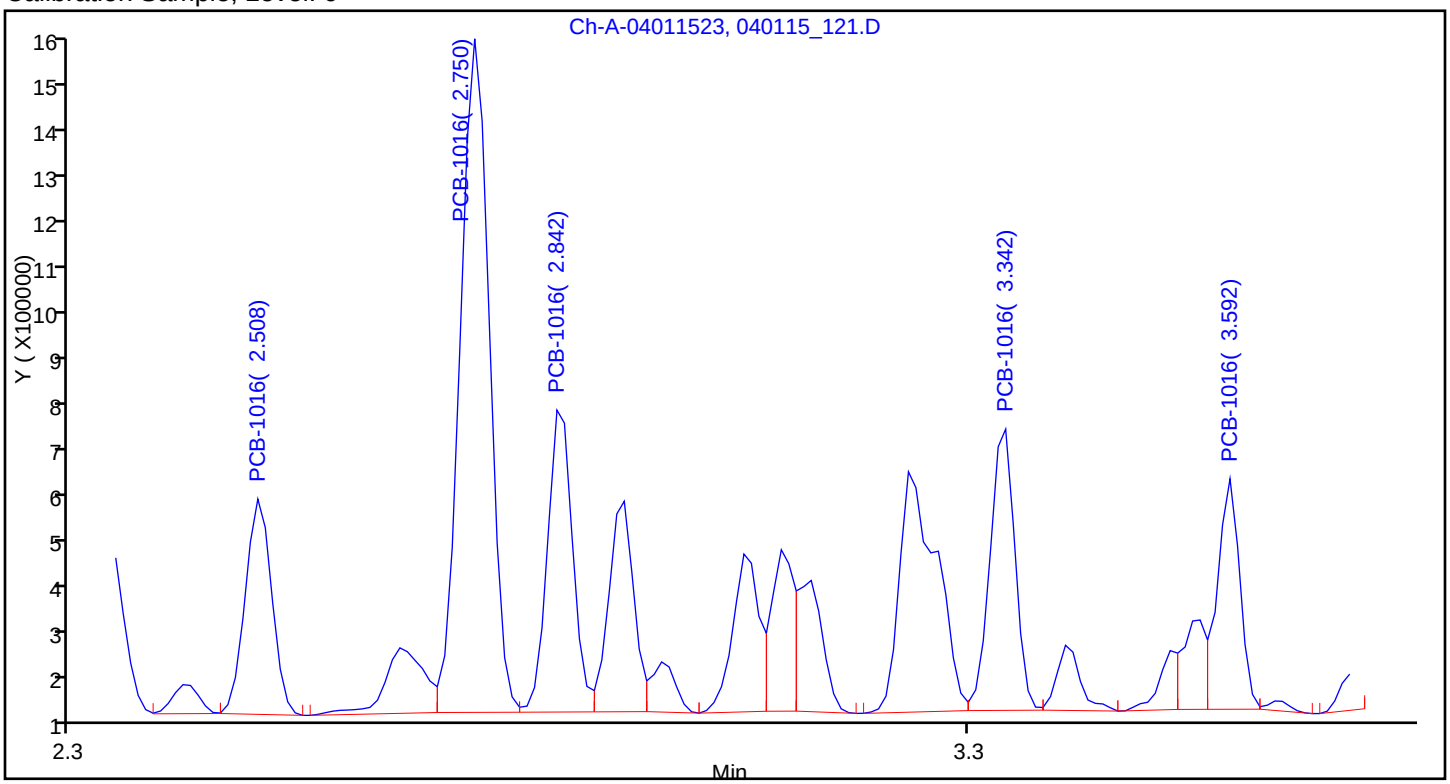
Report Date: 05-May-2015 10:07:31 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

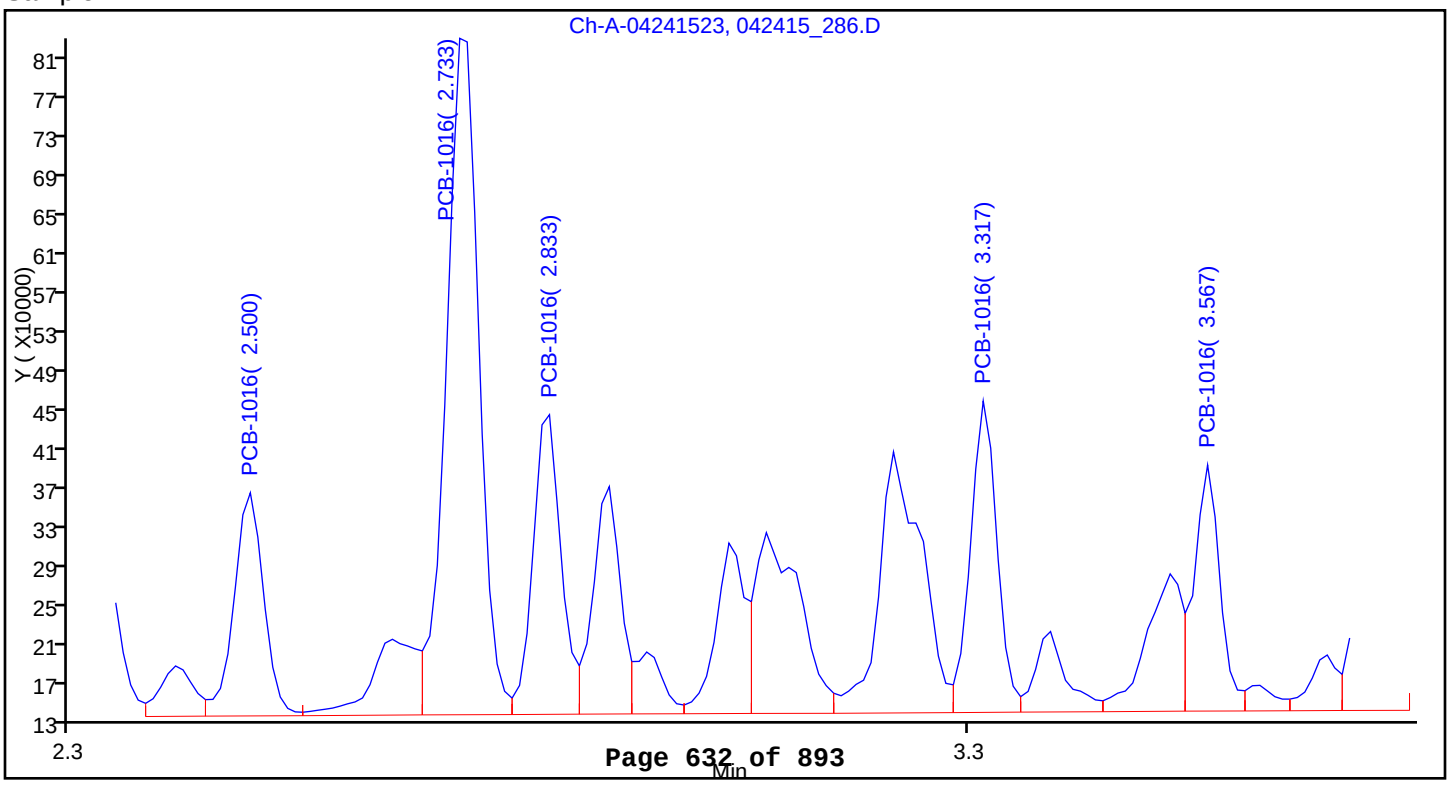
Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_286.D				
Injection Date:	02-May-2015 06:48:39	Instrument ID:	INST23-24		
Lims ID:	500-95474-A-10-B MS				
Client ID:	DS-10				
Operator ID:	werners	ALS Bottle#:	0	Worklist Smp#:	57
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		
Column:		Detector	Ch-A		

2 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 6



Sample



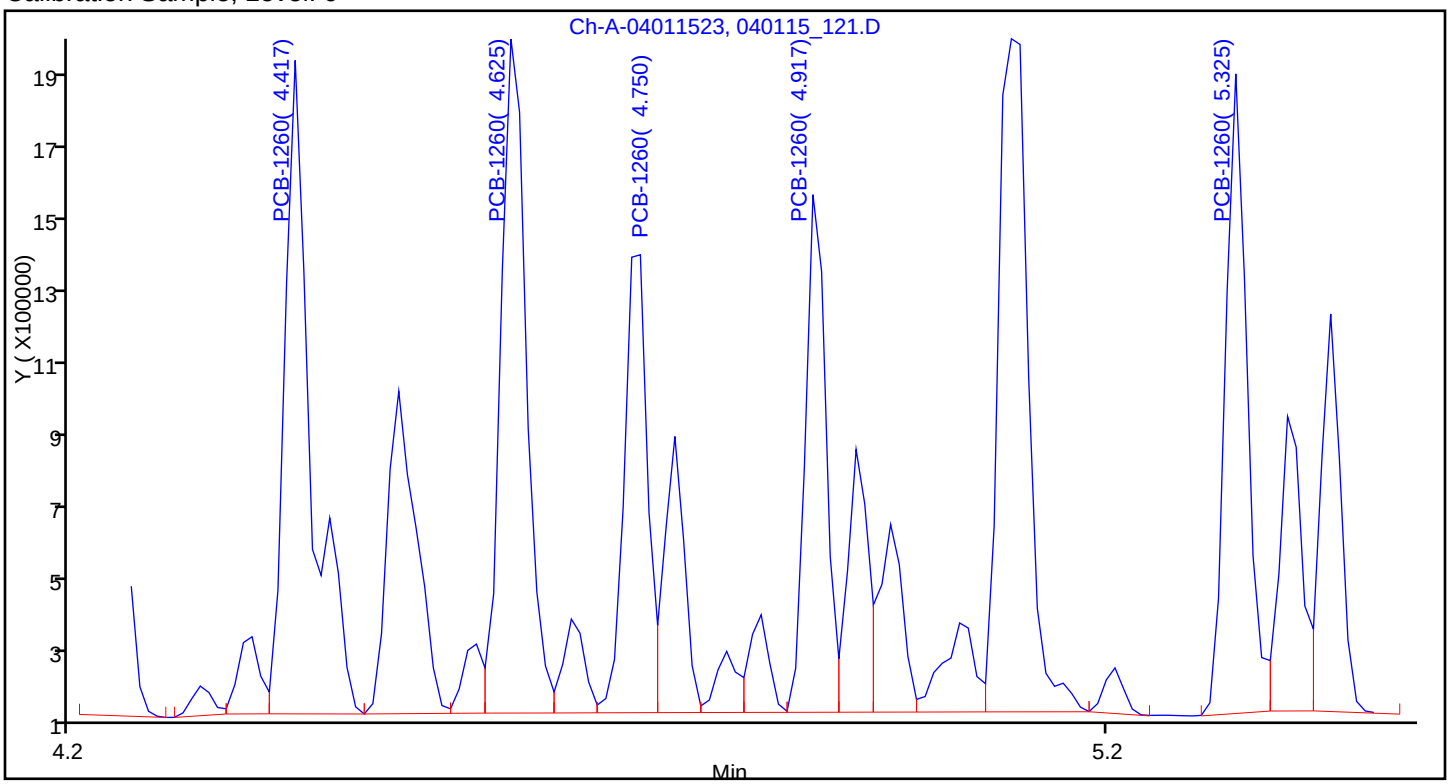
Report Date: 05-May-2015 10:07:32 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_286.D				
Injection Date:	02-May-2015 06:48:39	Instrument ID:	INST23-24		
Lims ID:	500-95474-A-10-B MS				
Client ID:	DS-10				
Operator ID:	werners	ALS Bottle#:	0	Worklist Smp#:	57
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		
Column:		Detector	Ch-A		

8 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



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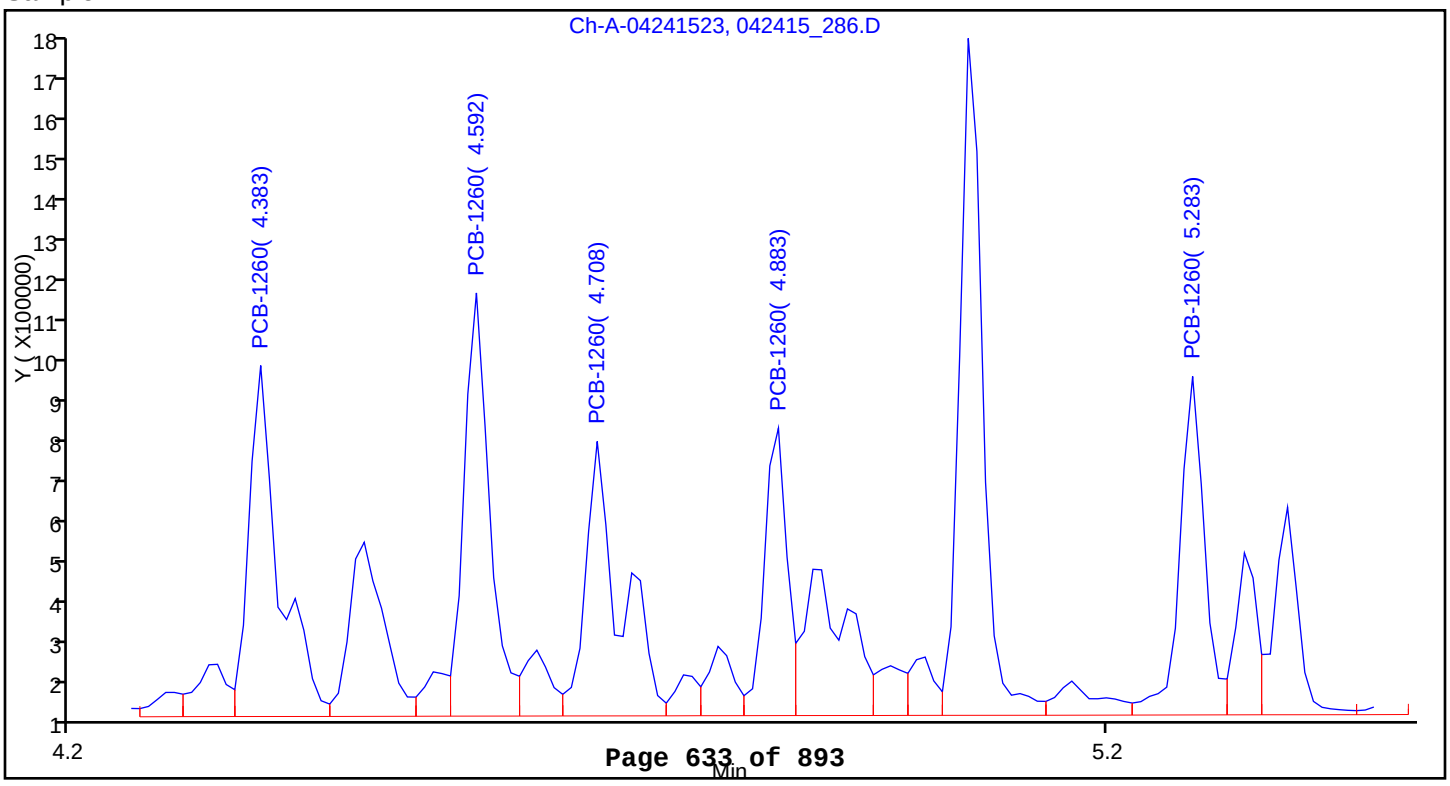


FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Chicago | Job No.: 500-95474-1

SDG No.: 15-07.01

Client Sample ID: DS-10 MSD | Lab Sample ID: 500-95474-10 MSD

Matrix: Solid | Lab File ID: 042415_287.D

Analysis Method: 8082 | Date Collected: 04/30/2015 16:05

Extraction Method: 3541 | Date Extracted: 05/01/2015 16:26

Sample wt/vol: 15.5635(g) | Date Analyzed: 05/02/2015 07:02

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: 21.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 286255 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
12674-11-2	PCB-1016	0.193		0.021	
11104-28-2	PCB-1221	<0.021		0.021	
11141-16-5	PCB-1232	<0.021		0.021	
53469-21-9	PCB-1242	<0.021		0.021	
12672-29-6	PCB-1248	<0.021		0.021	
11097-69-1	PCB-1254	<0.021		0.021	
11096-82-5	PCB-1260	0.206		0.021	
1336-36-3	Polychlorinated biphenyls, Total	0.399		0.021	

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	75		50-116
2051-24-3	DCB Decachlorobiphenyl	89		48-142

TestAmerica Chicago
Target Compound Quantitation Report

Data File: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_287.D
Lims ID: 500-95474-B-10-A MSD
Client ID: DS-10
Sample Type: MSD
Inject. Date: 02-May-2015 07:02:31 ALS Bottle#: 0 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: #: dc= Name: 042415,pcb23,500-0030606-058
Operator ID: werners Instrument ID: INST23-24

Method: \\Chi-svr07\ChromData\GC23-24\20150430-30606.b\8082_23-24.m
Limit Group: GC_PCB_ICAL
Method Label: Test America Chicago
Last Update: 02-May-2015 11:02:34 Calib Date: 10-Apr-2015 11:20:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Chi-svr07\ChromData\GC23-24\20150410-30185.b\040115_133.D

Column 1 : Det: Ch-A 02-May-2015 07:02:31
Column 2 : Det: Ch-B 02-May-2015 07:16:11
Process Host: XAWRK013

First Level Reviewer: orfg Date: 02-May-2015 11:01:02

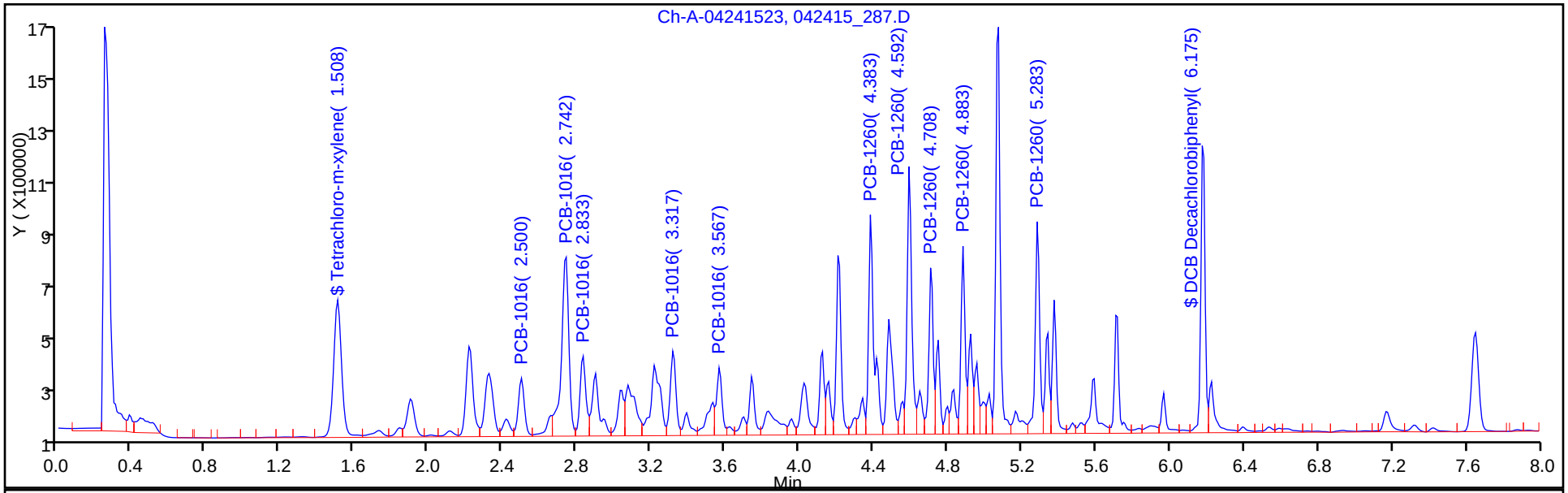
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
$ 12 Tetrachloro-m-xylene							
1	1.508	1.500	0.008	504514H	0.0400	0.0301	
2	1.358	1.350	0.008	163037H	0.0400	0.0286	
						RPD = 5.14	
2 PCB-1016							
1	3.317	3.342	-0.025	309230H	0.5000	0.5005	
1	2.500	2.508	-0.008	213554H	0.5000	0.4445	
1	2.742	2.750	-0.008	656674H	0.5000	0.4586	
1	2.833	2.850	-0.017	293064H	0.5000	0.4468	
1	3.567	3.592	-0.025	247800H	0.5000	0.5062	
		Average of Peak Amounts =				0.4713	
2	3.583	3.583	0.000	81759H	0.5000	0.4056	
2	2.750	2.750	0.000	193906H	0.5000	0.4526	
2	2.867	2.867	0.000	102503H	0.5000	0.4757	
2	3.258	3.258	0.000	94074H	0.5000	0.4477	
2	3.350	3.358	-0.008	95889H	0.5000	0.4542	
		Average of Peak Amounts =				0.4472	
						RPD = 5.26	

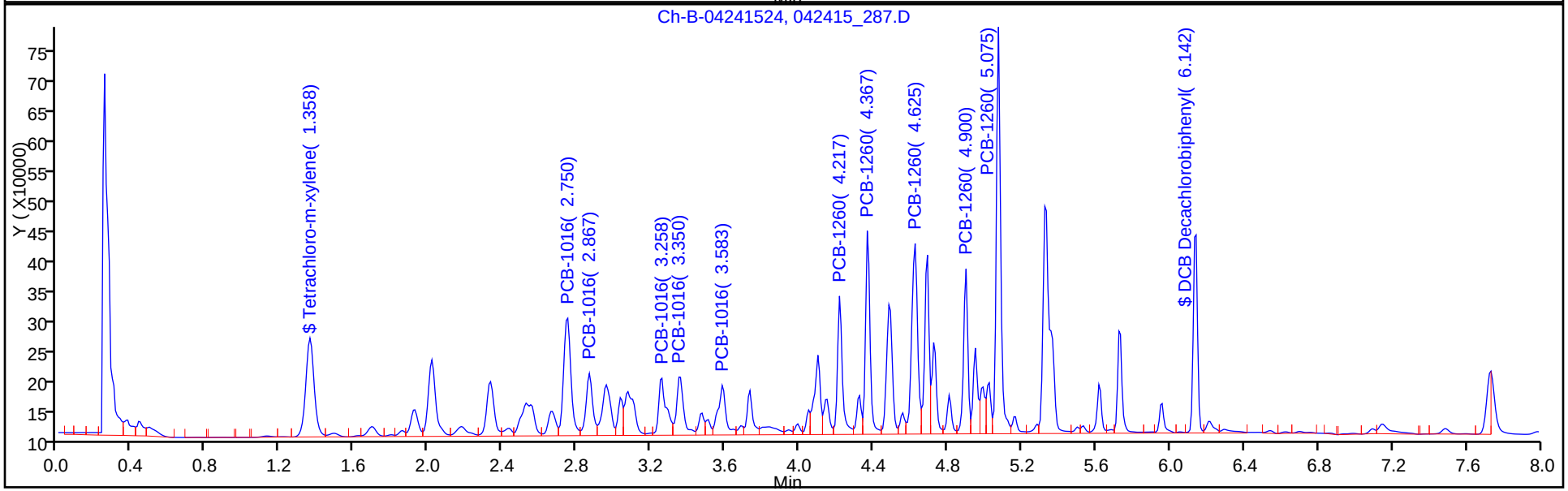
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
8 PCB-1260							
1	4.383	4.400	-0.017	806264H	0.5000	0.4667	
1	4.592	4.608	-0.016	982906H	0.5000	0.5313	
1	4.708	4.725	-0.017	610487H	0.5000	0.4952	
1	4.883	4.900	-0.017	689483H	0.5000	0.5266	
1	5.283	5.300	-0.017	778442H	0.5000	0.4864	
		Average of Peak Amounts =				0.5012	
2	4.217	4.217	0.000	228402H	0.5000	0.4484	
2	4.367	4.367	0.000	335705H	0.5000	0.5198	
2	5.075	5.075	0.000	671433H	0.5000	0.5175	
2	4.625	4.625	0.000	314443H	0.5000	0.5087	
2	4.900	4.900	0.000	272433H	0.5000	0.4607	
		Average of Peak Amounts =				0.4910	
						RPD = 2.06	
$ 1 DCB Decachlorobiphenyl							
1	6.175	6.200	-0.025	1053474H	0.0400	0.0358	a
2	6.142	6.142	0.000	326916H	0.0400	0.0277	
						RPD = 25.56	
S 11 Polychlorinated biphenyls, Total							
1						0.9726	

Report Date: 02-May-2015 11:02:41 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_287.D				
Injection Date:	02-May-2015 07:02:31	Instrument ID:	INST23-24	Operator ID:	werners
Lims ID:	500-95474-B-10-A MSD			Worklist Smp#:	58
Client ID:	DS-10				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		





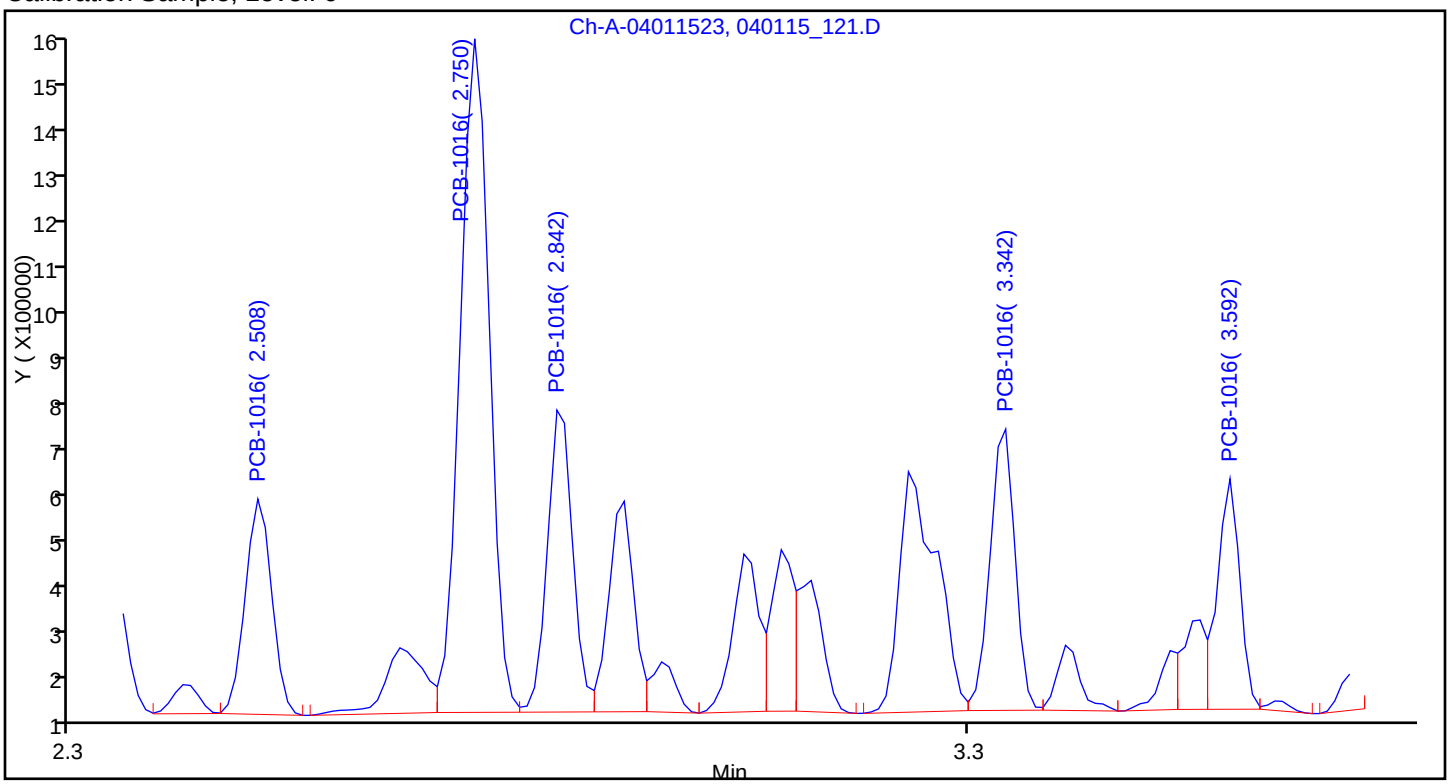
Report Date: 02-May-2015 11:02:41 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

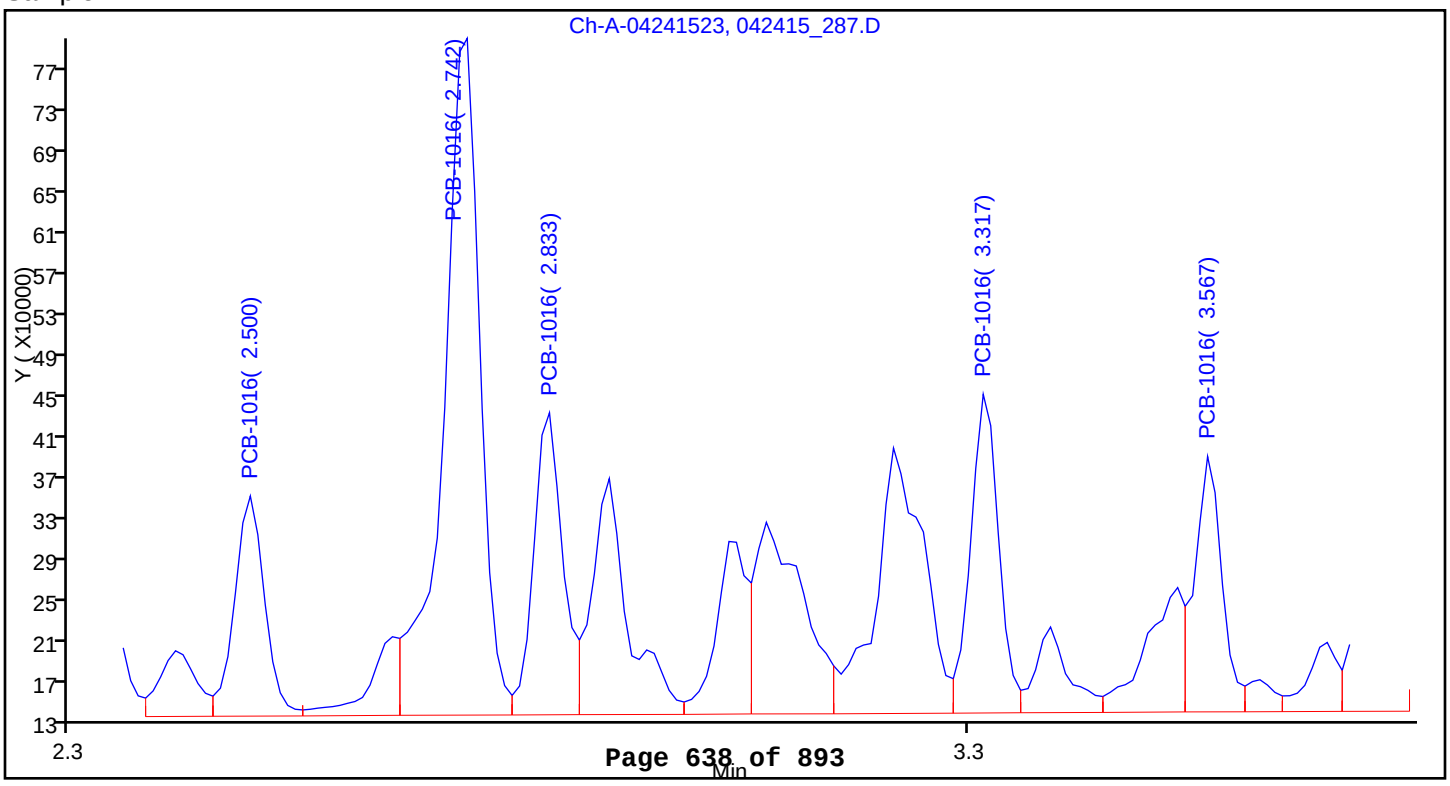
Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_287.D				
Injection Date:	02-May-2015 07:02:31	Instrument ID:	INST23-24		
Lims ID:	500-95474-B-10-A MSD				
Client ID:	DS-10				
Operator ID:	werners	ALS Bottle#:	0	Worklist Smp#:	58
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		
Column:		Detector	Ch-A		

2 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 6



Sample



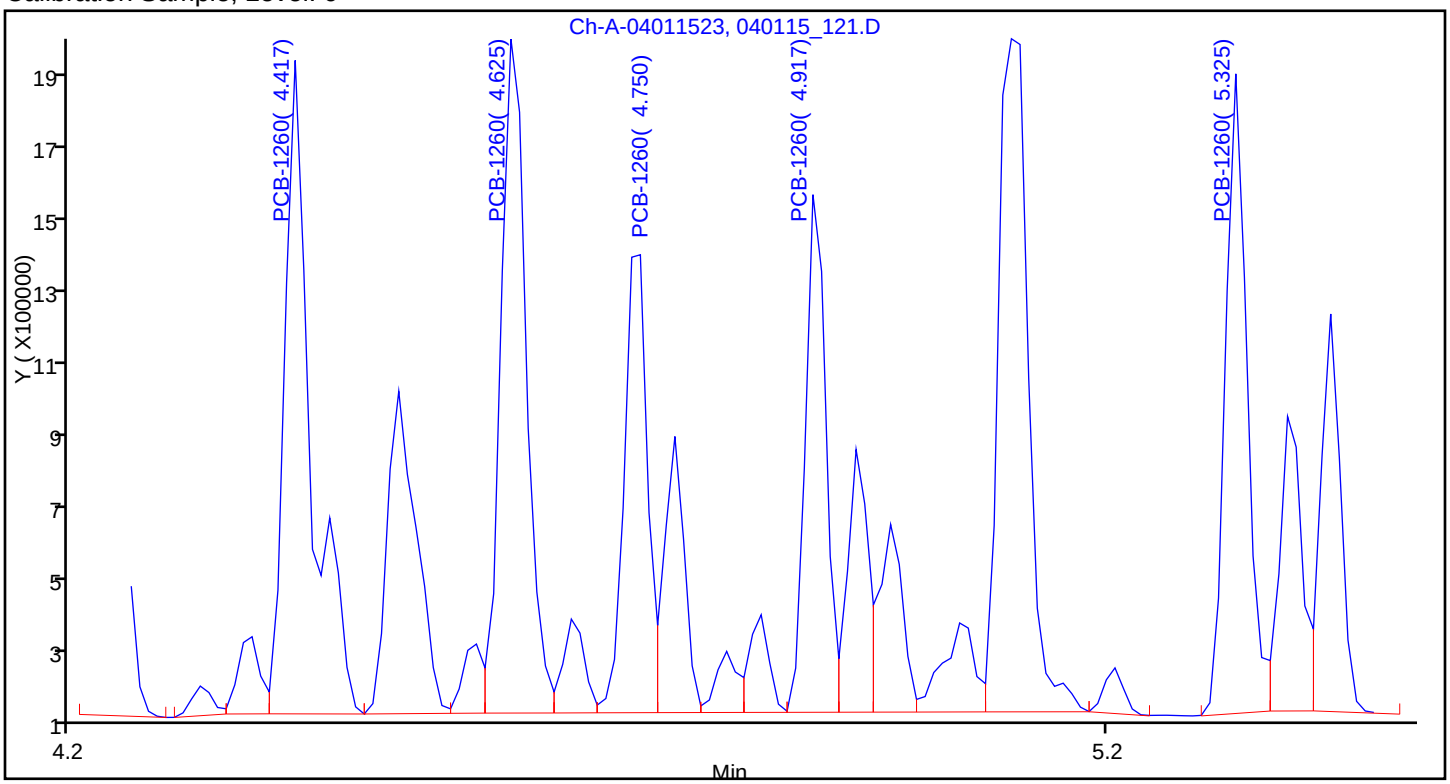
Report Date: 02-May-2015 11:02:41 Chrom Revision: 2.2 09-Apr-2015 10:05:40

TestAmerica Chicago

Data File:	\\Chi-svr07\ChromData\GC23-24\20150430-30606.b\042415_287.D				
Injection Date:	02-May-2015 07:02:31	Instrument ID:	INST23-24		
Lims ID:	500-95474-B-10-A MSD				
Client ID:	DS-10				
Operator ID:	werners	ALS Bottle#:	0	Worklist Smp#:	58
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_23-24	Limit Group:	GC_PCB_ICAL		
Column:		Detector	Ch-A		

8 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



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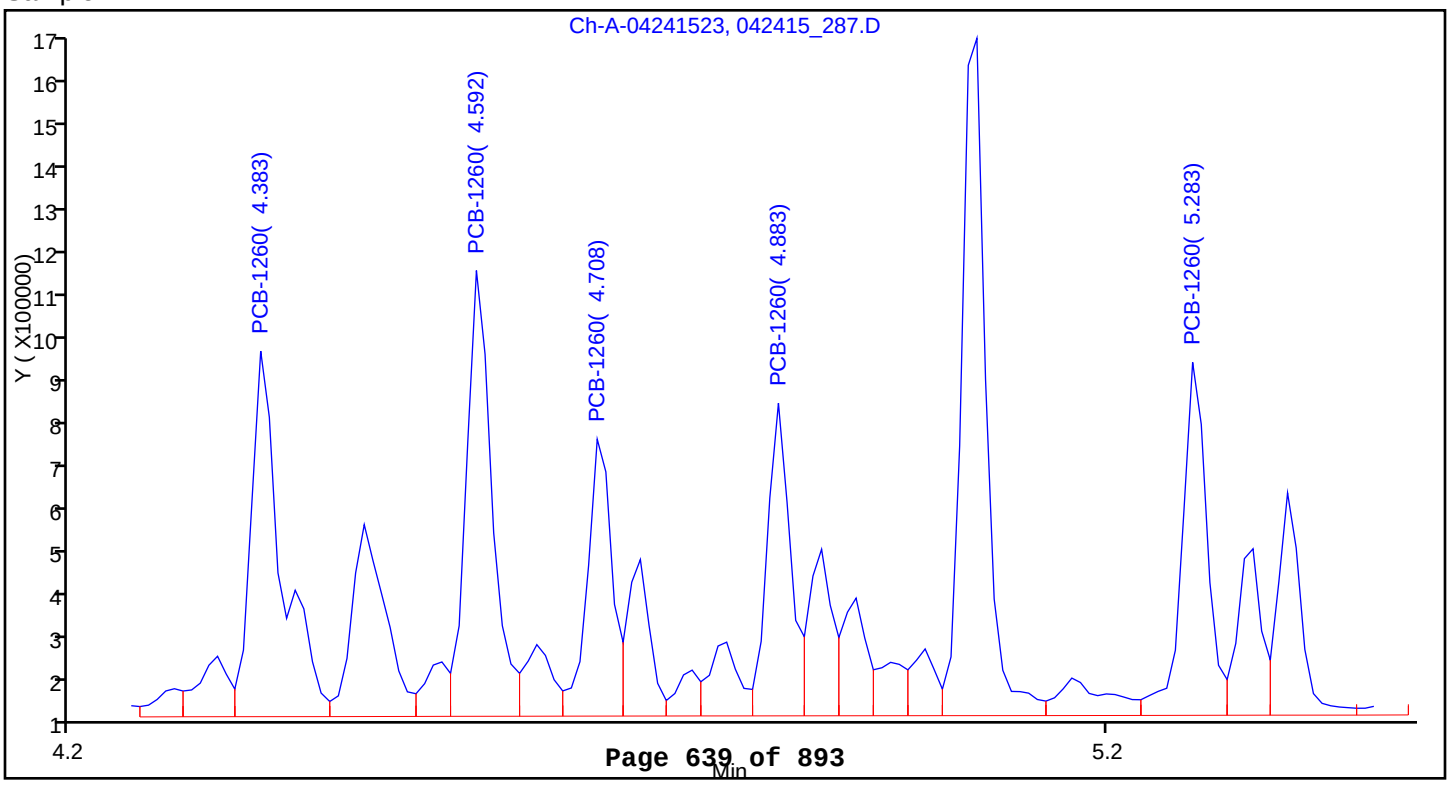

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: INST23-24 Start Date: 04/10/2015 08:36

Analysis Batch Number: 283260 End Date: 04/10/2015 11:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD16606 500-283260/1 IC		04/10/2015 08:36	1	040115_121.D	RTX-5 0.53(mm)
STD16606 500-283260/1 IC		04/10/2015 08:36	1		RTXCLP2 0.42(mm)
STD16605 500-283260/2 IC		04/10/2015 08:49	1	040115_122.D	RTX-5 0.53(mm)
STD16605 500-283260/2 IC		04/10/2015 08:49	1		RTXCLP2 0.42(mm)
STD16604 500-283260/3 ICRT		04/10/2015 09:03	1	040115_123.D	RTX-5 0.53(mm)
STD16604 500-283260/3 ICRT		04/10/2015 09:03	1		RTXCLP2 0.42(mm)
STD16603 500-283260/4 IC		04/10/2015 09:17	1	040115_124.D	RTX-5 0.53(mm)
STD16603 500-283260/4 IC		04/10/2015 09:17	1		RTXCLP2 0.42(mm)
STD16602 500-283260/5 IC		04/10/2015 09:31	1	040115_125.D	RTX-5 0.53(mm)
STD16602 500-283260/5 IC		04/10/2015 09:31	1		RTXCLP2 0.42(mm)
STD16601 500-283260/6 IC		04/10/2015 09:44	1	040115_126.D	RTX-5 0.53(mm)
STD16601 500-283260/6 IC		04/10/2015 09:44	1		RTXCLP2 0.42(mm)
STD12544 500-283260/7 IC		04/10/2015 09:58	1	040115_127.D	RTX-5 0.53(mm)
STD12544 500-283260/7 IC		04/10/2015 09:58	1		RTXCLP2 0.42(mm)
STD12484 500-283260/8 IC		04/10/2015 10:12	1	040115_128.D	RTX-5 0.53(mm)
STD12484 500-283260/8 IC		04/10/2015 10:12	1		RTXCLP2 0.42(mm)
STD12424 500-283260/9 IC		04/10/2015 10:25	1	040115_129.D	RTX-5 0.53(mm)
STD12424 500-283260/9 IC		04/10/2015 10:25	1		RTXCLP2 0.42(mm)
STD12324 500-283260/10 IC		04/10/2015 10:39	1	040115_130.D	RTX-5 0.53(mm)
STD12324 500-283260/10 IC		04/10/2015 10:39	1		RTXCLP2 0.42(mm)
STD12214 500-283260/11 IC		04/10/2015 10:53	1	040115_131.D	RTX-5 0.53(mm)
STD12214 500-283260/11 IC		04/10/2015 10:53	1		RTXCLP2 0.42(mm)
STD12684 500-283260/12 IC		04/10/2015 11:06	1		RTX-5 0.53(mm)
STD12684 500-283260/12 IC		04/10/2015 11:06	1		RTXCLP2 0.42(mm)
STD12624 500-283260/13 IC		04/10/2015 11:20	1		RTX-5 0.53(mm)
STD12624 500-283260/13 IC		04/10/2015 11:20	1		RTXCLP2 0.42(mm)
ICV 500-283260/14		04/10/2015 11:34	1	040115_134.D	RTX-5 0.53(mm)
ICV 500-283260/14		04/10/2015 11:34	1		RTXCLP2 0.42(mm)

8082

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: INST23-24 Start Date: 05/01/2015 01:02

Analysis Batch Number: 286255 End Date: 05/02/2015 07:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/01/2015 01:02	1		RTX-5 0.53(mm)
ZZZZZ		05/01/2015 01:02	1		RTXCLP2 0.42(mm)
ZZZZZ		05/01/2015 01:15	1		RTX-5 0.53(mm)
ZZZZZ		05/01/2015 01:15	1		RTXCLP2 0.42(mm)
ZZZZZ		05/01/2015 04:00	1		RTX-5 0.53(mm)
ZZZZZ		05/01/2015 04:00	1		RTXCLP2 0.42(mm)
CCV 500-286255/28		05/02/2015 00:11	1	042415_257.D	RTX-5 0.53(mm)
CCV 500-286255/28		05/02/2015 00:11	1		RTXCLP2 0.42(mm)
MB 500-286408/1-A		05/02/2015 00:25	1	042415_258.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 00:25	1		RTXCLP2 0.42(mm)
LCS 500-286408/2-A		05/02/2015 00:39	1	042415_259.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 00:39	1		RTXCLP2 0.42(mm)
CCV 500-286255/37		05/02/2015 02:14	1	042415_266.D	RTX-5 0.53(mm)
CCV 500-286255/37		05/02/2015 02:14	1		RTXCLP2 0.42(mm)
CCV 500-286255/45		05/02/2015 04:04	1	042415_274.D	RTX-5 0.53(mm)
CCV 500-286255/45		05/02/2015 04:04	1		RTXCLP2 0.42(mm)
500-95474-1	DS-1	05/02/2015 04:18	1	042415_275.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 04:18	1		RTXCLP2 0.42(mm)
500-95474-2	DS-2	05/02/2015 04:31	1	042415_276.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 04:31	1		RTXCLP2 0.42(mm)
500-95474-3	DS-3	05/02/2015 04:45	1	042415_277.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 04:45	1		RTXCLP2 0.42(mm)
500-95474-4	DS-4	05/02/2015 04:59	1	042415_278.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 04:59	1		RTXCLP2 0.42(mm)
500-95474-5	DS-5	05/02/2015 05:13	1	042415_279.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 05:13	1		RTXCLP2 0.42(mm)
500-95474-6	DS-6	05/02/2015 05:26	1	042415_280.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 05:26	1		RTXCLP2 0.42(mm)
500-95474-7	DS-7	05/02/2015 05:40	1	042415_281.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 05:40	1		RTXCLP2 0.42(mm)
500-95474-8	DS-8	05/02/2015 05:54	1	042415_282.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 05:54	1		RTXCLP2 0.42(mm)
500-95474-9	DS-9	05/02/2015 06:07	1	042415_283.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 06:07	1		RTXCLP2 0.42(mm)
CCV 500-286255/55		05/02/2015 06:21	1	042415_284.D	RTX-5 0.53(mm)
CCV 500-286255/55		05/02/2015 06:21	1		RTXCLP2 0.42(mm)
500-95474-10	DS-10	05/02/2015 06:34	1	042415_285.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 06:34	1		RTXCLP2 0.42(mm)
500-95474-10 MS	DS-10 MS	05/02/2015 06:48	1	042415_286.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 06:48	1		RTXCLP2 0.42(mm)
500-95474-10 MSD	DS-10 MSD	05/02/2015 07:02	1	042415_287.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 07:02	1		RTXCLP2 0.42(mm)
500-95474-11	DS-DUP	05/02/2015 07:16	1	042415_288.D	RTX-5 0.53(mm)
ZZZZZ		05/02/2015 07:16	1		RTXCLP2 0.42(mm)
CCV 500-286255/60		05/02/2015 07:29	1	042415_289.D	RTX-5 0.53(mm)

8082

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: INST23-24 Start Date: 05/01/2015 01:02

Analysis Batch Number: 286255 End Date: 05/02/2015 07:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 500-286255/60		05/02/2015 07:29	1		RTXCLP2 0.42(mm)

8082

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Batch Number: 286408 Batch Start Date: 05/01/15 16:26 Batch Analyst: Allen, Deavon E

Batch Method: 3541 Batch End Date: 05/01/15 19:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	SoxThermPosition	EXCPPSUW 00786	EXPCBSPW66 00130	
MB 500-286408/1		3541, 8082		15.0000 g	5.0 mL	37	500 uL		
LCS 500-286408/2		3541, 8082		15.0000 g	5.0 mL	38	500 uL	500 uL	
500-95474-B-1	DS-1	3541, 8082	T	15.0722 g	5.0 mL	39	500 uL		
500-95474-A-2	DS-2	3541, 8082	T	15.3794 g	5.0 mL	40	500 uL		
500-95474-B-3	DS-3	3541, 8082	T	15.1852 g	5.0 mL	41	500 uL		
500-95474-A-4	DS-4	3541, 8082	T	15.5144 g	5.0 mL	42	500 uL		
500-95474-B-5	DS-5	3541, 8082	T	15.1919 g	5.0 mL	43	500 uL		
500-95474-A-6	DS-6	3541, 8082	T	15.1254 g	5.0 mL	44	500 uL		
500-95474-B-7	DS-7	3541, 8082	T	15.7212 g	5.0 mL	45	500 uL		
500-95474-A-8	DS-8	3541, 8082	T	15.4312 g	5.0 mL	46	500 uL		
500-95474-B-9	DS-9	3541, 8082	T	15.6015 g	5.0 mL	47	500 uL		
500-95474-A-10	DS-10	3541, 8082	T	15.9733 g	5.0 mL	48	500 uL		
500-95474-A-10 MS	DS-10	3541, 8082	T	15.0151 g	5.0 mL	49	500 uL	500 uL	
500-95474-B-10 MSD	DS-10	3541, 8082	T	15.5635 g	5.0 mL	50	500 uL	500 uL	
500-95474-B-11	DS-DUP	3541, 8082	T	15.7512 g	5.0 mL	51	500 uL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Batch Number: 286408 Batch Start Date: 05/01/15 16:26 Batch Analyst: Allen, Deavon E

Batch Method: 3541 Batch End Date: 05/01/15 19:00

Batch Notes	
Acid used for Clean Up Reagent	3230208
Concentration End Time	2145
Concentration Start Time	1930
Person's name who did the concentration	LK
First End time	19:00
Exchange Solvent Lot #	3194966
Exchange Solvent Name	Hexane
Glass Wool ID	3099917
Vendor lot number	3194966/3191471
N-evap #	C-2091
N-evap temperature	29.8 Degrees C
Na2SO4 Lot Number	3229878
Person's name who did the prep	DA LK JP
Solvent	Hexane/Acetone
Soxtherm Temperature	137.5 135.9 136.2 136.4
Soxtherm Unit	C 2292 C 2293 C 2497 C 2498
First Start time	16:26
Syringe Lot #	A43 A47
ID number of the thermometer	C 2484
Uncorrected N-evap Temperature	30 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Chicago Job Number: 500-95474-1

SDG No.: 15-07.01

Project: Habitat/Dragoo Phase II

Client Sample ID	Lab Sample ID
DS-1	500-95474-1
DS-2	500-95474-2
DS-3	500-95474-3
DS-4	500-95474-4
DS-5	500-95474-5
DS-6	500-95474-6
DS-7	500-95474-7
DS-8	500-95474-8
DS-9	500-95474-9
DS-10	500-95474-10
DS-DUP	500-95474-11

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-1

Lab Sample ID: 500-95474-1

Lab Name: TestAmerica Chicago

Job No.: 500-95474-1

SDG ID.: 15-07.01

Matrix: Solid

Date Sampled: 04/30/2015 14:20

Reporting Basis: DRY

Date Received: 05/01/2015 10:15

% Solids: 76.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	7.9	1.3		mg/Kg			1	6010B
7440-39-3	Barium	100	1.3		mg/Kg			1	6010B
7440-43-9	Cadmium	0.33	0.26		mg/Kg			1	6010B
7440-47-3	Chromium	17	1.3		mg/Kg			1	6010B
7439-92-1	Lead	24	0.64		mg/Kg			1	6010B
7782-49-2	Selenium	<1.3	1.3		mg/Kg			1	6010B
7440-22-4	Silver	<0.64	0.64		mg/Kg			1	6010B
7439-97-6	Mercury	0.053	0.022		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-2

Lab Sample ID: 500-95474-2

Lab Name: TestAmerica Chicago

Job No.: 500-95474-1

SDG ID.: 15-07.01

Matrix: Solid

Date Sampled: 04/30/2015 14:30

Reporting Basis: DRY

Date Received: 05/01/2015 10:15

% Solids: 77.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	7.4	1.3		mg/Kg			1	6010B
7440-39-3	Barium	89	1.3		mg/Kg			1	6010B
7440-43-9	Cadmium	0.27	0.26		mg/Kg			1	6010B
7440-47-3	Chromium	16	1.3		mg/Kg			1	6010B
7439-92-1	Lead	22	0.64		mg/Kg			1	6010B
7782-49-2	Selenium	<1.3	1.3		mg/Kg			1	6010B
7440-22-4	Silver	<0.64	0.64		mg/Kg			1	6010B
7439-97-6	Mercury	0.047	0.019		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-3
Lab Sample ID: 500-95474-3
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG ID.: 15-07.01
Matrix: Solid
Date Sampled: 04/30/2015 14:35
Reporting Basis: DRY
Date Received: 05/01/2015 10:15
% Solids: 75.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	6.6	1.2		mg/Kg			1	6010B
7440-39-3	Barium	91	1.2		mg/Kg			1	6010B
7440-43-9	Cadmium	0.25	0.25		mg/Kg			1	6010B
7440-47-3	Chromium	16	1.2		mg/Kg			1	6010B
7439-92-1	Lead	17	0.62		mg/Kg			1	6010B
7782-49-2	Selenium	<1.2	1.2		mg/Kg			1	6010B
7440-22-4	Silver	<0.62	0.62		mg/Kg			1	6010B
7439-97-6	Mercury	0.044	0.020		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-4
Lab Sample ID: 500-95474-4
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG ID.: 15-07.01
Matrix: Solid
Date Sampled: 04/30/2015 14:45
Reporting Basis: DRY
Date Received: 05/01/2015 10:15
% Solids: 81.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	6.9	1.1		mg/Kg			1	6010B
7440-39-3	Barium	94	1.1		mg/Kg			1	6010B
7440-43-9	Cadmium	0.25	0.22		mg/Kg			1	6010B
7440-47-3	Chromium	17	1.1		mg/Kg			1	6010B
7439-92-1	Lead	26	0.55		mg/Kg			1	6010B
7782-49-2	Selenium	<1.1	1.1		mg/Kg			1	6010B
7440-22-4	Silver	<0.55	0.55		mg/Kg			1	6010B
7439-97-6	Mercury	0.044	0.018		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-5
Lab Sample ID: 500-95474-5
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG ID.: 15-07.01
Matrix: Solid
Date Sampled: 04/30/2015 15:05
Reporting Basis: DRY
Date Received: 05/01/2015 10:15
% Solids: 79.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	8.9	1.2		mg/Kg			1	6010B
7440-39-3	Barium	100	1.2		mg/Kg			1	6010B
7440-43-9	Cadmium	0.28	0.23		mg/Kg			1	6010B
7440-47-3	Chromium	27	1.2		mg/Kg			1	6010B
7439-92-1	Lead	33	0.58		mg/Kg			1	6010B
7782-49-2	Selenium	<1.2	1.2		mg/Kg			1	6010B
7440-22-4	Silver	<0.58	0.58		mg/Kg			1	6010B
7439-97-6	Mercury	0.046	0.019		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-6

Lab Sample ID: 500-95474-6

Lab Name: TestAmerica Chicago

Job No.: 500-95474-1

SDG ID.: 15-07.01

Matrix: Solid

Date Sampled: 04/30/2015 15:15

Reporting Basis: DRY

Date Received: 05/01/2015 10:15

% Solids: 78.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	7.8	1.2		mg/Kg			1	6010B
7440-39-3	Barium	96	1.2		mg/Kg			1	6010B
7440-43-9	Cadmium	0.26	0.25		mg/Kg			1	6010B
7440-47-3	Chromium	20	1.2		mg/Kg			1	6010B
7439-92-1	Lead	23	0.62		mg/Kg			1	6010B
7782-49-2	Selenium	<1.2	1.2		mg/Kg			1	6010B
7440-22-4	Silver	<0.62	0.62		mg/Kg			1	6010B
7439-97-6	Mercury	0.049	0.020		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-7

Lab Sample ID: 500-95474-7

Lab Name: TestAmerica Chicago

Job No.: 500-95474-1

SDG ID.: 15-07.01

Matrix: Solid

Date Sampled: 04/30/2015 15:25

Reporting Basis: DRY

Date Received: 05/01/2015 10:15

% Solids: 78.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	7.0	1.1		mg/Kg			1	6010B
7440-39-3	Barium	92	1.1		mg/Kg			1	6010B
7440-43-9	Cadmium	<0.23	0.23		mg/Kg			1	6010B
7440-47-3	Chromium	16	1.1		mg/Kg			1	6010B
7439-92-1	Lead	20	0.57		mg/Kg			1	6010B
7782-49-2	Selenium	<1.1	1.1		mg/Kg			1	6010B
7440-22-4	Silver	<0.57	0.57		mg/Kg			1	6010B
7439-97-6	Mercury	0.043	0.019		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-8
Lab Sample ID: 500-95474-8
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG ID.: 15-07.01
Matrix: Solid
Date Sampled: 04/30/2015 15:45
Reporting Basis: DRY
Date Received: 05/01/2015 10:15
% Solids: 79.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	7.4	1.2		mg/Kg			1	6010B
7440-39-3	Barium	92	1.2		mg/Kg			1	6010B
7440-43-9	Cadmium	0.25	0.24		mg/Kg			1	6010B
7440-47-3	Chromium	23	1.2		mg/Kg			1	6010B
7439-92-1	Lead	21	0.60		mg/Kg			1	6010B
7782-49-2	Selenium	<1.2	1.2		mg/Kg			1	6010B
7440-22-4	Silver	<0.60	0.60		mg/Kg			1	6010B
7439-97-6	Mercury	0.049	0.019		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-9
Lab Sample ID: 500-95474-9
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG ID.: 15-07.01
Matrix: Solid
Date Sampled: 04/30/2015 15:50
Reporting Basis: DRY
Date Received: 05/01/2015 10:15
% Solids: 78.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	6.9	1.1		mg/Kg			1	6010B
7440-39-3	Barium	92	1.1		mg/Kg			1	6010B
7440-43-9	Cadmium	0.26	0.22		mg/Kg			1	6010B
7440-47-3	Chromium	17	1.1		mg/Kg			1	6010B
7439-92-1	Lead	21	0.54		mg/Kg			1	6010B
7782-49-2	Selenium	<1.1	1.1		mg/Kg			1	6010B
7440-22-4	Silver	<0.54	0.54		mg/Kg			1	6010B
7439-97-6	Mercury	0.046	0.018		mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-10
Lab Sample ID: 500-95474-10
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG ID.: 15-07.01
Matrix: Solid
Date Sampled: 04/30/2015 16:05
Reporting Basis: DRY
Date Received: 05/01/2015 10:15
% Solids: 78.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	6.8	1.2		mg/Kg		F1 F2	1	6010B
7440-39-3	Barium	91	1.2		mg/Kg		V	1	6010B
7440-43-9	Cadmium	0.28	0.25		mg/Kg			1	6010B
7440-47-3	Chromium	16	1.2		mg/Kg		F1 F2 V	1	6010B
7439-92-1	Lead	20	0.62		mg/Kg			1	6010B
7782-49-2	Selenium	<1.2	1.2		mg/Kg		F1	1	6010B
7440-22-4	Silver	<0.62	0.62		mg/Kg			1	6010B
7439-97-6	Mercury	0.041	0.021		mg/Kg		F1	1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DS-DUP
Lab Sample ID: 500-95474-11
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG ID.: 15-07.01
Matrix: Solid
Date Sampled: 04/30/2015 00:00
Reporting Basis: DRY
Date Received: 05/01/2015 10:15
% Solids: 75.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	8.0	1.1		mg/Kg			1	6010B
7440-39-3	Barium	98	1.1		mg/Kg			1	6010B
7440-43-9	Cadmium	0.31	0.23		mg/Kg			1	6010B
7440-47-3	Chromium	18	1.1		mg/Kg			1	6010B
7439-92-1	Lead	25	0.57		mg/Kg			1	6010B
7782-49-2	Selenium	1.1	1.1		mg/Kg			1	6010B
7440-22-4	Silver	<0.57	0.57		mg/Kg			1	6010B
7439-97-6	Mercury	0.063	0.021		mg/Kg			1	7471B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

ICV Source: M15CICVIC_00001 Concentration Units: mg/L

CCV Source: M15DCCVIC_00002

Analyte	ICV 500-286672/6 05/04/2015 17:43				CCV 500-286672/39 05/04/2015 20:01				CCV 500-286672/51 05/04/2015 20:53			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.410		0.400	102	0.507		0.500	101	0.518		0.500	104
Barium	0.407		0.400	102	0.470		0.500	94	0.471		0.500	94
Cadmium	0.405		0.400	101	0.499		0.500	100	0.513		0.500	103
Chromium	0.399		0.400	100	0.507		0.500	101	0.520		0.500	104
Lead	0.415		0.400	104	0.519		0.500	104	0.531		0.500	106
Selenium	0.394		0.400	99	0.467		0.500	93	0.476		0.500	95
Silver	0.393		0.400	98	0.490		0.500	98	0.500		0.500	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

ICV Source: M15CICVIC_00001 Concentration Units: mg/L

CCV Source: M15DCCVIC_00002

Analyte	CCV 500-286672/63 05/04/2015 21:47				CCV 500-286672/75 05/04/2015 22:39				CCV 500-286672/78 05/04/2015 22:51			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.513		0.500	103	0.522		0.500	104	0.518		0.500	104
Barium	0.453		0.500	91	0.459		0.500	92	0.454		0.500	91
Cadmium	0.511		0.500	102	0.516		0.500	103	0.512		0.500	102
Chromium	0.509		0.500	102	0.516		0.500	103	0.517		0.500	103
Lead	0.528		0.500	106	0.528		0.500	106	0.527		0.500	105
Selenium	0.468		0.500	94	0.473		0.500	95	0.469		0.500	94
Silver	0.491		0.500	98	0.499		0.500	100	0.494		0.500	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

ICV Source: M11FSTKHG_00001 Concentration Units: ug/L

CCV Source: M11FSTKHG_00001

Analyte	ICV 500-286742/7 05/05/2015 09:35				CCV 500-286742/19 05/05/2015 10:01				CCV 500-286742/31 05/05/2015 10:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.14		2.00	107	1.01		1.00	101	1.04		1.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Method: 6010B Instrument ID: ICP6

Lab Sample ID: CRI 500-286672/9 Concentration Units: mg/L

CRQL Check Standard Source: M15CCRIIC_00001

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Arsenic	0.0200	0.0192		96	50-150
Barium	0.0200	0.0208		104	50-150
Cadmium	0.00400	0.00449		112	50-150
Chromium	0.0200	0.0209		105	50-150
Lead	0.0100	0.00903		90	50-150
Selenium	0.0200	0.0216		108	50-150
Silver	0.0100	0.0105		105	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Method: 7471B Instrument ID: HG5

Lab Sample ID: CRA 500-286742/9 Concentration Units: ug/L

CRQL Check Standard Source: M15BSTKHG_00001

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.185	J	93	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Concentration Units: mg/L

Analyte	RL	ICBIS 500-286672/7 05/04/2015 17:47		CCB 500-286672/40 05/04/2015 20:05		CCB 500-286672/52 05/04/2015 20:56		CCB 500-286672/64 05/04/2015 21:51	
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.010	<0.010		<0.010		<0.010		<0.010	
Barium	0.010	<0.010		<0.010		<0.010		<0.010	
Cadmium	0.0020	<0.0020		<0.0020		<0.0020		<0.0020	
Chromium	0.010	<0.010		<0.010		<0.010		<0.010	
Lead	0.0050	<0.0050		<0.0050		<0.0050		<0.0050	
Selenium	0.010	<0.010		<0.010		<0.010		<0.010	
Silver	0.0050	<0.0050		<0.0050		<0.0050		<0.0050	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Concentration Units: mg/L

Analyte	RL	CCB 500-286672/76 05/04/2015 22:43		CCB 500-286672/79 05/04/2015 22:55					
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.010	<0.010		<0.010					
Barium	0.010	<0.010		<0.010					
Cadmium	0.0020	<0.0020		<0.0020					
Chromium	0.010	<0.010		<0.010					
Lead	0.0050	<0.0050		<0.0050					
Selenium	0.010	<0.010		<0.010					
Silver	0.0050	<0.0050		<0.0050					

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Concentration Units: ug/L

Analyte	RL	ICB 500-286742/8 05/05/2015 09:37		CCB 500-286742/20 05/05/2015 10:03		CCB 500-286742/32 05/05/2015 10:28			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	<0.20		<0.20		<0.20			

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Concentration Units: mg/Kg Lab Sample ID: MB 500-286488/1-A

Instrument Code: ICP6 Batch No.: 286672

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	<1.0			6010B
7440-39-3	Barium	<1.0			6010B
7440-43-9	Cadmium	<0.20			6010B
7440-47-3	Chromium	<1.0			6010B
7439-92-1	Lead	<0.50			6010B
7782-49-2	Selenium	<1.0			6010B
7440-22-4	Silver	<0.50			6010B

FORM III-IN

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Concentration Units: mg/Kg Lab Sample ID: MB 500-286609/12-A

Instrument Code: HG5 Batch No.: 286742

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	<0.017			7471B

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: ICSA 500-286672/10 Instrument ID: ICP6

Lab File ID: P6050415B.asc ICS Source: M15CISAIC_00003

Concentration Units: mg/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**-0.0011**	
Barium		**0.0005**	
Cadmium		**-0.0005**	
Chromium		**0.0016**	
Lead		**-0.0050**	
Selenium		**0.0069**	
Silver		**0.0010**	
Aluminum	*500*	*519*	*104*
Antimony		*-0.0026*	
Beryllium		*0.0004*	
Bismuth		*-0.0052*	
Boron		*-0.0018*	
Calcium	*500*	*499*	*100*
Cobalt		*-0.0031*	
Copper		*0.0024*	
Iron	*200*	*198*	*99*
Li		*0.0031*	
Magnesium	*500*	*535*	*107*
Manganese		*-0.0003*	
Molybdenum		*0.0020*	
Nickel		*-0.0011*	
Potassium		*-0.0069*	
Silicon		*0.0018*	
Sodium		*0.0139*	
Strontium		*0.0046*	
Thallium		*0.0032*	
Tin		*0.0059*	
Titanium		*0.0009*	
Total Heavy Metals		*0.0000*	
Vanadium		*-0.0029*	
Zinc		*0.0026*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Lab Sample ID: ICSAB 500-286672/11 Instrument ID: ICP6

Lab File ID: P6050415B.asc ICS Source: M15CISBIC_00002

Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Arsenic	**0.100**	**0.103**	**103**
Barium	**0.500**	**0.506**	**101**
Cadmium	**1.00**	**1.00**	**100**
Chromium	**0.500**	**0.479**	**96**
Lead	**0.0500**	**0.0497**	**99**
Selenium	**0.0500**	**0.0546**	**109**
Silver	**0.200**	**0.207**	**104**
Aluminum	*500*	*516*	*103*
Antimony	*0.600*	*0.593*	*99*
Beryllium	*0.500*	*0.552*	*110*
Bismuth		*-0.0077*	
Boron		*-0.0018*	
Calcium	*500*	*500*	*100*
Cobalt	*0.500*	*0.527*	*105*
Copper	*0.500*	*0.547*	*109*
Iron	*200*	*198*	*99*
Li		*0.0030*	
Magnesium	*500*	*533*	*107*
Manganese	*0.500*	*0.503*	*101*
Molybdenum		*0.0021*	
Nickel	*1.00*	*1.02*	*102*
Potassium		*-0.0468*	
Silicon		*0.0010*	
Sodium		*0.0116*	
Strontium		*0.0046*	
Thallium	*0.100*	*0.0933*	*93*
Tin		*0.0034*	
Titanium		*0.0011*	
Total Heavy Metals	*4.05*	*4.13*	*102*
Vanadium	*0.500*	*0.486*	*97*
Zinc	*1.00*	*1.03*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: DS-10 MS
Lab ID: 500-95474-10 MS
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG No.: 15-07.01
Matrix: Solid
Concentration Units: mg/Kg
% Solids: 78.3

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	26.4		6.8		12.8	154	75-125	F1	6010B
Barium	328		91		255	93	75-125		6010B
Cadmium	6.00		0.28		6.38	90	75-125		6010B
Chromium	52.4		16		25.5	142	75-125	F1	6010B
Lead	35.9		20		12.8	120	75-125		6010B
Selenium	10.0		<1.2		12.8	72	75-125	F1	6010B
Silver	5.39		<0.62		6.38	84	75-125		6010B
Mercury	0.162		0.041		0.0969	124	80-120	F1	7471B

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: DS-10 MSD
Lab ID: 500-95474-10 MSD
Lab Name: TestAmerica Chicago
Job No.: 500-95474-1
SDG No.: 15-07.01
Matrix: Solid
Concentration Units: mg/Kg
% Solids: 78.3

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	16.9		11.4	89	75-125	44	20	F2	6010B
Barium	299		228	91	75-125	9	20		6010B
Cadmium	5.19		5.70	86	75-125	14	20		6010B
Chromium	41.1		22.8	110	75-125	24	20	F2	6010B
Lead	32.7		11.4	107	75-125	9	20		6010B
Selenium	9.14		11.4	72	75-125	9	20	F1	6010B
Silver	4.70		5.70	82	75-125	14	20		6010B
Mercury	0.169		0.106	120	80-120	4	20		7471B

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VD - IN

6-IN
DUPLICATES
METALS

Client ID: DS-10 DU

Lab ID: 500-95474-10 DU

Lab Name: TestAmerica Chicago

Job No.: 500-95474-1

SDG No.: 15-07.01

% Solids for Sample: 78.3

% Solids for Duplicate: 78.3

Matrix: Solid

Concentration Units: mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	1.3	6.8		7.03		4		6010B
Barium	1.3	91		93.7		3		6010B
Cadmium	0.25	0.28		0.262		6		6010B
Chromium	1.3	16		17.6		9		6010B
Lead	0.64	20		20.6		0.5		6010B
Selenium	1.3	<1.2		<1.3		NC		6010B
Silver	0.64	<0.62		<0.64		NC		6010B
Mercury	0.019	0.041		0.0478		14		7471B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 500-286488/2-A

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

Sample Matrix: Solid LCS Source: M15DSPKIC_00002

Analyte	Solid(mg/Kg)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	10.0	10.2		102	80	120		6010B
Barium	200	199		99	80	120		6010B
Cadmium	5.00	5.17		103	80	120		6010B
Chromium	20.0	21.2		106	80	120		6010B
Lead	10.0	10.4		104	80	120		6010B
Selenium	10.0	8.79		88	80	120		6010B
Silver	5.00	4.93		99	80	120		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 500-286609/13-A

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

Sample Matrix: Solid LCS Source: M11FSTKHG_00001

Analyte	Solid(mg/Kg)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.167	0.174		104	80	120		7471B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 500-95474-10

SDG No: 15-07.01

Lab Name: TestAmerica Chicago Job No: 500-95474-1

Matrix: Solid Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	6.8		6.85		NC		6010B
Barium	91		103		13	V	6010B
Cadmium	0.28		<1.2		NC		6010B
Chromium	16		18.7		16	V	6010B
Lead	20		20.8		1.6		6010B
Selenium	<1.2		<6.2		NC		6010B
Silver	<0.62		<3.1		NC		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Chicago Job Number: 500-95474-1

SDG Number: 15-07.01

Matrix: Solid Instrument ID: ICP6

Method: 6010B MDL Date: 01/09/2015 09:10

Prep Method: 3050B

Analyte	Wavelength/ Mass	RL (mg/Kg)	MDL (mg/Kg)
Arsenic		1	0.462
Barium		1	0.183
Cadmium		0.2	0.0579
Chromium		1	0.172
Lead		0.5	0.249
Selenium		1	0.495
Silver		0.5	0.117

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Chicago Job Number: 500-95474-1

SDG Number: 15-07.01

Matrix: Solid Instrument ID: ICP6

Method: 6010B XMDL Date: 05/25/2006 09:03

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Arsenic		0.01	0.005
Barium		0.01	0.005
Cadmium		0.002	0.001
Chromium		0.01	0.005
Lead		0.005	0.0025
Selenium		0.01	0.005
Silver		0.005	0.0025

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Chicago Job Number: 500-95474-1

SDG Number: 15-07.01

Matrix: Solid Instrument ID: HG5

Method: 7471B MDL Date: 01/16/2015 07:17

Prep Method: 7471B

Analyte	Wavelength/ Mass	RL (ug/Kg)	MDL (ug/Kg)
Mercury		16.7	5.83

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Chicago Job Number: 500-95474-1

SDG Number: 15-07.01

Matrix: Solid Instrument ID: HG5

Method: 7471B XMDL Date: 01/16/2015 07:16

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.0611

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Chicago Job Number: 500-95474-1

SDG No.: 15-07.01

ICP-AES Instrument ID: ICP6 Date: 04/30/2015

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Aluminum															
Antimony			0.000010									0.015204		0.000013	
Arsenic			0.000002									-0.000899		-0.000004	
Barium															
Beryllium														0.000007	
Bismuth														0.000043	
Boron															
Cadmium				0.004283		-0.000232								0.000009	
Calcium															
Chromium															
Cobalt						-0.000350						-0.000258		0.000011	
Copper															
Iron											0.074102				
Lead			-0.000052										0.001208	0.000052	
Lithium															
Magnesium														-0.000289	
Manganese														0.000010	
Molybdenum			-0.000011											-0.000015	
Nickel														0.000037	
Potassium															
Selenium			-0.000033											0.000007	
Silicon															
Silver														-0.000001	
Sodium															
Strontium															
Thallium			-0.000010								0.001123			0.000004	
Tin															
Titanium									-0.000007						
Vanadium														0.000047	
Zinc			-0.000005									-0.000534			

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Chicago Job Number: 500-95474-1

SDG No.: 15-07.01

ICP-AES Instrument ID: ICP6 Date: 04/30/2015

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl
Aluminum					0.007252										
Antimony														-0.002346	
Arsenic					-0.000257										
Barium															
Beryllium															
Bismuth														-0.007347	
Boron					0.033439										
Cadmium															
Calcium															
Chromium															
Cobalt														0.002231	
Copper															
Iron															
Lead					-0.000892						0.000095				
Lithium															
Magnesium				-0.003611	-0.006776										
Manganese															
Molybdenum															
Nickel															
Potassium															
Selenium															
Silicon					0.014343										
Silver															
Sodium															
Strontium															
Thallium														-0.001267	
Tin															
Titanium															
Vanadium					-0.001868									0.000604	
Zinc															

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Chicago Job Number: 500-95474-1

SDG No.: 15-07.01

ICP-AES Instrument ID: ICP6 Date: 04/30/2015

Analyte	Wave Length	V	Zn												
Aluminum		0.225109													
Antimony		-0.001068													
Arsenic															
Barium															
Beryllium															
Bismuth															
Boron															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron		0.007569													
Lead															
Lithium															
Magnesium															
Manganese															
Molybdenum															
Nickel															
Potassium															
Selenium															
Silicon															
Silver															
Sodium															
Strontium															
Thallium		-0.000102													
Tin															
Titanium															
Vanadium															
Zinc															

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Chicago Job No: 500-95474-1

SDG No.: 15-07.01

Instrument ID: ICP6 Date: 01/14/2015 13:36

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Arsenic		20	6010B
Barium		20	6010B
Cadmium		10	6010B
Chromium		20	6010B
Lead		100	6010B
Selenium		20	6010B
Silver		10	6010B

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Prep Method: 3050B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 500-286488/1-A	05/03/2015 18:08	286488	1		100
LCS 500-286488/2-A	05/03/2015 18:08	286488	1		100
500-95474-1	05/03/2015 18:08	286488	1.0262		100
500-95474-2	05/03/2015 18:08	286488	1.0015		100
500-95474-3	05/03/2015 18:08	286488	1.0646		100
500-95474-4	05/03/2015 18:08	286488	1.1126		100
500-95474-5	05/03/2015 18:08	286488	1.0839		100
500-95474-6	05/03/2015 18:08	286488	1.0179		100
500-95474-7	05/03/2015 18:08	286488	1.1182		100
500-95474-8	05/03/2015 18:08	286488	1.0468		100
500-95474-9	05/03/2015 18:08	286488	1.1790		100
500-95474-10	05/03/2015 18:08	286488	1.0278		100
500-95474-10 DU	05/03/2015 18:08	286488	1.0028		100
500-95474-10 MS	05/03/2015 18:08	286488	1.0011		100
500-95474-10 MSD	05/03/2015 18:08	286488	1.1208		100
500-95474-11	05/03/2015 18:08	286488	1.1642		100

FORM XII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Prep Method: 7471B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 500-286609/12-A	05/04/2015 14:00	286609	0.6		50
LCS 500-286609/13-A	05/04/2015 14:00	286609	0.6		50
500-95474-1	05/04/2015 14:00	286609	0.6087		50
500-95474-2	05/04/2015 14:00	286609	0.6877		50
500-95474-3	05/04/2015 14:00	286609	0.6507		50
500-95474-4	05/04/2015 14:00	286609	0.6692		50
500-95474-5	05/04/2015 14:00	286609	0.6688		50
500-95474-6	05/04/2015 14:00	286609	0.6487		50
500-95474-7	05/04/2015 14:00	286609	0.6839		50
500-95474-8	05/04/2015 14:00	286609	0.6635		50
500-95474-9	05/04/2015 14:00	286609	0.6995		50
500-95474-10	05/04/2015 14:00	286609	0.6194		50
500-95474-10 DU	05/04/2015 14:00	286609	0.6797		50
500-95474-10 MS	05/04/2015 14:00	286609	0.6588		50
500-95474-10 MSD	05/04/2015 14:00	286609	0.6003		50
500-95474-11	05/04/2015 14:00	286609	0.6352		50

FORM XII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: ICP6 Method: 6010B

Start Date: 05/04/2015 17:23 End Date: 05/04/2015 23:02

Lab Sample ID	D/F	Type	Time	Analytes																			
				Ag	As	Ba	Cd	Cr	Pb	Se													
ZZZZZZ			17:23																				
ZZZZZZ			17:27																				
ZZZZZZ			17:31																				
ZZZZZZ			17:35																				
ZZZZZZ			17:39																				
ICV 500-286672/6	1		17:43	X	X	X	X	X	X	X													
ICBIS 500-286672/7	1		17:47	X	X	X	X	X	X	X													
ICVL 500-286672/8			17:51																				
CRI 500-286672/9	1		17:55	X	X	X	X	X	X	X													
ICSA 500-286672/10	1		17:59	X	X	X	X	X	X	X													
ICSAB 500-286672/11	1		18:04	X	X	X	X	X	X	X													
CCV 500-286672/12			18:09																				
CCB 500-286672/13			18:13																				
ZZZZZZ			18:17																				
ZZZZZZ			18:22																				
ZZZZZZ			18:27																				
ZZZZZZ			18:31																				
ZZZZZZ			18:35																				
ZZZZZZ			18:39																				
ZZZZZZ			18:43																				
ZZZZZZ			18:47																				
ZZZZZZ			18:51																				
ZZZZZZ			18:55																				
ZZZZZZ			19:00																				
ZZZZZZ			19:04																				
ZZZZZZ			19:08																				
CCV 500-286672/27			19:12																				
CCB 500-286672/28			19:16																				
ZZZZZZ			19:20																				
ZZZZZZ			19:24																				
ZZZZZZ			19:28																				
ZZZZZZ			19:32																				
ZZZZZZ			19:36																				
ZZZZZZ			19:40																				
ZZZZZZ			19:44																				
ZZZZZZ			19:49																				
ZZZZZZ			19:53																				
ZZZZZZ			19:57																				
CCV 500-286672/39	1		20:01	X	X	X	X	X	X	X													
CCB 500-286672/40	1		20:05	X	X	X	X	X	X	X													
ZZZZZZ			20:08																				
ZZZZZZ			20:12																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: ICP6 Method: 6010B

Start Date: 05/04/2015 17:23 End Date: 05/04/2015 23:02

Lab Sample ID	D/F	Type	Time	Analytes																			
				Ag	As	Ba	Cd	Cr	Pb	Se													
ZZZZZZ			20:16																				
ZZZZZZ			20:20																				
ZZZZZZ			20:24																				
MB 500-286488/1-A	1	T	20:29	X	X	X	X	X	X	X													
LCS 500-286488/2-A	1	T	20:34	X	X	X	X	X	X	X													
500-95474-1	1	T	20:38	X	X	X	X	X	X	X													
ZZZZZZ			20:42																				
ZZZZZZ			20:48																				
CCV 500-286672/51	1		20:53	X	X	X	X	X	X	X													
CCB 500-286672/52	1		20:56	X	X	X	X	X	X	X													
500-95474-4	1	T	21:00	X	X	X	X	X	X	X													
500-95474-5	1	T	21:05	X	X	X	X	X	X	X													
500-95474-6	1	T	21:09	X	X	X	X	X	X	X													
500-95474-7	1	T	21:14	X	X	X	X	X	X	X													
500-95474-8	1	T	21:19	X	X	X	X	X	X	X													
500-95474-9	1	T	21:24	X	X	X	X	X	X	X													
500-95474-10	1	T	21:29	X	X	X	X	X	X	X													
500-95474-10 SD	5	T	21:34	X	X	X	X	X	X	X													
500-95474-10 DU	1	T	21:38	X	X	X	X	X	X	X													
500-95474-10 MS	1	T	21:42	X	X	X	X	X	X	X													
CCV 500-286672/63	1		21:47	X	X	X	X	X	X	X													
CCB 500-286672/64	1		21:51	X	X	X	X	X	X	X													
500-95474-10 MSD	1	T	21:54	X	X	X	X	X	X	X													
500-95474-11	1	T	21:59	X	X	X	X	X	X	X													
ZZZZZZ			22:04																				
ZZZZZZ			22:08																				
ZZZZZZ			22:12																				
ZZZZZZ			22:16																				
ZZZZZZ			22:20																				
ZZZZZZ			22:25																				
ZZZZZZ			22:30																				
500-95474-2	1	T	22:35	X	X	X	X	X	X	X													
CCV 500-286672/75	1		22:39	X	X	X	X	X	X	X													
CCB 500-286672/76	1		22:43	X	X	X	X	X	X	X													
500-95474-3	1	T	22:47	X	X	X	X	X	X	X													
CCV 500-286672/78	1		22:51	X	X	X	X	X	X	X													
CCB 500-286672/79	1		22:55	X	X	X	X	X	X	X													
ZZZZZZ			22:58																				
CCVL 500-286672/81			23:02																				

Prep Types

T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: HG5 Method: 7471B

Start Date: 05/05/2015 09:13 End Date: 05/05/2015 11:13

Lab Sample ID	D/F	Type	Time	Analytes																			
				Hg																			
STD01REP1 500-286742/1 IC			09:13	X																			
STD02REP1 500-286742/2 IC			09:15	X																			
STD03REP1 500-286742/3 IC			09:17	X																			
STD04REP1 500-286742/4 IC			09:19	X																			
STD05REP1 500-286742/5 IC			09:21	X																			
STD06REP1 500-286742/6 IC			09:23	X																			
ICV 500-286742/7	1		09:35	X																			
ICB 500-286742/8	1		09:37	X																			
CRA 500-286742/9	1		09:39	X																			
MB 500-286609/12-A	1	T	09:41	X																			
LCS 500-286609/13-A	1	T	09:43	X																			
ZZZZZZ			09:45																				
500-95474-1	1	T	09:47	X																			
500-95474-2	1	T	09:49	X																			
500-95474-3	1	T	09:52	X																			
500-95474-4	1	T	09:54	X																			
500-95474-5	1	T	09:56	X																			
500-95474-6	1	T	09:59	X																			
CCV 500-286742/19	1		10:01	X																			
CCB 500-286742/20	1		10:03	X																			
500-95474-7	1	T	10:05	X																			
500-95474-8	1	T	10:07	X																			
500-95474-9	1	T	10:09	X																			
500-95474-10	1	T	10:11	X																			
500-95474-10 DU	1	T	10:13	X																			
500-95474-10 MS	1	T	10:15	X																			
500-95474-10 MSD	1	T	10:17	X																			
500-95474-11	1	T	10:20	X																			
ZZZZZZ			10:22																				
ZZZZZZ			10:24																				
CCV 500-286742/31	1		10:26	X																			
CCB 500-286742/32	1		10:28	X																			
ZZZZZZ			10:30																				
ZZZZZZ			10:33																				
ZZZZZZ			10:35																				
ZZZZZZ			10:37																				
ZZZZZZ			10:39																				
ZZZZZZ			10:41																				
ZZZZZZ			10:44																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Instrument ID: HG5 Method: 7471B

Start Date: 05/05/2015 09:13 End Date: 05/05/2015 11:13

Lab Sample ID	D/F	Type	Time	Analytes																			
				Hg																			
ZZZZZZ			10:46																				
ZZZZZZ			10:48																				
ZZZZZZ			10:50																				
CCV 500-286742/43			10:52																				
CCB 500-286742/44			10:54																				
ZZZZZZ			10:56																				
ZZZZZZ			10:58																				
ZZZZZZ			11:00																				
ZZZZZZ			11:03																				
ZZZZZZ			11:05																				
ZZZZZZ			11:07																				
ZZZZZZ			11:09																				
CCV 500-286742/52			11:11																				
CCB 500-286742/53			11:13																				

Prep Types

T = Total/NA

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	CorrFact	Check	Check Table
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2	76	2	4	2	QC	S1	P6050415B	1	☒	S1
3	77	2	5	2	QC	S2		1	☒	S2
4	78	2	6	2	QC	ICV		1	☒	ICV
5	79	2	7	2	QC	ICB		1	☒	ICB
6	80	2	8	2	QC	ICVL		1	☒	CCVLL
7	81	2	9	2	QC	CRI		1	☒	CRI
8	82	2	10	2	QC	ICSA		1	☒	ICSA
9	83	2	11	2	QC	ICSAB		1	☒	ICSAB
10	84	2	12	2	QC	CCV		1	☒	CCV
11	85	2	1	3	QC	CCB		1	☒	CCB
12	153	3	9	3	QC	AL		1	☒	IEC
13	154	3	10	3	QC	FE		1	☒	IEC
14	86	2	2	3	QC	MRL		1	☒	CCVLL
15	87	2	3	3	Unk	lb 500-286484/1-b		1	☒	RLTABLE
16	88	2	4	3	Unk	lcs 500-286586/2-a		1	☒	RLTABLE
17	89	2	5	3	Unk	160-11533-a-1-c		1	☒	RLTABLE
18	90	2	6	3	Unk	160-11533-a-1-c sd@5		1	☒	RLTABLE
19	91	2	7	3	Unk	160-11533-a-1-d du		1	☒	RLTABLE
20	92	2	8	3	Unk	160-11533-a-1-e ms		1	☒	RLTABLE
21	93	2	9	3	Unk	160-11533-a-2-c		1	☒	RLTABLE
22	94	2	10	3	Unk	160-11533-a-3-c		1	☒	RLTABLE
23	95	2	11	3	Unk	160-11533-a-4-c		1	☒	RLTABLE
24	96	2	12	3	Unk	160-11533-a-5-c		1	☒	RLTABLE
25	97	2	1	4	QC	CCV		1	☒	CCV
26	98	2	2	4	QC	CCB		1	☒	CCB
27	99	2	3	4	Unk	160-11533-a-6-c		1	☒	RLTABLE
28	100	2	4	4	Unk	160-11533-a-7-c		1	☒	RLTABLE
29	101	2	5	4	Unk	160-11533-a-8-c		1	☒	RLTABLE
30	102	2	6	4	Unk	160-11533-a-9-c		1	☒	RLTABLE
31	103	2	7	4	Unk	160-11533-a-10-c		1	☒	RLTABLE
32	104	2	8	4	Unk	160-11565-a-1-b		1	☒	RLTABLE
33	105	2	9	4	Unk	160-11565-a-2-b		1	☒	RLTABLE
34	106	2	10	4	Unk	160-11565-a-3-b		1	☒	RLTABLE
35	107	2	11	4	Unk	160-11565-a-4-b		1	☒	RLTABLE
36	108	2	12	4	Unk	160-11565-a-5-b		1	☒	RLTABLE
37	110	2	2	5	QC	CCV		1	☒	CCV
38	111	2	3	5	QC	CCB		1	☒	CCB
39	112	2	4	5	Unk	160-11565-a-6-b		1	☒	RLTABLE
40	113	2	5	5	Unk	160-11565-a-7-b		1	☒	RLTABLE
41	114	2	6	5	Unk	160-11565-a-8-b		1	☒	RLTABLE
42	115	2	7	5	Unk	160-11565-a-9-b		1	☒	RLTABLE
43	116	2	8	5	Unk	160-11565-a-11-b		1	☒	RLTABLE
44	117	2	9	5	Unk	mb 500-286488/1-a		1	☒	RLTABLE
45	118	2	10	5	Unk	lcs 500-286488/2-a		1	☒	RLTABLE
46	119	2	11	5	Unk	500-95474-a-1-a		1	☒	RLTABLE
47	145	3	1	3	Unk	500-95490-b-1-a		1	☒	RLTABLE
48	148	3	4	3	Unk	500-95490-b-2-a		1	☒	RLTABLE
49	122	3	2	1	QC	CCV		1	☒	CCV
50	123	3	3	1	QC	CCB		1	☒	CCB
51	124	3	4	1	Unk	500-95474-a-4-b		1	☒	RLTABLE
52	125	3	5	1	Unk	500-95474-a-5-a		1	☒	RLTABLE
53	126	3	6	1	Unk	500-95474-a-6-b		1	☒	RLTABLE
54	127	3	7	1	Unk	500-95474-a-7-a		1	☒	RLTABLE
55	128	3	8	1	Unk	500-95474-b-8-a		1	☒	RLTABLE
56	129	3	9	1	Unk	500-95474-a-9-a		1	☒	RLTABLE
57	130	3	10	1	Unk	500-95474-a-10-c		1	☒	RLTABLE
58	131	3	11	1	Unk	95474-a-10-c sd@5		1	☒	RLTABLE
59	132	3	12	1	Unk	500-95474-a-10-d du		1	☒	RLTABLE

	Fail Action
1	None
2	None
3	None
4	None
5	None
6	None
7	None
8	None
9	None
10	None
11	None
12	None
13	None
14	None
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45	---
46	---
47	---
48	---
49	None
50	None
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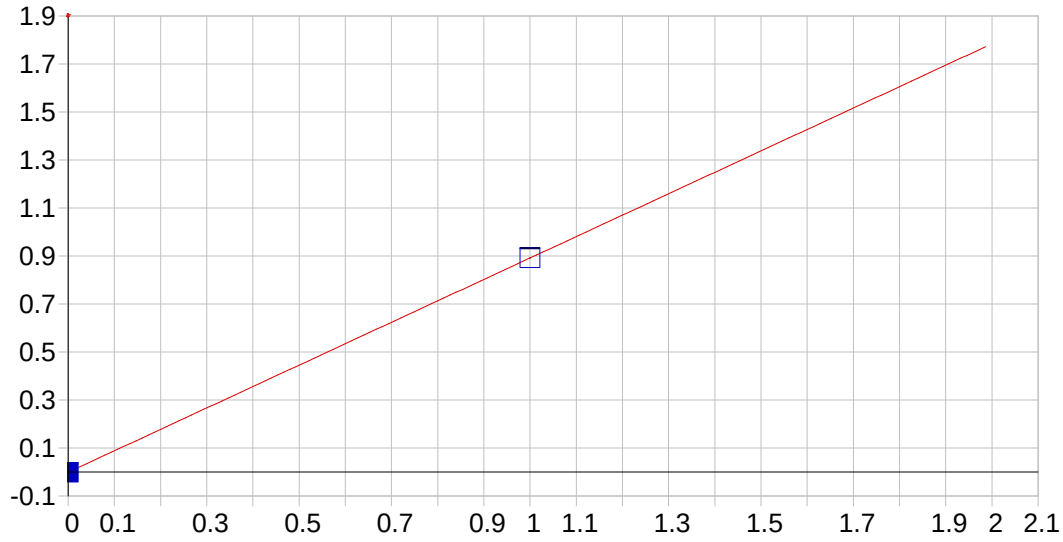
52	---
53	---
54	---
55	---
56	---
57	---
58	---
59	---

	Pos ID	Rack	Row	Col	Type	Samplename	Comment	CorrFact	Check	Check Table
60	133	3	1	2	Unk	500-95474-b-10-b ms		1	☒	RLTABLE
61	134	3	2	2	QC	CCV		1	☒	CCV
62	135	3	3	2	QC	CCB		1	☒	CCB
63	136	3	4	2	Unk	500-95474-a-10-e msd		1	☒	RLTABLE
64	137	3	5	2	Unk	500-95474-b-11-b		1	☒	RLTABLE
65	138	3	6	2	Unk	500-95262-f-1-a		1	☒	RLTABLE
66	139	3	7	2	Unk	500-95262-f-2-a		1	☒	RLTABLE
67	140	3	8	2	Unk	500-95262-f-3-a		1	☒	RLTABLE
68	141	3	9	2	Unk	500-95262-f-4-a		1	☒	RLTABLE
69	142	3	10	2	Unk	500-95481-a-1-a		1	☒	RLTABLE
70	143	3	11	2	Unk	500-95481-a-2-a		1	☒	RLTABLE
71	144	3	12	2	Unk	500-95481-a-3-a		1	☒	RLTABLE
72	120	2	12	5	Unk	500-95474-b-2-a		1	☒	RLTABLE
73	146	3	2	3	QC	CCV		1	☒	CCV
74	147	3	3	3	QC	CCB		1	☒	CCB
75	121	3	1	1	Unk	500-95474-a-3-a		1	☒	RLTABLE
76	149	3	5	3	QC	CCV		1	☒	CCV
77	150	3	6	3	QC	CCB		1	☒	CCB
78	151	3	7	3	QC	CCVL		1	☒	CCVLL
79	152	3	8	3	QC	CCVL		1	☒	CCVLL

	Fail Action
60	---
61	None
62	None
63	---
64	---
65	---
66	---
67	---
68	---
69	---
70	---
71	---
72	---
73	None
74	None
75	---
76	None
77	None
78	None
79	None

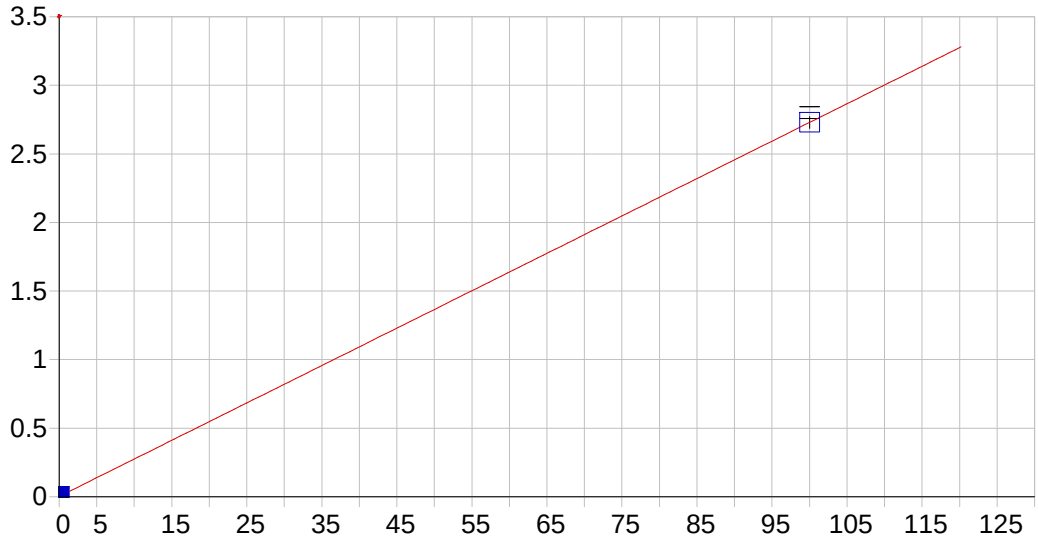


Ag 328.068 {103}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001046	Re-Slope:	1.000000
A1 (Gain):	0.892618	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000706		
Predicted MQL:	0.002352		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00105	.000	1
S1	1.0000	1.0000	.000	.000	.89157	.002	1

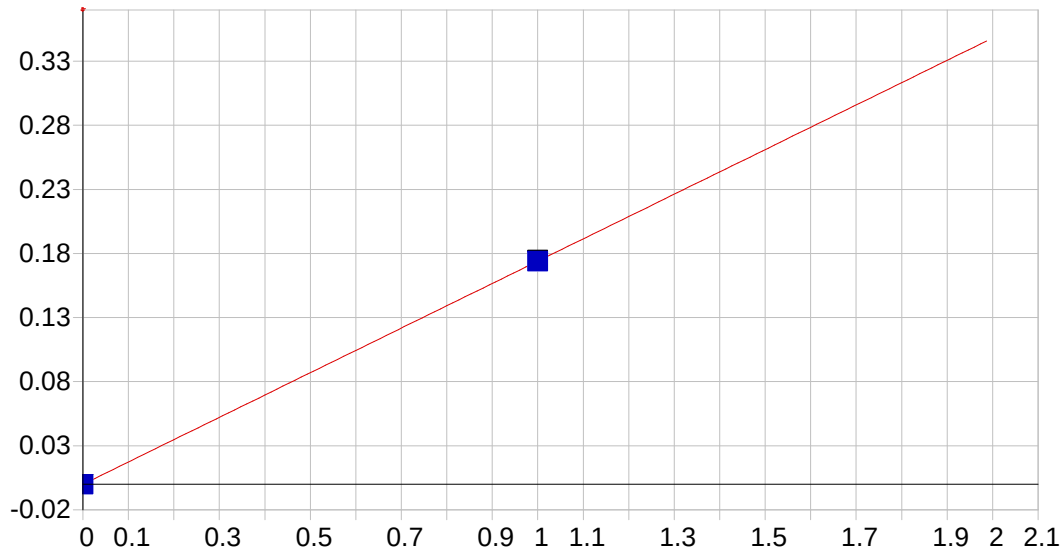


Al 308.215 {109}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002260	Re-Slope:	1.000000
A1 (Gain):	0.027269	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.023508		
Predicted MQL:	0.078359		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00226	.000	1
S2	100.00	100.00	.000	.000	2.7292	.043	1

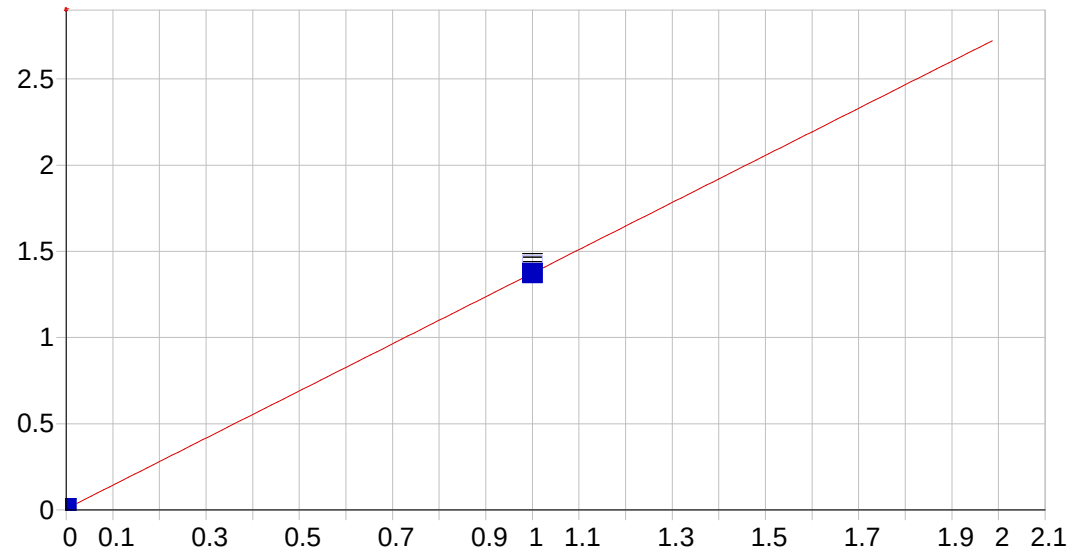


As 189.042 {478}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000066	Re-Slope:	1.000000
A1 (Gain):	0.174091	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.002629		
Predicted MQL:	0.008765		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00007	.000	1
S1	1.0000	1.00000	.000	.000	.17382	.001	1

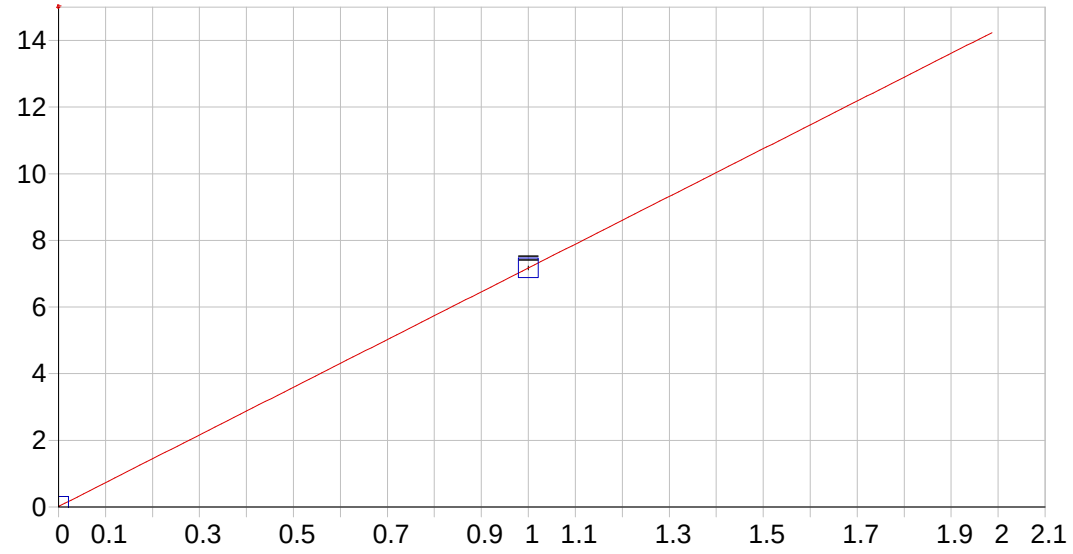


B 208.959 {461}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006896	Re-Slope:	1.000000
A1 (Gain):	1.366650	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000370		
Predicted MQL:	0.001232		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00690	.000	1
S1	1.0000	1.0000	.000	.000	1.4192	.010	1

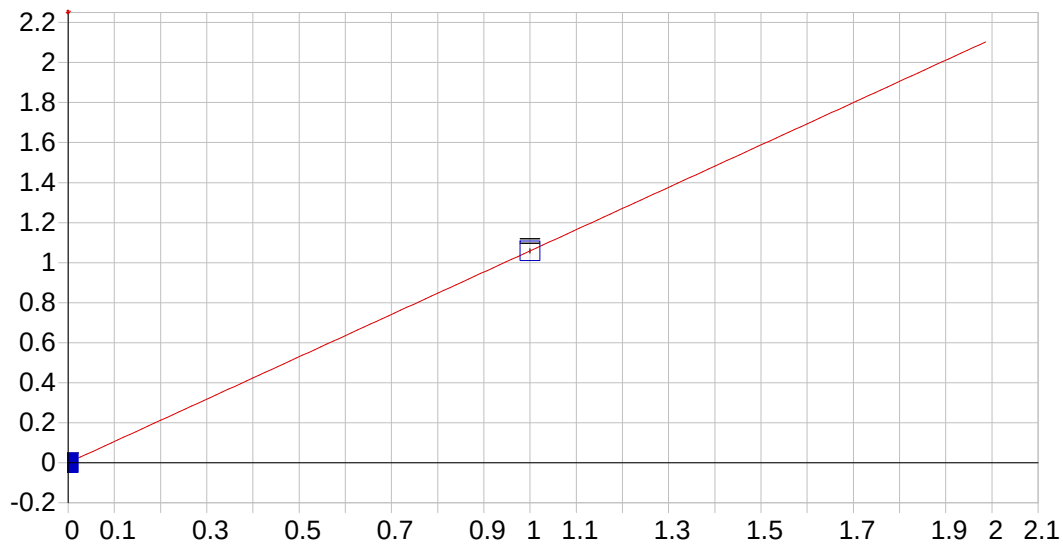


Ba 455.403 { 74}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.015425	Re-Slope:	1.000000
A1 (Gain):	7.157101	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000186		
Predicted MQL:	0.000619		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.01543	.000	1
S1	1.0000	1.0000	.000	.000	7.1725	.058	1

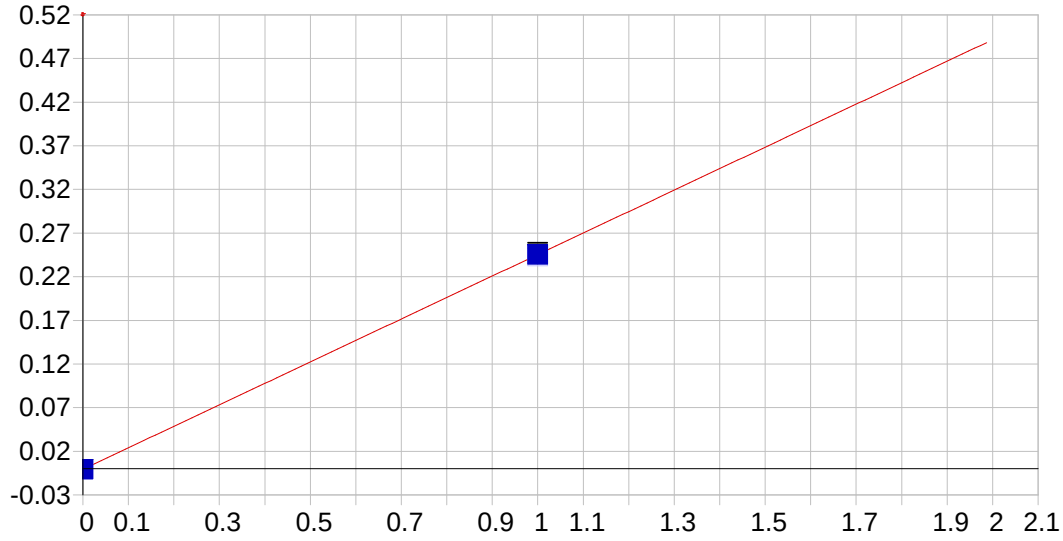


Be 234.861 {143}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000095	Re-Slope:	1.000000
A1 (Gain):	1.058684	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000348		
Predicted MQL:	0.001159		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00009	.000	1
S1	1.0000	1.0000	.000	.000	1.0588	.011	1



Bi 223.061 {451}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000643	Re-Slope:	1.000000
A1 (Gain):	0.246094	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.001694		
Predicted MQL:	0.005647		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
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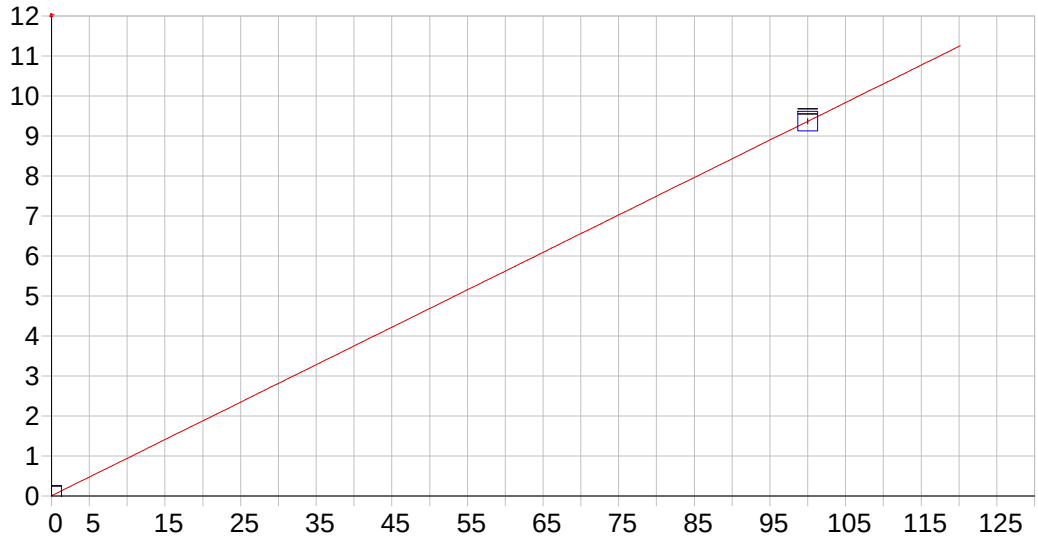
S1	1.0000	1.0000	.000	.000	.24364	.002	1



Ca 317.933 {106}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006034	Re-Slope:	1.000000
A1 (Gain):	0.093609	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.005552		
Predicted MQL:	0.018506		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
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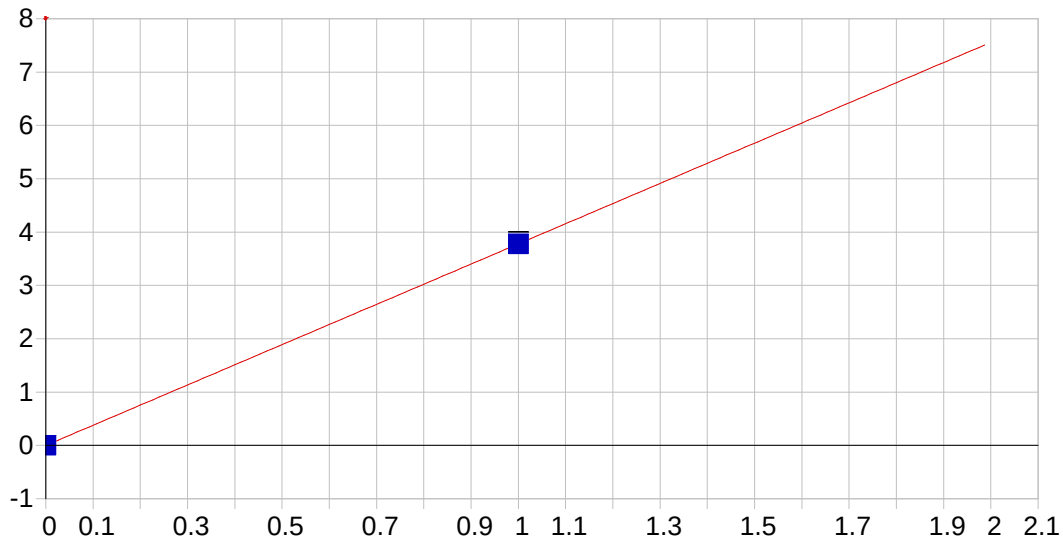
S2	100.00	100.00	.000	.000	9.3670	.066	1



Cd 228.802 {447}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000054	Re-Slope:	1.000000
A1 (Gain):	3.778499	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000206		
Predicted MQL:	0.000686		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
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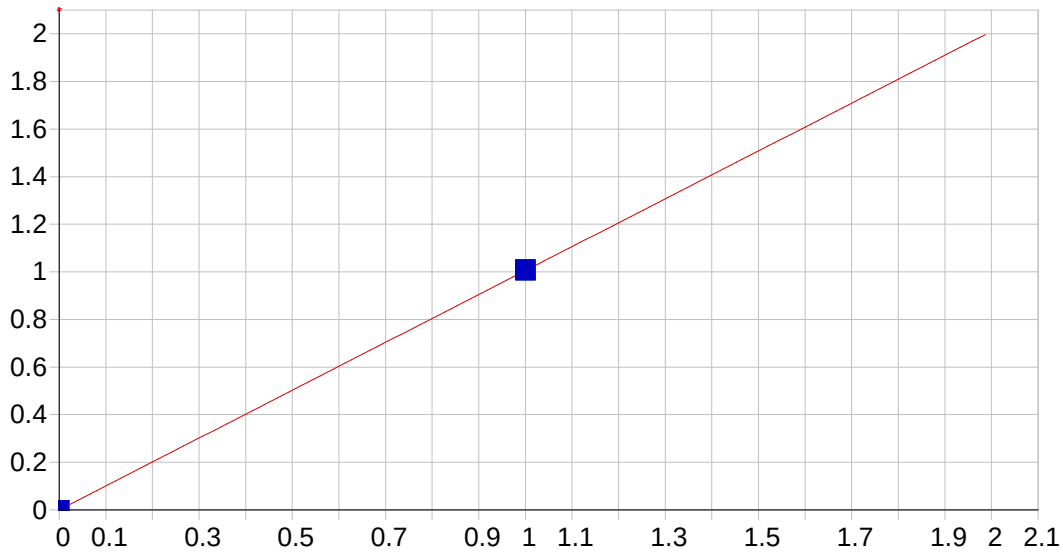
S1	1.0000	1.0000	.000	.000	3.7939	.028	1

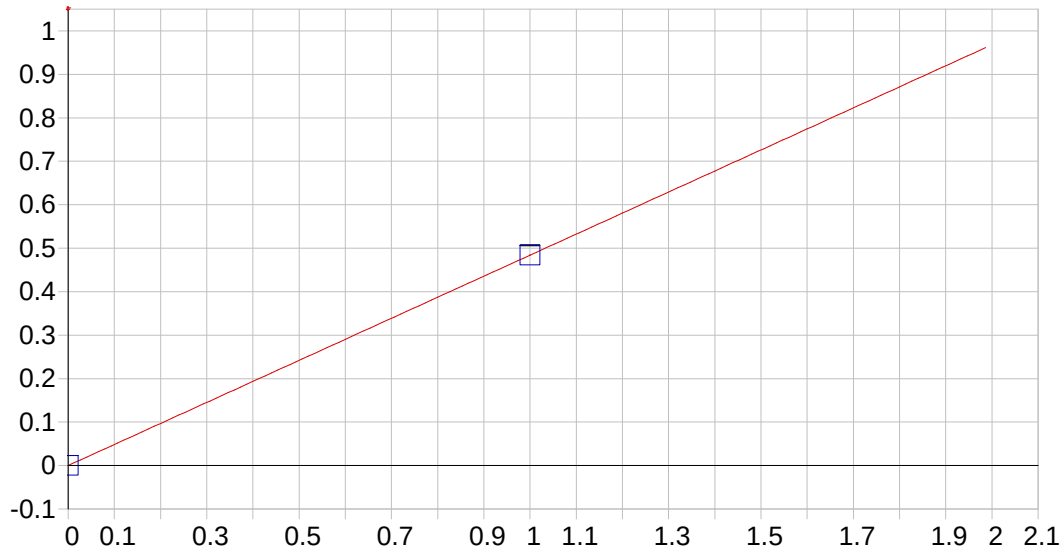


Co 228.616 {447}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000348	Re-Slope:	1.000000
A1 (Gain):	1.005080	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000401		
Predicted MQL:	0.001335		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00035	.000	1
S1	1.0000	1.0000	.000	.000	1.0071	.002	1

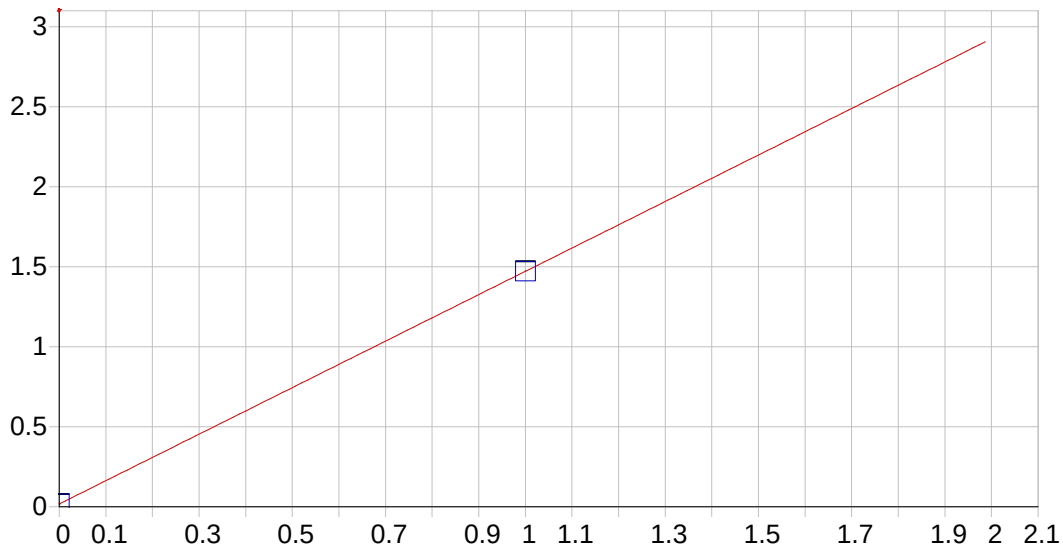


Cr 267.716 {126}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000030	Re-Slope:	1.000000
A1 (Gain):	0.484042	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000882		
Predicted MQL:	0.002942		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00003	.000	1
S1	1.0000	1.0000	.000	.000	.48401	.001	1

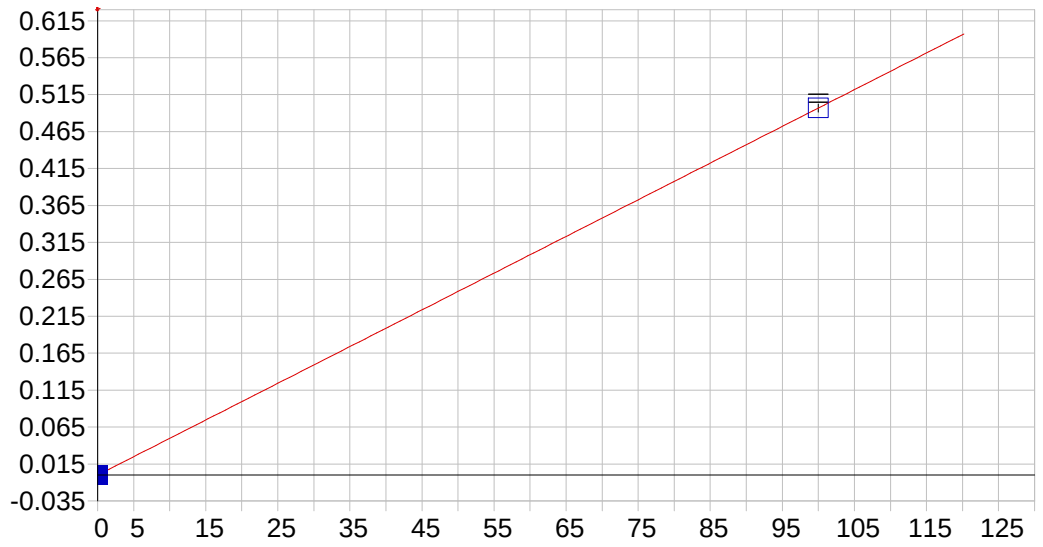


Cu 324.754 {104}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.017419	Re-Slope:	1.000000
A1 (Gain):	1.453948	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000420		
Predicted MQL:	0.001401		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.01742	.000	1
S1	1.0000	1.0000	.000	.000	1.4714	.002	1

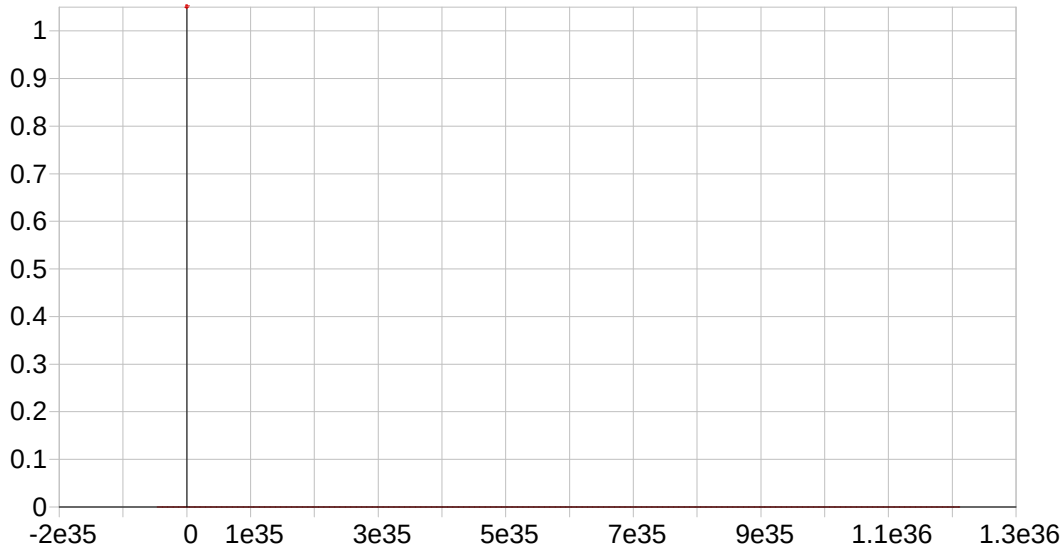


Fe 271.441 {124}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000030	Re-Slope:	1.000000
A1 (Gain):	0.004969	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.092096		
Predicted MQL:	0.306986		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00003	.000	1
S2	100.00	100.00	.000	.000	.49693	.005	1

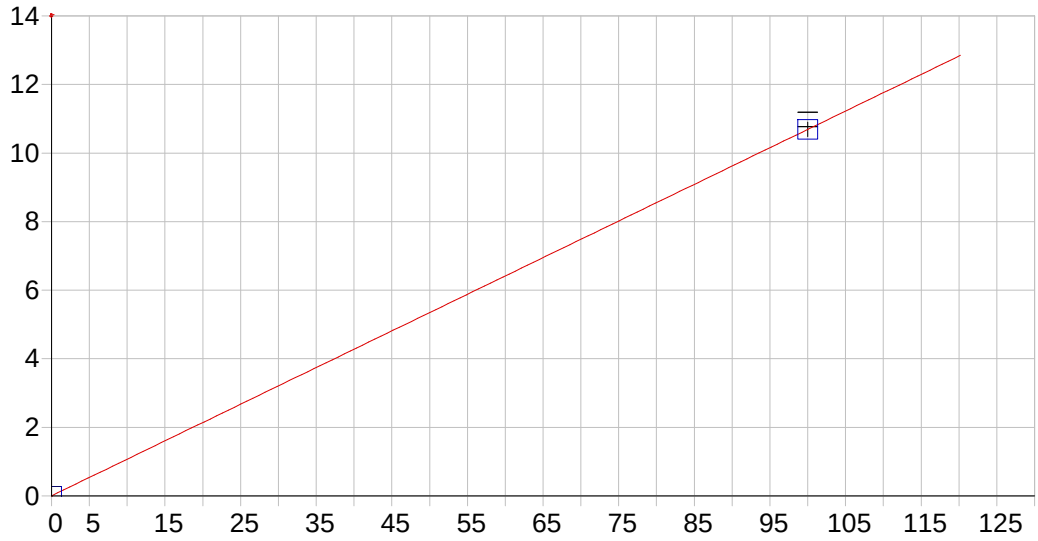


In 230.606 {446}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

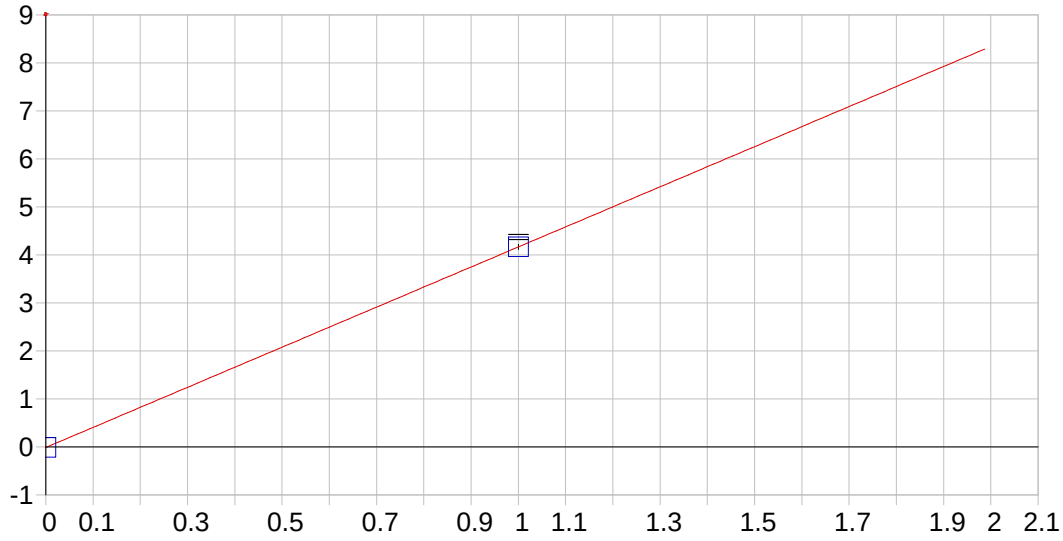


K 766.490 { 44}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003140	Re-Slope:	1.000000
A1 (Gain):	0.106870	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.022500		
Predicted MQL:	0.074999		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00314	.000	1
S2	100.00	100.00	.000	.000	10.690	.208	1

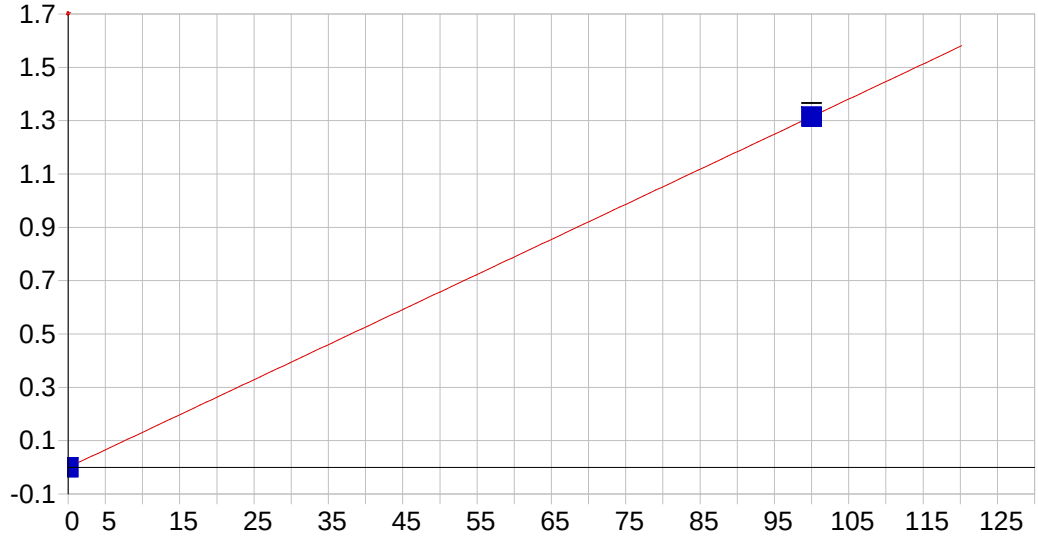


Li 670.784 { 50}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.011438	Re-Slope:	1.000000
A1 (Gain):	4.177320	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000596		
Predicted MQL:	0.001985		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.01144	.003	1
S1	1.0000	1.0000	.000	.000	4.1659	.055	1

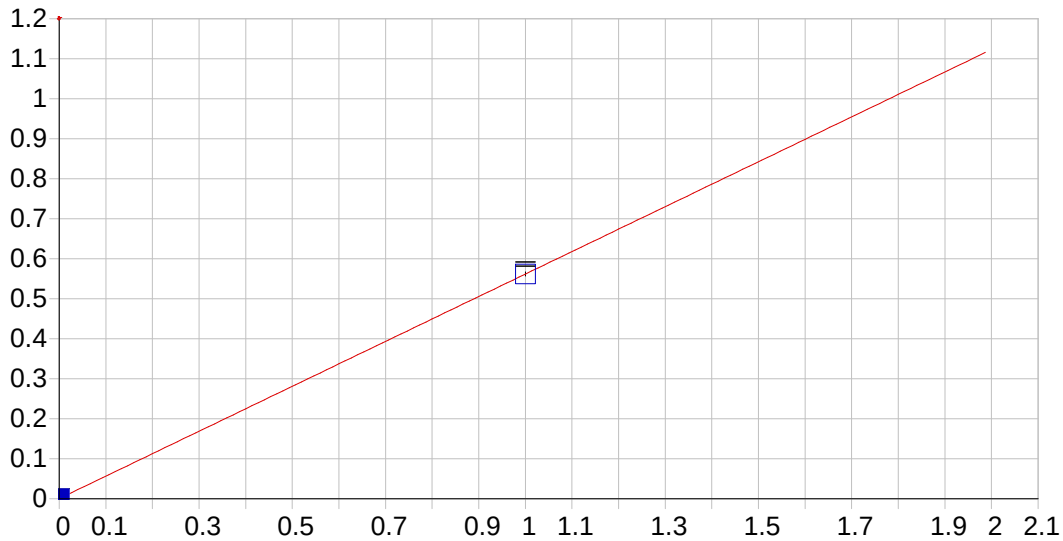


Mg 279.079 {121}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000138	Re-Slope:	1.000000
A1 (Gain):	0.013152	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.028897		
Predicted MQL:	0.096324		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00014	.000	1
S2	100.00	100.00	.000	.000	1.3147	.014	1

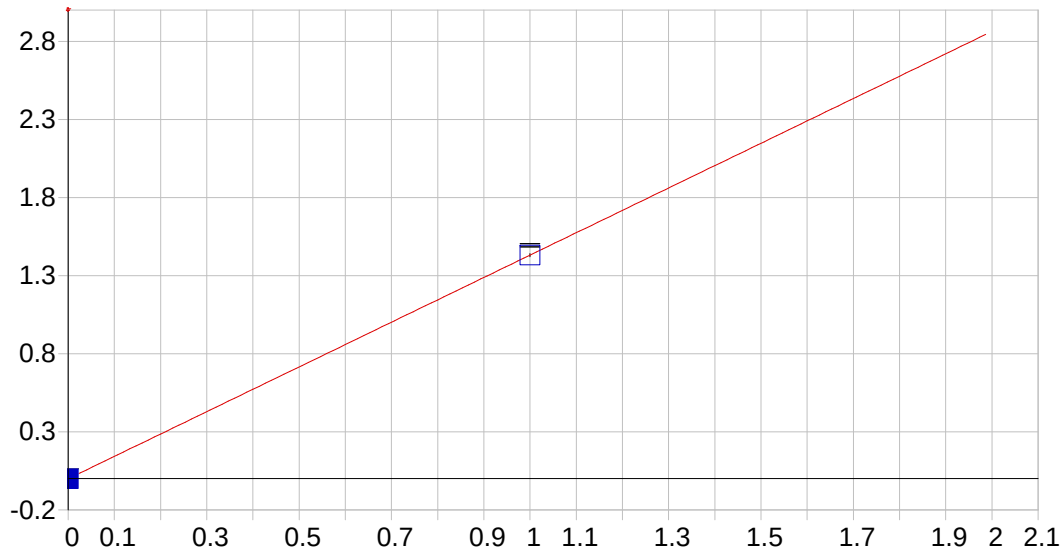


Mn 257.610 {131}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000400	Re-Slope:	1.000000
A1 (Gain):	0.561354	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000669		
Predicted MQL:	0.002231		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00040	.000	1
S1	1.0000	1.0000	.000	.000	.56175	.005	1

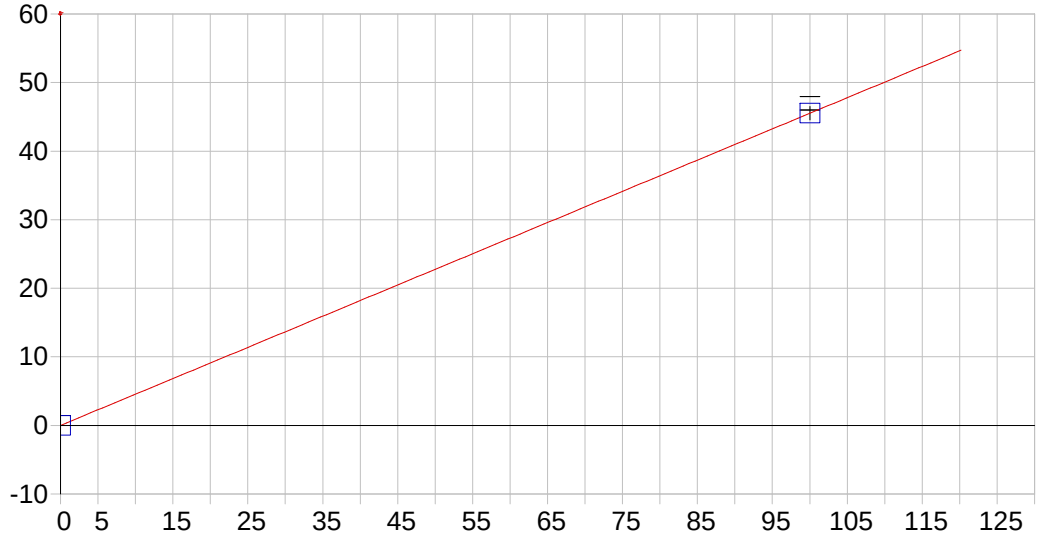


Mo 202.030 {467}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000588	Re-Slope:	1.000000
A1 (Gain):	1.431879	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000381		
Predicted MQL:	0.001269		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00059	.000	1
S1	1.0000	1.0000	.000	.000	1.4313	.010	1

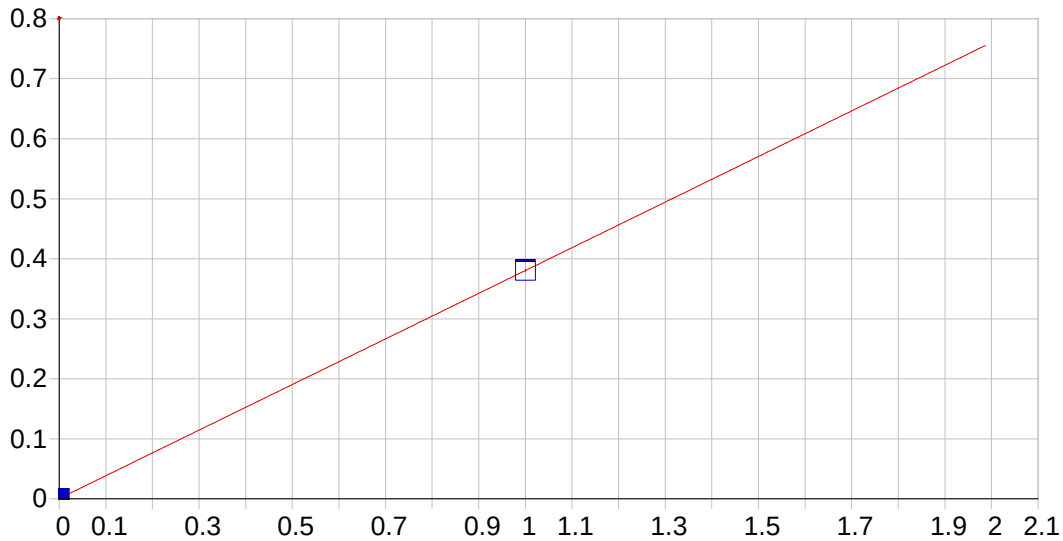


Na 589.592 { 57}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000869	Re-Slope:	1.000000
A1 (Gain):	0.455166	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.005060		
Predicted MQL:	0.016867		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00087	.001	1
S2	100.00	100.00	.000	.000	45.517	.973	1

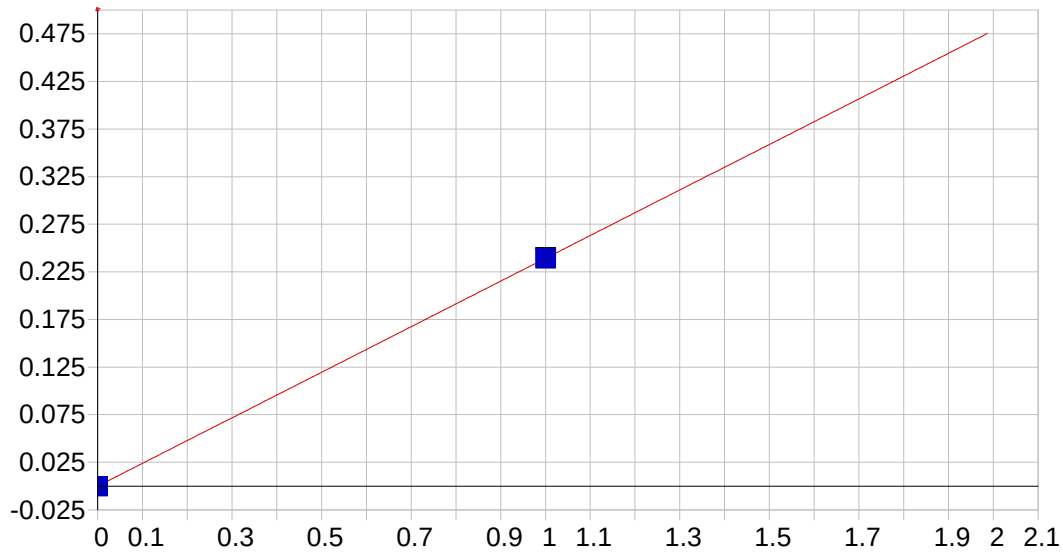


Ni 231.604 {446}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000424	Re-Slope:	1.000000
A1 (Gain):	0.379965	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000872		
Predicted MQL:	0.002907		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00042	.000	1
S1	1.0000	1.0000	.000	.000	.38039	.001	1

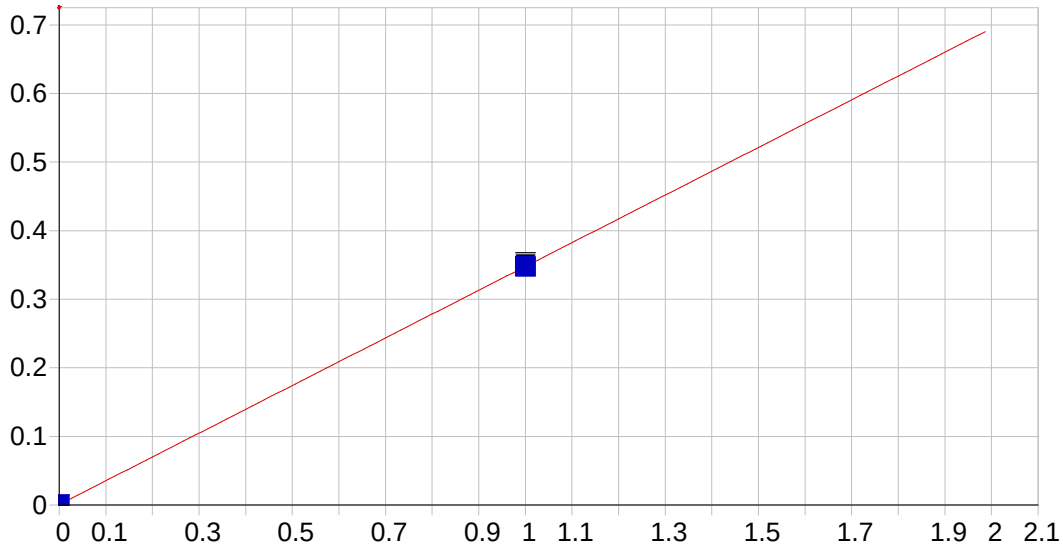


Pb 220.353 {453}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000080	Re-Slope:	1.000000
A1 (Gain):	0.239318	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.001772		
Predicted MQL:	0.005907		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00008	.000	1
S1	1.0000	1.00000	.000	.000	.23934	.001	1

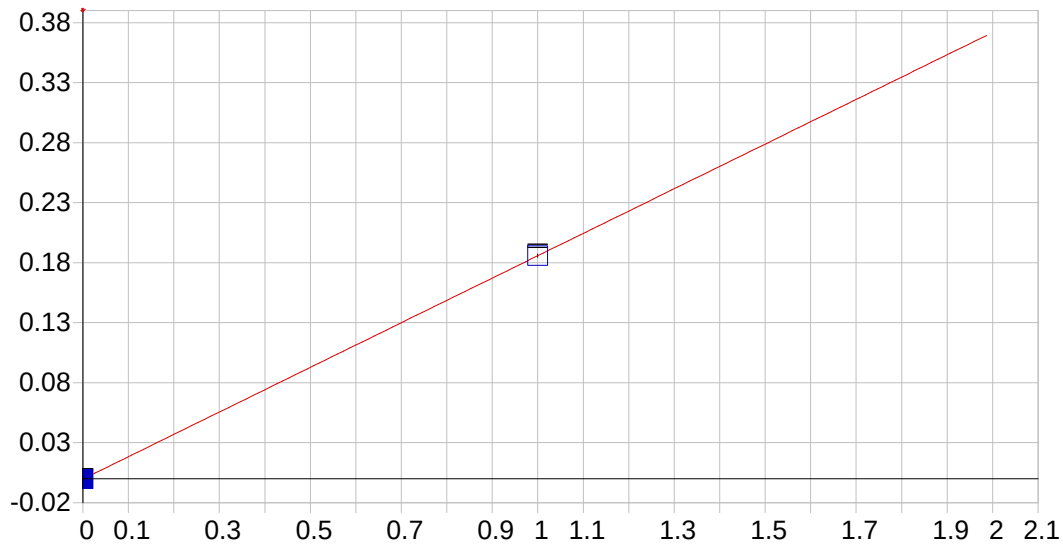


Sb 206.833 {463}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000623	Re-Slope:	1.000000
A1 (Gain):	0.347094	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.001576		
Predicted MQL:	0.005252		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00062	.000	1
S1	1.0000	1.00000	.000	.000	.35181	.001	1

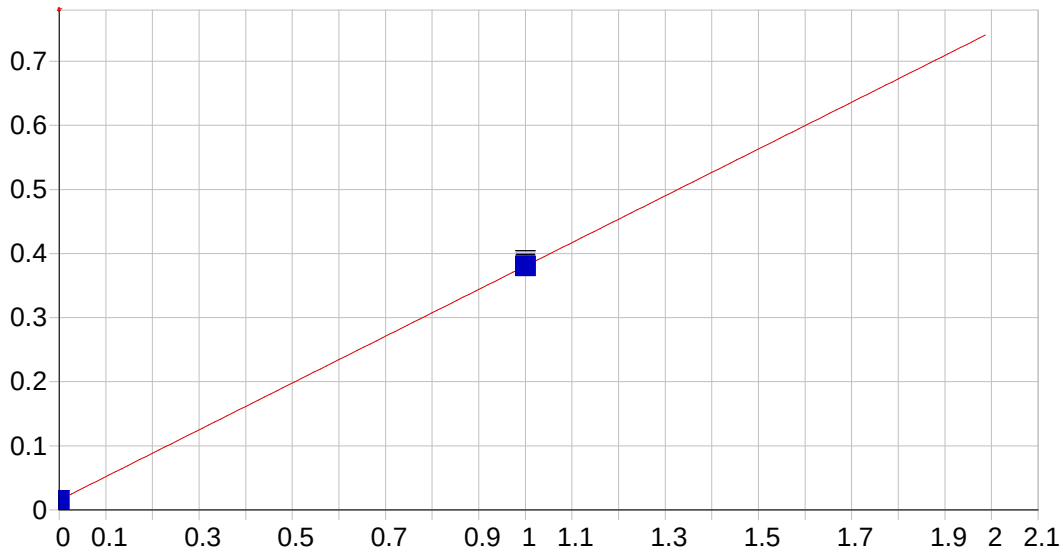


Se 196.090 {472}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000233	Re-Slope:	1.000000
A1 (Gain):	0.186012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.002780		
Predicted MQL:	0.009266		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00023	.000	1
S1	1.0000	1.0000	.000	.000	.18578	.001	1

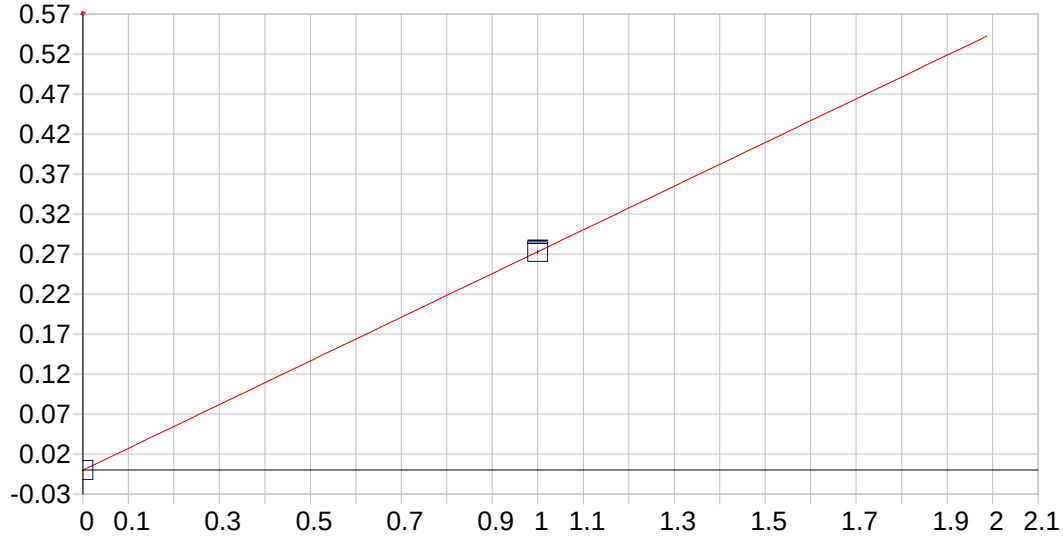


Si 212.412 {459}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.015391	Re-Slope:	1.000000
A1 (Gain):	0.365155	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.001166		
Predicted MQL:	0.003886		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.01539	.000	1
S1	1.0000	1.0000	.000	.000	.38578	.003	1

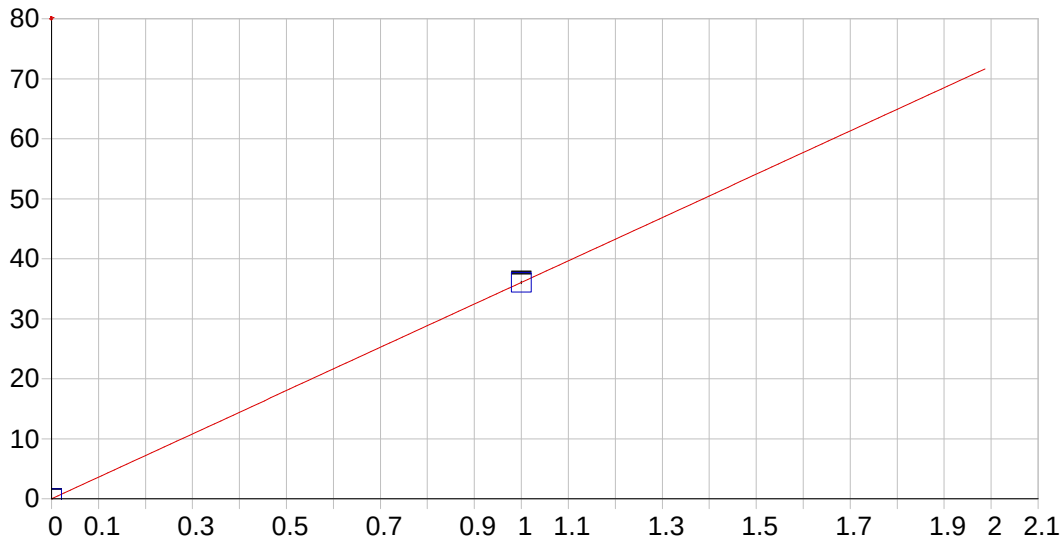


Sn 189.989 {477}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000126	Re-Slope:	1.000000
A1 (Gain):	0.272992	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.001265		
Predicted MQL:	0.004217		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00013	.000	1
S1	1.0000	1.0000	.000	.000	.27287	.002	1

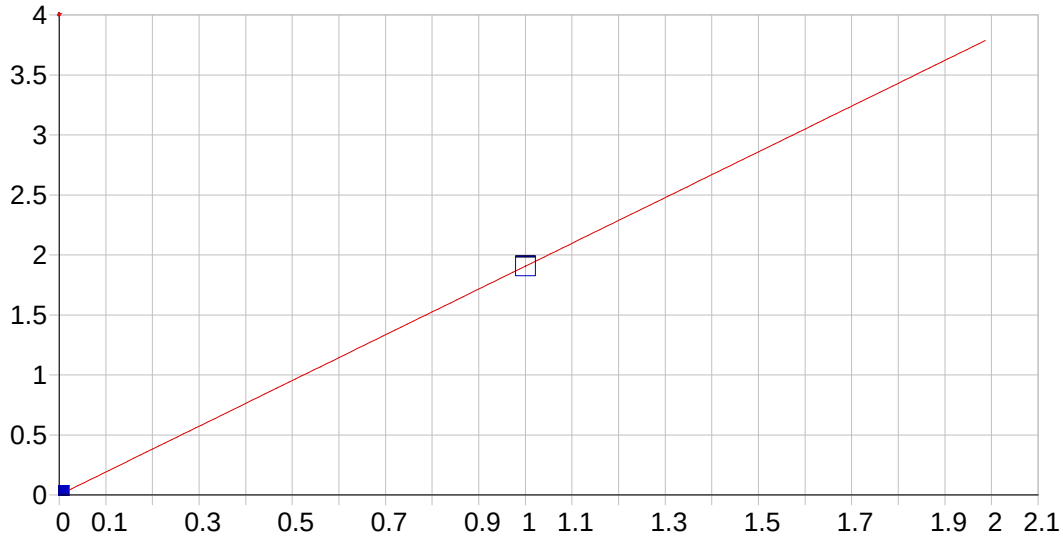


Sr 421.552 { 80}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001646	Re-Slope:	1.000000
A1 (Gain):	36.053980	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000021		
Predicted MQL:	0.000069		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00165	.000	1
S1	1.0000	1.0000	.000	.000	36.056	.196	1

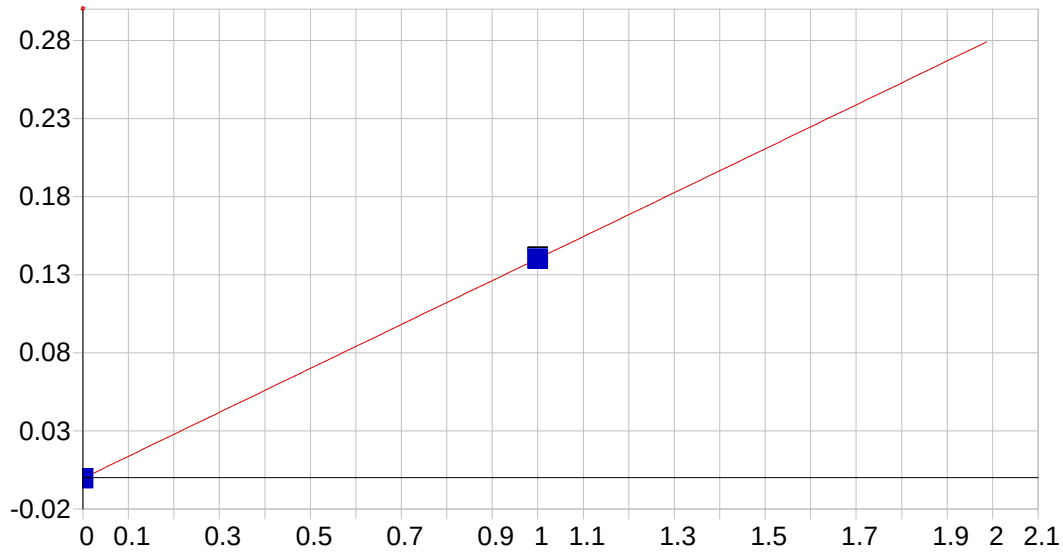


Ti 334.941 {101}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000524	Re-Slope:	1.000000
A1 (Gain):	1.905497	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000225		
Predicted MQL:	0.000749		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00052	.000	1
S1	1.0000	1.0000	.000	.000	1.9060	.004	1

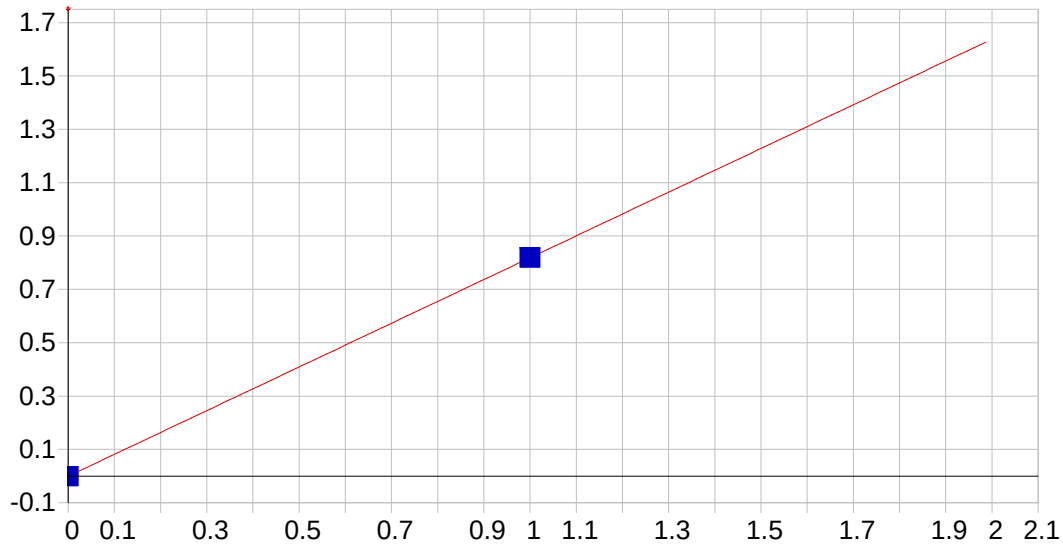


Tl 190.856 {477}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000328	Re-Slope:	1.000000
A1 (Gain):	0.140614	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.001417		
Predicted MQL:	0.004722		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00033	.000	1
S1	1.0000	1.0000	.000	.000	.14025	.001	1

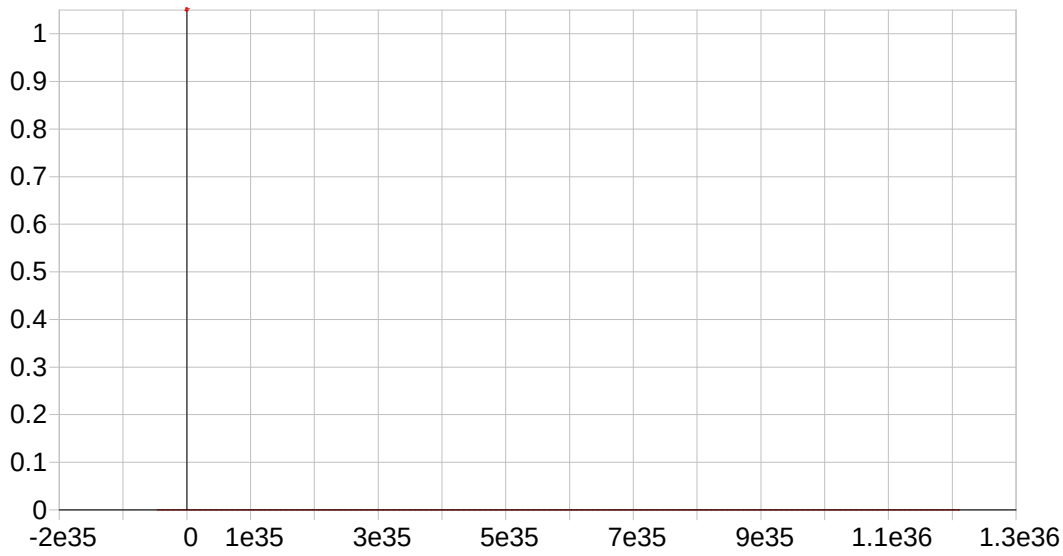


V 292.402 {115}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000548	Re-Slope:	1.000000
A1 (Gain):	0.819229	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000667		
Predicted MQL:	0.002222		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	-.00055	.000	1
S1	1.0000	1.00000	.000	.000	.81765	.000	1

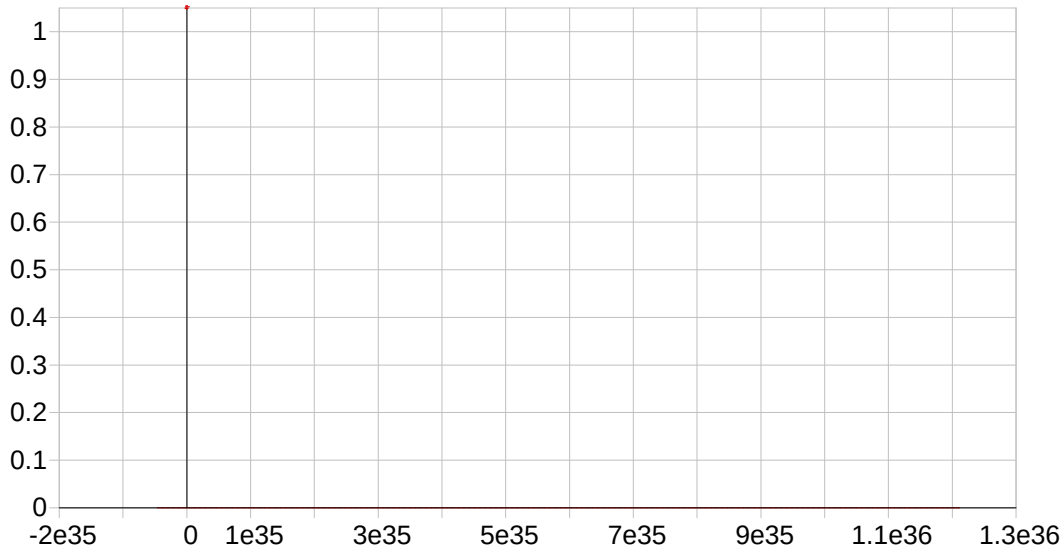


Y 224.306 {450}*

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

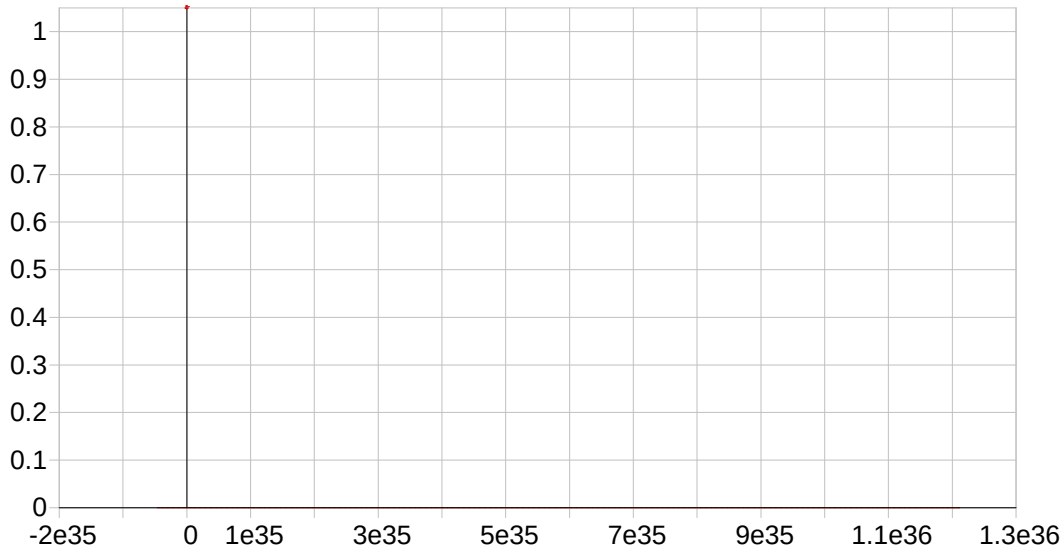


Y 360.073 { 94}*

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

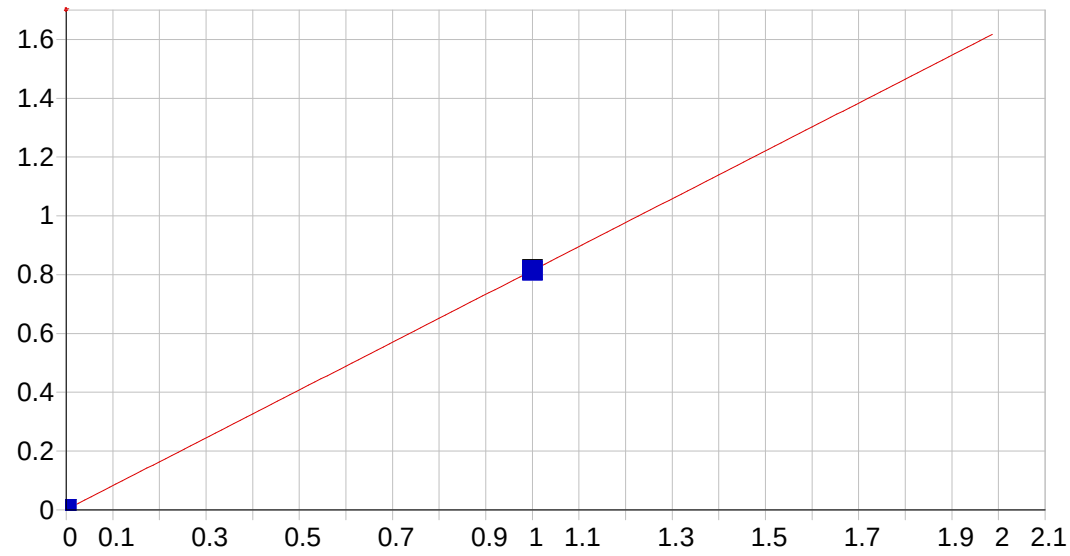
A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.000000		Status:	Warning	Zero Gain	
Std Error of Est:		0.000000					
Predicted MDL:		n/a					
Predicted MQL:		n/a					
Std. Name	**Stated Conc.**	**Found Conc.**	**Difference**	**% Diff.**	**(S)IR**	**Std Dev**	**Emphasis**



Y 371.030 { 91}*

Date of Fit:	5/5/2015 7:18:49		Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):		0.000000		Re-Slope:	1.000000		
A1 (Gain):		0.000000		Y-int:	0.000000		
A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.000000		Status:	Warning	Zero Gain	
Std Error of Est:		0.000000					
Predicted MDL:		n/a					
Predicted MQL:		n/a					
Std. Name	**Stated Conc.**	**Found Conc.**	**Difference**	**% Diff.**	**(S)IR**	**Std Dev**	**Emphasis**



Zn 206.200 {463}

Date of Fit:	5/5/2015 7:18:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001070	Re-Slope:	1.000000
A1 (Gain):	0.813315	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.000383		
Predicted MQL:	0.001276		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00107	.000	1
S1	1.0000	1.0000	.000	.000	.81395	.002	1

Sample Name: Blank Acquired: 5/4/2015 17:23:52 Type: Cal
Method: P6050415A(v2) Mode: IR Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00105	.00226	-.00007	.00690	.01543	.00009	-.00064	.00603
Stddev	.00020	.00017	.00024	.00006	.00029	.00017	.00018	.00043
%RSD	18.870	7.5035	361.76	.91075	1.9055	174.80	27.245	7.1217
#1	-.00119	.00214	.00010	.00685	.01563	.00021	-.00052	.00634
#2	-.00091	.00238	-.00023	.00694	.01522	-.00002	-.00077	.00573

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664	Li6707	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0001	.00035	-.00003	.01742	.00003	.00314	-.0114	-.00014
Stddev	.0005	.00009	.00013	.00009	.00027	.00035	.0029	.00005
%RSD	873.2	26.581	419.26	.53680	924.31	11.091	25.57	33.375
#1	-.0003	.00028	-.00012	.01735	-.00016	.00339	-.0135	-.00017
#2	.0004	.00041	.00006	.01749	.00022	.00289	-.0094	-.00011

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00040	-.00059	.00087	.00042	-.00008	.00062	-.00023	.01539
Stddev	.00012	.00019	.00093	.00004	.00030	.00026	.00016	.00030
%RSD	29.308	32.059	106.87	9.7850	382.64	42.154	67.014	1.9817
#1	.00048	-.00045	.00021	.00039	-.00030	.00044	-.00012	.01517
#2	.00032	-.00072	.00153	.00045	.00014	.00081	-.00034	.01561

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00013	.00165	.00052	-.00033	-.00055	.00107
Stddev	.00020	.00025	.00021	.00001	.00038	.00024
%RSD	156.92	15.099	39.504	3.0285	68.637	22.007
#1	.00001	.00147	.00067	-.00033	-.00028	.00090
#2	-.00027	.00182	.00038	-.00032	-.00081	.00124

Sample Name: Blank Acquired: 5/4/2015 17:23:52 Type: Cal
Method: P6050415A(v2) Mode: IR Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2680.3	1433.3	7531.2	4721.5
Stddev	85.4	65.8	138.5	106.4
%RSD	3.1868	4.5939	1.8389	2.2531
#1	2740.7	1479.8	7629.1	4796.7
#2	2619.9	1386.7	7433.3	4646.3

Sample Name: S1 Acquired: 5/4/2015 17:27:57 Type: Cal
Method: P6050415A(v2) Mode: IR Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	As1890	B_2089	Ba4554	Be2348	Bi2230	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.89157	.17382	1.4192	7.1725	1.0588	.24364	3.794	1.0071
Stddev	.00158	.00063	.0102	.0579	.0111	.00234	.028	.0021
%RSD	.17775	.36078	.71802	.80759	1.0465	.96195	.7459	.20592
#1	.89045	.17338	1.4120	7.1316	1.0509	.24199	3.774	1.0056
#2	.89269	.17427	1.4265	7.2135	1.0666	.24530	3.814	1.0085

Elem	Cr2677	Cu3247	Li6707	Mn2576	Mo2020	Ni2316	Pb2203	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.48401	1.4714	4.166	.56175	1.4313	.38039	.23934	.35181
Stddev	.00055	.0017	.055	.00525	.0099	.00136	.00050	.00143
%RSD	.11275	.11286	1.320	.93503	.69363	.35709	.21012	.40768
#1	.48363	1.4702	4.127	.55804	1.4243	.37943	.23898	.35080
#2	.48440	1.4725	4.205	.56547	1.4383	.38135	.23969	.35282

Elem	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.18578	.38578	.27287	36.056	1.9060	.14025	.81765	.81395
Stddev	.00127	.00318	.00191	.196	.0035	.00093	.00050	.00219
%RSD	.68522	.82334	.70045	.54405	.18397	.66051	.06085	.26930
#1	.18488	.38354	.27151	35.917	1.9035	.13960	.81729	.81240
#2	.18668	.38803	.27422	36.194	1.9085	.14091	.81800	.81550

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2454.0	1281.0	6586.9	4109.7
Stddev	10.1	7.2	23.9	21.4
%RSD	.41123	.56535	.36235	.52093
#1	2461.2	1286.1	6603.7	4124.9
#2	2446.9	1275.9	6570.0	4094.6

Sample Name: S2 Acquired: 5/4/2015 17:31:56 Type: Cal
Method: P6050415A(v2) Mode: IR Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Al3082	Ca3179	Fe2714	K_7664	Mg2790	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.7292	9.3670	.49693	10.690	1.3147	45.517
Stddev	.0430	.0656	.00538	.208	.0141	.973
%RSD	1.5755	.70043	1.0826	1.9477	1.0733	2.1368
#1	2.6988	9.3206	.49313	10.543	1.3047	44.830
#2	2.7596	9.4134	.50073	10.837	1.3246	46.205

Int. Std.	Y_3710
Units	Cts/S
Avg	3961.6
Stddev	36.4
%RSD	.91877
#1	3987.4
#2	3935.9

Sample Name: S1 Acquired: 5/4/2015 17:35:59 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment: P6050415B

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.003107	-.098827	1.005501	1.004140	1.006239	1.009772	1.003052
Stddev	.001167	.022676	.004348	.002343	.005264	.009663	.005567
%RSD	.1163216	22.94531	.4324110	.2333727	.5231797	.9569558	.5550260
#1	1.003933	-.082793	1.002427	1.002483	1.002516	1.002939	.999116
#2	1.002282	-.114862	1.008575	1.005797	1.009961	1.016604	1.006989
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0490516	1.004191	1.002989	1.004170	1.004614	.0739952	-.011687
Stddev	.0021900	.002548	.003260	.002163	.004260	.0230105	.014441
%RSD	4.464703	.2537648	.3250640	.2154456	.4240773	31.09725	123.5665
#1	.0506002	1.002390	1.000684	1.002640	1.007626	.0902661	-.001476
#2	.0475030	1.005993	1.005295	1.005700	1.001601	.0577244	-.021899
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.002507	.0194072	1.006660	1.008523	.0159428	1.003222	1.003082
Stddev	.002385	.0115489	.010939	.002795	.0005897	.006697	.003468
%RSD	.2378959	59.50819	1.086659	.2771302	3.698868	.6675026	.3457795
#1	1.004193	.0112409	.998925	1.006547	.0163597	.998487	1.000629
#2	1.000820	.0275735	1.014395	1.010499	.0155258	1.007957	1.005535
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value							
Range							

Sample Name: S1 Acquired: 5/4/2015 17:35:59 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment: P6050415B

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.005290	.9969390	1.002914	1.005544	1.020050	1.004098	1.006115
Stddev	.000588	.0108602	.002604	.003010	.002908	.001093	.007109
%RSD	.0584581	1.089350	.2596797	.2993732	.2850613	.1088061	.7065893
#1	1.004874	.9892597	1.001073	1.003415	1.022106	1.004871	1.001089
#2	1.005705	1.004618	1.004756	1.007673	1.017994	1.003325	1.011142
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	1.004806	1.007152
Stddev	.001016	.003976
%RSD	.1011540	.3948055
#1	1.004088	1.004341
#2	1.005525	1.009964
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2445.585	1275.606	6545.352	4090.580
Stddev	8.905	2.929	18.624	23.741
%RSD	.3641323	.2295931	.2845393	.5803831
#1	2451.882	1277.677	6532.183	4107.367
#2	2439.288	1273.536	6558.522	4073.792

Sample Name: S2 Acquired: 5/4/2015 17:39:56 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006513	99.87430	-.000884	.0016198	.0004055	.0002115	-.002102
Stddev	.0001097	1.25196	.001502	.0000387	.0001495	.0001089	.001891
%RSD	16.84011	1.253533	169.8028	2.391420	36.87279	51.49619	89.94385
#1	.0005737	98.98903	.000177	.0015924	.0002997	.0001345	-.003439
#2	.0007288	100.7596	-.001946	.0016472	.0005112	.0002886	-.000765
Check ?	None	Chk Pass	None	None	None	None	None
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	99.51136	.0000924	.0004029	.0001191	.0025486	99.69517	99.45583
Stddev	1.20586	.0000690	.0001450	.0002288	.0006412	1.39549	1.23048
%RSD	1.211786	74.66144	35.98821	192.0570	25.15882	1.399760	1.237210
#1	98.65869	.0001412	.0005054	-.000043	.0030020	98.70840	98.58575
#2	100.3640	.0000436	.0003004	.000281	.0020952	100.6819	100.3259
Check ?	Chk Pass	None	None	None	None	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004970	99.41673	.0010412	.0003017	99.51376	.0022414	-.000930
Stddev	.0003372	1.24191	.0000711	.0000450	1.09264	.0005840	.000637
%RSD	67.84549	1.249201	6.824205	14.92128	1.097983	26.05446	68.57685
#1	.0002585	98.53856	.0009910	.0003335	98.74114	.0018284	-.001380
#2	.0007354	100.2949	.0010915	.0002699	100.2864	.0026543	-.000479
Check ?	None	Chk Pass	None	None	Chk Pass	None	None
Value							
Range							

Sample Name: S2 Acquired: 5/4/2015 17:39:56 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000478	-.000560	.0054035	.0028100	.0031964	.0038772	.0006170
Stddev	.001185	.000131	.0010980	.0012566	.0000095	.0001733	.0029382
%RSD	247.6663	23.39057	20.32004	44.71735	.2965611	4.468839	476.2357
#1	-.001316	-.000468	.0061799	.0019215	.0032031	.0039997	.0026945
#2	.000359	-.000653	.0046271	.0036985	.0031897	.0037546	-.001461
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	-.001310	.0006727
Stddev	.000223	.0004785
%RSD	17.05233	71.13361
#1	-.001468	.0003344
#2	-.001152	.0010111
Check ?	None	None
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2064.308	1228.783	6169.239	3966.512
Stddev	10.289	2.204	4.713	39.664
%RSD	.4984266	.1793796	.0763876	.9999799
#1	2071.583	1230.342	6165.906	3994.559
#2	2057.032	1227.225	6172.571	3938.465

Sample Name: ICV Acquired: 5/4/2015 17:43:59 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3927389	40.88923	.4099057	.4060122	.4070750	.4161609	.4071093
Stddev	.0035612	.34616	.0068469	.0023075	.0040555	.0028543	.0029188
%RSD	.9067572	.8465910	1.670365	.5683429	.9962568	.6858606	.7169516
#1	.3902208	41.13400	.4050642	.4043805	.4099427	.4181792	.4050454
#2	.3952571	40.64445	.4147472	.4076438	.4042073	.4141426	.4091731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.79281	.4051512	.4219655	.3988595	.4078590	20.84641	39.90402
Stddev	.19690	.0027905	.0034221	.0046590	.0044990	.07804	.60307
%RSD	.9469663	.6887618	.8109843	1.168070	1.103068	.3743713	1.511292
#1	20.93204	.4031780	.4195457	.3955651	.4046777	20.90159	40.33045
#2	20.65358	.4071244	.4243853	.4021538	.4110402	20.79122	39.47759
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.298355	20.51327	4.060873	.4057821	20.26702	.4183320	.4153938
Stddev	.042263	.27171	.035574	.0038516	.28103	.0031093	.0034409
%RSD	1.281335	1.324556	.8760122	.9491926	1.386645	.7432601	.8283426
#1	3.328239	20.70540	4.086027	.4030586	20.46574	.4161334	.4129607
#2	3.268470	20.32115	4.035718	.4085057	20.06830	.4205306	.4178268
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICV Acquired: 5/4/2015 17:43:59 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4036943	.3941351	.4192994	.4259953	.4099950	.4139212	.4010396
Stddev	.0041256	.0054481	.0043745	.0029386	.0039187	.0057459	.0030401
%RSD	1.021949	1.382297	1.043296	.6898197	.9557847	1.388158	.7580500
#1	.4007771	.3902827	.4162061	.4239174	.4072241	.4098582	.3988900
#2	.4066115	.3979875	.4223926	.4280732	.4127659	.4179842	.4031893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	4.028544	.4239266
Stddev	.042367	.0039952
%RSD	1.051682	.9424220
#1	3.998586	.4211015
#2	4.058503	.4267516
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2216.330	1241.299	6336.206	3983.003
Stddev	13.231	8.127	51.071	34.198
%RSD	.5969701	.6547173	.8060229	.8585869
#1	2225.686	1247.046	6372.319	3958.822
#2	2206.974	1235.552	6300.093	4007.184

Sample Name: ICB Acquired: 5/4/2015 17:47:52 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007742	.0016678	-.000871	.0012951	.0001214	-.000081	.0007277
Stddev	.0004562	.0079887	.000493	.0001764	.0001766	.000088	.0000083
%RSD	58.92243	478.9927	56.63934	13.61921	145.4733	109.4775	1.147060
#1	.0010968	-.003981	-.000522	.0014198	-.000003	-.000018	.0007218
#2	.0004516	.007317	-.001219	.0011703	.000246	-.000143	.0007336
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029352	.0001089	.0001056	-.000037	.0007791	.0179797	.0011173
Stddev	.0041994	.0000174	.0000422	.000167	.0001684	.1014875	.0057864
%RSD	143.0716	15.97839	39.96023	456.1713	21.61474	564.4564	517.8786
#1	.0059046	.0000966	.0001354	.000081	.0008981	-.053783	-.002974
#2	-.000034	.0001212	.0000757	-.000155	.0006600	.089742	.005209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002075	-.000232	-.000613	-.000020	.0039258	.0007167	-.000825
Stddev	.0000248	.017060	.000475	.000147	.0045790	.0007921	.001855
%RSD	11.95925	7338.715	77.60782	734.7780	116.6382	110.5204	224.8646
#1	.0001899	-.012296	-.000276	-.000124	.0006880	.0012768	.000487
#2	.0002250	.011831	-.000949	.000084	.0071637	.0001566	-.002137
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICB Acquired: 5/4/2015 17:47:52 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000886	.0011420	.0063003	.0001448	-.000038	-.000083	.0001628
Stddev	.001835	.0020251	.0003063	.0002912	.000000	.000092	.0001404
%RSD	207.0901	177.3363	4.861541	201.0717	1.176962	109.9204	86.19182
#1	.000411	.0025740	.0060837	.0003507	-.000039	-.000019	.0002621
#2	-.002184	-.000290	.0065168	-.000061	-.000038	-.000148	.0000636
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0009907	-.000295
Stddev	.0002394	.000008
%RSD	24.16320	2.813004
#1	.0008214	-.000289
#2	.0011600	-.000301
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2495.815	1296.765	6559.836	4119.246
Stddev	3.060	.101	.907	46.812
%RSD	.1225886	.0077637	.0138297	1.136422
#1	2497.978	1296.693	6560.477	4152.347
#2	2493.651	1296.836	6559.194	4086.145

Sample Name: ICVL Acquired: 5/4/2015 17:51:06 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059436	.2110310	.0102611	.0509754	.0105029	.0038398	.0516475
Stddev	.0008847	.0293042	.0012099	.0003451	.0002102	.0001380	.0001478
%RSD	14.88502	13.88622	11.79079	.6768954	2.000986	3.593439	.2861909
#1	.0065691	.2317522	.0094056	.0512193	.0103543	.0039374	.0517520
#2	.0053180	.1903098	.0111166	.0507314	.0106515	.0037422	.0515429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2026330	.0023801	.0049059	.0107056	.0108506	.2209012	.4883786
Stddev	.0016916	.0000103	.0004052	.0001074	.0003275	.0076893	.0207226
%RSD	.8348237	.4338378	8.259250	1.003039	3.018213	3.480869	4.243144
#1	.2014369	.0023874	.0051924	.0107815	.0110822	.2263383	.4737255
#2	.2038292	.0023728	.0046194	.0106296	.0106190	.2154640	.5030317
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096723	.0894298	.0117879	.0103418	.9996365	.0098060	.0039657
Stddev	.0004504	.0233318	.0000696	.0001803	.0013697	.0002442	.0002590
%RSD	4.656640	26.08956	.5907198	1.743693	.1370167	2.489892	6.530221
#1	.0099908	.1059279	.0117387	.0104693	1.000605	.0099786	.0037826
#2	.0093539	.0729317	.0118372	.0102143	.998668	.0096333	.0041489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICVL Acquired: 5/4/2015 17:51:06 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0184428	.0114248	.1907140	.0405200	.0052652	.0052277	.0102633
Stddev	.0018188	.0019102	.0027134	.0003745	.0000051	.0000842	.0004732
%RSD	9.862129	16.71955	1.422737	.9242376	.0961385	1.610726	4.610436
#1	.0171567	.0127755	.1887954	.0402552	.0052687	.0051682	.0105979
#2	.0197289	.0100741	.1926326	.0407848	.0052616	.0052873	.0099287
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0050975	.0199915
Stddev	.0002707	.0004360
%RSD	5.309606	2.180948
#1	.0049061	.0196832
#2	.0052889	.0202998
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2459.591	1283.355	6489.390	4038.267
Stddev	5.855	.253	23.809	28.064
%RSD	.2380469	.0196955	.3668984	.6949430
#1	2463.731	1283.534	6472.554	4058.111
#2	2455.451	1283.177	6506.226	4018.423

Sample Name: CRI Acquired: 5/4/2015 17:55:10 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105225	.4241015	.0192489	.1026420	.0207905	.0081135	.1015023
Stddev	.0001408	.0081903	.0011291	.0009549	.0001360	.0001391	.0027121
%RSD	1.337778	1.931213	5.865647	.9302789	.6539632	1.713967	2.671988
#1	.0104230	.4183101	.0184505	.1019668	.0206944	.0080152	.0995845
#2	.0106220	.4298930	.0200473	.1033172	.0208867	.0082118	.1034200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4059945	.0044851	.0098990	.0209187	.0209093	.4660521	.9830852
Stddev	.0034923	.0001055	.0001777	.0014136	.0000597	.0330501	.0152791
%RSD	.8601815	2.351552	1.794751	6.757449	.2853984	7.091495	1.554198
#1	.4035250	.0044105	.0097733	.0219182	.0209515	.4894220	.9938892
#2	.4084639	.0045597	.0100246	.0199191	.0208671	.4426822	.9722813
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0200619	.1997170	.0204300	.0204389	2.005386	.0206132	.0090288
Stddev	.0001386	.0096431	.0005884	.0002270	.005029	.0000651	.0004170
%RSD	.6907587	4.828408	2.880060	1.110519	.2507840	.3159356	4.618402
#1	.0199639	.2065358	.0208461	.0202784	2.001829	.0206592	.0093236
#2	.0201599	.1928983	.0200139	.0205994	2.008942	.0205671	.0087339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CRI Acquired: 5/4/2015 17:55:10 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0391179	.0216193	.3785540	.0807245	.0104021	.0103226	.0188373
Stddev	.0004646	.0004626	.0036846	.0000543	.0000495	.0000710	.0010651
%RSD	1.187668	2.139675	.9733431	.0672681	.4757075	.6874786	5.654354
#1	.0387894	.0212922	.3759486	.0807629	.0104371	.0103728	.0180842
#2	.0394465	.0219464	.3811594	.0806861	.0103671	.0102725	.0195905
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0109783	.0403718
Stddev	.0002070	.0005631
%RSD	1.885956	1.394844
#1	.0111247	.0399736
#2	.0108319	.0407700
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2461.298	1287.310	6542.214	4070.883
Stddev	13.488	8.009	4.494	24.794
%RSD	.5479986	.6221644	.0686952	.6090594
#1	2470.835	1292.973	6539.036	4088.415
#2	2451.760	1281.647	6545.392	4053.351

Sample Name: ICSA Acquired: 5/4/2015 17:59:16 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010433	519.3343	-.001059	-.001771	.0005012	.0004475	-.005204
Stddev	.0003823	4.7589	.002833	.000115	.0000143	.0002607	.002562
%RSD	36.64035	.9163400	267.5870	6.477853	2.846802	58.24687	49.23664
#1	.0013136	515.9693	-.003062	-.001852	.0005113	.0002632	-.007016
#2	.0007730	522.6994	.000945	-.001690	.0004912	.0006318	-.003392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	498.7850	-.000514	-.003135	.0016043	.0023710	197.8593	-.006916
Stddev	.7707	.000033	.000399	.0009045	.0001362	1.9047	.003029
%RSD	.1545227	6.366492	12.74242	56.37901	5.744895	.9626725	43.79803
#1	498.2400	-.000537	-.003417	.0009648	.0022747	196.5125	-.009058
#2	499.3300	-.000491	-.002852	.0022439	.0024674	199.2062	-.004774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030862	534.9238	-.000272	.0020491	.0138594	-.001070	-.004962
Stddev	.0001325	5.2202	.000585	.0014350	.0048840	.000225	.000251
%RSD	4.294168	.9758708	214.9724	70.03442	35.23980	20.99407	5.053075
#1	.0031799	531.2326	-.000685	.0030638	.0104059	-.000911	-.004785
#2	.0029925	538.6150	.000141	.0010343	.0173130	-.001229	-.005140
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSA Acquired: 5/4/2015 17:59:16 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002563	.0069432	.0017611	.0058947	.0046253	.0008689	.0031833
Stddev	.000460	.0076228	.0006587	.0002451	.0000145	.0001923	.0042098
%RSD	17.94955	109.7877	37.40492	4.158499	.3140782	22.12904	132.2454
#1	-.002888	.0123334	.0022269	.0057214	.0046356	.0007329	.0061601
#2	-.002238	.0015531	.0012953	.0060681	.0046150	.0010048	.0002066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	-.002879	.0026025
Stddev	.000004	.0006009
%RSD	.1404224	23.08736
#1	-.002876	.0030274
#2	-.002881	.0021776
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1853.660	1144.200	5787.004	3707.074
Stddev	4.202	4.138	11.483	17.101
%RSD	.2266877	.3616915	.1984275	.4613089
#1	1856.632	1147.126	5778.885	3719.166
#2	1850.689	1141.273	5795.124	3694.982

Sample Name: ICSAB Acquired: 5/4/2015 18:04:17 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2070876	516.1646	.1033423	-.001846	.5060205	.5523639	-.007676
Stddev	.0005938	4.5204	.0043794	.000327	.0038296	.0032787	.000832
%RSD	.2867187	.8757715	4.237761	17.70284	.7568122	.5935716	10.83470
#1	.2066678	512.9682	.1064390	-.002077	.5033125	.5500456	-.008264
#2	.2075075	519.3610	.1002456	-.001615	.5087285	.5546823	-.007088
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	499.6339	1.001020	.5270560	.4794802	.5474874	198.0766	-.046776
Stddev	1.7046	.008768	.0045715	.0013897	.0019221	.5196	.006704
%RSD	.3411782	.8759106	.8673614	.2898344	.3510713	.2623123	14.33234
#1	498.4285	.994820	.5238235	.4784976	.5461283	197.7092	-.042036
#2	500.8392	1.007220	.5302886	.4804629	.5488466	198.4440	-.051517
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030259	532.8913	.5034209	.0020894	.0116197	1.024020	.0497345
Stddev	.0002045	3.7335	.0008033	.0006394	.0003227	.010915	.0034929
%RSD	6.757108	.7006148	.1595704	30.60021	2.777310	1.065926	7.023060
#1	.0031704	530.2513	.5028529	.0025415	.0118479	1.016301	.0522043
#2	.0028813	535.5313	.5039889	.0016373	.0113915	1.031738	.0472647
Check ?	None	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB Acquired: 5/4/2015 18:04:17 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5926542	.0546266	.0010473	.0033947	.0045800	.0011047	.0932865
Stddev	.0042862	.0017135	.0026659	.0016534	.0000100	.0001050	.0005568
%RSD	.7232204	3.136663	254.5617	48.70380	.2185892	9.504857	.5969121
#1	.5896234	.0558382	-.000838	.0045639	.0045730	.0011790	.0936803
#2	.5956850	.0534150	.002932	.0022256	.0045871	.0010305	.0928928
Check ?	Chk Pass	Chk Pass	None	None	None	None	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.4859053	1.030146
Stddev	.0008090	.008521
%RSD	.1664919	.8271388
#1	.4864774	1.024121
#2	.4853333	1.036171
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1848.662	1135.318	5794.896	3718.271
Stddev	14.097	7.815	10.399	10.535
%RSD	.7625639	.6883759	.1794485	.2833318
#1	1858.630	1140.844	5802.249	3725.720
#2	1838.693	1129.792	5787.543	3710.822

Sample Name: CCV Acquired: 5/4/2015 18:09:12 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4860990	49.68190	.5080102	.4956709	.4893792	.5139875	.4954628
Stddev	.0002034	.59791	.0034752	.0046585	.0075110	.0084286	.0052580
%RSD	.0418519	1.203474	.6840879	.9398283	1.534801	1.639856	1.061223
#1	.4862429	49.25912	.5055529	.4923769	.4840681	.5080275	.4917448
#2	.4859552	50.10469	.5104676	.4989649	.4946903	.5199475	.4991807
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.33579	.4942112	.5171351	.4947559	.5010918	25.59766	48.49633
Stddev	.50381	.0026093	.0025881	.0025908	.0011535	.52174	.91359
%RSD	1.988526	.5279817	.5004742	.5236521	.2302069	2.038234	1.883830
#1	24.97954	.4923661	.5153050	.4965879	.5002761	25.22874	47.85033
#2	25.69203	.4960563	.5189652	.4929239	.5019075	25.96659	49.14234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.020786	24.92447	4.989819	.4872452	24.87353	.5137257	.5108333
Stddev	.072414	.42071	.088349	.0022011	.43764	.0001025	.0023923
%RSD	1.800985	1.687939	1.770577	.4517369	1.759450	.0199492	.4683111
#1	3.969582	24.62699	4.927347	.4856888	24.56407	.5137982	.5091417
#2	4.071990	25.22196	5.052291	.4888015	25.18298	.5136532	.5125249
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 5/4/2015 18:09:12 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4926643	.4783755	.4995625	.5187139	.4958168	.5054775	.4874045
Stddev	.0020528	.0049567	.0021792	.0001521	.0004506	.0018860	.0045008
%RSD	.4166703	1.036155	.4362214	.0293156	.0908838	.3731121	.9234274
#1	.4912128	.4748706	.4980216	.5188215	.4961354	.5068111	.4842219
#2	.4941158	.4818804	.5011035	.5186064	.4954981	.5041439	.4905871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	4.958993	.5198083
Stddev	.005978	.0014415
%RSD	.1205557	.2773176
#1	4.963220	.5187890
#2	4.954766	.5208276
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2230.053	1263.549	6378.068	4029.087
Stddev	11.688	7.313	1.762	58.723
%RSD	.5241324	.5787685	.0276293	1.457489
#1	2238.318	1268.721	6379.314	4070.610
#2	2221.788	1258.378	6376.822	3987.563

Sample Name: CCB Acquired: 5/4/2015 18:13:07 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002167	.0085783	.0006482	.0009962	.0002912	-.000073	.0015583
Stddev	.0005043	.0035416	.0011881	.0002244	.0000543	.000071	.0016018
%RSD	232.6759	41.28633	183.2854	22.52883	18.64646	97.63912	102.7946
#1	-.000140	.0060739	.0014883	.0008375	.0002528	-.000123	.0004256
#2	.000573	.0110826	-.000192	.0011550	.0003296	-.000023	.0026910
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000621	.0001378	-.000106	.0003618	.0004917	.0357005	.0202508
Stddev	.002461	.0000753	.000066	.0001596	.0005318	.0233151	.0136904
%RSD	396.4859	54.61738	61.96077	44.12175	108.1547	65.30747	67.60441
#1	.001120	.0000846	-.000060	.0004746	.0008678	.0192142	.0299314
#2	-.002361	.0001911	-.000152	.0002489	.0001157	.0521867	.0105702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000109	.0353701	.0005369	.0002110	.0044545	.0007620	-.001094
Stddev	.000604	.0198526	.0006663	.0002064	.0013070	.0009253	.001102
%RSD	556.3010	56.12836	124.0984	97.82850	29.34086	121.4275	100.7896
#1	-.000536	.0494080	.0000658	.0000650	.0053786	.0014163	-.001873
#2	.000319	.0213321	.0010081	.0003569	.0035303	.0001077	-.000314
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 5/4/2015 18:13:07 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001533	-.000496	.0114595	-.000357	-.000021	.0000007	.0010240
Stddev	.000827	.000702	.0003070	.000999	.000006	.0002152	.0001817
%RSD	53.98326	141.5277	2.678682	279.8172	28.44477	31027.51	17.74281
#1	-.002118	.000000	.0112425	-.001063	-.000026	.0001529	.0008955
#2	-.000948	-.000992	.0116766	.000349	-.000017	-.000152	.0011524
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0011392	-.000086
Stddev	.0002717	.000148
%RSD	23.85232	172.6044
#1	.0009470	-.000191
#2	.0013313	.000019
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2469.999	1283.892	6546.791	4092.831
Stddev	5.894	1.568	8.424	13.623
%RSD	.2386338	.1221281	.1286801	.3328535
#1	2474.167	1285.000	6552.748	4102.464
#2	2465.832	1282.783	6540.834	4083.198

Sample Name: AL Acquired: 5/4/2015 18:17:13 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001882	F 659.7170	.0002018	.0005896	.0007215	.0000959
Stddev	.0004230	1.6022	.0021524	.0007979	.0001637	.0006687
%RSD	224.7318	.2428580	1066.713	135.3173	22.68836	697.0097
#1	-.000111	660.8499	.0017238	.0011538	.0008372	.0005688
#2	.000487	658.5841	-.001320	.0000254	.0006057	-.000377
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.1000000				
Low Limit		-.100000				

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001563	.2095322	.0003585	-.000475	.0000530	F .0053324
Stddev	.001720	.0017217	.0000391	.000092	.0011273	.0000788
%RSD	110.0298	.8217020	10.91022	19.30832	2128.311	1.477272
#1	-.002779	.2107496	.0003309	-.000411	.0008501	.0052767
#2	-.000347	.2083147	.0003862	-.000540	-.000744	.0053881
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.0050000
Low Limit						-.005000

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0991284	-.017112	-.000447	-.006596	.0028337	F .0051051
Stddev	.0206584	.004309	.000386	.001062	.0007851	.0003084
%RSD	20.84002	25.18250	86.30035	16.09803	27.70664	6.041794
#1	.0845207	-.014065	-.000174	-.007347	.0033889	.0053232
#2	.1137361	-.020159	-.000720	-.005845	.0022785	.0048870
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Fail
High Limit						.0050000
Low Limit						-.005000

Sample Name: AL Acquired: 5/4/2015 18:17:13 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129058	.0017900	-.000064	-.001724	F .0155023	-.006757
Stddev	.0039367	.0001806	.000880	.001059	.0048737	.000761
%RSD	30.50354	10.09139	1366.868	61.39210	31.43877	11.26780
#1	.0101221	.0016623	.000558	-.002473	.0189485	-.007295
#2	.0156895	.0019177	-.000687	-.000976	.0120560	-.006218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					.0050000	
Low Limit					-.005000	

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013482	.0001730	.0001918	.0015541	.0013816	.0071171
Stddev	.0014908	.0000051	.0000830	.0005464	.0000790	.0006539
%RSD	110.5805	2.971226	43.26054	35.16018	5.718435	9.187162
#1	.0024024	.0001694	.0002504	.0011677	.0014374	.0075794
#2	.0002940	.0001767	.0001331	.0019404	.0013257	.0066548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2154.085	1243.065	6068.658	3574.940
Stddev	6.423	4.614	20.282	7.249
%RSD	.2981604	.3711801	.3342171	.2027690
#1	2158.626	1246.328	6054.316	3580.065
#2	2149.543	1239.803	6083.000	3569.814

Sample Name: FE Acquired: 5/4/2015 18:22:14 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009297	.0199827	-.002643	-.002427	.0004301	.0003789
Stddev	.0003177	.0006730	.003099	.000063	.0000196	.0000383
%RSD	34.17233	3.368072	117.2443	2.579924	4.551028	10.10781
#1	.0011543	.0204586	-.004835	-.002471	.0004440	.0004059
#2	.0007050	.0195068	-.000452	-.002383	.0004163	.0003518
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003178	.0603541	F -.002072	F -.002601	.0021460	.0022277
Stddev	.001160	.0016170	.000119	.000092	.0003001	.0000704
%RSD	36.48086	2.679156	5.754137	3.529544	13.98160	3.158538
#1	-.003998	.0592107	-.001987	-.002536	.0019339	.0022775
#2	-.002359	.0614975	-.002156	-.002666	.0023582	.0021780
Check ?	Chk Pass	None	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit			.0010000	.0025000		
Low Limit			-.001000	-.002500		

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 206.6310	-.032362	-.000072	.0602047	.0000154	-.001606
Stddev	1.7309	.001004	.000538	.0013565	.0004727	.000063
%RSD	.8376643	3.101209	744.6660	2.253150	3079.324	3.915856
#1	205.4071	-.033071	-.000453	.0592455	-.000319	-.001561
#2	207.8549	-.031652	.000308	.0611639	.000350	-.001650
Check ?	Chk Fail	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.1000000					
Low Limit	-.100000					

Sample Name: FE Acquired: 5/4/2015 18:22:14 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088259	-.003166	.0003042	-.001972	.0005470	.0043636
Stddev	.0032201	.000148	.0010184	.000672	.0016222	.0005962
%RSD	36.48422	4.679235	334.8147	34.08488	296.5493	13.66223
#1	.0111029	-.003061	-.000416	-.002448	-.000600	.0039420
#2	.0065490	-.003270	.001024	-.001497	.001694	.0047851
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029448	.0003557	-.000290	.0003535	-.002141	.0004701
Stddev	.0003984	.0000080	.000102	.0005597	.000433	.0001389
%RSD	13.52984	2.261418	35.19360	158.3304	20.20459	29.55085
#1	.0026631	.0003614	-.000362	.0007493	-.002446	.0003719
#2	.0032266	.0003500	-.000218	-.000042	-.001835	.0005683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2374.964	1259.858	6429.297	4032.211
Stddev	9.779	4.333	7.084	24.787
%RSD	.4117339	.3439593	.1101819	.6147182
#1	2381.879	1262.922	6434.306	4049.738
#2	2368.050	1256.794	6424.288	4014.684

Sample Name: MRL Acquired: 5/4/2015 18:27:14 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055258	.2080208	.0091451	.0509551	.0100375	.0037793	.0497599
Stddev	.0006817	.0033725	.0006182	.0001168	.0002002	.0001224	.0004837
%RSD	12.33659	1.621224	6.760297	.2291737	1.994639	3.240115	.9720510
#1	.0060079	.2056361	.0095823	.0508725	.0101791	.0036927	.0494179
#2	.0050438	.2104055	.0087080	.0510377	.0098959	.0038658	.0501020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2034003	.0023393	.0050136	.0100421	.0105177	.2532141	.4575142
Stddev	.0047366	.0001717	.0000658	.0000953	.0003580	.0225966	.0009929
%RSD	2.328686	7.338664	1.311615	.9490207	3.403607	8.923924	.2170188
#1	.2067496	.0024607	.0049672	.0101095	.0102645	.2372358	.4582162
#2	.2000511	.0022179	.0050601	.0099747	.0107708	.2691923	.4568121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095220	.0992842	.0108910	.0100661	.9725236	.0108956	.0036108
Stddev	.0000095	.0331345	.0001876	.0003653	.0089924	.0003468	.0002846
%RSD	.0996974	33.37341	1.722147	3.629423	.9246449	3.183216	7.880793
#1	.0095287	.0758545	.0110237	.0098077	.9788822	.0111408	.0038120
#2	.0095153	.1227138	.0107584	.0103244	.9661650	.0106503	.0034096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: MRL Acquired: 5/4/2015 18:27:14 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0184276	.0112339	.1875156	.0396483	.0050805	.0050719	.0094012
Stddev	.0005270	.0003248	.0020206	.0004975	.0000113	.0000357	.0005917
%RSD	2.859835	2.891044	1.077558	1.254863	.2230093	.7044608	6.293697
#1	.0188002	.0114636	.1860869	.0392965	.0050885	.0050972	.0098196
#2	.0180550	.0110043	.1889444	.0400002	.0050725	.0050466	.0089828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0052532	.0203065
Stddev	.0002900	.0000741
%RSD	5.520905	.3650121
#1	.0050482	.0202541
#2	.0054583	.0203589
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2475.750	1290.709	6624.630	4107.051
Stddev	9.407	3.005	.801	15.089
%RSD	.3799754	.2328425	.0120988	.3673813
#1	2482.402	1292.834	6625.197	4117.721
#2	2469.098	1288.584	6624.063	4096.382

Sample Name: lb 500-286484/1-b Acquired: 5/4/2015 18:31:18 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005229	.0218413	-.001918	.0759070	.0010339	-.000126	-.006206
Stddev	.0004977	.0098483	.001441	.0003600	.0000452	.000237	.002006
%RSD	95.17924	45.08999	75.12898	.4742386	4.371561	188.8336	32.31899
#1	.0001710	.0148776	-.002936	.0756525	.0010659	.000042	-.007625
#2	.0008749	.0288051	-.000899	.0761615	.0010019	-.000294	-.004788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1350451	.0004332	-.000344	.0003356	.0003459	.0607882	.0219042
Stddev	.0027032	.0000170	.000419	.0002515	.0001675	.0461295	.0015397
%RSD	2.001683	3.934811	121.5722	74.93931	48.41142	75.88573	7.029320
#1	.1369565	.0004452	-.000048	.0005134	.0002275	.0281697	.0208155
#2	.1331336	.0004211	-.000640	.0001578	.0004644	.0934067	.0229930
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007342	.0407404	.0001810	.0003797	.7515924	-.001492	.0005800
Stddev	.0000075	.0005188	.0003073	.0000547	.0174164	.000431	.0000987
%RSD	1.021143	1.273498	169.7516	14.39364	2.317264	28.89659	17.02283
#1	.0007395	.0403736	-.000036	.0004184	.7392772	-.001187	.0006498
#2	.0007289	.0411073	.000398	.0003411	.7639077	-.001797	.0005102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: lb 500-286484/1-b Acquired: 5/4/2015 18:31:18 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012676	.0017071	.0819606	.0005230	.0003324	.0000600	-.003172
Stddev	.0002166	.0011726	.0026708	.0002922	.0000049	.0000239	.000908
%RSD	17.08371	68.68999	3.258702	55.85907	1.467641	39.85537	28.63010
#1	.0011145	.0025363	.0800721	.0007296	.0003290	.0000431	-.002530
#2	.0014207	.0008779	.0838492	.0003165	.0003359	.0000770	-.003814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0004491	.0056708
Stddev	.0004068	.0003984
%RSD	90.57230	7.025197
#1	.0007368	.0053891
#2	.0001615	.0059526
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2483.579	1295.747	6715.398	4167.620
Stddev	3.113	1.454	5.432	6.620
%RSD	.1253488	.1122490	.0808910	.1588462
#1	2485.780	1296.775	6711.557	4172.301
#2	2481.377	1294.718	6719.239	4162.938

Sample Name: lcs 500-286586/2-a Acquired: 5/4/2015 18:35:23 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0472262	1.879095	.0945081	.9216607	1.953831	.0495779	.4629011
Stddev	.0003186	.015827	.0013822	.0043634	.005952	.0001919	.0016102
%RSD	.6746982	.8422470	1.462537	.4734316	.3046348	.3870904	.3478548
#1	.0474515	1.890286	.0935307	.9247461	1.949622	.0494422	.4640397
#2	.0470009	1.867904	.0954854	.9185753	1.958040	.0497136	.4617625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.898926	.0491820	.5005630	.2010535	.2521312	1.060731	9.740486
Stddev	.028915	.0001351	.0007193	.0000592	.0011712	.074563	.064257
%RSD	.2920992	.2746967	.1437028	.0294191	.4645359	7.029417	.6596926
#1	9.878481	.0492775	.5010716	.2010117	.2513030	1.113455	9.785923
#2	9.919372	.0490865	.5000544	.2010954	.2529594	1.008007	9.695049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5032170	9.437124	.4965288	.9733549	10.22886	.4930339	.1008393
Stddev	.0008264	.077724	.0010845	.0043785	.01327	.0005984	.0012026
%RSD	.1642242	.8235942	.2184167	.4498399	.1297624	.1213780	1.192582
#1	.5026327	9.382165	.4957619	.9764510	10.21947	.4926108	.1016896
#2	.5038014	9.492083	.4972956	.9702588	10.23824	.4934571	.0999889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: lcs 500-286586/2-a Acquired: 5/4/2015 18:35:23 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4832337	.0843650	4.550578	.9555367	.9720589	1.020448	.0915474
Stddev	.0014686	.0015315	.012812	.0032222	.0023512	.001046	.0009439
%RSD	.3039144	1.815297	.2815499	.3372169	.2418827	.1024660	1.031039
#1	.4842722	.0854479	4.559637	.9578152	.9737215	1.019709	.0908799
#2	.4821953	.0832821	4.541518	.9532582	.9703963	1.021188	.0922148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.5049496	.4778402
Stddev	.0037313	.0012816
%RSD	.7389395	.2681967
#1	.5075880	.4787464
#2	.5023112	.4769340
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2393.463	1283.881	6600.773	4103.432
Stddev	6.551	6.508	4.862	8.525
%RSD	.2737227	.5068837	.0736586	.2077518
#1	2388.831	1279.279	6597.335	4109.460
#2	2398.096	1288.482	6604.211	4097.404

Sample Name: 160-11533-a-1-c Acquired: 5/4/2015 18:39:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007452	33.12705	-.004368	.5420459	.2654810	.0011294
Stddev	.0001785	.41338	.001529	.0004956	.0028093	.0000440
%RSD	23.94700	1.247849	35.00582	.0914331	1.058188	3.896947
#1	.0008714	32.83475	-.003287	.5416954	.2634945	.0010983
#2	.0006190	33.41935	-.005449	.5423963	.2674675	.0011606
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.010005	13.82404	.0014228	.0040383	.0355092	.0422688
Stddev	.000081	.00301	.0002105	.0001701	.0008844	.0004223
%RSD	.8079228	.0217487	14.79429	4.211483	2.490561	.9989949
#1	-.010063	13.82616	.0015717	.0041585	.0361346	.0425674
#2	-.009948	13.82191	.0012740	.0039180	.0348839	.0419702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.62630	4.374109	.0157112	5.967256	.2474609	.0004567
Stddev	.02952	.143621	.0003867	.041118	.0005791	.0002771
%RSD	.1304775	3.283437	2.461551	.6890618	.2340260	60.67626
#1	22.60543	4.272554	.0154378	5.938181	.2470514	.0006526
#2	22.64718	4.475665	.0159847	5.996331	.2478704	.0002608
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-1-c Acquired: 5/4/2015 18:39:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.75178	.0218561	.0341983	.0022716	.0032303	F 56.07758
Stddev	.51269	.0005648	.0007870	.0009827	.0015727	.01299
%RSD	3.060532	2.584367	2.301324	43.26171	48.68537	.0231598
#1	16.38925	.0222555	.0347548	.0015767	.0021182	56.08677
#2	17.11431	.0214567	.0336418	.0029666	.0043423	56.06840
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020366	.0626439	.4377114	-.003963	.0552573	.1525719
Stddev	.0012472	.0001480	.0043801	.000002	.0000310	.0004037
%RSD	61.23759	.2363116	1.000676	.0591139	.0561728	.2645844
#1	.0011547	.0627486	.4408086	-.003961	.0552793	.1528574
#2	.0029185	.0625392	.4346143	-.003965	.0552354	.1522865
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2323.400	1295.361	6623.224	4124.867
Stddev	2.863	.314	10.319	10.946
%RSD	.1232062	.0242291	.1558027	.2653715
#1	2321.376	1295.140	6615.927	4132.607
#2	2325.425	1295.583	6630.521	4117.127

Sample Name: 160-11533-a-1-c sd@5 Acquired: 5/4/2015 18:43:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004127	7.100260	-.001626	.1247300	.0566337	.0001009	-.001229
Stddev	.0002332	.032087	.001834	.0003176	.0004418	.0000826	.000756
%RSD	56.49600	.4519154	112.8256	.2546124	.7801696	81.92268	61.50402
#1	.0002478	7.077571	-.002923	.1245054	.0563213	.0000424	-.000695
#2	.0005776	7.122949	-.000329	.1249546	.0569461	.0001593	-.001764
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.042541	.0003756	.0007618	.0077930	.0093540	5.052295	.9130835
Stddev	.021453	.0001265	.0001854	.0003317	.0004673	.016747	.0035094
%RSD	.7050926	33.68114	24.33195	4.256128	4.995742	.3314825	.3843416
#1	3.027371	.0004650	.0006307	.0080275	.0096844	5.040452	.9155650
#2	3.057710	.0002861	.0008929	.0075585	.0090235	5.064137	.9106020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028823	1.307091	.0537910	.0004002	3.468444	.0049582	.0067878
Stddev	.0002004	.021014	.0007580	.0004285	.001882	.0002916	.0001870
%RSD	6.954588	1.607725	1.409213	107.0776	.0542604	5.881631	2.755124
#1	.0030240	1.292232	.0532550	.0000972	3.467113	.0051644	.0066556
#2	.0027406	1.321951	.0543270	.0007032	3.469775	.0047520	.0069201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 160-11533-a-1-c sd@5 Acquired: 5/4/2015 18:43:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000422	.0003293	12.43815	.0008000	.0137338	.0952340	-.002161
Stddev	.001580	.0016415	.01862	.0005433	.0000637	.0006304	.000400
%RSD	374.6672	498.5368	.1497372	67.91824	.4637627	.6619662	18.49202
#1	-.001539	.0014899	12.42498	.0011841	.0137789	.0956798	-.001878
#2	.000696	-.000831	12.45132	.0004158	.0136888	.0947882	-.002443
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0128757	.0330706
Stddev	.0005742	.0006157
%RSD	4.459800	1.861661
#1	.0124697	.0326353
#2	.0132818	.0335060
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2414.405	1286.896	6590.959	4090.166
Stddev	5.685	6.376	.435	25.081
%RSD	.2354453	.4954692	.0066029	.6132022
#1	2418.424	1291.405	6590.651	4107.901
#2	2410.385	1282.388	6591.267	4072.431

Sample Name: 160-11533-a-1-d du Acquired: 5/4/2015 18:47:25 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008123	32.82354	-.007951	.5767296	.2691138	.0008996
Stddev	.0001209	.01232	.000905	.0058339	.0014077	.0001688
%RSD	14.88230	.0375457	11.38325	1.011541	.5230887	18.76331
#1	.0008978	32.83225	-.008591	.5808548	.2701092	.0010190
#2	.0007269	32.81482	-.007311	.5726045	.2681184	.0007803
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008762	13.96998	.0013938	.0039353	.0365653	.0428769
Stddev	.001420	.03989	.0000017	.0003476	.0000617	.0013469
%RSD	16.20811	.2855331	.1214467	8.832311	.1688024	3.141315
#1	-.007758	13.99819	.0013926	.0041811	.0365217	.0419245
#2	-.009766	13.94178	.0013950	.0036896	.0366090	.0438293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.46847	4.376563	.0151781	5.848623	.2524351	.0007553
Stddev	.09829	.012673	.0000187	.034141	.0009396	.0001879
%RSD	.4374713	.2895536	.1234942	.5837433	.3722296	24.87752
#1	22.53798	4.385523	.0151649	5.872764	.2530995	.0006224
#2	22.39897	4.367602	.0151914	5.824482	.2517707	.0008881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-1-d du Acquired: 5/4/2015 18:47:25 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.39361	.0223935	.0349489	.0020316	.0084898	F 58.11461
Stddev	.01420	.0009089	.0000135	.0006653	.0015652	.56455
%RSD	.0816404	4.058766	.0387489	32.74963	18.43558	.9714441
#1	17.40365	.0217508	.0349393	.0015611	.0073831	58.51381
#2	17.38357	.0230362	.0349585	.0025020	.0095966	57.71541
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031841	.0630921	.4357356	-.003628	.0547920	.1594611
Stddev	.0000329	.0018036	.0114456	.001603	.0012489	.0009539
%RSD	1.034248	2.858628	2.626731	44.18606	2.279360	.5981867
#1	.0031608	.0618168	.4276424	-.004762	.0539089	.1601356
#2	.0032074	.0643674	.4438289	-.002494	.0556751	.1587866
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2281.844	1265.075	6617.783	4136.967
Stddev	15.544	11.861	154.003	20.737
%RSD	.6812116	.9375660	2.327109	.5012606
#1	2270.853	1256.688	6726.680	4122.304
#2	2292.836	1273.462	6508.886	4151.631

Sample Name: 160-11533-a-1-e ms Acquired: 5/4/2015 18:51:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0464638	44.16088	.0882354	1.446484	2.178852	.0499605
Stddev	.0006214	.31039	.0001309	.000876	.011506	.0007112
%RSD	1.337377	.7028521	.1483760	.0605863	.5280594	1.423559
#1	.0460244	43.94141	.0881428	1.447104	2.170716	.0494576
#2	.0469032	44.38036	.0883280	1.445865	2.186987	.0504635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4671618	23.20572	.0488567	.5124079	.2365965	.2926491
Stddev	.0010086	.27696	.0000195	.0000104	.0005311	.0017584
%RSD	.2158922	1.193514	.0398366	.0020378	.2244888	.6008652
#1	.4664486	23.00988	.0488429	.5124153	.2369720	.2938925
#2	.4678750	23.40156	.0488705	.5124005	.2362209	.2914057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.12100	14.48389	.5246453	15.64883	.7325998	.9387164
Stddev	.15501	.04335	.0015858	.14320	.0065367	.0038746
%RSD	.6170524	.2992670	.3022654	.9150936	.8922577	.4127539
#1	25.01139	14.51455	.5257666	15.54758	.7279777	.9359767
#2	25.23060	14.45325	.5235239	15.75009	.7372220	.9414562
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-1-e ms Acquired: 5/4/2015 18:51:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.17649	.5248835	.1359196	.4143856	.0875527	F 70.90791
Stddev	.00605	.0012636	.0008051	.0016135	.0002174	.18477
%RSD	.0222659	.2407310	.5923535	.3893688	.2483036	.2605709
#1	27.18077	.5257770	.1364889	.4132446	.0877065	70.77726
#2	27.17222	.5239900	.1353503	.4155265	.0873990	71.03855
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9232894	1.005994	1.484245	.0892640	.5586970	.6404971
Stddev	.0022526	.006272	.002455	.0012125	.0009258	.0022855
%RSD	.2439727	.6234518	.1654279	1.358302	.1657112	.3568363
#1	.9216966	1.010429	1.485981	.0901213	.5593516	.6388810
#2	.9248823	1.001559	1.482509	.0884066	.5580423	.6421132
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2296.138	1297.106	6684.761	4177.816
Stddev	.228	1.559	23.491	17.121
%RSD	.0099508	.1202103	.3514080	.4098027
#1	2295.976	1298.208	6668.150	4189.922
#2	2296.300	1296.003	6701.371	4165.710

Sample Name: 160-11533-a-2-c Acquired: 5/4/2015 18:55:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000453	145.6078	.0208768	.5566816	1.488360	.0064366
Stddev	.000769	5.9913	.0014069	.0008561	.024710	.0003604
%RSD	169.7017	4.114666	6.738991	.1537808	1.660213	5.598498
#1	.000091	141.3714	.0218716	.5572869	1.470887	.0066914
#2	-.000997	149.8443	.0198820	.5560763	1.505832	.0061818
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.014299	30.20999	.0015748	.0264040	.1280780	.1654243
Stddev	.001568	.32671	.0000567	.0001237	.0022307	.0008394
%RSD	10.96829	1.081456	3.597948	.4684203	1.741647	.5074445
#1	-.013190	29.97898	.0015348	.0263166	.1296553	.1648307
#2	-.015408	30.44101	.0016149	.0264915	.1265007	.1660179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	138.8430	16.91852	.0724435	26.71824	.7651376	.0025384
Stddev	3.2133	.91228	.0024121	.73582	.0123703	.0006086
%RSD	2.314344	5.392173	3.329596	2.753984	1.616743	23.97520
#1	136.5709	16.27344	.0707379	26.19794	.7563905	.0021081
#2	141.1152	17.56360	.0741490	27.23854	.7738847	.0029687
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-2-c Acquired: 5/4/2015 18:55:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.05144	.1991027	.0810573	.0008670	.0062406	F 83.36250
Stddev	.21481	.0005150	.0022324	.0008499	.0031683	.68057
%RSD	1.071281	.2586558	2.754098	98.02083	50.76954	.8164039
#1	19.89955	.1994669	.0826359	.0002661	.0084810	83.84374
#2	20.20333	.1987385	.0794788	.0014680	.0040003	82.88126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097380	.3047652	.9153778	-.006124	.2400009	.5960509
Stddev	.0006644	.0005322	.1104440	.001554	.0057129	.0027669
%RSD	6.822945	.1746192	12.06540	25.36831	2.380346	.4642001
#1	.0092682	.3051415	.9934735	-.007223	.2440405	.5980074
#2	.0102078	.3043889	.8372821	-.005026	.2359613	.5940944
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2187.456	1431.257	7327.412	4515.539
Stddev	6.155	.878	19.733	39.274
%RSD	.2813712	.0613620	.2693092	.8697500
#1	2183.103	1431.878	7341.365	4543.310
#2	2191.808	1430.636	7313.458	4487.768

Sample Name: 160-11533-a-3-c Acquired: 5/4/2015 19:00:12 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000106	70.10734	.0195269	.3402822	.5244963	.0037095
Stddev	.000470	.04000	.0021732	.0005057	.0002799	.0004803
%RSD	443.5270	.0570612	11.12904	.1486018	.0533679	12.94904
#1	.000226	70.07906	.0179902	.3406398	.5242983	.0033699
#2	-.000438	70.13563	.0210635	.3399246	.5246942	.0040492
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.011099	16.40741	.0015362	.0139847	.0807028	.1022589
Stddev	.000656	.07651	.0001712	.0002918	.0016076	.0003592
%RSD	5.911618	.4663146	11.14173	2.086286	1.992007	.3512391
#1	-.011563	16.35331	.0016573	.0141910	.0795661	.1020050
#2	-.010635	16.46151	.0014152	.0137784	.0818396	.1025129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	85.91230	9.347413	.0394362	15.45117	.5078553	.0025038
Stddev	.36191	.019826	.0002136	.08913	.0014558	.0001615
%RSD	.4212526	.2121020	.5416532	.5768542	.2866560	6.451334
#1	85.65639	9.361432	.0392851	15.38814	.5068259	.0026181
#2	86.16820	9.333394	.0395872	15.51419	.5088847	.0023896
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-3-c Acquired: 5/4/2015 19:00:12 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.33092	.1218261	.0582332	.0006952	.0021320	F 78.78181
Stddev	.05925	.0006358	.0021255	.0025508	.0006015	2.88579
%RSD	.5229273	.5218904	3.650061	366.9244	28.21265	3.663012
#1	11.28902	.1213765	.0597362	-.001108	.0017067	80.82237
#2	11.37281	.1222757	.0567302	.002499	.0025573	76.74125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067119	.1843999	.5984098	-.003273	.1582612	.3505706
Stddev	.0009656	.0000780	.0570948	.000088	.0029019	.0005277
%RSD	14.38567	.0422771	9.541087	2.703584	1.833644	.1505201
#1	.0073946	.1843448	.5580377	-.003210	.1562092	.3501975
#2	.0060291	.1844550	.6387819	-.003335	.1603131	.3509438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2294.081	1380.959	7061.646	4372.858
Stddev	2.433	3.743	5.427	3.514
%RSD	.1060642	.2710733	.0768557	.0803687
#1	2292.361	1378.312	7057.809	4375.343
#2	2295.802	1383.606	7065.484	4370.373

Sample Name: 160-11533-a-4-c Acquired: 5/4/2015 19:04:10 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005319	33.90815	-.002255	.6089279	.2519091	.0015340
Stddev	.0003151	.32989	.001699	.0026893	.0013878	.0001257
%RSD	59.23019	.9728867	75.33922	.4416523	.5509009	8.196194
#1	.0007547	33.67489	-.001053	.6070262	.2509278	.0016229
#2	.0003092	34.14142	-.003456	.6108295	.2528904	.0014451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008886	17.35076	.0013732	.0049701	.0371693	.0550831
Stddev	.000429	.06914	.0000385	.0000026	.0010463	.0001666
%RSD	4.832019	.3985044	2.803832	.0531218	2.815051	.3024992
#1	-.008582	17.30187	.0013460	.0049719	.0379092	.0552009
#2	-.009189	17.39966	.0014004	.0049682	.0364295	.0549653
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.64055	3.851488	.0165785	6.530092	.1953709	.0009994
Stddev	.15203	.035635	.0006404	.032450	.0010400	.0001921
%RSD	.5129122	.9252146	3.862531	.4969279	.5323419	19.22445
#1	29.53305	3.826291	.0161257	6.507146	.1946354	.0008635
#2	29.74805	3.876686	.0170313	6.553037	.1961063	.0011352
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-4-c Acquired: 5/4/2015 19:04:10 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.28935	.0260945	.0545499	.0026900	.0045348	F 59.14188
Stddev	.13600	.0007383	.0008802	.0012042	.0010716	.09328
%RSD	.7435748	2.829186	1.613599	44.76777	23.63042	.1577205
#1	18.19319	.0266165	.0551723	.0035415	.0052925	59.07592
#2	18.38551	.0255725	.0539275	.0018384	.0037770	59.20784
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029340	.0544584	.5631370	-.005096	.0635072	.1637859
Stddev	.0005318	.0002888	.0027158	.000225	.0000238	.0000321
%RSD	18.12465	.5302772	.4822677	4.408358	.0375344	.0195924
#1	.0033100	.0546626	.5650574	-.005255	.0635241	.1638086
#2	.0025580	.0542542	.5612166	-.004937	.0634904	.1637632
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2264.971	1275.888	6587.635	4092.841
Stddev	5.278	1.059	.806	11.120
%RSD	.2330284	.0829773	.0122303	.2716939
#1	2268.703	1276.636	6587.065	4100.704
#2	2261.238	1275.139	6588.205	4084.978

Sample Name: 160-11533-a-5-c Acquired: 5/4/2015 19:08:10 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005015	46.32189	.0017984	.5656025	.3172692	.0014768
Stddev	.0004426	.16866	.0004820	.0037123	.0009279	.0002786
%RSD	88.25392	.3641075	26.80055	.6563446	.2924791	18.86593
#1	.0008145	46.20263	.0021392	.5629775	.3166131	.0012798
#2	.0001885	46.44115	.0014576	.5682275	.3179254	.0016738
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007950	15.10216	.0014356	.0071217	.0485355	.0601698
Stddev	.000763	.11551	.0001761	.0002619	.0018735	.0004725
%RSD	9.602736	.7648517	12.26375	3.677767	3.860133	.7853311
#1	-.007410	15.02048	.0015601	.0069365	.0498603	.0598356
#2	-.008490	15.18383	.0013111	.0073069	.0472107	.0605039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.01502	4.389777	.0233526	8.221419	.3445766	.0009172
Stddev	.24762	.055286	.0004600	.005054	.0017113	.0003680
%RSD	.5625768	1.259427	1.969868	.0614755	.4966468	40.12424
#1	43.83992	4.428870	.0236779	8.224993	.3433665	.0006569
#2	44.19011	4.350684	.0230273	8.217845	.3457867	.0011774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-5-c Acquired: 5/4/2015 19:08:10 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.85463	.0380274	.0571612	.0027979	.0057992	F 66.93534
Stddev	.20408	.0003116	.0044595	.0004750	.0009732	.36251
%RSD	1.210820	.8194400	7.801570	16.97622	16.78235	.5415810
#1	16.99894	.0382477	.0603145	.0031337	.0064873	66.67901
#2	16.71033	.0378071	.0540079	.0024620	.0051110	67.19167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039120	.0502837	.7642710	-.005696	.0840062	.1787767
Stddev	.0006094	.0000478	.0011860	.000054	.0005008	.0001987
%RSD	15.57890	.0949667	.1551774	.9487292	.5961509	.1111521
#1	.0043429	.0503175	.7651096	-.005734	.0843603	.1789172
#2	.0034810	.0502499	.7634324	-.005657	.0836520	.1786362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2257.746	1289.867	6634.252	4131.554
Stddev	1.058	5.131	10.303	12.886
%RSD	.0468760	.3978084	.1553039	.3118890
#1	2256.997	1293.495	6626.967	4140.665
#2	2258.494	1286.238	6641.538	4122.442

Sample Name: CCV Acquired: 5/4/2015 19:12:10 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4902771	48.09747	.5113314	.5033736	.4699636	.5126036	.4891108
Stddev	.0003643	.73444	.0026440	.0036199	.0053271	.0071025	.0003521
%RSD	.0743028	1.526974	.5170911	.7191327	1.133522	1.385568	.0719895
#1	.4900195	47.57815	.5094618	.5008139	.4661967	.5075814	.4893598
#2	.4905347	48.61680	.5132010	.5059333	.4737304	.5176259	.4888618
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.73558	.5028214	.5272062	.5060036	.5047829	25.51177	45.96566
Stddev	.53031	.0013314	.0009013	.0015592	.0008155	.54573	.04156
%RSD	2.060619	.2647884	.1709481	.3081438	.1615611	2.139114	.0904081
#1	25.36059	.5018800	.5265690	.5049011	.5042062	25.12589	45.99504
#2	26.11057	.5037629	.5278435	.5071061	.5053596	25.89766	45.93627
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.825144	24.27787	5.026217	.4857540	24.05602	.5212493	.5193103
Stddev	.017711	.24254	.085040	.0022314	.06670	.0018375	.0015200
%RSD	.4630236	.9990286	1.691937	.4593613	.2772524	.3525270	.2927013
#1	3.837668	24.10636	4.966084	.4841762	24.10318	.5199500	.5182355
#2	3.812620	24.44937	5.086349	.4873318	24.00886	.5225486	.5203851
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 5/4/2015 19:12:10 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4972878	.4763356	.5209347	.5197073	.4883280	.5128139	.4921165
Stddev	.0006941	.0007118	.0007749	.0023210	.0001139	.0000672	.0019733
%RSD	.1395844	.1494394	.1487462	.4465873	.0233200	.0131141	.4009840
#1	.4967970	.4768389	.5203868	.5180662	.4884085	.5128615	.4907212
#2	.4977787	.4758322	.5214826	.5213485	.4882474	.5127664	.4935119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	5.036452	.5211670
Stddev	.001071	.0014126
%RSD	.0212729	.2710508
#1	5.035694	.5221658
#2	5.037210	.5201681
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2244.472	1272.715	6463.893	4092.255
Stddev	3.720	3.873	.805	48.118
%RSD	.1657239	.3043455	.0124464	1.175822
#1	2247.102	1275.454	6464.462	4126.279
#2	2241.842	1269.976	6463.324	4058.230

Sample Name: CCB Acquired: 5/4/2015 19:16:04 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000995	.0221391	-.001040	.0014497	.0001965	-.000045	.0003616
Stddev	.0004159	.0029197	.001836	.0001749	.0000731	.000262	.0009290
%RSD	417.8231	13.18789	176.5289	12.06288	37.18754	580.4452	256.8956
#1	-.000195	.0242036	-.002338	.0015733	.0002482	.000140	-.000295
#2	.000394	.0200745	.000258	.0013260	.0001448	-.000230	.001018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004715	.0000877	-.000167	.0003398	-.000030	.0439830	-.022581
Stddev	.004813	.0000050	.000513	.0003383	.000078	.1062083	.003945
%RSD	102.0772	5.724038	306.8621	99.53267	261.4310	241.4755	17.46899
#1	-.001312	.0000841	.000196	.0001007	.000025	-.031118	-.025371
#2	-.008118	.0000912	-.000530	.0005790	-.000085	.119084	-.019792
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000360	-.001430	.0002668	.0001784	.0006497	.0003814	-.001092
Stddev	.0008772	.020470	.0001883	.0002586	.0002021	.0005427	.000346
%RSD	2436.794	1431.446	70.54610	144.9381	31.11081	142.2976	31.68958
#1	.0006563	-.015904	.0003999	-.000004	.0005068	.0007651	-.000847
#2	-.000584	.013044	.0001337	.000361	.0007927	-.000002	-.001336
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 5/4/2015 19:16:04 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000955	.0007759	.0168272	.0010867	-.000043	.0000806	.0008383
Stddev	.000385	.0026667	.0015199	.0001493	.000002	.0000703	.0003626
%RSD	40.35227	343.7059	9.032171	13.73434	5.749374	87.20555	43.25854
#1	-.001228	-.001110	.0179019	.0011922	-.000042	.0001302	.0010947
#2	-.000683	.002662	.0157525	.0009811	-.000045	.0000309	.0005818
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0009821	-.000110
Stddev	.0005554	.000120
%RSD	56.55578	109.6038
#1	.0005893	-.000195
#2	.0013748	-.000025
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2508.692	1301.746	6616.075	4103.406
Stddev	2.720	.990	10.008	19.404
%RSD	.1084400	.0760236	.1512706	.4728695
#1	2506.768	1301.047	6623.152	4117.127
#2	2510.615	1302.446	6608.998	4089.686

Sample Name: 160-11533-a-6-c Acquired: 5/4/2015 19:20:09 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001608	2.876120	-.003325	.6570198	.0888082	.0003089	-.005777
Stddev	.0002304	.028214	.002249	.0016297	.0003197	.0000886	.000976
%RSD	143.2882	.9809615	67.63662	.2480455	.3599835	28.68361	16.88793
#1	-.000002	2.856170	-.004915	.6581722	.0885822	.0002463	-.005088
#2	.000324	2.896070	-.001735	.6558674	.0890343	.0003716	-.006467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.30006	.0006971	-.000377	.0043286	.0089412	1.303473	1.085191
Stddev	.03860	.0000385	.000188	.0003201	.0002026	.034097	.023094
%RSD	.3416032	5.519365	49.81631	7.394358	2.265887	2.615848	2.128073
#1	11.27277	.0006699	-.000509	.0041023	.0087979	1.327583	1.101520
#2	11.32736	.0007243	-.000244	.0045550	.0090844	1.279363	1.068861
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014980	2.523618	.0111921	.0006702	23.40721	.0007885	.0016589
Stddev	.0002144	.000117	.0000314	.0001839	.28255	.0003749	.0003270
%RSD	14.31023	.0046186	.2804125	27.43999	1.207086	47.54722	19.70922
#1	.0016496	2.523700	.0111699	.0008002	23.20742	.0010536	.0018901
#2	.0013464	2.523535	.0112143	.0005401	23.60700	.0005234	.0014277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 160-11533-a-6-c Acquired: 5/4/2015 19:20:09 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002865	.0020292	5.911301	.0000555	.0446565	.0478209	-.003539
Stddev	.0006959	.0018093	.031297	.0002805	.0000592	.0001701	.000504
%RSD	242.8880	89.16193	.5294461	505.5669	.1326701	.3557039	14.23654
#1	.0007786	.0007499	5.933431	-.000143	.0446984	.0479412	-.003896
#2	-.000206	.0033086	5.889171	.000254	.0446146	.0477006	-.003183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0049589	.2368324
Stddev	.0005594	.0008991
%RSD	11.28162	.3796266
#1	.0053545	.2374681
#2	.0045633	.2361966
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2392.035	1287.202	6618.706	4094.849
Stddev	9.831	4.142	10.017	3.320
%RSD	.4109783	.3217609	.1513396	.0810720
#1	2385.083	1284.274	6611.623	4097.196
#2	2398.986	1290.131	6625.789	4092.501

Sample Name: 160-11533-a-7-c Acquired: 5/4/2015 19:24:10 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005709	96.53635	.0084694	.4494383	.5708776	.0034738
Stddev	.0007654	1.12244	.0004580	.0015102	.0053693	.0001323
%RSD	134.0553	1.162711	5.407782	.3360166	.9405366	3.810118
#1	.0011121	95.74267	.0087932	.4483704	.5670809	.0033802
#2	.0000297	97.33004	.0081455	.4505062	.5746743	.0035674
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.011063	15.13431	.0012424	.0233079	.0873475	.1029879
Stddev	.001081	.24850	.0000006	.0000817	.0008193	.0006063
%RSD	9.767332	1.641991	.0484089	.3503619	.9379842	.5886593
#1	-.011827	14.95859	.0012420	.0232501	.0867682	.1034166
#2	-.010299	15.31003	.0012428	.0233656	.0879268	.1025592
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	84.01660	9.415085	.0415862	14.44381	.5211457	.0012836
Stddev	1.03794	.053666	.0002965	.14195	.0087223	.0006125
%RSD	1.235401	.5699973	.7128958	.9828029	1.673679	47.71509
#1	83.28267	9.377137	.0413765	14.34343	.5149781	.0017167
#2	84.75054	9.453032	.0417958	14.54419	.5273133	.0008505
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-7-c Acquired: 5/4/2015 19:24:10 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.41866	.1053505	.0601786	.0003049	.0049135	F 67.22232
Stddev	.12553	.0012664	.0011158	.0006229	.0009399	.30377
%RSD	.7645496	1.202051	1.854085	204.2923	19.12803	.4518909
#1	16.32990	.1044551	.0609676	.0007453	.0055781	67.00752
#2	16.50742	.1062460	.0593896	-.000136	.0042489	67.43712
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053404	.1610224	.7044926	-.004326	.1411094	.8215289
Stddev	.0007641	.0001114	.0001810	.002143	.0004412	.0003215
%RSD	14.30758	.0692042	.0256905	49.54450	.3126920	.0391354
#1	.0048001	.1611012	.7043646	-.002811	.1414214	.8213016
#2	.0058807	.1609436	.7046206	-.005842	.1407974	.8217563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2253.963	1387.270	7116.049	4436.975
Stddev	1.968	.830	16.975	26.190
%RSD	.0873273	.0598273	.2385396	.5902732
#1	2255.355	1387.857	7104.046	4455.494
#2	2252.571	1386.683	7128.052	4418.455

Sample Name: 160-11533-a-8-c Acquired: 5/4/2015 19:28:08 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006892	33.13657	-.002407	.6478229	.2449159	.0011385
Stddev	.0001845	.13018	.001595	.0034689	.0012639	.0002190
%RSD	26.77501	.3928566	66.26822	.5354700	.5160637	19.23196
#1	.0008197	33.04452	-.003535	.6453700	.2440222	.0009837
#2	.0005588	33.22862	-.001279	.6502758	.2458097	.0012934
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.010628	22.43323	.0014793	.0054061	.0330991	.0699673
Stddev	.001336	.19390	.0002549	.0003081	.0029574	.0070216
%RSD	12.56807	.8643228	17.22857	5.698427	8.934954	10.03557
#1	-.011572	22.29613	.0012991	.0056240	.0310079	.0650022
#2	-.009683	22.57034	.0016596	.0051883	.0351903	.0749323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.12121	4.055533	.0157814	6.590996	.1865272	.0016179
Stddev	.28551	.020958	.0000688	.052168	.0010535	.0002087
%RSD	1.015272	.5167656	.4358794	.7915092	.5647688	12.89760
#1	27.91933	4.040713	.0158300	6.554107	.1857823	.0014704
#2	28.32310	4.070352	.0157327	6.627884	.1872721	.0017655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11533-a-8-c Acquired: 5/4/2015 19:28:08 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.96422	.0239616	.0614207	.0026253	.0062669	F 58.65031
Stddev	.04412	.0002914	.0030377	.0017515	.0002447	.10200
%RSD	.2326266	1.216206	4.945693	66.71504	3.904796	.1739180
#1	18.93302	.0241677	.0635687	.0013868	.0064400	58.57819
#2	18.99541	.0237555	.0592728	.0038638	.0060939	58.72244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027299	.0603733	.4584790	-.003021	.0555159	.2411026
Stddev	.0009442	.0055108	.0414997	.001902	.0056127	.0003256
%RSD	34.58608	9.127944	9.051605	62.94988	10.11013	.1350650
#1	.0033975	.0564766	.4291343	-.004365	.0515471	.2413328
#2	.0020622	.0642701	.4878237	-.001676	.0594847	.2408723
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2268.068	1277.050	7034.393	4143.773
Stddev	1.143	3.495	467.414	4.788
%RSD	.0504144	.2737084	6.644694	.1155408
#1	2267.259	1279.522	7364.905	4147.158
#2	2268.876	1274.579	6703.882	4140.388

Sample Name: 160-11533-a-9-c Acquired: 5/4/2015 19:32:08 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001611	6.921279	-.002240	.8036173	.1047985	.0002732	-.006511
Stddev	.0005811	.140039	.000826	.0039553	.0009125	.0004244	.000440
%RSD	360.6386	2.023304	36.86506	.4921844	.8707479	155.3527	6.765348
#1	.0005720	6.822257	-.001656	.8008205	.1041532	-.000027	-.006822
#2	-.000250	7.020301	-.002824	.8064141	.1054437	.000573	-.006199
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.978704	.0007208	.0014187	.0089464	.0093042	4.236273	1.603708
Stddev	.012668	.0000892	.0002835	.0003767	.0003519	.000925	.046664
%RSD	.1587729	12.37793	19.98523	4.210287	3.781728	.0218247	2.909748
#1	7.969747	.0006577	.0016192	.0086801	.0095530	4.235619	1.570711
#2	7.987662	.0007839	.0012182	.0092128	.0090554	4.236926	1.636704
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031773	2.782662	.1574776	.0002711	33.09092	.0061666	.0055876
Stddev	.0005087	.028073	.0005229	.0002682	.57136	.0015975	.0000967
%RSD	16.00914	1.008866	.3320479	98.94162	1.726650	25.90601	1.729794
#1	.0035370	2.762811	.1571079	.0004608	32.68690	.0072963	.0056560
#2	.0028176	2.802513	.1578474	.0000814	33.49494	.0050370	.0055193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 160-11533-a-9-c Acquired: 5/4/2015 19:32:08 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005427	.0031127	13.33403	-.000432	.0317776	.1137013	-.002897
Stddev	.0004331	.0001163	.16868	.000026	.0001231	.0006074	.000310
%RSD	79.81060	3.736526	1.265003	6.034634	.3872415	.5341952	10.70364
#1	.0002364	.0031949	13.21476	-.000451	.0318646	.1132718	-.002678
#2	.0008490	.0030304	13.45330	-.000414	.0316906	.1141308	-.003116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0126054	.0724298
Stddev	.0003080	.0002107
%RSD	2.443154	.2909349
#1	.0128232	.0722808
#2	.0123877	.0725788
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2311.119	1257.517	6502.456	4030.920
Stddev	1.468	2.130	21.211	7.364
%RSD	.0635281	.1693809	.3261959	.1826843
#1	2310.081	1259.023	6487.458	4036.127
#2	2312.157	1256.011	6517.454	4025.713

Sample Name: 160-11533-a-10-c Acquired: 5/4/2015 19:36:09 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000274	116.4616	.0191759	.4533515	.4520946	.0049643	-.006355
Stddev	.000249	.9452	.0023133	.0003398	.0031016	.0000210	.000158
%RSD	90.86432	.8115584	12.06359	.0749531	.6860468	.4231480	2.485809
#1	-.000098	115.7933	.0208116	.4531113	.4499015	.0049791	-.006243
#2	-.000450	117.1299	.0175401	.4535918	.4542878	.0049494	-.006467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.87499	.0006248	.0324609	.1070815	.1488175	110.1862	11.75596
Stddev	.18097	.0000131	.0002305	.0009890	.0013548	1.0772	.03144
%RSD	.8669179	2.104821	.7101779	.9236263	.9103983	.9776308	.2674183
#1	20.74703	.0006155	.0322979	.1077809	.1497756	109.4245	11.73373
#2	21.00296	.0006341	.0326239	.1063822	.1478595	110.9480	11.77818
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0512002	19.92281	.8310744	.0033303	26.16508	.1521299	.0576192
Stddev	.0002175	.15728	.0075496	.0001960	.15397	.0004514	.0003206
%RSD	.4247729	.7894360	.9084161	5.884148	.5884396	.2967493	.5563227
#1	.0510465	19.81159	.8257360	.0034689	26.05621	.1524491	.0573925
#2	.0513540	20.03402	.8364128	.0031917	26.27395	.1518107	.0578458
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 160-11533-a-10-c Acquired: 5/4/2015 19:36:09 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000305	.0023822	31.72785	.0074625	.2080339	.6950906	-.003249
Stddev	.000051	.0007899	.51406	.0003012	.0001673	.0024058	.000060
%RSD	16.71056	33.16121	1.620207	4.036922	.0804345	.3461164	1.846684
#1	-.000341	.0018236	31.36436	.0072495	.2081523	.6967918	-.003206
#2	-.000269	.0029407	32.09134	.0076755	.2079156	.6933894	-.003291
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.1942276	.4746255
Stddev	.0004826	.0021546
%RSD	.2484620	.4539546
#1	.1945689	.4731020
#2	.1938864	.4761491
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2209.858	1370.748	6961.075	4380.879
Stddev	.331	1.189	32.534	25.165
%RSD	.0149614	.0867260	.4673702	.5744300
#1	2209.624	1371.589	6938.070	4398.674
#2	2210.091	1369.908	6984.080	4363.085

Sample Name: 160-11565-a-1-b Acquired: 5/4/2015 19:40:57 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001228	26.03732	-.002074	.7845873	.2097157	.0009229	-.006309
Stddev	.0001704	.05779	.001078	.0009950	.0002051	.0000272	.000721
%RSD	138.7970	.2219434	51.98061	.1268137	.0978071	2.944654	11.43262
#1	.0002433	26.07818	-.002836	.7852908	.2095706	.0009037	-.005799
#2	.0000023	25.99645	-.001312	.7838837	.2098607	.0009421	-.006819
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.52237	.0011561	.0031845	.0296615	.0286412	22.06207	3.052618
Stddev	.08676	.0001033	.0001572	.0001529	.0004711	.11351	.029266
%RSD	.6416256	8.933397	4.935355	.5153954	1.644801	.5145190	.9587113
#1	13.46102	.0010831	.0030734	.0295534	.0283081	21.98180	3.073312
#2	13.58372	.0012292	.0032956	.0297696	.0289743	22.14233	3.031924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124559	6.163452	.1294234	.0006850	23.22015	.0218658	.0282268
Stddev	.0000615	.000732	.0012979	.0001778	.18551	.0003105	.0002980
%RSD	.4937177	.0118719	1.002815	25.95615	.7989269	1.419886	1.055635
#1	.0124124	6.163969	.1285057	.0005593	23.08897	.0220854	.0284375
#2	.0124994	6.162934	.1303412	.0008108	23.35133	.0216463	.0280161
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 160-11565-a-1-b Acquired: 5/4/2015 19:40:57 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017697	.0028992	45.37102	.0008938	.0404103	.5569355	-.004371
Stddev	.0007681	.0013307	.21864	.0000605	.0001152	.0010614	.000052
%RSD	43.40008	45.89848	.4818990	6.768262	.2850381	.1905798	1.193400
#1	.0023128	.0019582	45.52562	.0009366	.0404917	.5576861	-.004408
#2	.0012266	.0038401	45.21641	.0008510	.0403288	.5561850	-.004334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0457342	.0855179
Stddev	.0001958	.0004689
%RSD	.4281239	.5482928
#1	.0458726	.0851863
#2	.0455957	.0858495
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2277.962	1278.115	6566.876	4065.996
Stddev	1.234	4.807	15.210	10.173
%RSD	.0541841	.3760721	.2316229	.2501967
#1	2277.089	1274.716	6556.121	4073.190
#2	2278.835	1281.513	6577.631	4058.803

Sample Name: 160-11565-a-2-b Acquired: 5/4/2015 19:44:58 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001248	112.7124	.0042914	.5412242	.8247278	.0037900
Stddev	.0001203	.7630	.0014887	.0020790	.0034100	.0000974
%RSD	96.43926	.6769426	34.69110	.3841306	.4134685	2.569889
#1	.0000397	112.1729	.0053441	.5397541	.8223166	.0037211
#2	.0002099	113.2519	.0032387	.5426943	.8271390	.0038589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.011948	30.77412	.0013848	.0190166	.1147405	.1352779
Stddev	.000678	.16086	.0000174	.0004825	.0001401	.0011442
%RSD	5.677923	.5227267	1.256832	2.537159	.1220672	.8458130
#1	-.011468	30.66037	.0013725	.0193578	.1146414	.1360870
#2	-.012428	30.88786	.0013971	.0186754	.1148395	.1344688
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	111.0577	10.42273	.0571030	22.52441	.2889384	.0018590
Stddev	.9731	.09078	.0011416	.01918	.0011922	.0001242
%RSD	.8762016	.8709648	1.999209	.0851315	.4126141	6.680683
#1	110.3696	10.35854	.0562958	22.51085	.2880954	.0017712
#2	111.7457	10.48692	.0579103	22.53797	.2897814	.0019468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11565-a-2-b Acquired: 5/4/2015 19:44:58 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.57427	.0786867	.0858749	.0022085	.0079642	F 78.64123
Stddev	.22596	.0001505	.0021342	.0010854	.0007083	.16309
%RSD	.9585121	.1912601	2.485220	49.14831	8.892988	.2073871
#1	23.41449	.0787931	.0873839	.0029760	.0074634	78.52591
#2	23.73405	.0785802	.0843658	.0014410	.0084650	78.75655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0078471	.2114179	.6282435	-.004430	.1861355	.4277309
Stddev	.0004047	.0000760	.0026992	.000533	.0000122	.0007354
%RSD	5.157462	.0359354	.4296491	12.02940	.0065455	.1719306
#1	.0081333	.2113642	.6301522	-.004807	.1861441	.4282509
#2	.0075609	.2114716	.6263349	-.004053	.1861269	.4272108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2262.271	1363.814	6962.832	4332.270
Stddev	1.253	2.520	12.968	7.195
%RSD	.0553946	.1847489	.1862487	.1660704
#1	2263.158	1365.596	6953.662	4337.358
#2	2261.385	1362.033	6972.002	4327.183

Sample Name: 160-11565-a-3-b Acquired: 5/4/2015 19:49:48 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000782	84.91885	.0175403	.2551266	.3379412	.0058027	-.003780
Stddev	.0000932	.75653	.0059683	.0012920	.0023622	.0001249	.000803
%RSD	119.1082	.8908848	34.02615	.5064281	.6990022	2.152729	21.23493
#1	.0000123	84.38390	.0133201	.2542130	.3362709	.0058911	-.003212
#2	.0001441	85.45380	.0217606	.2560402	.3396115	.0057144	-.004348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.52513	.0007001	.0140415	.0983412	.0835394	84.05979	9.730901
Stddev	.07732	.0000055	.0000869	.0000315	.0003261	.27494	.114592
%RSD	.6709152	.7900009	.6192136	.0320743	.3903517	.3270798	1.177609
#1	11.47046	.0007040	.0139800	.0983188	.0837700	83.86538	9.649872
#2	11.57981	.0006962	.0141030	.0983635	.0833089	84.25420	9.811929
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0569577	17.73129	.3100505	.0014127	11.22069	.1139858	.0286802
Stddev	.0009294	.16937	.0019247	.0002026	.10093	.0002247	.0003105
%RSD	1.631805	.9551974	.6207676	14.33829	.8995401	.1971210	1.082798
#1	.0563005	17.61153	.3086895	.0012695	11.14932	.1138269	.0288998
#2	.0576149	17.85105	.3114114	.0015559	11.29206	.1141447	.0284606
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 160-11565-a-3-b Acquired: 5/4/2015 19:49:48 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001449	.0031474	6.532396	.0060797	.1312637	.3826914	-.003056
Stddev	.000176	.0012765	.234912	.0003390	.0000575	.0018133	.000799
%RSD	12.12976	40.55724	3.596102	5.576003	.0438112	.4738369	26.15829
#1	-.001574	.0040501	6.698504	.0063194	.1313043	.3839737	-.003622
#2	-.001325	.0022448	6.366289	.0058400	.1312230	.3814092	-.002491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.1901671	.3808942
Stddev	.0007695	.0009942
%RSD	.4046309	.2610097
#1	.1907112	.3815972
#2	.1896230	.3801912
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2280.588	1489.209	7548.263	4706.028
Stddev	2.079	3.414	10.659	28.661
%RSD	.0911594	.2292501	.1412100	.6090215
#1	2282.058	1491.623	7540.726	4726.295
#2	2279.118	1486.795	7555.800	4685.762

Sample Name: 160-11565-a-4-b Acquired: 5/4/2015 19:53:45 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014358	13.70803	-.002984	.7186770	.1402133	.0004719	-.005170
Stddev	.0002569	.01179	.002138	.0035310	.0003728	.0000132	.000342
%RSD	17.89578	.0860227	71.66386	.4913178	.2658581	2.795789	6.609448
#1	.0016175	13.69969	-.001472	.7161802	.1404768	.0004812	-.005412
#2	.0012541	13.71637	-.004496	.7211737	.1399497	.0004626	-.004929
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.499795	.0008241	.0008280	.0154867	.0135788	10.10228	1.819120
Stddev	.116761	.0000245	.0000063	.0002773	.0000181	.09187	.000829
%RSD	1.229090	2.971553	.7648095	1.790865	.1334590	.9094459	.0455608
#1	9.417232	.0008068	.0008324	.0156828	.0135916	10.03731	1.819706
#2	9.582357	.0008414	.0008235	.0152906	.0135660	10.16724	1.818534
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062170	3.612244	.0704897	.0005050	22.59241	.0098499	.0115112
Stddev	.0002658	.019086	.0002971	.0003570	.15751	.0000563	.0021875
%RSD	4.275410	.5283699	.4214648	70.70402	.6972032	.5712778	19.00372
#1	.0060290	3.598748	.0706998	.0007575	22.70379	.0098101	.0130580
#2	.0064049	3.625739	.0702796	.0002525	22.48103	.0098897	.0099644
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 160-11565-a-4-b Acquired: 5/4/2015 19:53:45 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006875	.0009294	23.71154	.0009411	.0331068	.2894084	-.004767
Stddev	.0018471	.0005499	.02862	.0005961	.0001203	.0024012	.000974
%RSD	268.6883	59.16728	.1206857	63.34493	.3632967	.8296936	20.43594
#1	-.000619	.0005406	23.69130	.0013626	.0331919	.2911063	-.004078
#2	.001994	.0013183	23.73177	.0005195	.0330218	.2877105	-.005456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0220731	.0970704
Stddev	.0006380	.0006704
%RSD	2.890431	.6906631
#1	.0216219	.0975445
#2	.0225242	.0965963
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2401.258	1315.209	6738.610	4163.946
Stddev	.449	2.504	17.246	3.774
%RSD	.0187022	.1903589	.2559340	.0906329
#1	2401.576	1316.979	6726.415	4166.615
#2	2400.941	1313.439	6750.805	4161.278

Sample Name: 160-11565-a-5-b Acquired: 5/4/2015 19:57:47 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005679	72.88412	-.000728	.7406329	.2990411	.0019505
Stddev	.0000609	.90536	.000485	.0014407	.0021897	.0000626
%RSD	10.72811	1.242195	66.51787	.1945243	.7322292	3.210869
#1	.0006109	73.52431	-.000386	.7416516	.3005894	.0019947
#2	.0005248	72.24393	-.001071	.7396141	.2974927	.0019062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.013209	19.58020	.0016487	.0101194	.0734803	.0771327
Stddev	.002700	.27955	.0000962	.0001867	.0035390	.0003461
%RSD	20.44129	1.427736	5.836730	1.844671	4.816223	.4487057
#1	-.011300	19.38253	.0017167	.0099874	.0759827	.0768879
#2	-.015118	19.77788	.0015806	.0102514	.0709779	.0773774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	63.44247	8.418554	.0343092	15.15915	.2537469	.0011399
Stddev	.27821	.224881	.0008284	.04699	.0004860	.0002094
%RSD	.4385191	2.671259	2.414637	.3099517	.1915367	18.37243
#1	63.24575	8.577569	.0348950	15.12593	.2534032	.0009918
#2	63.63919	8.259539	.0337234	15.19238	.2540905	.0012879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11565-a-5-b Acquired: 5/4/2015 19:57:47 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.39189	.0454976	.0650899	.0035398	.0038057	F 90.36453
Stddev	.14169	.0002346	.0002981	.0007917	.0012144	2.46615
%RSD	.5172826	.5155201	.4579781	22.36430	31.91162	2.729110
#1	27.29170	.0456635	.0653007	.0029800	.0046644	92.10836
#2	27.49208	.0453318	.0648792	.0040996	.0029469	88.62070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049196	.1137515	.7542037	-.003889	.1372343	.2177708
Stddev	.0008594	.0013285	.1861217	.001847	.0079415	.0005833
%RSD	17.46842	1.167901	24.67791	47.48570	5.786799	.2678478
#1	.0055272	.1146909	.8858116	-.005195	.1428498	.2173584
#2	.0043119	.1128121	.6225958	-.002583	.1316189	.2181833
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2276.807	1331.297	6786.471	4180.725
Stddev	1.995	5.367	12.753	33.310
%RSD	.0876021	.4031394	.1879229	.7967530
#1	2278.217	1327.502	6777.453	4204.279
#2	2275.396	1335.092	6795.489	4157.171

Sample Name: CCV Acquired: 5/4/2015 20:01:45 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4903925	47.93553	.5068009	.4985155	.4697485	.5191457	.4859705
Stddev	.0003248	.74333	.0035234	.0033602	.0063976	.0071609	.0023531
%RSD	.0662290	1.550687	.6952184	.6740362	1.361926	1.379354	.4842084
#1	.4906221	47.40991	.5043095	.4961395	.4652247	.5140822	.4843066
#2	.4901628	48.46114	.5092923	.5008915	.4742723	.5242092	.4876344
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.00136	.4993924	.5240113	.5074309	.5044976	25.61081	45.72325
Stddev	.28929	.0018164	.0006526	.0010490	.0010792	.35986	.93210
%RSD	1.112612	.3637262	.1245415	.2067364	.2139208	1.405110	2.038568
#1	25.79680	.4981080	.5235498	.5066891	.5037345	25.35635	45.06416
#2	26.20592	.5006768	.5244727	.5081727	.5052607	25.86527	46.38235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.776567	24.40372	5.078517	.4825414	23.96183	.5208248	.5192619
Stddev	.080004	.37653	.067582	.0034415	.47950	.0011255	.0041610
%RSD	2.118426	1.542917	1.330751	.7132007	2.001104	.2160892	.8013296
#1	3.719996	24.13747	5.030729	.4801079	23.62277	.5216206	.5222041
#2	3.833139	24.66996	5.126305	.4849749	24.30088	.5200290	.5163196
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 5/4/2015 20:01:45 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4938597	.4671092	.5267946	.5148971	.4852291	.5132620	.4888999
Stddev	.0004006	.0019642	.0010561	.0005530	.0002534	.0000371	.0021506
%RSD	.0811130	.4205102	.2004708	.1073935	.0522239	.0072278	.4398892
#1	.4941430	.4657203	.5260478	.5152881	.4850499	.5132883	.4904206
#2	.4935765	.4684982	.5275413	.5145061	.4854083	.5132358	.4873792
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	5.033593	.5216443
Stddev	.000203	.0002973
%RSD	.0040319	.0570029
#1	5.033737	.5214340
#2	5.033450	.5218545
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2261.384	1286.293	6482.672	4062.099
Stddev	.441	4.479	1.744	48.906
%RSD	.0194819	.3482093	.0269093	1.203954
#1	2261.695	1289.460	6481.439	4096.681
#2	2261.072	1283.126	6483.906	4027.518

Sample Name: CCB Acquired: 5/4/2015 20:05:40 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000756	.0148127	-.000845	.0019064	.0002863	.0000305	.0008461
Stddev	.0006070	.0079152	.000577	.0004038	.0000537	.0000321	.0016460
%RSD	803.3091	53.43562	68.30035	21.18369	18.77091	105.1535	194.5453
#1	-.000354	.0092157	-.001253	.0021919	.0003243	.0000532	-.000318
#2	.000505	.0204096	-.000437	.0016208	.0002483	.0000078	.002010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003367	.0001714	-.000199	.0002719	.0002626	.0242677	.0070449
Stddev	.003900	.0000703	.000362	.0007652	.0000213	.1149772	.0125950
%RSD	115.8447	41.02739	182.0728	281.3935	8.108932	473.7877	178.7815
#1	-.006124	.0002211	-.000454	-.000269	.0002475	.1055688	.0159509
#2	-.000609	.0001217	.000057	.000813	.0002776	-.057033	-.001861
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002506	.0171159	-.000244	.0001246	-.002877	.0006124	-.001165
Stddev	.0001236	.0042046	.000314	.0000446	.003707	.0004730	.000665
%RSD	49.32433	24.56568	129.0062	35.77096	128.8470	77.23551	57.08444
#1	.0001632	.0141428	-.000466	.0001562	-.000256	.0002779	-.001635
#2	.0003380	.0200891	-.000021	.0000931	-.005499	.0009468	-.000695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 5/4/2015 20:05:40 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000743	.0003455	.0227322	-.000104	-.000046	.0000393	-.000513
Stddev	.001116	.0002535	.0011143	.000111	.000015	.0001710	.000842
%RSD	150.0695	73.37230	4.901627	107.2659	32.29385	435.2096	163.9722
#1	.000045	.0001662	.0219444	-.000182	-.000036	.0001602	.000082
#2	-.001532	.0005247	.0235201	-.000025	-.000057	-.000082	-.001109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0006081	-.000482
Stddev	.0003417	.000101
%RSD	56.18774	20.98063
#1	.0003665	-.000410
#2	.0008497	-.000553
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2503.012	1302.280	6614.981	4080.480
Stddev	6.241	.613	5.082	40.737
%RSD	.2493218	.0470430	.0768244	.9983346
#1	2498.599	1301.846	6618.575	4109.285
#2	2507.424	1302.713	6611.388	4051.675

Sample Name: 160-11565-a-6-b Acquired: 5/4/2015 20:08:55 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009491	60.08193	.0041573	.8324634	.3196935	.0027860
Stddev	.0001072	.28302	.0035925	.0014021	.0016128	.0004052
%RSD	11.29197	.4710531	86.41311	.1684226	.5044746	14.54245
#1	.0008733	59.88180	.0016171	.8334548	.3185531	.0030724
#2	.0010249	60.28205	.0066976	.8314720	.3208339	.0024995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.016480	17.08435	.0024727	.0094056	.0769397	.0646006
Stddev	.002522	.08953	.0001075	.0018801	.0000931	.0001994
%RSD	15.30321	.5240198	4.346185	19.98944	.1209515	.3086060
#1	-.018263	17.02105	.0025487	.0107350	.0770055	.0644596
#2	-.014697	17.14765	.0023967	.0080762	.0768739	.0647415
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	62.90167	8.186522	.0432362	16.99200	.3089841	.0020519
Stddev	.31334	.000544	.0010642	.05997	.0016177	.0014559
%RSD	.4981414	.0066421	2.461261	.3529400	.5235470	70.95759
#1	62.68010	8.186907	.0439887	16.94960	.3078402	.0010224
#2	63.12323	8.186138	.0424838	17.03441	.3101280	.0030814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11565-a-6-b Acquired: 5/4/2015 20:08:55 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.06453	.0533792	.0635559	.0034959	.0077943	F 100.1068
Stddev	.05597	.0017442	.0072569	.0020115	.0007790	4.2035
%RSD	.1925599	3.267545	11.41810	57.53807	9.994716	4.198967
#1	29.10411	.0546125	.0686873	.0020736	.0072435	103.0791
#2	29.02496	.0521459	.0584245	.0049183	.0083452	97.1345
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056951	.1202976	*****	-.005966	.1524417	.3976726
Stddev	.0003126	.0003815	-----	.001100	.0032551	.0004936
%RSD	5.488811	.3171690	-----	18.43574	2.135312	.1241354
#1	.0054740	.1205674	-----	-.006744	.1547434	.3973236
#2	.0059161	.1200278	.8415938	-.005188	.1501400	.3980217
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2238.036	1339.566	6818.450	4251.902
Stddev	5.635	3.943	14.635	1.999
%RSD	.2517777	.2943386	.2146396	.0470116
#1	2234.051	1336.778	6808.101	4253.315
#2	2242.020	1342.354	6828.798	4250.489

Sample Name: 160-11565-a-7-b Acquired: 5/4/2015 20:12:53 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007462	33.26774	-.002013	.7676338	.2299930	.0013285
Stddev	.0001559	.05601	.000954	.0047746	.0001837	.0004364
%RSD	20.89142	.1683568	47.38220	.6219870	.0798616	32.84535
#1	.0006359	33.22814	-.001338	.7642577	.2301228	.0010199
#2	.0008564	33.30735	-.002687	.7710099	.2298631	.0016370
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009473	23.37623	.0014920	.0049784	.0363799	.1156909
Stddev	.000781	.16464	.0002028	.0001563	.0004147	.0009396
%RSD	8.242781	.7043095	13.58921	3.139188	1.139970	.8121573
#1	-.010025	23.25981	.0013487	.0048679	.0366731	.1163553
#2	-.008921	23.49265	.0016354	.0050889	.0360866	.1150265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.66867	5.913814	.0170677	6.999716	.2263866	.0020760
Stddev	.15077	.061405	.0003599	.056101	.0007690	.0002983
%RSD	.5081701	1.038336	2.108977	.8014777	.3396826	14.36864
#1	29.56206	5.957234	.0168131	6.960046	.2258429	.0018651
#2	29.77528	5.870394	.0173222	7.039385	.2269304	.0022870
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11565-a-7-b Acquired: 5/4/2015 20:12:53 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.36566	.0231616	.0962031	.0031075	.0038096	F 59.38402
Stddev	.19539	.0002415	.0022016	.0013628	.0032474	.31962
%RSD	.8362194	1.042858	2.288532	43.85403	85.24165	.5382178
#1	23.50382	.0229908	.0977599	.0021439	.0061059	59.15802
#2	23.22750	.0233324	.0946463	.0040711	.0015134	59.61003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027055	.0657333	.4525160	-.003982	.0620246	.3101745
Stddev	.0004112	.0001138	.0047587	.000259	.0001912	.0008647
%RSD	15.19803	.1731180	1.051600	6.500047	.3082917	.2787819
#1	.0024148	.0658138	.4558809	-.004165	.0618894	.3107860
#2	.0029963	.0656529	.4491511	-.003799	.0621598	.3095631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2255.233	1284.447	6568.355	4069.732
Stddev	1.999	2.810	20.589	7.305
%RSD	.0886431	.2187574	.3134540	.1794964
#1	2256.646	1286.434	6553.797	4074.897
#2	2253.819	1282.460	6582.914	4064.566

Sample Name: 160-11565-a-8-b Acquired: 5/4/2015 20:16:52 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000198	75.89262	-.000057	.7900708	.2550263	.0025131
Stddev	.000244	1.41379	.000679	.0000503	.0038503	.0003896
%RSD	123.1141	1.862882	1183.477	.0063597	1.509762	15.50224
#1	-.000026	74.89292	-.000538	.7900352	.2523037	.0022376
#2	-.000370	76.89232	.000423	.7901063	.2577489	.0027885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.012356	16.05547	.0015705	.0104325	.0758403	.1060977
Stddev	.001265	.21493	.0000048	.0000512	.0001482	.0003569
%RSD	10.23571	1.338647	.3078222	.4911158	.1953605	.3363644
#1	-.013251	15.90349	.0015739	.0103963	.0759451	.1058453
#2	-.011462	16.20745	.0015671	.0104688	.0757356	.1063500
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	65.88896	8.591916	.0363218	14.81937	.3944696	.0012127
Stddev	.88698	.192256	.0007365	.22051	.0049707	.0002305
%RSD	1.346167	2.237644	2.027836	1.488004	1.260105	19.00688
#1	65.26177	8.455970	.0358010	14.66344	.3909547	.0013757
#2	66.51614	8.727862	.0368426	14.97530	.3979844	.0010497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11565-a-8-b Acquired: 5/4/2015 20:16:52 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.51993	.0462135	.0913862	.0018807	.0063046	F 83.95362
Stddev	.38906	.0005801	.0002053	.0012523	.0025261	.12191
%RSD	1.317959	1.255214	.2246181	66.58754	40.06759	.1452128
#1	29.24482	.0466237	.0912410	.0027662	.0080908	84.03982
#2	29.79504	.0458033	.0915313	.0009952	.0045184	83.86741
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045033	.0955459	.7156723	-.004637	.1357279	.2593181
Stddev	.0005434	.0003335	.0095788	.001036	.0010918	.0016595
%RSD	12.06676	.3490813	1.338440	22.33687	.8044016	.6399289
#1	.0041191	.0953101	.7088990	-.003904	.1349559	.2604915
#2	.0048875	.0957818	.7224455	-.005369	.1364999	.2581447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2305.893	1361.075	6942.427	4258.205
Stddev	1.206	1.843	6.798	40.978
%RSD	.0522859	.1354368	.0979267	.9623249
#1	2305.041	1359.772	6947.235	4287.180
#2	2306.746	1362.379	6937.620	4229.229

Sample Name: 160-11565-a-9-b Acquired: 5/4/2015 20:20:49 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006088	36.87095	.0009640	.6634850	.3237364	.0018212
Stddev	.0007069	.11368	.0003153	.0022538	.0015390	.0003983
%RSD	116.1226	.3083291	32.71227	.3396849	.4753857	21.86987
#1	.0001089	36.79057	.0007410	.6650786	.3226482	.0015396
#2	.0011086	36.95134	.0011870	.6618913	.3248247	.0021028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.012162	18.08763	.0018081	.0040198	.0437497	.0363757
Stddev	.000338	.12573	.0000374	.0000775	.0002044	.0001187
%RSD	2.782621	.6950971	2.068889	1.929025	.4672003	.3262895
#1	-.012402	17.99873	.0017817	.0040746	.0436052	.0362917
#2	-.011923	18.17653	.0018346	.0039649	.0438942	.0364596
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.33201	4.876607	.0275042	13.46741	.1427321	.0030603
Stddev	.36607	.028831	.0001223	.09087	.0013754	.0002630
%RSD	1.036095	.5912070	.4447362	.6747501	.9636407	8.592119
#1	35.07316	4.896994	.0274177	13.40315	.1417595	.0032463
#2	35.59087	4.856221	.0275907	13.53166	.1437046	.0028744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 160-11565-a-9-b Acquired: 5/4/2015 20:20:49 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.00862	.0420568	.0373444	.0033111	.0052777	F 71.56013
Stddev	.09641	.0000270	.0005576	.0001160	.0016480	.02891
%RSD	.3323514	.0641866	1.493101	3.502802	31.22481	.0404056
#1	29.07680	.0420759	.0377387	.0033931	.0041124	71.58057
#2	28.94045	.0420377	.0369502	.0032290	.0064430	71.53968
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						50.00000
Low Limit						-.200000

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035508	.1093804	.3933102	-.004780	.0815630	.1880673
Stddev	.0001412	.0002191	.0052231	.000454	.0001027	.0002500
%RSD	3.976573	.2003106	1.327989	9.503623	.1259318	.1329110
#1	.0036506	.1092255	.3970035	-.005101	.0816356	.1878905
#2	.0034509	.1095353	.3896169	-.004459	.0814904	.1882440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2252.963	1329.355	6771.806	4202.246
Stddev	2.086	1.506	27.211	13.440
%RSD	.0925674	.1132887	.4018299	.3198229
#1	2251.488	1328.290	6791.047	4211.749
#2	2254.438	1330.420	6752.565	4192.742

Sample Name: 160-11565-a-11-b Acquired: 5/4/2015 20:24:48 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006967	5.349847	-.003177	.7337399	.0948801	.0002782	-.005504
Stddev	.0000208	.029109	.000469	.0005332	.0001917	.0002647	.000309
%RSD	2.985479	.5441020	14.76749	.0726619	.2020697	95.16448	5.608253
#1	.0007114	5.329264	-.003508	.7333629	.0947445	.0000910	-.005722
#2	.0006820	5.370430	-.002845	.7341169	.0950157	.0004654	-.005286
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.79586	.0008360	.0002348	.0077779	.0150100	3.310079	2.816527
Stddev	.08710	.0000397	.0002425	.0006161	.0000528	.027804	.009445
%RSD	.3512660	4.750243	103.2689	7.921629	.3514336	.8399798	.3353545
#1	24.73427	.0008079	.0000633	.0082136	.0149727	3.290419	2.809848
#2	24.85745	.0008641	.0004062	.0073423	.0150473	3.329740	2.823206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031452	2.700714	.0390278	.0009694	21.43960	.0024892	.0089441
Stddev	.0000315	.005333	.0000952	.0001938	.08487	.0003865	.0006512
%RSD	1.002789	.1974603	.2440421	19.99650	.3958686	15.52689	7.281210
#1	.0031229	2.696943	.0389605	.0008323	21.37959	.0022159	.0094046
#2	.0031675	2.704485	.0390952	.0011064	21.49961	.0027625	.0084836
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 160-11565-a-11-b Acquired: 5/4/2015 20:24:48 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033076	.0019755	9.302097	.0005661	.0906498	.1262818	-.004074
Stddev	.0012162	.0019962	.061741	.0003111	.0001038	.0099221	.000164
%RSD	36.77062	101.0478	.6637349	54.95291	.1145156	7.857069	4.026720
#1	.0024476	.0005640	9.258439	.0007860	.0907232	.1332977	-.004190
#2	.0041676	.0033870	9.345755	.0003461	.0905764	.1192658	-.003958
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0130443	.1226483
Stddev	.0000427	.0001375
%RSD	.3276733	.1121018
#1	.0130745	.1225511
#2	.0130141	.1227455
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2395.005	1305.255	6728.472	4146.671
Stddev	1.631	2.815	17.222	5.712
%RSD	.0681184	.2156776	.2559607	.1377575
#1	2393.851	1303.265	6716.294	4150.710
#2	2396.158	1307.246	6740.650	4142.631

Sample Name: mb 500-286488/1-a Acquired: 5/4/2015 20:29:54 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003615	.0268088	-.002029	.0036323	.0007625	-.000199	-.004613
Stddev	.0001651	.0016059	.003140	.0000989	.0000186	.000059	.001346
%RSD	45.66442	5.990341	154.7984	2.722122	2.446236	29.75047	29.17252
#1	.0004782	.0256732	.000192	.0035624	.0007757	-.000241	-.005565
#2	.0002448	.0279444	-.004249	.0037022	.0007493	-.000157	-.003662
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0257416	.0005476	-.000286	.0011102	.0003143	.0769224	.0007506
Stddev	.0050934	.0000423	.000208	.0001604	.0005060	.0755422	.0071938
%RSD	19.78676	7.726183	72.69746	14.44662	160.9948	98.20569	958.3754
#1	.0221400	.0005776	-.000139	.0009968	-.000044	.0235060	-.004336
#2	.0293432	.0005177	-.000433	.0012236	.000672	.1303388	.005837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002235	.0154511	.0002614	.0001680	.0568154	-.001530	.0030397
Stddev	.0004633	.0083997	.0003533	.0000346	.0096315	.001258	.0002049
%RSD	207.3195	54.36332	135.1757	20.58005	16.95237	82.21675	6.740341
#1	.0005511	.0095116	.0000115	.0001925	.0500048	-.002420	.0028948
#2	-.000104	.0213906	.0005112	.0001436	.0636259	-.000641	.0031846
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: mb 500-286488/1-a Acquired: 5/4/2015 20:29:54 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000948	.0014375	.0387325	.0147176	.0000930	.0004603	-.004011
Stddev	.001040	.0014998	.0008803	.0002015	.0000093	.0002305	.000422
%RSD	109.7159	104.3388	2.272694	1.369315	9.972697	50.08796	10.51841
#1	-.000212	.0003769	.0381101	.0145751	.0000864	.0006233	-.003712
#2	-.001683	.0024980	.0393550	.0148601	.0000995	.0002973	-.004309
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0000835	.0110258
Stddev	.0001330	.0000027
%RSD	159.3368	.0241037
#1	.0001776	.0110277
#2	-.000011	.0110239
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2493.838	1301.833	6738.578	4155.987
Stddev	3.606	6.690	29.745	20.332
%RSD	.1445888	.5138658	.4414175	.4892124
#1	2496.387	1306.563	6759.611	4170.364
#2	2491.288	1297.102	6717.545	4141.610

Sample Name: lcs 500-286488/2-a Acquired: 5/4/2015 20:34:00 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0492573	1.902927	.1018767	.9398531	1.985836	.0524983	.4815160
Stddev	.0005842	.039754	.0035968	.0006167	.012551	.0000720	.0023596
%RSD	1.186017	2.089109	3.530548	.0656131	.6320345	.1371125	.4900298
#1	.0496704	1.874817	.1044200	.9394171	1.976961	.0524474	.4831845
#2	.0488442	1.931038	.0993334	.9402892	1.994711	.0525492	.4798476
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.32684	.0516608	.5325718	.2118261	.2635653	1.158563	9.804199
Stddev	.01995	.0000540	.0023261	.0002813	.0001919	.063579	.099736
%RSD	.1931495	.1045986	.4367665	.1328045	.0728164	5.487732	1.017275
#1	10.31274	.0516990	.5309270	.2116272	.2637010	1.113606	9.733675
#2	10.34095	.0516226	.5342166	.2120251	.2634296	1.203520	9.874723
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5107656	9.700698	.5221630	1.012374	10.39171	.5238574	.1040049
Stddev	.0045262	.115920	.0011267	.002603	.10854	.0019898	.0000762
%RSD	.8861548	1.194970	.2157820	.2571232	1.044460	.3798274	.0732596
#1	.5075652	9.618730	.5213663	1.010533	10.31496	.5224504	.1039510
#2	.5139661	9.782666	.5229597	1.014214	10.46846	.5252644	.1040587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: lcs 500-286488/2-a Acquired: 5/4/2015 20:34:00 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4994182	.0879231	2.648279	1.011750	1.005300	1.069585	.0967743
Stddev	.0003792	.0009481	.006850	.006591	.002040	.002220	.0000385
%RSD	.0759302	1.078353	.2586703	.6514142	.2029656	.2075892	.0397516
#1	.4991500	.0885935	2.653123	1.007090	1.003857	1.071155	.0968015
#2	.4996863	.0872527	2.643435	1.016410	1.006742	1.068015	.0967471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.5304785	.5016972
Stddev	.0005732	.0029393
%RSD	.1080519	.5858656
#1	.5308838	.4996188
#2	.5300732	.5037756
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2332.609	1255.646	6486.314	3990.069
Stddev	7.229	.994	9.894	15.970
%RSD	.3099308	.0791560	.1525339	.4002377
#1	2337.721	1254.943	6479.318	4001.361
#2	2327.497	1256.349	6493.310	3978.777

Sample Name: 500-95474-a-1-a Acquired: 5/4/2015 20:38:03 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000577	104.0001	.0618326	.0221128	.7762210	.0053757	-.000648
Stddev	.000243	.3207	.0010279	.0003921	.0027372	.0000453	.000868
%RSD	42.16123	.3083549	1.662420	1.773033	.3526342	.8422815	133.9472
#1	-.000749	103.7733	.0625595	.0218356	.7742855	.0053437	-.001263
#2	-.000405	104.2269	.0611058	.0223901	.7781565	.0054077	-.000034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.73834	.0025716	.1091794	.1304063	.1013193	144.9737	8.515728
Stddev	.11963	.0000416	.0006425	.0004431	.0005865	.6952	.024080
%RSD	.5039486	1.617586	.5885277	.3398090	.5788606	.4795484	.2827718
#1	23.65375	.0025422	.1096338	.1307197	.1009046	144.4821	8.498701
#2	23.82293	.0026010	.1087251	.1300930	.1017341	145.4653	8.532755
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0750704	12.37965	8.607616	.0112205	.2252547	.1236107	.1892377
Stddev	.0004020	.03563	.035835	.0006647	.0055839	.0003943	.0014656
%RSD	.5355371	.2877987	.4163120	5.924050	2.478944	.3189910	.7744949
#1	.0753547	12.35445	8.582277	.0107505	.2213063	.1238895	.1902741
#2	.0747861	12.40484	8.632955	.0116906	.2292031	.1233318	.1882013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-1-a Acquired: 5/4/2015 20:38:03 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001116	.0076984	1.256378	.0208894	.0632079	1.166952	-.002656
Stddev	.000519	.0006463	.003442	.0000482	.0001108	.000672	.000897
%RSD	46.51824	8.394756	.2739395	.2307895	.1752083	.0575462	33.78609
#1	-.001483	.0081553	1.253944	.0209235	.0632862	1.166477	-.003290
#2	-.000749	.0072414	1.258812	.0208553	.0631296	1.167426	-.002021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2374538	.5008481
Stddev	.0002123	.0000335
%RSD	.0894101	.0066927
#1	.2376039	.5008718
#2	.2373036	.5008244
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2272.045	1452.788	7355.161	4502.755
Stddev	3.442	.692	5.103	7.738
%RSD	.1514753	.0476248	.0693731	.1718496
#1	2269.611	1453.277	7351.553	4508.226
#2	2274.478	1452.298	7358.769	4497.283

Sample Name: 500-95490-b-1-a Acquired: 5/4/2015 20:42:54 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028983	19.56697	.0338948	.1351661	.1444963	.0015059
Stddev	.0010064	.03275	.0018853	.0003068	.0005461	.0002158
%RSD	34.72429	.1673668	5.562057	.2269996	.3779129	14.33066
#1	.0021867	19.59013	.0325617	.1353831	.1441102	.0016585
#2	.0036099	19.54382	.0352279	.1349492	.1448824	.0013533
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038683	F 3790.560	.0187281	.0133220	.2444475	.2192991
Stddev	.0024021	22.945	.0000576	.0005271	.0015238	.0001998
%RSD	62.09672	.6053128	.3077578	3.956282	.6233608	.0911046
#1	.0021697	3774.336	.0187689	.0136947	.2455250	.2191579
#2	.0055668	3806.785	.0186873	.0129493	.2433700	.2194404
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		600.0000				
Low Limit		-.200000				

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	462.3674	3.553443	.0638753	F 1228.257	7.629095	1.239967
Stddev	2.9154	.012831	.0000894	8.012	.056533	.000343
%RSD	.6305436	.3610999	.1399219	.6522678	.7410156	.0276713
#1	460.3059	3.562516	.0639385	1222.592	7.589120	1.239724
#2	464.4289	3.544369	.0638121	1233.922	7.669069	1.240210
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				1000.000		
Low Limit				-.100000		

Sample Name: 500-95490-b-1-a Acquired: 5/4/2015 20:42:54 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.681449	.1081631	.4162833	.0080705	.0004148	2.079885
Stddev	.009795	.0026072	.0035162	.0003063	.0063065	.002601
%RSD	.2660645	2.410468	.8446525	3.795919	1520.547	.1250324
#1	3.674522	.1100067	.4187696	.0078539	-.004045	2.081724
#2	3.688375	.1063195	.4137970	.0082871	.004874	2.078046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0515723	1.624535	1.106217	-.003010	.1401145	5.011013
Stddev	.0012966	.000937	.001191	.000852	.0016204	.025431
%RSD	2.514148	.0576982	.1076783	28.32097	1.156467	.5075048
#1	.0506555	1.625197	1.107060	-.002407	.1412603	4.993030
#2	.0524892	1.623872	1.105375	-.003613	.1389688	5.028995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1436.902	979.1507	5111.625	3368.709
Stddev	.206	1.4447	5.904	10.412
%RSD	.0143580	.1475471	.1155086	.3090663
#1	1436.756	978.1291	5107.449	3376.071
#2	1437.048	980.1722	5115.800	3361.347

Sample Name: 500-95490-b-2-a Acquired: 5/4/2015 20:48:02 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0240098	221.8156	.0613113	.2129365	.2882850	.0026565
Stddev	.0001886	.2397	.0005285	.0000811	.0003179	.0001484
%RSD	.7855595	.1080816	.8620480	.0380805	.1102565	5.587056
#1	.0238765	221.6460	.0616850	.2129939	.2880603	.0027615
#2	.0241432	221.9851	.0609376	.2128792	.2885098	.0025516
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0416414	F 1630.043	-.001767	.0114919	8.852549	.5226760
Stddev	.0051825	5.183	.000198	.0006645	.018520	.0009250
%RSD	12.44557	.3179400	11.17533	5.782661	.2092067	.1769697
#1	.0453060	1626.378	-.001628	.0110220	8.865644	.5220219
#2	.0379768	1633.708	-.001907	.0119618	8.839453	.5233300
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		600.0000				
Low Limit		-.200000				

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2356.964	1.931772	.0603834	482.8647	F 119.2136	1.405582
Stddev	3.546	.017601	.0000263	.3738	.6731	.002739
%RSD	.1504367	.9111516	.0435906	.0774222	.5646419	.1948888
#1	2354.457	1.944218	.0603648	482.6003	118.7376	1.403645
#2	2359.471	1.919326	.0604020	483.1290	119.6896	1.407519
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit	1000.000				20.00000	
Low Limit	-.200000				-.010000	

Sample Name: 500-95490-b-2-a Acquired: 5/4/2015 20:48:02 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.62630	.3525322	.8129534	F -.038392	.0265802	2.029894
Stddev	.02549	.0006546	.0016853	.000441	.0024152	.006082
%RSD	.1532853	.1856875	.2073081	1.149343	9.086492	.2996119
#1	16.64432	.3529951	.8141451	-.038080	.0248724	2.025593
#2	16.60827	.3520693	.8117617	-.038704	.0282880	2.034194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				20.00000		
Low Limit				-.020000		

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1082298	.9637073	F 10.88084	.0227954	4.200011	15.70710
Stddev	.0022381	.0004710	.02441	.0025209	.004845	.01699
%RSD	2.067930	.0488744	.2243110	11.05888	.1153529	.1081620
#1	.1098123	.9633743	10.89810	.0245780	4.203437	15.69509
#2	.1066472	.9640404	10.86358	.0210128	4.196585	15.71911
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			5.000000			
Low Limit			-.005000			

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1663.779	982.4503	5446.627	3511.630
Stddev	3.734	1.1074	.996	4.884
%RSD	.2244426	.1127206	.0182899	.1390837
#1	1661.138	981.6673	5445.922	3515.083
#2	1666.419	983.2334	5447.331	3508.176

Sample Name: CCV Acquired: 5/4/2015 20:53:05 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5002406	48.20302	.5178403	.5065331	.4711641	.5289323	.4934085
Stddev	.0044090	.43795	.0069260	.0024389	.0044512	.0063443	.0008182
%RSD	.8813823	.9085506	1.337472	.4814819	.9447217	1.199450	.1658327
#1	.5033583	47.89334	.5129429	.5048086	.4680167	.5244462	.4928299
#2	.4971230	48.51270	.5227377	.5082576	.4743116	.5334184	.4939871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.60237	.5126532	.5382845	.5197029	.5143626	26.16007	45.77040
Stddev	.21984	.0020084	.0009381	.0010102	.0019568	.14644	.22211
%RSD	.8263944	.3917595	.1742732	.1943829	.3804248	.5597757	.4852663
#1	26.44692	.5112331	.5376212	.5189886	.5157462	26.05652	45.61334
#2	26.75782	.5140734	.5389479	.5204173	.5129789	26.26362	45.92745
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.802620	24.56680	5.141543	.4877361	24.34255	.5329170	.5308370
Stddev	.018225	.20438	.042952	.0031371	.10998	.0018997	.0014249
%RSD	.4792819	.8319213	.8353816	.6431851	.4518174	.3564798	.2684290
#1	3.789733	24.42228	5.111172	.4855179	24.26479	.5315737	.5298294
#2	3.815507	24.71132	5.171914	.4899544	24.42033	.5342603	.5318446
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 5/4/2015 20:53:05 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5030408	.4759381	.5053205	.5249957	.4885461	.5251922	.4965962
Stddev	.0016184	.0048619	.0017461	.0017758	.0003301	.0014980	.0037103
%RSD	.3217265	1.021545	.3455388	.3382431	.0675721	.2852356	.7471533
#1	.5018964	.4725002	.5040858	.5237401	.4887795	.5262515	.4939726
#2	.5041852	.4793760	.5065551	.5262514	.4883127	.5241329	.4992198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	5.141767	.5347580
Stddev	.012708	.0010628
%RSD	.2471505	.1987402
#1	5.150753	.5340065
#2	5.132781	.5355095
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2227.575	1273.222	6380.439	4005.106
Stddev	3.323	3.767	13.648	35.459
%RSD	.1491610	.2958335	.2139050	.8853527
#1	2229.925	1275.885	6370.789	4030.179
#2	2225.226	1270.559	6390.090	3980.032

Sample Name: CCB Acquired: 5/4/2015 20:56:58 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007158	.0171800	-.000639	.0011406	.0004076	.0001434	.0008626
Stddev	.0001344	.0102092	.000309	.0000848	.0000785	.0000907	.0009144
%RSD	18.77648	59.42509	48.37836	7.436548	19.27118	63.25000	106.0049
#1	.0006208	.0099610	-.000420	.0012005	.0004631	.0000793	.0002160
#2	.0008109	.0243989	-.000857	.0010806	.0003520	.0002075	.0015091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002562	.0002100	-.000020	.0004821	.0000772	.0163732	-.015096
Stddev	.001407	.0000367	.000096	.0001111	.0000980	.0732475	.017111
%RSD	54.90818	17.49904	487.9145	23.04642	127.0453	447.3623	113.3504
#1	-.001567	.0002360	-.000087	.0004035	.0000078	-.035421	-.002996
#2	-.003557	.0001840	.000048	.0005606	.0001465	.068167	-.027195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003428	-.004929	-.000089	.0000884	-.005858	.0007943	-.000689
Stddev	.0000508	.012393	.000298	.0002277	.000267	.0002972	.001244
%RSD	14.80857	251.4192	335.5127	257.4711	4.557091	37.41938	180.5556
#1	.0003069	-.013692	-.000299	-.000073	-.006047	.0010044	-.001568
#2	.0003787	.003834	.000122	.000249	-.005670	.0005841	.000191
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 5/4/2015 20:56:58 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000871	-.000069	.0085996	.0000792	-.000038	.0000635	-.000025
Stddev	.000481	.000397	.0008136	.0000704	.000016	.0000522	.000538
%RSD	55.20761	571.7256	9.461153	88.91117	43.37220	82.25349	2124.932
#1	-.000531	-.000350	.0091749	.0000294	-.000049	.0001004	-.000405
#2	-.001211	.000211	.0080243	.0001290	-.000026	.0000266	.000355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0005846	.0002324
Stddev	.0000715	.0002281
%RSD	12.23088	98.17847
#1	.0006352	.0000711
#2	.0005341	.0003937
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2501.578	1309.333	6599.806	4056.897
Stddev	.985	.910	7.753	35.457
%RSD	.0393892	.0695299	.1174769	.8739921
#1	2502.275	1308.690	6605.288	4081.969
#2	2500.881	1309.977	6594.324	4031.825

Sample Name: 500-95474-a-4-b Acquired: 5/4/2015 21:00:14 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000800	117.9066	.0626385	.0207678	.8464601	.0059574	-.000336
Stddev	.000066	.5751	.0014233	.0002940	.0043378	.0003301	.000222
%RSD	8.190392	.4877531	2.272180	1.415780	.5124631	5.541570	65.91933
#1	-.000847	117.4999	.0616321	.0209757	.8433928	.0057239	-.000180
#2	-.000754	118.3132	.0636449	.0205599	.8495274	.0061908	-.000493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.26660	.0022501	.1199086	.1500007	.1023689	156.0650	7.630113
Stddev	.20250	.0001585	.0001519	.0004856	.0005875	1.3535	.036052
%RSD	1.108565	7.045467	.1266635	.3237193	.5739117	.8672460	.4725003
#1	18.12342	.0023621	.1198012	.1503441	.1027844	155.1079	7.655606
#2	18.40979	.0021380	.1200160	.1496574	.1019535	157.0220	7.604620
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0887412	13.37449	9.011751	.0115238	.2492123	.1375066	.2367897
Stddev	.0003569	.06317	.080312	.0003569	.0036875	.0008136	.0023052
%RSD	.4021510	.4723516	.8911959	3.097520	1.479652	.5916795	.9735351
#1	.0884889	13.32981	8.954961	.0112714	.2518197	.1369313	.2384198
#2	.0889936	13.41916	9.068540	.0117762	.2466049	.1380819	.2351597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-4-b Acquired: 5/4/2015 21:00:14 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011158	.0078724	1.314562	.0222262	.0625521	1.302721	-.001704
Stddev	.0011719	.0010948	.003228	.0007197	.0001912	.002919	.000711
%RSD	105.0360	13.90738	.2455217	3.238272	.3056024	.2240998	41.73814
#1	.0002871	.0070982	1.316845	.0227351	.0626873	1.304785	-.002207
#2	.0019445	.0086465	1.312280	.0217173	.0624170	1.300657	-.001201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2643807	.5019300
Stddev	.0009892	.0015849
%RSD	.3741394	.3157540
#1	.2636812	.5008094
#2	.2650801	.5030507
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2269.639	1466.411	7422.597	4576.447
Stddev	7.458	3.944	18.196	16.421
%RSD	.3285968	.2689249	.2451432	.3588146
#1	2264.365	1463.622	7409.730	4588.058
#2	2274.912	1469.199	7435.463	4564.836

Sample Name: 500-95474-a-5-a Acquired: 5/4/2015 21:05:05 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000480	115.7530	.0761932	.0208830	.8734888	.0066157	-.000051
Stddev	.000704	.3132	.0003236	.0002600	.0017104	.0004261	.001223
%RSD	146.6786	.2706036	.4247317	1.244992	.1958130	6.440740	2378.291
#1	-.000978	115.5316	.0759644	.0210669	.8722794	.0069170	.000814
#2	.000018	115.9745	.0764221	.0206992	.8746983	.0063144	-.000917
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.14352	.0023949	.1533269	.2311520	.1003179	171.3043	9.107981
Stddev	.15832	.0001476	.0005249	.0004380	.0000223	1.8419	.029985
%RSD	.9234936	6.162547	.3423310	.1894914	.0222183	1.075234	.3292144
#1	17.03157	.0022905	.1529558	.2308423	.1003021	170.0018	9.129184
#2	17.25547	.0024992	.1536981	.2314617	.1003336	172.6067	9.086779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0851010	12.76042	12.54418	.0116650	.2363470	.1388997	.2839547
Stddev	.0006038	.01119	.10981	.0003539	.0048448	.0001204	.0002678
%RSD	.7095450	.0877120	.8754028	3.034023	2.049849	.0866796	.0943184
#1	.0855280	12.75250	12.46653	.0114147	.2397727	.1388146	.2841441
#2	.0846741	12.76833	12.62183	.0119153	.2329212	.1389848	.2837654
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-5-a Acquired: 5/4/2015 21:05:05 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000393	.0069140	1.304543	.0211239	.0576849	1.434142	-.000508
Stddev	.000999	.0020018	.001522	.0007305	.0000614	.003615	.000269
%RSD	254.3123	28.95317	.1166530	3.458125	.1063825	.2520333	52.99314
#1	-.001099	.0054985	1.303467	.0206074	.0577282	1.436698	-.000317
#2	.000314	.0083296	1.305619	.0216405	.0576415	1.431587	-.000698
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2989203	.5132802
Stddev	.0000248	.0033118
%RSD	.0083013	.6452267
#1	.2989027	.5109384
#2	.2989378	.5156220
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2242.180	1450.540	7314.314	4522.175
Stddev	2.378	4.029	21.283	18.224
%RSD	.1060438	.2777743	.2909780	.4029935
#1	2240.499	1447.691	7299.265	4535.061
#2	2243.862	1453.389	7329.363	4509.288

Sample Name: 500-95474-a-6-b Acquired: 5/4/2015 21:09:56 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000496	105.5916	.0626492	.0193143	.7712035	.0056846	-.002343
Stddev	.000324	.0796	.0017858	.0000716	.0009445	.0002873	.000955
%RSD	65.29007	.0753958	2.850535	.3704341	.1224672	5.054204	40.76284
#1	-.000267	105.6479	.0613864	.0193648	.7705356	.0058878	-.001667
#2	-.000726	105.5353	.0639120	.0192637	.7718713	.0054814	-.003018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.67840	.0021087	.1156229	.1573825	.0942896	146.1795	7.274072
Stddev	.11646	.0002306	.0003854	.0007716	.0002537	.7988	.104977
%RSD	.6982535	10.93524	.3333278	.4902567	.2691098	.5464530	1.443162
#1	16.59605	.0022718	.1153503	.1579281	.0941102	145.6146	7.348302
#2	16.76075	.0019457	.1158954	.1568369	.0944691	146.7443	7.199842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0786031	11.90694	9.123520	.0101674	.2461302	.1235806	.1847745
Stddev	.0006662	.04106	.050357	.0007344	.0041987	.0011020	.0023141
%RSD	.8475038	.3448015	.5519441	7.223222	1.705874	.8917509	1.252368
#1	.0790741	11.87791	9.087913	.0096481	.2490991	.1243598	.1864108
#2	.0781320	11.93598	9.159128	.0106867	.2431613	.1228013	.1831382
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-6-b Acquired: 5/4/2015 21:09:56 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000805	.0060752	1.234102	.0202633	.0551564	1.202468	-.001914
Stddev	.001239	.0006285	.003964	.0007947	.0000381	.001036	.000667
%RSD	153.9686	10.34470	.3212069	3.922011	.0690872	.0861610	34.87077
#1	.000071	.0056309	1.236905	.0208253	.0551834	1.203200	-.002385
#2	-.001681	.0065197	1.231299	.0197013	.0551295	1.201735	-.001442
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2503902	.4573891
Stddev	.0000133	.0013142
%RSD	.0053154	.2873342
#1	.2503996	.4583184
#2	.2503808	.4564598
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2280.923	1448.491	7329.220	4520.461
Stddev	4.366	4.593	.391	1.310
%RSD	.1914245	.3170604	.0053335	.0289883
#1	2277.836	1445.243	7328.944	4521.387
#2	2284.011	1451.738	7329.497	4519.534

Sample Name: 500-95474-a-7-a Acquired: 5/4/2015 21:14:47 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000693	118.4252	.0616718	.0226118	.8092577	.0059904	.0002098
Stddev	.000219	.4597	.0005028	.0000696	.0045755	.0001684	.0001279
%RSD	31.62695	.3882176	.8152377	.3076136	.5653914	2.811893	60.97610
#1	-.000848	118.1002	.0620273	.0225626	.8060224	.0061095	.0001194
#2	-.000538	118.7503	.0613163	.0226610	.8124931	.0058713	.0003003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.06997	.0019803	.1030905	.1446328	.1074050	153.8246	8.027817
Stddev	.03184	.0000836	.0004786	.0005060	.0012496	.4435	.058705
%RSD	.1586629	4.220610	.4642316	.3498617	1.163428	.2883415	.7312723
#1	20.04745	.0019212	.1034289	.1449906	.1082886	153.5109	7.986307
#2	20.09249	.0020394	.1027521	.1442750	.1065214	154.1382	8.069328
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0887064	13.89482	7.774376	.0094976	.2665005	.1358136	.1758398
Stddev	.0008961	.11388	.025194	.0001837	.0037445	.0008439	.0009526
%RSD	1.010228	.8195850	.3240696	1.934236	1.405054	.6213962	.5417170
#1	.0880727	13.81430	7.756561	.0096275	.2638528	.1352168	.1751663
#2	.0893400	13.97535	7.792191	.0093677	.2691483	.1364103	.1765134
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-7-a Acquired: 5/4/2015 21:14:47 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001966	.0051305	1.302847	.0219040	.0637924	1.309625	-.001605
Stddev	.000203	.0014935	.004635	.0001099	.0002007	.003519	.000722
%RSD	10.33292	29.11059	.3557450	.5018133	.3146421	.2687245	45.00077
#1	-.001822	.0061865	1.306124	.0219817	.0639343	1.312113	-.002115
#2	-.002109	.0040744	1.299570	.0218263	.0636505	1.307136	-.001094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2598239	.5100502
Stddev	.0010897	.0001807
%RSD	.4194066	.0354219
#1	.2605945	.5099225
#2	.2590534	.5101780
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2246.055	1447.082	7277.138	4509.286
Stddev	4.195	2.056	38.891	.842
%RSD	.1867665	.1421055	.5344208	.0186825
#1	2243.089	1445.628	7249.638	4508.690
#2	2249.022	1448.536	7304.638	4509.882

Sample Name: 500-95474-b-8-a Acquired: 5/4/2015 21:19:38 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000591	108.7199	.0614802	.0221536	.7637103	.0056954	-.001868
Stddev	.000183	.5208	.0015507	.0001310	.0048658	.0001626	.000793
%RSD	30.95485	.4790011	2.522228	.5913431	.6371249	2.855425	42.45052
#1	-.000720	108.3517	.0603837	.0220610	.7602697	.0058104	-.002429
#2	-.000462	109.0882	.0625766	.0222463	.7671510	.0055804	-.001308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.13197	.0020816	.0988373	.1902904	.1029333	152.2355	7.053752
Stddev	.16895	.0000147	.0004204	.0002563	.0008415	1.8321	.035181
%RSD	.8830532	.7039282	.4253014	.1346668	.8175255	1.203450	.4987563
#1	19.01251	.0020919	.0991346	.1901092	.1023383	150.9400	7.078629
#2	19.25144	.0020712	.0985401	.1904716	.1035284	153.5309	7.028875
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0806353	12.42307	7.885634	.0094267	.3279134	.1254471	.1743243
Stddev	.0000561	.09783	.055494	.0003448	.0045277	.0002916	.0003127
%RSD	.0695853	.7874743	.7037372	3.657374	1.380768	.2324123	.1793682
#1	.0805956	12.35390	7.846393	.0091830	.3247118	.1256533	.1745454
#2	.0806750	12.49225	7.924874	.0096705	.3311150	.1252410	.1741032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-b-8-a Acquired: 5/4/2015 21:19:38 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000214	.0064161	1.351631	.0204346	.0607261	1.277460	-.003235
Stddev	.002518	.0000390	.006565	.0014482	.0000808	.000373	.000473
%RSD	1175.116	.6075797	.4856865	7.086946	.1330670	.0291728	14.63090
#1	-.001995	.0064437	1.356273	.0214586	.0606690	1.277196	-.003570
#2	.001566	.0063885	1.346989	.0194106	.0607833	1.277723	-.002901
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2625110	.4626074
Stddev	.0009586	.0010634
%RSD	.3651547	.2298634
#1	.2631888	.4618555
#2	.2618332	.4633593
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2264.166	1439.059	7293.322	4499.642
Stddev	3.095	4.132	.043	23.688
%RSD	.1367076	.2871353	.0005928	.5264415
#1	2261.977	1436.137	7293.353	4516.392
#2	2266.355	1441.981	7293.291	4482.892

Sample Name: 500-95474-a-9-a Acquired: 5/4/2015 21:24:30 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000927	120.7663	.0637028	.0235938	.8483350	.0063211	.0006192
Stddev	.000031	.5833	.0043793	.0000472	.0049795	.0001022	.0010971
%RSD	3.313921	.4830298	6.874535	.1999962	.5869701	1.616946	177.1630
#1	-.000948	120.3538	.0667994	.0236272	.8448140	.0063934	.0013950
#2	-.000905	121.1788	.0606061	.0235605	.8518561	.0062488	-.000157
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.43962	.0023694	.1195625	.1545560	.1094176	154.3962	8.373581
Stddev	.14276	.0000855	.0009513	.0022618	.0008170	1.4031	.015071
%RSD	.7343586	3.608672	.7956653	1.463415	.7466889	.9087574	.1799786
#1	19.33868	.0024299	.1202352	.1561553	.1088399	153.4040	8.384237
#2	19.54056	.0023090	.1188899	.1529567	.1099953	155.3883	8.362924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0911594	13.80011	9.032640	.0100483	.2771573	.1378936	.1979782
Stddev	.0003023	.08670	.080660	.0002028	.0032443	.0009263	.0042235
%RSD	.3316002	.6282837	.8929804	2.018515	1.170543	.6717594	2.133305
#1	.0913732	13.73880	8.975605	.0099049	.2794513	.1385486	.2009647
#2	.0909457	13.86141	9.089675	.0101917	.2748633	.1372386	.1949918
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-9-a Acquired: 5/4/2015 21:24:30 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006457	.0064223	1.348341	.0208046	.0647506	1.346381	-.001306
Stddev	.0013790	.0020332	.011184	.0004716	.0000181	.001863	.000505
%RSD	213.5644	31.65891	.8294809	2.266651	.0279421	.1383855	38.65995
#1	-.000329	.0078600	1.356250	.0211380	.0647378	1.347698	-.000949
#2	.001621	.0049846	1.340433	.0204711	.0647633	1.345064	-.001662
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2671308	.5115528
Stddev	.0005462	.0037895
%RSD	.2044708	.7407886
#1	.2675170	.5142324
#2	.2667446	.5088733
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2285.866	1479.790	7433.550	4578.099
Stddev	22.131	7.621	18.275	16.174
%RSD	.9681720	.5150375	.2458451	.3532945
#1	2270.217	1474.401	7446.472	4589.536
#2	2301.515	1485.179	7420.627	4566.663

Sample Name: 500-95474-a-10-c Acquired: 5/4/2015 21:29:22 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000660	101.2960	.0544528	.0211317	.7355659	.0053295	.0007166
Stddev	.000188	.9050	.0031703	.0001871	.0047596	.0000321	.0015025
%RSD	28.53061	.8934245	5.822184	.8852831	.6470628	.6012944	209.6800
#1	-.000527	100.6561	.0566946	.0212640	.7322004	.0053521	.0017790
#2	-.000793	101.9359	.0522110	.0209994	.7389315	.0053068	-.000346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.86023	.0022478	.0930650	.1296058	.0903385	130.9816	7.979147
Stddev	.09875	.0000841	.0004736	.0006530	.0008375	.9686	.048846
%RSD	.6226223	3.740489	.5088984	.5038312	.9270520	.7394727	.6121673
#1	15.79040	.0021883	.0933999	.1291440	.0909307	130.2967	7.944608
#2	15.93005	.0023072	.0927301	.1300675	.0897463	131.6665	8.013687
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0779384	11.97354	7.877852	.0079955	.2357247	.1210314	.1649081
Stddev	.0007151	.04988	.060954	.0002235	.0008966	.0007706	.0013714
%RSD	.9175468	.4166007	.7737400	2.795744	.3803759	.6366610	.8315924
#1	.0774327	11.93827	7.834752	.0078374	.2363587	.1204866	.1639384
#2	.0784441	12.00881	7.920954	.0081536	.2350907	.1215763	.1658778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-10-c Acquired: 5/4/2015 21:29:22 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000116	.0071375	1.188845	.0201736	.0545684	1.224859	-.000014
Stddev	.001578	.0001199	.000237	.0014437	.0000246	.002465	.000268
%RSD	1365.757	1.679774	.0199410	7.156577	.0450500	.2012331	1856.916
#1	.001001	.0072222	1.189012	.0211945	.0545510	1.223116	.000175
#2	-.001232	.0070527	1.188677	.0191528	.0545858	1.226602	-.000204
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2251457	.4545491
Stddev	.0004170	.0001458
%RSD	.1851931	.0320837
#1	.2254405	.4546522
#2	.2248509	.4544459
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2312.327	1475.750	7446.264	4593.022
Stddev	.182	1.043	9.154	23.562
%RSD	.0078741	.0706885	.1229346	.5129982
#1	2312.199	1475.013	7439.792	4609.683
#2	2312.456	1476.488	7452.737	4576.361

Sample Name: 95474-a-10-c sd@5 Acquired: 5/4/2015 21:34:15 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001871	22.90308	.0110311	.0055420	.1665937	.0015224	.0010152
Stddev	.0009141	.25798	.0002228	.0002316	.0019646	.0002885	.0019785
%RSD	488.5480	1.126410	2.019438	4.179538	1.179286	18.95230	194.8849
#1	.0008335	22.72066	.0111886	.0053782	.1652045	.0017264	.0024142
#2	-.000459	23.08550	.0108736	.0057058	.1679829	.0013184	-.000384
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.734438	.0005478	.0184555	.0301079	.0198543	30.49354	1.704789
Stddev	.029267	.0000349	.0001441	.0008626	.0002285	.18293	.039869
%RSD	.7837146	6.371862	.7809912	2.864858	1.150647	.5998862	2.338630
#1	3.713743	.0005725	.0183536	.0294980	.0196927	30.36419	1.676597
#2	3.755133	.0005231	.0185574	.0307178	.0200158	30.62289	1.732980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0167402	2.756578	1.854231	.0016494	.0435557	.0240640	.0335082
Stddev	.0002565	.050759	.020503	.0000662	.0016330	.0003484	.0011925
%RSD	1.532094	1.841361	1.105741	4.012020	3.749174	1.447775	3.558823
#1	.0169216	2.720687	1.839733	.0016026	.0447104	.0238176	.0326650
#2	.0165589	2.792470	1.868728	.0016962	.0424010	.0243103	.0343514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 95474-a-10-c sd@5 Acquired: 5/4/2015 21:34:15 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001071	.0007927	.2801675	.0042594	.0125816	.2824353	-.000873
Stddev	.000178	.0021454	.0017640	.0003219	.0000043	.0001040	.000434
%RSD	16.64241	270.6528	.6296273	7.557924	.0340549	.0368198	49.68212
#1	-.001197	-.000724	.2814148	.0044870	.0125846	.2823618	-.001179
#2	-.000945	.002310	.2789201	.0040318	.0125786	.2825089	-.000566
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0523864	.0948549
Stddev	.0001214	.0008990
%RSD	.2317489	.9477987
#1	.0523006	.0954906
#2	.0524722	.0942192
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2425.251	1348.321	6821.132	4176.934
Stddev	1.032	1.724	5.421	30.807
%RSD	.0425425	.1278897	.0794758	.7375449
#1	2425.981	1349.540	6824.966	4198.717
#2	2424.521	1347.102	6817.299	4155.150

Sample Name: 500-95474-a-10-d du Acquired: 5/4/2015 21:38:17 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000741	100.3632	.0552274	.0197211	.7363147	.0055806	-.001022
Stddev	.000226	.8352	.0020180	.0000450	.0050136	.0001565	.000120
%RSD	30.47203	.8322067	3.653903	.2282610	.6809027	2.804666	11.69451
#1	-.000901	99.7726	.0538005	.0197529	.7327696	.0054699	-.000938
#2	-.000582	100.9538	.0566543	.0196892	.7398598	.0056912	-.001107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.67860	.0020565	.0940167	.1383273	.0927157	135.3839	7.692822
Stddev	.12861	.0000258	.0000973	.0001983	.0007297	.7517	.098407
%RSD	.7710795	1.252606	.1035037	.1433827	.7870620	.5552277	1.279210
#1	16.58766	.0020747	.0939479	.1381871	.0932317	134.8524	7.623238
#2	16.76954	.0020383	.0940855	.1384676	.0921997	135.9154	7.762407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0744172	12.10262	7.925425	.0076602	.2253028	.1204004	.1616387
Stddev	.0014190	.07711	.065542	.0003010	.0040462	.0004795	.0000079
%RSD	1.906797	.6371627	.8269807	3.928843	1.795873	.3982141	.0048681
#1	.0734139	12.04809	7.879080	.0074474	.2224417	.1200614	.1616442
#2	.0754206	12.15714	7.971770	.0078730	.2281638	.1207394	.1616331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-10-d du Acquired: 5/4/2015 21:38:17 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001072	.0043175	1.233312	.0198494	.0540085	1.189137	-.001256
Stddev	.000406	.0029153	.001708	.0015525	.0002124	.003539	.000351
%RSD	37.83311	67.52170	.1384828	7.821313	.3933542	.2976004	27.94030
#1	-.001359	.0022561	1.234520	.0209471	.0541587	1.191639	-.001504
#2	-.000785	.0063789	1.232104	.0187516	.0538583	1.186635	-.001008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2281342	.4525448
Stddev	.0003109	.0003554
%RSD	.1362710	.0785387
#1	.2283540	.4527961
#2	.2279143	.4522935
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2258.259	1437.714	7256.354	4462.583
Stddev	6.801	5.062	22.643	34.276
%RSD	.3011639	.3520661	.3120374	.7680762
#1	2253.450	1434.135	7240.343	4486.820
#2	2263.068	1441.293	7272.364	4438.346

Sample Name: 500-95474-b-10-b ms Acquired: 5/4/2015 21:42:16 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0422449	151.3180	.2073264	.7940340	2.575076	.0533298	.4936739
Stddev	.0000407	.1291	.0016861	.0005932	.005904	.0003954	.0017755
%RSD	.0964301	.0853458	.8132453	.0747101	.2292737	.7414444	.3596475
#1	.0422161	151.2267	.2061342	.7936145	2.570901	.0530502	.4924184
#2	.0422737	151.4093	.2085186	.7944534	2.579250	.0536094	.4949293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.06116	.0470073	.6459820	.4106279	.3390308	166.4229	21.89521
Stddev	.18467	.0000067	.0004830	.0007336	.0005113	1.3401	.28298
%RSD	.7086059	.0141924	.0747759	.1786466	.1508084	.8052220	1.292431
#1	25.93058	.0470120	.6456405	.4101092	.3393924	165.4753	22.09530
#2	26.19174	.0470026	.6463236	.4111466	.3386693	167.3705	21.69511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5523446	24.00982	8.811979	.8390100	9.427514	.6917049	.2811240
Stddev	.0079473	.10054	.053670	.0013960	.109579	.0000685	.0024264
%RSD	1.438833	.4187363	.6090624	.1663808	1.162337	.0099000	.8631076
#1	.5579642	23.93872	8.774028	.8380229	9.504998	.6916565	.2794083
#2	.5467250	24.08091	8.849930	.8399971	9.350029	.6917534	.2828398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-b-10-b ms Acquired: 5/4/2015 21:42:16 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1469721	.0787462	1.814925	.9457295	.9344824	2.716798	.0992609
Stddev	.0010736	.0075745	.004600	.0019982	.0000415	.002435	.0033539
%RSD	.7304576	9.618904	.2534421	.2112818	.0044424	.0896134	3.378896
#1	.1477313	.0841022	1.818178	.9443166	.9344530	2.715076	.1016324
#2	.1462130	.0733902	1.811672	.9471424	.9345117	2.718520	.0968893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.7589984	1.042835
Stddev	.0006770	.000170
%RSD	.0891943	.0163263
#1	.7585197	1.042715
#2	.7594771	1.042955
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2173.003	1422.143	7169.614	4431.178
Stddev	3.874	.285	9.037	7.944
%RSD	.1782588	.0200328	.1260406	.1792702
#1	2170.264	1421.941	7176.004	4436.795
#2	2175.742	1422.344	7163.224	4425.561

Sample Name: CCV Acquired: 5/4/2015 21:47:08 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4910769	46.38536	.5127736	.5047813	.4532476	.5142548
Stddev	.0009094	.43169	.0064051	.0061996	.0046700	.0039333
%RSD	.1851785	.9306630	1.249113	1.228167	1.030343	.7648595
#1	.4904339	46.08011	.5082444	.5003975	.4499454	.5114735
#2	.4917200	46.69062	.5173026	.5091651	.4565498	.5170360
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4883401	25.84376	.5105337	.5349951	.5088283	.4997389
Stddev	.0069569	.23363	.0057812	.0071732	.0028188	.0002826
%RSD	1.424607	.9039968	1.132381	1.340805	.5539705	.0565402
#1	.4834209	25.67856	.5064458	.5299229	.5068351	.4999387
#2	.4932594	26.00896	.5146216	.5400674	.5108214	.4995391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.99168	F 44.24763	3.672503	23.74445	5.002318	.4815517
Stddev	.22190	.00594	.000167	.25325	.052193	.0079687
%RSD	.8878840	.0134271	.0045483	1.066546	1.043386	1.654792
#1	24.83478	44.24342	3.672385	23.56538	4.965411	.4759170
#2	25.14859	44.25183	3.672622	23.92352	5.039224	.4871864
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		50.00000				
Range		-10.0000%				

Sample Name: CCV Acquired: 5/4/2015 21:47:08 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.64499	.5284446	.5279756	.5039058	.4680982	.4966974
Stddev	.01575	.0073172	.0071149	.0045838	.0031562	.0072502
%RSD	.0666186	1.384663	1.347580	.9096598	.6742576	1.459674
#1	23.65613	.5232706	.5229446	.5006645	.4658665	.4915707
#2	23.63386	.5336187	.5330065	.5071471	.4703300	.5018240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5182350	.4726228	.5127467	.4954096	5.007678	.5257492
Stddev	.0083360	.0001476	.0014676	.0046999	.003324	.0074629
%RSD	1.608541	.0312340	.2862225	.9486971	.0663879	1.419476
#1	.5123406	.4727271	.5117090	.4920863	5.010028	.5204722
#2	.5241295	.4725184	.5137845	.4987330	5.005327	.5310263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2243.388	1281.697	6503.117	4080.085
Stddev	17.882	10.164	10.325	24.064
%RSD	.7970763	.7929801	.1587678	.5897822
#1	2256.032	1288.884	6495.817	4097.101
#2	2230.744	1274.510	6510.418	4063.070

Sample Name: CCB Acquired: 5/4/2015 21:51:03 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014648	.0277421	-.001324	.0015755	.0001609	.0000766	.0016401
Stddev	.0002689	.0095839	.002256	.0004209	.0000672	.0003140	.0003800
%RSD	18.35677	34.54654	170.4362	26.71207	41.79105	410.1906	23.17073
#1	.0012747	.0209652	.000272	.0018731	.0001134	-.000145	.0013714
#2	.0016549	.0345189	-.002919	.0012779	.0002085	.000299	.0019088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002630	.0000524	.0001191	.0005982	-.000027	-.045390	.0082706
Stddev	.003141	.0000179	.0000067	.0001904	.000439	.051025	.0134646
%RSD	119.4106	34.16340	5.659217	31.83612	1602.667	112.4162	162.8004
#1	-.004851	.0000398	.0001143	.0007328	.000283	-.009309	-.001250
#2	-.000409	.0000651	.0001238	.0004635	-.000338	-.081470	.017792
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005653	-.007078	.0001496	.0001785	-.007317	.0004096	-.000970
Stddev	.0007104	.002214	.0000426	.0001257	.002685	.0002632	.000140
%RSD	125.6677	31.28167	28.45052	70.44765	36.69653	64.25732	14.39800
#1	.0010676	-.005512	.0001195	.0002674	-.005418	.0005957	-.001069
#2	.0000630	-.008644	.0001797	.0000896	-.009215	.0002235	-.000871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 5/4/2015 21:51:03 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000829	.0003221	.0029250	.0004949	-.000033	.0002366	-.000584
Stddev	.000829	.0028260	.0001191	.0004239	.000009	.0001237	.000378
%RSD	100.1147	877.3087	4.070738	85.64547	27.89062	52.29001	64.66568
#1	-.001415	-.001676	.0028408	.0001952	-.000027	.0001491	-.000851
#2	-.000242	.002320	.0030092	.0007947	-.000040	.0003241	-.000317
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0010606	-.000020
Stddev	.0001081	.000047
%RSD	10.19385	238.9332
#1	.0011371	.000014
#2	.0009842	-.000053
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2498.811	1308.568	6503.056	4167.817
Stddev	1.849	.630	101.334	81.658
%RSD	.0740079	.0481264	1.558250	1.959246
#1	2497.503	1308.123	6431.402	4225.558
#2	2500.119	1309.014	6574.710	4110.077

Sample Name: 500-95474-a-10-e msd Acquired: 5/4/2015 21:54:19 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0412472	166.8393	.1483860	.7815265	2.625686	.0526245	.4879700
Stddev	.0003025	.9361	.0036095	.0015044	.016140	.0003284	.0000121
%RSD	.7332550	.5611033	2.432478	.1924943	.6146930	.6240433	.0024777
#1	.0410333	166.1773	.1458337	.7804627	2.614273	.0523923	.4879614
#2	.0414611	167.5013	.1509383	.7825903	2.637098	.0528567	.4879785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.34230	.0455513	.6406291	.3607833	.3404414	156.2353	23.05600
Stddev	.10582	.0000755	.0006157	.0008839	.0006994	.9595	.05944
%RSD	.3870095	.1657959	.0961051	.2450063	.2054403	.6141454	.2577991
#1	27.26748	.0454979	.6401938	.3601583	.3399469	155.5568	23.01398
#2	27.41713	.0456047	.6410645	.3614084	.3409360	156.9137	23.09803
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5523015	25.34927	9.228527	.7976760	9.204565	.6846482	.2870473
Stddev	.0010996	.13729	.051157	.0018065	.019341	.0008050	.0006477
%RSD	.1990919	.5415910	.5543322	.2264712	.2101278	.1175749	.2256297
#1	.5515240	25.25219	9.192354	.7963986	9.190889	.6840790	.2865894
#2	.5530790	25.44635	9.264700	.7989534	9.218242	.6852174	.2875053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-10-e msd Acquired: 5/4/2015 21:54:19 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1390456	.0802074	1.866764	.9249610	.9236674	2.906368	.0956410
Stddev	.0010777	.0024300	.002499	.0024263	.0009778	.001852	.0035963
%RSD	.7750805	3.029702	.1338493	.2623084	.1058609	.0637088	3.760157
#1	.1382836	.0784891	1.864997	.9232454	.9243588	2.905059	.0930981
#2	.1398077	.0819257	1.868531	.9266767	.9229760	2.907677	.0981840
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.7675479	1.084649
Stddev	.0021186	.001974
%RSD	.2760241	.1820143
#1	.7660498	1.083253
#2	.7690460	1.086045
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2166.174	1439.333	7249.698	4456.820
Stddev	.571	.574	17.337	11.714
%RSD	.0263699	.0398847	.2391397	.2628331
#1	2166.578	1439.739	7237.439	4465.104
#2	2165.771	1438.927	7261.957	4448.537

Sample Name: 500-95474-b-11-b Acquired: 5/4/2015 21:59:13 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000323	109.8400	.0707761	.0217214	.8618643	.0060985	-.000361
Stddev	.000009	.7516	.0006055	.0003193	.0044846	.0000175	.000615
%RSD	2.833776	.6842428	.8554694	1.470205	.5203352	.2868110	170.3641
#1	-.000317	109.3085	.0703480	.0219472	.8586932	.0060861	.000074
#2	-.000330	110.3714	.0712042	.0214955	.8650354	.0061109	-.000796
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.36871	.0027470	.1323582	.1584231	.1089849	160.4419	9.060192
Stddev	.14966	.0002462	.0005309	.0006384	.0001470	.8574	.060584
%RSD	.5675618	8.961479	.4011377	.4029788	.1348450	.5344189	.6686871
#1	26.26289	.0029211	.1319828	.1579716	.1090889	159.8356	9.017353
#2	26.47454	.0025729	.1327336	.1588745	.1088810	161.0482	9.103032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0805097	13.22973	10.28917	.0119051	.2246792	.1401694	.2198643
Stddev	.0004162	.04664	.06104	.0004286	.0028419	.0002414	.0010880
%RSD	.5168888	.3525621	.5932050	3.599799	1.264870	.1721964	.4948525
#1	.0802154	13.19675	10.24601	.0116020	.2226696	.1403401	.2190950
#2	.0808039	13.26271	10.33233	.0122081	.2266887	.1399987	.2206336
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-b-11-b Acquired: 5/4/2015 21:59:13 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000167	.0094839	1.224223	.0213564	.0667892	1.191575	-.001339
Stddev	.000679	.0010160	.000652	.0010861	.0000284	.003573	.001094
%RSD	407.2651	10.71326	.0532670	5.085398	.0424753	.2998678	81.68800
#1	-.000647	.0102023	1.224685	.0221243	.0668093	1.194102	-.000566
#2	.000313	.0087654	1.223762	.0205884	.0667692	1.189048	-.002113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2645062	.5408291
Stddev	.0016110	.0013587
%RSD	.6090792	.2512318
#1	.2656453	.5398684
#2	.2633670	.5417899
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2273.633	1471.774	7482.516	4604.088
Stddev	2.931	.506	18.455	5.572
%RSD	.1289153	.0343482	.2466457	.1210247
#1	2275.705	1471.417	7469.466	4608.028
#2	2271.560	1472.132	7495.566	4600.148

Sample Name: 500-95262-f-1-a Acquired: 5/4/2015 22:04:04 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000903	28.15744	.0426746	.0413110	.3063599	.0022465	-.001642
Stddev	.000165	.15110	.0006730	.0001663	.0020099	.0002791	.001728
%RSD	18.31236	.5366429	1.576991	.4024539	.6560540	12.42287	105.2499
#1	-.000786	28.05060	.0431504	.0414286	.3049387	.0020491	-.000420
#2	-.001020	28.26429	.0421987	.0411935	.3077811	.0024438	-.002864
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	328.4744	.0024428	.0348129	.0741363	.0841908	93.03229	6.277035
Stddev	1.6056	.0000298	.0004463	.0001295	.0003482	.61797	.115047
%RSD	.4888017	1.219141	1.282032	.1746172	.4136378	.6642528	1.832819
#1	327.3391	.0024218	.0344973	.0740447	.0844371	92.59532	6.195685
#2	329.6097	.0024639	.0351285	.0742278	.0839446	93.46926	6.358385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0435054	193.5752	2.632705	.0043346	3.320872	.1273381	.0585841
Stddev	.0001289	.8520	.016265	.0002711	.050392	.0001745	.0007428
%RSD	.2963238	.4401619	.6178086	6.255228	1.517436	.1370713	1.267844
#1	.0435965	192.9727	2.621204	.0041429	3.285239	.1272147	.0580589
#2	.0434142	194.1777	2.644206	.0045263	3.356505	.1274615	.0591093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95262-f-1-a Acquired: 5/4/2015 22:04:04 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004624	.0029051	1.106289	.0180134	.1158772	.9090019	-.003389
Stddev	.0004959	.0028379	.003728	.0004764	.0000654	.0009192	.000857
%RSD	107.2365	97.68720	.3369662	2.644706	.0564393	.1011231	25.27228
#1	.0008130	.0008984	1.108925	.0176765	.1158310	.9096518	-.002784
#2	.0001118	.0049118	1.103653	.0183503	.1159235	.9083519	-.003995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.1335912	.3156922
Stddev	.0000911	.0008485
%RSD	.0681773	.2687866
#1	.1336556	.3150922
#2	.1335268	.3162922
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2015.275	1362.827	6987.274	4402.052
Stddev	1.053	1.988	1.146	20.668
%RSD	.0522600	.1458613	.0164029	.4695028
#1	2016.020	1361.421	6988.084	4416.667
#2	2014.531	1364.233	6986.463	4387.438

Sample Name: 500-95262-f-2-a Acquired: 5/4/2015 22:08:04 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002302	56.27648	.0555716	.0533290	.6851270	.0041169	.0004799
Stddev	.0003282	.27073	.0015570	.0003574	.0038090	.0001785	.0012516
%RSD	142.5996	.4810719	2.801706	.6702352	.5559578	4.335712	260.7934
#1	-.000002	56.08504	.0544707	.0535817	.6824336	.0039907	-.000405
#2	.000462	56.46791	.0566726	.0530763	.6878204	.0042431	.001365
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	315.1256	.0030994	.0663632	.1085779	.1441364	133.9543	10.35876
Stddev	1.1411	.0000334	.0000588	.0003082	.0007267	.7600	.11466
%RSD	.3621218	1.077110	.0886421	.2838243	.5041441	.5673374	1.106858
#1	314.3187	.0031230	.0664048	.1087958	.1436225	133.4169	10.27769
#2	315.9325	.0030758	.0663216	.1083600	.1446502	134.4916	10.43984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0659619	189.8238	6.011147	.0031744	3.374491	.2111434	.1075546
Stddev	.0010159	.7725	.021072	.0000614	.029948	.0001655	.0024472
%RSD	1.540171	.4069406	.3505480	1.933044	.8874697	.0783643	2.275298
#1	.0652435	189.2775	5.996247	.0031310	3.353315	.2110264	.1058241
#2	.0666802	190.3700	6.026047	.0032178	3.395668	.2112604	.1092850
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95262-f-2-a Acquired: 5/4/2015 22:08:04 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008304	.0017181	1.065091	.0211534	.1586163	1.288529	-.001294
Stddev	.0000088	.0033240	.001816	.0016076	.0002141	.000854	.000354
%RSD	1.062964	193.4734	.1705265	7.599898	.1349864	.0662896	27.38993
#1	.0008242	.0040685	1.066375	.0222902	.1584649	1.289133	-.001545
#2	.0008367	-.000632	1.063807	.0200167	.1587677	1.287925	-.001044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2190535	.4563338
Stddev	.0009974	.0012337
%RSD	.4553363	.2703385
#1	.2197588	.4572061
#2	.2183482	.4554615
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1979.567	1427.187	7345.700	4607.968
Stddev	.728	1.943	14.812	29.781
%RSD	.0367910	.1361317	.2016412	.6463006
#1	1980.082	1425.813	7356.174	4629.026
#2	1979.052	1428.561	7335.227	4586.909

Sample Name: 500-95262-f-3-a Acquired: 5/4/2015 22:12:03 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000969	45.57350	.0467111	.0505956	.6256163	.0036834	-.005458
Stddev	.0002611	.16508	.0021108	.0002358	.0011929	.0001461	.000248
%RSD	269.5499	.3622216	4.518761	.4659811	.1906823	3.965151	4.540018
#1	-.000088	45.45678	.0482036	.0504289	.6247728	.0035802	-.005633
#2	.000282	45.69023	.0452185	.0507623	.6264599	.0037867	-.005283
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	307.3038	.0038587	.0425300	.0946397	.0584922	109.2843	8.254568
Stddev	2.1898	.0000510	.0002575	.0017445	.0001240	.6877	.020988
%RSD	.7125761	1.321434	.6054507	1.843284	.2120301	.6292543	.2542627
#1	305.7554	.0038948	.0423480	.0934062	.0585799	108.7980	8.269409
#2	308.8522	.0038226	.0427121	.0958732	.0584045	109.7706	8.239727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0573113	184.3784	1.826250	.0026898	1.115298	.1781987	.0725921
Stddev	.0004719	.8841	.013574	.0000324	.003399	.0002211	.0029989
%RSD	.8233594	.4794763	.7432685	1.202538	.3047642	.1240580	4.131166
#1	.0576449	183.7533	1.816651	.0026669	1.117701	.1780424	.0704715
#2	.0569776	185.0035	1.835848	.0027126	1.112894	.1783550	.0747126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95262-f-3-a Acquired: 5/4/2015 22:12:03 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005244	.0022692	1.019811	.0211665	.1387917	.7130320	-.004821
Stddev	.0004708	.0002287	.003020	.0025078	.0000656	.0016824	.001711
%RSD	89.78777	10.07605	.2961582	11.84815	.0472678	.2359447	35.49840
#1	.0008573	.0024309	1.021946	.0229398	.1388381	.7118423	-.003611
#2	.0001915	.0021075	1.017675	.0193932	.1387453	.7142216	-.006031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.1446105	.4762564
Stddev	.0001944	.0015648
%RSD	.1344163	.3285525
#1	.1447479	.4751499
#2	.1444730	.4773628
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1988.059	1657.924	8561.368	5388.015
Stddev	5.534	1.050	7.970	19.730
%RSD	.2783454	.0633088	.0930934	.3661763
#1	1991.972	1657.182	8555.732	5401.966
#2	1984.147	1658.666	8567.004	5374.064

Sample Name: 500-95262-f-4-a Acquired: 5/4/2015 22:16:02 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000035	48.32626	.0357516	.0477780	.4887861	.0030469	-.002772
Stddev	.000080	.38594	.0012040	.0000541	.0025064	.0001672	.001277
%RSD	227.9510	.7986183	3.367681	.1131436	.5127844	5.488238	46.05738
#1	.000022	48.05336	.0349002	.0477398	.4870138	.0029287	-.001869
#2	-.000092	48.59916	.0366029	.0478162	.4905584	.0031652	-.003675
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	314.1525	.0034108	.0502996	.0944659	.0825587	126.8146	8.305637
Stddev	2.5677	.0001251	.0005723	.0002256	.0003270	1.1741	.017435
%RSD	.8173516	3.667377	1.137795	.2388435	.3960191	.9258748	.2099212
#1	312.3368	.0034993	.0498949	.0946255	.0823275	125.9843	8.293309
#2	315.9682	.0033224	.0507042	.0943064	.0827899	127.6448	8.317966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0640374	189.5366	3.635437	.0025871	1.689340	.2079117	.0633533
Stddev	.0000334	1.2578	.029416	.0005692	.004955	.0000952	.0036431
%RSD	.0522046	.6636196	.8091595	22.00075	.2933271	.0457709	5.750415
#1	.0640610	188.6472	3.614636	.0021846	1.685836	.2078444	.0607773
#2	.0640137	190.4260	3.656238	.0029896	1.692844	.2079790	.0659294
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95262-f-4-a Acquired: 5/4/2015 22:16:02 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015406	.0033787	.9938030	.0210060	.1122805	.9841688	-.000821
Stddev	.0004239	.0016790	.0024266	.0007609	.0002176	.0001473	.001023
%RSD	27.51616	49.69273	.2441754	3.622404	.1938203	.0149653	124.6395
#1	.0012408	.0045659	.9920871	.0204679	.1124344	.9840647	-.001545
#2	.0018403	.0021915	.9955189	.0215440	.1121266	.9842730	-.000097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.1753299	.4517279
Stddev	.0004699	.0010316
%RSD	.2679932	.2283727
#1	.1756621	.4524574
#2	.1749976	.4509984
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2030.258	1489.038	7674.750	4837.198
Stddev	.236	1.662	.303	21.633
%RSD	.0116058	.1116320	.0039533	.4472214
#1	2030.091	1487.863	7674.965	4852.495
#2	2030.425	1490.214	7674.536	4821.901

Sample Name: 500-95481-a-1-a Acquired: 5/4/2015 22:20:00 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005925	.0487511	.0017579	.0312118	.0030320	-.000026
Stddev	.0005160	.0172006	.0010587	.0001042	.0001675	.000085
%RSD	87.08820	35.28257	60.22672	.3338536	5.525507	325.2050
#1	.0002276	.0365884	.0010093	.0311382	.0029135	-.000087
#2	.0009573	.0609137	.0025065	.0312855	.0031505	.000034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002649	4.819091	.0007447	.0030325	.0034006	.0096995
Stddev	.002289	.021162	.0000897	.0000121	.0011532	.0004786
%RSD	86.40433	.4391208	12.04054	.3980119	33.91046	4.934417
#1	-.001030	4.804128	.0006813	.0030410	.0025852	.0100380
#2	-.004267	4.834055	.0008081	.0030240	.0042160	.0093611
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3130494	68.89305	.0001540	7.658021	.8711999	.0035266
Stddev	.0567505	.10000	.0001672	.077489	.0059136	.0001946
%RSD	18.12830	.1451583	108.6181	1.011867	.6787924	5.517889
#1	.2729207	68.96377	.0000357	7.603228	.8670183	.0033890
#2	.3531781	68.82234	.0002722	7.712814	.8753815	.0036642
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 500-95481-a-1-a Acquired: 5/4/2015 22:20:00 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	786.1143	.0098904	.0000966	-.003587	.0274474	.3589302
Stddev	6.9324	.0005971	.0006998	.001249	.0002605	.0011369
%RSD	.8818553	6.036792	724.3321	34.82180	.9492475	.3167417
#1	791.0162	.0103126	-.000398	-.004470	.0276316	.3597341
#2	781.2124	.0094682	.000591	-.002704	.0272632	.3581263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0224988	.0072798	.0033979	F -.012447	.0030102	.2938588
Stddev	.0020109	.0000102	.0003276	.001013	.0000214	.0011494
%RSD	8.937707	.1399688	9.641457	8.140574	.7122492	.3911298
#1	.0210769	.0072726	.0031663	-.011730	.0029950	.2930461
#2	.0239207	.0072870	.0036296	-.013163	.0030254	.2946716
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				20.00000		
Low Limit				-.010000		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1977.898	1163.931	5858.514	3908.040
Stddev	4.231	.285	6.889	24.956
%RSD	.2138927	.0244770	.1175914	.6385849
#1	1980.890	1164.133	5853.643	3925.687
#2	1974.907	1163.730	5863.385	3890.394

Sample Name: 500-95481-a-2-a Acquired: 5/4/2015 22:25:08 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004270	.0674256	.0054145	.0359855	.0031702	.0000903
Stddev	.0001394	.0126928	.0019480	.0002111	.0001063	.0000964
%RSD	32.64645	18.82491	35.97769	.5866343	3.354071	106.6731
#1	.0005255	.0764008	.0040370	.0358362	.0032454	.0001585
#2	.0003284	.0584504	.0067919	.0361348	.0030950	.0000222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001482	5.689015	.0006955	.0033021	.0044943	.0111129
Stddev	.001421	.016340	.0000592	.0002619	.0004884	.0000544
%RSD	95.91011	.2872160	8.516846	7.931720	10.86666	.4895132
#1	-.000477	5.677461	.0006536	.0034873	.0048397	.0110744
#2	-.002487	5.700569	.0007374	.0031169	.0041490	.0111513
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2072120	80.59004	.0009920	9.106908	1.014968	.0038208
Stddev	.1134392	.60880	.0000891	.027643	.001227	.0000347
%RSD	54.74551	.7554281	8.981583	.3035399	.1209122	.9079277
#1	.2874256	80.15955	.0010550	9.087362	1.014100	.0038453
#2	.1269983	81.02052	.0009290	9.126455	1.015836	.0037962
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 500-95481-a-2-a Acquired: 5/4/2015 22:25:08 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	836.2301	.0126637	.0005924	-.004089	.0278659	.4050965
Stddev	.9886	.0012542	.0003083	.002396	.0015176	.0002678
%RSD	.1182169	9.904237	52.04340	58.59002	5.446194	.0660990
#1	835.5311	.0117768	.0003744	-.005783	.0289390	.4049071
#2	836.9291	.0135506	.0008104	-.002395	.0267928	.4052858
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0232489	.0082752	.0036797	F -.013982	.0030093	.3528815
Stddev	.0000520	.0000016	.0001051	.000395	.0002734	.0015518
%RSD	.2235730	.0188782	2.856906	2.824784	9.084117	.4397363
#1	.0232856	.0082763	.0037541	-.014261	.0028160	.3517842
#2	.0232121	.0082740	.0036054	-.013703	.0032026	.3539787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				20.00000		
Low Limit				-.010000		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1958.862	1159.343	5799.694	3845.035
Stddev	5.862	3.971	11.324	9.907
%RSD	.2992616	.3425552	.1952590	.2576515
#1	1963.007	1162.151	5791.686	3852.040
#2	1954.716	1156.535	5807.702	3838.030

Sample Name: 500-95474-b-2-a Acquired: 5/4/2015 22:35:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000019	95.75307	.0577686	.0191309	.6910638	.0052106	.0003724
Stddev	.000410	.67494	.0021647	.0002577	.0068594	.0001969	.0006223
%RSD	2148.869	.7048788	3.747265	1.346916	.9925792	3.778004	167.1179
#1	-.000309	95.27582	.0562379	.0193131	.6862135	.0053498	-.000068
#2	.000271	96.23033	.0592993	.0189487	.6959141	.0050714	.000812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.15427	.0020998	.0935151	.1225463	.0927121	131.1665	7.411594
Stddev	.22607	.0000240	.0004266	.0016500	.0004881	1.0879	.083033
%RSD	1.180243	1.141860	.4561804	1.346417	.5264317	.8293659	1.120315
#1	18.99442	.0021167	.0938168	.1213796	.0923670	130.3972	7.470307
#2	19.31413	.0020828	.0932135	.1237130	.0930573	131.9357	7.352881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0722422	11.82434	7.115436	.0087486	.2256870	.1144100	.1690057
Stddev	.0011523	.08502	.071105	.0000686	.0029560	.0002119	.0007732
%RSD	1.594976	.7190635	.9993117	.7837795	1.309793	.1852020	.4575008
#1	.0730570	11.76421	7.065157	.0087971	.2277772	.1142601	.1695524
#2	.0714275	11.88446	7.165715	.0087001	.2235968	.1145598	.1684590
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-b-2-a Acquired: 5/4/2015 22:35:24 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003805	.0062134	1.255629	.0186212	.0551534	1.138566	-.001962
Stddev	.0001305	.0012422	.001197	.0008402	.0000351	.000638	.000951
%RSD	34.30448	19.99170	.0953618	4.512258	.0637170	.0560298	48.45265
#1	.0004728	.0070917	1.254782	.0192153	.0551783	1.138115	-.002635
#2	.0002882	.0053350	1.256476	.0180270	.0551286	1.139017	-.001290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2197125	.4350734
Stddev	.0005226	.0025058
%RSD	.2378744	.5759463
#1	.2193430	.4333015
#2	.2200821	.4368452
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2298.357	1442.480	7352.553	4533.828
Stddev	2.760	.278	.395	23.470
%RSD	.1200725	.0193048	.0053685	.5176655
#1	2300.309	1442.677	7352.274	4550.424
#2	2296.406	1442.284	7352.832	4517.232

Sample Name: 500-95481-a-3-a Acquired: 5/4/2015 22:30:16 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009612	.0536507	.0039397	.0331744	.0027351	-.000137
Stddev	.0002724	.0144825	.0014197	.0000720	.0001086	.000381
%RSD	28.33860	26.99413	36.03664	.2170578	3.969787	277.5306
#1	.0011539	.0638914	.0049436	.0331234	.0026583	-.000407
#2	.0007686	.0434100	.0029358	.0332253	.0028118	.000132
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000786	5.196737	.0008063	.0032344	.0037985	.0099864
Stddev	.001115	.030793	.0000678	.0002259	.0012141	.0002161
%RSD	141.8108	.5925391	8.413394	6.985518	31.96271	2.164185
#1	-.001574	5.174963	.0007583	.0033942	.0029400	.0098335
#2	.000002	5.218510	.0008542	.0030746	.0046570	.0101392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3988068	71.01609	.0007124	8.004746	.9424018	.0036161
Stddev	.0251874	.30745	.0000223	.018846	.0046964	.0002907
%RSD	6.315676	.4329306	3.125630	.2354361	.4983415	8.038266
#1	.3809967	71.23349	.0006967	7.991419	.9390810	.0038217
#2	.4166170	70.79869	.0007282	8.018072	.9457227	.0034106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 500-95481-a-3-a Acquired: 5/4/2015 22:30:16 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	825.1576	.0102586	.0011810	-.004067	.0264082	.3628491
Stddev	20.3678	.0002102	.0010890	.002208	.0002515	.0002790
%RSD	2.468358	2.049280	92.21363	54.29011	.9524169	.0768877
#1	839.5599	.0104072	.0019511	-.005629	.0262303	.3630464
#2	810.7554	.0101099	.0004109	-.002506	.0265860	.3626519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0226490	.0074781	.0037352	F -.014230	.0028875	.3095313
Stddev	.0002640	.0000125	.0001479	.000302	.0006327	.0009515
%RSD	1.165538	.1673860	3.959866	2.123505	21.91333	.3073893
#1	.0228356	.0074870	.0038397	-.014017	.0024401	.3102041
#2	.0224623	.0074693	.0036306	-.014444	.0033349	.3088585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				20.00000		
Low Limit				-.010000		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1953.065	1150.317	5816.149	3863.338
Stddev	.250	2.890	4.771	17.081
%RSD	.0127957	.2512044	.0820367	.4421311
#1	1952.889	1148.274	5819.523	3875.416
#2	1953.242	1152.361	5812.775	3851.260

Sample Name: CCV Acquired: 5/4/2015 22:39:24 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4989992	46.87046	.5218956	.5107236	.4587431	.5196424
Stddev	.0017576	.87350	.0006125	.0024761	.0081321	.0078943
%RSD	.3522216	1.863647	.1173580	.4848258	1.772694	1.519175
#1	.5002420	46.25281	.5223287	.5089727	.4529928	.5140603
#2	.4977564	47.48812	.5214625	.5124745	.4644934	.5252245
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4827823	26.19778	.5164022	.5368355	.5156118	.5098737
Stddev	.0040842	.24396	.0008698	.0015495	.0002676	.0010455
%RSD	.8459621	.9312165	.1684336	.2886265	.0519045	.2050543
#1	.4798944	26.02528	.5157872	.5357399	.5158011	.5106130
#2	.4856702	26.37029	.5170173	.5379311	.5154226	.5091344
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.45031	F 44.74218	3.729099	23.88298	5.062641	.4807547
Stddev	.23092	.85695	.084297	.33723	.060510	.0021024
%RSD	.9073338	1.915296	2.260531	1.412008	1.195225	.4373046
#1	25.28703	44.13623	3.669492	23.64452	5.019854	.4792681
#2	25.61360	45.34813	3.788707	24.12144	5.105428	.4822413
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		50.00000				
Range		-10.0000%				

Sample Name: CCV Acquired: 5/4/2015 22:39:24 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.94861	.5300851	.5280635	.5093511	.4729339	.4987233
Stddev	.50590	.0006903	.0004524	.0013170	.0017312	.0004315
%RSD	2.112450	.1302288	.0856695	.2585739	.3660464	.0865198
#1	23.59088	.5295970	.5277436	.5102824	.4717098	.4984182
#2	24.30633	.5305732	.5283834	.5084198	.4741580	.4990284
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5146189	.4756365	.5214391	.4932092	5.077394	.5197396
Stddev	.0020774	.0013414	.0009393	.0018624	.013072	.0010115
%RSD	.4036719	.2820224	.1801399	.3775983	.2574544	.1946113
#1	.5131500	.4765850	.5221033	.4918923	5.086638	.5190244
#2	.5160878	.4746880	.5207749	.4945261	5.068151	.5204548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2240.721	1269.244	6445.349	4018.708
Stddev	10.117	4.934	16.713	33.962
%RSD	.4515159	.3887087	.2593093	.8450982
#1	2247.875	1272.733	6433.531	4042.723
#2	2233.567	1265.755	6457.167	3994.693

Sample Name: CCB Acquired: 5/4/2015 22:43:19 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002831	.0123170	-.000740	.0008337	.0004753	.0002157	.0009984
Stddev	.0006231	.0110136	.002070	.0002119	.0002144	.0001917	.0011559
%RSD	220.1202	89.41763	279.6847	25.41118	45.10712	88.87951	115.7782
#1	.0007237	.0045292	.000724	.0009835	.0003237	.0003513	.0018158
#2	-.000158	.0201048	-.002204	.0006839	.0006269	.0000801	.0001810
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001812	.0001140	-.000277	.0006710	-.000595	.0711167	.0056762
Stddev	.000327	.0000866	.000198	.0002846	.000229	.0525124	.0094125
%RSD	18.05900	75.94709	71.55356	42.40757	38.45262	73.83973	165.8242
#1	-.002043	.0000528	-.000417	.0004698	-.000757	.0339848	-.000979
#2	-.001581	.0001752	-.000137	.0008723	-.000433	.1082486	.012332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001172	-.000141	.0000882	.0002004	-.001491	.0008109	.0002500
Stddev	.0005344	.005591	.0000370	.0002463	.002886	.0005911	.0003401
%RSD	455.9269	3962.957	41.97235	122.9115	193.6064	72.90127	136.0248
#1	.0004951	-.004095	.0000620	.0003746	.000550	.0012288	.0000095
#2	-.000261	.003812	.0001144	.0000262	-.003532	.0003929	.0004905
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 5/4/2015 22:43:19 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001356	-.000099	.0027117	-.000164	-.000044	.0001059	-.000100
Stddev	.000757	.001412	.0001075	.000337	.000013	.0001176	.001014
%RSD	55.83737	1431.951	3.965820	205.2912	29.35546	111.0657	1009.513
#1	-.000820	-.001097	.0027877	.000074	-.000053	.0001890	.000617
#2	-.001891	.000900	.0026356	-.000403	-.000035	.0000227	-.000818
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0005230	-.000007
Stddev	.0000787	.000080
%RSD	15.05235	1165.106
#1	.0004674	.000050
#2	.0005787	-.000063
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2504.203	1307.895	6617.886	4047.046
Stddev	.857	1.142	17.333	15.000
%RSD	.0342155	.0872946	.2619065	.3706450
#1	2504.809	1308.702	6630.143	4057.652
#2	2503.597	1307.087	6605.631	4036.439

Sample Name: 500-95474-a-3-a Acquired: 5/4/2015 22:47:26 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000475	98.04697	.0527783	.0209596	.7318288	.0054652	-.003918
Stddev	.000590	.18176	.0002830	.0002461	.0013076	.0000428	.000526
%RSD	124.0718	.1853831	.5362767	1.174238	.1786757	.7833660	13.41962
#1	-.000058	97.91845	.0529784	.0207855	.7309042	.0054955	-.004290
#2	-.000892	98.17550	.0525781	.0211336	.7327534	.0054350	-.003546
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.73953	.0020000	.0898434	.1254093	.0915605	127.2029	7.245591
Stddev	.16093	.0000674	.0003072	.0006111	.0000973	.8109	.009546
%RSD	.9071900	3.371306	.3419718	.4872694	.1062797	.6374644	.1317461
#1	17.62574	.0019523	.0900606	.1249772	.0914917	126.6295	7.252341
#2	17.85333	.0020477	.0896261	.1258414	.0916293	127.7763	7.238841
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0784045	11.58981	7.070704	.0077958	.2560476	.1169190	.1363638
Stddev	.0007941	.03335	.039214	.0001229	.0043333	.0002406	.0020422
%RSD	1.012836	.2877696	.5545969	1.576723	1.692394	.2057727	1.497611
#1	.0789661	11.56623	7.042976	.0077089	.2591117	.1167489	.1349197
#2	.0778430	11.61339	7.098433	.0078827	.2529834	.1170891	.1378078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 500-95474-a-3-a Acquired: 5/4/2015 22:47:26 Type: Unk
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000719	.0048488	1.334473	.0197589	.0567789	1.124239	-.002655
Stddev	.000581	.0040863	.000687	.0017375	.0000517	.002633	.000430
%RSD	80.74296	84.27446	.0514484	8.793464	.0909740	.2342158	16.20909
#1	-.000309	.0077383	1.333987	.0185304	.0567424	1.126100	-.002960
#2	-.001130	.0019594	1.334958	.0209875	.0568154	1.122376	-.002351
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.2195537	.4029491
Stddev	.0002725	.0002741
%RSD	.1241050	.0680167
#1	.2197464	.4031429
#2	.2193610	.4027554
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2236.854	1416.163	7235.507	4421.253
Stddev	1.906	.696	1.324	7.030
%RSD	.0852286	.0491590	.0183008	.1590042
#1	2235.506	1415.671	7236.443	4426.224
#2	2238.202	1416.655	7234.570	4416.282

Sample Name: CCV Acquired: 5/4/2015 22:51:26 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4942669	46.62974	.5180402	.5084695	.4541149	.5202720
Stddev	.0001034	.71218	.0014954	.0003788	.0049967	.0055460
%RSD	.0209134	1.527302	.2886587	.0744923	1.100308	1.065977
#1	.4943400	46.12615	.5169828	.5082017	.4505817	.5163504
#2	.4941938	47.13332	.5190976	.5087373	.4576481	.5241936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3179	Cd2288	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4817277	26.29194	.5123729	.5373141	.5165119	.5072049
Stddev	.0028155	.22216	.0007627	.0030879	.0022670	.0002781
%RSD	.5844642	.8449593	.1488607	.5746873	.4389019	.0548372
#1	.4797368	26.13485	.5118336	.5351306	.5181149	.5070083
#2	.4837186	26.44903	.5129122	.5394975	.5149089	.5074016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.28683	F 44.33191	3.682263	23.73335	5.065924	.4786663
Stddev	.31276	.33484	.030557	.24379	.063008	.0018244
%RSD	1.236848	.7552941	.8298431	1.027198	1.243755	.3811395
#1	25.06567	44.09515	3.660656	23.56096	5.021370	.4773762
#2	25.50798	44.56868	3.703870	23.90573	5.110477	.4799563
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		50.00000				
Range		-10.0000%				

Sample Name: CCV Acquired: 5/4/2015 22:51:26 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.82438	.5304093	.5271309	.5041521	.4693668	.4942246
Stddev	.17622	.0036559	.0001902	.0020087	.0025600	.0017916
%RSD	.7396788	.6892520	.0360906	.3984272	.5454227	.3625057
#1	23.69977	.5278242	.5272654	.5027317	.4675566	.4929578
#2	23.94898	.5329944	.5269964	.5055724	.4711770	.4954915
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5138170	.4730029	.5210531	.4939674	5.077684	.5216228
Stddev	.0046442	.0014265	.0009386	.0041576	.001573	.0014410
%RSD	.9038551	.3015930	.1801323	.8416745	.0309749	.2762440
#1	.5105331	.4719942	.5203894	.4910275	5.078796	.5206039
#2	.5171009	.4740116	.5217168	.4969073	5.076572	.5226417
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2248.551	1280.236	6469.386	4031.889
Stddev	7.285	1.892	2.957	37.195
%RSD	.3239662	.1478160	.0457149	.9225296
#1	2253.702	1281.574	6471.477	4058.190
#2	2243.400	1278.898	6467.295	4005.588

Sample Name: CCB Acquired: 5/4/2015 22:55:20 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004481	-.013608	.0002188	.0009882	.0003808	-.000120	-.000105
Stddev	.0003238	.002433	.0008448	.0000456	.0000488	.000256	.000060
%RSD	72.26482	17.87964	386.1238	4.612921	12.81338	213.3610	57.23586
#1	.0006770	-.011888	-.000379	.0009560	.0004153	-.000301	-.000147
#2	.0002191	-.015328	.000816	.0010205	.0003463	.000061	-.000062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002292	.0001266	.0001281	.0003432	-.000356	-.020526	-.006578
Stddev	.004145	.0000292	.0003083	.0005489	.000577	.034991	.009371
%RSD	180.8291	23.09825	240.6485	159.9450	161.9343	170.4752	142.4534
#1	.000639	.0001059	.0003462	-.000045	-.000765	.004217	.000048
#2	-.005224	.0001472	-.000090	.000731	.000052	-.045268	-.013204
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001778	.0127800	-.000190	.0002804	.0034542	-.000015	-.000089
Stddev	.0002783	.0281196	.000159	.0001461	.0020993	.000208	.000830
%RSD	156.4915	220.0282	83.69329	52.11301	60.77547	1354.335	928.2911
#1	.0003746	-.007104	-.000078	.0003837	.0049386	-.000162	-.000676
#2	-.000019	.032664	-.000303	.0001771	.0019698	.000131	.000498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 5/4/2015 22:55:20 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001230	.0023535	.0012390	-.000369	-.000043	.0002796	.0002812
Stddev	.000127	.0009738	.0009665	.000283	.000014	.0000754	.0000888
%RSD	10.30933	41.37743	78.00336	76.70872	33.24342	26.97177	31.57952
#1	-.001141	.0030421	.0005556	-.000169	-.000033	.0003329	.0002184
#2	-.001320	.0016649	.0019224	-.000569	-.000053	.0002263	.0003440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0006956	-.000170
Stddev	.0005625	.000085
%RSD	80.85682	50.08550
#1	.0010934	-.000231
#2	.0002979	-.000110
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2505.294	1311.156	6648.359	4074.544
Stddev	3.299	1.088	.414	28.631
%RSD	.1316725	.0829932	.0062227	.7026717
#1	2507.626	1311.925	6648.651	4094.789
#2	2502.961	1310.386	6648.066	4054.299

Sample Name: CCVL Acquired: 5/4/2015 22:58:37 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057861	.1916736	.0109207	.0519337	.0097979	.0041188	.0492972
Stddev	.0002097	.0160476	.0014672	.0005489	.0000957	.0000052	.0000167
%RSD	3.623867	8.372341	13.43491	1.056923	.9767546	.1254781	.0339180
#1	.0059344	.1803262	.0098832	.0515456	.0098655	.0041224	.0492853
#2	.0056378	.2030209	.0119581	.0523218	.0097302	.0041151	.0493090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2298953	.0022835	.0051327	.0105504	.0096392	.2001909	.4403282
Stddev	.0023273	.0001247	.0000718	.0003946	.0005140	.1406167	.0132452
%RSD	1.012349	5.461289	1.398864	3.739965	5.332176	70.24130	3.008030
#1	.2315410	.0023717	.0051835	.0102714	.0100026	.1007599	.4496940
#2	.2282497	.0021953	.0050820	.0108294	.0092757	.2996219	.4309625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097586	.1000984	.0108746	.0097781	.9529760	.0105503	.0043009
Stddev	.0000881	.0102964	.0004263	.0002537	.0126357	.0002024	.0013376
%RSD	.9027154	10.28628	3.919970	2.594809	1.325917	1.918486	31.10029
#1	.0096963	.0928177	.0111760	.0099575	.9440412	.0104072	.0033551
#2	.0098209	.1073790	.0105732	.0095987	.9619107	.0106934	.0052467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCVL Acquired: 5/4/2015 22:58:37 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0192028	.0096611	.1866403	.0399602	.0049491	.0053571	.0093023
Stddev	.0011352	.0024956	.0007321	.0007733	.0000083	.0001377	.0007625
%RSD	5.911531	25.83181	.3922583	1.935224	.1681065	2.570881	8.197491
#1	.0200055	.0078964	.1861226	.0394134	.0049550	.0054545	.0087631
#2	.0184001	.0114258	.1871580	.0405070	.0049432	.0052597	.0098415
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0055531	.0250430
Stddev	.0002620	.0003265
%RSD	4.718666	1.303810
#1	.0057383	.0248121
#2	.0053678	.0252739
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2486.444	1308.831	6644.682	4056.335
Stddev	9.943	2.320	9.161	15.795
%RSD	.3998787	.1772466	.1378680	.3894025
#1	2493.474	1310.471	6638.204	4067.504
#2	2479.413	1307.190	6651.160	4045.166

Sample Name: CCVL Acquired: 5/4/2015 23:02:43 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba4554	Be2348	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054754	.2037621	.0117409	.0521381	.0097713	.0040571	.0483615
Stddev	.0000507	.0068119	.0029310	.0003179	.0000548	.0001153	.0007133
%RSD	.9253596	3.343087	24.96378	.6098090	.5610794	2.841521	1.474952
#1	.0054396	.2085789	.0096684	.0519133	.0098101	.0041386	.0488658
#2	.0055112	.1989453	.0138134	.0523629	.0097325	.0039755	.0478571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2067324	.0023200	.0052358	.0102528	.0099218	.2431679	.4388281
Stddev	.0052587	.0000214	.0000714	.0008178	.0002394	.0777550	.0249399
%RSD	2.543723	.9219952	1.364044	7.976010	2.413159	31.97586	5.683286
#1	.2104508	.0023351	.0051853	.0108310	.0100912	.2981490	.4211929
#2	.2030139	.0023049	.0052863	.0096745	.0097526	.1881868	.4564632
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095336	.1033518	.0102203	.0098650	.9500268	.0110526	.0047369
Stddev	.0003217	.0131411	.0003538	.0000432	.0049729	.0002055	.0020060
%RSD	3.374405	12.71492	3.461811	.4375479	.5234501	1.859599	42.34860
#1	.0093061	.0940597	.0104705	.0098344	.9465104	.0111980	.0033184
#2	.0097611	.1126440	.0099701	.0098955	.9535432	.0109073	.0061553
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCVL Acquired: 5/4/2015 23:02:43 Type: QC
Method: P6050415A(v2) Mode: CONC Corr. Factor: 1.000000
User: LACYK analytical run: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0199573	.0122125	.1850665	.0401223	.0048665	.0051815	.0106109
Stddev	.0011652	.0012777	.0019843	.0007302	.0000099	.0002171	.0005807
%RSD	5.838555	10.46252	1.072210	1.819973	.2032067	4.189675	5.472231
#1	.0191334	.0131160	.1836634	.0396060	.0048735	.0053350	.0102003
#2	.0207812	.0113090	.1864696	.0406386	.0048595	.0050280	.0110215
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062
Units	ppm	ppm
Avg	.0054199	.0200819
Stddev	.0000435	.0000608
%RSD	.8021874	.3028892
#1	.0054506	.0201249
#2	.0053891	.0200389
Check ?	Chk Pass	Chk Pass
Value		
Range		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2497.281	1312.233	6641.023	4056.980
Stddev	12.345	6.167	14.834	10.803
%RSD	.4943553	.4699631	.2233630	.2662762
#1	2506.011	1316.593	6630.534	4064.619
#2	2488.552	1307.872	6651.512	4049.342

Metals Worksheet

Batch Number: 500-286742
Method: 245.1
Analyst: Laird, Rebecca L

Date Open: May 05 2015 9:13AM
Batch End:

Lab ID	Client ID	Method Chain	Basis	Final weight/volume of sample	M11FSTKHG_00001	M15BSTKHG_00001
STD01REP1~500-286742/1						
STD02REP1~500-286742/2						
STD03REP1~500-286742/3						
STD04REP1~500-286742/4						
STD05REP1~500-286742/5						
STD06REP1~500-286742/6						
ICV~500-286742/7		7471A		50 mL	0.0001 mL	
ICB~500-286742/8		7471A				
CRA~500-286742/9		7471A		50 mL		0.00001 mL
MB~500-286609/12-A		7471A				
LCS~500-286609/13-A		7471A				
500-95476-F-9-C		7471A	T			
500-95474-B-1-B		7471B	T			
500-95474-A-2-B		7471B	T			
500-95474-B-3-B		7471B	T			
500-95474-B-4-A		7471B	T			
500-95474-B-5-B		7471B	T			
500-95474-B-6-A		7471B	T			
CCV~500-286742/19		7471A		50 mL	0.00005 mL	
CCB~500-286742/20		7471A				
500-95474-B-7-B		7471B	T			
500-95474-A-8-B		7471B	T			
500-95474-B-9-B		7471B	T			
500-95474-B-10-C		7471B	T			
500-95474-B-10-D~DU		7471B	T			

Metals Worksheet

Batch Number: 500-286742
Method: 245.1
Analyst: Laird, Rebecca L

Date Open: May 05 2015 9:13AM
Batch End:

Lab ID	Client ID	Method Chain	Basis	Final weight/volume of sample	M11FSTKHG_00001	M15BSTKHG_00001
500-95474-A-10-F~MS		7471B	T			
500-95474-B-10-E~MSD		7471B	T			
500-95474-A-11-A		7471B	T			
500-95488-F-1-C		7471B	T			
500-95489-G-1-C		7471B	T			
CCV~500-286742/31		7471B		50 mL	0.00005 mL	
CCB~500-286742/32		7471B				
500-95489-F-2-B		7471B	T			
500-95490-B-1-C		7471B	T			
500-95490-A-2-F		7471B	T			
MB~500-286613/12-A		7471B				
LCS~500-286613/13-A		7471B				
500-95509-C-1-A		7471B	T			
500-95509-A-2-C		7471B	T			
500-95509-C-3-A		7471B	T			
500-95509-A-4-C		7471B	T			
500-95509-C-5-A		7471B	T			
CCV~500-286742/43		7471B		50 mL	0.00005 mL	
CCB~500-286742/44		7471B				
500-95509-A-6-C		7471B	T			
500-95509-A-7-C		7471B	T			
500-95509-B-8-H		7471B	T			
500-95509-B-8-I~DU		7471B	T			
500-95509-B-8-J~MS		7471B	T			
500-95509-C-8-A~MSD		7471B	T			

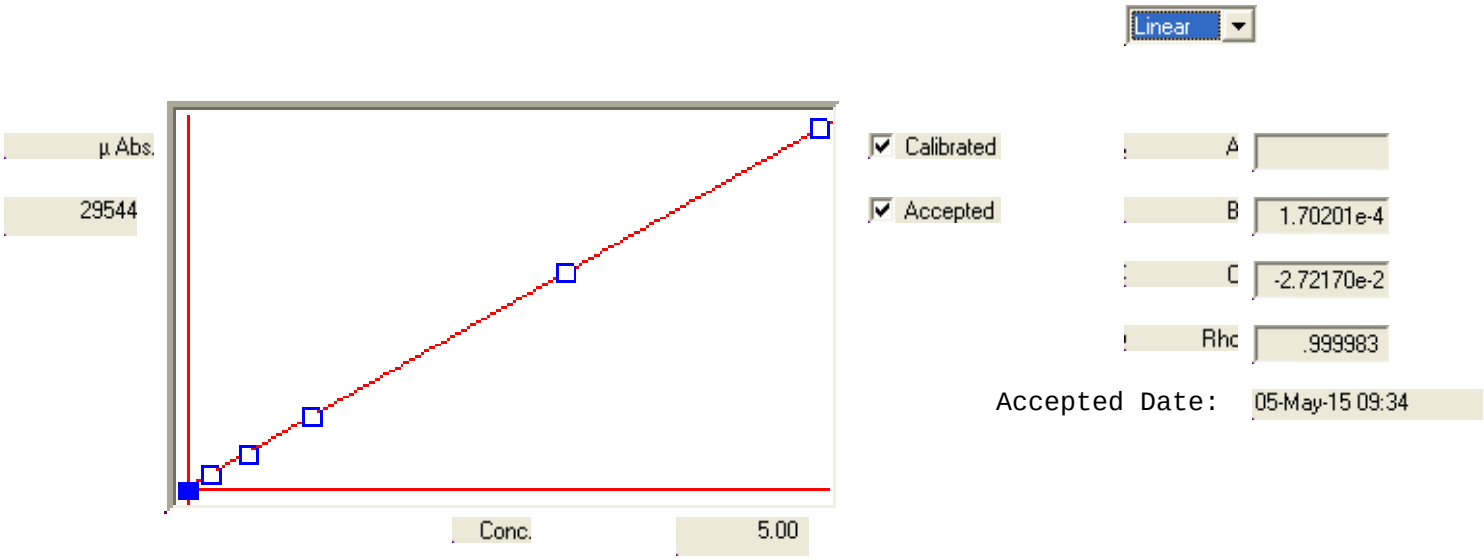
Metals Worksheet

Batch Number: 500-286742
Method: 245.1
Analyst: Laird, Rebecca L

Date Open: May 05 2015 9:13AM
Batch End:

Lab ID	Client ID	Method Chain	Basis	Final weight/volume of sample	M11FSTKHG_00001	M15BSTKHG_00001
500-95509-A-9-C		7471B	T			
CCV~500-286742/52		7471B		50 mL	0.00005 mL	
CCB~500-286742/53		7471B				

Protocol: SOIL



S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
01	.00000	-.006	-.006	122	0	122				
02	.20000	.214	.014	1417	0%	1416				
03	.50000	.484	-.016	3003	0%	3003				
04	1.0000	1.01	.012	6106	0%	6106				
05	3.0000	3.00	-.004	17761	0%	17760				
06	5.0000	5.00	.001	29544	0%	29544				
07										
08										
09										
10										

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Standard: 1 Rep: 1              Seq:  1       09:13:08 05 May 15   HG

Hg    .000    ppb      122

*** Standard: 2 Rep: 1              Seq:  2       09:15:15 05 May 15   HG

Hg    .200    ppb      1416

*** Standard: 3 Rep: 1              Seq:  3       09:17:17 05 May 15   HG

Hg    .500    ppb      3003

*** Standard: 4 Rep: 1              Seq:  4       09:19:29 05 May 15   HG

Hg    1.00    ppb      6106

*** Standard: 5 Rep: 1              Seq:  5       09:21:42 05 May 15   HG

Hg    3.00    ppb      17760

*** Standard: 6 Rep: 1              Seq:  6       09:23:45 05 May 15   HG

Hg    5.00    ppb      29544

*** Sample ID: ICV                   Seq:  7      09:35:16 05 May 15   HG

Hg    2.14    ppb      12714

================================================================================
*** Sample ID: ICB                   Seq:  8      09:37:19 05 May 15   HG

Hg   -.026    ppb      6
                                                                              =
================================================================================
*** Sample ID: CRA                   Seq:  9      09:39:23 05 May 15   HG

Hg    .185    ppb      1246
                                                                              =
================================================================================
*** Sample ID:                       Seq:  10     09:41:25 05 May 15   HG
                           mb 500-286609/12-a
Hg   -.011    ppb      98
                                                                              =
*** Sample ID:                       Seq:  11     09:43:26 05 May 15   HG
                           lcs 500-286609/13-a
Hg    2.09    ppb      12437
                                                                              =
```

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID:                        Seq:  12     09:45:42 05 May 15   HG
                            500-95476-f-9-c
Hg    .993    ppb      5994
                                                                                =
*** Sample ID:                        Seq:  13     09:47:47 05 May 15   HG
                            500-95474-b-1-b
Hg    .494    ppb      3060
                                                                                =
*** Sample ID:                        Seq:  14     09:49:50 05 May 15   HG
                            500-95474-a-2-b
Hg    .497    ppb      3081
                                                                                =
*** Sample ID:                        Seq:  15     09:52:17 05 May 15   HG
                            500-95474-b-3-b
Hg    .431    ppb      2690
                                                                                =
*** Sample ID:                        Seq:  16     09:54:45 05 May 15   HG
                            500-95474-b-4-a
Hg    .476    ppb      2956
                                                                                =
*** Sample ID:                        Seq:  17     09:56:59 05 May 15   HG
                            500-95474-b-5-b
Hg    .491    ppb      3044
                                                                                =
*** Sample ID:                        Seq:  18     09:59:01 05 May 15   HG
                            500-95474-b-6-a
Hg    .499    ppb      3094
                                                                                =
================================================================================
*** Sample ID: CCV                    Seq:  19     10:01:13 05 May 15   HG

Hg    1.01    ppb      6105
                                                                                =
================================================================================
*** Sample ID: CCB                    Seq:  20     10:03:16 05 May 15   HG

Hg   -.009    ppb      109
                                                                                =
================================================================================
*** Sample ID:                        Seq:  21     10:05:17 05 May 15   HG
                            500-95474-b-7-b
Hg    .466    ppb      2895
                                                                                =
*** Sample ID:                        Seq:  22     10:07:20 05 May 15   HG
                            500-95474-a-8-b
Hg    .520    ppb      3216
                                                                                =
```

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID:                        Seq:  34     10:33:02 05 May 15   HG
                            500-95490-b-1-c
Hg    1.46    ppb      8739
                                                                                =
*** Sample ID:                        Seq:  35     10:35:14 05 May 15   HG
                            500-95490-a-2-f
Hg    .208    ppb      1384
                                                                                =
*** Sample ID:                        Seq:  36     10:37:37 05 May 15   HG
                            mb 500-286613/12-a
Hg    .007    ppb      201
                                                                                =
*** Sample ID:                        Seq:  37     10:39:40 05 May 15   HG
                            lcs 500-286613/13-a
Hg    2.14    ppb      12750
                                                                                =
*** Sample ID:                        Seq:  38     10:41:46 05 May 15   HG
                            500-95509-c-1-a
Hg    1.11    ppb      6685
                                                                                =
*** Sample ID:                        Seq:  39     10:44:11 05 May 15   HG
                            500-95509-a-2-c
Hg    .145    ppb      1011
                                                                                =
*** Sample ID:                        Seq:  40     10:46:17 05 May 15   HG
                            500-95509-c-3-a
Hg    .557    ppb      3434
                                                                                =
*** Sample ID:                        Seq:  41     10:48:19 05 May 15   HG
                            500-95509-a-4-c
Hg    .055    ppb      483
                                                                                =
*** Sample ID:                        Seq:  42     10:50:26 05 May 15   HG
                            500-95509-c-5-a
Hg    .855    ppb      5186
                                                                                =
================================================================================
*** Sample ID: CCV                    Seq:  43     10:52:29 05 May 15   HG

Hg    1.10    ppb      6649
                                                                                =
================================================================================
*** Sample ID: CCB                    Seq:  44     10:54:34 05 May 15   HG

Hg    .005    ppb      188
                                                                                =
================================================================================
```

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID:                        Seq:  23     10:09:24 05 May 15   HG
                            500-95474-b-9-b
Hg    .509    ppb      3152
                                                                                =
*** Sample ID:                        Seq:  24     10:11:29 05 May 15   HG
                            500-95474-b-10-c
Hg    .402    ppb      2519
                                                                                =
*** Sample ID:                        Seq:  25     10:13:32 05 May 15   HG
                            500-95474-b-10-d du
Hg    .509    ppb      3151
                                                                                =
*** Sample ID:                        Seq:  26     10:15:34 05 May 15   HG
                            500-95474-a-10-f ms
Hg    1.67    ppb      9945
                                                                                =
*** Sample ID:                        Seq:  27     10:17:37 05 May 15   HG
                            500-95474-b-10-e msd
Hg    1.59    ppb      9518
                                                                                =
*** Sample ID:                        Seq:  28     10:20:00 05 May 15   HG
                            500-95474-a-11-a
Hg    .602    ppb      3695
                                                                                =
*** Sample ID:                        Seq:  29     10:22:06 05 May 15   HG
                            500-95488-f-1-c
Hg    .583    ppb      3588
                                                                                =
*** Sample ID:                        Seq:  30     10:24:12 05 May 15   HG
                            500-95489-g-1-c
Hg   -.005    ppb      131
                                                                                =
================================================================================
*** Sample ID: CCV                    Seq:  31     10:26:14 05 May 15   HG

Hg    1.04    ppb      6244
                                                                                =
================================================================================
*** Sample ID: CCB                    Seq:  32     10:28:22 05 May 15   HG

Hg   -.026    ppb      7
                                                                                =
================================================================================
*** Sample ID:                        Seq:  33     10:30:37 05 May 15   HG
                            500-95489-f-2-b
Hg    .018    ppb      268
                                                                                =
```

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID:                        Seq:  45     10:56:37 05 May 15   HG
                            500-95509-a-6-c
Hg    .184    ppb      1241
                                                                                =
*** Sample ID:                        Seq:  46     10:58:39 05 May 15   HG
                            500-95509-a-7-c
Hg    .142    ppb      995
                                                                                =
*** Sample ID:                        Seq:  47     11:00:42 05 May 15   HG
                            500-95509-b-8-h
Hg    1.09    ppb      6568
                                                                                =
*** Sample ID:                        Seq:  48     11:03:15 05 May 15   HG
                            500-95509-b-8-i du
Hg    .911    ppb      5513
                                                                                =
*** Sample ID:                        Seq:  49     11:05:18 05 May 15   HG
                            500-95509-b-8-j ms
Hg    2.12    ppb      12603
                                                                                =
*** Sample ID:                        Seq:  50     11:07:21 05 May 15   HG
                            500-95509-c-8-a msd
Hg    2.22    ppb      13218
                                                                                =
*** Sample ID:                        Seq:  51     11:09:26 05 May 15   HG
                            500-95509-a-9-c
Hg    .085    ppb      659
                                                                                =
================================================================================
*** Sample ID: CCV                    Seq:  52     11:11:29 05 May 15   HG

Hg    1.09    ppb      6540
                                                                                =
================================================================================
*** Sample ID: CCB                    Seq:  53     11:13:32 05 May 15   HG

Hg    .006    ppb      194
                                                                                =
```

METALS BATCH WORKSHEET

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Batch Number: 286488 Batch Start Date: 05/03/15 18:08 Batch Analyst: Hacek, Phillip J

Batch Method: 3050B Batch End Date: 05/03/15 18:38

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	InitialAmount	FinalAmount	M15DSPKIC 00002		
MB 500-286488/1		3050B, 6010B		CALC NOT SET TO RUN	1 g	100 mL			
LCS 500-286488/2		3050B, 6010B		CALC NOT SET TO RUN	1 g	100 mL	1 mL		
500-95474-A-1	DS-1	3050B, 6010B	T	CALC NOT SET TO RUN	1.0262 g	100 mL			
500-95474-B-2	DS-2	3050B, 6010B	T	CALC NOT SET TO RUN	1.0015 g	100 mL			
500-95474-A-3	DS-3	3050B, 6010B	T	CALC NOT SET TO RUN	1.0646 g	100 mL			
500-95474-A-4	DS-4	3050B, 6010B	T	CALC NOT SET TO RUN	1.1126 g	100 mL			
500-95474-A-5	DS-5	3050B, 6010B	T	CALC NOT SET TO RUN	1.0839 g	100 mL			
500-95474-A-6	DS-6	3050B, 6010B	T	CALC NOT SET TO RUN	1.0179 g	100 mL			
500-95474-A-7	DS-7	3050B, 6010B	T	CALC NOT SET TO RUN	1.1182 g	100 mL			
500-95474-B-8	DS-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.0468 g	100 mL			
500-95474-A-9	DS-9	3050B, 6010B	T	CALC NOT SET TO RUN	1.1790 g	100 mL			
500-95474-A-10	DS-10	3050B, 6010B	T	CALC NOT SET TO RUN	1.0278 g	100 mL			
500-95474-A-10 DU	DS-10	3050B, 6010B	T	CALC NOT SET TO RUN	1.0028 g	100 mL			
500-95474-B-10 MS	DS-10	3050B, 6010B	T	CALC NOT SET TO RUN	1.0011 g	100 mL	1 mL		
500-95474-A-10 MSD	DS-10	3050B, 6010B	T	CALC NOT SET TO RUN	1.1208 g	100 mL	1 mL		
500-95474-B-11	DS-DUP	3050B, 6010B	T	CALC NOT SET TO RUN	1.1642 g	100 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Batch Number: 286488 Batch Start Date: 05/03/15 18:08 Batch Analyst: Hacek, Phillip J

Batch Method: 3050B Batch End Date: 05/03/15 18:38

Batch Notes	
Analyst	PH
Balance ID	1966
First End time	1838
Filter Paper Lot Number	9634968
Hydrogen peroxide lot number	4503225
Lot # of hydrochloric acid	86340
Lot # of Nitric Acid	104740
Hood ID or number	2
Hot Block ID number	2403
Oven, Bath or Block Temperature 1	94 Degrees C
Pipette ID	1752
Person's name who witnessed reagent drop	MD
Snap Cap Lot #	34814012
First Start time	1808
Temperature	95/94 Degrees C
ID number of the thermometer	2104173
Digestion Tube/Cup Lot #	1408268
Uncorrected Temperature	95 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Batch Number: 286609 Batch Start Date: 05/04/15 14:00 Batch Analyst: Laird, Rebecca L

Batch Method: 7471B Batch End Date: 05/04/15 14:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	M11FSTKHG 00001	M15BSTKHG 00001		
MB 500-286609/12		7471B, 7471B		0.6 g	50 mL				
LCS 500-286609/13		7471B, 7471B		0.6 g	50 mL	0.0001 mL			
500-95474-B-1	DS-1	7471B, 7471B	T	0.6087 g	50 mL				
500-95474-A-2	DS-2	7471B, 7471B	T	0.6877 g	50 mL				
500-95474-B-3	DS-3	7471B, 7471B	T	0.6507 g	50 mL				
500-95474-B-4	DS-4	7471B, 7471B	T	0.6692 g	50 mL				
500-95474-B-5	DS-5	7471B, 7471B	T	0.6688 g	50 mL				
500-95474-B-6	DS-6	7471B, 7471B	T	0.6487 g	50 mL				
500-95474-B-7	DS-7	7471B, 7471B	T	0.6839 g	50 mL				
500-95474-A-8	DS-8	7471B, 7471B	T	0.6635 g	50 mL				
500-95474-B-9	DS-9	7471B, 7471B	T	0.6995 g	50 mL				
500-95474-B-10	DS-10	7471B, 7471B	T	0.6194 g	50 mL				
500-95474-B-10 DU	DS-10	7471B, 7471B	T	0.6797 g	50 mL				
500-95474-A-10 MS	DS-10	7471B, 7471B	T	0.6588 g	50 mL		0.00005 mL		
500-95474-B-10 MSD	DS-10	7471B, 7471B	T	0.6003 g	50 mL		0.00005 mL		
500-95474-A-11	DS-DUP	7471B, 7471B	T	0.6352 g	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Chicago Job No.: 500-95474-1

SDG No.: 15-07.01

Batch Number: 286609 Batch Start Date: 05/04/15 14:00 Batch Analyst: Laird, Rebecca L

Batch Method: 7471B Batch End Date: 05/04/15 14:30

Batch Notes	
Hydroxylamine Hydrochloride Lot	96240
Balance ID	C-0127
Batch Comment	STOCKID: M11FSTKHG_0001[QC], M15BSTKHG_00001[CURVE] teflon stip: 1346199
Digestion End Time	1430
Digestion Start Time	1400
Filter Lot #	R4DA50664
Lot # of hydrochloric acid	86340
Lot # of Nitric Acid	93717
Hood ID or number	C-0264
Hot Block ID number	C-2459
Potassium Permanganate Lot Number	138740A
NaCl Lot #	XA20H
Oven, Bath or Block Temperature 1	90 Celsius
Pipette ID	2240, 1631, 1751, 1629
Repittetor Volume Check	0
Stannous Chloride Lot Number	125758
SOP Number	UP-ME-245.1, REV. 19
Syringe Lot #	3186288
ID number of the thermometer	15098
Digestion Tube/Cup Lot #	1408268
Uncorrected Temperature	90 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-95474

Chain of Custody Number:

Page 1 of 2

Temperature °C of Cooler (-1.1 -0.8)

500-95474 COC

(optional)

Report To
Contact: Rudy Fields
Company: Fields Environmental, Inc.
Address: 1304 W. Vernal Pike
Address: Bloomington, Indiana
Phone: (812) 333-5333
Fax: (812) 337-5334
E-Mail: rudy@fieldsenvironmentalinc.com

A.N. 4-30-15

(optional)

Bill To
Contact: "Same"
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Client: Fields Environmental, Inc.
Client Project #: 1544-07.01
Project Name: Habitat / Drayoo Phase II
Project Location/State: Bloomington, IN
Lab Project #:
Sampler: Aaron Norton, Richard Creek
Lab PM: Robin Kintz

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	PAHs/PCBs (Preservative: NONE)	RCRA METALS/MOISTURE (Preservative: NONE)								Comments
1		DS-1	4-30-15	1420	2	S	X	X								
2		DS-2	"	1430	2	S	X	X								
3		DS-3	"	1435	2	S	X	X								
4		DS-4	"	1445	2	S	X	X								
5		DS-5	"	1505	2	S	X	X								
6		DS-6	"	1515	2	S	X	X								
7		DS-7	"	1525	2	S	X	X								
8		DS-8	"	1545	2	S	X	X								
9		DS-9	"	1550	2	S	X	X								
10	Y	DS-10	"	1605	6	S	X	X								

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days Standard ___ Other
Requested Due Date ___

Sample Disposal
[ ] Return to Client [✓] Disposal by Lab [ ] Archive for ___ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	FEI	4-30-15	1745	Fed Ex			
				[signature]	TA	5/1/15	1015

Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments: Level IV QA/QC

Lab Comments:

TAL-4124-500 (1209)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-95474

Chain of Custody Number:

Page 2 of 2

Temperature °C of Cooler:

(optional)

Report To
Contact: Rudy Fields
Company: Fields Environmental, Inc.
Address: 1309 W Vernal Pike
Address: Bloomington, IN 47404
Phone: 812-333-5333
Fax: 812-333-5334
E-Mail: rudy@fieldsenvironmentalinc.com

4-30-15 A.N.

(optional)

Bill To
Contact: "SAME"
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Client: Fields Environmental, Inc.
Client Project #: #1515-07.01
Project Name: Habitat/Dragoo Phase II
Project Location/State: Bloomington, IN
Lab Project #:
Sampler: Aaron Norton Richard Creek
Lab PM: Robin Kintz

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	PAHs/PCBS (Preservative: NONE)	RCRA Metals/Moisture (Preservative: NONE)								Comments
11		DS-DUP	4-30-15	—	2	S	X	X								

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days Standard Other
Requested Due Date

Sample Disposal
☐ Return to Client ☑ Disposal by Lab ☐ Archive for ___ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	FEI	4-30-15	1745	FEDEX			
				[signature]	TA	5-1-15	1015

Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments: Level IV QA/QC

Lab Comments:

TAL-4124-500 (1209)

Login Sample Receipt Checklist

Client: Fields Environmental

Job Number: 500-95474-1
SDG Number: 15-07.01

Login Number: 95474
List Number: 1
Creator: James, Jeff A

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

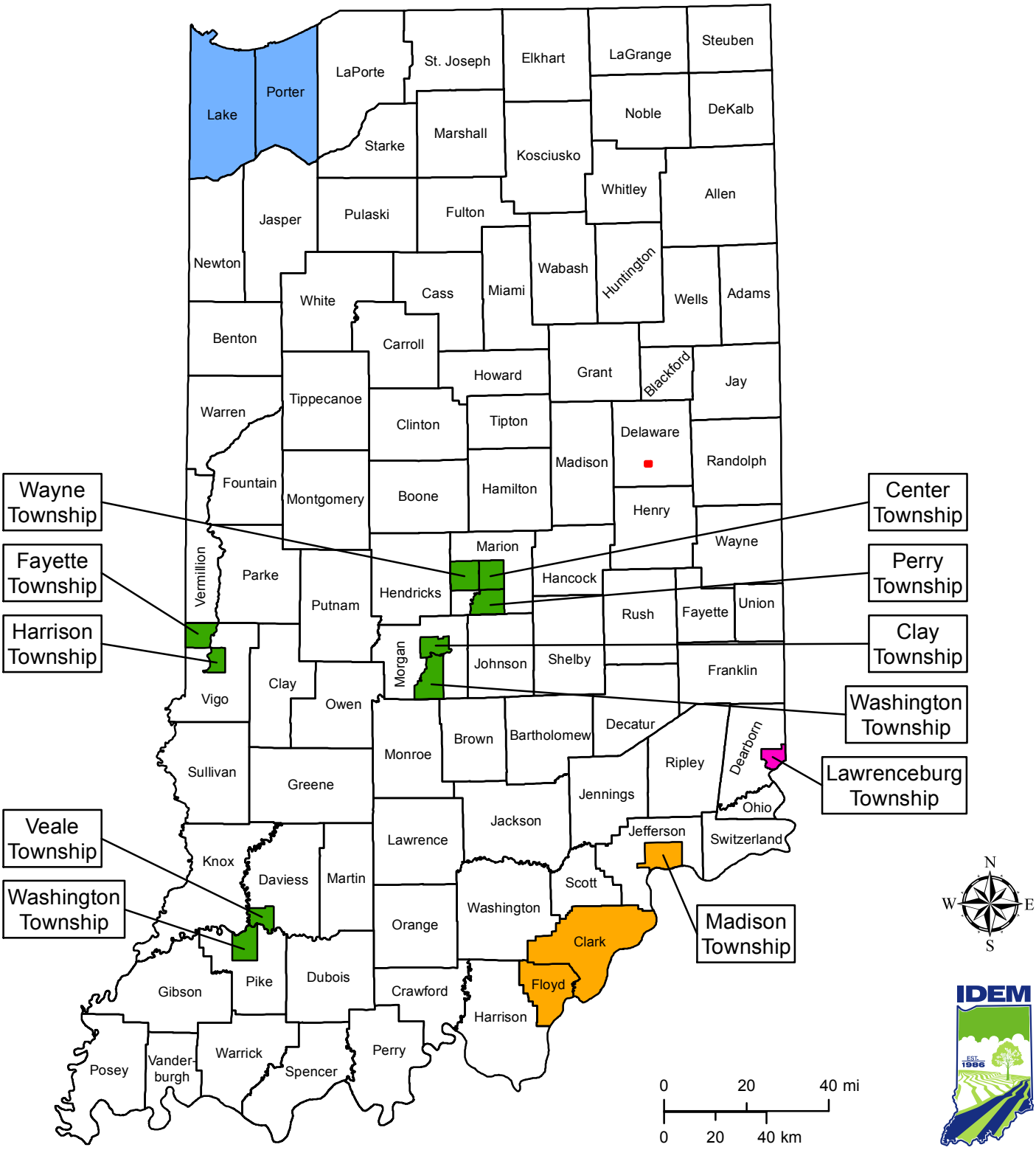
Attachment 8:

Current Nonattainment Areas

Office of Air Quality

Indiana Department of Environmental Management

Current Nonattainment Areas



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By: B. Callahan, OAQ **Date:** 3/18/2015
Source: Office of Air Quality

Map Projection: UTM Zone 16 N **Map Datum:** NAD83

- Nonattainment for the 1997 Annual Fine Particle Standard
- Nonattainment for the 2008 8-Hour Ozone Standard
- Nonattainment for the 2010 1-Hour SO_2 Standard
- Nonattainment for the 2008 Lead Standard
- Nonattainment for the 2008 8-Hour Ozone Standard and the 1997 Annual Fine Particle Standard

Attachment 9:

Indiana Federally-Listed Threatened, Endangered and Candidate Species' County Distribution

U.S. Fish and Wildlife Service

Indiana

Federally-Listed Threatened, Endangered and Candidate Species' County Distribution

For more information on Indiana's federally listed species, contact
U.S. Fish and Wildlife Service, 620 S. Walker St., Bloomington, Indiana 47403-2121 or phone (812)334-4261

Revised September 2015

Species	Status	Counties	Habitat
MAMMALS			
Gray bat (*Myotis grisescens*)	Endangered	Clark, Crawford, Floyd, Harrison, Perry, Spencer	A year-round cave obligate species -- roosting in caves both during hibernation and summer. Foraging habitat of gray bats is correlated with rivers, streams, lakes or reservoirs and associated shorelines. Forested corridors used to travel between caves and foraging areas.
Indiana bat *Myotis sodalis*	Endangered	Statewide CRITICAL HABITAT: Big Wyandotte Cave (Crawford County), Ray's Cave (Greene County)	Hibernation occurs in caves and mines, with swarming in surrounding wooded areas. Summer roosting and foraging habitat occurs in wooded stream corridors and in bottomland and upland forests and woods.
Northern long-eared bat *Myotis septentrionalis*	Threatened	Statewide	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests and woods.
BIRDS			
Least tern (*Sterna antillarum*)	Endangered	Gibson, Greene, Spencer	Sandbars on large rivers, dredged spoil islands, and man-made habitats that include constructed nesting islands and gravel areas near impoundments.
Piping plover *(Charadrius melodus)*	Endangered	Lake and LaPorte	Beaches along shoreline of Lake Michigan
Piping plover *(Charadrius melodus)*	Critical Habitat Designated	Porter - 7.9 km of Lake Michigan shoreline (5 km are part of Indiana Dunes State Park and the remainng 2.9 km are part of Indiana Dunes National Lakeshore) No recent records	
Rufa red knot *(Calidris canutus rufa)*	Threatened	Lake	Beaches along shoreline of Lake Michigan
REPTILES			
Copperbelly water snake (*Nerodia erythrogaster neglecta*)	Threatened	Kosciusko, St. Joseph, Steuben	Wooded and permanently wet areas such as oxbows, sloughs, brushy ditches and floodplain woods
Eastern massasauga (*Sistrurus catenatus*)	Proposed as Threatned	Carroll, Elkhart, Fulton, Kosciuscko, Lagrange, LaPorte, Marshall, Noble, Porter, Pulaski, St. Joseph, Starke, Steuben	Wetlands and adjacent uplands

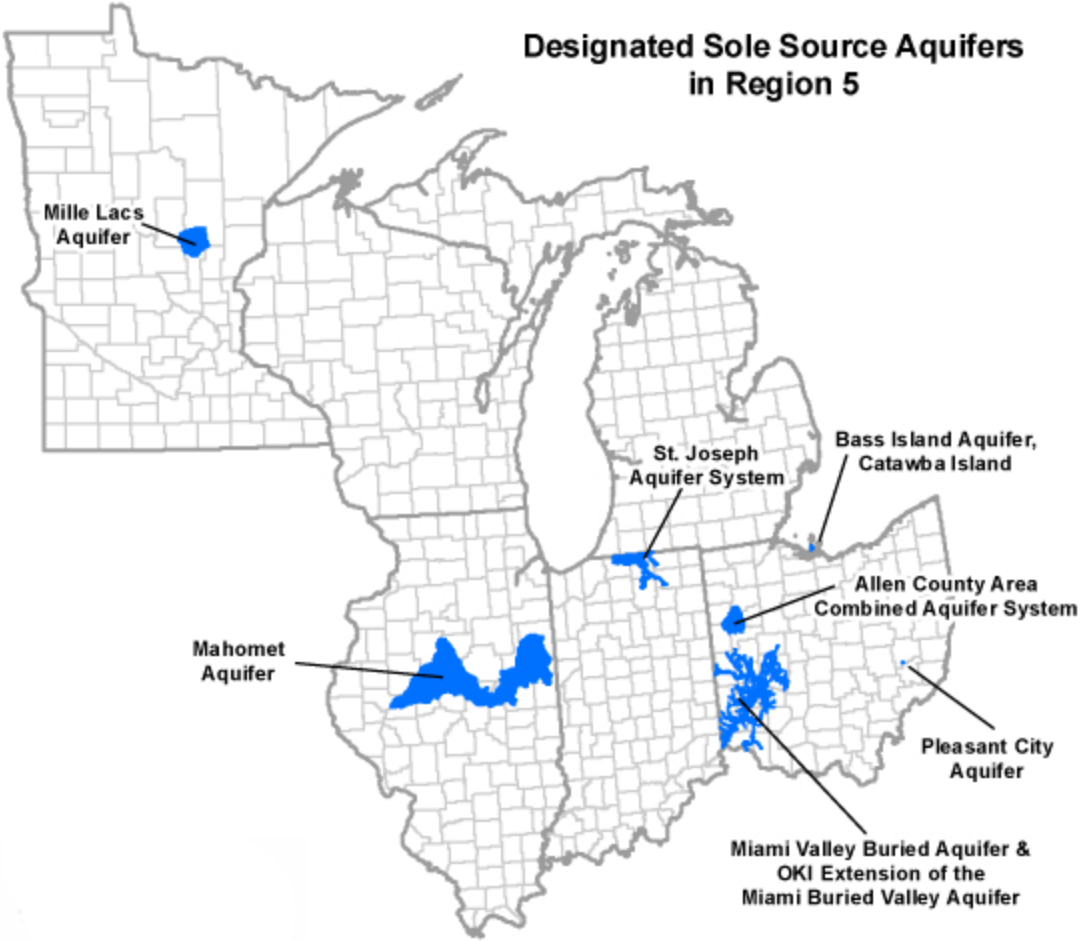
MUSSELS			
Clubshell (*Pleurobema clava*)	Endangered	Carroll, Dekalb, Fulton, Kosciusko, Marshall, Pulaski, Starke, Steuben, Tippecanoe, White	Tippecanoe River, Fish Creek
Fanshell (*Cyprogenia stegaria*)	Endangered	Carroll, Daviess, Dubois, Lawrence, Martin, Pike, Posey, Tippecanoe, Wabash, White	Tippecanoe River, Wabash River, East Fork White River
Fat pocketbook (*Potamilus capax*)	Endangered	Daviess, Dubois, Gibson, Knox, Pike, Posey, Vanderburgh	Big Creek, Ohio River, Wabash River, East Fork White River, White River
Northern riffleshell (*Epioblasma torulosa rangiana*)	Endangered	Dekalb, Pulaski	Tippecanoe River, Fish Creek
Rabbitsfoot (*Quadrula cylindrica cylindrica*)	Threatened	Carroll, Cass, Fulton, Miami, Perry, Pulaski, Shelby, Spencer, Starke, Tippecanoe, and White	Eel River, Fish Creek, Flatrock River, Ohio River, Sugar Creek, Tippecanoe River, Wabash River
Rabbitsfoot (*Quadrula cylindrica cylindrica*)	Critical Habitat	Carroll, Pulaski, Tippecanoe, and White	Tippecanoe River
Rayed Bean (*Villosa fabalis*)	Endangered	Allen, Carroll, Dekalb, Fulton, Johnson, Kosciusko, Marshall, Pulaski, Starke, Steuben, Tippecanoe, and White	Fish Creek, Lake Maxinkuckee, St. Joseph River, Sugar Creek, Tippecanoe River
Rough pigtoe (*Pleurobema plenum*)	Endangered	Lawrence, Martin	East Fork White River
Sheepnose (*Plethobasus cyphyus*)	Endangered	Carroll, Cass, Clark, Crawford, Dearborn, Floyd, Fulton, Harrison, Jefferson, Knox, Marshall, Martin, Ohio, Perry, Posey, Pulaski, Spencer, Starke, Switzerland, Tippecanoe, Vanderburgh, Wabash, Warrick, White	Eel River, Ohio River, Tippecanoe River, East Fork White River, and Wabash River
Snuffbox (*Epioblasma triquetra*)	Endangered	Carroll, Hancock, Huntington, Johnson, LaGrange, Shelby, Tippecanoe, and White	Small to medium-sized creeks and some larger rivers, in areas with a swift current - - Tippecanoe River, Salamonie River, Sugar Creek, Buck Creek, Pigeon River
White cat's paw pearlymussel (*Epioblasma obliquata perobliqua*)	Endangered	Dekalb	Fish Creek
INSECTS			
Mitchell's satyr (*Neonympha mitchellii*)	Endangered	LaGrange, LaPorte	Fens
Karner blue butterfly (*Lycaeides melissa samuelis*)	Endangered	Lake, Porter	Pine barrens and oak savannas on sandy soils and containing wild lupines *(Lupinus perennis)*, the only known food plant of larvae.
PLANTS			
Eastern prairie fringed orchid (*Plantathera leucophaea*)	Threatened	White	Mesic to wet prairies and meadows
Mead's milkweed *Asclepias meadii*	Threatened	Lake	Prairies
Pitcher's thistle (*Cirsium pitcheri*)	Threatened	Lake, Porter	Lakeshores; stabilized dunes and blowout areas
Running buffalo clover (*Trifolium stoloniferum*)	Endangered	Dearborn, Ohio, Ripley, Switzerland	Disturbed bottomland meadows

Short's bladderpod (*Physaria globosa*)	Endangered and Critical Habitat	Posey	Rocky wooded slopes and talus areas, often associated with calcareous rock. Along cliff tops, ledges and bases; often adjacent to rivers or streams.
Short's goldenrod (*Solidago shortii*)	Endangered	Harrison	Natural openings associated with rock outcrops or rocky shorelines along rivers.

Attachment 10:

Designated Sole Source Aquifers in Region 5

U.S. Environmental Protection Agency

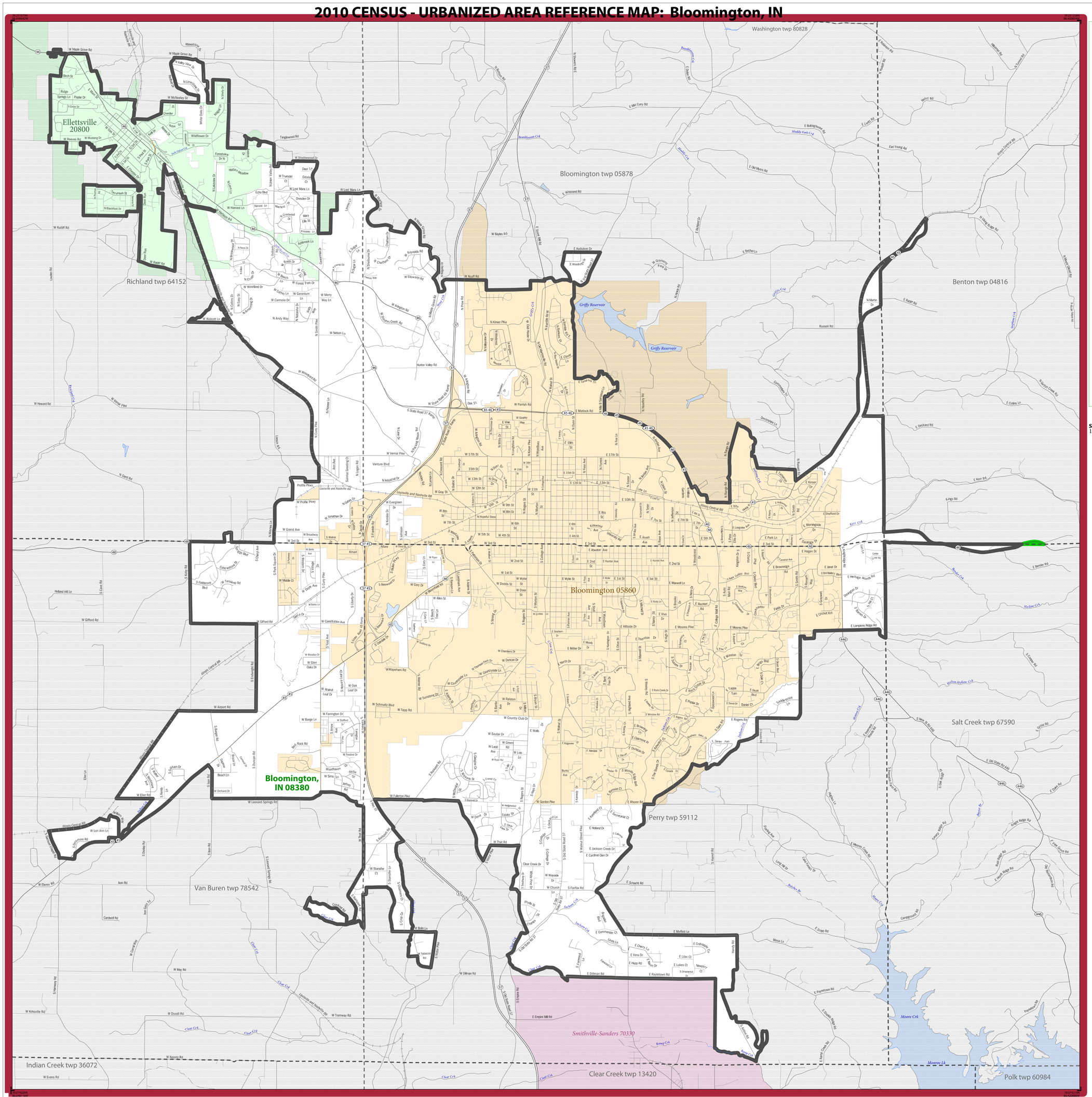

Designated Sole Source Aquifers
in Region 5
Mille Lacs
Aquifer
St. Joseph
Aquifer System
Bass Island Aquifer,
Catawba Island
Allen County Area
Combined Aquifer System
Mahomet
Aquifer
Pleasant City
Aquifer
Miami Valley Buried Aquifer &
OKI Extension of the
Miami Buried Valley Aquifer

Attachment 11:

2010 Census – Urbanized Area Reference Map: Bloomington, IN

U.S. Census Bureau

2010 CENSUS - URBANIZED AREA REFERENCE MAP: Bloomington, IN



LEGEND

SYMBOL DESCRIPTION	SYMBOL	LABEL STYLE
International		CANADA
Federal American Indian Reservation		L'ANSE RES 1880
Off-Reservation Trust Land		T1880
Urbanized Area		Dover, DE 24580
Urban Cluster		*Tooele, VT 88057*
State (or statistically equivalent entity)		NEW YORK 36
County (or statistically equivalent entity)		ERIE 029
Minor Civil Division (MCD) [1,2]		Bristol town 07485
Consolidated City		MILFORD 47500
Incorporated Place [1,3]		Davis 18100
Census Designated Place (CDP) [3]		*Incline Village 35100*

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
Interstate	5	Water Body	*Pleasant Lake*
U.S. Highway	2	Military	Fort Belvoir
State Highway	4	Outside Subject Area	
Other Road	Marsh Ln		
Railroad	Southern RR		
Perennial Stream	*Tumbling Cr*		
Intermittent Stream	*Piney Cr*		

Where international, state, county, and/or MCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries.

1 A '*' following an MCD name denotes a false MCD. A '*' following a place name indicates that a false MCD exists with the same name and FIPS code as the place; the false MCD label is not shown.

2 MCD boundaries are shown in the following states in which some or all MCDs function as general-purpose governmental units: Connecticut, Illinois, Indiana, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin. (Note that Illinois and Nebraska have some counties covered by nongovernmental precincts and Missouri has most counties covered by nongovernmental townships.)

3 Place label color corresponds to the place fill color.
Label colors: Davis Davis Davis Davis Davis

SUBJECT AREA COUNTIES ON MAP SHEET
18105 Monroe

All legal boundaries and names are as of January 1, 2010. Urban areas are based on results from the 2010 Decennial Census. The boundaries shown on this map are for Census Bureau statistical data collection and tabulation purposes only; their depiction and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership or entitlement.

Geographic Vintage: 2010 Census (reference date: January 1, 2010)
Data Source: U.S. Census Bureau's MAF/TIGER database (TAB10)
Map Created by Geography Division: March 11, 2012

U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

Projection: Albers Equal Area Conic
Datum: NAD 83
Spheroid: GRS 80
1st Standard Parallel: 38 26 11
2nd Standard Parallel: 41 05 43
Central Meridian: -86 26 28
Latitude of Projection's Origin: 37 46 18
False Easting: 0
False Northing: 0

0 0.8 1.6 2.4 3.2 4 Kilometers
0 0.4 0.8 1.2 1.6 2 Miles
The plotted map scale is 1:26922

N W E S

PARENT SHEET 1

Total Sheets: 1
- Index Sheets: 0
- Parent Sheets: 1

UA NAME: Bloomington, IN
UA CODE: 08380
ENTITY TYPE: Urbanized Area (UA)
ST: Indiana (18)

2010 CENSUS UA REF MAP (PARENT)
23100B380001

Attachment 12:

EJSCREEN Report

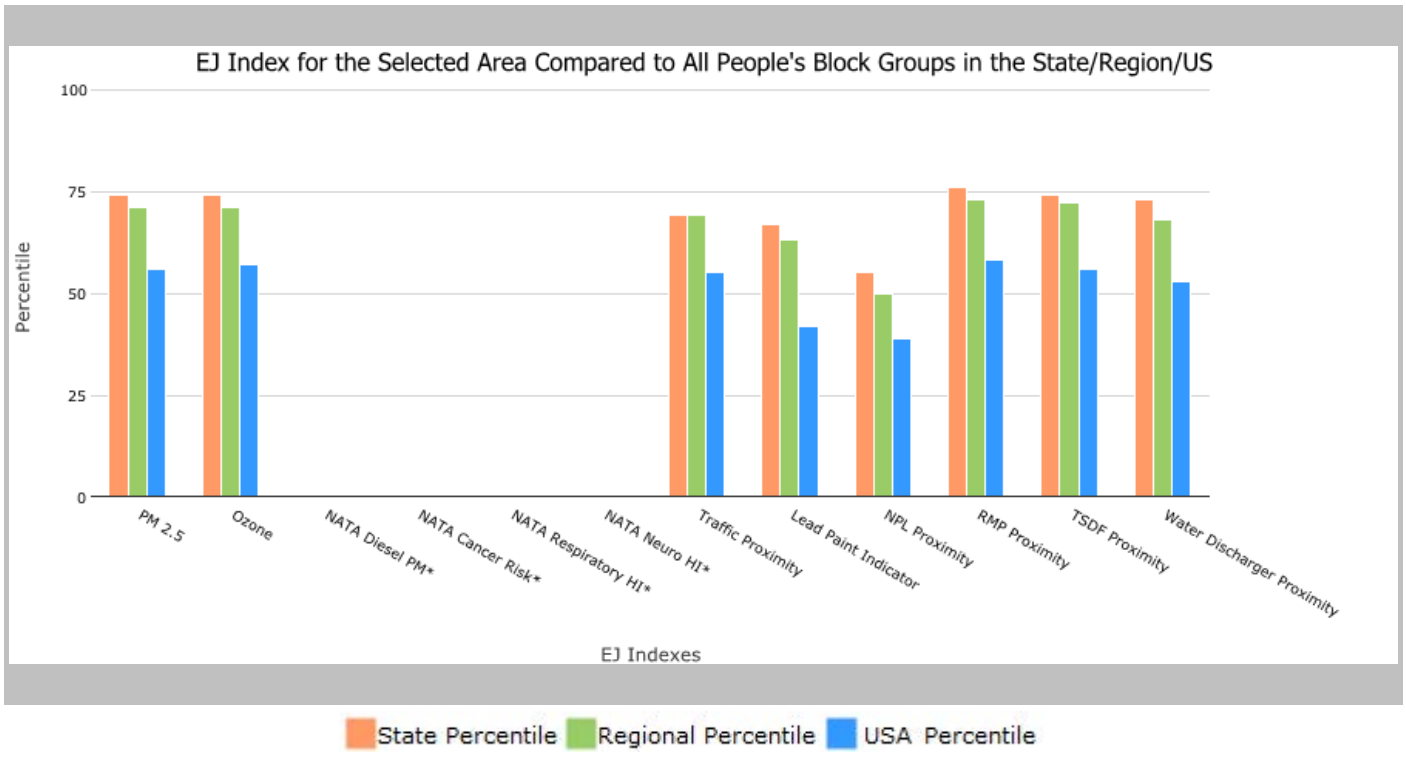
U.S. Environmental Protection Agency

EJSCREEN Report

for 1 mile Ring Centered at 39.146616,-86.544069, INDIANA, EPA Region 5

Approximate Population: 7523

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	74	71	56
EJ Index for Ozone	74	71	57
EJ Index for NATA Diesel PM*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	69	69	55
EJ Index for Lead Paint Indicator	67	63	42
EJ Index for Proximity to NPL sites	55	50	39
EJ Index for Proximity to RMP sites	76	73	58
EJ Index for Proximity to TSDFs	74	72	56
EJ Index for Proximity to Major Direct Dischargers	73	68	53

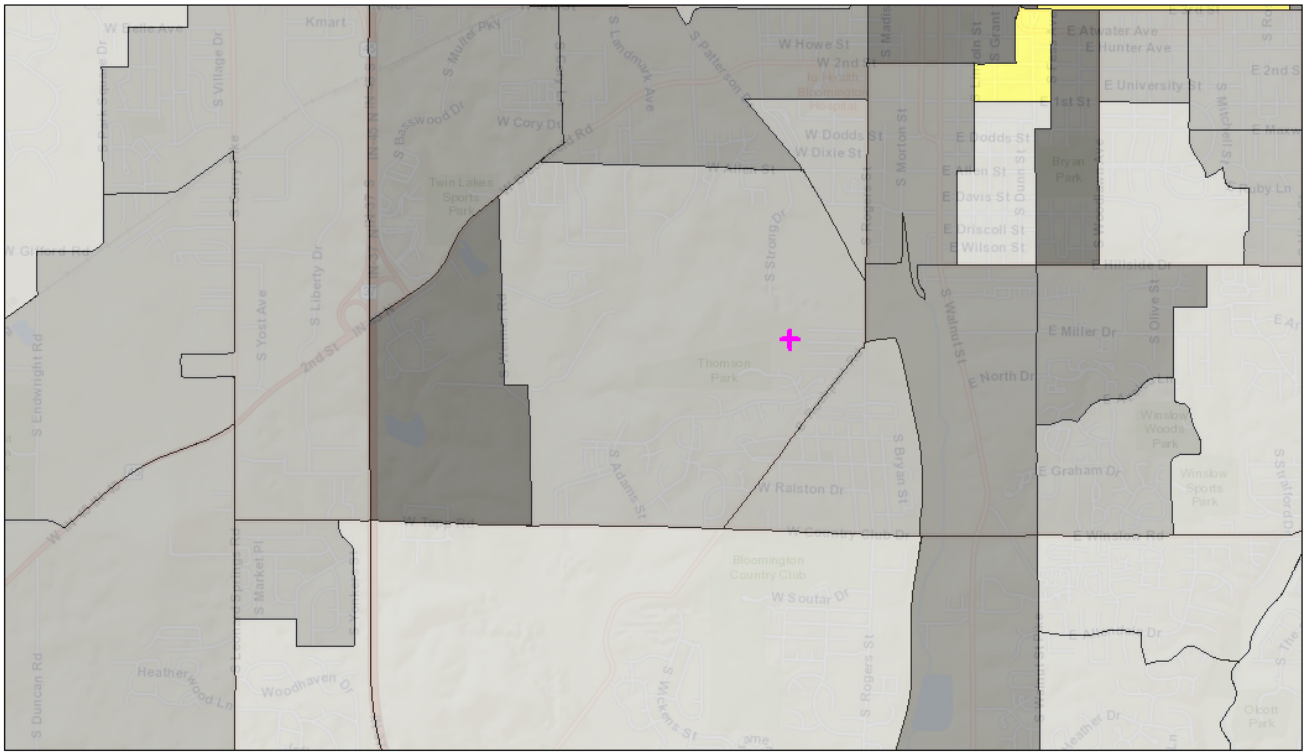


This report shows environmental, demographic, and EJ indicator values. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report

for 1 mile Ring Centered at 39.146616,-86.544069, INDIANA, EPA Region 5

Approximate Population: 7523



September 9, 2015

Digitized Point	50 -60%ile	80 - 90%ile
Data Not Available	60 -70%ile	90 - 95%ile
Less than 50%ile	70 -80%ile	95 - 100%ile

1:36,112

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

EJSCREEN Report

for 1 mile Ring Centered at 39.146616,-86.544069, INDIANA, EPA Region 5

Approximate Population: 7523

Selected Variables	Raw Data	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	11	11.3	42	10.8	59	9.78	77
Ozone (ppb)	47.2	46.5	52	44.4	78	46.1	55
NATA Diesel PM (µg/m^3)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Cancer Risk (lifetime risk per million)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Respiratory Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Neurological Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	9	24	46	69	26	110	20
Lead Paint Indicator (% Pre-1960 Housing)	0.32	0.37	53	0.4	48	0.3	61
NPL Proximity (site count/km distance)	0.27	0.11	92	0.086	94	0.096	94
RMP Proximity (facility count/km distance)	0.023	0.35	1	0.33	2	0.31	2
TSDF Proximity (facility count/km distance)	0.011	0.042	19	0.051	22	0.054	31
Water Discharger Proximity (facility count/km distance)	0.19	0.26	59	0.23	65	0.25	66
Demographic Indicators							
Demographic Index	33%	26%	74	28%	72	35%	56
Minority Population	12%	19%	55	24%	50	36%	30
Low Income Population	54%	34%	82	32%	84	34%	81
Linguistically Isolated Population	1%	2%	68	2%	64	5%	49
Population With Less Than High School Education	6%	13%	27	12%	33	14%	30
Population Under 5 years of age	4%	7%	25	6%	27	7%	27
Population over 64 years of age	8%	13%	25	13%	26	13%	31

* The National-scale Air Toxics Assessment (NATA) environmental indicators and EJ indexes, which include cancer risk, respiratory hazard, neurodevelopment hazard, and diesel particulate matter will be added into EJSCREEN during the first full public update after the soon-to-be-released 2011 dataset is made available. The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: http://www.epa.gov/ttn/atw/natamain/index.html.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

Attachment 13:

Wild and Scenic Rivers in Indiana

National Wild and Scenic Rivers Program

INDIANA

Indiana has approximately 35,673 miles of river, but no designated wild & scenic rivers.

Indiana does not have any designated rivers.

Choose a State Go
Choose a River Go

Nourished by the fertile soils of the region, rivers of the Midwest explode with life, from great avian migrations to ancient fishes.

Attachment 14:

Agency Correspondence Letters

City of Bloomington
Planning and Transportation Department

November 20, 2015

Sara Hamidovic
VET Environmental Engineering, LLC
341 W. Sample Road
Bloomington, IN 47404

RE: Proposed Residential Neighborhood in Bloomington, Indiana
Habitat for Humanity of Monroe County

Dear Ms. Hamidovic,

This letter is being written at your request to verify zoning for the property with Parcel Number 53-08-08-100-115.000-009. This parcel is zoned Residential Single-Family (RS). Single-family housing is a permitted use in this district.

Currently, Habitat for Humanity of Monroe County has not submitted a proposal or site plan for this property. All relevant standards of the Unified Development Ordinance apply to the development and subdivision of this property. This letter does not identify all of the applicable standards, but rather highlights a few. The City of Bloomington's entire Unified Development Ordinance is available online at www.bloomington.in.gov/udo.

In accordance with subdivision standards, subdivision of this property would require the construction of streets, sidewalks, street trees, and the extension of utilities among other requirements. Per the UDO's definition of *wetland*, it appears the property contains a wetland and the relevant UDO standards would apply. Additionally, riparian buffer standards would apply to this property.

If you have any questions about this Zoning Verification Letter, please don't hesitate to contact me at (812) 349-3423.

Sincerely,

Beth Rosenbarger, AICP
Zoning & Long Range Planner

cc: Linda Thompson, Senior Environmental Planner, City of Bloomington

401 N. Morton Street ▪ Bloomington, IN 47404 City Hall Phone: (812) 349-3423 ▪ Fax: (812) 349-3520
www.bloomington.in.gov
e-mail: planning@bloomington.in.gov

United States Department of the Interior
Fish and Wildlife Service

Bloomington Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

October 27, 2015

Ms. Sara R. Hamidovic
Vet Environmental Engineering, LLC
341 West Sample Road
Bloomington, IN 47404

Dear Ms. Hamidovic:

This responds to your letter dated October 14, 2015 requesting U.S. Fish and Wildlife Service (FWS) comments on the proposed Habitat for Humanity project in Monroe County, Indiana.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U.S. Fish and Wildlife Service's Mitigation Policy.

The proposed project includes the construction of a residential development on a previously disturbed site.

The proposed project is in an area of karst geologic features, which often support unique subterranean ecosystems. We are not aware of any karst features at the project site, but if caverns or springs are encountered during excavation, all work should stop immediately and this office or the Indiana Department of Natural Resources should be contacted concerning proper mitigation measures. If sinkholes occur in construction areas they should be left undisturbed along with a 25 foot buffer around the highest closed contour. Existing volume of surface drainage to sinkholes should be maintained, and drainage from construction sites should be filtered or treated prior to entering a sinkhole.

Endangered Species

The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*M. septentrionalis*).

Indiana bats hibernate in caves, then disperse to reproduce and forage in relatively undisturbed forested areas associated with water resources during spring and summer. Recent research has

shown that they will inhabit fragmented landscapes with adequate forest for roosting and foraging. Young are raised in nursery colony roosts in trees, typically near drainageways in undeveloped areas. Like all other bat species in Indiana, the Indiana bat diet consists exclusively of insects.

During the summer, NLEBs typically roost singly or in colonies in cavities, underneath bark, crevices, or hollows of both live and dead trees and/or snags (typically ≥3 inches dbh). Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on presence of cavities or crevices or presence of peeling bark. It has also been occasionally found roosting in structures like barns and sheds (particularly when suitable tree roosts are unavailable). They forage for insects in upland and lowland woodlots and tree lined corridors. During the winter, NLEBs predominately hibernate in caves and abandoned mine portals.

There is suitable summer habitat present throughout the area surrounding the project site. There are current records of northern long-eared bats within 1.5 miles of the site. If required, tree clearing should be avoided during the period of April 1 – September 30 to avoid incidental take from removal of an occupied roost tree. If this measure is implemented we concur that the proposed project is not likely to adversely affect these listed species.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. If, however, new information on endangered species at the site becomes available or if project plans are changed significantly, please contact our office for further consultation.

For further discussion please contact Marissa Reed at (812) 334-4261 ext. 1215 or marissa_reed@fws.gov.

Sincerely yours,

Marissa R Reed
for

Scott E. Pruitt
Field Supervisor

Indiana Department of Environmental Management

We make Indiana a cleaner, healthier place to live.

Mike Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis , Indiana 46206

(317) 232-8603
800) 451-6027
www.IN.gov/idem

Habitat for Humanity of Monroe County
Carolyn Thomson
213 East Kirkwood Avenue
Bloomington , IN 47408

VET Environmental Engineering, LLC
Sara Hamidovic
341 West Sample Road
Bloomington , IN 47404

Wednesday, October 28, 2015

Dear Grant Administrator or Other Finance Approval Authority:

RE: Habitat for Humanity of Monroe County (HHMC) seeks a Community Development Block Grant grant from the HOME Investment Partnerships Program of the U. S. Department of Housing and Urban Development. HHMC proposes to construct a residential neighborhood on one parcel of vacant land located at the end of West Chambers Drive, West Duncan Drive, and South Bernard Drive to the west of the intersection of South Rogers Street and South Roekport Road in Perry Township, Bloomington, Monroe County, Indiana. The Property is owned by Rosalie Dragoo. For the purposes of this projeet, the Property will be referred to as the Dragoo Property.

The Indiana Department of Environmental Management (IDEM) is aware that many local government or not-for-profit entities are seeking grant monies, a bond issuance, or another public funding mechanism to cover some portion of the cost of a public works, infrastructure, or community development project. IDEM also is aware that in order to be eligible for such funding assistance, applicants are required to first evaluate the potential impacts that their particular project may have on the environment. In order to assist applicants seeking such financial assistance and to ensure that such projects do not have an adverse impact on the environment, IDEM has prepared the following list of environmental issues that each applicant must consider in order to minimize environmental impacts in compliance with all relevant state laws.

IDEM recommends that each applicant consider the following issues when moving forward with their project. IDEM also requests that, in addition to submitting the information requested above, each applicant also sign the attached certification, attesting to the fact that they have read the letter in its entirety, agree to abide by the recommendations of the letter, and to apply for any permits required from IDEM for the completion of their project.

IDEM recommends that any person(s) intending to complete a public works, infrastructure, or community development project using any public funding consider each of the following applicable recommendations and requirements:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches.

   Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the

Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (http://www.lrl.usace.army.mil/orf/default.asp) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciosko, and Wells counties; smaller portions of Jasper, Starke, Marshall , Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at http://www.in.gov/idem/4396.htm. IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality. To learn more about the water quality certification program, visit: http://www.in.gov/idem/4384.htm.

3. If the USACE determines that a wetland or other body of water is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A state isolated wetland permit from IDEM's Office of Water Quality is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the Office of Water Quality at 317-233-8488.

4. If your project will impact more than 0.5 acres of wetland, stream relocation, or other large-scale alterations to bodies of water such as the creation of a dam or a water diversion, you should seek additional input from the Office of Water Quality, Wetlands staff at 317-233-8488.

5. Work within the one-hundred year floodway of a given body of water is regulated by the Department of Natural Resources, Division of Water. Contact this agency at 317-232-4160 for further information.

6. The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

7. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
   - http://www.in.gov/idem/4902.htm

   To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (http://www.in.gov/idem/4917.htm#constreq), and as described in 327 IAC 15-5-6.5 (http://www.in.gov/legislative/iac/T03270/A00150.[PDF], pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (http://www.in.gov/isda/soil/contaets/map.html).

   Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the

Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: http://www.in.gov/idem/4900.htm.

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

8. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317-232-4080) for additional project input.

9. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.

10. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.

11. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project (see page 1) should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed under specific conditions (http://www.in.gov/idem/4148.htm). You also can seek an open burning variance from IDEM.

   IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on-site. You must register with IDEM if more than 2,000 pounds is to be composted; contact 317-232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) on-site, although burying large quantities of such material can lead to subsidence problems.

2. Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

   If construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for three to five years, precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus Histoplasma capsulatum, which stems from bird or bat droppings that have accumulated in one area for three to five years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at 317-233-7272.

3. The U.S. EPA and the U.S. Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. For a county-by-county map of predicted radon levels in Indiana , visit http://www.in.gov/idem/4267.htm.

   The U.S. EPA further recommends that all homes and apartments (within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L or higher, then U.S. EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L or higher, then U.S. EPA recommends the installation of radon-reduction measures. For a list of qualified radon testers and radon mitigation (or reduction) specialists, visit http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf. Also, is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

   To learn more about radon, radon risks, and ways to reduce exposure, visit http://www.in.gov/isdh/regsvcs/radhealth/radon.htm, http://www.in.gov/idem/4145.htm, or http://www.epa.gov/radon/index.html.

4. With respect to asbestos removal, all facilities slated for renovation or demolition (except residential buildings that have four (4) or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

   If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

   For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

   In all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at www.in.gov/icpr/webfile/formsdiv/44593.pdf.

   Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of $150 per project; projects below these amounts will be billed a fee of $50 per project. Billings will occur on a quarterly basis.

   For more information about IDEM policy regarding asbestos removal and disposal, visit: http://www.in.gov/idem/4983.htm.

5. With respect to lead-based paint removal, IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978 , or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal, visit http://www.in.gov/idem/permits/guide/waste/leadabatement.html.

6. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months of April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule (http://www.ai.org/legislative/iac/T03260/A00080.PDF).

7. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (www.ai.org/legislative/iac/t03260/a00020.pdf.). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.

8. For more information on air permits, visit http://www.in.gov/idem/4223.htm, or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or oamprod at idem.in.gov.

LAND QUALITY

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit http://www.in.gov/idem/4998.htm.
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If Polychlorinated Biphenyls (PCBs) are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes. (Asbestos removal is addressed above, under Air Quality.)
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317-308-3039(http://www.in.gov/idem/4999.htm).

FINAL REMARKS

Should the applicant need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that they notify all adjoining property owners and/or occupants within ten days of your submittal of each permit application. Applicants seeking multiple permits, may still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Please note that this letter does not constitutes a permit, license, endorsement, or any other form of approval on the part of either the Indiana Department of Environmental Management or any other Indiana state agency.

Should you have any questions relating to the content or recommendations of this letter, or if you have additional questions about whether a more complete environmental review of your project should be conducted, please feel free to contact Steve Howell at (317) 232-8587, snhowell@idem.in.gov.

Sincerely,

Thomas W. Easterly
Commissioner

Signature(s) of the Applicant

I acknowledge that I am seeking grant monies, a bond issuance, or other public funding mechanism to cover some portion of the cost of the public works, infrastructure, or community development project as described herein, which I am working (possibly with others) to complete.

Project Description

Habitat for Humanity of Monroe County (HHMC) seeks a Community Development Block Grant grant from the HOME Investment Partnerships Program of the U. S. Department of Housing and Urban Development. HHMC proposes to construct a residential neighborhood on one parcel of vacant land located at the end of West Chambers Drive, West Duncan Drive, and South

Bernard Drive to the west of the intersection of South Rogers Street and South Rockport Road in Perry Township, Bloomington, Monroe County, Indiana. The Property is owned by Rosalie Dragoo. For the purposes of this project, the Property will be referred to as the Dragoo Property.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environmental Management that appears directly above. In addition, I understand that in order to complete the project in which I am interested, with a minimum impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Dated Signature of the Public Owner Contact/Responsible Elected Official _____

Carolyn Thomson

Dated Signature of the Project Planner/Consultant Contact Person _____

Sara Hamidovic

INDIANA GEOLOGICAL SURVEY
611 N. Walnut Grove Ave., Bloomington, IN 47405-2208 · (812) 855-7636
http://igs.indiana.edu · IGSinfo@indiana.edu

April 15, 2010

Environmental sustainability has become one of the most critical issues if the 21st century. As geologists and scientists we are acutely aware of protecting and sustaining the earth's resources. And in these difficult economic times we are also aware of saving money! As such, the Indiana Geological Survey (IGS) is instituting a system of electronic delivery for environmental questionnaires.

To date, the IGS has received over 300 environmental questionnaires. On average, these packages contain about 7 pages, amounting to over 3500 sheets of paper. Many of the packages contain additional pages and include larger format maps, figures, and images. Once received at the IGS we must store these documents for a minimum of 5 years. We must also consume additional resources to respond to the questionnaires.

The current system of document delivery is costly to you, the requesting agency, and to the IGS. It is unnecessary to spend money, and consume so many resources when most of these documents are originally produced by electronic means. Sending document packages as a portable document file (PDF) via email, will not only save money and resources, but also time. We could potentially have a turn around in less time than it would take to mail the documents, and definitely less than 30 days! This would also allow us to better track and archive the documents we receive.

The IGS is requesting that your agency begin submitting your environmental questionnaires as PDF to the following email address : IGSenvir@indiana.edu. If the PDF is too large send an email to the previously stated address and we will send you a link to upload the file to a local server.

We anticipate that this new system will lead to more effcient communication between our agencies.

Please contact me if you have any questions or concerns.

Sincerely,

Nancy Hasenmueller
Environmental Section Head
Indiana Geological Survey

Project No. 15-17 Des. No. N.A.

Project Description Dragoo Property, Habitat for Humanity of Monroe County, Bloomington

Name of Organization requesting early coordination:

Sara Hamidovic, PE. VET Environmental Engineering LLC

QUESTIONNAIRE FOR THE INDIANA GEOLOGICAL SURVEY

1) Do unusual and/or problem () geographic, (x) geological, ( ) geophysical, or ( ) topographic features exist within the project limits? Describe:

Karst features exist with 1-2 km of property, but none apparent within the boundaries. Karst, however, is possible for the underlying bedrock.

2) Have existing or potential mineral resources been identified in this area? Describe:

None apparent

3) Are there any active or abandoned mineral resources extraction sites located nearby? Describe: None apparent

This information was furnished by:

Name: G. William Monaghan, Ph.D. Title: Senior Research Scientist
Address: Indiana Geological Survey, 611 North Walnut Grove, Bloomington, IN 47405
Phone: 812 856 3542 or 812 272 9137 Date: Nov 11, 2015

Indiana State Department of Health
An Equal Opportunity Employer

Michael R. Pence
Governor

Jerome M. Adams, MD, MPH
State Health Commissioner

October 30, 2015

Sara R. Hamidovic, PE, CHMM
President, VET
Vet Environmental Engineering, LLC
341 West Sample Road
Bloomington, IN 47404

Re: Project Number: 15-17
Proposed Residential Neighborhood
In Bloomington, Indiana
Environmental Review
Monroe County

Dear Ms. Hamidovic:

In regards to the above referenced project, I am responding to the environmental review documents received by our office.

Based on information available to this office, we have no reservation about the proposed project and foresee no significant environmental health related hazards.

If you should have any further questions regarding this matter, please feel free to contact me.

Sincerely,

Michael Mettler, REHS, Director
Environmental Public Health Division
100 N. Senate Avenue, N-855
Indianapolis, IN 46204
317/233-7183
mmettler@isdh.in.gov

cc: Monroe County Health Department

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-18651 **Request Received:** October 20, 2015

Requestor: VET Environmental Engineering, LLC
Sara R Hamidovic, PE
341 West Sample Road
Bloomington, IN 47404

Project: Proposed residential neighborhood in Bloomington (Dragoo Property), Habitat for Humanity

County/Site info: Monroe

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Natural Heritage Database: The Natural Heritage Program's data have been checked.
To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: A karst assessment should be conducted by a geologist with karst geology expertise to rule out the presence of karst features at this site. Any sinkhole that construction runoff may drain to, on or off-site, should be assumed to be active unless otherwise indicated by a qualified geologist. To protect active sinkholes (or those not assessed), the most protective erosion control methods, such as runoff containment and filtering prior to discharge, should be implemented to avoid potentially impacting sensitive karst ecosystems.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:
1. Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon completion; low endophyte tall fescue may be used in the ditch bottom and side slopes only.
2. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
3. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
4. Seed and protect disturbed banks and slopes that are 3:1 or steeper with biodegradable heavy-duty erosion control blankets (follow manufacturer's recommendations for installation); seed and apply mulch on all other disturbed areas.

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife

Early Coordination/Environmental Assessment

Contact Staff: Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.

Christie L. Stanifer **Date:** November 18, 2015

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Monroe County Health Department
Monroe County, Indiana

Health Department	Futures Family Planning Clinic	Public Health Clinic
119 W. 7th Street (812) 349-2543	338 S. Walnut Street (812) 349-7343	333 E. Miller Drive (812) 353-3244

DATE: 11/12/2015

TO: Reilly Taylor
VET Environmental Engineering
341 West Sample Road
Bloomington, IN 47404

RE: Dragoo Property
Habitat for Humanity of Monroe County
Bloomington, IN 47403

In regards to the above referenced project, I am responding to the environmental review documents received by our office.

☒ We have no reservation about the proposed project and foresee no significant environmental disturbance.

☐ We believe this proposed project will have environmental detriment to the community and have attached supported documents or intend on requesting more information for our consideration.

If you have any questions, please contact Penny Caudill at the Monroe County Health Department at 812-349-2068.

Sincerely,
Penny Caudill

Penny Caudill
Administrator
Monroe County Health Department

Updated 11/12/15

Michael R. Pence, Governor
Cameron F. Clark, Director

DNR Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 · dhpa@dnr.IN.gov

April 28, 2015

Nancy Hiestand
Program Manager Historic Preservation
City of Bloomington
401 N. Morton Street
Bloomington, Indiana 47404

Federal Agency: City of Bloomington as the delegatee of the U.S. Department of Housing and Urban Development

Re: Project information and the City of Bloomington's finding of "no historic properties affected" regarding the acquisition of land and construction of 35-40 single family homes (DHPA #17505)

Dear Ms. Hiestand:

Pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated March 26, 2015 and received on March 30, 2015, for the above indicated project in Bloomington, Monroe County, Indiana.

Based upon the documentation available to the staff of the Indiana SHPO, we have not identified any historic buildings, structures, districts, or objects listed in or eligible for inclusion in the National Register of Historic Places within the probable area of potential effects.

In terms of potential impact on archaeological resources, a review of our records indicates that the proposed project area is in an environmental setting that is suitable to contain archaeological resources, but the majority of the project area has never been evaluated by a qualified archaeologist. Moreover, several archaeological sites have already been recorded within one mile of the proposed project location.

Given the above, a reconnaissance level archaeological survey will be required to determine the presence or absence of archaeological resources. A small portion of the project area appears to have been archaeologically surveyed (AR-53-00142). The reconnaissance would cover any portion of the proposed project area which has not been archaeologically surveyed or has not been previously disturbed by construction activities. The survey must be done in accordance with the "Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation" (48 F.R. 44716). A description of the survey methods and results must be submitted to the Division of Historic Preservation and Archaeology for review before we can comment further (see list of qualified professional archaeologists at the DHPA website link http://www.in.gov/dnr/historic/files/hp_archeo.pdf).

Once the indicated information is received, the Indiana SHPO will resume identification and evaluation procedures for this project. Please keep in mind that additional information may be requested in the future.

If you have questions about archaeological issues please contact Amy Johnson at (317) 232-6982 or ajohnson@dnr.IN.gov. If you have questions about buildings or structures please contact Ashley Thomas at (317) 234-7034 or asthomas@dnr.IN.gov. Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA #17505.

Very truly yours,

Mitchell K. Zoll
Deputy State Historic Preservation Officer

MKZ:ADT:ALJ:aj

USDA
United States Department of Agriculture

Natural Resources Conservation Service
Indiana State Office
6013 Lakeside Boulevard
Indianapolis, IN 46278
317-290-3200

October 23, 2015

Sara R. Hamidovic, PE, CHMM
President
Vet Environmental Engineering, LLC
341 West Sample Road
Bloomington, Indiana 47404

Dear Ms. Hamidovic:

The proposed project to Construct a Residential Neighborhood on one parcel of vacant land located at the end of West Chambers Drive, West Duncan Drive, and South Bernard Drive to the West of the intersection of South Rogers Street and South Rockport Road in the City of Bloomington, Monroe County, Indiana, as referred to in your letter received October 19, 2015, will not cause a conversion of prime farmland.

If you need additional information, please contact Rick Neilson at 317-295-5875.

Sincerely,

Jane E. Hardisty

JANE E. HARDISTY
State Conservationist

Attachment 15:

Karst Assessment, Dragoo Property

Fields Environmental, Inc.

Fields Environmental, Inc.

KARST ASSESSMENT

HABITAT FOR HUMANITY PROPOSED RESIDENTIAL NEIGHBORHOOD IN BLOOMINGTON, INDIANA

DRAGOO PROPERTY

December 14, 2015

Electronic File Section 1 of 1

Fields Environmental, Inc.

1309 WEST VERNAL PIKE
BLOOMINGTON, IN 47404

RUDY D. FIELDS, LPG, CHMM
President

www.fieldsenvironmentalinc.com

Phone: 812-333-5333
Fax: 812-333-5334

December 14, 2015

Ms. Sara Hamidovic, PE
President
VET Environmental Engineering, LLC
341 West Sample Road
Bloomington, IN 47408

RE: Karst Assessment for Habitat for Humanity Proposed Residential Neighborhood in Bloomington, Indiana - Dragoo Property (Property)

Fields Environmental, Inc. (Fields) conducted a karst assessment consistent with a request from the Indiana Department of Natural Resources (IDNR). The IDNR request was made in response to a review conducted by that agency in response to:

The Community Development Block Grant Application Notification, Dragoo Property, Habitat for Humanity of Monroe County, Bloomington, Indiana, VET Environmental Engineering, LLC 47403, October 14, 2015 (CDBG Grant Application).

IDNR provided the following response document:

State of Indiana, Department of Natural Resources, Division of Fish and Wildlife, Early Coordination/Environmental Assessment, ER-18651, November 18, 2015 (IDNR Letter Response).

The IDNR Letter Response requested and specified the karst assessment and listed additional measures to "…avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources". Based upon that request Fields conducted this karst assessment.

Robert Autio, a Licensed Professional Geologist (LPG) with Fields, conducted a site walk at the Dragoo Property to search for karst features on November 20, 2015. Robert Autio is an Indiana LPG (IN LPG#874). Mr. Autio has worked and conducted geological and environmental investigations in the Bloomington area for over thirty years.

The site walk was conducted by walking the perimeter of the entire property and then walking north-south and east-west lines on approximately 50 foot centers. A field sketch map includes the approximate walking route and observed features (**Figure 1**). The geologist was looking for karst features including, but not limited to sinkholes, swallow holes, and sinking streams.

The property has a wooded and brush-covered border on the north and west sides of the property. The remainder of the property is grass-covered but only a portion was mowed recently. Most of the grass-covered area had at least one (1) season of growth with taller grasses and thorn bushes. Areas of taller grasses were observed at various locations as noted on field sketch map (**Figure 1**). Thick vegetation over large portions of the Property made detailed observation of the ground surface difficult and a definitive assessment of all possible features was not possible. Fields believes that the assessment was adequate for the identification of significant karst features, but the possibility exists that small features could be hidden and not observed.

No water was observed flowing in the swale on the east side of the property, nor from any springs or seeps. The site walk was conducted at a time of low precipitation.

One (1) potential sink hole was observed near the northern property line within the wooded border, as noted on the field sketch map (**Photo 1**). The potential sinkhole was approximately 3 feet in diameter and approximately 1 foot deep (**Figure 1**). No other karst features were observed.

Fields recommends that site clearing and development contractors and other personnel make detailed observation of cleared surfaces and report any suspect karst features to project management personnel.

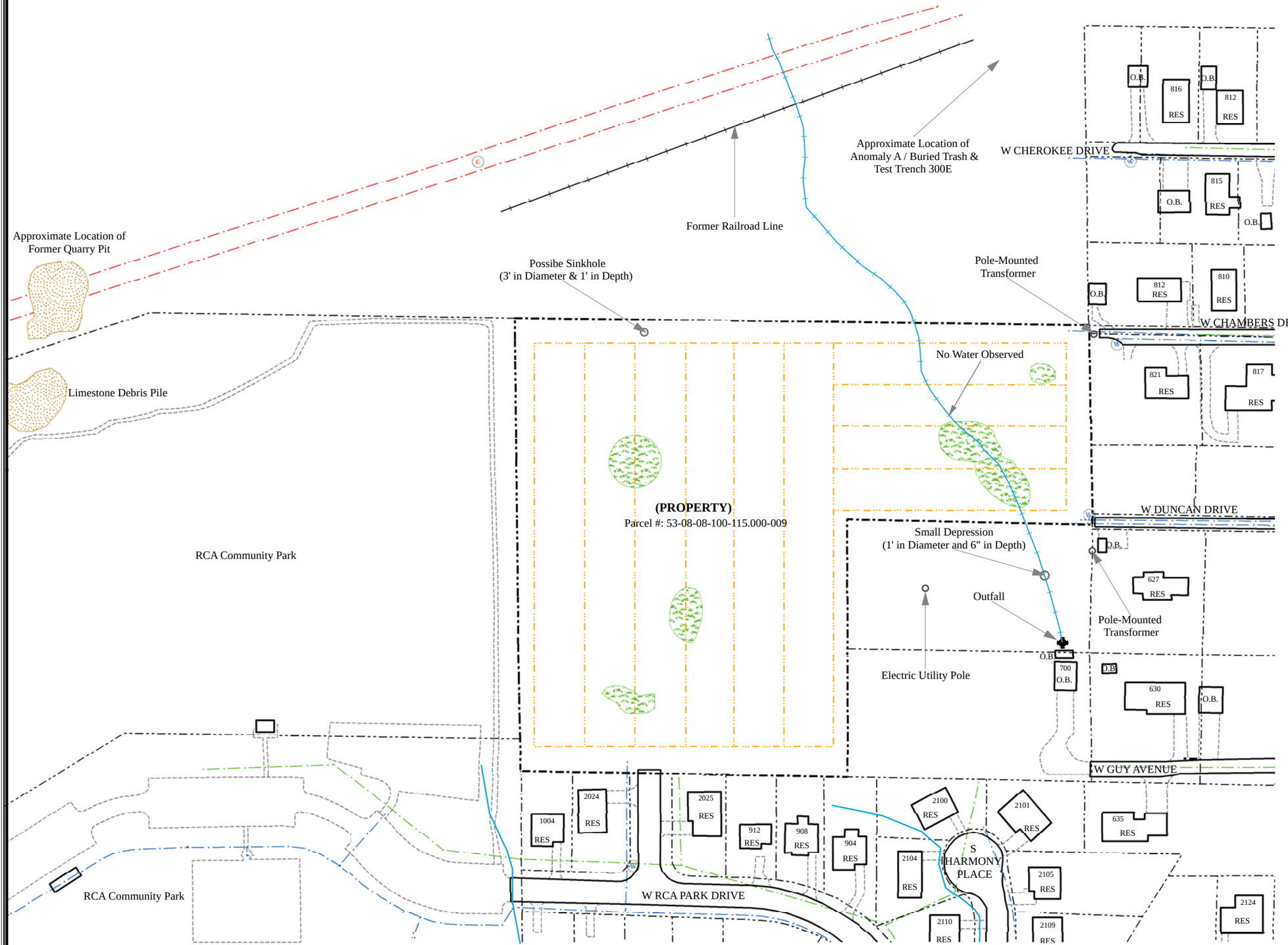
Please contact Rudy Fields or Robert Autio at Fields Environmental, Inc. with questions pertaining to this project.

Respectfully submitted,

Rudy Fields, LPG, CHMM

President

FIGURES



Legend

- = PROPERTY LINE
- = PARCEL LINES
- = KARST ASSESSMENT SITE WALK
- = INTERMITTENT DRAINAGE FEATURE
- = DRAINAGE FEATURE
- = FORMER RAIL LINE
- = ELECTRICAL LINES
- = WATER LINES
- = SANITARY SEWER LINES
- = TALL GRASS
- = FIRE HYDRANTS
- = OUTFALL
- RES = RESIDENTIAL
- O.B. = OUTBUILDING

N

0 30 60 120 180 240 300 360 Feet

Fields Environmental Inc.
1309 West Vernal Pike
Bloomington, IN 47404
Phone: 812-333-5333
www.fieldsenvironmentalinc.com

Figure 1
SITE MAP AND ADJACENT PROPERTIES & KARST ASSESSMENT SITE WALK

For:	HABITAT FOR HUMANITY OF MONROE COUNTY		
Date: 11 - 20 - 2015	BLOOMINGTON, INDIANA		
Project# 15-07.02	Drawn By: R. Creek	Scale: 1" = 120'	

PHOTOGRAPHS

Dragoo Environmental Assessment - Site Photographs

Potential sinkhole observed in tree line on northern side of property. 8.5 x 11 inch field sheet for scale. View to the north-northeast.

Panorama showing property viewed from near northeast corner of property viewing south to west. Potential sinkhole located in tree line on right center of photograph. Yellow arrow points to approximate location of sinkhole.

.

Photograph shows tall grasses and thorn bushes present across much of the property. Viewing east from southwest corner of property.

Panorama showing property viewed from northeast corner of property viewing south to west. Photograph shows tall grasses and thorn bushes present across much of the property.

Attachment 16:

USACE Jurisdictional Determination

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
P.O. BOX 59
LOUISVILLE KY 40201-0059
FAX: (502) 315-6677
http://www.lrl.usace.army.mil/

November 24, 2015

Operations Division
Regulatory Branch (North)
ID No. LRL-2015-843-pmh

Mr. Steven A. Brehob
Smith Brehob & Associates, Inc.
453 South Clarizz Boulevard
Bloomington, Indiana 47401

Dear Mr. Brehob:

This is in regard to your request of October 9, 2015, concerning a jurisdictional determination for a 10-acre site located in Section 8, Township 8 North, Range 1 West, in Monroe County, Bloomington, Indiana. More specifically, your site is located at Latitude 39.14613° North and Longitude 86.54348° West.

This determination is approved based on the information provided by you. It does not appear that a Department of the Army permit will be needed since the property referenced above does not include or contain any "waters of the United States (U.S.)." "Waters of the U.S." include all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce. This jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision of the determination before the expiration date.

If the project would necessitate the discharge of dredged or fill material into "waters of the U.S.," including wetlands, plans should be submitted for our review.

Our comments on this project are limited to only those effects which may fall within our area of jurisdiction and thus does not obviate the need to obtain other permits from State or local agencies. Lack of comments on other environmental aspects should not be construed as either concurrence or nonconcurrence with stated environmental effects.

If we can be of any further assistance, please contact us by writing to the above address, ATTN: CELRL-OP-FN, or by calling me at 502-315-7457. Any correspondence on this matter should refer to our ID Number LRL-20158-843.

Sincerely,

Phyllis Hockett

Phyllis Hockett
Project Manager
Regulatory Branch

Smith Brehob & Associates, Inc.

Providing professional land planning, design, surveying and approval processing for a sustainable environment.

Stephen L. Smith P.E., L.S.
Steven A. Brehob B.S.Cn.T.

October 09, 2015

Greg McKay
Chief, North Section
Regulatory Branch
Operations Division
Louisville District
US Army Corps of Engineers
P.O. Box 59
Louisville, KY 40201-0059

RE: Jurisdiction Determination Request

Dear Mr. McKay,

On behalf of our client, we would like to request a jurisdictional determination of a waterway. Attached are the exhibits depicting a broad, shallow waterway across an open field located in Monroe County, Indiana. The waterway traverses a 10 acre site that is being investigated for development as a subdivision for Habitat for Humanity.

The property is currently a gently rolling field that appears to be regularly mowed. The waterway bisects the property from northwest to southeast. As it leaves the property, it becomes more defined by grading and development of the area including piped conveyance systems. Drainage to the waterway occurs as sheet flow from an adjacent property to the north.

There does not appear to be a defined channel within the waterway at any location where it crosses the site. The waterway is visible on aerial photography and evident by contour information. A field investigation by a consultant for Habitat indicated the presence of hydric soils, but no wetland plant material.

Habitat for Humanity needs to understand if this waterway will be considered jurisdictional so that they can determine how to proceed with acquisition and potential development of the property. I have attached photographs taken in the field, aerial imagery and contour imagery for your review and consideration. If you would like to meet in the field to review the waterway, please contact me.

Sincerely,

Steven A. Brehob
Smith Brehob & Associates, Inc.

Attachments
- Location Map
- Aerial and Contour Imagery
- Field Photographs

H:\Sabrehib\Dragoo Site\Dragoo jurisdictional Determination Cover Letter.doc

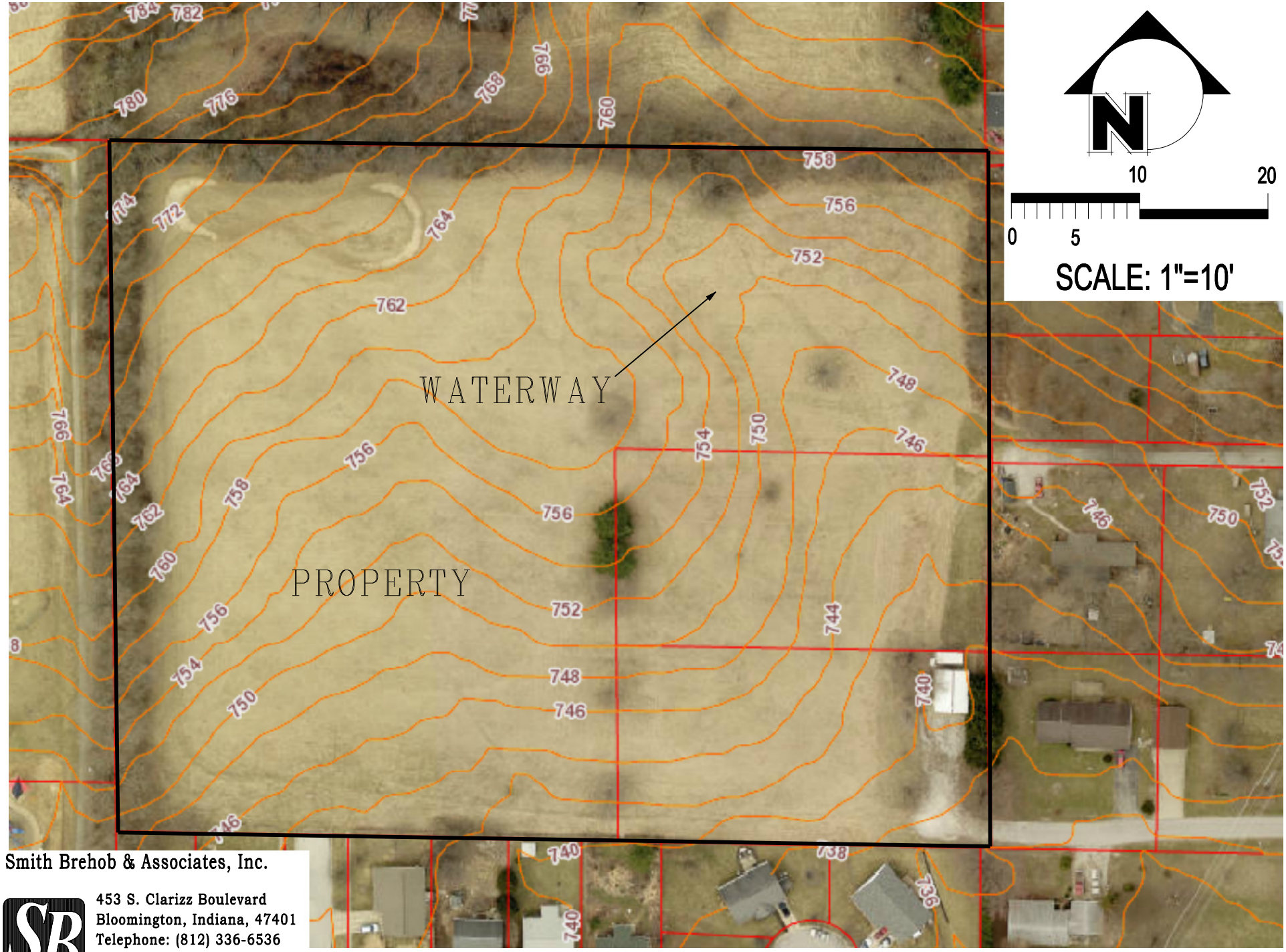
453 S Clarizz Boulevard
Bloomington, Indiana 47401
Telephone 812 336-6536
FAX 812 336-0513
www.smithbrehob.com

Smith Brehob & Associates, Inc.

453 S. Clarizz Boulevard
Bloomington, Indiana, 47401
Telephone: (812) 336-6536
Fax: (812) 336-0513
Web: http://smithbrehob.com

LOCATION MAP

N



Smith Brehob & Associates, Inc.
453 S. Clarizz Boulevard
Bloomington, Indiana, 47401
Telephone: (812) 336-6536
Fax: (812) 336-0513
Web: http://smithbrehob.com

CONTOUR IMAGERY

Smith Brehob & Associates, Inc.

Providing professional land planning, design, surveying and approval processing for a sustainable environment.

Stephen L. Smith P.E., L.S.
Steven A. Brehob B.S.Cn.T.

Looking NW (upstream) along waterway.

Looking SE (downstream) along waterway.

453 S Clarizz Boulevard
Bloomington, Indiana 47401
Telephone 812 336-6536
FAX 812 336-0513
www.smithbrehob.com

Standing at edge of mow line looking NW (upstream) along waterway.

453 S Clarizz Boulevard
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Telephone 812 336-6536
FAX 812 336-0513
www.smithbrehob.com