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Program ID No. (primary): VCP ID No. 2541
Report date: August 13, 2015
TCEQ Region No.: 4
MSD Certificate No.:
Additional Program ID Numbers:
SWR/Facility ID No.:
PST Facility ID No.:
DCRP ID No.:
VCP ID No.: 2541
LPST ID No.:
MSW Tracking No.:
HW Permit/CP No.:
Enforcement ID No.:
Other ID Nos.:

Reason for submittal (check all that apply):
☒ Initial submittal
☐ Revision
Notice of Deficiency Letter
Permit/Compliance Plan
Voluntary response
Enforcement/Agreed order
Directive/NOV letter
Other:

On-Site Property Information

On-Site Property (Facility) Name: Exide Technologies Undeveloped Buffer Property
Street no. 7471 Pre dir: South Street name: 5th Street type: Street Post dir:
City: Frisco County: Collin County Code 43 Zip 75034
Nearest street intersection and location description: Undeveloped land located around the former Exide Technologies Frisco Recycling Center, intersection of Parkwood Drive and Eagan Way
Latitude: Decimal Degrees North 33.14199
Longitude: Decimal Degrees West -96.825066

Contact Person for On-Site Property Information and Acknowledgment

Company Name or Person: Exide Technologies
Contact Name: Matthew A. Love Title: Director, Global Environmental Remediation
Mailing Address: 3000 Montrose Ave
City: Reading State: PA Zip: 19605 Phone: 610-921-4054
Email: matt.love@exide.com Fax: 610-921-4063
Person is: X property owner ___ property manager ___ potential purchaser ___ tenant ___ operator
other

By my signature below, I acknowledge the requirement of §350.2(a) that no person shall submit information to the executive director or to parties who are required to be provided information under this chapter which they know or reasonably should have known to be false or intentionally misleading, or fail to submit available information which is critical to the understanding of the matter at hand or to the basis of critical decisions which reasonably would have been influenced by that information. Violation of this rule may subject a person to the imposition of administrative, civil, or criminal penalties.

Signature of Person Name (print): MATTHEW A. LOVE Date: 8/7/15

Consultant Contact Person

Consultant Company Name: Pastor, Behling & Wheeler, LLC
Contact Person: Tim Nickels Title: Senior Scientist
Mailing Address: 2201 Double Creek Dr. Suite 4004
City: Round Rock State: Texas Zip: 78664
Phone: 512-671-3434 Fax: 512-671-3446 E-mail address tim.nickels@pbwllc.com

PROFESSIONAL SIGNATURES AND SEALS

Professional Geoscientist

Professional Geoscientist: Will Vienne
Geoscientist License number: 10492
Expiration date: 11/30/2015
Signature: Will V
Date: 8-13-15
Telephone number: 512-671-3434
FAX number: 512-671-3446
E-mail: will.vienne@pbwllc.com

Professional Engineer

Professional Engineer: Eric F. Pastor
P.E. License number: 67019
Expiration date: 9/30/2015
Signature:
Date: 8-13-15
Telephone number: 512-671-3434
FAX number: 512-671-3446
E-mail: eric.pastor@pbwllc.com

Firm Registrations

Pastor, Behling & Wheeler, LLC
Firm Engineering Registration Number
Engineering Registration No.: 4760
Expiration date: 5/31/2016

Pastor, Behling & Wheeler, LLC
Firm Geoscience Registration Number
Geoscience Registration No.: 50248
Expiration date: 4/30/2016

Seals, as applicable:

WILLIAM F. VIENNE
GEOLOGY
No. 10492

Will V
8-13-15

ERIC F. PASTOR
67019

8-13-15

EXECUTIVE SUMMARY

Environmental Media	Actual or Probable Exposures On-Site?		Actual or Probable Exposures Off-Site?		Have notifications for actual or probable exposures been completed? (§350.55(e))		
	Yes	No	Yes	No	Yes	No	N/A
Soil		X		X			X
Groundwater		X		X			X
Sediment		X		X			X
Surface Water		X		X			X

Is there, or has there been, an affected or potentially affected water well? ____Yes __X__No

If yes, what is the well used for? ____

Actual land use: On-Site: ___Res __X__C/I Off-Site affected property: ___Res ____C/I _X_N/A

Land use for critical PCL determination: On-Site: _X_Res ___C/I Off-Site affected property: ___Res ___C/I _X_N/A

Did the affected property pass the Tier 1 ecological exclusion criteria checklist? ______Yes __X__No

Affected groundwater-bearing unit(s) (in order from depth below ground surface), or uppermost groundwater-bearing unit if none affected

Unit No.	Name	Depth below ground surface (ft)	Resource Classification (1, 2, or 3)
1	Upper Groundwater Bearing Unit	~4 ft where present, not present in some areas	2
2			
3			

Assessment

Environmental Media		Assessment Levels Exceeded?						Affected property defined to RAL?			Is COC extent stable or expanding?	General classes of COCs (VOCs SVOCs, metals, etc.)
		On-Site?			Off-Site?							
		Yes	No	Not sampled	Yes	No	Not sampled	Yes	No	N/A		
Soil	Surface	X			X			X^{2}			Stable	Metals (primarily lead)
	Subsurface			X	X					X		
Groundwater			X^{1}		X					X		
Sediment			X		X					X		
Surface Water			X			X				X		

1. Arsenic and MTBE PCL exceedances observed in monitoring wells VCP-MW-9 and VCP-MW-10, respectively, were not confirmed upon re-sampling.
2. Affected property defined to RAL on Undeveloped Buffer Property, not applicable to adjacent property (FOP) where affected property assessment is ongoing.

EXECUTIVE SUMMARY

NAPL Occurrence Matrix

	NAPL Occurrence		Description
NAPL in vadose zone	X	No NAPL in vadose zone	There is no direct or indirect evidence of NAPL in the vadose zone
		NAPL in/on soil	NAPL detected in or on unsaturated, unconsolidated clay-, silt-, sand-, and/or gravel-dominated soils
		NAPL in fractured clay	NAPL detected in fractures of unsaturated fine-grained soils
		NAPL in fractured or porous rock	NAPL detected in unsaturated lithologic material
		NAPL in karst	NAPL detected in karst environment
NAPL at capillary fringe	X	No NAPL at capillary fringe	There is no direct or indirect evidence of NAPL at the capillary fringe
		NAPL at capillary fringe	NAPL detected at vadose-saturated zone transition, capillary fringe (in contact with water table)
NAPL in saturated zone	X	No NAPL in saturated zone	There is no direct or indirect evidence of NAPL in the saturated zone
		NAPL in soil	NAPL detected in saturated unconsolidated clay-, silt-, sand-, and/or gravel-dominated soils
		NAPL in fractured clay	NAPL detected in fractures of saturated fine-grained soil or other double-porosity sediments
		NAPL in saturated fractured or porous rock	NAPL detected in saturated lithologic material
		NAPL in saturated karst	NAPL detected in karst environment within the saturated zone
NAPL in surface water or sediment	X	No NAPL in surface water or sediment	There is no direct or indirect evidence of NAPL in surface water or sediments
		NAPL in surface water	NAPL detected in surface water at exceedance concentration levels or visual observation
		NAPL in sediments	NAPL detected in sediments at exceedance concentration levels or visual observation via migration pathway or a direct release

Remedy Decision

Environmental Media		Critical PCL exceeded on-Site?			Critical PCL exceeded off-Site?			PCLE zones defined?			General class (VOCs, SVOCs, metals, etc.) of COCs requiring remedy
		Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	
Soil	Surface	X			X			X[2]			Metals (primarily lead)
	Subsurface			X	X					X	
Groundwater			X[1]		X					X	
Sediment			X		X					X	
Surface Water			X			X				X	

1. Arsenic and MTBE PCL exceedances observed in monitoring wells VCP-MW-9 and VCP-MW-10, respectively, were not confirmed upon re-sampling.
2. PCLE zones defined on Undeveloped Buffer Property, not applicable to adjacent property (FOP) where affected property assessment is ongoing.

EXECUTIVE SUMMARY

NAPL Triggers

NAPL Response Action Triggers		Description of Triggers
X	No NAPL response action triggers	No NAPL triggers have been observed in any assessment zones (vadose, capillary fringe and saturated), nor in surface water or sediments
	NAPL vapor accumulation is explosive	NAPL vapors accumulate in buildings, utility and other conduits, other existing structures, or within anticipated construction areas at levels that are potentially explosive (≥ 25% LEL)
	NAPL zone expanding	NAPL zone is observed to be expanding using time-series data
	Mobile NAPL in vadose zone	NAPL zone is observably mobile, or is theoretically mobile based on COC concentrations and residual saturation
	NAPL creating an aesthetic impact or causing nuisance condition	NAPL is responsible for objectionable characteristics (e.g., taste, odor, color, etc.) resulting in making a natural resource or soil unfit for intended use
	NAPL in contact with Class 1 groundwater	NAPL has come in actual contact with saturated zone or capillary fringe of a Class 1 GWBU
	NAPL in contact with Class 2 or 3 groundwater	NAPL has come in actual contact with saturated zone or capillary fringe of a Class 2 or Class 3 GWBU
	NAPL in contact with surface water	Liquid containing COC concentrations that exceed the aqueous solubility in contact with surface water via various migration pathways or direct release to surface water
	NAPL in or on sediments	Liquid containing COC concentrations that exceed the aqueous solubility impact surface water sediments via migration pathway or a direct release

CONCLUSIONS AND RECOMMENDATIONS

Assessment Results

This report describes the affected property assessment conducted for the Undeveloped Buffer Property adjacent to the Exide Technologies Former Operating Plant (FOP) in Frisco, Texas. The Undeveloped Buffer Property (the Site) consists of undeveloped land located adjacent to the former Exide Technologies Frisco Recycling Center, a former battery recycling and lead smelting facility. The Site has been used for agricultural purposes dating back to the early 1900s and various tracts making up the Site were acquired by Exide Technologies (Exide) or its predecessors between 1983 and 2001 (SWG, 2013). Although battery chips have been found in discrete and localized areas around the Undeveloped Buffer Property, no battery recycling or lead smelting operations are known to have occurred at the Site. At locations where battery chips have been found within Site soils (berms, drainage areas), the soils may or may not contain lead at concentrations exceeding the assessment levels.

This affected property assessment is being conducted in accordance with the Texas Commission on Environmental Quality (TCEQ) requirements for participation in the Voluntary Cleanup Program (VCP). Initial investigation activities were completed as part of due diligence proceedings related to the proposed sale of the Undeveloped Buffer Property from Exide to the Frisco Economic Development Corporation (EDC) and the Frisco Community Development Corporation (CDC). Exide Technologies, the City of Frisco, the EDC and the CDC are referred to collectively as the “VCP Applicants”. Pastor, Behling, and Wheeler, LLC (PBW), on behalf of Exide, has conducted the affected property assessment to evaluate potential impacts on the Site associated with the adjacent Former Operating Plant and other potential off-site sources of contamination. Characterization and delineation of the Undeveloped Buffer Property began in March 2012 and continued through May 2013. In response to TCEQ comments on the initial version of this APAR, limited supplemental soil and groundwater sampling was performed.

Based on the available knowledge of the Site history, the primary chemicals of concern (COCs) at the Site are lead and cadmium. Analyses for additional COCs were performed on specific soil samples based on the sample location and the objective of the sampling. A lead soil assessment level of 250 mg/kg, one-half of the Texas Risk Reduction Program (TRRP) residential soil assessment level of 500 mg/kg, was established in an agreement between Exide, EDC, CDC, and the City of Frisco. Investigation activities conducted at the Site in 2012 and 2013 identified soils containing lead at concentrations exceeding the assessment level present at areas of the Site near the FOP and along the former South 5th Street south of the facility. Cadmium concentrations at the Site were not found to exceed the TRRP residential soil cadmium assessment level. Elevated lead concentrations observed in the upper few inches of soil are presumed to be associated with atmospheric deposition of lead from the adjacent FOP. Elevated lead concentrations in soil from an undetermined source in areas along the former South 5th Street extend to slightly greater depths (1-2 feet below ground surface, top of bedrock). On-site surface soil in an area adjacent to a former Circuit Fab facility (located off-site) contains elevated concentrations of copper, assumed to be related to runoff from past firefighting at the Circuit Fab facility in 1988. An on-site area adjacent to Parkwood Drive contains debris (e.g., broken concrete, asphalt) with lead concentrations exceeding the soil assessment level.

Site groundwater was evaluated for a broad suite of COCs. Arsenic and MTBE concentrations exceeded their applicable assessment levels at wells VCP-MW-9 and VCP-MW-10, respectively, however the exceedances were not observed in a subsequent sampling event. The presence of these compounds is believed to be associated with upgradient, off-site sources (historical fuel release on adjacent property). No other COCs were detected in groundwater at concentrations exceeding their applicable assessment levels.

CONCLUSIONS AND RECOMMENDATIONS

Stewart Creek flows through the Site in the area east of the former 5th Street and upstream of the FOP. An evaluation of surface water and sediments within the creek in this area is included in this APAR. The evaluation determined that COC concentration in surface water and sediment are protective and further evaluation is not required.

Applicable Exposure Pathways:

The affected property does not meet the requirements of the Tier 1 Exclusion Criteria Checklist for ecological receptors and a Screening Level Ecological Risk Assessment (SLERA) is provided in Section 9. Surface water and sediment pathways are considered potentially complete at the Site. While there are no actual or probable exposure scenarios, the potentially complete exposure pathways identified as applicable for this affected property assessment are:

Surface Soil: The $^{\mathbf{Tot}}\mathbf{Soil}_{\mathbf{Comb}}$ and $^{\mathbf{GW}}\mathbf{Soil}_{\mathbf{Ing}}$ pathways are considered potentially complete for surface soils.

Groundwater: The applicable groundwater pathways for the uppermost groundwater-bearing unit, considered a Class 2 groundwater resource for the purpose of this report, are $^{\mathbf{GW}}\mathbf{GW}_{\mathbf{Ing}}$, $^{\mathbf{SW}}\mathbf{GW}$, and $^{\mathbf{Air}}\mathbf{GW}_{\mathbf{Inh\text{-}V}}$.

Surface Water: Surface water from Stewart Creek was evaluated as part of the affected property assessment because Stewart Creek passes through portions of the Site ($^{\mathbf{SW}}\mathbf{SW}$ pathway).

Sediment: Sediments within Stewart Creek were included in the affected property assessment because Stewart Creek passes through portions of the Site. The sediment pathway considered potentially complete is $^{\mathbf{Tot}}\mathbf{Sed}_{\mathbf{Comb.}}$

TRRP Assessment Level and PCL Exceedances:

The Site is being evaluated using residential assessment criteria, therefore the Residential Assessment Level (RAL) is the applicable assessment level and the RAL is also considered the Critical Protective Concentration Level (PCL) for determining whether a remedy is required.

Surface Soil: Lead and copper were detected in surface soils at concentrations exceeding the applicable RAL and critical PCL. Based on the data collected as part of the affected property assessment, lead impacts are limited to the upper few inches of soil in most of the PCL exceedance areas, with PCL exceedances extending one to two feet below ground in an area along former South 5th Street, and up to five feet below ground in one area containing fill/debris. Lead exceeded the assessment level of 250 mg/kg in the 0 – 3 inch sample interval at approximately 80 locations during the assessment. Deeper soil samples were collected at 51 of these locations, typically to 12” below ground surface, to evaluate the vertical extent of impacts. The results of 41 of these samples were below the applicable vertical assessment level, either the assessment level of 250 mg/kg (in areas where groundwater monitoring wells were installed) or the background concentration of 31.5 mg/kg (in other areas). Copper was detected at two sample locations in the vicinity of the former Circuit Fab facility at concentrations that exceed the RAL and critical PCL. Several individual soil samples in the northwest part of the Site exceeded the RAL for arsenic; however, a statistically determined representative concentration calculated for these sample locations did not exceed the RAL. The Site assessment has been performed using RALs as the assessment level, and any response actions will utilize the RAL as the response action objective, therefore the RAL is the critical PCL for determining whether a response is required. Consequently, since the RAL is effectively the applicable critical PCL, development of a critical PCL is not necessary. Arsenic, copper and lead concentrations in soils exceeded their respective RALs and were carried through to critical PCL development for APAR completeness (see Table 11A).

Subsurface Soil: The results of the affected property assessment indicated no soil impacts at depths greater than five feet below ground surface and no impacts to shallow groundwater underlying the Site (based on analytical results). However, if the presence of battery chips is interpreted as soil impacts, some areas of the Site may contain battery chips within other debris at depths greater than five feet below ground surface.

Groundwater: Arsenic was detected in groundwater at one monitoring well, VCP-MW-9, at a concentration (0.0166 mg/l) exceeding the assessment level of 0.01 mg/l, however, this exceedance was not confirmed in a subsequent groundwater monitoring event. MTBE was detected in groundwater at one monitoring well, VCP-MW-10 (3.64 mg/l) at a concentration exceeding the assessment level of 0.244 mg/l, again, this exceedance was not confirmed in a subsequent groundwater monitoring event. These sample locations are on the upgradient boundary of the Site, adjacent to a facility that experienced a release from a fuel tank, which has been closed under the TCEQ UST program.

Surface Water: Arsenic, cadmium and lead were not detected in surface water at the Site at concentrations exceeding the applicable human health or aquatic life protective PCLs.

Sediment: Arsenic, cadmium and lead were not detected in Site sediments at concentrations exceeding the applicable human health or aquatic life protective PCLs. Arsenic was detected above the critical PCL in one sediment sample that was collected from Stewart Creek in an area upstream of the Undeveloped Buffer Property.

In summary, lead and copper in surface soils are the only COCs in soil exceeding the applicable RALs at the Site requiring a response action, additional detailed information regarding the nature and extent of soil impacts is presented in Section 4. No COCs were detected in groundwater at the Site exceeding the applicable RALs during the most recent site-wide groundwater sampling event (January 2014). Arsenic and MTBE were not detected at concentrations above their respective RALs at wells VCP-MW-9 and VCP-MW-10, during a follow up sampling event conducted in April 2015.

NAPL Discussion

NAPL has not been observed at the Site and is not expected to be present at the Site based on historical knowledge of Site activities.

Response Actions and Recommendations

To address the presence of COCs and battery chips in shallow surface soils, excavation of impacted areas to concentrations below the assessment level/critical PCL, and until no additional battery chips are observed, is proposed. A draft Response Action Plan (RAP) has been prepared that describes the proposed response actions. The VCP Applicants have agreed to a lead cleanup standard of 250 mg/kg (less than the lead critical PCL of 500 mg/kg) for the response actions at the Site. In general, soils containing lead at a concentration exceeding the remediation level of 250 mg/kg (or battery chips) will be excavated, characterized for waste classification, and disposed of in the adjacent Exide Technologies

CONCLUSIONS AND RECOMMENDATIONS

Class 2 landfill or other off-site facility authorized to accept the waste. Confirmation samples will be collected from the excavated areas to ensure that remaining soil does not contain lead at a concentration greater than the remediation level of 250 mg/kg. Similarly, surface soils containing copper above the critical PCL of 548 mg/kg will be excavated and confirmation samples collected to verify residual copper concentrations are below the critical PCL.

Due to the difference in the initial and subsequent arsenic and MTBE sampling results observed at wells VCP-MW-9 and VCP-MW-10 respectively, one additional quarterly groundwater monitoring event was conducted in April 2015 and one additional sampling event is recommended to be conducted at these wells. Results of the April 2015 groundwater sampling event are included in Section 5 and results of the following sampling event will be provided within 90 days of sample collection.

CHRONOLOGY

Date of Report or Event(s)	*Title of Report*/ Assessment Activities	Author/Assessor	Summary of Environmental Assessment and/or Correspondence
April 22, 2015	Soil and groundwater sampling event	Pastor, Behling & Wheeler, LLC	Additional soil samples collected to complete evaluation of arsenic in M Tract. Wells VCP-MW-9 and VCP-MW-10 sampled for arsenic and MTBE, respectively
September 25, 2014	Comments to Affected Property Assessment Report	TCEQ	Comments provided by TCEQ on the draft Affected Property Assessment Report
April 1, 2014	Affected Property Assessment Report	Pastor, Behling & Wheeler, LLC	Draft Affected Property Assessment Report
January 16, 2014	Groundwater sampling event	Pastor, Behling & Wheeler, LLC	Newly installed monitoring wells and existing wells in the vicinity of previous arsenic and MTBE detections sampled during this event
January 3, 2014	Soil sampling event, monitoring well installation	Pastor, Behling & Wheeler, LLC	Confirmation soil samples collected at eight sample locations to address potential bias in previously collected data. Installation of monitoring well VCP-MW-13
December 12, 2013	Monitoring well installation	Pastor, Behling & Wheeler, LLC	Installation of monitoring well VCP-MW-12
July 1, 2013	Approval Letter	TCEQ	Letter approving Phase I ESA report and proposed APAR scope of work
May 21, 2013	Soil sampling event	Pastor, Behling & Wheeler, LLC	Additional surface soil samples collected
May 15, 2013	Soil sampling event	Pastor, Behling & Wheeler, LLC	Collection of additional surface soil sample in the former Circuit Fab area
May 7, 2013	Soil sampling event	Pastor, Behling & Wheeler, LLC	Collection of additional vertical delineation samples, excavation of test pits, collection of additional surface soil samples for arsenic analysis
April 29, 2013	Site-wide groundwater gauging event	Pastor, Behling & Wheeler, LLC	Site-wide groundwater gauging event
April 26, 2013	Sampling and analysis of newly installed wells (VCP-MW-9, 10, and 11)	Pastor, Behling & Wheeler, LLC	Assessment of groundwater in NE portion of Site
April 24, 2013	Collection of additional surface soil samples	Pastor, Behling & Wheeler, LLC	Horizontal delineation of impacted soil and soil pH for Tier 2 calculations
April 15, 2013	Installation of 5 monitoring wells	Pastor, Behling & Wheeler, LLC	Assessment of groundwater in NE portion of Site and along So. 5th Street (wells VCP-MW-7 through VCP-MW-11)
March 11, 2013	Re-sample well VCP-MW-4	Pastor, Behling & Wheeler, LLC	Re-sample well VCP-MW-4 to verify SVOC detects
March 13, 2013	Community Relations Plan	Exide Technologies	Community Relations Plan prepared and submitted for VCP project

CHRONOLOGY

Date of Report or Event(s)	***Title of Report*/ Assessment Activities**	**Author/Assessor**	**Summary of Environmental Assessment and/or Correspondence**
March 19, 21, 22, 2013	Groundwater sampling and analysis	Pastor, Behling & Wheeler, LLC	Assessment of groundwater (VCP-MW-2 through 6, MW-19, MW-20, MW-28)
March 18, 2013	Site-wide grid sampling, focused sampling along So. 5th Street	Pastor, Behling & Wheeler, LLC	Completion of site-wide assessment with ½ acre exposure area assumption, additional surface and shallow soil samples collected along So. 5th Street.
March 5, 2013	VCP Agreement	VCP Applicants	Submittal of the VCP Agreement
February 27 through March 1, 2013	Installation of 7 monitoring wells	Pastor, Behling & Wheeler, LLC	Assessment of groundwater (VCP-MW-1 through 6, MW-28)
February 26, 2013	Phase I Environmental Site Assessment	Southwest Geoscience	Submittal of Phase I ESA to TCEQ
October 25, 2012	VCP Application	VCP Applicants	Submittal of VCP Application to TCEQ
May 2012	Surface soil sample collection	Pastor, Behling & Wheeler, LLC	Followup grid sampling
March 2012	Surface soil sample collection	Pastor, Behling & Wheeler, LLC	Initial grid sampling
January 12, 2012	Monitoring well installation	Pastor, Behling & Wheeler, LLC	Installation of MW-19 and MW-20

DRAFT

SPECIALIZED SUBMITTALS CHECKLIST

_____ Check here if no specialized submittals in this report

	If included, specify section or appendix
Ecological Risk Assessment	
Reasoned justification, expedited stream evaluation, Tier 2 or 3 ecological risk assessment, and/or proposal for ecological services analysis	Tier 2 SLERA Section 9
Statistics	
Calculated Site-specific background concentrations	Appendix 8
Used alternate statistical methods to determine proxy values for non-detected results (§350.51(n))	
Calculated representative concentrations (§350.79(2)) for remedy decision	Appendix 8
Analytical Issues	
Used SQL for assessment or critical PCL instead of the MQL (§350.51(d)(1)) or PCL (§350.79)	
The MQL of the analytical method exceeds assessment levels/critical PCLs (§350.54(e)(3))	
Human Health/Toxicology	
Variance to exposure factors approved by TCEQ Executive Director[1] (§350.74(j)(2))	
Developed PCLs based on alternate exposure areas	
Evaluated non-standard exposure pathway (e.g., agricultural, contact recreation, etc)	
Combined exposure pathways across media for simultaneously exposed populations (§350.71(j))	
Adjusted PCLs due to residual saturation, cumulative risk, hazard index, aesthetic concerns, or theoretical soil vapor	
Utilized non-default human health RBELs to calculate PCLs (includes use of non-default parameters, toxicity factors not published in rule, etc.) (§350.51(l), §350.73, §350.74)	
Calculated Tier 2 or 3 RBELs/PCLs or TSCA levels for polychlorinated biphenyls, or calculated Tier 2 or 3 RBELS/PCLs for cadmium, lead, dibenzo-p-dioxins, dibenzofurans, and/or polycyclic aromatic hydrocarbons	
Calculated Tier 1, 2, or 3 total petroleum hydrocarbon (TPH) PCLs	
Developed sediment/surface water human health RBELs and PCLs	
Fate and Transport	
Used or developed groundwater to surface water dilution factors	
Calculated Tier 2 PCL	Section 4, Appendix 9
Calculated Tier 3 PCL	
Groundwater Issues	
Conducted aquifer test, classified Class 3 groundwater, or determined non-groundwater bearing unit (saturated soil)	Appendix 7

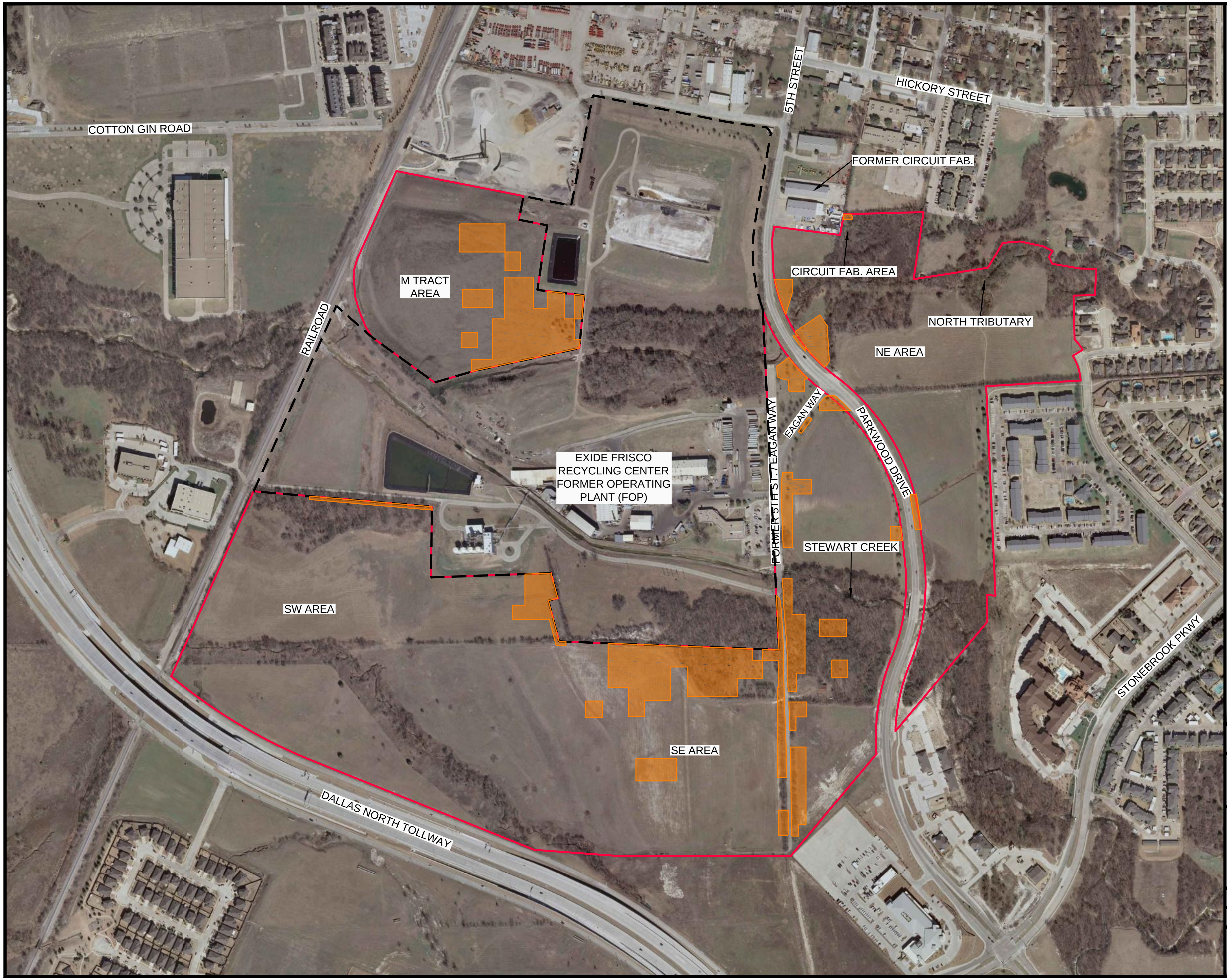
[1] Prior approval by Executive Director is required.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

Executive Summary

Figure A	Affected Property and PCLE Zone Map



EXPLANATION

- - - Former Operating Plant Boundary (Approximate)

— Undeveloped Buffer Property Subject to The Voluntary Cleanup Program

▨ PCLE Zone

N

Scale in Feet

0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure A

AFFECTED PROPERTY AND PCLE ZONE MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2015	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS

1.0 PROPERTY INFORMATION

1.1 Physical Location

1.1.1 Property Location and Land Use

The Undeveloped Buffer Property (the Site) consists of 13 tracts of vacant land totaling approximately 170 acres adjacent to the former Exide Technologies Frisco Recycling Center (Former Operating Plant, FOP). The Exide Technologies (Exide) FOP recycled lead-acid batteries and operated as lead smelter until late November 2012. The FOP is located at 7471 South 5th Street in Frisco, Collin County, Texas. The Site has been used for agricultural purposes since the early 1900s. With the exception of a demolished residential structure and two barns in various states of deterioration, no buildings or other improvements are present at the Site. The majority of the Site is vacant land/fields with limited areas of dense vegetation. Segments of Eagan Way and former 5th Street are also located within the Site. The land use is considered commercial/industrial; however, pursuant to an agreement among the VCP applicants, the assessment is based on residential land use criteria.

1.1.2 Topography & Weather

The topography of the Site ranges from 620 to 700 feet above mean sea level and is generally flat or gently sloping. The most elevated area of the Site is to the south (Tract B) which consists of an outcrop of the Austin Chalk which slopes down towards Stewart Creek and the FOP. There are three ~~intermittent~~ streams present at the Site: Stewart Creek, an unnamed tributary of Stewart Creek (the “North Tributary”), and an unnamed ditch in the southwest portion of Tract B (Figure 1A.2). Some areas of the Site along Stewart Creek and the North Tributary are located within the 100 year flood plain as indicated on Figure 1A.1 (FEMA, 2009).

The average annual rainfall in the Dallas area is highly variable, ranging from less than 20 inches per year to more than 50 inches per year, with the largest amount of monthly precipitation occurring in May and October. Periods of rainy weather typically last for one to two days. Thunderstorms occur throughout the year, but are most common during the spring. During the summer, daily high temperatures frequently exceed 100 degrees Fahrenheit (^{o}F) and daily lows are generally less than 80^{o}F. Summer hot spells are typically 3 to 5 days in duration, broken up by periods of thunderstorm activity. Winters are mild, with short periods of extreme cold. (NOAA, 2013)

The Texas Commission on Environmental Quality (TCEQ) has published wind rose diagrams for the Dallas-Fort Worth area using wind data obtained from the EPA for the years 1984-1992 (TCEQ, 2013a). Based on the TCEQ wind rose diagrams, the prevailing wind direction in the area is toward the north for each month of the year. Southerly (south to north) winds are particularly dominant during spring, summer, and fall months. Northerly winds are common in winter, but occur less frequently than southerly winds during that period.

1.2 Affected Property and Sources of Release

1.2.1 History and Operations

The Site is undeveloped and has been used for agricultural purposes since the early 1900s. There is evidence of a former residential building and two old barns at the Site, as well as what appear to be corrals or livestock pens (see Figure 1A.1). Historical aerial photos indicate that several areas of the Site may have been used as borrow areas, including a former gravel pit in the western portion of Tract A, an exposed area (possibly a road cut in the Austin Chalk) along former South 5th Street visible in a 1938 aerial, and an excavated/cleared area northeast of the FOP in Tract G visible in a 1984 aerial (historical aerial photos provided in Appendix 17). The property tracts present at the Site are shown on Figure 1A.2.

With the exception of Tract M purchased in 1970, the tracts of land comprising the Site were purchased by Exide's predecessor between 1983 and 2001 to create a buffer between the FOP and the surrounding community (SWG, 2013). There is no evidence that the Site was used for operations associated with the FOP, however, materials associated with FOP such as plastic fragments from battery cases (battery chips), have been observed in areas of the Site adjacent to the FOP. The primary source of impacts at the Site is believed to be historical atmospheric deposition of lead and cadmium from emissions at the adjacent FOP based on the observed distribution of these compounds over the majority of the Site (i.e., highest concentrations found in the upper few inches of soil vertically, and laterally concentrations generally decreasing with distance from the FOP). Elevated concentrations of lead in soil have been observed in adjacent ditch areas along the former South 5th Street located south of the FOP. Based on their distribution, these concentrations are not likely to be a result of historical atmospheric deposition. The source of this material is not known. The Site has historically been utilized for agricultural purposes and is planned to be used for commercial/industrial (non-residential) purposes in the future. The area has a history of cotton farming and according to a former Exide employee, cotton farming was performed on parts of the Undeveloped Buffer Property, including the M Tract. The possible use of arsenic-based defoliants for cotton crops may have potentially contributed to the arsenic levels observed in some M Tract soil samples.

1.2.2 Project Overview

This APAR summarizes the affected property assessment conducted for approximately 170 acres of land adjacent to the former Exide Technologies Frisco Recycling Center (or FOP), identified as the Undeveloped Buffer Property. The affected property assessment is being conducted in accordance with the TCEQ requirements for participation in the VCP. Initial Site investigation activities were completed as part of due diligence proceedings related to the contemplated sale of the Site by Exide to the other VCP Applicants. PBW, on behalf of the VCP Applicants, has conducted this affected property assessment to evaluate impacts associated with the adjacent FOP and other potential off-site sources of contamination. A Phase I Environmental Site Assessment (ESA) performed by Southwest Geoscience (SWG, 2013) identified potential on-site and off-site impacts, and was used as a basis for portions of the affected property assessment. The ESA was approved by the TCEQ in a letter dated July 1, 2013. The ESA and the scope of the affected property assessment were reviewed with TCEQ personnel in a meeting held on March 27, 2013. A subsequent affected property assessment data review meeting was held with TCEQ personnel on April 26, 2013.

Tables 1A and 1B present a summary of the potential sources identified in the Phase I ESA and investigated as part of the affected property assessment; additional detail is provided in Section 4. In addition to investigating the specific areas of concern noted in the ESA, non-judgmental samples were collected from across the Site, using a grid system, to identify any other potentially impacted areas. Site characterization and delineation of affected areas began in March 2012 and continued through January 2014.

An affected property is defined as the entire area which contains releases of COCs at concentrations equal to or greater than the assessment level applicable to the groundwater classification (Class 2 for assessment purposes) and land use (for assessment purposes, residential) (30 TAC §350.4(a)(1)). Assessment levels for the potentially complete pathways, which are discussed in Section 2 of this APAR, were used for comparison with Site sample data results to determine the extent of the affected property for each potentially affected environmental media, as applicable. During the Site investigation, approximately 650 soil samples and 16 groundwater samples from 13 monitoring wells were collected and analyzed. No COCs were detected in groundwater at the Site exceeding the applicable RALs during the most recent groundwater sampling event (January 2014). The extent of the Affected Property is based on elevated lead concentrations in soil, with the primary source of lead being the adjacent former FOP. While the Affected Property has not been separated into discrete areas, the Site itself has been divided into four geographical areas to assist in the presentation of the data (Figures 1B.1 through 1B.4). Detailed discussions of soil and groundwater sample data are provided in Sections 4 and 5, respectively.

1.3 Geology/Hydrogeology

1.3.1 Geology

The Site is situated in southwestern Collin County along the north-south trending contacts between the Cretaceous-aged Austin Chalk, the Cretaceous-aged Eagle Ford Formation (“Eagle Ford Shale”), and Quaternary-aged undivided surficial deposits (Figure 1C). Regional dip is to the east and southeast such that outcropping rock formations become relatively younger from west to east, with the exception of Quaternary deposits, which are generally controlled by variations in topography. Geologic units encountered at the Site are as follows (from youngest to oldest):

- Quaternary Undivided Surficial Deposits: Sand, clay, silt, and gravel; mostly colluvium and minor alluvium (McGowen et al., 1991).

- Austin Chalk: Upper and lower parts consist of light gray massive chalk (limestone primarily composed of the calcareous skeletons of micro-organisms) with some calcareous clay interbeds and partings; middle part mainly light gray bedded marl with massive chalk interbeds (McGowen et al., 1991).

- Eagle Ford Shale: Medium to dark gray shale (fine-grained, fissile, sedimentary rock composed of clay-sized and silt-sized particles); commonly selenitic (contains gypsum) and bituminous with thin platy beds of sandstone and sandy limestone in middle and upper parts (McGowen et al., 1991).

A regional geologic map is provided as Figure 1C and a generalized regional geologic cross section is provided as Figure 1D. A geologic cross section location map for cross sections constructed using soil boring data from the Site is provided as Figure 4C.1. The Site cross sections are provided on Figures 4C.2 through 4C.5.

As shown on Figure 1C, the Austin Chalk forms a hillside on the south portion of the Site. Within the Site, the drainages of Stewart Creek and the North Tributary have eroded the Austin Chalk such that the Quaternary surficial deposits typically lie directly on top of the Eagle Ford Shale. The surface of the Eagle Ford Shale has also been eroded in the vicinity of the Site such that it and the overlying Quaternary surficial deposits generally slope toward Stewart Creek and the North Tributary, and slope gradually in the downstream direction of these drainages (see Figure 4C.4).

The geology at the Site is generally divided into two areas by Stewart Creek which transects the Site from east to west. At areas of the Site located north of Stewart Creek, the shallow geology is characterized by approximately 10 to 30 feet of moist to wet clay-rich colluvial soils overlying Eagle Ford Shale. Colluvium is a general term used to define soil material and rock debris that accumulates at the base of hillsides due to erosional forces such as slides, slumps, sheetfloods, or debris flows (USGS, 2013). It is typically characterized by heterogeneous and poorly sorted material. As depicted in Geologic Cross Sections A-A’ through D-D’ (Figures 4C.2 through 4C.5), the colluvial soils at the Site typically consist of clay and silty clay with minor occurrences of gravelly clay (gravel suspended in a clay matrix) and discontinuous sand and clayey gravel lenses. At areas of the Site located south of Stewart Creek, an outcrop of the Austin Chalk is present close to the ground surface and is overlain by several feet of silty clay and weathered limestone (Figure 4C.4). The Eagle Ford Shale and the Austin Chalk regionally dip to the east (see Fig 1D) and the Eagle Ford is eroded in a way that the surface slopes towards the creeks in the area.

1.3.2 Hydrogeology

The uppermost groundwater-bearing unit (GWBU) at the Site is comprised of the clay-rich colluvial soils situated on top of the Eagle Ford Shale, which acts as an aquiclude unit at the base of the uppermost GWBU. Four groundwater gauging events, three in 2013 and one in 2014, ~~three groundwater gauging events~~ were conducted across the entire Site (including the FOP) using monitoring wells completed in the upper GWBU at the Site (Table 5D). During these gauging events, depth to water measurements at wells located on the Undeveloped Buffer Property ranged from less than 3.5 feet bgs in well VCP-MW-4, near Stewart Creek in Tract M, to approximately 21 feet bgs in well MW-20, located on Tract E. Monitoring well locations are shown on Figures 5A.1 through 5A.4.

Groundwater potentiometric surface maps for the four APAR investigation water level gauging events (conducted on March 11, 2013; April 5, 2013; April 29, 2013, and January 21, 2014) are provided as Figures 5A.1 through 5A.4. The potentiometric surfaces depicted on each of these figures slope toward Stewart Creek and/or the North Tributary, suggesting that groundwater flow within the upper GWBU at the Site is controlled by topography and that groundwater is discharging to the on-site creeks. Aquifer testing was performed at two wells located on the Undeveloped Buffer Property at wells MW-19 and MW-20. The results of the aquifer testing indicate that the saturated zone present in the vicinity of wells MW-19 and MW-20 will yield groundwater at a rate of approximately 0.25 gallons of water per day. A summary of the aquifer testing activities and results is provided in Appendix 7.

The Texas Water Development Board (TWBD) does not consider the Austin Chalk, the Eagle Ford Shale, or the Quaternary undivided surficial deposits in the vicinity of the Site to be major or minor water producing formations of Texas (George et al., 2011). A water well records search performed within an approximate 0.5-mile radius of the Site identified five potential wells completed in the Woodbine, Paluxy, or Twin Mountain Formations (see Section 2). These formations are all stratigraphically below the Eagle Ford Formation (Figure 1D).

The Woodbine Formation lies directly below the Eagle Ford Shale and is considered a minor aquifer of Texas (George et al., 2011). The Paluxy and Twin Mountains Formations lie at deeper depths, and comprise the upper and lower portions, respectively, of the Trinity Aquifer, which is considered a major aquifer of Texas (George et al., 2011). The Paluxy Formation is separated from the Woodbine Formation by the Washita and Fredericksburg Groups. According to Nordstrom (1982), both the Washita and Fredericksburg Groups consist predominantly of limestone, shale, clay, and marl and yield only small amounts of water to localized areas. The Paluxy and Twin Mountains Formations are separated by the relatively impermeable Glen Rose Formation, which is composed primarily of argillaceous limestone. Based on a regional cross section constructed by Nordstrom (1982) (Figure 1D), the approximate depths of these formations near the Site are as follows:

- <u>Eagle Ford Shale</u>: Near surface to 550 feet bgs;
- <u>Woodbine Formation</u>: 550 to 850 feet bgs;
- <u>Washita Group</u>: 850 to 1,325 feet bgs;
- <u>Fredericksburg Group</u>: 1,325 to 1,400 feet bgs;
- <u>Paluxy Formation</u>: 1,400 to 1,650 feet bgs;
- <u>Glen Rose Formation</u>: 1,650 to 2,100 feet bgs; and
- <u>Twin Mountains Formation</u>: 2,100 to 2,650 feet bgs.

1.3.3 Surface Water Hydrology

As stated previously, Stewart Creek and a tributary of Stewart Creek, the North Tributary, flow in an approximate east to west direction through the eastern portion of the Site. Stewart Creek is a small first order stream within the Trinity River Basin that drains a watershed of approximately three square miles upstream of the Site. It flows into Lewisville Lake (Classified Segment 0823), located approximately 5 miles downstream of the Site. The on-site portions of Stewart Creek and the North Tributary receive surface water flow from five distinct creeks that collect water from east of the Site. These creeks have been incorporated into parks as water features, run along roadways and/or run through neighborhoods and other developments, and are part of the surface water features within the Frisco city limits that are contained within the City's MS4 storm water management permit. Urban runoff is the primary source of water in Stewart Creek and eventually feeds into the on-site portion of Stewart Creek.

Two staff gauges were installed in Stewart Creek during previous FOP investigations to measure water level elevations in the creek. As shown on Figures 5A.1 through 5A.3, Staff Gauge #1 is located in the eastern portion of the FOP (just downstream of the on-site reach of Stewart Creek) and Staff Gauge #2 is located in the western portion of the FOP. Creek water levels at the staff gauges were measured concurrent with groundwater gauging events several times during the APAR investigation. As shown on the groundwater potentiometric surface maps on Figures 5A.2, 5A.3, and 5A.4 (representing the April 5, 2013, April 29, 2013, and January 21, 2014 gauging events, respectively), the creek water level elevations at the staff gauge locations on those dates were generally lower than the projected potentiometric surface contours in their immediate vicinity, suggesting that the creek is a gaining stream (i.e., groundwater is discharging to the creek). Although staff gauges were not installed in the North Tributary, the groundwater potentiometric contours in the vicinity of the North Tributary on Figures 5A.1 through 5A.3

suggest that it is also a gaining stream. As noted previously, an evaluation of Stewart Creek surface water and sediment (including data from the Site) is included in the revised APAR for the FOP.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

1.0 Tables

TABLE 1A
SOURCES OF RELEASES
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Affected Property Name/Number	Name of Potential Source	Type of Potential Source	NOR Unit or SWMU Number, if Applicable	Substances of Potential Concern	Size of Source (capacity, area, or volume)	Status of Source		Was a release from this source confirmed?			
						Status:	Date:	No	Yes	Discovery method	Date
Exide Undeveloped Buffer Property - South 5th Street	Exide Technologies Frisco Recycling Center	Other (unknown release)	NA	Lead, cadmium	Ditches along former South 5th Street	NA	NA		X	Site Assessment	March 2012 - June 2013
Exide Undeveloped Buffer Property - Tracts G and J	Undocumented fill material	Former fill area containing construction type debris (broken concrete, asphalt, steel)	NA	VOCs, SVOCs, TPH, metals	3.5 Acres	NA	NA		X	Site Assessment	March 2013 - June 2013
Exide Undeveloped Buffer Property - Berm areas	Berms located in Tracts A, E, L, M	Unknown	NA	Lead, cadmium	Various berms ~ 3 acre area	NA	NA	X		Site Assessment	March 2013 - June 2013
Exide Undeveloped Buffer Property - Tracts K and L	Surface debris	Isolated piles of construction type debris (broken concrete, asphalt, steel)	NA	NA	~100 cubic yards	NA	NA	X		Site Assessment	March 2013 - June 2013
Exide Undeveloped Buffer Property - Tract C	Surface debris	Debris/trash from former home site	NA	NA	~1000 cubic yards	NA	NA	X		Site Assessment	March 2013 - June 2013
Exide Undeveloped Buffer Property - Tract C	Land Disturbance	Unknown	NA	Lead, cadmium	~ 2 acres	NA	NA	X		Site Assessment	March 2013 - June 2013
Exide Undeveloped Buffer Property - Tract A	Land Disturbance	Former gravel pit/quarry	NA	Lead, cadmium	~ 4 acres	NA	NA	X		Site Assessment	March 2013 - June 2013
Exide Undeveloped Buffer Property - Tract B	Cistern	Abandoned/filled cistern	NA	VOCs, SVOCs, TPH, metals, pesticides, herbicides	NA	NA	NA	X		Site Assessment	March 2013 - June 2013

TABLE 1B
POTENTIAL OFF-SITE SOURCES
Affected Property Assessment Report

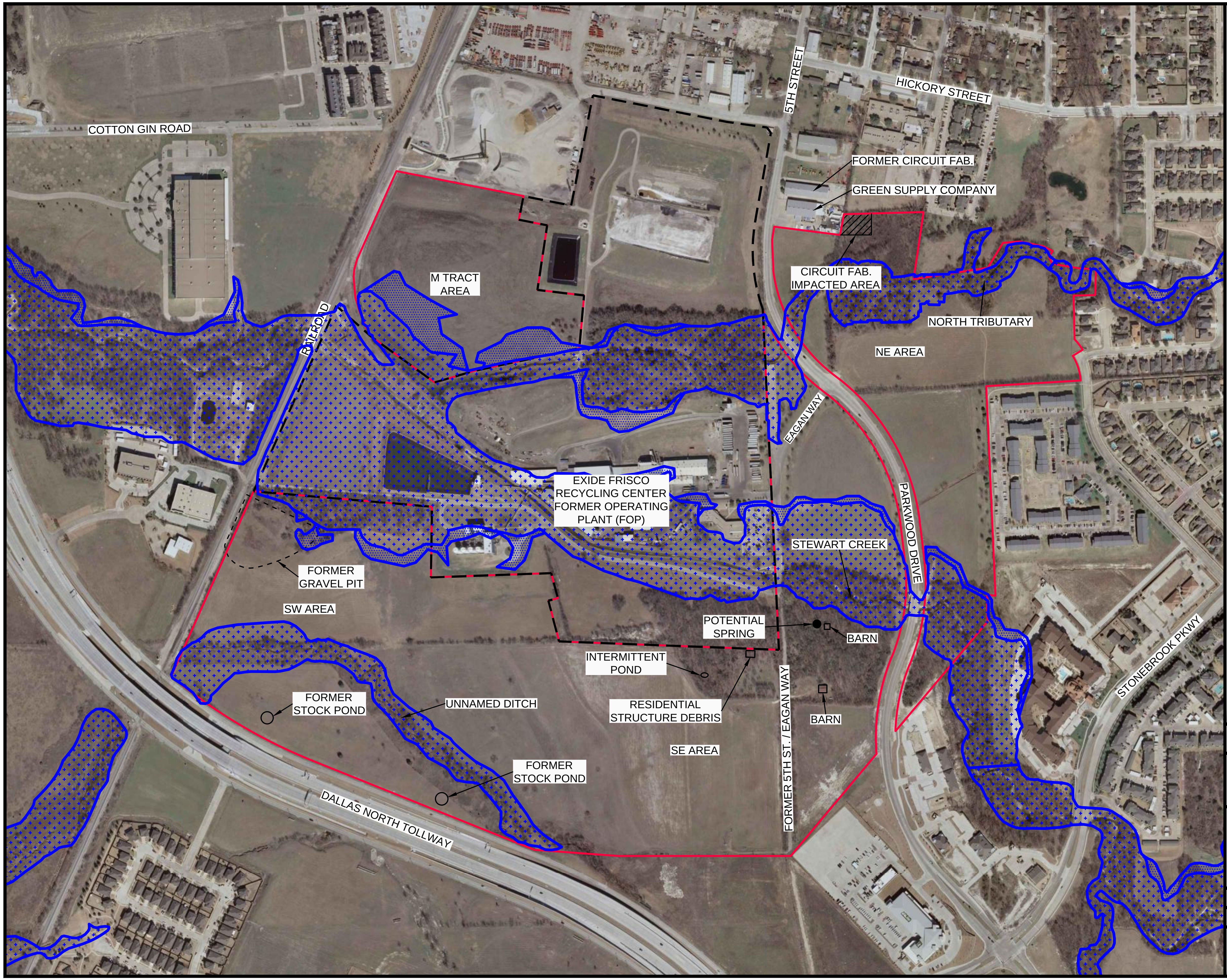
Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Affected Property Name/Number	Off-site facility/site name	Physical Address	Regulatory ID number	Type of operation/ business	Years of operation (if known)	COCs
Exide Undeveloped Buffer Property - General Area	Exide Technologies Frisco Recycling Center (Former Operating Plant)	7471 South 5th Street, Frisco, TX 75034	TCEQ SWR No. 30516; EPA ID No. TXD006451090; EPA Order Docket No. RCRA-06-2011-0966; Customer No. CN600129787; Regulated Entity No. RN100218643	Former lead smelting facility	~1964-2012	Metals, primarily lead and cadmium
Undeveloped Buffer Property - Tracts I and J	Green Supply	7850 Parkwood Blvd, Frisco, TX 75034	1558 LPST ID 113367	Plumbing supply and fixture distribution	25+ years	BTEX, MTBE, TPH
Undeveloped Buffer Property - Tracts I and J	Circuit Fab	7990 5th Street, Frisco, TX 75034	TWC 37316 EPA ID No. TXD130376973	Manufacture and plate printed circuit boards	1984-1988	Metals

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

1.0 Figures



EXPLANATION

– – – Former Operating Plant Boundary (Approximate)

— Undeveloped Buffer Property Subject to The Voluntary Cleanup Program

▨ Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood (100-year Flood) (FEMA, 2009)

▨ Areas of 0.2% Annual Chance Flood, Areas of 1% Chance Flood with Average Depths of Less that 1 foot or with Drainage Areas Less than 1 Square Mile, or Areas Protected by Levees from 1% Annual Chance Flood (FEMA, 2009)

N

Scale in Feet
0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 1A.1

ON-SITE PROPERTY MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

- - - Former Operating Plant Boundary (Approximate)

— Undeveloped Buffer Property Subject to The Voluntary Cleanup Program

- - - Property Tract

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

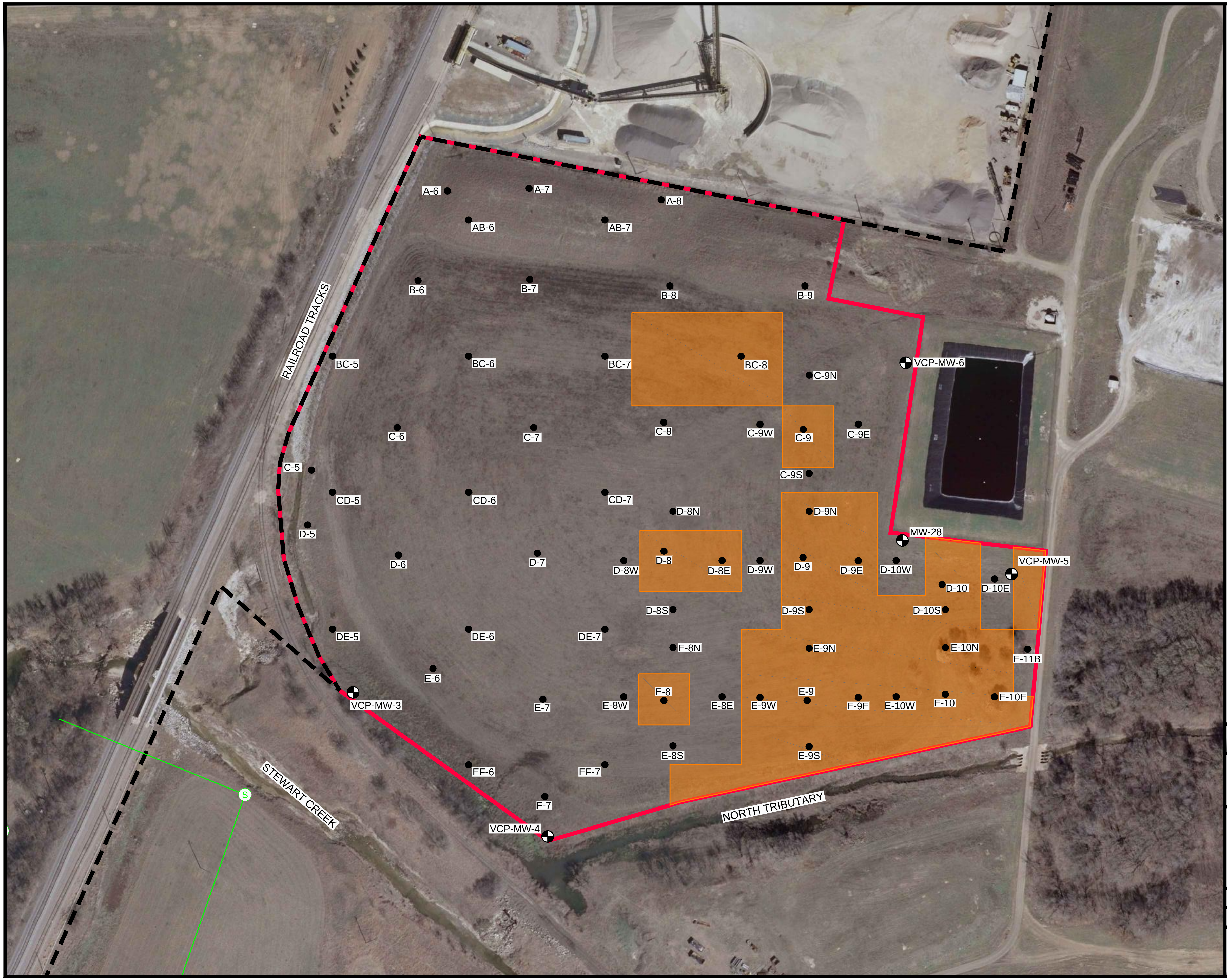
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 1A.2

ON-SITE PROPERTY MAP
PROPERTY TRACTS

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- – – Property Owned By Exide
- — Undeveloped Buffer Property
- ◐ Monitoring Well Location
- ● Surface Soil Sample Location
- 🟧 PCLE Zone
- — Sanitary Sewer Line
- Ⓢ Sanitary Sewer Manhole

NOTES:
1. See Figure 4C.1 for cross-section location map.

N

Scale in Feet
0 75 150

Source of photo:
Imagery from NCTCOG, 2009 photography.
Source of utilities:
City of Frisco, GIS Department

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 1B.1

AFFECTED PROPERTY MAP
M TRACT AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

- - -	Property Owned By Exide
—	Undeveloped Buffer Property
◐	Monitoring Well Location
●	Surface Soil Sample Location
🟧	PCLE Zone
—	Water Line
⌖	Fire Hydrant
—	Sanitary Sewer Line
Ⓢ	Sanitary Sewer Manhole
—	Stormwater Line
STM	Stormwater Manhole
☐	Stormwater Inlet/Basin

N

Scale in Feet
0 100 200

Source of photo:
Imagery from NCTCOG, 2009 photography.
Source of utilities:
City of Frisco, GIS Department

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 1B.2

AFFECTED PROPERTY MAP SW AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

- - -	Property Owned By Exide
━	Undeveloped Buffer Property
◐	Monitoring Well Location
●	Surface Soil Sample Location
●	Eagan Way Soil Sample Location
▨	PCLE Zone
─	Water Line
⌖	Fire Hydrant
─	Sanitary Sewer Line
Ⓢ	Sanitary Sewer Manhole
─	Stormwater Line
STM	Stormwater Manhole
☐	Stormwater Inlet/Basin

NOTES:
1. See Figure 4C.1 for cross-section location map.

N

Scale in Feet
0 100 200

Source of photo:
Imagery from NCTCOG, 2009 photography.
Source of utilities:
City of Frisco, GIS Department

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 1B.3

AFFECTED PROPERTY MAP
SE AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

– – –	Property Owned By Exide
▬	Undeveloped Buffer Property
◐	Monitoring Well Location
●	Surface Soil Sample Location
●	Eagan Way Soil Sample Location
▨	PCLE Zone
—	Water Line
⊕	Fire Hydrant
—	Sanitary Sewer Line
Ⓢ	Sanitary Sewer Manhole
—	Stormwater Line
STM	Stormwater Manhole
□	Stormwater Inlet/Basin

NOTES:
1. See Figure 4C.1 for cross-section location map.

N

Scale in Feet
0 100 200

Source of photo:
Imagery from NCTCOG, 2009 photography.
Source of utilities:
City of Frisco, GIS Department

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 1B.4

AFFECTED PROPERTY MAP
NE AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2015	CHECKED: TNN	

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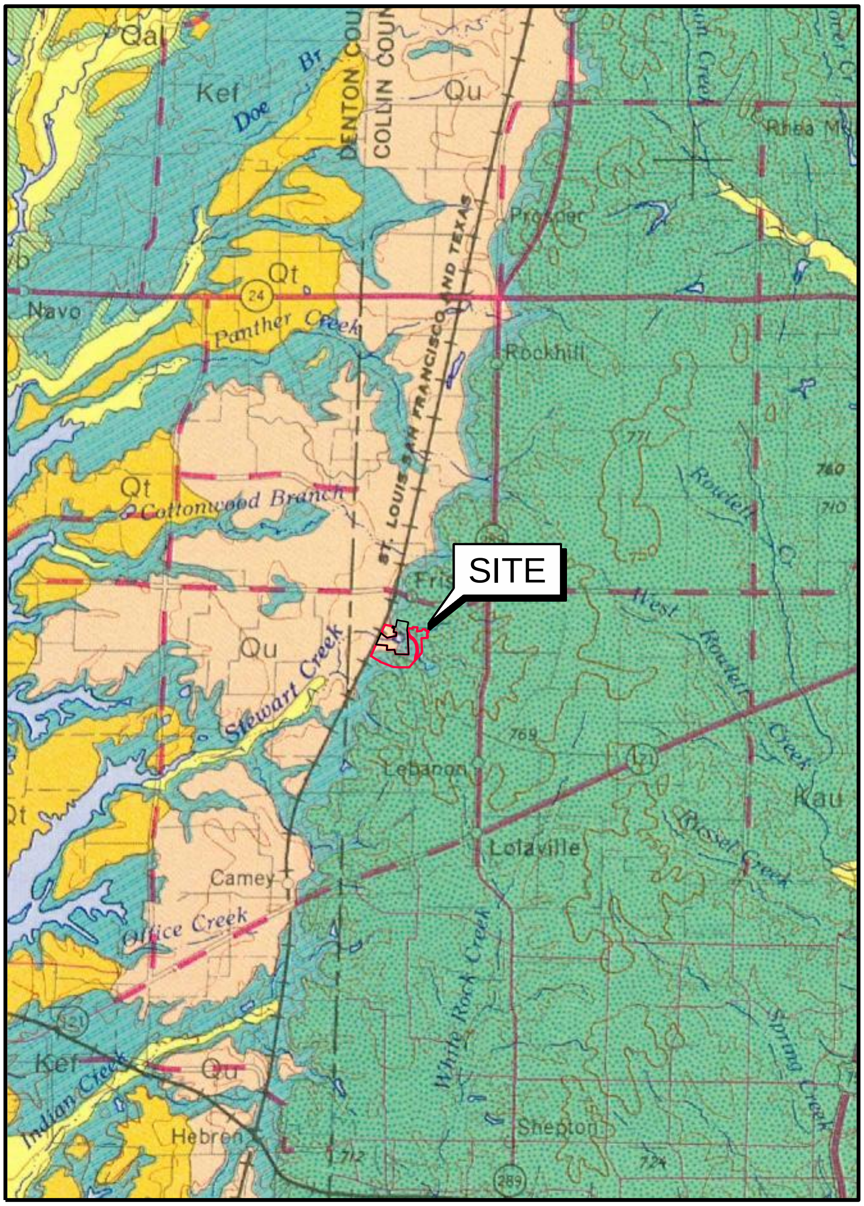
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

QUATERNARY

Holocene: 🟨 Qal

Pleistocene: 🟧 Qt

🟫 Qu

Alluvium (Qal),
fluviatile terrace deposits (Qt),
surficial deposits undivided (Qu)

CRETACEOUS

Upper Cretaceous

🟩 Kau
Austin Group

▨ Kef
Eagle Ford Formation

▨ Kwb
Woodbine Formation

N

Scale 1:250,000

0 3

Statute Miles

Source: Geologic Atlas of Texas, Sherman Sheet (McGowen et al., 1991).

EXIDE TECHNOLOGIES

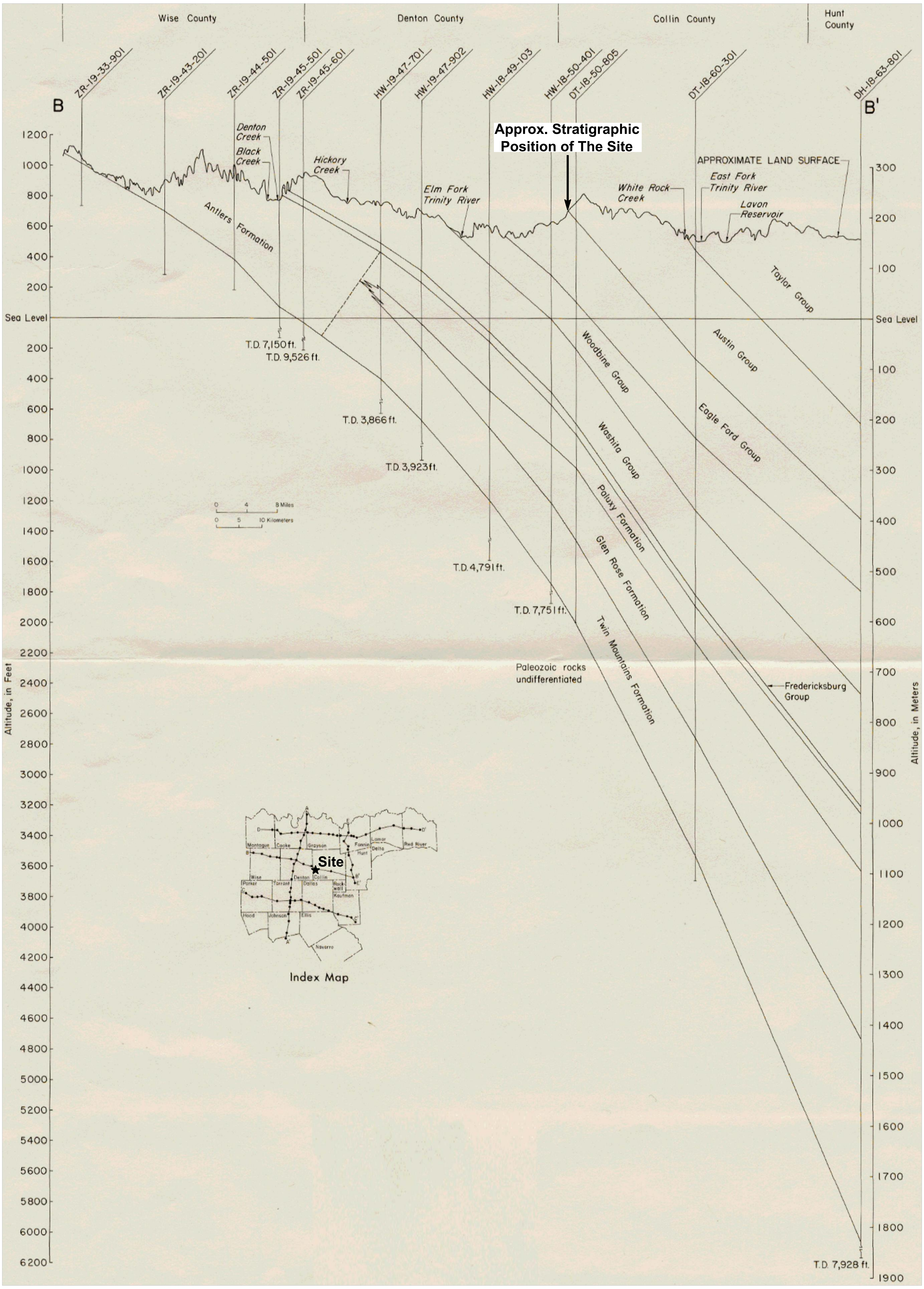
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 1C

REGIONAL GEOLOGIC MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 1D

REGIONAL GEOLOGIC CROSS SECTION

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Source:
After Nordstrom (1982).

2.0 EXPOSURE PATHWAYS AND GROUNDWATER RESOURCE CLASSIFICATION

2.1 Sources of Potable Water for On-Site Property and Affected Off-Site Properties

Potable water for the Site and properties within the vicinity of the Site is provided by the City of Frisco, which purchases treated surface water from the North Texas Municipal Water District (NTMWD). The primary source for the NTMWD water supply is Lavon Lake, which is located approximately 16 miles east of the Site (City of Frisco, 2013).

2.2 Field Receptor Survey

The area within 500 feet of the affected property is comprised of agricultural, commercial, industrial, and residential properties (Figure 2A). All of the developed properties located within the 500-foot field receptor survey radius receive potable water from the City of Frisco.

As required by TRRP, a survey of potential receptors within at least 500 feet of the affected properties has been completed. The 500-foot radius boundary is depicted on Figure 2A. Land within 500 feet of the affected property is contained almost entirely within the boundaries of the Site. Field receptor surveys of the area within the TRRP-required 500-foot affected property buffer and the Site vicinity beyond the 500-foot buffer was conducted February 22, 2012 and October 22, 2012 by Dr. Kirby Tyndall of PBW. Receptor survey photographs are provided in Figure 2B. In addition to the field receptor survey conducted by PBW, a supplemental field water well survey was conducted by Larry Eagan of Exide in October-November 2012 within approximately 0.5 miles of the FOP property. The findings of the field receptor surveys and supplemental water well survey are discussed in Section 2.4.

2.3 Records Survey

A water well records search was performed by Banks Environmental Data (Banks) on April 5, 2013 as part of the affected property assessment to identify water wells located within approximately 0.5 miles of the Site or FOP. As noted in the Banks report (Appendix 5), the following databases were accessed during the water well search:

- TWDB databases: Groundwater Data, Submitted Drillers Reports;
- TCEQ databases: Water Utility Database, Public Water Systems Database, Central Records;
- Local Groundwater Conservation District and Subsidence District Records; and
- USGS databases: National Water Information System.

2.4 Receptor Survey Results

The first receptor survey, conducted in February of 2012, focused primarily on developed properties in the vicinity of the Site. Developed land near the Site includes residential, industrial, and commercial properties. Several schools and parks with playgrounds are located within nearby residential neighborhoods: Grand Park is located approximately 3,500 feet southwest of the Site, First Street Park, which contains a community garden, is located approximately 2,750 feet due north of the Site, and Oakbrook and Hickory Parks are located in neighborhoods across 5th Street, east of the Site.

The second receptor survey, conducted in October of 2012, focused primarily on Stewart Creek, the North Tributary, and potential ecological habitat. Receptors of potential concern previously identified during the February 2012 survey were confirmed and/or further evaluated during the second receptor survey. On-site and downstream portions of Stewart Creek and the North Tributary are considered potential surface water receptors. During the October 2012 receptor survey conducted by PBW, no additional potential surface water receptors were identified. During the survey, the upstream segments of both Stewart Creek and the North Tributary, which run through developed neighborhoods east of the Site, were observed. Much of the base flow of Stewart Creek and the North Tributary is likely surface runoff from upstream irrigation systems. Surface water in the vicinity of the Site is not used for domestic or agricultural purposes. The ground surface within the survey area generally slopes toward the drainages of Stewart Creek and the North Tributary, and in the downstream direction of these creeks to the west.

The records survey and supplemental field water well survey identified five potential water wells within approximately 0.5 miles of the Site (Table 2A). The reported locations of the wells are shown on Figure 2C. Mr. Eagan presented the findings of the supplemental water well field survey in a memorandum dated December 18, 2012, which is reproduced in Appendix 5. As described therein, the memorandum also included the evaluation of a possible well location that was observed during the field survey. A summary of the findings for the water well field survey and the records survey is provided below:

- Based on State well records, Figure 2C well location No. 1 (TWDB State Well No. 18-50-8C) consists of one domestic well screened from 600 to 620 feet bgs. The reported location of the well is approximately 0.25 miles north of the Site, in the vicinity of the intersection of Page Street and John W. Elliot Drive. Well records indicate that the well is owned by Frisco Concrete, which is no longer in operation at this location. Donnie Mayfield, a City of Frisco employee who oversaw the demolition of three home sites located in the vicinity of the reported well location, was interviewed by Mr. Eagan on October 19, 2012. Mr. Mayfield indicated that the Frisco Concrete cement plant was formerly located in the vicinity of the demolished home sites. Lynn Floyd, of Floyd Architectural Millwork at 8734 John W. Elliot Drive, the only current business owner and operator in the vicinity of the reported well, was interviewed by Mr. Eagan on October 22, 2012. Mr. Floyd, who has operated a business at this address for 15 years, indicated that he was not aware of any active wells in the area. Evidence of an active well in the area was not observed during a walking survey performed by Mr. Eagan on October 22, 2012. Based on this evaluation, the well is believed to be destroyed.

- Based on State well records, Figure 2C well location No. 2 is a cluster of four public supply wells (TWDB State Well Nos. 18-50-802, 18-50-803,18-50-804, and Public Water System ID G0430005A) owned by the City of Frisco. Well records indicate that the four wells are completed in the Paluxy and/or Twin Mountains Formations with total depths ranging from approximately 1600 to 2800 feet bgs. The reported wells are located approximately 0.25 miles northeast of the Site, in the vicinity of Elm Street and 7thStreet. Mr. Eagan interviewed Mr. Mayfield of the City of Frisco on October 19, 2012 in regards to the wells. Mr. Mayfield indicated that two of the wells are capped and not currently in use by the City of Frisco, but could be utilized in an emergency. According to Mr. Mayfield, the other two wells have been plugged and abandoned.

- A possible well location was preliminarily identified during the February 2012 receptor survey by PBW and again by Mr. Eagan during the supplemental field water well survey. Specifically, a small concrete structure, possibly associated with a well, was observed at 8661 7th Street, located approximately 0.20 miles northeast of the Site (see Appendix 5). The owner of the property, Janet Lovelady, was interviewed over the phone by Mr. Eagan on November 7, 2012. Ms. Lovelady indicated that there is no active well currently located on the property, but that there had been a well on the property in the distant past that was believed to have caved in. As noted previously, the records search did not indicate a well at this location. Based on this evaluation, the observed concrete structure was determined to not be an active well.

There were no active water wells identified in the upper GWBU within 0.5 miles of the Site or FOP.

Potential terrestrial ecological receptors are discussed in the Screening Level Ecological Risk Assessment (SLERA) presented in Section 9. Potential aquatic ecological receptors at the Site are discussed as part of the overall evaluation of Stewart Creek provided in the FOP APAR (and the SLERA included therein).

The Phase I ESA prepared for the Site (SWG, 2013) identified evidence of several historical surface water features. These features include what appear to be former stock tanks or ponds, and a cistern located in the southern area of the Site (Tract B). These features have been dry since the investigation began. The intermittent pond identified on the north side of Tract B is located within a PCL exceedance (PCLE) zone and will be removed/addressed as part of the response action. The remaining stock tanks are located on the far south portion of Tract B are not expected to be affected based on the location and surface soil sampling data. A potential spring (see Figure 1A.1) was identified by SWG during the Phase I ESA (SWG, 2013). During the affected property assessment the area in the vicinity of the possible spring was dry and no spring was present. A backhoe was used to excavate the location of the potential spring to a depth of approximately five feet. With the exception of moist clay around two feet below ground surface, no saturated soils or evidence of a spring were encountered during the excavation activities (see Appendix 13 for photo of spring excavation).

2.5 Groundwater Resource Classification

Due to the size of the Site, the nature of the groundwater varies considerably across the Exide property. Some areas of the Site, such as the northwest corner (M Tract), have clayey gravels that produce some groundwater, while wells installed in other areas of the Site do not produce any groundwater. Based on the lack of groundwater usage in the vicinity of the Site, and generally low groundwater yield from wells installed at the Site, the groundwater is assumed to be a Class 2 Groundwater Resource for the purpose of this APAR.

2.6 Exposure Pathways

There are no previous or current immediate threats of exposure or actual exposure at the Affected Property. The land use at the Site is considered commercial/industrial due to an extensive history of agricultural production. The potentially complete exposure pathways identified as applicable for this affected property assessment are presented on Table 2C and are detailed below.

Surface Soil: The $^{\mathbf{Tot}}\mathbf{Soil}_{\mathbf{Comb}}$ and $^{\mathbf{GW}}\mathbf{Soil}_{\mathbf{Ing}}$ pathways are considered potentially complete for surface soils, defined as soils from ground surface to 5 ft bgs for industrial land use and 15 ft bgs for residential land use. For the purpose of the affected property assessment, surface soil is considered to be from ground surface to 15 ft bgs. The ${}^{GW}Soil_{Ing}$ pathway is the applicable soil-leaching to groundwater pathway since the uppermost water-bearing unit is considered a Class 2 groundwater resource for the purpose of this report.

Groundwater: The applicable groundwater pathways for the uppermost groundwater-bearing unit are $\mathbf{{}^{SW}GW}$, $\mathbf{{}^{GW}GW_{Ing}}$ and $\mathbf{{}^{Air}GW_{Inh\text{-}V}}$. The uppermost groundwater-bearing unit is considered a Class 2 groundwater resource for the purpose of this report.

Surface Water and Sediment: Surface water and sediment pathways have been considered due to the presence of Stewart Creek and associated tributaries that are present at the Site ($\mathbf{{}^{Tot}Sed_{Comb}}$ and $\mathbf{{}^{SW}SW}$).

Assessment levels and PCLs based on the potentially complete pathways outlined above are used in subsequent sections of this APAR to identify the extent of the Affected Property and to define PCL exceedance (PCLE) zones for each potentially affected environmental media.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

2.0 Tables

TABLE 2A
WATER WELL SUMMARY
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID on Figure 2C	Source Well ID	Owner of Record	Approximate Distance from Site (miles)	Screened Interval (feet bgs)	Casing Interval (feet bgs)	Cemented Interval (feet bgs)	Surface Completion Type	Total depth (feet bgs)	Completion Date	Producing Formation	Current water use	Current status	Data source
1	18-50-8C	Frisco Concrete	0.35	600-620	0-600	--	--	620	2/14/1980	Woodbine	NA	Destroyed	TWDB, field survey, and interviews
2	18-50-802	City of Frisco	0.35	1440-1630	0-1440	--	--	1632	1/1/1940	Paluxy	Unused	Inactive (possibly plugged and abandoned)[1]	TWDB, interview with City employee
2	18-50-803	City of Frisco	0.35	1440-2796	0-1440	0-1440	--	2796	3/22/1950	Paluxy and Twin Mountains	Unused	Inactive (possibly plugged and abandoned)[1]	TWDB, interview with City employee
2	18-50-804	City of Frisco	0.35	--	--	--	--	1680	1/1/1924	Paluxy	Unused	Plugged and abandoned	TWDB, interview with City employee
2	GO430005A	City of Frisco	0.35	--	--	--	--	2796	3/22/1950	Paluxy and/or Twin Mountains	Unused	Inactive (possibly plugged and abandoned)[1]	TCEQ, interview with City employee

Notes:

1. [1]-Donny Mayfield, City of Frisco employee, indicated that two of the four City of Frisco-owned wells have been plugged and abandoned and that the remaining two wells are capped and unused (see Section 2.4 for additional details).
2. "--" = information not available.
3. NA = not applicable. Bgs = below ground surface. TWDB = Texas Water Development Board
4. Well information is presented in well reports provided in Appendix 5.

TABLE 2C
COMPLETE OR REASONABLY ANTICIPATED TO BE COMPLETE EXPOSURE PATHWAYS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Exposure Pathway	Surface Soil[1]	Subsurface Soil[2]	Groundwater	Surface Water/ Sediment
$^{Tot}Soil_{Comb}$[3]	X	NA	NA	NA
$^{Air}Soil_{Inh\text{-}V}$	NA	NA		
$^{GW}Soil_{Ing}$ or $^{GW}Soil_{Class3}$	X	X		
$^{GW}GW_{Ing}$ or $^{GW}GW_{Class3}$	NA	NA	X	
$^{Air}GW_{Inh\text{-}V}$			X	
^{SW}GW			X*	
^{Sed}GW				
^{SW}SW or ^{Sed}Sed			NA	NA
Other (specify)				

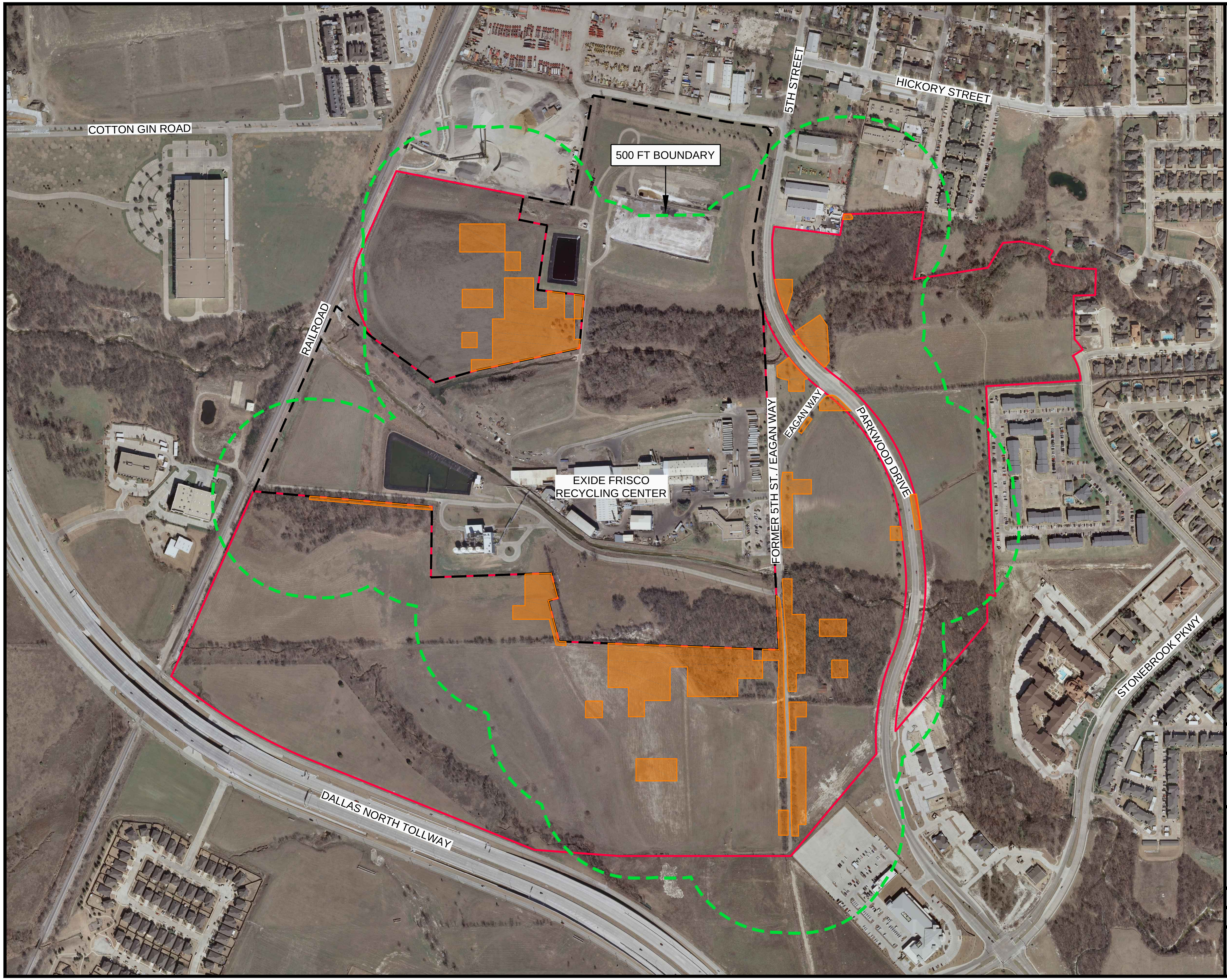
Notes:

1. Residential: soils from 0-15 feet deep, or to bedrock or groundwater-bearing unit if shallower.
2. The vadose zone beneath the surface soil extending to the groundwater-bearing unit, and including unsaturated zones between stratified groundwater-bearing units.
3. Residential: $^{Air}Soil_{Inh}\text{-}_{VP} + {}^{Soil}Soil_{Ing} + {}^{Soil}Soil_{Derm} + {}^{Veg}Soil_{Ing}$
4. NA = Not applicable. X = Complete or potentially complete exposure pathway.
5. * = The ^{SW}GW exposure pathway only applies in areas where there is a potential point of discharge of groundwater to surface water (i.e., in the near vicinity of Stewart Creek or the North Tributary).

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

2.0 Figures



EXPLANATION

- – – – Former Operating Plant Boundary (Approximate)
- ━━ Undeveloped Buffer Property Subject to The Voluntary Cleanup Program
- ▨ PCLE Zone (Affected Property)
- – – – Approximate 500-Foot Radius of Affected Property

N

Scale in Feet

0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 2A

POTENTIAL RECEPTORS MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: MAY, 2015	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

FIGURE 2B
FIELD SURVEY PHOTOGRAPHS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Photo No. 1 – Commercial development south of Site, Frisco Police Department in background, looking south.

Photo No. 2 – Commercial buildings southeast of Site, looking southeast.

FIGURE 2B
FIELD SURVEY PHOTOGRAPHS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Photo No. 3 – Agricultural property south of the Site, looking south.

Photo No. 4 – Green Supply Company located adjacent to the Site to the north.

FIGURE 2B
FIELD SURVEY PHOTOGRAPHS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

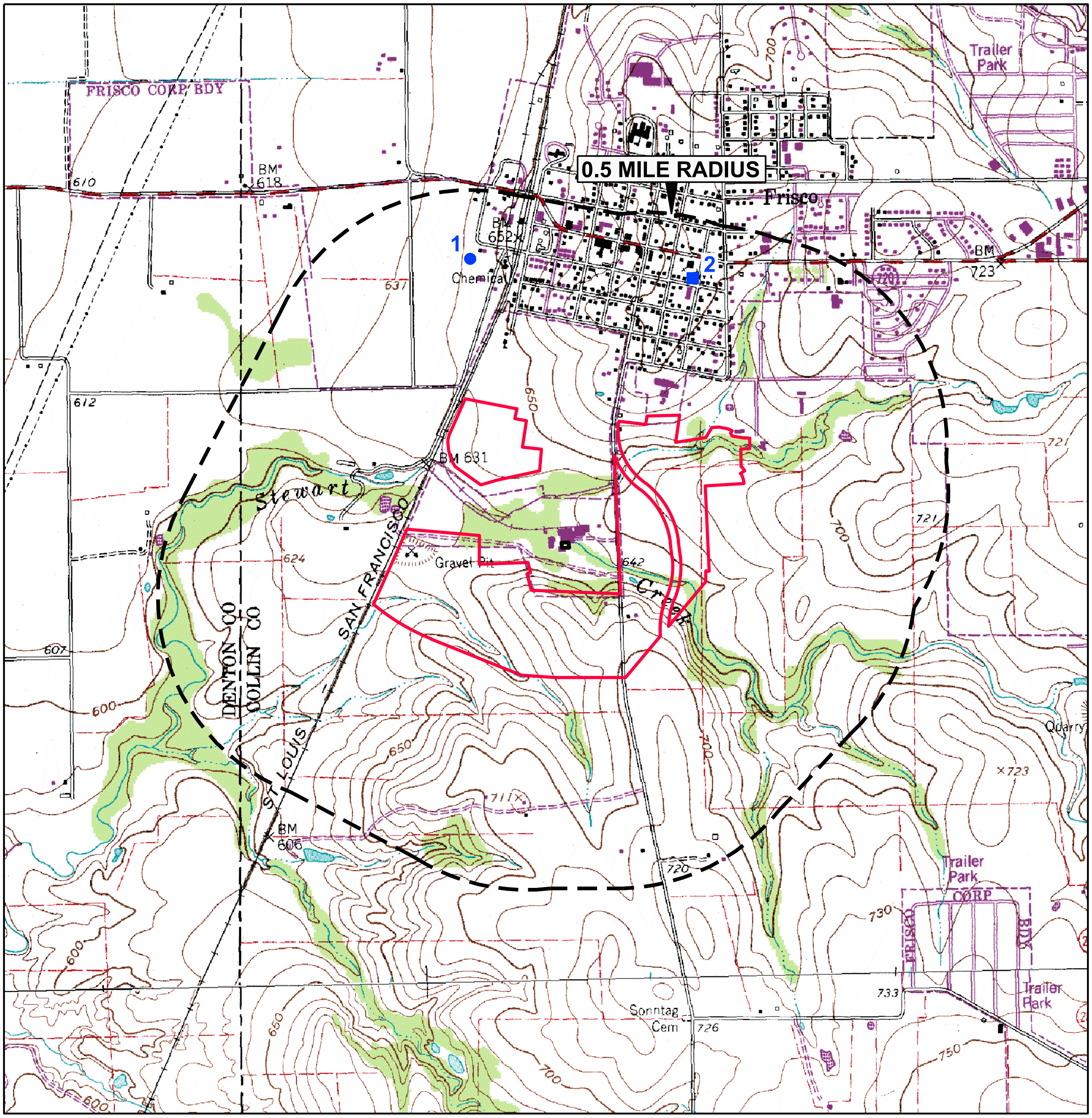
Photo No. 5 – Residential area located east of the Site, looking east.

Photo No. 6 – Martin Marietta Materials located north of the Site, looking northwest.

FIGURE 2B
FIELD SURVEY PHOTOGRAPHS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Photo No. 7 – Commercial development across railroad tracks to the west of the Site, looking west.



EXPLANATION

● Water Well
(Destroyed or Plugged and Abandoned)

■ Water Well Cluster
(Unused or Plugged and Abandoned)

━ Undeveloped Buffer Property Boundary

N

Scale in Feet

0 600 1200

SOURCE:
Base map from www.tnris.org, Frisco, TX 7.5 min. USGS quadrangle dated 1995.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 2C

WATER WELL MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

3.0 ASSESSMENT STRATEGY

The assessment strategy was structured around the findings of the Phase I ESA (SWG, 2013) and previous investigations conducted at the Site or adjacent FOP. The assessment strategy was reviewed with the TCEQ and refined based on input from TCEQ representatives during a meeting on March 27, 2013, and was further refined during a preliminary data review meeting with the TCEQ on April 26, 2013.

3.1 General Assessment Issues

3.1.1 Environmental Media Assessed

Soil and groundwater were assessed at the Site. Since the primary source of impacts at the Site is expected to be associated with aerial deposition from the adjacent FOP, soil samples were primarily collected from the upper few inches of soil. At areas with elevated surface soil concentrations, subsequent sampling from 3 to 12 inches below ground surface typically confirmed that impacts were limited to the upper few inches of soil in most cases. At areas with elevated soil concentrations in the 3 to 12 inch depth interval, deeper samples ranging from one to four feet below ground surface were collected to evaluate the vertical extent of lead and cadmium and confirm that lead and cadmium in surface soils do not extend throughout the vadose zone and do not extend to the underlying GWBU (if present). Traditional environmental investigation techniques were used to assess surface soil, subsurface soil, and groundwater at the Site. Specifically, surface soil was sampled using manual hand tools (trowels, hand augers, or slide-hammer drive samplers), deeper surface soil was sampled using direct-push drilling techniques, and groundwater was sampled using low-flow sampling techniques at permanent monitoring wells. At locations where the uppermost GWBU was encountered, wells were screened across the entire saturated thickness of the unit.

As presented in Section 2.0 of this APAR, the applicable exposure pathways for the Site, and the environmental media assessed to evaluate each applicable exposure pathway, are summarized below:

Potentially Complete Exposure Pathway	Environmental Media Assessed
$^{Tot}Soil_{Comb}$	Surface Soil
$^{GW}Soil_{Ing}$	Surface Soil
$^{GW}GW_{Ing}$	Groundwater
$^{Air}GW_{Inh\text{-}V}$	Groundwater
^{SW}GW	Groundwater
^{Sed}Sed	Creek Sediments
^{SW}SW	Surface Water

TRRP defines subsurface soil as being greater than 15 feet below ground surface for residential land use. Based on the data gathered during the investigation (i.e., impacts were vertically defined to the upper 5-6 ft of soil and/or groundwater was not impacted), subsurface soil (i.e., soil below a depth of 15 feet bgs, as defined by TRRP) was not included in the investigation.

3.1.2 Target COCs

COCs were selected for inclusion in the Site investigation based on knowledge of the Site history and the potential for impacts associated with off-site sources. In general, the COCs for evaluation of soil impacts were lead and cadmium, which were identified as the primary COCs associated with aerial deposition at the FOP. A broader range of analytes, including volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), pesticides, herbicides and an expanded list of metals (including arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, copper and tin) were analyzed in samples from certain areas of the Site to evaluate potential impacts from those COCs. Further discussion of those COCs, areas of soil assessment, and analytical results, are provided in Section 4. Similarly, groundwater was evaluated for a broad suite of analytes that included VOCs, SVOCs, TPH and the RCRA 8 metals. Further discussion of these COCs, areas of groundwater assessment, and analytical results, are provided in Section 5.

3.1.3 Background

Site-specific background concentrations were calculated for arsenic and lead in soil using background soil samples collected as part of the FOP investigation on March 29, 2012 and May 9, 2013. These samples were collected from within an area of the City of Frisco's Grand Park, located approximately 0.75 miles southwest of the Site near the intersection of Legacy Drive and Stonebrook Parkway. The background sample area for the FOP was approved by the EPA in a meeting on January 4, 2012. Background samples from the March 29, 2012 sampling event were also analyzed for cadmium, but a site-specific background concentration for cadmium was not calculated due to the high number of non-detect results for cadmium in these samples. A letter summarizing the background study was submitted to the TCEQ on May 31, 2013 (Appendix 8). As detailed in the letter, the representative site-specific background concentration calculated for arsenic was 15.9 mg/kg and the representative site-specific background concentration calculated for lead was 31.5 mg/kg. Since the findings of the background study for the FOP are applicable to this Site, the results of the study are used in this APAR and the letter report is included in Appendix 8.

3.2 Assessment Strategy

3.2.1 General Assessment Approach

Grid Sampling Due to the size of the Site and nature of the primary source of impacts (aerial deposition); surface soil samples were collected from across the site at non-judgmental sample locations. To accomplish this, a grid system was established for the Site and surface soil samples were collected at prescribed intervals within the grid system. The grid system was comprised of 1-acre centers and surface soils samples were collected from the center of the grids and at the intersections of the grid lines, resulting in a sample density of approximately one sample per half-acre across the entire Site. Initial samples were collected from the ground surface, typically from a depth of 0 to 3 inches. At locations where the sample from the 0 to 3-inch depth interval contained COCs at concentrations exceeding the assessment level, additional samples were collected to evaluate the horizontal and vertical extent of the impacts. The initial grid sampling investigation activities (March 2012) identified an area at the Site impacted by lead that did not appear to be related to aerial deposition. This area is located on the southern portion of the Site along Eagan Way/former South 5th Street. Initial investigation activities indicated that impacts in a ditch in this area extended along the roadway and to depths greater than 12 inches below ground surface. To evaluate the lateral and vertical extent of impacts in this area, direct-push soil borings were advanced on both sides of the roadway and additional surface soil samples were collected using hand tools.

Soil Exposure Area Selection The minimum soil exposure area for the property was selected based on the site-specific conditions that include:

- No existing residences and no platted residential properties currently exist on the property, and no future residences will exist due to the deed recorded development restriction for commercial/industrial use only.
- Although walking/bike paths and green belt areas may exist in the future for connectivity and environmental quality purposes, no recreational areas will be constructed on this property in the future.
- Extensive Phase 1 investigation activities and intensive sampling and delineation of potential source areas both on and off site of this property have been conducted.
- The conservative cleanup level selected (250 mg/kg for lead) is ½ of the residential direct contact (500 mg/kg) cleanup standard, resulting in significantly more detailed delineation of contamination.
- The identified contamination is relatively homogeneous over large areas of the parcel.
- Future development of the parcel will be controlled by City of Frisco zoning and development ordinances.
- The total number of soil samples analyzed in comparison to the total number of acres evaluated in this APAR is 643 samples to 170 acres.

Historically, this property has served primarily as "buffer" property around an operational industrial facility, the Exide Technologies Frisco Battery Recycling Center. Impacts at the Site are primarily related to the deposition of air-borne particulates emitted from the adjacent permitted Exide facility. Air-borne particulates from a stationary source typically disperse over a relatively large area in an approximately radial pattern around the source. Although ground concentrations resulting from deposition of air-borne particulates vary, they generally exhibit a relatively homogeneous distribution, with concentrations declining as distance from the source increases. Deposition is also influenced by atmospheric conditions, including wind direction and atmospheric stability class**,** and by the relative height and location of nearby structures and other obstructions. While these influences cause some degree of increased variability in depositional patterns beyond distance alone, the dynamic nature of this media results in a much more uniform pattern of migration than is typical for contaminant transport in soil or water media.

In addition to impacts from deposition of air-borne particulates emitted from the adjacent Exide facility, a thorough Phase 1 environmental site assessment was conducted at the Site to identify other potential sources of contamination. Intensive sampling in and around these potential sources has been conducted, in addition to grid sampling, to evaluate the extent of impacts at the Site. Furthermore, as noted above, the selection of a cleanup standard for lead that is ½ of the residential direct contact standard results in the delineation of a larger impacted area than would otherwise exist if the regulatory-based minimum required cleanup standard were used. The default TRRP Tier 1 residential total soil combined protective concentration level (PCL) for lead in surface soil is 500 mg/Kg. The parties have chosen to utilize a more conservative lead PCL of 250 mg/Kg for surface soil. This conservative standard resulted in additional sampling when results were greater than 250 mg/Kg. Using the residential standard in the existing regulatory guidance, lead concentrations below 500 mg/Kg would not require collection of additional samples.
Utilizing these assessment standards, Exide collected a total of 643 soil samples over 170 acres to determine the area and extent of impacts at the Site. This represents an average of 3.8 samples per acre, with sampling focused in areas either likely or demonstrated to be more contaminated.

The extensive surface soil sampling has identified and delineated somewhat homogeneous surface soil impacts in areas adjacent to the former Exide facility (see Section 4). Lead and cadmium concentrations originating from air deposition generally decrease with increasing distance from the Exide facility. In addition, impacts not associated with air deposition have been found and delineated on the parcel along Eagan Way/South 5th Street and impacts not related to Exide's lead smelting operations have been found in the area identified as the M Tract.

Any development on the property other than that allowed by the deed restrictions will require further evaluation and concurrence by the TCEQ prior to any such development being allowed on the property. Based on the factors described above, a 1/2 acre area exposure area – requiring a minimum of 2 samples per acre – has been selected as the appropriate soil exposure area to comply with the requirements of 30 TAC 350.51(l)(3).

Test Pit Excavations Specific areas identified as being potential environmental concerns in the Phase I ESA (SWG, 2013), and other areas of the Site showing evidence of disturbed ground, were also assessed for potential impacts. These areas included areas of disturbed land visible on historical aerial photos, berms around the Site, and areas where battery chips were observed on the ground surface. To evaluate these areas, an excavator was used to advance exploratory excavations (test pits) to determine what type of materials were used to backfill the exposed areas, determine if any non-native material was present in the berms, and to evaluate the possible presence of battery case chips in the subsurface. Test pits in the northwest area of the Site (M Tract) were excavated in response to TCEQ's request to evaluate possible impacts associated with runoff from potential off-site sources to the north identified in the Phase I ESA (Martin Marietta Material and Xtreme Iron/Rodman and Frisco Towing). The locations of the test pits were reviewed with TCEQ representatives during a project scoping meeting on March 27, 2013 and during a project data review meeting on April 26, 2013. Samples were typically collected from within the fill material and/or underlying soil and analyzed to evaluate the nature of the fill material and whether the underlying soil had been impacted. Samples collected from test pits in areas with known fill/debris material, or areas with potential impacts from off-site sources (M Tract area) were analyzed for VOCs, SVOCs, TPH and the RCRA 8 metals. Test pits excavated in areas potentially impacted by FOP activities were analyzed for lead and cadmium. Additional surface soil samples were collected in the vicinity of potential off-site contaminant sources as well if additional delineation was required (e.g., the on-site area adjacent to the off-site former Circuit Fab facility). An additional test pit was advanced at the location of the spring identified in the Phase I ESA (SWG, 2013) as described above in Section 2.4.

Monitoring Well Installation, Development, and Groundwater Sampling Monitoring wells were installed at 16 locations, including locations downgradient of potential off-site source areas, and within potential on-site source areas to evaluate groundwater conditions at the Site. Monitoring well locations were reviewed with TCEQ representatives during a project scoping meeting on March 27, 2013 and during a project data review meeting on April 26, 2013. Monitoring wells were located in areas where the anticipated potential for impacts were greatest, and downgradient from other off-site properties with potential environmental concerns. Groundwater samples were analyzed for a broad range of analytes to evaluate whether analytes from off-site sources had migrated onto the Site.

Specific monitoring well locations are shown on Figure 5B and the rationale for the location of each well is provided below (see well locations on Figure 5B):

VCP-MW-1 - Evaluation of potential impacts associated with the FOP South Disposal Area.
VCP-MW-2 – Evaluation of potential impacts associated with the FOP crystallizer and stormwater retention pond.
VCP-MW-3 and VCP-MW-4 – Evaluation of potential impacts associated with Stewart Creek, FOP rail area, and drainage ditch.

VCP-MW-5, VCP-MW-6, MW-28 – Evaluation of potential impacts associated with the FOP Class 2 landfill and solar evaporation pond.
VCP-MW-7 and VCP-MW-8 – Evaluation of potential groundwater impacts associated with elevated lead concentrations in surface soils.
VCP-MW-9, VCP-MW-10, VCP-MW-11, VCP-MW-12, and VCP-MW-13 – Evaluation of potential impacts associated with possible off-site sources (Green's Supply – LPST site, and Circuit Fab – facility fire).
MW-19 and MW-20 – FOP background wells installed during the 2012 FOP Site investigation.

Surface Water and Sediment Assessment Surface water and sediments at the Site are being evaluated within the overall assessment of Stewart Creek provided in the FOP APAR (in preparation).

3.2.2 Utilities

There are several underground utilities present at the Site, including a fiber optic corridor, natural gas distribution lines, water lines and sewer lines. Based on the results of the investigation (see Section 4), COCs and impacted soils do not typically extend deeper than 12 inches below ground surface and do not appear to be mobile in the subsurface. Lead impacts observed at the Site are most likely associated with aerial deposition from the adjacent FOP, a release scenario that would not be expected to result in impacts to subsurface utilities. Given this it is unlikely that underground utilities would be affected by Site COCs or act as preferential pathways for COC migration.

3.2.3 Off-Site Assessment

Soil impacts identified at the Site do not extend beyond the Exide property boundaries. However, delineation of potential impacts was not continued onto portions of the Exide property that were not the subject of this investigation (i.e., the FOP or downstream areas). In many cases the impacts identified in the investigation extend up to the boundary with the FOP area, which has been investigated as part of a different affected property assessment (PBW, 2013). Similarly, copper impacts identified near the former off-site Circuit Fab facility extend to the boundary with the adjacent property, which is the source of the impacts found on the Exide property.

Assessment Methods

Soil Sampling and Analysis Procedures Shallow soil samples were collected using manual hand tools or by direct push drilling methods. Shallow surface soil samples were collected by clearing vegetation from the area to be sampled, removing soil from the appropriate depth interval, placing the soil into plastic bags, homogenizing the sample in the bag, and then placing the sample into laboratory-supplied sample containers. All soil samples were split at the time of sampling with Southwest Geoscience, the consultant for the City of Frisco, CDC and FDC. Any excess soil was returned to ground where the sample was collected. Hand sampling equipment was decontaminated between each sample location by washing with phosphate-free liquid detergent and rinsing with deionized water. Deeper soil samples were collected continuously with depth using direct-push technology (Geoprobe) and the soil cores examined for chemical odor, staining, or other visual evidence of contamination. Due to the presence of the Austin Chalk outcrop in the southern portion of the Site, the depth of deeper soil samples collected in this area was limited to approximately three feet before bedrock was encountered. Boreholes advanced during sub-surface sampling were plugged to the surface with bentonite following sample collection. Samples collected from test pits were typically collected by taking a sample from the bucket of the excavator or directly from the sidewalls of the excavation.

For most samples the analytical program consisted of analysis for lead and cadmium. For samples collected from unidentified fill areas, the analytical suite included VOCs by EPA Method 8260, SVOCs by EPA Method 8270, total petroleum hydrocarbons by TCEQ method TX1005, and metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by EPA Method 6000/7000 series. A soil sample was collected from a soil-filled cistern located on the southern boundary of the Site, near the southern termination of former South 5th Street (see Figures 4A.9 and 4A.10). This sample was composited from soil excavated from within the cistern from two feet (soil surface) to approximately seven feet below the surrounding ground surface. The analytical suite for this sample was expanded to include pesticides and herbicides due to historical agricultural activity in the area. Analyses were conducted in accordance with the appropriate EPA SW-846 methodologies by Test America Inc., located in Houston, Texas or by Pace Analytical in Allen, Texas.

Monitoring Well Installation, Development, and Groundwater Sampling Procedures Monitoring wells were constructed of 2-inch flush-threaded PVC with 0.010-inch slotted screen generally installed from the top of the Eagle Ford Shale unit to at least the top of the observed saturated zone. Wells were screened in this manner to capture any saturated zones present and to ensure the top of the water table was within the screen interval for wells installed in the vicinity of a former off-site fuel release. A threaded PVC cap was placed at the bottom of each well screen. A filter pack of 20/40 silica sand (or equivalent) was installed from the bottom of the screened interval to approximately 2 feet above the well screen. The filter pack was sealed with a minimum of two feet of bentonite clay and completed to ground surface with cement. Surface completions consisted of above-grade protective steel casing stick-ups or flush-grade well vaults. Each permanent monitoring well sampled during the APAR investigation was surveyed by a licensed, professional surveyor using the Texas State Plane coordinate system, North American Datum of 1983 (NAD 83), and North American Vertical Datum of 1988 (NAVD88). Well construction logs are provided in Appendix 2 and State monitoring well records are provided in Appendix 6.

After installation, monitoring wells were developed by surging and pumping or bailing the well until physical parameters (e.g., temperature, conductivity, and pH) had stabilized or the well went dry (wells that went dry were typically allowed to go dry and recharge several times during development). Development consisted of repeatedly pumping the wells dry or using a disposable bailer to surge the well and remove silt from the filter pack. Groundwater samples were collected using low-flow sampling techniques with dedicated or disposable sample tubing. To collect a sample, a peristaltic pump and flow-through cell was used to pump groundwater from the well at a low flow rate, typically between 0.1 and 0.5 liters per minute, and monitor the groundwater parameters for stabilization. Monitoring wells in which water levels did not stabilize were pumped dry and were sampled the following day with no additional purging. Groundwater samples analyzed for total metals were typically not filtered in the field. However, groundwater samples collected for total metals analyses during the APAR investigation were filtered with a 10 micron filter if turbidity measurements were above 10 NTUs with the exception of the samples collected in January 2014 which were not filtered to remove turbidity. In accordance with generally accepted procedures for the collection of water samples for dissolved metals analysis (TCEQ, 2012a; Boghichi, 2003), groundwater samples collected for dissolved metals analysis during the APAR investigation were filtered in the field using a 0.45 micron filter. Groundwater samples were collected in method-specified containers with appropriate preservatives and placed on ice pending transport to the laboratory under chain-of-custody control. Static water levels were gauged at each well several times over the course of the assessment. Gauging of water levels in Site monitoring wells was typically conducted as part of overall gauging activities that included wells associated with the nearby FOP area. Potentiometric surface maps prepared for this assessment include data for all wells in the vicinity of the

Site in order to provide a more accurate understanding of the indicated groundwater flow rates and directions.

The initial analytical program for groundwater samples included: VOCs, SVOCs, TPH and the RCRA 8 metals. During the second groundwater sampling event conducted in January 2014, monitoring wells VCP-MW-8, VCP-MW-9, VCP-MW-10, VCP-MW-12 and VCP-MW-13 were sampled and analyzed for arsenic and MTBE as these were the compounds that had previously exceeded the RALs in the area (VCP-MW-9 (arsenic) and VCP-MW-10 (MTBE)). Wells VCP-MW-12 and VCP-MW-13 had recently been installed prior to the sampling event for the purpose of evaluating the extent of arsenic and MTBE. Monitoring well VCP-MW-11 did not produce sufficient water for sampling during the initial groundwater sampling activities and was subsequently sampled during the January 2014 sampling event. The groundwater sample collected from monitoring well VCP-MW-11 was only analyzed for TPH and VOCs due to limited sample volume. Wells VCP-MW-9 and VCP-MW-10 were sampled again in April 2015 to evaluate the potential presence of arsenic and MTBE, respectively. An additional quarterly sampling event is proposed at wells VCP-MW-9 and VCP-MW-10 to further evaluate the presence of arsenic and MTBE. Analyses were conducted in accordance with the appropriate EPA SW-846 methodology by Test America Inc., located in Houston, Texas.

3.3 Investigation Derived Waste

Soil and monitoring well purge/development water investigation-derived waste (IDW) was initially stored in 55-gallon steel drums at the FOP pending disposition. Purge/development water IDW was disposed of at the FOP Wastewater Treatment Facility. Soil IDW was characterized and removed from the FOP and managed in accordance with state and federal regulations. All IDW generated during the APAR investigation has been removed from the FOP or processed on-site (in the case of purge/development water). The waste characterization and disposition documentation for the soil IDW from the APAR investigation is provided in Appendix 12 of this APAR. IDW generated during the additional investigation activities conducted in January 2014 and April 2015 have been consolidated with other IDW at the FOP pending disposition.

3.4 Data Quality

The laboratory analytical methods utilized for the analysis of the COCs outlined in Section 3.1 were appropriate and commonly utilized USEPA SW-846 methodologies for the type of COCs in each analysis group. The laboratory's method quantitation limits (MQLs) for methods used were less than the TRRP PCLs for the primary COCs at the Site, and were less than the TRRP PCLs in most cases for the other Site COCs (see Tables 4A and 5A). COCs with laboratory MQLs greater than their respective TRRP PCLs were benzidine and N-nitrosodimethylamine (soil and groundwater). Appropriate quality assurance samples were collected during sampling events, including field duplicates, matrix spike and matrix spike duplicates, equipment, field, and trip blanks. All data generated during the investigation activities were evaluated for usability in accordance with TRRP-13 guidance *Review and Reporting of COC Concentration Data under TRRP*. Data usability summaries are included with the analytical data provided in Appendix 10.

3.4.1 Investigation Data Usability Summary

Data collected for the affected property assessment were validated in accordance with TRRP data usability requirements. A review was completed on 100% of the environmental samples to determine conformance with the requirements of the TRRP guidance document, *Review and Reporting of COC*

Concentration Data (RGG-366/TRRP-13) (TCEQ, 2010b) and for adherence to project objectives. Results of the review are presented in data usability summaries (DUS) by sample media and month (Appendix 10).

Criteria used for the data usability review are as follows:

- Inorganics: 70-130% spike recovery (and not less than 30% or data are rejected) and ±MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13.

- Organics: 60-140% spike recovery (and not less than 10% or data are rejected) and ±MQL difference or 40% RPD (for laboratory duplicates) as recommended in TRRP-13.

- Soil Samples: ± 3x MQL difference (if either result is less than 5x MQL) or 50% RPD (for field duplicates) as recommended in TRRP-13.

- Groundwater Samples: ± 2x MQL difference (if either result is less than 5x MQL) or 30% RPD (for field duplicates) as recommended in TRRP-13.

If an item was found outside of the review criteria, the reviewer applied a data qualifier and bias code to the results for the affected samples in accordance with TRRP-13. Per TRRP-13, the qualifiers and codes are defined as follows:

U	Not detected; the analyte was not detected >5x (10x for common contaminants) the level in an associated blank and thus should be considered not detected above the level of the associated numerical value (i.e., the reported sample concentration).
UJ	Estimated data; the analyte was not detected above the reported sample detection limit (SDL). The numerical value of the SDL is estimated and may be inaccurate.
J	Estimated data; the analyte was detected and identified. The associated numerical value (i.e., the reported sample concentration) is the approximate concentration of the analyte in the sample.
R	Rejected data; the result is unusable. Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.
X8	The laboratory is not NELAC accredited under the Texas Laboratory Accreditation Program for this analyte in this matrix analyzed by this method. The TCEQ offers accreditation for this analyte in this matrix by this method, but the laboratory is not accredited for this analyte in this matrix by this method. The analyte result is validated and reported as part of a suite of analytes for the method.
H	Bias in sample result is likely to be high.
L	Bias in sample result is likely to be low.

When an option exists to assign two different flags, the flag higher in the data quality hierarchy was assigned (R > U > J > JL/JH for detects and R > UJ > UJL for non-detects).

All analytical results presented in the tables and figures of this report include the data qualifier, if any was applied. The data usability summaries provided in Appendix 10 list all of the qualified results along with the specific reasons for qualification.

Results with no qualification and those qualified as estimated are of acceptable quality for the intended use. Some results are qualified as estimated (J, JH, JL, UJ or UJL) due to minor QC issues, primarily poor laboratory duplicate precision for metals in the soil samples. This is not considered unusual due to the inherent variability of soil samples. Note that a data qualifier of J may be assigned solely because the analytical result was qualified by the laboratory as an estimated concentration between the sample detection limit and the quantitation limit. The concentration reported for detects or the reporting limit for non-detects is considered estimated with a high bias (JH flag), low bias (JL or UJL flag), or unknown bias (J or UJ flag).

Results that are qualified as not detected because the result is associated with a contaminated blank (U) are also useable. The analyte should be considered not detected at or above the reported concentration for the sample location.

Results that are rejected (R) are not useable. The non-detect results for 2,4-dinitrophenol, 3.3'-dichlorobenzidine, 3-nitroaniline, benzidine, and hexachlorocyclopentadiene for five samples (CF-1, CF-1 Dup, CF-2, CF-3, and CF-4) are qualified as rejected (R) because the analyte was not recovered in the matrix spike or matrix spike duplicate (0% recovery).

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

3.0 Tables

TABLE 3A
UNDERGROUND UTILITIES
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Utility Type	Construction Material	Backfill Material	Approximate Depth (ft)	Utility company Name	Potential Migration Pathway?		Affected?	
					Yes	No	Yes	No
Fiber Optic Cable	NA	Unknown	4-5	Various		x		x
Natural Gas	Unknown	Unknown	Unknown	Atmos Energy		x		x
Sanitary Sewer	Unknown	Unknown	Unknown	City of Frisco		x		x
City Water	Asbestos concrete	Unknown	Unknown	City of Frisco		x		x

Notes:
1. Utilities present at the Site are shown on Figures 1B.1 through 1B.4.
2. City of Frisco utility department was contacted for information on City utilities.
Information on City utilities was provided by Dan Franke and Nick Miller 12/20/2013.

4.0 SOIL ASSESSMENT

4.1 Derivation of Assessment Levels

Surface soil and subsurface soil assessment levels were based on the following exposure pathways;

Surface Soil: The $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ pathways are considered potentially complete for surface soils, defined as soils from ground surface to 15 ft bgs for residential land use. The $^{GW}Soil_{Ing}$ pathway is the applicable soil-leaching to groundwater pathway since the water-bearing unit is considered a Class 2 resource (see Section 2.5).

Subsurface Soil: Impacts observed during the site investigation did not extend below 15 ft and thus subsurface soils (defined in TRRP as soil below 15 feet when comparing to residential criteria) were not evaluated as part of this assessment.

The assessment levels used for this assessment were based on a 30-acre source area, residential land use, and a Class 2 groundwater resource except for lead (used a more conservative assessment level of 250 mg/kg). The derivation of the assessment levels for the target COCs is described below:

The assessment level for cadmium is the lower of the PCLs for the $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ pathways. The PCL for the $^{Tot}Soil_{Comb}$ pathway is 52 mg/kg (TRRP Tier 1 PCL) and the PCL for the $^{GW}Soil_{Ing}$ pathway is 103 mg/kg (Tier 2 residential PCL, see Appendix 9). The assessment level for cadmium is the lower of these two values, or 52 mg/kg.

The TCEQ TRRP assessment level for lead is the lower of the PCLs for the $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ pathways. The PCL for the $^{Tot}Soil_{Comb}$ pathway is 500 mg/kg and the PCL for the $^{GW}Soil_{Ing}$ pathway is 958 mg/kg (Tier 2 residential PCL). The assessment level for lead is the lower of these two values, or 500 mg/kg. A more conservative assessment level of one half of the TRRP Tier 1 $^{Tot}Soil_{Comb}$ PCL (250 mg/kg) has been established for the Site in an agreement between the VCP Applicants. TCEQ TRRP assessment levels for other analytes are listed in Table 4A.

Tier 2 PCL values for the $^{GW}Soil_{Ing}$ pathway were developed for several COCs. Tier 2 PCLs were developed using Site-specific soil properties and TRRP default values where appropriate. A summary of the Tier 2 PCL development procedure and results is provided in Appendix 9.

A Tier 3 $^{GW}Soil_{Ing}$ value for arsenic of 29.9 mg/kg was established based on data obtained using the Synthetic Precipitation Leaching Procedure (SPLP) which evaluates the potential for a COC to leach from the soil to underlying groundwater (see Section 4.2.5). Table 4D.11 presents the results of SPLP tests performed on soil samples containing elevated arsenic concentrations observed at various areas around the Site. All SPLP sample results were below the $^{GW}GW_{Ing}$ PCL of 0.01 mg/l for concentrations as high as 29.9 mg/kg. The assessment level for arsenic is the lower of the PCLs for the $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ pathways. The PCL for the $^{Tot}Soil_{Comb}$ pathway is 24 mg/kg (TRRP Tier 1 PCL), therefore 24 mg/kg is the assessment level for arsenic.

To demonstrate that groundwater is not impacted by lead concentrations in Site soils, lead was vertically delineated to the Site-specific background lead concentration at the majority of areas with the highest observed lead concentrations in soil. The specific areas selected for vertical delineation of lead concentrations in soil were reviewed with representatives from the TCEQ during a meeting on April 26, 2013. The site-specific background concentration established for lead is 31.5 mg/kg (see Appendix 8).

4.2 Nature and Extent of COCs in Soil

Soil sampling results indicate exceedances of the applicable assessment levels in surface soils at multiple locations around the Site. Surface soil sampling results are summarized on Figures 4A.1 through 4A.12 and discussed below.

4.2.1 Site-wide/Grid Sampling Results

Since the primary source of impacts at the Site is expected to be associated with aerial deposition of cadmium and lead from the FOP, evaluation of surface soils over the entire Site was a significant part of the investigation. In general, shallow soil samples (0-3 inches below ground surface) for analysis of lead and cadmium were collected in the center of one-acre grids and also at the intersections of the one-acre grid lines. Deeper soil samples were collected from the 3-6 inch and 6-12 inch below ground surface depth intervals (and occasionally deeper) at 51 locations where the 0-3 inch below ground surface interval had lead concentrations exceeding 250 mg/kg. At all of these locations the concentration of lead decreased significantly within the 3-6 inch, 6-12 inch, or 1-2 foot depth interval, frequently to below the background level of 31.5 mg/kg. The concentration of lead decreased to below the assessment level of 250 mg/kg or the background concentration of 31.5 mg/kg at 41 sample locations where deeper samples were collected. Cadmium was typically analyzed along with lead and was not found to exceed the assessment level at any locations. These deeper samples indicate that the impacts associated with aerial deposition are typically limited to the upper few inches of the soil column. Vertical delineation of impacts is typically required to the background concentration, or to the assessment level if groundwater in the area has been evaluated (i.e., a monitoring well is installed nearby). In the area along Former South 5th Street, the surface soils are underlain by a limestone outcrop which was considered the vertical extent of soil impacts. Vertical delineation of lead (to either the background or assessment level) is demonstrated by samples collected from the following locations (see Figures 4A.5 through 4A.9, and Figure 4A.11, sample interval is feet bgs):

Vertical delineation to background:

M Tract Area – BC-8 (4-5), C-9 (0.5-1), D-8 (0.5-1), D-9 (0.5-1), E-8 (0.25-0.5), E-9 (2-3), E-10 (0.5-1), E-10E (2-3), E-10N (2-3).

Southwest Area – HI-4 (1-2), HI-5 (1-2), HI-6 (1-2), K-10 (2-3).

Southeast Area (includes locations along former South 5th Street described below) – KL-15 (2-3), L-17 (0.5-1), L-17W (1-2), M-12 (1-2), M-12N (1-1.5), M-14S (1-2), M-14W (1-2), M-17 (0.5-1), N-11 (2-3), N-12 (2-3), N-16 (2-3) O-15 (1-2), O-15A1 (1-2), 0-15A6 (2-2.5), O-15A7 (1-2), O-15A9 (0-1), O-15A12 (0-1), O-15A16 (1-1.75).

Northeast Area (includes test pits and Circuit Fab Area) –F-16 (0.5-1), F-17 (0.5-1), HI-15 (2-3), HI-15B (2-3), I-18 (0.5-1).

Vertical delineation to assessment level: (samples from areas where monitoring wells were installed):

M Tract Area – D-10 (0.25-0.5).

Northeast Area (includes test pits and Circuit Fab Area) – E-16 (0.5-1), TP-7 (2), TP-9 (5-6).

Vertical delineation to bedrock:

Southeast Area locations along former South 5th Street - L-16A4 (1-1.5), M-16A1 (1-2), M-16A3 (1-2).

Sample results representing vertical delineation are indicated by an asterisk on Tables 4D.1 through 4D.4, 4D.6 and 4D.8.

The horizontal distribution of these areas was further evaluated in most cases by additional surface soil sampling to the north, south, east and west of the elevated concentrations. Lead impacts measured in surface soil at grid-based sampling locations are shown on Figures 4A.5 through 4A.8 and are typically associated with areas immediately adjacent to the FOP. Maximum lead concentrations in these areas are typically around 500 mg/kg. Cadmium concentrations detected during the investigation did not exceed the assessment level of 52 mg/kg.

Several grid samples in the M Tract Area were analyzed for arsenic to evaluate the lateral extent of arsenic observed at test pits TP-10 and TP-11. Nine additional samples were collected within a 1/8th acre exposure area around grid sample location DE-6 to determine a representative arsenic concentration at this location. The representative arsenic concentration determined for the DE-6 exposure area is 24 mg/kg. Additional samples were also collected south of TP-10 to delineate arsenic affected soils to the south. Sample results are provided on Table 4D.10 and a discussion of the representative concentration determination is provided in Appendix 8. A summary of the sample locations and arsenic results are presented on Figure 4A.12.

The results of eight grid samples collected during the initial investigation activities in 2012 were flagged as estimated values with a potential low bias due to quality control issues. These locations were re-sampled in January 2014 and analyzed for cadmium and lead. Both results are presented in this report and the more recent data used to determine whether impacts are present. The eight locations resampled in January 2014 are:

M-14 (3-6”)
N-11E (0-3”)
M-17W (0-3”)
L17N (0-3”)
G-16S (0-3”)
E-9 (6-12”)
D-9N (0-3”)
D-8E (0-3”)

4.2.2 Former Eagan Way/South 5th Street Sampling Results

Elevated lead concentrations were detected in soil samples collected from the east and west sides of former South 5th Street in the area located south of the FOP and south of Stewart Creek. The source of these lead concentrations is not known; however, this occurrence is not associated with an ongoing source, and has been delineated to a discrete area. Lead concentrations in these soils were observed to range as high as 9,640 mg/kg (location M-16A3, 0-3” sample), with concentrations rapidly decreasing with depth (e.g., lead concentration decreased from 9640 mg/kg to 46.4 mg/kg in the 1-2 ft bgs sample at M-16A3). This portion of the Site consists of a limestone outcrop of the Austin Chalk and typically only has one to two feet of soil overlying the limestone, limiting the vertical extent of these impacts. A monitoring well, VCP-MW-7, was installed approximately 10 ft into the limestone at location M-16A3 to evaluate potential impacts to underlying groundwater, however, shallow groundwater was not encountered in this area and the monitoring well has remained dry. The extent of the lead-impacted soils associated with former South 5th Street is presented on Figure 4A.7.

The City of Frisco's consultant, SWG, analyzed 12 split soil samples collected in this area for lead and cadmium using the TCLP method. Results of the TCLP analyses are presented on Table 4D.11, laboratory data and data usability summaries are provided in Appendix 10. The TCLP lead results for these samples ranged from 0.074 mg/l to 9.1 mg/l. The following samples were analyzed using the TCLP method:

BC-8 (0-3")
F-17 (0-3")
HI-15 (1-2)
HI-6 (0-3")
HI-7 (0-3")
L-16A1 (0-3")
L-16A2 (0-3")
M-16A1 (0-3")
M-16A3 (0-3")
O-15 (0-3")
OP-12 (0-3")
TP-7 (1')

4.2.3 Test Pit Investigation

Areas around the Site with the potential to contain non-native fill or waste materials were evaluated through the use of exploratory excavations. A small backhoe was used to excavate suspected fill areas, berms, and areas of disturbed ground visible in historical aerial photos. The excavated material was evaluated for evidence of waste or other non-native material and samples of fill material and/or underlying soil were submitted for laboratory analysis. Test pit locations and sample results are presented on Figures 4A.9 and 4A.10, and a summary of the test pit investigation results is provided below:

Undocumented Fill in Tracts G and J – A 1984 aerial photo (Appendix 17) indicates an area of land disturbance on these tracts. The Phase I ESA (SWG, 2013) and subsequent walking surveys of the area indicate the presence of debris (concrete pipe, broken asphalt, wire, glass etc.) at this location. Six test pits were advanced in this area (TP-1, TP-5, TP-6, TP-7, TP-8, and TP-9). Soils samples were collected from within the upper few feet of soil (within the debris/fill area) and from the native soils below the debris/fill. Samples were analyzed for VOCs, SVOCs, TPH and the RCRA 8 metals. The area typically contained an approximately one foot thick layer of cover soil underlain by debris mixed with clay fill soil approximately two to three feet thick. The debris material generally consisted of concrete, brick, wire and glass mixed with clay fill soils (see Appendix 13 for photos of excavated material). Occasional battery chips were observed in several of these test pits around one ft below ground surface, typically below the cover soil but on top of the debris material. In addition to COC concentration data, the presence of battery chips in the debris material has been used as a criteria for determining PCL exceedance areas.

Lead concentrations exceeded the assessment level of 250 mg/kg at two test pit locations, TP-7 (1 ft), and TP-9 (5 ft), (see Figure 4A.9). No other COCs were detected in the test pits at concentrations exceeding their respective RALs. Groundwater monitoring wells installed in this area (VCP-MW-8 and MW-19) did not contain any COCs at concentrations exceeding the applicable groundwater assessment levels (see Section 5). Based on the groundwater results for this area, the assessment level (rather than the site-specific background concentration) was used as the basis for vertical delineation of lead impacts at these locations. The TP-7 exceedance was vertically delineated to a depth of two feet and the TP-9 exceedance was vertically delineated to a depth of five feet as shown on Figure 4A.9.

Areas Adjacent to Drainage Ditch and Railroad Tracks in Tract M – Test pits were advanced at four locations in the M Tract area adjacent to a drainage ditch and railroad spur that is present along the west and southwest boundary of the M Tract portion of the Site (pest pits TP-10 through 13). These excavations were advanced to evaluate the potential for the drainage ditch or the railroad activities to contribute impacts to this portion of the Site. Samples were collected from one foot below ground surface at each test pit and analyzed for VOCs, SVOC, TPH and the RCRA 8 metals.

Soils observed in the area of these test pits were typically dark brown silty clays. The moisture content ranged from wet/saturated in the south (TP-10 and 11), becoming moist to the north (TP-12) and transitioning to a light brown sandy silt, dry, with some clay, at the northernmost test pit (TP-13). Non-native/fill material was not observed in any of the test pits with the exception of some old silt fencing found in TP-13 at approximately one foot below ground surface. No visible indications of potential impacts associated with the adjacent drainage ditch or rail line were observed. Arsenic was reported in soil samples from TP-10 and TP-11 at concentrations of 29.9 mg/kg and 24.5 mg/kg, respectively. Additional surface soil samples were collected in the vicinity of these test pits, and arsenic concentrations from nearby grid samples were obtained to evaluate the extent of the arsenic and determine representative arsenic concentrations in areas with individual arsenic concentrations exceeding the assessment level (see Figure 4A.12). A representative arsenic concentration of 17.79 mg/kg was established at TP-10 and a representative arsenic concentration of 21.23 was established at TP-11, below the assessment level established for the Site. Details for calculation of the representative arsenic concentrations are provided in Appendix 8.

Berm Areas – Numerous berms are present at the Site east of the FOP, generally along Parkwood Drive and further east. The berms located on the eastern portion of the Site were created during the development of the adjacent property as a residential area (apartment complex), according to former Exide employees. Berms closer to the FOP, along Parkwood Drive, are landscaping features created using soils from the Site in the vicinity of the berm, according to former Exide employees. Three test pits (TP-2, TP-3, and TP-4) were advanced into the primary berm located west of Parkwood Drive to evaluate whether waste was present in the berms and to assess whether elevated lead and cadmium were present in soils used to create the berm. The berms were generally comprised of dark gray weathered shale (TP-2) or dark brown silty clay (TP-3 and TP-4) at the surface (0-1 ft) and dry, light gray to brown sandy clay below (see Appendix 13 for photos of excavated material). One battery chip was observed at a depth of approximately six inches below ground surface at TP-3. With the exception of the one battery chip described above, non-native materials were not observed in the berms. The area where the battery chip was found will be considered a PCL exceedance zone. Soil samples were collected from within the fill material at each test pit location and analyzed for lead and cadmium. Lead and cadmium concentrations observed in samples collected from the berms were below the assessment levels (maximum lead concentration 43.3 mg/kg, maximum cadmium concentration 0.407 mg/kg) as indicated on Figure 4A.9. .

Eight test pits (TP-33 through TP-40) were excavated in a large berm and one smaller berm present on the eastern edge of the Site adjacent to an apartment complex to evaluate whether non-native material or impacted soils were present. The berms were typically comprised of approximately one foot of brown silty clay soil underlain by gray broken limestone material (see Appendix 13 for photos of excavated material). Non-native material was not observed in any of these test pits with the exception of a piece of rebar/steel at location TP-38 at a depth of 18 inches. Soil samples were collected from each test pit at a depth of approximately one foot bgs, with a deeper sample collected if limestone was not encountered. Lead and cadmium concentrations observed in samples collected from the berm were below the assessment levels (maximum lead concentration 33.5 mg/kg, maximum cadmium concentration 0.504 mg/kg) as indicated on Figure 4A.9.

<u>*Land Disturbance Area in Tracts C and D*</u> – A 1934 aerial photo (see Appendix 17) indicates an area along former South 5th Street that appears to be exposed/disturbed ground. Three test pits (TP-14, TP-15, and TP-16) were advanced in this area to evaluate any potential fill placed here. The shallow soils in this area were typically comprised of yellowish gray shaley clay and weathered shale/limestone, consistent with the native/undisturbed soils in the area (see Appendix 13 for photos of excavated material). Soil samples were collected from approximately 1 ft below ground surface at each test pit and analyzed for lead and cadmium. Lead and cadmium concentrations observed in samples collected from this area were below the assessment levels (maximum lead concentration 219 mg/kg, maximum cadmium concentration 1.24 mg/kg) as indicated on Figure 4A.9.

<u>*Berm and Ditch Area South of Crystallizer Road, West of VCP-MW-2*</u> – Some occasional battery chips were observed on the ground surface in the vicinity of monitoring well VCP-MW-2 and on the toe of the berm located south of Crystallizer Road. The low area south of Crystallizer Road is a drainage feature and the berm further to the south is believed to be the south bank of the former Frisco Lake (removed prior to FOP activities). Nine test pits (TP-20 through TP-27A) were advanced in this area to evaluate the soils for the presence of battery chips or other non-native material that may have been placed in the ditch or berm. No battery chips or other non-native material were observed in any test pits advanced in this area. Soils observed in the test pits consisted of dark brown silty clay, typically moist and consistent with native soil. Based on the absence of any indication of battery chips or non-native material in the test pit soils, no soil samples were collected in this area per prior discussions with the TCEQ on April 26, 2013. However, surface soils were collected in this area as part of the Site-wide grid sampling (HI-4, HI-5, HI-6, HI-7, I-5, I-6, I-7). The maximum concentration of cadmium observed in grid samples collected from the ditch area was 47.5 mg/kg (I-4), below the assessment level of 52.4 mg/kg. Lead concentrations exceeded the assessment level of 250 mg/kg at four grid sample locations along the ditch (0 to 3 inches below ground surface, maximum concentration 472 mg/kg). Lead concentrations in soil samples collected from the 1 to 2 foot interval at these locations did not exceed the site specific background concentration of 31.5 mg/kg (see Figure 4A.6).

<u>*Land Disturbed Area, Former Gravel Pit on Tract A*</u> – Land disturbance reported to be associated with a former gravel pit is visible on aerial photos beginning in 1938 (see Appendix 17). Seven test pits were advanced in this area to evaluate the nature of the fill material used to level this area (TP-17 through 19, TP-28 through 31). The fill was sourced from areas adjacent to the gravel pit according to previous Exide employees interviewed for the Phase I ESA (SWG, 2013). The fill material observed in the test pits typically consisted of one to two feet of sandy or silty clay containing gravel ranging from 0.5 to 2 inches in diameter. Undisturbed shaley clay and weathered shale was present below the fill at depths ranging from two to three feet below ground surface (see Appendix 13 for photos of excavated material). Soil samples were collected from fill material immediately above the native material at each test pit location and analyzed for lead and cadmium. Lead and cadmium concentrations observed in samples collected from this area were below the assessment levels (maximum lead concentration 25.3 mg/kg, maximium cadmium concentration 0.393 mg/kg) as indicated on Figure 4A.9.

<u>*Shooting Range Berm Area*</u> – Battery chips were observed on the ground surface at the south end of the former shooting range berm (near the South Disposal Area) during berm investigation activities. A test pit (TP-32) was advanced near the observed battery chips to verify that no chips or other non-native material had been placed in the soils comprising the portion of the berm on the Site. No evidence of chips or non-native material was observed in the soil from the test pit. The soil was light brown weathered shale consistent with native/fill material sourced from the Site. Based on the absence of battery chips or non-native material in the soils, no soil samples were collected at this location. This area of the Site was subsequently included in the FOP portion of the facility and is not within the boundaries of the Site.

Abandoned Cistern – A cistern was observed during the Phase I ESA (SWG, 2013) at the southeastern corner of the B Tract, just west of the southern termination of former Eagan Way/South 5th Street (see Figure 4A.9). The cistern appeared to have been filled in and contained soil up to within two feet of the ground surface. An excavator was used to remove the soil from the cistern to a depth of seven feet below ground surface (five feet of soil). The fill material appeared to be native soils from the area, no debris or waste material was observed in the fill (see Appendix 13 for photos of excavation). Soil samples were collected at approximately one foot intervals during the excavation and composited into one sample. The sample was analyzed for VOCs, SVOCs, TPH, RCRA 8 metals, pesticides and herbicides. No analytes measured in this sample exceeded the applicable assessment levels (see Table 4D.9). It is recommended that the cistern be plugged and abandoned as part of the response action activities.

Battery Chips/Slag – Slag was not observed at any test pit locations excavated during the investigation. Battery chips were observed at six test pit locations. Five of the test pit locations where battery chips were observed are located on Tract G where fill/debris was found (see description above). The occurrence of battery chips in these test pits was minimal, with multiple battery chips only observed at one of the locations. One battery chip was observed in one test pit excavated in the berms located along Parkwood Drive (Test Pit 3). A map summarizing the occurrence of battery chips, and the associated soil sampling data, is provided as Figure 4A.13. Areas where battery chips were found are considered PCL exceedance zones and will be addressed as part of the response actions.

4.2.4 Former Circuit Fab

The former Circuit Fab facility is located off-site north of Green Supply north of the H Tract and operated from 1984 to 1988 (SWG, 2013). Regulatory information indicates a release (believed to be associated with runoff from firefighting activities) occurred at the facility and potentially extended beyond the facility boundaries. Fifteen surface soil samples, 14 from 0-3 inches below ground surface and one from 0.5 to 1 ft below ground surface, were collected in the area of the Site that would have received surface runoff from the facility during the firefighting activities (see Figure 4A.11). The initial samples (CF-1 through CF-4) were analyzed for VOCs, SVOCs, TPH, RCRA 8 metals, copper and tin. Copper was detected in soil at sample location CF-1 at a concentration of 2,070 mg/kg, which exceeds the direct contact PCL of 548 mg/kg. This sample was analyzed using the synthetic precipitation leaching procedure (SPLP) which indicates that a copper concentration of 2,070 mg/kg is protective of underlying groundwater (see below). Additional surface soil samples (CF-5 through CF-14) were collected in the area to horizontally and vertically delineate the copper impacts in the area. Based on these additional samples, impacted soils are limited to the area of sample locations CF-1 and CF-5 (approximately 25x25 foot square area, less than one foot deep).

4.2.5 Synthetic Precipitation Leaching Procedure (SPLP)

Several samples containing elevated levels of COCs were analyzed using the SPLP extraction procedure to evaluate the potential for the COCs to leach from Site soils. These COCs included arsenic from sample locations TP-7, TP-10 and from the cistern, and copper at sample location CF-1. These sample locations represent the highest concentrations of these COCs observed in Site soils. SPLP results were compared to the TRRP Residential Tier 1 PCLs for Class 2 groundwater. Based on the SPLP results, soil concentrations of arsenic and copper as high as 29.9 mg/kg and 2,070 mg/kg, respectively, were concluded to not present a risk to underlying groundwater. SPLP results are summarized on Table 4D.11.

4.2.6 Soil pH Analysis

Soil pH is an important factor when determining the likelihood of metals to leach from soil to underlying groundwater. The soil-water partition coefficient (K_d) for many metals is dependent on the soil pH and describes the affinity of the metal to bind to organic matter in the soil. K_d is a prominent variable used in the calculation for establishing the Tier 2 soil to groundwater protective concentration level. Default Kd values as a function of pH are provided in 30 TAC§350.73(e)(1)(C). Soil samples were collected at 10 grid sample locations randomly distributed across the Site for analysis of pH. A site-wide average pH of 7.5 was calculated from the results and used in the Tier 2 PCL calculation. A summary of the pH sampling results is provided on Table 4E.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

4.0 Tables

TABLE 4A
SURFACE SOIL RESIDENTIAL ASSESSMENT LEVELS WITH NO ECOLOGICAL COMPONENT
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

				$^{GW}Soil_{Ing}$ PCL				Maximum concentration			
Chemical of Concern	**CAS**	**Source area size (acres)**	**$^{Tot}Soil_{Comb}$ PCL (mg/kg)**	**(mg/kg)**	**Tier**	**Laboratory MQL (mg/kg)**	**Background (mg/kg)**	**Sample ID**	**Sample depth**	**Sample date**	**Max Conc. (mg/kg)**
Metals by EPA Method 6010/7470											
Arsenic	7440-38-2	30	2.42E+01	2.99E+01	Tier 3	1	15.9	**TP-10**	**1**	**4/15/2013**	**29.9**
Barium	7440-39-3	30	8.10E+03	2.22E+02	Tier 1	1	300	**TP-5**	**3**	**4/15/2013**	**170**
Cadmium	7440-43-9	30	5.24E+01	1.03E+02	Tier 2	0.25	-	**I-4**	**0.25**	**3/27/2012**	**47.5**
Chromium	7440-47-3	30	2.66E+04	1.20E+03	Tier 1	0.5	30	**TP-11**	**1**	**4/15/2013**	**24.1**
Lead	7439-92-1	30	2.50E+02	9.58E+02	Tier 2	0.5	31.5	**M-16A3**	**0.25**	**3/22/2013**	**9640**
Mercury	7439-97-6	30	2.09E+00	1.12E+01	Tier 2	0.05	0.04	**Cistern**	**0-7**	**4/16/2013**	**0.0914**
Selenium	7782-49-2	30	3.09E+02	1.15E+00	Tier 1	2	0.3	**Cistern**	**0-7**	**4/16/2013**	**1.11J**
Silver	7440-22-4	30	9.67E+01	2.39E-01	Tier 1	0.4	-	**TP-8**	**3**	**4/15/2013**	**0.172J**
Copper	7440508	30	5.48E+02	1.81E+03	Tier 2	0.5	15	**CF-1**	**0.25**	**4/16/2013**	**2070**
Tin	7440315	30	3.54E+04	1.85E+04	Tier 1	1	0.9	**CF-1**	**0.25**	**4/16/2013**	**59**
TPH by TCEQ Method TX1005											
TPH C6-C12	TPH10051	30	1.07E+03	3.25E+01	Tier 1	10	-	-	-	-	<4.16
TPH >C-12-C28	TPH10052	30	1.98E+03	9.90E+01	Tier 1	10	-	**TP-9**	**1**	**4/15/2013**	**43.8**
TPH >C28-C35	TPH10053	30	1.98E+03	9.90E+01	Tier 1	10	-	**TP-9**	**1**	**4/15/2013**	**15.8**
TPH C6-C35	TPH10054	30	1.98E+03	9.90E+01	Tier 1	10	-	**TP-9**	**1**	**4/15/2013**	**59.7**
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	71-55-6	30	3.23E+04	8.10E-01	Tier 1	0.005	-	-	-	-	<0.00109
1,1,2,2-Tetrachloroethane	79-34-5	30	3.04E+01	1.15E-02	Tier 1	0.005	-	-	-	-	<0.00128
1,1,2-Trichloroethane	79-00-5	30	1.04E+01	1.00E-02	Tier 1	0.005	-	-	-	-	<0.00107
1,1-Dichloroethane	75-34-3	30	8.79E+03	9.25E+00	Tier 1	0.005	-	-	-	-	<0.00128
1,1-Dichloroethene	75-35-4	30	1.62E+03	2.50E-02	Tier 1	0.005	-	-	-	-	<0.00179
1,2-Dichloroethane	107-06-2	30	6.41E+00	6.86E-03	Tier 1	0.005	-	-	-	-	<0.00132
1,2-Dichloropropane	78-87-5	30	3.14E+01	1.14E-02	Tier 1	0.005	-	-	-	-	<0.00104
2-Butanone (MEK)	78-93-3	30	3.33E+04	1.46E+01	Tier 1	0.01	-	-	-	-	<0.00279
2-Hexanone	591-78-6	30	2.09E+02	1.61E-01	Tier 1	0.01	-	**TP-7**	**2**	**4/15/2013**	**0.00159J**
4-Methyl-2-pentanone (MIBK)	108-10-1	30	5.37E+03	2.47E+00	Tier 1	0.01	-	-	-	-	<0.00216
Acetone	67-64-1	30	5.94E+04	2.14E+01	Tier 1	0.01	-	-	-	-	<0.00243
Benzene	71-43-2	30	6.94E+01	1.28E-02	Tier 1	0.005	-	-	-	-	<0.000924
Bromodichloromethane	75-27-4	30	9.79E+01	3.27E-02	Tier 1	0.005	-	-	-	-	<0.000968
Bromoform	75-25-2	30	2.76E+02	3.16E-01	Tier 1	0.005	-	-	-	-	<0.00201
Bromomethane	74-83-9	30	2.94E+01	6.54E-02	Tier 1	0.01	-	-	-	-	<0.00122
Carbon disulfide	75-15-0	30	3.30E+03	6.79E+00	Tier 1	0.01	-	-	-	-	<0.000806
Carbon tetrachloride	56-23-5	30	2.27E+01	3.09E-02	Tier 1	0.005	-	-	-	-	<0.00166
Chlorobenzene	108-90-7	30	3.18E+02	5.46E-01	Tier 1	0.005	-	-	-	-	<0.00141
Chlorobromomethane	74-97-5	30	3.28E+03	1.52E+00	Tier 1	0.005	-	-	-	-	<0.00261
Chloroethane	75-00-3	30	2.32E+04	1.55E+01	Tier 1	0.01	-	-	-	-	<0.00205
Chloroform	67-66-3	30	8.01E+00	5.10E-01	Tier 1	0.005	-	-	-	-	<0.000968
Chloromethane	74-87-3	30	8.40E+01	2.03E-01	Tier 1	0.01	-	-	-	-	<0.00243
cis-1,2-Dichloroethene	156-59-2	30	1.22E+02	1.24E-01	Tier 1	0.005	-	-	-	-	<0.00122
cis-1,3-Dichloropropene	10061-01-5	30	7.79E+00	3.32E-03	Tier 1	0.005	-	-	-	-	<0.000792
Dibromochloromethane	124-48-1	30	7.23E+01	2.46E-02	Tier 1	0.005	-	-	-	-	<0.00138
Ethylbenzene	100-41-4	30	5.30E+03	3.82E+00	Tier 1	0.005	-	-	-	-	<0.0015
Methyl tert-butyl ether	1634-04-4	30	5.86E+02	3.11E-01	Tier 1	0.005	-	-	-	-	<0.00268
Methylene Chloride	75-09-2	30	4.69E+02	9.10E-02	Tier 2	0.01	-	**TP-8**	**3**	**4/15/2013**	**0.0247**
m-Xylene & p-Xylene	108-38-3	30	4.68E+03	5.26E+01	Tier 1	0.01	-	-	-	-	<0.00223
o-Xylene	95-47-6	30	2.89E+04	3.54E+01	Tier 1	0.005	-	-	-	-	<0.00166
Styrene	100-42-5	30	4.28E+03	1.63E+00	Tier 1	0.005	-	-	-	-	<0.00104
Tetrachloroethene	127-18-4	30	4.15E+02	2.51E-02	Tier 1	0.005	-	-	-	-	<0.00104
Toluene	108-88-3	30	5.45E+03	4.11E+00	Tier 1	0.005	-	-	-	-	<0.00202
trans-1,2-Dichloroethene	156-60-5	30	3.67E+02	2.45E-01	Tier 1	0.005	-	-	-	-	<0.00167
trans-1,3-Dichloropropene	10061-02-6	30	2.62E+01	1.79E-02	Tier 1	0.005	-	-	-	-	<0.00085
Trichloroethene	79-01-6	30	1.14E+01	1.68E-02	Tier 1	0.005	-	-	-	-	<0.00205
Vinyl acetate	108-05-4	30	1.55E+03	2.67E+01	Tier 1	0.005	-	-	-	-	<0.00136
Vinyl chloride	75-01-4	30	3.42E+00	1.11E-02	Tier 1	0.01	-	-	-	-	<0.00132
Xylenes, Total	1330-20-7	30	3.72E+03	6.13E+01	Tier 1	0.005	-	-	-	-	<0.00166

Notes:

1. Maximum concentration or maximum SDL exceeds RAL indicated by blue shading: 🟦
2. MQL exceeds RAL indicated by green shading: 🟩
3. Applicable Residential Assessment Level indicated by orange shading: 🟧
4. Tier 1 assessment levels are the residential PCLs derived from default values published in the TRRP Rule 30 TAC §350, Table 1, last updated June 29, 2012.
5. The TRRP Tier 1 Residential Assessment Level for lead is 500 mg/kg, however, an assessment level of 250 mg/kg has been agreed to by the City of Frisco and Exide.
6. The RAL is considered the critical PCL, critical PCLs were not developed for compounds exceeding the RAL.
7. < = Compound not detected at the SDL indicated.
8. Surface soil is defined under TRRP as 0-15 ft bgs for residential land use.

TABLE 4A
SURFACE SOIL RESIDENTIAL ASSESSMENT LEVELS WITH NO ECOLOGICAL COMPONENT
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Chemical of Concern	CAS	Source area size (acres)	$^{Tot}Soil_{Comb}$ PCL (mg/kg)	$^{GW}Soil_{Ing}$ PCL		Laboratory MQL (mg/kg)	Background (mg/kg)	Maximum concentration			
				(mg/kg)	Tier			Sample ID	Sample depth	Sample date	Max Conc. (mg/kg)
Semivolatile Organic Compounds (SVOCs) By EPA Method 8270											
1,2,4-Trichlorobenzene	120-82-1	30	6.95E+01	2.40E+00	Tier 1	0.0167	-	-	-	-	<0.0287
1,2-Dichlorobenzene	95-50-1	30	3.89E+02	8.94E+00	Tier 1	0.0167	-	-	-	-	<0.0413
1,3-Dichlorobenzene	541-73-1	30	6.16E+01	3.37E+00	Tier 1	0.0167	-	-	-	-	<0.0211
1,4-Dichlorobenzene	106-46-7	30	2.53E+02	1.05E+00	Tier 1	0.0167	-	-	-	-	<0.0308
2,4,5-Trichlorophenol	95-95-4	30	6.66E+03	1.69E+01	Tier 1	0.0167	-	-	-	-	<0.137
2,4,6-Trichlorophenol	88-06-2	30	6.66E+01	8.75E-02	Tier 1	0.0167	-	-	-	-	<0.0367
2,4-Dichlorophenol	120-83-2	30	2.00E+02	1.76E-01	Tier 1	0.0167	-	-	-	-	<0.053
2,4-Dimethylphenol	105-67-9	30	1.33E+03	1.62E+00	Tier 1	0.0167	-	-	-	-	<0.117
2,4-Dinitrophenol	51-28-5	30	1.33E+02	1.64E-01	Tier 2	0.1	-	-	-	-	<0.0646
2,4-Dinitrotoluene	121-14-2	30	6.91E+00	1.89E-02	Tier 2	0.0167	-	-	-	-	<0.0494
2,6-Dinitrotoluene	606-20-2	30	6.91E+00	1.62E-02	Tier 2	0.0167	-	-	-	-	<0.0404
2-Chloronaphthalene	91-58-7	30	5.04E+03	3.35E+02	Tier 1	0.0167	-	-	-	-	<0.0166
2-Chlorophenol	95-57-8	30	4.09E+02	8.16E-01	Tier 1	0.0167	-	-	-	-	<0.027
2-Methylnaphthalene	91-57-6	30	2.52E+02	8.53E+00	Tier 1	0.0167	-	-	-	-	<0.0375
2-Methylphenol	95-48-7	30	3.33E+03	3.56E+00	Tier 1	0.0167	-	-	-	-	<0.0442
2-Nitroaniline	88-74-4	30	1.10E+01	6.58E-02	Tier 2	0.0167	-	-	-	-	<0.0669
2-Nitrophenol	88-75-5	30	1.33E+02	6.73E-02	Tier 1	0.0167	-	-	-	-	<0.0532
3 & 4 Methylphenol	106-44-5	30	3.33E+02	3.16E-01	Tier 1	0.0333	-	-	-	-	<0.0382
3,3'-Dichlorobenzidine	91-94-1	30	1.04E+01	3.14E-01	Tier 2	0.0167	-	-	-	-	<0.139
3-Nitroaniline	99-09-2	30	1.21E+01	8.50E-02	Tier 2	0.0167	-	-	-	-	<0.0979
4,6-Dinitro-2-methylphenol	534-52-1	30	6.66E+00	8.19E-03	Tier 2	0.0167	-	-	-	-	<0.0682
4-Bromophenyl phenyl ether	101-55-3	30	2.68E-01	1.77E-01	Tier 1	0.0167	-	-	-	-	<0.0389
4-Chloro-3-methylphenol	59-50-7	30	3.33E+02	2.26E+00	Tier 1	0.0167	-	-	-	-	<0.213
4-Chloroaniline	106-47-8	30	2.35E+01	7.84E-02	Tier 2	0.0167	-	-	-	-	<0.0797
4-Chlorophenyl phenyl ether	7005-72-3	30	1.54E-01	1.67E-01	Tier 2	0.0167	-	-	-	-	<0.0246
4-Nitroaniline	100-01-6	30	1.86E+02	2.60E-01	Tier 2	0.0167	-	-	-	-	<0.153
4-Nitrophenol	100-02-7	30	1.33E+02	1.96E-01	Tier 2	0.0167	-	-	-	-	<0.0695
Acenaphthene	83-32-9	30	2.97E+03	1.18E+02	Tier 1	0.0167	-	-	-	-	<0.0197
Acenaphthylene	208-96-8	30	3.78E+03	2.04E+02	Tier 1	0.0167	-	-	-	-	<0.0137
Anthracene	120-12-7	30	1.77E+04	3.44E+03	Tier 1	0.0167	-	**TP-12**	**1**	**4/15/2013**	**0.096J**
Benzidine	92-87-5	30	1.25E-02	3.06E-05	Tier 2	0.0833	-	-	-	-	<0.123
Benzo[a]anthracene	56-55-3	30	5.65E+00	8.87E+00	Tier 1	0.0167	-	**TP-8**	**5**	**4/15/2013**	**0.0113J**
Benzo[a]pyrene	50-32-8	30	5.64E-01	3.82E+00	Tier 1	0.0167	-	**TP-12**	**1**	**4/15/2013**	**0.1J**
Benzo[b]fluoranthene	205-99-2	30	5.71E+00	3.01E+01	Tier 1	0.0167	-	**TP-12**	**1**	**4/15/2013**	**0.207J**
Benzo[g,h,i]perylene	191-24-2	30	1.78E+03	2.32E+04	Tier 1	0.0167	-	**TP-12**	**1**	**4/15/2013**	**0.0668J**
Benzo[k]fluoranthene	207-08-9	30	5.72E+01	3.08E+02	Tier 1	0.0167	-	**TP-8**	**5**	**4/15/2013**	**0.00781J**
Benzyl alcohol	100-51-6	30	6.66E+03	2.93E+00	Tier 1	0.0167	-	-	-	-	<0.0798
bis (2-Chloroisopropyl) ether	108-60-1	30	4.12E+01	9.07E-01	Tier 2	0.0167	-	-	-	-	<0.121
Bis(2-chloroethoxy)methane	111-91-1	30	2.46E+00	5.60E-02	Tier 2	0.0167	-	-	-	-	<0.0194
Bis(2-chloroethyl)ether	111-44-4	30	1.38E+00	5.47E-03	Tier 2	0.0167	-	-	-	-	<0.0226
Bis(2-ethylhexyl) phthalate	117-81-7	30	4.32E+01	8.18E+01	Tier 1	0.0667	-	**TP-6**	**2.5**	**4/15/2013**	**0.3J**
Butyl benzyl phthalate	85-68-7	30	1.61E+03	1.32E+02	Tier 1	0.0667	-	**TP-8**	**5**	**4/15/2013**	**0.111**
Carbazole	86-74-8	30	2.35E+02	2.28E+00	Tier 1	0.0167	-	-	-	-	<0.0427
Chrysene	218-01-9	30	5.60E+02	7.73E+02	Tier 1	0.0167	-	**TP-12**	**1**	**4/15/2013**	**0.0496J**
Dibenz(a,h)anthracene	53-70-3	30	5.49E-01	7.63E+00	Tier 1	0.0167	-	-	-	-	<0.0497
Dibenzofuran	132-64-9	30	2.66E+02	1.67E+01	Tier 1	0.0167		-	-	-	<0.0244
Diethyl phthalate	84-66-2	30	5.33E+04	7.79E+01	Tier 1	0.0667	-	**TP-7**	**3**	**4/15/2013**	**0.0245J**
Dimethyl phthalate	131-11-3	30	5.33E+04	3.11E+01	Tier 1	0.0667	-	-	-	-	<0.0669
Di-n-butyl phthalate	84-74-2	30	6.18E+03	1.66E+03	Tier 1	0.0667	-	**TP-8**	**5**	**4/15/2013**	**0.0138J**
Di-n-octyl phthalate	117-84-0	30	2.58E+03	1.00E+06	Tier 1	0.0667	-	-	-	-	<0.026

Notes:

1. Maximum concentration or maximum SDL exceeds RAL indicated by blue shading: 🟦
2. MQL exceeds RAL indicated by green shading: 🟩
3. Applicable Residential Assessment Level indicated by orange shading: 🟧
4. Tier 1 assessment levels are the residential PCLs derived from default values published in the TRRP Rule 30 TAC §350, Table 1, last updated June 29, 2012.
5. The TRRP Tier 1 Residential Assessment Level for lead is 500 mg/kg, however, an assessment level of 250 mg/kg has been agreed to by the City of Frisco and Exide.
6. The RAL is considered the critical PCL, critical PCLs were not developed for compounds exceeding the RAL.
7. < = Compound not detected at the SDL indicated.
8. Surface soil is defined under TRRP as 0-15 ft bgs for residential land use.

TABLE 4A
SURFACE SOIL RESIDENTIAL ASSESSMENT LEVELS WITH NO ECOLOGICAL COMPONENT
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Chemical of Concern	CAS	Source area size (acres)	$^{Tot}Soil_{Comb}$ PCL (mg/kg)	$^{GW}Soil_{Ing}$ PCL		Laboratory MQL (mg/kg)	Background (mg/kg)	Maximum concentration			
				(mg/kg)	Tier			Sample ID	Sample depth	Sample date	Max Conc. (mg/kg)
Semivolatile Organic Compounds (SVOCs) By EPA Method 8270 continued											
Fluoranthene	206-44-0	30	2.32E+03	9.59E+02	Tier 1	0.0167	-	**TP-8**	**5**	**4/15/2013**	**0.0455J**
Fluorene	86-73-7	30	2.26E+03	1.49E+02	Tier 1	0.0167	-	-	-	-	<0.0323
Hexachlorobenzene	118-74-1	30	1.02E+00	5.65E-01	Tier 1	0.0167	-	-	-	-	<0.0208
Hexachlorobutadiene	87-68-3	30	1.20E+01	1.64E+00	Tier 1	0.0167	-	-	-	-	<0.0263
Hexachlorocyclopentadiene	77-47-4	30	7.16E+00	9.64E+00	Tier 1	0.0167	-	-	-	-	<0.0631
Hexachloroethane	67-72-1	30	4.58E+01	6.43E-01	Tier 1	0.0167	-	-	-	-	<0.0316
Indeno[1,2,3-cd]pyrene	193-39-5	30	5.72E+00	8.67E+01	Tier 1	0.0167	-	**TP-12**	**1**	**4/15/2013**	**0.0659J**
Isophorone	78-59-1	30	4.95E+03	1.50E+00	Tier 1	0.0167	-	-	-	-	<0.0137
Naphthalene	91-20-3	30	1.24E+02	1.56E+01	Tier 1	0.0167	-	-	-	-	<0.0185
Nitrobenzene	98-95-3	30	3.38E+01	1.76E-01	Tier 1	0.0167	-	-	-	-	<0.0405
N-Nitrosodimethylamine	62-75-9	30	5.46E-02	7.33E-05	Tier 2	0.0167	-	-	-	-	<0.0573
N-Nitrosodi-n-propylamine	621-64-7	30	4.00E-01	9.74E-04	Tier 2	0.0167	-	-	-	-	<0.0304
N-Nitrosodiphenylamine	86-30-6	30	5.71E+02	1.41E+00	Tier 1	0.0167	-	-	-	-	<0.0259
Pentachlorophenol	87-86-5	30	7.25E-01	8.92E-02	Tier 2	0.167	-	-	-	-	<0.0547
Phenanthrene	85-01-8	30	1.71E+03	2.08E+02	Tier 1	0.0167	-	-	-	-	<0.0677
Phenol	108-95-2	30	2.00E+04	9.57E+00	Tier 1	0.0167	-	-	-	-	<0.058
Pyrene	129-00-0	30	1.70E+03	5.58E+02	Tier 1	0.0167	-	**TP-12**	**1**	**4/15/2013**	**0.0903J**
Pesticides by EPA Method 8081A											
4,4'-DDD	72-54-8	30	1.42E+01	6.48E+00	Tier 1	0.0033	-	-	-	-	<0.00195
4,4'-DDE	72-55-9	30	1.02E+01	5.89E+00	Tier 1	0.0033	-	-	-	-	<0.00174
4,4'-DDT	50-29-3	30	5.39E+00	7.37E+00	Tier 1	0.0033	-	-	-	-	<0.00222
Aldrin	309-00-2	30	4.97E-02	5.14E-02	Tier 1	0.0017	-	-	-	-	<0.00157
alpha-BHC	319-84-6	30	2.51E-01	3.96E-03	Tier 1	0.0017	-	-	-	-	<0.0012
alpha-Chlordane	5103-71-9	30	1.28E+01	3.69E+02	Tier 1	0.0033	-	-	-	-	<0.00191
beta-BHC	319-85-7	30	9.17E-01	1.45E-02	Tier 1	0.0017	-	-	-	-	<0.00122
Chlordane (technical)	12789-03-6	30	5.93E+00	4.81E+00	Tier 1	0.033	-	-	-	-	<0.0018
delta-BHC	319-86-8	30	2.85E+00	8.68E-02	Tier 1	0.0017	-	-	-	-	<0.00102
Dieldrin	60-57-1	30	1.45E-01	2.44E-02	Tier 1	0.0033	-	-	-	-	<0.00167
Endosulfan I	959-98-8	30	9.08E+01	1.54E+01	Tier 1	0.0017	-	-	-	-	<0.0012
Endosulfan II	33213-65-9	30	2.72E+02	4.62E+01	Tier 1	0.0017	-	-	-	-	<0.00181
Endosulfan sulfate	1031-07-8	30	3.85E+02	2.33E+03	Tier 1	0.0033	-	-	-	-	<0.00202
Endrin	72-20-8	30	9.01E+00	3.75E-01	Tier 1	0.0033	-	-	-	-	<0.00184
Endrin aldehyde	7421-93-4	30	1.94E+01	3.14E+02	Tier 1	0.0033	-	-	-	-	<0.00187
Endrin ketone	53494-70-5	30	1.90E+01	2.55E+01	Tier 1	0.0033	-	-	-	-	<0.00185
gamma-BHC (Lindane)	58-89-9	30	1.11E+00	4.58E-03	Tier 1	0.0017	-	-	-	-	<0.00112
gamma-Chlordane	5103-74-2	30	7.33E+00	2.05E+01	Tier 1	0.0033	-	-	-	-	<0.0015
Heptachlor	76-44-8	30	1.27E-01	9.44E-02	Tier 1	0.0017	-	-	-	-	<0.00112
Heptachlor epoxide	1024-57-3	30	2.37E-01	2.91E-02	Tier 1	0.0017	-	-	-	-	<0.0014
Methoxychlor	72-43-5	30	2.74E+02	6.21E+01	Tier 1	0.017	-	-	-	-	<0.00969
Toxaphene	8001-35-2	30	1.24E+00	5.75E+00	Tier 1	0.17	-	-	-	-	<0.0878
Herbicides by EPA Method 8151A											
2,4,5-T	93-76-5	30	6.66E+02	4.93E-01	Tier 1	0.004	-	-	-	-	<0.000528
2,4-D	94-75-7	30	7.34E+02	1.31E+00	Tier 1	0.004	-	-	-	-	<0.000408
2,4-DB	94-82-6	30	5.33E+02	1.95E-01	Tier 1	0.004	-	-	-	-	<0.000792
Dalapon	75-99-0	30	2.00E+03	2.92E-01	Tier 1	0.02	-	-	-	-	<0.0192
Dicamba	1918-00-9	30	2.00E+03	7.35E-01	Tier 1	0.004	-	-	-	-	<0.000552
Dichlorprop	120-36-5	30	6.66E+02	2.34E-01	Tier 1	0.004	-	-	-	-	<0.00054
Dinoseb	88-85-7	30	6.66E+01	1.75E-01	Tier 1	0.004	-	-	-	-	<0.000384
MCPA	94-74-6	30	3.33E+01	4.09E-02	Tier 2	0.04	-	-	-	-	<0.078
Mecoprop	93-65-2	30	6.66E+01	8.18E-02	Tier 2	0.04	-	-	-	-	<0.0551
Silvex (2,4,5-TP)	93-72-1	30	5.33E+02	2.65E+00	Tier 1	0.004	-	-	-	-	<0.000516

Notes:

1. Maximum concentration or maximum SDL exceeds RAL indicated by blue shading: 🟦
2. MQL exceeds RAL indicated by green shading: 🟩
3. Applicable Residential Assessment Level indicated by orange shading: 🟧
4. Tier 1 assessment levels are the residential PCLs derived from default values published in the TRRP Rule 30 TAC §350, Table 1, last updated June 29, 2012.
5. The TRRP Tier 1 Residential Assessment Level for lead is 500 mg/kg, however, an assessment level of 250 mg/kg has been agreed to by the City of Frisco and Exide.
6. The RAL is considered the critical PCL, critical PCLs were not developed for compounds exceeding the RAL.
7. < = Compound not detected at the SDL indicated.
8. Surface soil is defined under TRRP as 0-15 ft bgs for residential land use.

TABLE 4D.1
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: M TRACT AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
A-6	3/28/2012	0"-3"	<0.93	49.5
A-7	3/28/2012	0"-3"	<0.97	29.7
A-8	3/28/2012	0"-3"	<0.91	62.4
AB-6	3/18/2013	0"-3"	0.293	54.9
AB-7	3/18/2013	0"-3"	0.197J	44
B-6	3/28/2012	0"-3"	1.32J	156
B-7	3/28/2012	0"-3"	1.42J	183
B-8	3/28/2012	0"-3"	2.00J	230
B-9	3/28/2012	0"-3"	<0.94	146
BC-5	3/18/2013	0"-3"	0.69	68
BC-6	3/18/2013	0"-3"	1.06	161
BC-7	3/18/2013	0"-3"	1.35	234
BC-8	3/18/2013	0"-3"	1.49	281
BC-8	5/7/2013	2-3'	0.208J	41.1J
BC-8	5/7/2013	4-5'	NA	15.8*
C-5	3/28/2012	0"-3"	<0.94	72.4
C-6	3/28/2012	0"-3"	<0.94	46.8
C-7	3/28/2012	0"-3"	1.46J	158
C-8	3/28/2012	0"-3"	1.48J	194
C-9	3/28/2012	0"-3"	2.12J	309
C-9	5/17/2012	3"-6"	NA	123
C-9	5/17/2012	6"-12"	NA	17.7*
C-9 E	5/17/2012	0"-3"	NA	171
C-9 N	5/17/2012	0"-3"	NA	143
C-9 S	5/17/2012	0"-3"	NA	231
C-9 W	5/17/2012	0"-3"	NA	191
CD-5	3/18/2013	0"-3"	0.679	106
CD-6	3/18/2013	0"-3"	0.84	125
CD-7	3/18/2013	0"-3"	1.03	180
D-5	3/28/2012	0"-3"	1.03J	123JL
D-6	3/28/2012	0"-3"	1.46J	132
D-7	3/28/2012	0"-3"	1.38J	139
D-8	3/28/2012	0"-3"	2.45J	308
D-8	5/17/2012	3"-6"	NA	40
D-8	5/17/2012	6"-12"	NA	28.5*
D-8	5/7/2013	2-3'	0.319	15.7
D-8	5/7/2013	4-5'	0.315	NA
D-8 E	5/17/2012	0"-3"	NA	181JL
D-8 E	1/3/2014	0"-3"	2.05	339
D-8 N	5/17/2012	0"-3"	NA	146
D-8 S	5/17/2012	0"-3"	NA	165
D-8 W	5/17/2012	0"-3"	NA	123
D-9	3/28/2012	0"-3"	3.34	498
D-9	5/17/2012	3"-6"	NA	68.5
D-9	5/17/2012	6"-12"	NA	22.5*
D-9 E	5/17/2012	0"-3"	NA	296
D-9 N	5/17/2012	0"-3"	NA	227JL

TABLE 4D.1
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: M TRACT AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
D-9 N	1/3/2014	0"-3"	1.92	319
D-9 S	5/17/2012	0"-3"	NA	308
D-9 W	5/17/2012	0"-3"	NA	211
D-10	3/28/2012	0"-3"	3.69	629
D-10	5/16/2012	3"-6"	NA	219*
D-10	5/16/2012	6"-12"	NA	74.9
D-10 E	5/16/2012	0"-3"	NA	241
D-10 S	5/16/2012	0"-3"	NA	354
D-10 W	5/16/2012	0"-3"	NA	202
DE-5	3/18/2013	0"-3"	1.08	128
DE-6	3/18/2013	0"-3"	1.35	187
DE-7	3/18/2013	0"-3"	1.69	250
E-6	3/28/2012	0"-3"	1.93J	188
E-7	3/28/2012	0"-3"	1.92J	198
E-8	3/28/2012	0"-3"	2.35J	294
E-8	5/17/2012	3"-6"	NA	27*
E-8	5/17/2012	6"-12"	NA	16.7
E-8 E	5/17/2012	0"-3"	NA	191
E-8 N	5/17/2012	0"-3"	NA	157
E-8 S	5/17/2012	0"-3"	NA	158
E-8 W	5/17/2012	0"-3"	NA	133
E-9	3/28/2012	0"-3"	3.61	566
E-9	5/17/2012	3"-6"	NA	171
E-9	5/17/2012	6"-12"	NA	48.3JL
E-9	1/3/2014	6"-12"	0.49	41.3
E-9	5/7/2013	2-3'	0.286J	10.9J*
E-9 E	5/17/2012	0"-3"	NA	402
E-9 N	5/17/2012	0"-3"	NA	286
E-9 S	5/17/2012	0"-3"	NA	329
E-9 W	5/17/2012	0"-3"	NA	257
E-10	3/28/2012	0"-3"	3.22	528
E-10	5/17/2012	3"-6"	NA	103
E-10	5/17/2012	6"-12"	NA	17*
E-10 E	5/17/2012	0"-3"	NA	751
E-10 E	5/7/2013	2-3'	0.316	16.2J*
E-10 E	5/7/2013	4-5'	0.306	NA
E-10 N	5/17/2012	0"-3"	NA	616
E-10 N	5/7/2013	2-3'	0.278J	12.6J*
E-10 W	5/17/2012	0"-3"	NA	369
E-11B	3/15/2013	0-6"	0.922	216
EF-6	3/18/2013	0"-3"	0.876	103
EF-7	3/18/2013	0"-3"	0.346	52
F-7	3/28/2012	0"-3"	<1.97	103

Notes:
1. Concentrations exceeding the Residential Assessment Level (RAL) presented in highlighted cells.
2. The assessment and cleanup criteria are based on a residential land use standard, therefore the RAL (or assessment level in the case of lead) is the critical PCL (cPCL).
3. Lead assessment level = 250 mg/kg.
4. Cadmium assessment level = 52.4 mg/kg.
5. * = Sample represents vertical delineation of impacts (to background or RAL).
6. Vertical delineation to assessment level required if groundwater evaluation completed, delineation to background concentration if no groundwater evaluation completed.
7. < = Compound not detected at the indicated detection limit.   J = Estimated value.
8. JL = Estimated value with potential low bias. JH = Estimated value with potential high bias.

TABLE 4D.2
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: SW AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
HI-2	3/20/2013	0"-3"	0.899	134
HI-3	3/20/2013	0"-3"	1.43	199
HI-4	3/20/2013	0"-3"	2.16	260
HI-4	5/8/2013	1-2'	0.457	20.2*
HI-5	3/20/2013	0"-3"	1.76	278
HI-5	5/8/2013	1-2'	0.439	18.6*
HI-6	3/20/2013	0"-3"	3.72	472
HI-6	5/8/2013	1-2'	0.505	22.2*
HI-7	3/20/2013	0"-3"	21.7	372
I-3	3/27/2012	0"-3"	<0.96	73.8
I-4	3/27/2012	0"-3"	47.5	121
I-5	3/27/2012	0"-3"	1.53J	131
I-6	3/27/2012	0"-3"	<0.99	51.4
I-7	3/27/2012	0"-3"	<0.97	57.7
IJ-2	3/20/2013	0"-3"	0.254J	23.5
IJ-3	3/20/2013	0"-3"	0.268J	18.9
IJ-4	3/20/2013	0"-3"	0.466	66
IJ-5	3/20/2013	0"-3"	0.899	79.4
IJ-6	3/20/2013	0"-3"	1	124
J-2	3/27/2012	0"-3"	<1.9	21.1
J-3	3/27/2012	0"-3"	<0.9	23.3
J-4	3/27/2012	0"-3"	<1.22	61.9
J-5	3/27/2012	0"-3"	<0.92	60.2
J-6	3/27/2012	0"-3"	<0.93	58.8
J-7	3/27/2012	0"-3"	<0.97	107
JK-2	3/20/2013	0"-3"	<0.0293	34
JK-3	3/20/2013	0"-3"	<0.0303	52.1
JK-4	3/20/2013	0"-3"	<0.0308	26.7
JK-5	3/20/2013	0"-3"	0.228J	34.2
JK-6	3/20/2013	0"-3"	0.239J	38
K-2C	3/20/2013	0"-3"	<0.0286	38.8
K-3C	3/20/2013	0"-3"	<0.031	41.6
K-4C	3/20/2013	0"-3"	<0.0304	43.9
K-5C	3/20/2013	0"-3"	<0.0303	46.8
K-1	3/28/2012	0"-3"	<0.95	38.9
K-2	3/28/2012	0"-3"	<1.13	48.4
K-4	3/28/2012	0"-3"	<0.89	63.1 JL
K-6	3/26/2012	0"-3"	<0.92	33.6
K-7	3/26/2012	0"-3"	<0.99	88.9
K-8	3/26/2012	0"-3"	<0.97	122
K-9	3/26/2012	0"-3"	<1.06	161
K-10	3/26/2012	0"-3"	1.48J	293
K-10	5/7/2013	2-3'	<0.0296	13.9J*
KL-1	3/20/2013	0"-3"	<0.0293	35.6
KL-3	3/20/2013	0"-3"	<0.0278	29.3
KL-5	3/20/2013	0"-3"	0.304J	46.6
KL-6	3/20/2013	0"-3"	0.356	54.9
KL-7	3/20/2013	0"-3"	0.358	66.2
KL-8	3/20/2013	0"-3"	0.182J	63.7
KL-9	3/20/2013	0"-3"	1.05	253

TABLE 4D.2
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: SW AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
L-2C	3/20/2013	0"-3"	<0.0306	34
L-3C	3/20/2013	0"-3"	<0.0295	33.1
L-4C	3/20/2013	0"-3"	<0.0304	35.8
L-5C	3/20/2013	0"-3"	<0.0292	30.5
L-6	3/26/2012	0"-3"	<0.99	62.7
L-7	3/26/2012	0"-3"	<1.06	103
L-8	3/26/2012	0"-3"	<1.01	139
L-9	3/26/2012	0"-3"	<0.91	173
L-10	3/26/2012	0"-3"	<0.95	121
LM-1	3/20/2013	0"-3"	0.229J	26.4
LM-2	3/20/2013	0"-3"	0.475	51.2
LM-3	3/20/2013	0"-3"	0.395	43.6
LM-4	3/20/2013	0"-3"	0.308	38.1
LM-5	3/20/2013	0"-3"	<0.0297	38.5
LM-6	3/20/2013	0"-3"	0.371	47.6
LM-7	3/20/2013	0"-3"	0.504	72.1
LM-8	3/20/2013	0"-3"	0.662	101
LM-9	3/19/2013	0"-3"	0.914	150
LM-10	3/19/2013	0"-3"	1.36	215
M-1C	3/20/2013	0"-3"	0.335J	37.1
M-2C	3/20/2013	0"-3"	0.25J	39
M-3C	3/20/2013	0"-3"	0.306	38.6
M-4C	3/20/2013	0"-3"	0.387	50.5
M-5C	3/20/2013	0"-3"	<0.0321	35.5
M-6C	3/20/2013	0"-3"	<0.0282	18.4
M-7C	3/20/2013	0"-3"	<0.0294	51.7
M-8C	3/19/2013	0"-3"	0.475	51.5
M-1	3/28/2012	0"-3"	<0.96	37.5
M-3	3/28/2012	0"-3"	<0.98	27.2
M-5	3/28/2012	0"-3"	<0.9	37.8
M-7	3/28/2012	0"-3"	<0.93	69.4
M-9	3/26/2012	0"-3"	<1.69	54.7
M-10	3/26/2012	0"-3"	<1.94	164
MN-2	3/20/2013	0"-3"	0.2J	29.5
MN-4	3/20/2013	0"-3"	0.389	55.3
MN-6	3/20/2013	0"-3"	<0.0295	37.1
MN-8	3/20/2013	0"-3"	0.609	71.3
MN-9	3/19/2013	0"-3"	1	143
N-2C	3/20/2013	0"-3"	0.219J	22.4
N-3C	3/20/2013	0"-3"	0.227J	23.4
N-4C	3/20/2013	0"-3"	0.282	31.3
N-5C	3/20/2013	0"-3"	0.35	51.1
N-6C	3/20/2013	0"-3"	0.332	43.3
N-7C	3/20/2013	0"-3"	0.468	47.5
N-8C	3/20/2013	0"-3"	0.441	61.4

TABLE 4D.2
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: SW AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
N-9	3/26/2012	0"-3"	<0.9	87.8
N-10	3/26/2012	0"-3"	<1.03	<1.96
NO-2	3/20/2013	0"-3"	0.107J	11.2
NO-3	3/20/2013	0"-3"	0.276	41.9
NO-5	3/20/2013	0"-3"	0.39	48.4
NO-6	3/20/2013	0"-3"	0.237J	34.3
NO-7	3/20/2013	0"-3"	0.443	50.1
NO-8	3/20/2013	0"-3"	0.457	59.1
NO-9	3/20/2013	0"-3"	0.544	74.7
O-5C	3/20/2013	0"-3"	0.295	46.8
O-6C	3/20/2013	0"-3"	0.3	43.9
O-7C	3/20/2013	0"-3"	0.197J	31.3
O-8C	3/20/2013	0"-3"	0.397	39.7
O-9C	3/20/2013	0"-3"	0.527	78.2
O-10C	3/20/2013	0"-3"	0.645	103
O-3	3/28/2012	0"-3"	<2.24	40.5
O-5	3/28/2012	0"-3"	<1.03	61.2
O-7	3/28/2012	0"-3"	<1.05	74.1
O-9	3/28/2012	0"-3"	<0.94	92.2
OP-4	3/20/2013	0"-3"	0.0686J	26.9
OP-6	3/20/2013	0"-3"	0.283	40.5
OP-8	3/20/2013	0"-3"	0.403	51.6
OP-10	3/19/2013	0"-3"	0.633	88.2
P-6C	3/20/2013	0"-3"	0.333	44.5
P-7C	3/20/2013	0"-3"	0.262	36
P-8C	3/20/2013	0"-3"	0.618	103
P-9C	3/20/2013	0"-3"	0.312	37.2
P-10C	3/20/2013	0"-3"	0.56	80.9
PQ-7	3/20/2013	0"-3"	0.102J	17.6
PQ-9	3/19/2013	0"-3"	0.437	55.4
PQ-10	3/20/2013	0"-3"	0.42	54
Q-8	3/28/2012	0"-3"	<1.06	97.2
Q-9	3/28/2012	0"-3"	<0.99	24.4
Q-10/11	3/20/2013	0"-3"	0.174J	39
Q-10C	3/19/2013	0"-3"	0.736	105

Notes:

1. Concentrations exceeding the Residential Assessment Level (RAL) presented in highlighted cells.
2. The assessment and cleanup criteria are based on a residential land use standard, therefore the RAL (or assessment level in the case of lead) is the critical PCL (cPCL).
3. Lead assessment level = 250 mg/kg.
4. Cadmium assessment level = 52.4 mg/kg.
5. * = Sample represents vertical delineation of impacts (to background or RAL).
6. Vertical delineation to assessment level required if groundwater evaluation completed, delineation to background concentration if no groundwater evaluation completed.

TABLE 4D.3
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: SE AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
JK-15	3/19/2013	0"-3"	1.31	200
JK-16	3/19/2013	0"-3"	0.852	86.5
JK-17	3/19/2013	0"-3"	0.644	84
JK-18	3/19/2013	0"-3"	0.439	44.9
JK-20	3/19/2013	0"-3"	<0.0262JL	28.4
K-18C	3/19/2013	0"-3"	1.25	142
K-19C	3/19/2013	0"-3"	0.293	67.5
K-20C	3/19/2013	0"-3"	0.114J	41.6
K-16	3/23/2012	0"-3"	1.25J	158
K-17	3/23/2012	0"-3"	1.03J	176
K-18	3/28/2012	0"-3"	<0.9	22.2
K-20	3/28/2012	0"-3"	<1	69.3
KL-15	3/19/2013	0"-3"	11.7	2030
KL-15	5/7/2013	2-3'	0.387	14.2J*
KL-15	5/7/2013	4-5'	0.301	NA
L-16	3/23/2012	0"-3"	5.24J	833
L-16	5/15/2012	3"-6"	NA	90.7
L-16	5/15/2012	6"-12"	NA	36.4
L-16 E	5/15/2012	0"-3"	NA	133
L-16 N	5/15/2012	0"-3"	NA	165
L-16 S	5/15/2012	0"-3"	NA	530
L-16 W	5/15/2012	0"-3"	NA	1740
L-16A1	3/19/2013	0"-3"	17.9	5180
L-16A2	3/19/2013	0"-3"	22.3	2770
L-16A2	5/8/2013	1-1.5'	0.311	41.5
L-16A3	3/19/2013	0"-3"	10.4	2740
L-16A4	3/19/2013	0"-3"	11.1	858
L-16A4	5/8/2013	1-1.5'	1.07	69.3*
L-17	3/26/2012	0"-3"	<1.97	295
L-17	5/15/2012	3"-6"	NA	61.2
L-17	5/15/2012	6"-12"	NA	15*
L-17 E	5/15/2012	0"-3"	NA	87.9
L-17 N	5/15/2012	0"-3"	NA	196JL
L-17 N	1/3/2014	0"-3"	1.85	175
L-17 S	5/15/2012	0"-3"	NA	194
L-17 W	5/15/2012	0"-3"	NA	472
L-17 W	5/8/2013	1-2	0.516	27*
L-18C	3/19/2013	0"-3"	0.885	147
L-19C	3/19/2013	0"-3"	0.112J	33.3
L-20C	3/19/2013	0"-3"	0.187J	7.72
LM-19	3/19/2013	0"-3"	0.548	86JL
M-11	3/26/2012	0"-3"	<2.16	223
M-12	3/26/2012	0"-3"	3.21J	544
M-12	5/7/2013	1-2'	<0.0275	2.91J*
M-12 E	5/16/2012	0"-3"	NA	316

TABLE 4D.3
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: SE AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
M-12 N	5/16/2012	0"-3"	NA	293
M-12 N	5/7/2013	1-1.5	<0.0284	1.71J*
M-12 S	5/16/2012	0"-3"	NA	174
M-12 W	5/16/2012	0"-3"	NA	256
M-13	3/26/2012	0"-3"	<1.83	240
M-14	3/26/2012	0"-3"	2.74J	467
M-14	5/16/2012	3"-6"	NA	87.4JL
M-14	1/3/2014	3"-6"	2.65	393
M-14	5/16/2012	6"-12"	NA	40.8
M-14 E	5/15/2012	0"-3"	NA	188
M-14 N	5/15/2012	0"-3"	NA	471
M-14 S	5/15/2012	0"-3"	NA	488
M-14 S	5/8/2013	1-2'	0.186J	29.1*
M-14 W	5/15/2012	0"-3"	NA	936
M-14 W	5/8/2013	1-2'	0.601	23.5*
M-15	3/26/2012	0"-3"	2.31J	352
M-15	5/16/2012	3"-6"	NA	78.6
M-15	5/16/2012	6"-12"	NA	32.6
M-15 E	5/16/2012	0"-3"	NA	134
M-15 N	5/16/2012	0"-3"	NA	201
M-15 S	5/16/2012	0"-3"	NA	200
M-15 W	5/16/2012	0"-3"	NA	352
M-16	3/26/2012	0"-3"	1.21J	265
M-16	5/16/2012	3"-6"	NA	34.5
M-16 E	5/15/2012	0"-3"	NA	190
M-16 N	5/15/2012	0"-3"	NA	328
M-16 S	5/15/2012	0"-3"	NA	106
M-16 W	5/15/2012	0"-3"	NA	1730
M-16A1	3/22/2013	0"-3"	20.6	5000
M-16A1	3/22/2013	0'-1'	3.68	1660
M-16A1	3/22/2013	1'-2'	0.523	87.8J*
M-16A3	3/22/2013	0"-3"	19.4	9640
M-16A3	3/22/2013	0'-1'	13.7	3460
M-16A3	3/22/2013	1'-2'	<0.0279	46.4J*
M-16A4	3/19/2013	0"-3"	3.9	603
M-16A4	5/8/2013	9-11"	1.82	298
M-17	3/26/2012	0"-3"	2.88J	426
M-17	5/16/2012	3"-6"	NA	48.8
M-17	5/16/2012	6"-12"	NA	12.5*
M-17 E	5/15/2012	0"-3"	NA	138
M-17 N	5/15/2012	0"-3"	NA	123
M-17 S	5/15/2012	0"-3"	NA	134
M-17 W	5/15/2012	0"-3"	NA	201JL
M-17 W	1/3/2014	0"-3"	1.46	177
M-18	3/28/2012	0"-3"	<1.76	77.9
M-18C	3/19/2013	0"-3"	0.908	108
M-19C	3/19/2013	0"-3"	0.887	89.1
N-11	3/26/2012	0"-3"	<2.06	318
N-11	5/7/2013	2-3'	1.19	6.53J*
N-11 E	5/16/2012	0"-3"	NA	140JL

TABLE 4D.3
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: SE AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
N-11 E	1/3/2014	0"-3"	1.33	177
N-11 N	5/16/2012	0"-3"	NA	149
N-11 S	5/16/2012	0"-3"	NA	102
N-11 W	5/16/2012	0"-3"	NA	99.2
N-12	3/26/2012	0"-3"	3.2	411
N-12	5/7/2013	2-3'	0.0415J	9.58J*
N-12 E	5/16/2012	0"-3"	NA	169
N-12 N	5/16/2012	0"-3"	NA	337
N-12 S	5/16/2012	0"-3"	NA	171
N-12 W	5/16/2012	0"-3"	NA	129
N-13	3/26/2012	0"-3"	<2.48	134
N-14	3/26/2012	0"-3"	1.15J	152
N-15	3/26/2012	0"-3"	<1.87	101
N-16	3/26/2012	0"-3"	2.16J	307
N-16	5/16/2012	3"-6"	NA	77.7JL
N-16	5/7/2013	2-3'	<0.0286	8.8J*
N-16 E	5/16/2012	0"-3"	NA	67.9
N-16 N	5/16/2012	0"-3"	NA	109
N-16 S	5/16/2012	0"-3"	NA	97.1
N-16 W	5/16/2012	0"-3"	NA	4750
N-16 WA	3/22/2013	0"-3"	2.34	274
N-16A1	3/19/2013	0"-3"	2.05	354
N-16A2	3/19/2013	0"-3"	0.528	64.7
N-17	3/26/2012	0"-3"	2.17J	238
N-18/19	3/19/2013	0"-3"	0.124J	18.6
N-18C	3/19/2013	0"-3"	0.375	64.8
NO-13	3/19/2013	0"-3"	1.41	205
NO-14	3/19/2013	0"-3"	0.432	101
NO-16	3/19/2013	0"-3"	0.94	139
NO-17	3/19/2013	0"-3"	0.447	67.6
O-11C	3/19/2013	0"-3"	0.999	134
O-12C	3/19/2013	0"-3"	1.22	177
O-13C	3/19/2013	0"-3"	1.33	205
O-14C	3/19/2013	0"-3"	0.714	113
O-15C	3/19/2013	0"-3"	1.12	155
O-11	3/28/2012	0"-3"	<2.07	96.9 JL
O-13	3/28/2012	0"-3"	<1.83	127
O-15	3/28/2012	0"-3"	28.6	5180
O-15	5/16/2012	3"-6"	NA	3060
O-15	5/16/2012	6"-12"	NA	1260
O-15	3/22/2013	0'-1'	0.927	184
O-15	3/22/2013	1'-2'	<0.0306	17.6*
O-15 E	5/16/2012	0"-3"	NA	36.8
O-15 N	5/16/2012	0"-3"	NA	164
O-15 S	5/16/2012	0"-3"	NA	47.9
O-15 W	5/16/2012	0"-3"	NA	55.2

TABLE 4D.3
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: SE AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
O-15A1	3/22/2013	0"-3"	2.31	343
O-15A1	3/22/2013	0'-1'	0.264J	56
O-15A1	3/22/2013	1'-2'	<0.0299	10.6J*
O-15A2	3/19/2013	0"-3"	1.45	261
O-15A3	3/19/2013	0"-3"	3.47	520
O-15A4	3/19/2013	0"-3"	0.955	147
O-15A5	3/19/2013	0"-3"	0.8	128
O-15A6	3/22/2013	0"-3"	4.2	828
O-15A6	3/22/2013	0'-1'	0.352	59.4
O-15A6	3/22/2013	1'-2'	0.213J	34.1J
O-15A6	3/22/2013	2'-2.5'	<0.028	5.15J*
O-15A7	3/22/2013	0"-3"	1.49	272
O-15A7	3/22/2013	0'-1'	0.888	183
O-15A7	3/22/2013	1'-2'	0.0553J	17.1J*
O-15A8	3/19/2013	0"-3"	0.666	106
O-15A8	3/22/2013	0'-1'	0.0524J	24.2
O-15A8	3/22/2013	1'-2'	<0.0304	9.88
O-15A9	3/22/2013	0"-3"	2.55	382
O-15A9	3/22/2013	0'-1'	0.13J	21.3*
O-15A9	3/22/2013	1'-2'	<0.0287	6.88J
O-15A10	3/19/2013	0"-3"	0.706	116
O-15A11	3/22/2013	0'-1'	1.4	233
O-15A11	3/22/2013	1'-2'	0.0734J	17.8
O-15A12	3/22/2013	0"-3"	2.55	368
O-15A12	3/22/2013	0'-1'	0.174J	19.2*
O-15A12	3/22/2013	1'-2'	0.123J	10.8J
O-15A13	3/19/2013	0"-3"	1.51	231
O-15A14	3/19/2013	0"-3"	1.63	311
O-15A15	3/19/2013	0"-3"	16.8	3080
O-15A16	3/19/2013	0"-3"	1.71	280
O-15A16	5/8/2013	1-1.75'	0.206J	24.2*
O-17	3/28/2012	0"-3"	<1.66	47
O-18	3/19/2013	0"-3"	0.303	47.5
OP-12	3/19/2013	0"-3"	1.99	341
P-11C	3/19/2013	0"-3"	0.747	118
P-12C	3/19/2013	0"-3"	0.863	126
P-13C	3/19/2013	0"-3"	0.81	136
P-14C	3/19/2013	0"-3"	0.746	122
P-15C	3/19/2013	0"-3"	0.741	124
P-17C	3/19/2013	0"-3"	0.267	36
PQ-11	3/19/2013	0"-3"	0.805	109
PQ-12	3/19/2013	0"-3"	1.03	142
PQ-13	3/19/2013	0"-3"	0.828	143
PQ-14	3/19/2013	0"-3"	0.664	99.6
PQ-16	3/19/2013	0"-3"	0.619	86.7

TABLE 4D.3
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: SE AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
Q-11C	3/19/2013	0"-3"	0.454	60.8
Q-12C	3/19/2013	0"-3"	0.768	76.7
Q-13C	3/19/2013	0"-3"	1.07	90.9
Q-14C	3/19/2013	0"-3"	0.624	104
Q-11	3/28/2012	0"-3"	1.01J	87.2
Q-12/13	3/19/2013	0"-3"	0.71	77.1
Q-13	3/28/2012	0"-3"	0.86J	95.1
Q-14/15	3/19/2013	0"-3"	0.562	90.4
Q-15	3/28/2012	0"-3"	<0.95	101
Q-16	4/24/2013	0"-3"	0.158J	65.6J
Q-16A	5/8/2013	0"-3"	0.623	93.7
QR-16	3/19/2013	0"-3"	0.242J	36.1
SCSS	4/17/2013	0"-3"	12.9	1620
SCSSA	4/24/2013	0"-3"	0.83	112J
SCSSB	5/8/2013	0"-3"	0.324	21.2

Notes:
1. Concentrations exceeding the Residential Assessment Level (RAL) presented in highlighted cells.
2. The assessment and cleanup criteria are based on a residential land use standard, therefore the RAL (or assessment level in the case of lead) is the critical PCL (cPCL).
3. Lead assessment level = 250 mg/kg.
4. Cadmium assessment level = 52.4 mg/kg.
5. * = Sample represents vertical delineation of impacts (to background, RAL, or bedrock).
6. Vertical delineation to assessment level required if groundwater evaluation completed, delineation to background concentration if no groundwater evaluation completed.
7. < = Compound not detected at the indicated detection limit. J = Estimated value.
8. JL = Estimated value with potential low bias. JH = Estimated value with potential high bias.

TABLE 4D.4
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: NE AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
B-18	3/28/2012	0"-3"	<1.29	90.4
BC-16	3/18/2013	0"-3"	<0.0274	28JL
BC-17	3/18/2013	0"-3"	<0.039JL	71.6JL
C-18C	3/18/2013	0"-3"	<0.0262JL	40.2
C-21C	3/18/2013	0"-3"	0.443	43
C-22C	3/18/2013	0"-3"	0.568	22.7
C-16	3/23/2012	0"-3"	<1.05	82.4JL
C-17	3/23/2012	0"-3"	<1.23	75
C-18	3/28/2012	0"-3"	<1.06	90.7
C-19	3/18/2013	0"-3"	0.18J	33.6
C-20	3/28/2012	0"-3"	<0.97	45.8
C-22	3/28/2012	0"-3"	<0.99	38.3
CD-16	3/18/2013	0"-3"	0.0669J	28.2
CD-17	3/18/2013	0"-3"	0.253J	37.7
CD-19	3/18/2013	0"-3"	<0.0312JL	13.9JL
CD-21	3/18/2013	0"-3"	0.326	27.9
D-16C	5/14/2012	0"-3"	NA	162
D-16	3/23/2012	0"-3"	<2.10	436
D-16	5/14/2012	3"-6"	NA	122
D-16	5/14/2012	6"-12"	NA	95.98
D-16 E	5/14/2012	0"-3"	NA	84.4
D-16 N	5/14/2012	0"-3"	NA	98.7
D-16 S	5/14/2012	0"-3"	NA	35.9
D-17	3/23/2012	0"-3"	<1.09	65.5
D-18C	3/18/2013	0"-3"	0.27J	52.3
D-19C	3/18/2013	0"-3"	<0.029JL	30.1
D-20C	3/18/2013	0"-3"	<0.0285JL	28.8
D-21C	3/18/2013	0"-3"	<0.0292	28.3JL
D-22C	3/18/2013	0"-3"	0.159J	26.2
DE-17	3/18/2013	0"-3"	0.369JL	54
DE-18	3/18/2013	0"-3"	0.259J	53.1
DE-19	3/18/2013	0"-3"	0.258J	49.7
DE-20	3/18/2013	0"-3"	0.114J	35.2
DE-21	3/18/2013	0"-3"	<0.03	30.8
DE-22	3/18/2013	0"-3"	0.0801J	30.5
E-16	3/23/2012	0"-3"	<1.73	259
E-16	5/14/2012	3"-6"	NA	69.9
E-16	5/14/2012	6"-12"	NA	39.7JH*
E-16 E	5/14/2012	0"-3"	NA	90
E-16 N	5/14/2012	0"-3"	NA	80.5
E-16 S	5/14/2012	0"-3"	NA	74.9
E-16 W	5/14/2012	0"-3"	NA	150
E-18C	3/18/2013	0"-3"	0.403JL	78.6
E-20C	3/18/2013	0"-3"	0.514JL	38
E-21C	3/18/2013	0"-3"	0.224J	38.3
E-17	3/23/2012	0"-3"	<0.98	43.2
E-18	3/28/2012	0"-3"	<1.02	61.2
E-20	3/28/2012	0"-3"	<1.78	64.4
E-22	3/28/2012	0"-3"	<1.83	20.5
EF-17	3/18/2013	0"-3"	0.346	78.5

TABLE 4D.4
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: NE AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
EF-19	3/18/2013	0"-3"	0.391JL	49.4
EF-21	3/18/2013	0"-3"	<0.0295	35.7
F-16	3/23/2012	0"-3"	1.35J	266
F-16	5/14/2012	3"-6"	NA	89
F-16	5/14/2012	6"-12"	NA	8.01*
F-16 E	5/14/2012	0"-3"	NA	95.8
F-16 N	5/14/2012	0"-3"	NA	106
F-16 S	5/14/2012	0"-3"	NA	104JH
F-16 W	5/14/2012	0"-3"	NA	133
F-17	3/23/2012	0"-3"	4.60	1840
F-17	5/14/2012	3"-6"	NA	234
F-17	5/14/2012	6"-12"	NA	25.9*
F-17 E	5/14/2012	0"-3"	NA	91.3
F-17 N	5/14/2012	0"-3"	NA	51.5
F-17 C	5/14/2012	0"-3"	NA	64.1JH
F-18C	3/18/2013	0"-3"	0.511	87.9
F-19C	3/18/2013	0"-3"	0.294	51
F-20C	3/18/2013	0"-3"	0.479	36.6
F-21C	3/18/2013	0"-3"	0.284J	44.3
FG-18	3/18/2013	0"-3"	0.0935J	43.7
FG-19	3/18/2013	0"-3"	0.124J	25.5
FG-20	3/18/2013	0"-3"	<0.0259JL	19.6
G-16	3/23/2012	0"-3"	1.93J	537
G-16	5/14/2012	3"-6"	NA	65
G-16	5/14/2012	6"-12"	NA	61
G-16 E	5/14/2012	0"-3"	NA	92.5
G-16 N	5/14/2012	0"-3"	NA	132
G-16 S	5/14/2012	0"-3"	NA	148JL
G-16 S	1/3/2014	0"-3"	1.05	177
G-16 W	5/14/2012	0"-3"	NA	245
G-18C	3/18/2013	0"-3"	0.259J	72.3
G-19C	3/18/2013	0"-3"	0.367	40.6
G-20C	3/18/2013	0"-3"	0.409	25.2
G-17	3/23/2012	0"-3"	<1.01	92
G-18	3/28/2012	0"-3"	<0.94	89.7JH
G-20	3/28/2012	0"-3"	<3.28	37.1
GH-16	3/19/2013	0"-3"	0.542	112
GH-17	3/19/2013	0"-3"	0.353	76.2
GH-19	3/18/2013	0"-3"	0.272	34.1
H-16	3/23/2012	0"-3"	<0.94	38.6
H-17	3/23/2012	0"-3"	<1.02	57.5
H-18C	3/19/2013	0"-3"	0.501	106
H-19C	3/18/2013	0"-3"	0.331	55.8
H-20C	3/18/2013	0"-3"	<0.0302JL	52.4
HI-15	3/19/2013	0"-3"	3.41	982
HI-15	5/7/2013	1-2'	2.02	1030J
HI-15	5/7/2013	2-3'	0.373	12*
HI-15A	5/21/2013	1-2'	0.631	78.3
HI-15A	5/21/2013	2-3'	0.273	10.9
HI-15B	5/21/2013	1-2'	1.69	297

TABLE 4D.4
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: NE AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet or inches)	Cadmium (mg/kg)	Lead (mg/kg)
HI-15B	5/21/2013	2-3'	0.346	10.9*
HI-15C	5/21/2013	1-2'	0.398	20.1
HI-15C	5/21/2013	2-3'	0.385	13
HI-16	3/19/2013	0"-3"	0.632	108
HI-17	3/19/2013	0"-3"	0.427	71.6
HI-19	3/18/2013	0"-3"	<0.0262JL	49.5
HI-20	3/18/2013	0"-3"	0.0363J	25.7
I-16	3/23/2012	0"-3"	<0.93	24.5
I-17	3/23/2012	0"-3"	<1.86	70.9
I-18	3/28/2012	0"-3"	1.26J	421
I-18	5/15/2012	3"-6"	NA	58.2
I-18	5/15/2012	6"-12"	NA	23.8*
I-18 E	5/15/2012	0"-3"	NA	42
I-18 N	5/15/2012	0"-3"	NA	42.2
I-18 S	5/15/2012	0"-3"	NA	116
I-18 W	5/15/2012	0"-3"	NA	43.9
I-18A1	3/19/2013	0"-3"	0.252J	273
I-18A2	3/19/2013	0"-3"	0.209J	148
I-18A3	3/19/2013	0"-3"	0.133J	79.6
I-18A4	3/19/2013	0"-3"	0.379JL	239
I-18C	3/19/2013	0"-3"	0.451	59.3
I-19C	3/19/2013	0"-3"	0.0295J	77.9
I-20C	3/18/2013	0"-3"	0.28J	45.5
I-20	3/28/2012	0"-3"	<1.78	58.5
IJ-15	3/19/2013	0"-3"	2.07	426
IJ-16	3/19/2013	0"-3"	1.02	148
J-16	3/23/2012	0"-3"	0.97J	137JH
J-17	3/23/2012	0"-3"	<2.01	123
J-18C	3/19/2013	0"-3"	0.192J	45.8
J-20C	3/19/2013	0"-3"	0.169J	57.3

Notes:
1. Concentrations exceeding the Residential Assessment Level (RAL) presented in highlighted cells.
2. The assessment and cleanup criteria are based on a residential land use standard, therefore the RAL (or assessment level in the case of lead) is the critical PCL (cPCL).
3. Lead assessment level = 250 mg/kg.
4. Cadmium assessment level = 52.4 mg/kg.
5. * = Sample represents vertical delineation of impacts (to background or RAL).
6. Vertical delineation to assessment level required if groundwater evaluation completed, delineation to background concentration if no groundwater evaluation completed.
7. < = Compound not detected at the indicated detection limit. J = Estimated value.
8. JL = Estimated value with potential low bias. JH = Estimated value with potential high bias.

TABLE 4D.5
SURFACE SOIL SAMPLE RESULTS FOR LEAD AND CADMIUM: EAGAN WAY/SOUTH 5th STREET
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth ft below asphalt surface	Cadmium (mg/kg)	Lead (mg/kg)
EW-1	3/22/2013	0.5'-1.5'	0.237 J	12.5
EW-2	3/22/2013	1'-2'	<0.044	14.5
EW-3	3/22/2013	0.5'-1.5'	<0.0276	31.4
EW-4	3/22/2013	1'-2'	0.322	20.4
EW-5	3/22/2013	1'-2'	0.158 J	88.2
EW-6	3/22/2013	1'-2'	0.363	10.5
EW-7	3/22/2013	1'-2'	0.298 J	12.5

Notes:
1. Concentrations exceeding the Residential Assessment Level presented in highlighted cells (not applicable).
2. The assessment and cleanup criteria are based on a residential land use standard, therefore the RAL is the critical PCL (cPCL).
3. Lead assessment level = 250 mg/kg.
4. Cadmium assessment level = 52.4 mg/kg.
5. < = Compound not detected at the indicated detection limit.
6. J = Estimated value.

TABLE 4D.6
TEST PIT SAMPLE RESULTS: METALS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

		Undocumented Fill in Tracts G and J												
Location ID: **Sample Date:** **Sample Depth (ft bgs):**	**Residential Assess. Level**	TP-1 4/15/2013 1	TP-1 4/15/2013 2	TP-5 4/15/2013 1.0	TP-5 4/15/2013 3.0	TP-6 4/15/2013 1.0	TP-6 4/15/2013 2.5	TP-6 4/15/2013 3.5	TP-7 4/15/2013 1.0	TP-7 4/15/2013 2.0	TP-7 4/15/2013 3.0	TP-8 4/15/2013 1.0	TP-8 4/15/2013 3.0	TP-8 4/15/2013 5.0
Constituent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	2.42E+01	**10.9**	**10.5**	**9.24**	**10.7**	NA	**22.6**	**12.8**	NA	**14.8**	**23.8**	NA	**17.9**	**15**
Barium	2.22E+02	**112**	**165**	**70.1**	**170**	NA	**83**	**153**	NA	**88.3**	**154**	NA	**167**	**120**
Cadmium	5.24E+01	**0.869**	**0.435**	**0.53**	**0.363**	**0.605**	**0.381**	**0.442**	**0.411JL**	**0.625**	**0.264J**	**0.135J**	**0.28J**	**0.336**
Chromium	1.20E+03	**16.8**	**20.8**	**11.4**	**20.9**	NA	**14.7**	**18.7**	NA	**14**	**22.1**	NA	**11.4**	**12.4**
Lead	2.50E+02	**200**	**31.2**	**113**	**11.6**	**79.1JL**	**75.1**	**26.4**	**1010**	**128**	**145**	**51.1JL**	**89**	**86.4**
Mercury	2.09E+00	**0.00774J**	**0.00701J**	**0.0686**	<0.00525	NA	**0.0187J**	**0.00623J**	NA	**0.0241J**	**0.0243J**	NA	**0.0192J**	**0.0198J**
Selenium	1.15E+00	**0.358J**	<0.322	**0.511J**	<0.355	NA	**0.514J**	**0.442J**	NA	**0.563J**	**0.605J**	NA	**0.796J**	**0.678J**
Silver	2.39E-01	<0.135	<0.148	<0.154	<0.163	NA	<0.137	<0.15	NA	<0.149	<0.165	NA	**0.172J**	<0.145

		Undocumented Fill in Tracts G and J			Berm Area West of Parkwood Drive					M Tract Area Adjacent to Drainage Ditch and Rail Road Tracks					
Location ID: **Sample Date:** **Sample Depth (ft bgs):**	**Residential Assess. Level**	TP-9 4/15/2013 1.0	TP-9 4/15/2013 5.0	TP-9 5/7/2013 5-6	TP-2 4/15/2013 1	TP-3 4/15/2013 0.5	TP-3 4/15/2013 1.5	TP-4 4/15/2013 0.5	TP-4 4/15/2013 1.5	TP-10 4/15/2013 1	TP-10 5/7/2013 1-2	TP-11 4/15/2013 1	TP-11 5/7/2013 1-2	TP-12 4/15/2013 1	TP-13 4/15/2013 1
Constituent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	2.42E+01	**15.1**	**19.9**	NA	NA	NA	NA	NA	NA	**29.9**	**16**	**24.5**	**14.7**	**15.4**	**3.98**
Barium	2.22E+02	**82.2**	**90.9**	NA	NA	NA	NA	NA	NA	**129**	NA	**142**	NA	106	49.9
Cadmium	5.24E+01	**0.443**	**0.193J**	NA	**0.407**	**0.265J**	**0.331J**	**0.229J**	**0.192J**	**1.1**	NA	**0.473**	NA	**0.578**	**0.228J**
Chromium	1.20E+03	**13.5**	**15.2**	NA	NA	NA	NA	NA	NA	**21.5**	NA	**24.1**	NA	**18.4**	**7.41**
Lead	2.50E+02	**93.7**	**331**	**149J**	**9.25**	**43.4JL**	**12.6JL**	**33.4JL**	**4.31**	**136**	NA	**53.4**	NA	**48.8**	**22**
Mercury	2.09E+00	**0.0131J**	**0.02J**	NA	NA	NA	NA	NA	NA	**0.0266J**	NA	**0.0275J**	NA	**0.0343J**	**0.0177J**
Selenium	1.15E+00	**0.692J**	**0.401J**	NA	NA	NA	NA	NA	NA	**0.414J**	NA	<0.323	NA	**0.514J**	<0.281
Silver	2.39E-01	<0.121	<0.124	NA	NA	NA	NA	NA	NA	<0.156	NA	<0.148	NA	<0.14	<0.129

		Land Disturbance Area in Tracts C and D			Land Disturbed Area - Former Gravel Pit in Tract A						
Location ID: **Sample Date:** **Sample Depth (ft bgs):**	**Residential Assess. Level**	TP-14 4/16/2013 1	TP-15 4/16/2013 1	TP-16 4/16/2013 1-2	TP-17 4/17/2013 1.5	TP-18 4/17/2013 1.5	TP-19 4/17/2013 2	TP-28 4/17/2013 1.5	TP-29 4/17/2013 2	TP-30 4/17/2013 2.5	TP-31 4/17/2013 2
Constituent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Cadmium	5.24E+01	**0.351**	**1.1**	**1.24**	**0.325**	**0.25J**	**0.393**	**0.273J**	**0.303**	**0.230J**	**0.213J**
Lead	2.50E+02	**106**	**219**	**22.1**	**13.1**	**9.2**	**10.6**	**19.6**	**25.3**	**19.1**	**13.9**

		Berm Areas East of Parkwood Drive												
Location ID: **Sample Date:** **Sample Depth (ft bgs):**	**Residential Assess. Level**	TP-33 5/9/2013 1	TP-33 5/9/2013 2	TP-34 5/9/2013 1	TP-35 5/9/2013 1	TP-36 5/9/2013 1.5	TP-37 5/9/2013 1	TP-37 5/9/2013 4	TP-38 5/9/2013 1	TP-38 5/9/2013 4	TP-39 5/9/2013 1.5	TP-39 5/9/2013 3.5	TP-40 5/9/2013 1	TP-40 5/9/2013 3
Constituent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Cadmium	5.24E+01	**0.0504J**	**0.0458J**	<0.0254	<0.0278	<0.026	**0.258J**	**0.452**	**0.129J**	**0.2J**	**0.133J**	**0.113J**	**0.504**	**0.322J**
Lead	2.50E+02	**13.8**	**10.5**	**12**	**13.1**	**10.4**	**30.1**	**27.2**	**33.5**	**14.1J**	**20.1**	**19.7**	**33.2**	**27.9**

Notes:
1. Detected compounds presented in **bold**.
2. Concentrations or detection limits exceeding the Residential Assessment Level/Critical PCL presented in highlighted cells.
3 = Sample represents vertical delineation of impacts to the assessment level.
3. < = Compound not detected at the indicated detection limit.
4. J = Estimated value. JL = Estimated value with potential low bias. NA = Compound not analyzed.

TABLE 4D.7
TEST PIT SAMPLE RESULTS: TPH, VOCS, SVOCS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

		Undocumented Fill in Tracts G and J												Area Adjacent to Drainage Ditch and Rail Road Tracks			
Location ID:	**Residential**	TP-1	TP-1	TP-5	TP-5	TP-6	TP-6	TP-7	TP-7	TP-8	TP-8	TP-9	TP-9	TP-10	TP-11	TP-12	TP-13
Sample Date:	**Assess.**	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013
Sample Depth (ft bgs):	**Level**	1	2	1.0	3.0	2.5	3.5	2.0	3.0	3.0	5.0	1.0	5.0	1	1	1	1
Constituent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TPH by TCEQ Method TX1005																	
TPH C6-C12	3.25E+01	<4.65	<4.77	<5.21	<5.57	<4.46	<5.22	<4.91	<5.53	<5.15	<4.99	<4.16	<4.31	<5	<5.15	<4.58	<4.19
TPH >C-12-C28	9.90E+01	<4.97	<5.09	<5.56	<5.95	<4.77	<5.57	<5.24	<5.91	<5.5	<5.33	**43.8**	<4.61	<5.34	<5.5	<4.89	<4.47
TPH >C28-C35	9.90E+01	<4.97	<5.09	<5.56	<5.95	<4.77	<5.57	<5.24	<5.91	<5.5	<5.33	**15.8**	<4.61	<5.34	<5.5	<4.89	<4.47
TPH C6-C35	9.90E+01	<9.15	<9.38	<10.3	<11	<8.78	<10.3	<9.66	<10.9	<10.1	<9.82	**59.7**	<8.48	<9.83	<10.1	<9.01	<8.24
Volatile Organic Compounds (VOCs)																	
1,1,1-Trichloroethane	8.10E-01	<0.000908	<0.00093	<0.00101	<0.00109	<0.000872	<0.00102	<0.000962	<0.00108	<0.00101	<0.000977	<0.000813	<0.000841	<0.000973	<0.001	<0.000891	<0.000819
1,1,2,2-Tetrachloroethane	1.15E-02	<0.00107	<0.00109	<0.00119	<0.00128	<0.00103	<0.0012	<0.00113	<0.00127	<0.00119	<0.00115	<0.000956	<0.000989	<0.00114	<0.00118	<0.00105	<0.000963
1,1,2-Trichloroethane	1.00E-02	<0.000896	<0.000917	<0.001	<0.00107	<0.00086	<0.00101	<0.000949	<0.00107	<0.000995	<0.000964	<0.000802	<0.00083	<0.00096	<0.000991	<0.000879	<0.000808
1,1-Dichloroethane	9.25E+00	<0.00107	<0.00109	<0.00119	<0.00128	<0.00103	<0.0012	<0.00113	<0.00127	<0.00119	<0.00115	<0.000956	<0.000989	<0.00114	<0.00118	<0.00105	<0.000963
1,1-Dichloroethene	2.50E-02	<0.0015	<0.00153	<0.00167	<0.00179	<0.00144	<0.00168	<0.00159	<0.00178	<0.00166	<0.00161	<0.00134	<0.00139	<0.0016	<0.00166	<0.00147	<0.00135
1,2-Dichloroethane	6.86E-03	<0.0011	<0.00113	<0.00123	<0.00132	<0.00106	<0.00124	<0.00117	<0.00131	<0.00123	<0.00119	<0.000989	<0.00102	<0.00118	<0.00122	<0.00108	<0.000996
1,2-Dichloropropane	1.14E-02	<0.000871	<0.000892	<0.000973	<0.00104	<0.000837	<0.000978	<0.000923	<0.00104	<0.000968	<0.000937	<0.00078	<0.000807	<0.000933	<0.000964	<0.000855	<0.000786
2-Butanone (MEK)	1.46E+01	<0.00233	<0.00239	<0.0026	<0.00279	<0.00224	<0.00262	<0.00247	<0.00277	<0.00259JL	<0.00251	<0.00209	<0.00216	<0.0025	<0.00258	<0.00229JL	<0.0021JL
2-Hexanone	1.61E-01	<0.00124	<0.00127	<0.00138	<0.00148	<0.00119	<0.00139	**0.00159J**	<0.00147	<0.00138JL	<0.00133	<0.00111	<0.00115	<0.00133	<0.00137	<0.00122JL	<0.00112JL
4-Methyl-2-pentanone (MIBK)	2.47E+00	<0.0018	<0.00185	<0.00201	<0.00216	<0.00173	<0.00203	<0.00191	<0.00215	<0.002JL	<0.00194	<0.00162	<0.00167	<0.00193	<0.002	<0.00177JL	<0.00163JL
Acetone	2.14E+01	<0.00204	<0.00209	<0.00227	<0.00243	<0.00196	<0.00229	<0.00216	<0.00242	<0.00226	<0.00219	<0.00182	<0.00189	<0.00218	<0.00225	<0.002	<0.00184
Benzene	1.28E-02	<0.000773	<0.000792	<0.000863	<0.000924	<0.000743	<0.000868	<0.000819	<0.000919	<0.000859	<0.000832	<0.000693	<0.000716	<0.000828	<0.000856	<0.000759	<0.000698
Bromodichloromethane	3.27E-02	<0.00081	<0.000829	<0.000904	<0.000968	<0.000778	<0.000909	<0.000858	<0.000963	<0.0009	<0.000871	<0.000726	<0.00075	<0.000868	<0.000896	<0.000795	<0.000731
Bromoform	3.16E-01	<0.00168	<0.00172	<0.00188	<0.00201	<0.00161	<0.00189	<0.00178	<0.002	<0.00187	<0.00181	<0.00151	<0.00156	<0.0018	<0.00186	<0.00165	<0.00152
Bromomethane	6.54E-02	<0.00102X8	<0.00104X8	<0.00114X8	<0.00122X8	<0.000978X8	<0.00114X8	<0.00108X8	<0.00121X8	<0.00113X8	<0.0011X8	<0.000912X8	<0.000943X8	<0.00109X8	<0.00113X8	<0.000999X8	<0.000919X8
Carbon disulfide	6.79E+00	<0.000675	<0.000691	<0.000754	<0.000806	<0.000648	<0.000758	<0.000715	<0.000803	<0.00075	<0.000726	<0.000605	<0.000625	<0.000723	<0.000747	<0.000662	<0.000609
Carbon tetrachloride	3.09E-02	<0.00139	<0.00142	<0.00155	<0.00166	<0.00133	<0.00156	<0.00147	<0.00165	<0.00154	<0.00149	<0.00124	<0.00128	<0.00149	<0.00153	<0.00136	<0.00125
Chlorobenzene	5.46E-01	<0.00118	<0.00121	<0.00132	<0.00141	<0.00113	<0.00132	<0.00125	<0.0014	<0.00131	<0.00127	<0.00106	<0.00109	<0.00126	<0.0013	<0.00116	<0.00106
Chlorobromomethane	1.52E+00	<0.00218	<0.00224	<0.00244	<0.00261	<0.0021	<0.00245	<0.00231	<0.0026	<0.00243	<0.00235	<0.00196	<0.00202	<0.00234	<0.00242	<0.00214	<0.00197
Chloroethane	1.55E+01	<0.00172	<0.00176	<0.00192	<0.00205	<0.00165	<0.00193	<0.00182	<0.00204	<0.00191	<0.00185	<0.00154	<0.00159	<0.00184	<0.0019	<0.00169	<0.00155
Chloroform	5.10E-01	<0.00081	<0.000829	<0.000904	<0.000968	<0.000778	<0.000909	<0.000858	<0.000963	<0.0009	<0.000871	<0.000726	<0.00075	<0.000868	<0.000896	<0.000795	<0.000731
Chloromethane	2.03E-01	<0.00204	<0.00209	<0.00227	<0.00243	<0.00196	<0.00229	<0.00216	<0.00242	<0.00226	<0.00219	<0.00182	<0.00189	<0.00218	<0.00225	<0.002	<0.00184
cis-1,2-Dichloroethene	1.24E-01	<0.00102	<0.00104	<0.00114	<0.00122	<0.000978	<0.00114	<0.00108	<0.00121	<0.00113	<0.0011	<0.000912	<0.000943	<0.00109	<0.00113	<0.000999	<0.000919
cis-1,3-Dichloropropene	3.32E-03	<0.000663	<0.000678	<0.00074	<0.000792	<0.000636	<0.000744	<0.000702	<0.000788	<0.000736	<0.000713	<0.000594	<0.000614	<0.00071	<0.000733	<0.00065	<0.000598
Dibromochloromethane	2.46E-02	<0.00115	<0.00118	<0.00129	<0.00138	<0.00111	<0.0013	<0.00122	<0.00137	<0.00128	<0.00124	<0.00103	<0.00107	<0.00124	<0.00128	<0.00113	<0.00104
Ethylbenzene	3.82E+00	<0.00125	<0.00128	<0.0014	<0.0015	<0.0012	<0.00141	<0.00133	<0.00149	<0.00139	<0.00135	<0.00112	<0.00116	<0.00134	<0.00139	<0.00123	<0.00113
Methyl tert-butyl ether	3.11E-01	<0.00225	<0.0023	<0.00251	<0.00268	<0.00216	<0.00252	<0.00238	<0.00267	<0.00249	<0.00242	<0.00201	<0.00208	<0.00241	<0.00249	<0.0022	<0.00203
Methylene Chloride	3.49E-02	**0.00275 J**	<0.00275	<0.003	**0.00452J**	**0.00417J**	<0.00302	**0.00368J**	**0.00623J**	**0.0247**	<0.00289	**0.00298J**	**0.00351J**	**0.00481J**	<0.00297	**0.00592J**	**0.00374J**
o-Xylene	3.54E+01	<0.00139	<0.00142	<0.00155	<0.00166	<0.00133	<0.00156	<0.00147	<0.00165	<0.00154	<0.00149	<0.00124	<0.00128	<0.00149	<0.00153	<0.00136	<0.00125
Styrene	1.63E+00	<0.000871	<0.000892	<0.000973	<0.00104	<0.000837	<0.000978	<0.000923	<0.00104	<0.000968	<0.000937	<0.00078	<0.000807	<0.000933	<0.000964	<0.000855	<0.000786
Tetrachloroethene	2.51E-02	<0.000871	<0.000892	<0.000973	<0.00104	<0.000837	<0.000978	<0.000923	<0.00104	<0.000968	<0.000937	<0.00078	<0.000807	<0.000933	<0.000964	<0.000855	<0.000786
Toluene	4.11E+00	<0.00169	<0.00173	<0.00189	<0.00202	<0.00163	<0.0019	<0.00179	<0.00201	<0.00188	<0.00182	<0.00152	<0.00157	<0.00181	<0.00187	<0.00166	<0.00153
trans-1,2-Dichloroethene	2.45E-01	<0.0014	<0.00143	<0.00156	<0.00167	<0.00134	<0.00157	<0.00148	<0.00166	<0.00155	<0.00151	<0.00125	<0.0013	<0.0015	<0.00155	<0.00137	<0.00126
trans-1,3-Dichloropropene	1.79E-02	<0.000712	<0.000729	<0.000795	<0.00085	<0.000684	<0.000799	<0.000754	<0.000846	<0.000791	<0.000766	<0.000638	<0.000659	<0.000762	<0.000788	<0.000698	<0.000642
Trichloroethene	1.68E-02	<0.00172	<0.00176	<0.00192	<0.00205	<0.00165	<0.00193	<0.00182	<0.00204	<0.00191	<0.00185	<0.00154	<0.00159	<0.00184	<0.0019	<0.00169	<0.00155
Vinyl acetate	2.67E+01	<0.00114JL	<0.00117JL	<0.00127JL	<0.00136JL	<0.0011JL	<0.00128JL	<0.00121JL	<0.00136JL	<0.00127JL	<0.00123JL	<0.00102JL	<0.00106JL	<0.00122JL	<0.00126JL	<0.00112JL	<0.00103JL
Vinyl chloride	1.11E-02	<0.0011	<0.00113	<0.00123	<0.00132	<0.00106	<0.00124	<0.00117	<0.00131	<0.00123	<0.00119	<0.000989	<0.00102	<0.00118	<0.00122	<0.00108	<0.000996
Xylenes, Total	6.13E+01	<0.00139	<0.00142	<0.00155	<0.00166	<0.00133	<0.00156	<0.00147	<0.00165	<0.00154	<0.00149	<0.00124	<0.00128	<0.00149	<0.00153	<0.00136	<0.00125

TABLE 4D.7
TEST PIT SAMPLE RESULTS: TPH, VOCS, SVOCS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

		Undocumented Fill in Tracts G and J												Area Adjacent to Drainage Ditch and Rail Road Tracks			
Location ID:	**Residential**	TP-1	TP-1	TP-5	TP-5	TP-6	TP-6	TP-7	TP-7	TP-8	TP-8	TP-9	TP-9	TP-10	TP-11	TP-12	TP-13
Sample Date:	**Assess.**	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013	4/15/2013
Sample Depth (ft bgs):	**Level**	1	2	1.0	3.0	2.5	3.5	2.0	3.0	3.0	5.0	1.0	5.0	1	1	1	1
Constituent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Semivolatile Organic Compounds (SVOCs)																	
1,2,4-Trichlorobenzene	2.40E+00	<0.0257	<0.0263	<0.0287	<0.0154	<0.0247	<0.0145	<0.0273	<0.00306	<0.00286	<0.00277	<0.023	<0.00239	<0.0276	<0.0142	<0.0253	<0.0232
1,2-Dichlorobenzene	8.94E+00	<0.037	<0.0379	<0.0413	<0.0221	<0.0355	<0.0208	<0.0392	<0.0044	<0.00411	<0.00399	<0.0331	<0.00343	<0.0396	<0.0205	<0.0364	<0.0334
1,3-Dichlorobenzene	3.37E+00	<0.0189	<0.0193	<0.0211	<0.0113	<0.0181	<0.0106	<0.02	<0.00224	<0.00209	<0.00203	<0.0169	<0.00175	<0.0202	<0.0104	<0.0185	<0.017
1,4-Dichlorobenzene	1.05E+00	<0.0276	<0.0282	<0.0308	<0.0165	<0.0265	<0.0155	<0.0292	<0.00328	<0.00306	<0.00297	<0.0247	<0.00256	<0.0295	<0.0153	<0.0271	<0.0249
2,4,5-Trichlorophenol	1.69E+01	<0.123	<0.125	<0.137	<0.0733	<0.118	<0.0689	<0.13	<0.0146	<0.0136	<0.0132	<0.11	<0.0114	<0.131	<0.0679	<0.121	<0.111
2,4,6-Trichlorophenol	8.75E-02	<0.0329	<0.0336	<0.0367	<0.0196	<0.0315	<0.0184	<0.0348	<0.00391	<0.00365	<0.00354	<0.0294	<0.00304	<0.0352	<0.0182	<0.0323	<0.0297
2,4-Dichlorophenol	1.76E-01	<0.0474	<0.0485	<0.053	<0.0284	<0.0456	<0.0266	<0.0503	<0.00564	<0.00526	<0.00511	<0.0425	<0.0044	<0.0508	<0.0263	<0.0466	<0.0428
2,4-Dimethylphenol	1.62E+00	<0.105	<0.108	<0.117	<0.0629	<0.101	<0.0591	<0.111	<0.0125	<0.0117	<0.0113	<0.0941	<0.00975	<0.113	<0.0582	<0.103	<0.0949
2,4-Dinitrophenol	1.84E-01	<0.0579JL	<0.0592JL	<0.0646JL	<0.0346JL	<0.0556JL	<0.0325JL	<0.0613JL	<0.00688JL	<0.00642JL	<0.00623JL	<0.0518JL	<0.00536JL	<0.0619JL	<0.032JL	<0.0568JL	<0.0522JL
2,4-Dinitrotoluene	2.13E-02	<0.0442	<0.0453	<0.0494	<0.0264	<0.0425	<0.0248	<0.0469	<0.00526	<0.00491	<0.00477	<0.0396	<0.0041	<0.0474	<0.0245	<0.0435	<0.0399
2,6-Dinitrotoluene	1.82E-02	<0.0362	<0.037	<0.0404	<0.0216	<0.0347	<0.0203	<0.0383	<0.0043	<0.00401	<0.00389	<0.0324	<0.00335	<0.0387	<0.02	<0.0355	<0.0326
2-Chloronaphthalene	3.35E+02	<0.0148	<0.0152	<0.0166	<0.00887	<0.0142	<0.00833	<0.0157	<0.00176	<0.00165	<0.0016	<0.0133	<0.00137	<0.0159	<0.00821	<0.0146	<0.0134
2-Chlorophenol	8.16E-01	<0.0241	<0.0247	<0.027	<0.0144	<0.0232	<0.0136	<0.0256	<0.00287	<0.00268	<0.0026	<0.0216	<0.00224	<0.0258	<0.0134	<0.0237	<0.0218
2-Methylnaphthalene	8.53E+00	<0.0336	<0.0343	<0.0375	<0.0201	<0.0323	<0.0189	<0.0356	<0.00399	<0.00373	<0.00362	<0.0301	<0.00311	<0.0359	<0.0186	<0.033	<0.0303
2-Methylphenol	3.56E+00	<0.0396	<0.0405	<0.0442	<0.0237	<0.038	<0.0222	<0.042	<0.00471	<0.00439	<0.00426	<0.0354	<0.00367	<0.0424	<0.0219	<0.0389	<0.0357
2-Nitroaniline	7.41E-02	<0.0599	<0.0613	<0.0669	<0.0358	<0.0576	<0.0337	<0.0635	<0.00713	<0.00665	<0.00646	<0.0536	<0.00555	<0.0642	<0.0332	<0.0589	<0.0541
2-Nitrophenol	6.73E-02	<0.0477	<0.0488	<0.0532	<0.0285	<0.0458	<0.0268	<0.0506	<0.00567	<0.00529	<0.00514	<0.0427	<0.00442	<0.051	<0.0264	<0.0468	<0.043
3 & 4 Methylphenol	3.16E-01	<0.0342	<0.035	<0.0382	<0.0204	<0.0328	<0.0192	<0.0363	<0.00407	<0.0038	<0.00368	<0.0306	<0.00317	<0.0366	<0.0189	<0.0336	<0.0309
3,3'-Dichlorobenzidine	3.54E-01	<0.125	<0.127	<0.139	<0.0744	<0.12	<0.0699	<0.132	<0.0148	<0.0138	<0.0134	<0.111	<0.0115	<0.133	<0.0689	<0.122	<0.112
3-Nitroaniline	9.58E-02	<0.0876	<0.0896	<0.0979	<0.0524	<0.0842	<0.0492	<0.0929	<0.0104	<0.00973	<0.00944	<0.0784	<0.00812	<0.0938	<0.0485	<0.0861	<0.0791
4,6-Dinitro-2-methylphenol	9.22E-03	<0.061	<0.0624	<0.0682	<0.0365	<0.0586	<0.0343	<0.0647	<0.00726	<0.00677	<0.00658	<0.0546	<0.00566	<0.0653	<0.0338	<0.06	<0.0551
4-Bromophenyl phenyl ether	1.77E-01	<0.0348	<0.0356	<0.0389	<0.0208	<0.0334	<0.0195	<0.0369	<0.00414	<0.00386	<0.00375	<0.0312	<0.00323	<0.0373	<0.0193	<0.0342	<0.0314
4-Chloro-3-methylphenol	2.26E+00	<0.191	<0.195	<0.213	<0.114	<0.183	<0.107	<0.202	<0.0227	<0.0212	<0.0206	<0.171	<0.0177	<0.204	<0.106	<0.188	<0.172
4-Chloroaniline	8.83E-02	<0.0713	<0.073	<0.0797	<0.0426	<0.0685	<0.0401	<0.0756	<0.00848	<0.00792	<0.00768	<0.0639	<0.00661	<0.0764	<0.0395	<0.0701	<0.0644
4-Chlorophenyl phenyl ether	1.54E-01	<0.0221	<0.0226	<0.0246	<0.0132	<0.0212	<0.0124	<0.0234	<0.00262	<0.00245	<0.00238	<0.0197	<0.00204	<0.0236	<0.0122	<0.0217	<0.0199
4-Nitroaniline	2.93E-01	<0.137	<0.14	<0.153	<0.0817	<0.131	<0.0767	<0.145	<0.0162	<0.0152	<0.0147	<0.122	<0.0127	<0.146	<0.0757	<0.134	<0.123
4-Nitrophenol	2.21E-01	<0.0623	<0.0637	<0.0695	<0.0372	<0.0598	<0.035	<0.066	<0.0074	<0.00691	<0.00671	<0.0557	<0.00577	<0.0666	<0.0345	<0.0612	<0.0562
Acenaphthene	1.18E+02	<0.0177	<0.0181	<0.0197	<0.0106	<0.0169	<0.00991	<0.0187	<0.0021	<0.00196	<0.0019	<0.0158	<0.00164	<0.0189	<0.00977	<0.0173	<0.0159
Acenaphthylene	2.04E+02	<0.0123	<0.0125	<0.0137	<0.00733	<0.0118	<0.00688	<0.013	<0.00146	<0.00136	<0.00132	<0.011	<0.00114	<0.0131	<0.00679	<0.012	<0.0111
Anthracene	3.44E+03	**0.065J**	<0.016	<0.0175	<0.00938	**0.0592J**	<0.00881	**0.0727J**	**0.00868J**	**0.00791J**	**0.00994J**	<0.014	**0.00681J**	<0.0168	<0.00869	**0.096J**	<0.0142
Benzidine	3.45E-05	<0.111JL	<0.113JL	<0.123JL	<0.0661JL	<0.106JL	<0.0621JL	<0.117JL	<0.0131JL	<0.0123JL	<0.0119JL	<0.099JL	<0.0102JL	<0.118JL	<0.0612JL	<0.109JL	<0.0998JL
Benzo[a]anthracene	5.65E+00	<0.0169	<0.0173	<0.0189	<0.0101	<0.0162	<0.0095	<0.0179	<0.00201	<0.00188	**0.0113J**	<0.0151	<0.00157	<0.0181	<0.00936	<0.0166	<0.0153
Benzo[a]pyrene	5.64E-01	<0.0197	<0.0202	<0.022	<0.0118	<0.019	<0.0111	<0.0209	**0.0102J**	**0.00776J**	**0.0234**	<0.0177	**0.0049J**	<0.0211	<0.0109	**0.1J**	<0.0178
Benzo[b]fluoranthene	5.71E+00	**0.0331J**	<0.0216	<0.0235	<0.0126	<0.0202	<0.0118	**0.0465J**	**0.0181J**	**0.0142J**	**0.051**	<0.0189	**0.00847J**	<0.0226	<0.0117	**0.207**	<0.019
Benzo[g,h,i]perylene	1.78E+03	<0.0621JL	<0.0636JL	<0.0694JL	<0.0371JL	<0.0597JL	<0.0349JL	<0.0659JL	<0.00739JL	<0.0069JL	**0.00931J**	<0.0556JL	<0.00576JL	<0.0665JL	<0.0344JL	**0.0668J**	<0.0561JL
Benzo[k]fluoranthene	5.72E+01	<0.0183	<0.0187	<0.0204	<0.0109	<0.0175	<0.0103	<0.0194	<0.00217	<0.00203	**0.00781J**	<0.0163	<0.00169	<0.0195	<0.0101	<0.0179	<0.0165
Benzyl alcohol	2.93E+00	<0.0715	<0.0731	<0.0798	<0.0427	<0.0686	<0.0401	<0.0758	<0.0085	<0.00793	<0.0077	<0.064	<0.00662	<0.0765	<0.0396	<0.0702	<0.0645
bis (2-Chloroisopropyl) ether	1.02E+00	<0.108	<0.111	<0.121	<0.0648	<0.104	<0.0608	<0.115	<0.0129	<0.012	<0.0117	<0.097	<0.01	<0.116	<0.06	<0.106	<0.0978
Bis(2-chloroethoxy)methane	6.31E-02	<0.0174	<0.0178	<0.0194	<0.0104	<0.0167	<0.00977	<0.0185	<0.00207	<0.00193	<0.00187	<0.0156	<0.00161	<0.0186	<0.00964	<0.0171	<0.0157
Bis(2-chloroethyl)ether	6.16E-03	<0.0202	<0.0207	<0.0226	<0.0121	<0.0194	<0.0114	<0.0214	<0.0024	<0.00224	<0.00218	<0.0181	<0.00187	<0.0216	<0.0112	<0.0199	<0.0183
Bis(2-ethylhexyl) phthalate	4.32E+01	<0.0658	<0.0673	<0.0735	<0.0393	**0.3J**	<0.037	<0.0698	<0.00783	**0.023J**	**0.0547J**	<0.0589	<0.0061	<0.0705	<0.0364	<0.0647	<0.0594
Butyl benzyl phthalate	1.32E+02	<0.0759	<0.0776	<0.0847	<0.0454	<0.0729	<0.0426	<0.0804	<0.00902	<0.00842	**0.111**	<0.0679	<0.00703	<0.0812	<0.042	<0.0745	<0.0685
Carbazole	2.28E+00	<0.0382	<0.0391	<0.0427	<0.0229	<0.0367	<0.0215	<0.0405	<0.00455	<0.00424	<0.00412	<0.0342	<0.00354	<0.0409	<0.0212	<0.0376	<0.0345
Chrysene	5.60E+02	<0.0125	<0.0128	<0.014	<0.00747	<0.012	<0.00702	<0.0133	<0.00149	<0.00139	**0.027**	<0.0112	<0.00116	<0.0134	<0.00692	**0.0496J**	<0.0113
Dibenz(a,h)anthracene	5.49E-01	<0.0445	<0.0455	<0.0497	<0.0266	<0.0427	<0.025	<0.0472	<0.00529	<0.00494	<0.00479	<0.0398	<0.00412	<0.0476	<0.0246	<0.0437	<0.0402
Dibenzofuran	1.67E+01	<0.0218	<0.0223	<0.0244	<0.013	<0.021	<0.0123	<0.0231	<0.00259	<0.00242	<0.00235	<0.0195	<0.00202	<0.0234	<0.0121	<0.0214	<0.0197
Diethyl phthalate	7.79E+01	<0.103	<0.106	<0.115	<0.0618	<0.0992	<0.058	<0.11	**0.0245J**	<0.0115	<0.0111	<0.0925	<0.00957	<0.111	<0.0572	<0.102	<0.0933
Dimethyl phthalate	3.11E+01	<0.0599	<0.0613	<0.0669	<0.0358	<0.0576	<0.0337	<0.0635	<0.00713	<0.00665	<0.00646	<0.0536	<0.00555	<0.0642	<0.0332	<0.0589	<0.0541
Di-n-butyl phthalate	1.66E+03	<0.0317	<0.0325	<0.0354	<0.019	<0.0305	<0.0178	<0.0337	<0.00377	**0.0116J**	**0.0138J**	<0.0284	**0.00994J**	<0.034	<0.0176	<0.0312	<0.0287
Di-n-octyl phthalate	2.58E+03	<0.0233	<0.0238	<0.026	<0.0139	<0.0224	<0.0131	<0.0247	<0.00277	<0.00258	<0.00251	<0.0208	<0.00216	<0.0249	<0.0129	<0.0229	<0.021
Fluoranthene	9.59E+02	<0.0381	<0.039	<0.0426	<0.0228	<0.0366	<0.0214	<0.0404	<0.00453	<0.00423	**0.0455**	<0.0341	<0.00353	<0.0408	<0.0211	<0.0375	<0.0344
Fluorene	1.49E+02	<0.0289	<0.0296	<0.0323	<0.0173	<0.0278	<0.0162	<0.0307	<0.00344	<0.00321	<0.00312	<0.0259	<0.00268	<0.031	<0.016	<0.0284	<0.0261
Hexachlorobenzene	5.65E-01	<0.0186	<0.0191	<0.0208	<0.0111	<0.0179	<0.0105	<0.0198	<0.00222	<0.00207	<0.00201	<0.0167	<0.00173	<0.0199	<0.0103	<0.0183	<0.0168
Hexachlorobutadiene	1.64E+00	<0.0235	<0.0241	<0.0263	<0.0141	<0.0226	<0.0132	<0.025	<0.0028	<0.00261	<0.00254	<0.0211	<0.00218	<0.0252	<0.013	<0.0231	<0.0212
Hexachlorocyclopentadiene	7.16E+00	<0.0565JL	<0.0578JL	<0.0631JL	<0.0338JL	<0.0543JL	<0.0317JL	<0.0599JL	<0.00672JL	<0.00627JL	<0.00609JL	<0.0506JL	<0.00524JL	<0.0605JL	<0.0313JL	<0.0555JL	<0.051JL
Hexachloroethane	6.43E-01	<0.0283JL	<0.029JL	<0.0316JL	<0.0169JL	<0.0272JL	<0.0159JL	<0.03JL	<0.00337JL	<0.00314JL	<0.00305JL	<0.0253JL	<0.00262JL	<0.0303JL	<0.0157JL	<0.0278JL	<0.0256JL
Indeno[1,2,3-cd]pyrene	5.72E+00	<0.0429JL	<0.0439JL	<0.0479JL	<0.0256JL	<0.0412JL	<0.0241JL	<0.0455JL	<0.0051JL	<0.00476JL	**0.00863J**	<0.0384JL	<0.00398JL	<0.0459JL	<0.0237JL	**0.0659J**	<0.0387JL
Isophorone	1.50E+00	<0.0123	<0.0125	<0.0137	<0.00733	<0.0118	<0.00688	<0.013	<0.00146	<0.00136	<0.00132	<0.011	<0.00114	<0.0131	<0.00679	<0.012	<0.0111
Naphthalene	1.56E+01	<0.0165	<0.0169	<0.0185	<0.00989	<0.0159	<0.00929	<0.0175	<0.00197	<0.00184	<0.00178	<0.0148	<0.00153	<0.0177	<0.00916	<0.0163	<0.0149
Nitrobenzene	1.76E-01	<0.0363	<0.0371	<0.0405	<0.0217	<0.0348	<0.0204	<0.0385	<0.00431	<0.00403	<0.00391	<0.0325	<0.00336	<0.0388	<0.0201	<0.0356	<0.0328
N-Nitrosodimethylamine	8.26E-05	<0.0514	<0.0525	<0.0573	<0.0307	<0.0493	<0.0288	<0.0545	<0.00611	<0.0057	<0.00553	<0.046	<0.00476	<0.055	<0.0284	<0.0505	<0.0464
N-Nitrosodi-n-propylamine	1.10E-03	<0.0272	<0.0278	<0.0304	<0.0163	<0.0261	<0.0153	<0.0288	<0.00324	<0.00302	<0.00293	<0.0244	<0.00252	<0.0291	<0.0151	<0.0267	<0.0246
N-Nitrosodiphenylamine	1.41E+00	<0.0232	<0.0237	<0.0259	<0.0138	<0.0222	<0.013	<0.0246	<0.00275	<0.00257	<0.0025	<0.0207	<0.00215	<0.0248	<0.0128	<0.0228	<0.0209
Pentachlorophenol	1.00E-01	<0.049	<0.0501	<0.0547	<0.0293	<0.0471	<0.0275	<0.052	<0.00583	<0.00544	<0.00528	<0.0439	<0.00454	<0.0525	<0.0271	<0.0482	<0.0443
Phenanthrene	2.08E+02	<0.0607	<0.062	<0.0677	<0.0363	<0.0583	<0.0341	<0.0643	<0.00721	<0.00673	<0.00654	<0.0543	<0.00562	<0.0649	<0.0336	<0.0596	<0.0548
Phenol	9.57E+00	<0.052	<0.0531	<0.058	<0.0311	<0.0499	<0.0292	<0.0551	<0.00618	<0.00577	<0.0056	<0.0465	<0.00482	<0.0556	<0.0288	<0.0511	<0.0469
Pyrene	5.58E+02	<0.0224	<0.0229	<0.025	<0.0134	<0.0215	<0.0126	**0.0636J**	**0.0155J**	**0.0115J**	**0.0419**	<0.0201	**0.0099J**	<0.024	<0.0124	**0.0903J**	<0.0202

Notes:
1. Detected compounds presented in **bold**.
2. Concentrations or detection limits exceeding the Residential Assessment Level/Critical PCL presented in highlighted cells.
3. < = Compound not detected at the indicated detection limit.
4. J = Estimated value. JL = Estimated value with a potential low bias. NA = Compound not analyzed. X8 = Laboratory not NELAC certified for this compound.

TABLE 4D.8
SURFACE SOIL SAMPLE RESULTS: FORMER CIRCUIT FAB
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential Assess. Level**	CF-1	CF-1	CF-2	CF-3	CF-4	CF-5	CF-6	CF-7	CF-8	CF-9	CF-10	CF-11	CF-12	CF-13	CF-14
Sample Date:		4/16/2013	5/15/2013	4/16/2013	4/16/2013	4/16/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/15/2013	5/15/2013	5/15/2013	5/15/2013
Sample Depth (ft bgs):		0.25	0.5-1	0.25	0.25	0.25	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
Constituent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Metals by EPA Method 6010/7470																
Arsenic	2.42E+01	**14.3**	NA	**14.3**	**11.4**	**11.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	2.22E+02	**72.2**	NA	**85.8**	**64.5**	**74.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5.24E+01	**1.13**	NA	**1.09**	**0.633**	**0.353**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	1.20E+03	**16.6**	NA	**20.5**	**16.2**	**20**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	2.50E+02	**217**	NA	**86.4**	**43.9**	**31.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2.09E+00	**0.0721**	NA	**<0.0436J**	**0.0384J**	**<0.0348J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	1.15E+00	**0.795J**	NA	**0.951J**	**0.737J**	**0.907J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2.39E-01	<0.135	NA	<0.179	<0.146	<0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	5.48E+02	**2070**	**279***	**25.1**	**16.4**	**14.5**	**1100**	**264**	**95.9**	**157**	**85.6**	**209**	**49.2**	**20.2**	**14.2**	**19.2**
Tin	1.85E+04	**59**	NA	**2.84**	**1.41**	**1.26**	**47**	**18.9**	**7.51**	**11.1**	**8.03**	**13.5**	NA	NA	NA	NA
TPH by TCEQ Method TX1005																
TPH C6-C12	3.25E+01	<4.93	NA	<6.47	<5.08	<5.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH >C-12-C28	9.90E+01	<4.93	NA	<6.47	<5.08	<5.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH >C28-C35	9.90E+01	<4.62	NA	<6.06	<4.76	<5.11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH C6-C35	9.90E+01	<9.09	NA	<11.9	<9.37	<10.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds (VOCs)																
1,1,1-Trichloroethane	8.10E-01	<0.0009	NA	<0.00118	<0.000928	<0.000998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	1.15E-02	<0.00106	NA	<0.00139	<0.00109	<0.00117	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	1.00E-02	<0.000888	NA	<0.00117	<0.000915	<0.000984	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	9.25E+00	<0.00106	NA	<0.00139	<0.00109	<0.00117	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	2.50E-02	<0.00148	NA	<0.00195	<0.00153	<0.00164	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6.86E-03	<0.00109	NA	<0.00144	<0.00113	<0.00121	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	1.14E-02	<0.000863	NA	<0.00114	<0.00089	<0.000957	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	1.46E+01	<0.00231JL	NA	<0.00304JL	<0.00238JL	<0.00256JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	1.61E-01	<0.00123JL	NA	<0.00162JL	<0.00127JL	<0.00136JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	2.47E+00	<0.00179JL	NA	<0.00235JL	<0.00184JL	<0.00198JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	2.14E+01	<0.00202	NA	<0.00266	<0.00208	<0.00224	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1.28E-02	<0.000766	NA	<0.00101	<0.00079	<0.000849	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	3.27E-02	<0.000802	NA	<0.00106	<0.000827	<0.00089	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	3.16E-01	<0.00167	NA	<0.00219	<0.00172	<0.00185	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	6.54E-02	<0.00101X8	NA	<0.00133X8	<0.00104X8	<0.00112X8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	6.79E+00	<0.000669	NA	<0.00088	<0.000689	<0.000741	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	3.09E-02	<0.00137	NA	<0.00181	<0.00142	<0.00152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	5.46E-01	<0.00117	NA	<0.00154	<0.0012	<0.00129	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobromomethane	1.52E+00	<0.00216	NA	<0.00285	<0.00223	<0.0024	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	1.55E+01	<0.0017	NA	<0.00224	<0.00175	<0.00189	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	5.10E-01	<0.000802	NA	<0.00106	<0.000827	<0.00089	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	2.03E-01	<0.00202	NA	<0.00266	<0.00208	<0.00224	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	1.24E-01	<0.00101	NA	<0.00133	<0.00104	<0.00112	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	3.32E-03	<0.000657	NA	<0.000864	<0.000677	<0.000728	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	2.46E-02	<0.00114	NA	<0.0015	<0.00118	<0.00127	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	3.82E+00	<0.00124	NA	<0.00163	<0.00128	<0.00137	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	9.10E-02	<0.00223	NA	<0.00293	<0.00229	<0.00247	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	3.49E-02	**0.00736J**	NA	<0.0035	<0.00275	<0.00295	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	3.54E+01	<0.00137	NA	<0.00181	<0.00142	<0.00152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	1.63E+00	<0.000863	NA	<0.00114	<0.00089	<0.000957	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	2.51E-02	<0.000863	NA	<0.00114	<0.00089	<0.000957	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	4.11E+00	<0.00168	NA	<0.00221	<0.00173	<0.00186	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	2.45E-01	<0.00139	NA	<0.00182	<0.00143	<0.00154	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	1.79E-02	<0.000705	NA	<0.000928	<0.000727	<0.000782	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.68E-02	<0.0017	NA	<0.00224	<0.00175	<0.00189	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl acetate	2.67E+01	<0.00113	NA	<0.00149	<0.00117	<0.00125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	1.11E-02	<0.00109	NA	<0.00144	<0.00113	<0.00121	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	6.13E+01	<0.00137	NA	<0.00181	<0.00142	<0.00152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4D.8
SURFACE SOIL SAMPLE RESULTS: FORMER CIRCUIT FAB
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential**	CF-1	CF-1	CF-2	CF-3	CF-4	CF-5	CF-6	CF-7	CF-8	CF-9	CF-10	CF-11	CF-12	CF-13	CF-14
Sample Date:	**Assess.**	4/16/2013	5/15/2013	4/16/2013	4/16/2013	4/16/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/8/2013	5/15/2013	5/15/2013	5/15/2013	5/15/2013
Sample Depth (ft bgs):	**Level**	0.25	0.5-1	0.25	0.25	0.25	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
Constituent	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Semivolatile Organic Compounds (SVOCs)																
1,2,4-Trichlorobenzene	2.40E+00	<0.0255	NA	<0.0335	<0.0263	<0.0283	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	8.94E+00	<0.0366JL	NA	<0.0482JL	<0.0378JL	<0.0406JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	3.37E+00	<0.0187JL	NA	<0.0246JL	<0.0193JL	<0.0207JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	1.05E+00	<0.0273JL	NA	<0.0359JL	<0.0282JL	<0.0303JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	1.69E+01	<0.121	NA	<0.16	<0.125	<0.135	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	8.75E-02	<0.0325	NA	<0.0428	<0.0335	<0.0361	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	1.76E-01	<0.047	NA	<0.0618	<0.0484	<0.0521	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	1.62E+00	<0.104	NA	<0.137	<0.107	<0.115	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	1.64E-01	<0.0573R	NA	<0.0753R	<0.0591R	<0.0635R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	1.89E-02	<0.0438	NA	<0.0576	<0.0452	<0.0486	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	1.62E-02	<0.0358	NA	<0.0471	<0.0369	<0.0397	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	3.35E+02	<0.0147	NA	<0.0193	<0.0151	<0.0163	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	8.16E-01	<0.0239JL	NA	<0.0314JL	<0.0247JL	<0.0265JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	8.53E+00	<0.0332JL	NA	<0.0437JL	<0.0343JL	<0.0369JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	3.56E+00	<0.0392	NA	<0.0516	<0.0404	<0.0435	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	6.58E-02	<0.0593JL	NA	<0.0781JL	<0.0612JL	<0.0658JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	6.73E-02	<0.0472JL	NA	<0.0621JL	<0.0487JL	<0.0523JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3 & 4 Methylphenol	3.16E-01	<0.0339	NA	<0.0445	<0.0349	<0.0375	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	3.14E-01	<0.123R	NA	<0.162R	<0.127R	<0.137R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	8.50E-02	<0.0868R	NA	<0.114R	<0.0895R	<0.0962R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	8.19E-03	<0.0604	NA	<0.0795	<0.0623	<0.067	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	1.77E-01	<0.0345	NA	<0.0453	<0.0356	<0.0382	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	2.26E+00	<0.189	NA	<0.249	<0.195	<0.21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	7.84E-02	<0.0706	NA	<0.0929	<0.0729	<0.0783	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	1.67E-01	<0.0218	NA	<0.0287	<0.0225	<0.0242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	2.60E-01	<0.135JL	NA	<0.178JL	<0.14JL	<0.15JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	1.96E-01	<0.0616	NA	<0.0811	<0.0636	<0.0683	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	1.18E+02	<0.0175	NA	<0.023	<0.018	<0.0194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	2.04E+02	<0.0121	NA	<0.016	<0.0125	<0.0135	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3.44E+03	<0.0155	NA	<0.0204	<0.016	<0.0172	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzidine	3.06E-05	<0.109R	NA	<0.144R	<0.113R	<0.121R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	5.65E+00	<0.0167	NA	<0.022	<0.0173	<0.0186	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]pyrene	5.64E-01	<0.0195	NA	<0.0257	<0.0202	<0.0217	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[b]fluoranthene	5.71E+00	<0.0209	NA	<0.0275	<0.0215	<0.0231	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[g,h,i]perylene	1.78E+03	<0.0615	NA	<0.0809	<0.0635	<0.0682	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	5.72E+01	<0.0181	NA	<0.0238	<0.0187	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	2.93E+00	<0.0707JL	NA	<0.0931JL	<0.073JL	<0.0784JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis (2-Chloroisopropyl) ether	9.07E-01	<0.107JL	NA	<0.141JL	<0.111JL	<0.119JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	5.60E-02	<0.0172	NA	<0.0227	<0.0178	<0.0191	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	5.47E-03	<0.02JL	NA	<0.0263JL	<0.0207JL	<0.0222JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	4.32E+01	<0.0652	NA	<0.0857	<0.0672	<0.0722	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	1.32E+02	<0.0751	NA	<0.0988	<0.0775	<0.0833	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	2.28E+00	<0.0379	NA	<0.0498	<0.0391	<0.042	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	5.60E+02	<0.0124	NA	<0.0163	<0.0128	<0.0137	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	5.49E-01	<0.044	NA	<0.0579	<0.0454	<0.0488	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	1.67E+01	<0.0216	NA	<0.0284	<0.0223	<0.0239	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	7.79E+01	<0.102	NA	<0.135	<0.106	<0.113	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	3.11E+01	<0.0593	NA	<0.0781	<0.0612	<0.0658	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	1.66E+03	<0.0314	NA	<0.0413	<0.0324	<0.0348	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	2.58E+03	<0.0231	NA	<0.0303	<0.0238	<0.0256	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	9.59E+02	<0.0377	NA	<0.0496	<0.0389	<0.0418	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	1.49E+02	<0.0286	NA	<0.0377	<0.0295	<0.0317	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	5.65E-01	<0.0184	NA	<0.0243	<0.019	<0.0204	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	1.64E+00	<0.0233	NA	<0.0306	<0.024	<0.0258	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	7.16E+00	<0.0559R	NA	<0.0736R	<0.0577R	<0.062R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	6.43E-01	<0.028JL	NA	<0.0369JL	<0.0289JL	<0.0311JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	5.72E+00	<0.0425	NA	<0.0559	<0.0438	<0.0471	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	1.50E+00	<0.0121	NA	<0.016	<0.0125	<0.0135	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	1.56E+01	<0.0164JL	NA	<0.0215JL	<0.0169JL	<0.0182JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	1.76E-01	<0.0359JL	NA	<0.0472JL	<0.0371JL	<0.0398JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	7.33E-05	<0.0508	NA	<0.0669	<0.0525	<0.0564	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	9.74E-04	<0.0269	NA	<0.0354	<0.0278	<0.0299	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	1.41E+00	<0.0229JL	NA	<0.0302JL	<0.0237JL	<0.0254JL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	8.92E-02	<0.0485	NA	<0.0638	<0.0501	<0.0538	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	2.08E+02	<0.0601	NA	<0.079	<0.062	<0.0666	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	9.57E+00	<0.0515	NA	<0.0677	<0.0531	<0.057	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	5.58E+02	<0.0222	NA	<0.0292	<0.0229	<0.0246	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1. Detected compounds presented in **bold**.
2. Concentrations or detection limits exceeding the Residential Assessment Level/Critical PCL presented in highlighted cells.
3. * = Sample represents vertical delineation of impacts to assessment level.
4. < = Compound not detected at the indicated detection limit. J = Estimated value. JL = Estimated value with a potential low bias. NA - Compound not analyzed. R = Rejected result. X8 = Laboratory not NELAC certified for this compound.

TABLE 4D.9
SAMPLE RESULTS: CISTERN
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential Assessment Level**	Cistern
Sample Date:		4/16/2013
Sample Depth (ft bgs):		0-7
Constituent	mg/kg	mg/kg
Metals by EPA Method 6010/7470		
Arsenic	2.42E+01	**21.2**
Barium	2.22E+02	**121**
Cadmium	5.24E+01	**0.472**
Chromium	1.20E+03	**15.6**
Lead	2.50E+02	**50.9**
Mercury	2.09E+00	**0.0914**
Selenium	1.15E+00	**1.11J**
Silver	2.39E-01	<0.139
TPH by TCEQ Method TX1005		
TPH C6-C12	3.25E+01	<4.56
TPH >C-12-C28	9.90E+01	<4.88
TPH >C28-C35	9.90E+01	<4.88
TPH C6-C35	9.90E+01	<8.98
Volatile Organic Compounds (VOCs)		
1,1,1-Trichloroethane	8.10E-01	<0.000889
1,1,2,2-Tetrachloroethane	1.15E-02	<0.00104
1,1,2-Trichloroethane	1.00E-02	<0.000877
1,1-Dichloroethane	9.25E+00	<0.00104
1,1-Dichloroethene	2.50E-02	<0.00146
1,2-Dichloroethane	6.86E-03	<0.00108
1,2-Dichloropropane	1.14E-02	<0.000853
2-Butanone (MEK)	1.46E+01	<0.00228JL
2-Hexanone	1.61E-01	<0.00121JL
4-Methyl-2-pentanone (MIBK)	2.47E+00	<0.00177JL
Acetone	2.14E+01	<0.00199
Benzene	1.28E-02	<0.000756
Bromodichloromethane	3.27E-02	<0.000792
Bromoform	3.16E-01	<0.00165
Bromomethane	6.54E-02	<0.000997X8
Carbon disulfide	6.79E+00	<0.00066
Carbon tetrachloride	3.09E-02	<0.00136
Chlorobenzene	5.46E-01	<0.00115
Chlorobromomethane	1.52E+00	<0.00214
Chloroethane	1.55E+01	<0.00168
Chloroform	5.10E-01	<0.000792
Chloromethane	2.03E-01	<0.00199
cis-1,2-Dichloroethene	1.24E-01	<0.000997
cis-1,3-Dichloropropene	3.32E-03	<0.000648
Dibromochloromethane	2.46E-02	<0.00113
Ethylbenzene	3.82E+00	<0.00122
Methyl tert-butyl ether	9.10E-02	<0.0022
Methylene Chloride	3.49E-02	**0.0109J**
o-Xylene	3.54E+01	<0.00136
Styrene	1.63E+00	<0.000853
Tetrachloroethene	2.51E-02	<0.000853
Toluene	4.11E+00	<0.00166
trans-1,2-Dichloroethene	2.45E-01	<0.00137
trans-1,3-Dichloropropene	1.79E-02	<0.000696
Trichloroethene	1.68E-02	<0.00168
Vinyl acetate	2.67E+01	<0.00112
Vinyl chloride	1.11E-02	<0.00108
Xylenes, Total	6.13E+01	<0.00136

TABLE 4D.9
SAMPLE RESULTS: CISTERN
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential Assessment Level**	Cistern
Sample Date:		4/16/2013
Sample Depth (ft bgs):		0-7
Constituent	mg/kg	mg/kg
Semivolatile Organic Compounds (SVOCs)		
1,2,4-Trichlorobenzene	2.40E+00	<0.0252
1,2-Dichlorobenzene	8.94E+00	<0.0362
1,3-Dichlorobenzene	3.37E+00	<0.0185
1,4-Dichlorobenzene	1.05E+00	<0.027
2,4,5-Trichlorophenol	1.69E+01	<0.12
2,4,6-Trichlorophenol	8.75E-02	<0.0322
2,4-Dichlorophenol	1.76E-01	<0.0464
2,4-Dimethylphenol	1.62E+00	<0.103
2,4-Dinitrophenol	1.64E-01	<0.0566
2,4-Dinitrotoluene	1.89E-02	<0.0433
2,6-Dinitrotoluene	1.62E-02	<0.0354
2-Chloronaphthalene	3.35E+02	<0.0145
2-Chlorophenol	8.16E-01	<0.0236
2-Methylnaphthalene	8.53E+00	<0.0329
2-Methylphenol	3.56E+00	<0.0388
2-Nitroaniline	6.58E-02	<0.0587
2-Nitrophenol	6.73E-02	<0.0467
3 & 4 Methylphenol	3.16E-01	<0.0335
3,3'-Dichlorobenzidine	3.14E-01	<0.122
3-Nitroaniline	8.50E-02	<0.0858
4,6-Dinitro-2-methylphenol	8.19E-03	<0.0598
4-Bromophenyl phenyl ether	1.77E-01	<0.0341
4-Chloro-3-methylphenol	2.26E+00	<0.187
4-Chloroaniline	7.84E-02	<0.0698
4-Chlorophenyl phenyl ether	1.67E-01	<0.0216
4-Nitroaniline	2.60E-01	<0.134
4-Nitrophenol	1.96E-01	<0.061
Acenaphthene	1.18E+02	<0.0173
Acenaphthylene	2.04E+02	<0.012
Anthracene	3.44E+03	<0.0154
Benzidine	3.06E-05	<0.108
Benzo[a]anthracene	5.65E+00	<0.0166
Benzo[a]pyrene	5.64E-01	<0.0193
Benzo[b]fluoranthene	5.71E+00	<0.0206
Benzo[g,h,i]perylene	1.78E+03	<0.0608
Benzo[k]fluoranthene	5.72E+01	<0.0179
Benzyl alcohol	2.93E+00	<0.07
bis (2-Chloroisopropyl) ether	9.07E-01	<0.106
Bis(2-chloroethoxy)methane	5.60E-02	<0.017
Bis(2-chloroethyl)ether	5.47E-03	<0.0198
Bis(2-ethylhexyl) phthalate	4.32E+01	<0.0644
Butyl benzyl phthalate	1.32E+02	<0.0743
Carbazole	2.28E+00	<0.0374
Chrysene	5.60E+02	<0.0122
Dibenz(a,h)anthracene	5.49E-01	<0.0436
Dibenzofuran	1.67E+01	<0.0214
Diethyl phthalate	7.79E+01	<0.101
Dimethyl phthalate	3.11E+01	<0.0587
Di-n-butyl phthalate	1.66E+03	<0.0311
Di-n-octyl phthalate	2.58E+03	<0.0228
Fluoranthene	9.59E+02	<0.0373

TABLE 4D.9
SAMPLE RESULTS: CISTERN
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential Assessment Level**	Cistern
Sample Date:		4/16/2013
Sample Depth (ft bgs):		0-7
Constituent	mg/kg	mg/kg
Semivolatile Organic Compounds (SVOCs) Continued		
Fluorene	1.49E+02	<0.0283
Hexachlorobenzene	5.65E-01	<0.0182
Hexachlorobutadiene	1.64E+00	<0.023
Hexachlorocyclopentadiene	7.16E+00	<0.0553
Hexachloroethane	6.43E-01	<0.0277
Indeno[1,2,3-cd]pyrene	5.72E+00	<0.042
Isophorone	1.50E+00	<0.012
Naphthalene	1.56E+01	<0.0162
Nitrobenzene	1.76E-01	<0.0355
N-Nitrosodimethylamine	7.33E-05	<0.0503
N-Nitrosodi-n-propylamine	9.74E-04	<0.0266
N-Nitrosodiphenylamine	1.41E+00	<0.0227
Pentachlorophenol	8.92E-02	<0.048
Phenanthrene	2.08E+02	<0.0594
Phenol	9.57E+00	<0.0509
Pyrene	5.58E+02	<0.022
Pesticides by EPA Method 8081A		
4,4'-DDD	6.48E+00	<0.00195
4,4'-DDE	5.89E+00	<0.00174
4,4'-DDT	5.39E+00	<0.00222
Aldrin	4.97E-02	<0.00157
alpha-BHC	3.96E-03	<0.0012
alpha-Chlordane	1.28E+01	<0.00191
beta-BHC	1.45E-02	<0.00122
Chlordane (technical)	4.81E+00	<0.0018X8
delta-BHC	8.68E-02	<0.00102
Dieldrin	2.44E-02	<0.00167
Endosulfan I	1.54E+01	<0.0012
Endosulfan II	4.62E+01	<0.00181
Endosulfan sulfate	3.85E+02	<0.00202
Endrin	3.75E-01	<0.00184
Endrin aldehyde	1.94E+01	<0.00187
Endrin ketone	1.90E+01	<0.00185
gamma-BHC (Lindane)	4.58E-03	<0.00112
gamma-Chlordane	7.33E+00	<0.0015
Heptachlor	9.44E-02	<0.00112
Heptachlor epoxide	2.91E-02	<0.0014
Methoxychlor	6.21E+01	<0.00969
Toxaphene	1.24E+00	<0.0878
Herbicides by EPA Method 8151A		
2,4,5-T	4.93E-01	<0.000528
2,4-D	1.31E+00	<0.000408
2,4-DB	1.95E-01	<0.000792
Dalapon	2.92E-01	<0.0192
Dicamba	7.35E-01	<0.000552
Dichlorprop	2.34E-01	<0.00054
Dinoseb	1.75E-01	<0.000384
MCPA	4.09E-02	<0.078
Mecoprop	8.18E-02	<0.0551
Silvex (2,4,5-TP)	2.65E+00	<0.000516

Notes:
1. Detected compounds presented in **bold**.
2. Concentrations or detection limits exceeding the Residential Assessment Level/Critical PCL presented in highlighted cells.
3. < = Compound not detected at the indicated detection limit.
4. J = Estimated value. JL = Estimated value with potential low bias.
5. X8 = Laboratory not NELAC certified for this compound.

TABLE 4D.10
SURFACE SOIL SAMPLE RESULTS FOR ARSENIC: M TRACT AREA
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (feet)	Arsenic (mg/kg)
TRRP Residential Assessment Level			**24.2**
DE-6	3/18/2013	0 - 0.25	24.1
DE-6A	5/8/2013	0 -0.5	23.9
DE-6B	5/8/2013	0 -0.5	22.9
DE-6C	5/8/2013	0 -0.5	20
DE-6D	5/8/2013	0 -0.5	21.9
DE-6E	5/8/2013	0 -0.5	26.2
DE-6F	5/8/2013	0 -0.5	24.3
DE-6G	5/8/2013	0 -0.5	22.7
DE-6H	5/8/2013	0 -0.5	23.7
DE-6I	5/8/2013	0 -0.5	24.2
TP-10	4/15/2013	1	29.9
TP-10	5/7/2013	1-2	16
TP-10A	5/7/2013	0 - 0.5	11.3
TP-10B	5/7/2013	0 - 0.5	12
TP-10C	5/7/2013	0 - 0.5	13.8
TP-10D	5/7/2013	0 - 0.5	12.2
TP-10E	5/7/2013	0 - 0.5	12.4
TP-10F	5/7/2013	0 - 0.5	14
TP-10G	5/7/2013	0 - 0.5	12.1
TP-10H	5/7/2013	0 - 0.5	15.6
TP-10I	5/7/2013	0 - 0.5	12.2
TP-10J	4/21/2015	0 - 0.5	14.9
TP-11	4/15/2013	1	24.5
TP-11	5/7/2013	1-2	14.7
TP-11A	5/8/2013	0 - 0.5	19.1
TP-11B	5/8/2013	0 - 0.5	21.7
TP-11C	5/8/2013	0 - 0.5	23.2
TP-11D	5/8/2013	0 - 0.5	17.2
TP-11E	5/8/2013	0 - 0.5	19.1
TP-11F	5/8/2013	0 - 0.5	18.2
TP-11G	5/8/2013	0 - 0.5	22.2
TP-11H	5/8/2013	0 - 0.5	18.8
DE-5	3/18/2013	0.25	17
DE-7	3/18/2013	0.25	21.8
EF-6	3/18/2013	0.25	10.2
EF-7	3/18/2013	0.25	7.87
E-11B	3/15/2013	0-0.5	13.7

Notes:
1. Concentrations exceeding the Residential Assessment Level presented in highlighted cells.
2. The assessment and cleanup criteria are based on a residential land use standard, therefore the RAL is the critical PCL (cPCL).

TABLE 4D.11
SOIL SAMPLING RESULTS: SPLP AND TCLP ANALYSES
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

SPLP Analysis

Sample ID	Sample Date	Sample Depth (ft)	Arsenic (mg/kg)	SPLP Arsenic (mg/l)	Copper (mg/kg)	SPLP Copper (mg/l)
TRRP Tier 1 Protective Concentration Level:				**0.01**		**1.3**
TP-7	4/15/2013	3	23.8	<0.00328	NA	NA
TP-10	4/24/2013	0-1	29.9	0.0085J	NA	NA
Cistern	4/16/2013	0-7	21.2	0.0049J	NA	NA
CF-1	4/16/2013	0.25	14.3	NA	2070	0.198

Notes:
1. TRRP Tier 1 Protective Concentration Level based on a Class 2 groundwater.

TCLP Analysis

Sample ID	Sample Date	Sample Depth (ft)	Lead (mg/kg)	TCLP Lead (mg/l)	Cadmium (mg/kg)	TCLP Cadmium (mg/l)
BC-8	3/18/2013	0-0.25	281	0.087	--	NA
F-17	3/23/2012	0-0.25	1840	0.57	--	NA
HI-15	5/7/2013	1-2	1030J	0.61	--	NA
HI-6	3/20/2013	0-0.25	472	0.074	--	NA
HI-7	3/20/2013	0-0.25	372	0.077	--	NA
L-16A1	3/19/2013	0-0.25	5180	1.3	--	NA
L-16A2	3/19/2013	0-0.25	--	NA	22.3	0.041
M-16A1	3/22/2013	0-0.25	5000	11.2	20.6	0.15
M-16A3	3/22/2013	0-0.25	9640	9.1	--	NA
O-15	3/28/2012	0-0.25	5180	4.4	--	NA
OP-12	3/19/2013	0-0.25	341	0.076	--	NA
TP-7	4/15/2013	1	1010	0.6	--	NA

Notes:
1. J = Estimated value.

TABLE 4E
SOIL GEOCHEMICAL/GEOTECHNICAL DATA SUMMARY
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date	Sample Depth (inches)	pH
EF-17	4/24/2013	0-6	7.51
K-4C	4/24/2013	0-6	7.33
DE-7	4/24/2013	0-6	7.65
BC-8	4/24/2013	0-6	7.39
E-20C	4/24/2013	0-6	7.86
HI-16	4/24/2013	0-6	7.53
O-15C	4/24/2013	0-6	7.41
O-12C	4/24/2013	0-6	7.47
O-9C	4/24/2013	0-6	7.67
M-7C	4/24/2013	0-6	7.55
Average			**7.5**

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

4.0 Figures

BC-8	
Depth	Conc.
0"-3"	1.49
2'-3'	0.208J
4'-5'	NA

C-9	
Depth	Conc.
0"-3"	2.12J
3"-6"	NA
6"-12"	NA

D-8	
Depth	Conc.
0"-3"	2.45J
3"-6"	NA
6"-12"	NA
2'-3'	0.319
4'-5'	0.315

D-9	
Depth	Conc.
0"-3"	3.34
3"-6"	NA
6"-12"	NA

D-10	
Depth	Conc.
0"-3"	3.69
3"-6"	NA
6"-12"	NA

E-10N	
Depth	Conc.
0"-3"	NA
2'-3'	0.278J

E-10E	
Depth	Conc.
0"-3"	NA
2'-3'	0.316
4'-5'	0.306

E-8	
Depth	Conc.
0"-3"	2.35J
3"-6"	NA
6"-12"	NA

E-9	
Depth	Conc.
0"-3"	3.61
3"-6"	NA
6"-12"	0.49
2'-3'	0.286J

E-10	
Depth	Conc.
0"-3"	3.22
3"-6"	NA
6"-12"	NA

EXPLANATION

– – –	Property Owned By Exide
━	Undeveloped Buffer Property
—	1 Acre Sample Grid
◐	Monitoring Well Location
●	Surface Soil Concentration Below the Assessment Level
●	Surface Soil Concentration Above the Assessment Level (Not Applicable)
(1.35)	Cadmium Concentration (mg/Kg)

NOTES:
1. J = Estimated value
2. NA = Not analyzed
3. < = Compound not detected at the indicated detection limit.
4. Highlighted values exceed the Residential Assessment Level (52.4 mg/kg). (Not Applicable)

N

Scale in Feet
0 75 150

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.1

SURFACE SOIL CADMIUM CONCENTRATION MAP M TRACT AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

HI-6	
Depth	Conc.
0"-3"	*3.72*
1'-2'	*0.505*

HI-4	
Depth	Conc.
0"-3"	*2.16*
1'-2'	*0.457*

HI-5	
Depth	Conc.
0"-3"	*1.76*
1'-2'	*0.439*

K-10	
Depth	Conc.
0"-3"	*1.48J*
2'-3'	*<0.0296*

EXPLANATION

- - -	Property Owned By Exide
━	Undeveloped Buffer Property
—	1 Acre Sample Grid
⊕	Monitoring Well Location
●	Surface Soil Concentration Below the Assessment Level
●	Surface Soil Concentration Above the Assessment Level (Not Applicable)
(1.35)	Cadmium Concentration (mg/Kg)

NOTES:
1. J = Estimated value
2. < = Compound not detected at the indicated detection limit.
3. Highlighted values exceed the Residential Assessment Level (52.4 mg/kg). (Not Applicable)

N

Scale in Feet
0 100 200

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.2

SURFACE SOIL CADMIUM CONCENTRATION MAP SW AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

- - - Property Owned By Exide
🟥 Undeveloped Buffer Property
— 1 Acre Sample Grid
⊕ Monitoring Well Location
🟢 Surface Soil Concentration Below the Assessment Level
🔴 Surface Soil Concentration Above the Assessment Level (Not Applicable)
🟠 Eagan Way Soil Sample Location
(1.35) Cadmium Concentration (mg/Kg)

NOTES:
1. J = Estimated value
2. JL = Estimated value with potential low bias.
3. < = Compound not detected at the indicated detection limit.
4. Highlighted values exceed the Residential Assessment Level (52.4 mg/kg). (Not Applicable)

N

Scale in Feet
0 100 200

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

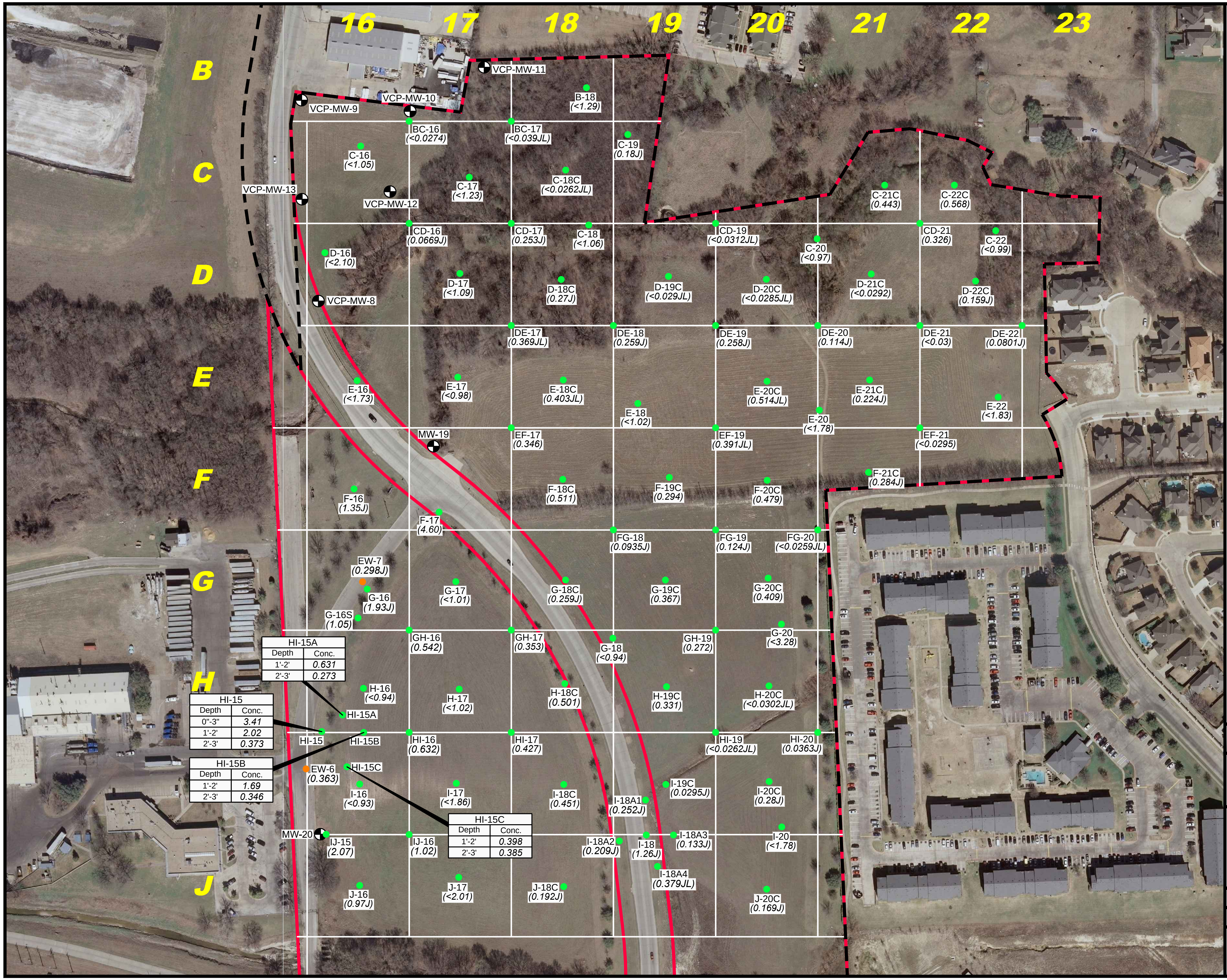
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.3

SURFACE SOIL CADMIUM CONCENTRATION MAP SE AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



HI-15A

Depth	Conc.
1'-2'	0.631
2'-3'	0.273

HI-15

Depth	Conc.
0"-3"	3.41
1'-2'	2.02
2'-3'	0.373

HI-15B

Depth	Conc.
1'-2'	1.69
2'-3'	0.346

HI-15C

Depth	Conc.
1'-2'	0.398
2'-3'	0.385

EXPLANATION

- - -	Property Owned By Exide
▬	Undeveloped Buffer Property
—	1 Acre Sample Grid
◐	Monitoring Well Location
🟢	Surface Soil Concentration Below the Assessment Level
🔴	Surface Soil Concentration Above the Assessment Level (Not Applicable)
🟠	Eagan Way Soil Sample Location
(1.35)	Cadmium Concentration (mg/Kg)

NOTES:
1. J = Estimated value
2. JL = Estimated value with potential low bias.
3. < = Compound not detected at the indicated detection limit.
4. Highlighted values exceed the Residential Assessment Level (52.4 mg/kg). (Not Applicable)

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

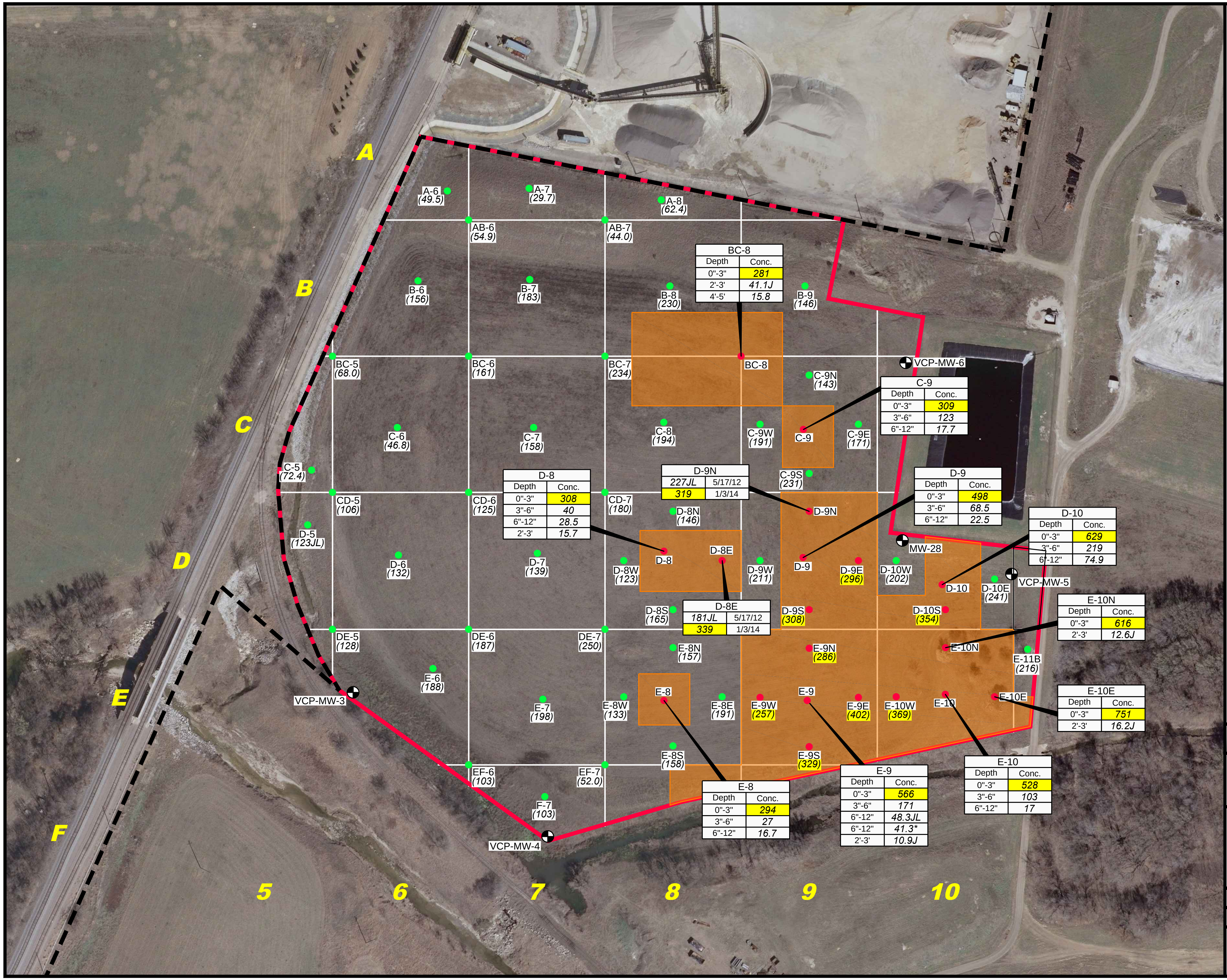
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.4

SURFACE SOIL CADMIUM CONCENTRATION MAP NE AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



BC-8	
Depth	Conc.
0"-3"	281
2'-3'	41.1J
4'-5'	15.8

C-9	
Depth	Conc.
0"-3"	309
3"-6"	123
6"-12"	17.7

D-8	
Depth	Conc.
0"-3"	308
3"-6"	40
6"-12"	28.5
2'-3'	15.7

D-9N	
227JL	5/17/12
319	1/3/14

D-9	
Depth	Conc.
0"-3"	498
3"-6"	68.5
6"-12"	22.5

D-10	
Depth	Conc.
0"-3"	629
3"-6"	219
6"-12"	74.9

D-8E	
181JL	5/17/12
339	1/3/14

E-10N	
Depth	Conc.
0"-3"	616
2'-3'	12.6J

E-10E	
Depth	Conc.
0"-3"	751
2'-3'	16.2J

E-8	
Depth	Conc.
0"-3"	294
3"-6"	27
6"-12"	16.7

E-9	
Depth	Conc.
0"-3"	566
3"-6"	171
6"-12"	48.3JL
6"-12"	41.3*
2'-3'	10.9J

E-10	
Depth	Conc.
0"-3"	528
3"-6"	103
6"-12"	17

EXPLANATION

– – –	Property Owned By Exide
▬	Undeveloped Buffer Property
—	1 Acre Sample Grid
⊕	Monitoring Well Location
●	Surface Soil Concentration Below the Assessment Level
●	Surface Soil Concentration Above the Assessment Level
(1.35)	Lead Concentration (mg/Kg)
▨	PCLE Zone (Based on surface soil lead concentration)

NOTES:
1. JH = Estimated value with potential high bias.
2. JL = Estimated value with potential low bias.
3. Highlighted values exceed the assessment level of 250 mg/kg.
4. The TRPP Residential Assessment Level for lead is 500 mg/kg, however the assessment level for this site was set at 250 mg/kg based on an agreement between Exide and the City of Frisco.
5. * Denotes confirmation sample collected 1/3/14.

N

Scale in Feet
0 75 150

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.5

SURFACE SOIL
LEAD CONCENTRATION MAP
M TRACT AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

– – –	Property Owned By Exide
—	Undeveloped Buffer Property
– – –	Potential Boundary Revision
—	1 Acre Sample Grid
◐	Monitoring Well Location
●	Surface Soil Concentration Below the Assessment Level
●	Surface Soil Concentration Above the Assessment Level
(1.35)	Lead Concentration (mg/Kg)
▨	PCLE Zone (Based on surface soil lead concentration)

NOTES:
1. Highlighted values exceed the assessment level of 250 mg/kg.
2. The TRPP Residential Assessment Level for lead is 500 mg/kg, however the assessment level for this site was set at 250 mg/kg based on an agreement between Exide and the City of Frisco.

N

Scale in Feet
0 100 200

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.6

SURFACE SOIL LEAD CONCENTRATION MAP SW AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
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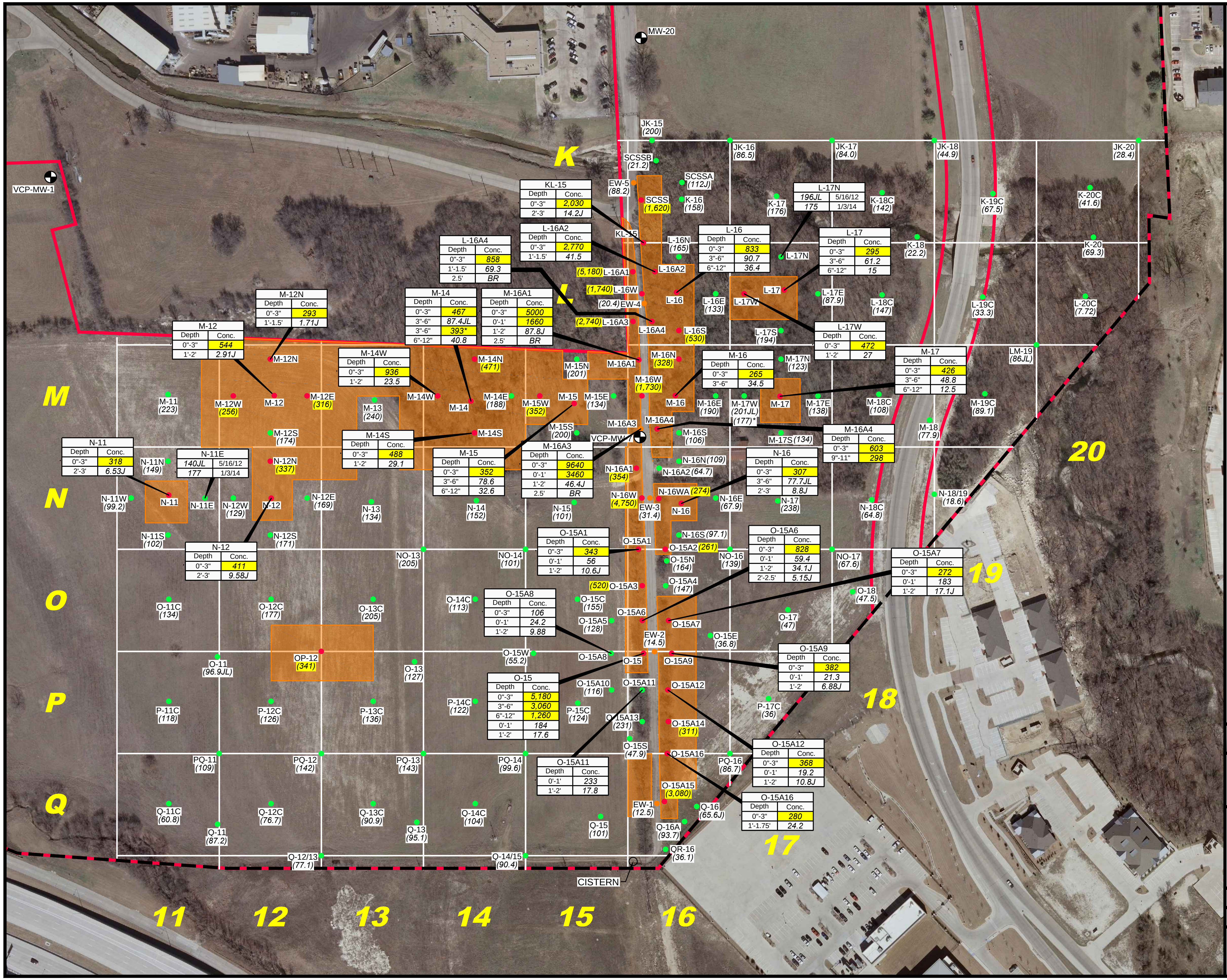


EXPLANATION

- - -	Property Owned By Exide
―	Undeveloped Buffer Property
―	1 Acre Sample Grid
⊕	Monitoring Well Location
●	Surface Soil Concentration Below the Assessment Level
●	Surface Soil Concentration Above the Assessment Level
●	Eagan Way Soil Sample Location
(1.35)	Lead Concentration (mg/Kg)
▨	PCLE Zone (Based on surface soil lead concentration)

NOTES:

1. JH = Estimated value with potential high bias.
2. JL = Estimated value with potential low bias.
3. Highlighted values exceed the assessment level of 250 mg/kg.
4. BR = Bed Rock/Limestone encountered at this depth.
5. The TRPP Residential Assessment Level for lead is 500 mg/kg, however the assessment level for this site was set at 250 mg/kg based on an agreement between Exide and the City of Frisco.
6. * Denotes confirmation sample collected 1/3/14.

N

Scale in Feet

0 100 200

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

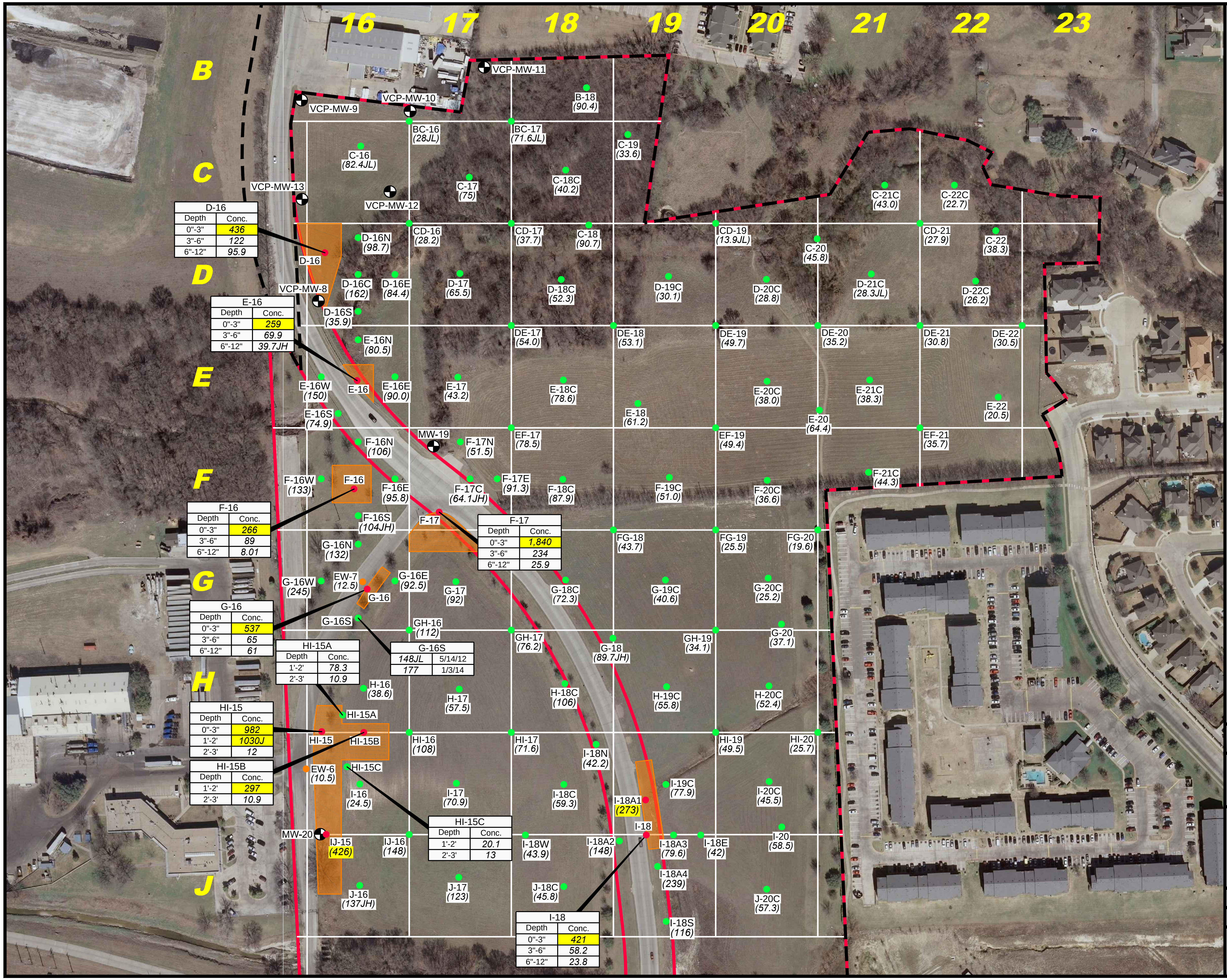
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.7

SURFACE SOIL LEAD CONCENTRATION MAP SE AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



D-16

Depth	Conc.
0"-3"	436
3"-6"	122
6"-12"	95.9

E-16

Depth	Conc.
0"-3"	259
3"-6"	69.9
6"-12"	39.7JH

F-16

Depth	Conc.
0"-3"	266
3"-6"	89
6"-12"	8.01

F-17

Depth	Conc.
0"-3"	1,840
3"-6"	234
6"-12"	25.9

G-16

Depth	Conc.
0"-3"	537
3"-6"	65
6"-12"	61

G-16S

148JL	5/14/12
177	1/3/14

HI-15A

Depth	Conc.
1'-2'	78.3
2'-3'	10.9

HI-15

Depth	Conc.
0"-3"	982
1'-2'	1030J
2'-3'	12

HI-15B

Depth	Conc.
1'-2'	297
2'-3'	10.9

HI-15C

Depth	Conc.
1'-2'	20.1
2'-3'	13

I-18

Depth	Conc.
0"-3"	421
3"-6"	58.2
6"-12"	23.8

EXPLANATION

– – –	Property Owned By Exide
━	Undeveloped Buffer Property
—	1 Acre Sample Grid
◑	Monitoring Well Location
🟢	Surface Soil Concentration Below the Assessment Level
🔴	Surface Soil Concentration Above the Assessment Level
🟠	Eagan Way Soil Sample Location
(1.35)	Lead Concentration (mg/Kg)
🟧	PCLE Zone (Based on surface soil lead concentration)

NOTES:
1. JH = Estimated value with potential high bias.
2. JL = Estimated value with potential low bias.
3. Highlighted values exceed the assessment level of 250 mg/kg.
4. The TRPP Residential Assessment Level for lead is 500 mg/kg, however the assessment level for this site was set at 250 mg/kg based on an agreement between Exide and the City of Frisco.

N

Scale in Feet
0 100 200

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

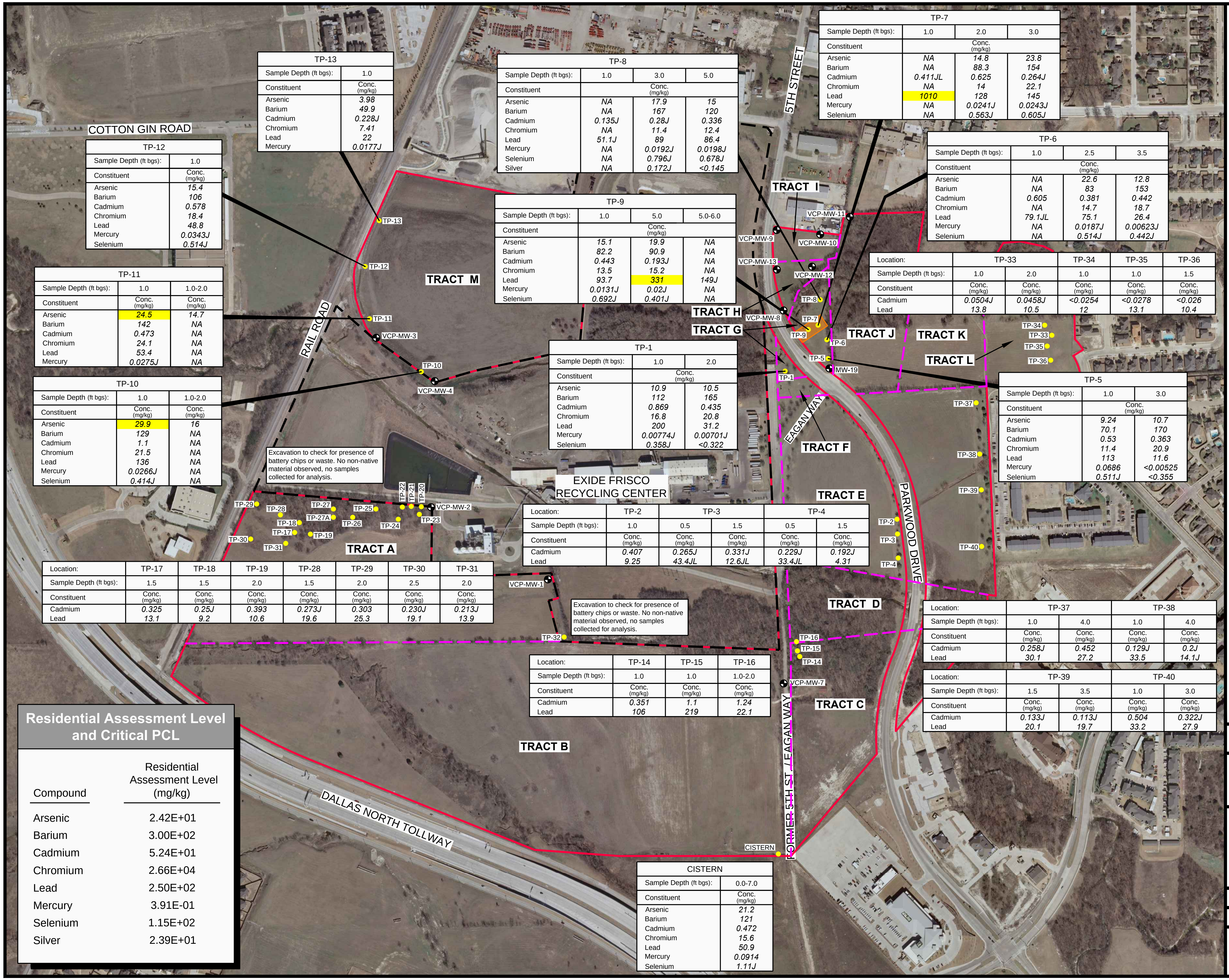
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.8

SURFACE SOIL LEAD CONCENTRATION MAP NE AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



Excavation to check for presence of battery chips or waste. No non-native material observed, no samples collected for analysis.

Excavation to check for presence of battery chips or waste. No non-native material observed, no samples collected for analysis.

TP-13	
Sample Depth (ft bgs):	1.0
Constituent	Conc. (mg/kg)
Arsenic	3.98
Barium	49.9
Cadmium	0.228J
Chromium	7.41
Lead	22
Mercury	0.0177J

TP-12	
Sample Depth (ft bgs):	1.0
Constituent	Conc. (mg/kg)
Arsenic	15.4
Barium	106
Cadmium	0.578
Chromium	18.4
Lead	48.8
Mercury	0.0343J
Selenium	0.514J

TP-11		
Sample Depth (ft bgs):	1.0	1.0-2.0
Constituent	Conc. (mg/kg)	Conc. (mg/kg)
Arsenic	24.5	14.7
Barium	142	NA
Cadmium	0.473	NA
Chromium	24.1	NA
Lead	53.4	NA
Mercury	0.0275J	NA

TP-10		
Sample Depth (ft bgs):	1.0	1.0-2.0
Constituent	Conc. (mg/kg)	Conc. (mg/kg)
Arsenic	29.9	16
Barium	129	NA
Cadmium	1.1	NA
Chromium	21.5	NA
Lead	136	NA
Mercury	0.0266J	NA
Selenium	0.414J	NA

TP-8			
Sample Depth (ft bgs):	1.0	3.0	5.0
Constituent	Conc. (mg/kg)		
Arsenic	NA	17.9	15
Barium	NA	167	120
Cadmium	0.135J	0.28J	0.336
Chromium	NA	11.4	12.4
Lead	51.1J	89	86.4
Mercury	NA	0.0192J	0.0198J
Selenium	NA	0.796J	0.678J
Silver	NA	0.172J	<0.145

TP-9			
Sample Depth (ft bgs):	1.0	5.0	5.0-6.0
Constituent	Conc. (mg/kg)		
Arsenic	15.1	19.9	NA
Barium	82.2	90.9	NA
Cadmium	0.443	0.193J	NA
Chromium	13.5	15.2	NA
Lead	93.7	331	149J
Mercury	0.0131J	0.02J	NA
Selenium	0.692J	0.401J	NA

TP-1		
Sample Depth (ft bgs):	1.0	2.0
Constituent	Conc. (mg/kg)	
Arsenic	10.9	10.5
Barium	112	165
Cadmium	0.869	0.435
Chromium	16.8	20.8
Lead	200	31.2
Mercury	0.00774J	0.00701J
Selenium	0.358J	<0.322

TP-7			
Sample Depth (ft bgs):	1.0	2.0	3.0
Constituent	Conc. (mg/kg)		
Arsenic	NA	14.8	23.8
Barium	NA	88.3	154
Cadmium	0.411JL	0.625	0.264J
Chromium	NA	14	22.1
Lead	1010	128	145
Mercury	NA	0.0241J	0.0243J
Selenium	NA	0.563J	0.605J

TP-6			
Sample Depth (ft bgs):	1.0	2.5	3.5
Constituent	Conc. (mg/kg)		
Arsenic	NA	22.6	12.8
Barium	NA	83	153
Cadmium	0.605	0.381	0.442
Chromium	NA	14.7	18.7
Lead	79.1JL	75.1	26.4
Mercury	NA	0.0187J	0.00623J
Selenium	NA	0.514J	0.442J

Location:	TP-33		TP-34	TP-35	TP-36
Sample Depth (ft bgs):	1.0	2.0	1.0	1.0	1.5
Constituent	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)
Cadmium	0.0504J	0.0458J	<0.0254	<0.0278	<0.026
Lead	13.8	10.5	12	13.1	10.4

TP-5		
Sample Depth (ft bgs):	1.0	3.0
Constituent	Conc. (mg/kg)	
Arsenic	9.24	10.7
Barium	70.1	170
Cadmium	0.53	0.363
Chromium	11.4	20.9
Lead	113	11.6
Mercury	0.0686	<0.00525
Selenium	0.511J	<0.355

Location:	TP-2	TP-3		TP-4	
Sample Depth (ft bgs):	1.0	0.5	1.5	0.5	1.5
Constituent	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)
Cadmium	0.407	0.265J	0.331J	0.229J	0.192J
Lead	9.25	43.4JL	12.6JL	33.4JL	4.31

Location:	TP-17	TP-18	TP-19	TP-28	TP-29	TP-30	TP-31
Sample Depth (ft bgs):	1.5	1.5	2.0	1.5	2.0	2.5	2.0
Constituent	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)
Cadmium	0.325	0.25J	0.393	0.273J	0.303	0.230J	0.213J
Lead	13.1	9.2	10.6	19.6	25.3	19.1	13.9

Location:	TP-37		TP-38	
Sample Depth (ft bgs):	1.0	4.0	1.0	4.0
Constituent	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)
Cadmium	0.258J	0.452	0.129J	0.2J
Lead	30.1	27.2	33.5	14.1J

Location:	TP-39		TP-40	
Sample Depth (ft bgs):	1.5	3.5	1.0	3.0
Constituent	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)
Cadmium	0.133J	0.113J	0.504	0.322J
Lead	20.1	19.7	33.2	27.9

Location:	TP-14	TP-15	TP-16
Sample Depth (ft bgs):	1.0	1.0	1.0-2.0
Constituent	Conc. (mg/kg)	Conc. (mg/kg)	Conc. (mg/kg)
Cadmium	0.351	1.1	1.24
Lead	106	219	22.1

CISTERN	
Sample Depth (ft bgs):	0.0-7.0
Constituent	Conc. (mg/kg)
Arsenic	21.2
Barium	121
Cadmium	0.472
Chromium	15.6
Lead	50.9
Mercury	0.0914
Selenium	1.11J

Residential Assessment Level and Critical PCL

Compound	Residential Assessment Level (mg/kg)
Arsenic	2.42E+01
Barium	3.00E+02
Cadmium	5.24E+01
Chromium	2.66E+04
Lead	2.50E+02
Mercury	3.91E-01
Selenium	1.15E+02
Silver	2.39E+01

EXPLANATION

— — —	Former Operating Plant Boundary (Approximate)
🟥	Undeveloped Buffer Property Subject to The Voluntary Cleanup Program
— — —	Property Tract
◐	Monitoring Well Location
●	Test Pit Location
🟧	PCLE Zone (Based on test pit sampling results)

NOTES:
1. Only detected compounds shown.
2. J = Estimated value
3. JL = Estimated value with potential low bias.
4. Exceedance of the Residential Assessment Level indicated by highlighted values.
5. Samples analyzed for RCRA 8 metals except where only cadmium and lead results are shown.
6. The TRPP Residential Assessment Level for lead is 500 mg/kg, however the assessment level for this site was set at 250 mg/kg based on an agreement between Exide and the City of Frisco.

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

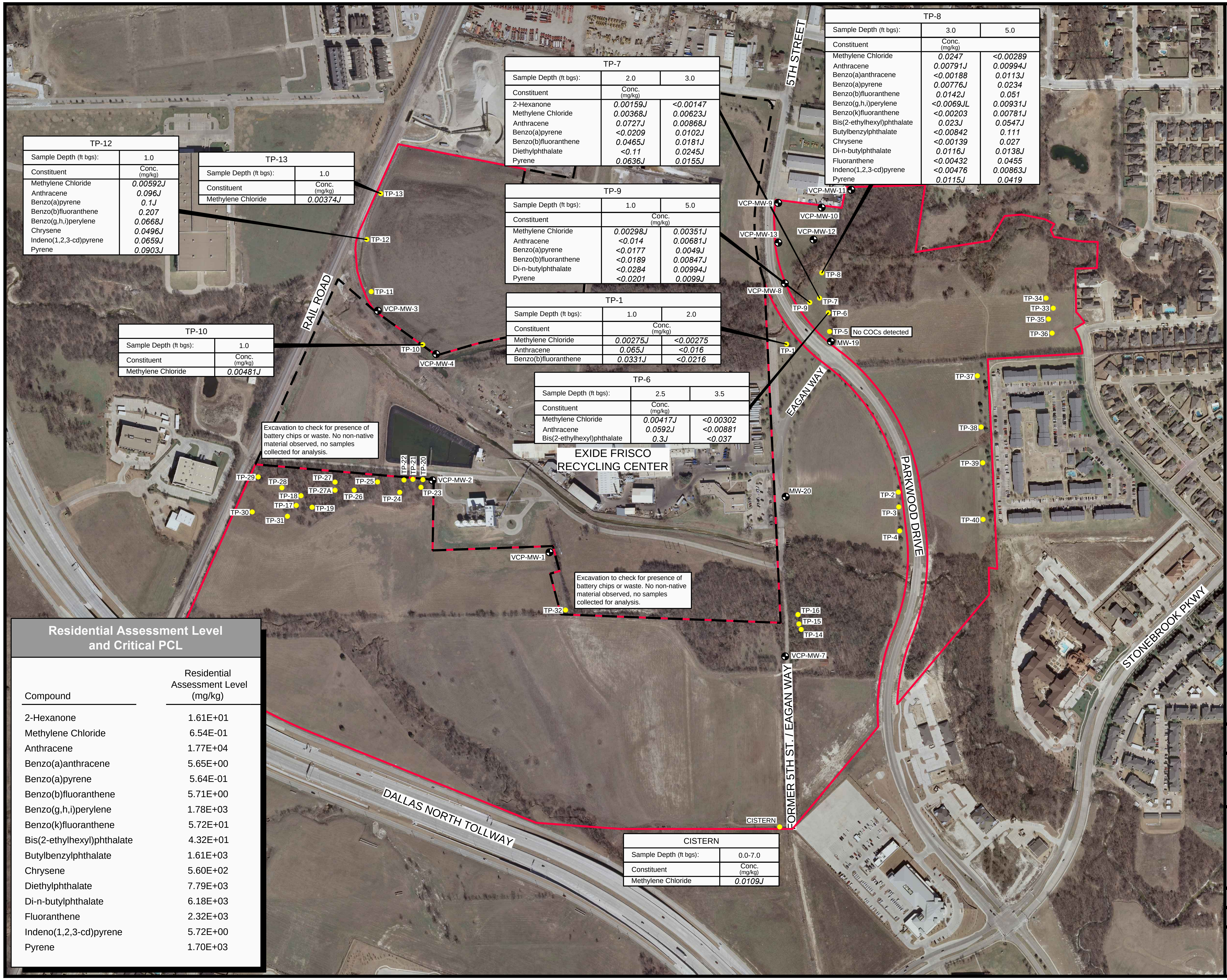
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.9

TEST PIT SOIL CONCENTRATION MAP METALS

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



Excavation to check for presence of battery chips or waste. No non-native material observed, no samples collected for analysis.

Excavation to check for presence of battery chips or waste. No non-native material observed, no samples collected for analysis.

TP-8		
Sample Depth (ft bgs):	3.0	5.0
Constituent	Conc. (mg/kg)	
Methylene Chloride	*0.0247*	*<0.00289*
Anthracene	*0.00791J*	*0.00994J*
Benzo(a)anthracene	*<0.00188*	*0.0113J*
Benzo(a)pyrene	*0.00776J*	*0.0234*
Benzo(b)fluoranthene	*0.0142J*	*0.051*
Benzo(g,h,i)perylene	*<0.0069JL*	*0.00931J*
Benzo(k)fluoranthene	*<0.00203*	*0.00781J*
Bis(2-ethylhexyl)phthalate	*0.023J*	*0.0547J*
Butylbenzylphthalate	*<0.00842*	*0.111*
Chrysene	*<0.00139*	*0.027*
Di-n-butylphthalate	*0.0116J*	*0.0138J*
Fluoranthene	*<0.00432*	*0.0455*
Indeno(1,2,3-cd)pyrene	*<0.00476*	*0.00863J*
Pyrene	*0.0115J*	*0.0419*

TP-7		
Sample Depth (ft bgs):	2.0	3.0
Constituent	Conc. (mg/kg)	
2-Hexanone	*0.00159J*	*<0.00147*
Methylene Chloride	*0.00368J*	*0.00623J*
Anthracene	*0.0727J*	*0.00868J*
Benzo(a)pyrene	*<0.0209*	*0.0102J*
Benzo(b)fluoranthene	*0.0465J*	*0.0181J*
Diethylphthalate	*<0.11*	*0.0245J*
Pyrene	*0.0636J*	*0.0155J*

TP-9		
Sample Depth (ft bgs):	1.0	5.0
Constituent	Conc. (mg/kg)	
Methylene Chloride	*0.00298J*	*0.00351J*
Anthracene	*<0.014*	*0.00681J*
Benzo(a)pyrene	*<0.0177*	*0.0049J*
Benzo(b)fluoranthene	*<0.0189*	*0.00847J*
Di-n-butylphthalate	*<0.0284*	*0.00994J*
Pyrene	*<0.0201*	*0.0099J*

TP-1		
Sample Depth (ft bgs):	1.0	2.0
Constituent	Conc. (mg/kg)	
Methylene Chloride	*0.00275J*	*<0.00275*
Anthracene	*0.065J*	*<0.016*
Benzo(b)fluoranthene	*0.0331J*	*<0.0216*

TP-6		
Sample Depth (ft bgs):	2.5	3.5
Constituent	Conc. (mg/kg)	
Methylene Chloride	*0.00417J*	*<0.00302*
Anthracene	*0.0592J*	*<0.00881*
Bis(2-ethylhexyl)phthalate	*0.3J*	*<0.037*

TP-12	
Sample Depth (ft bgs):	1.0
Constituent	Conc. (mg/kg)
Methylene Chloride	*0.00592J*
Anthracene	*0.096J*
Benzo(a)pyrene	*0.1J*
Benzo(b)fluoranthene	*0.207*
Benzo(g,h,i)perylene	*0.0668J*
Chrysene	*0.0496J*
Indeno(1,2,3-cd)pyrene	*0.0659J*
Pyrene	*0.0903J*

TP-13	
Sample Depth (ft bgs):	1.0
Constituent	Conc. (mg/kg)
Methylene Chloride	*0.00374J*

TP-10	
Sample Depth (ft bgs):	1.0
Constituent	Conc. (mg/kg)
Methylene Chloride	*0.00481J*

CISTERN	
Sample Depth (ft bgs):	0.0-7.0
Constituent	Conc. (mg/kg)
Methylene Chloride	*0.0109J*

Residential Assessment Level and Critical PCL

Compound	Residential Assessment Level (mg/kg)
2-Hexanone	1.61E+01
Methylene Chloride	6.54E-01
Anthracene	1.77E+04
Benzo(a)anthracene	5.65E+00
Benzo(a)pyrene	5.64E-01
Benzo(b)fluoranthene	5.71E+00
Benzo(g,h,i)perylene	1.78E+03
Benzo(k)fluoranthene	5.72E+01
Bis(2-ethylhexyl)phthalate	4.32E+01
Butylbenzylphthalate	1.61E+03
Chrysene	5.60E+02
Diethylphthalate	7.79E+03
Di-n-butylphthalate	6.18E+03
Fluoranthene	2.32E+03
Indeno(1,2,3-cd)pyrene	5.72E+00
Pyrene	1.70E+03

EXPLANATION

– – –	Former Operating Plant Boundary (Approximate)
🟥	Undeveloped Buffer Property Subject to The Voluntary Cleanup Program
◐	Monitoring Well Location
●	Test Pit Location

NOTES:
1. Only detected compounds shown.
2. Exceedance of the Residential Assessment Level indicated by highlighted values. (Not Applicable)
3. Pesticides and herbicides only analyzed at Cistern location.
4. No samples collected at sample locations with no data, or samples were analyzed for metals only (see Figure 4A.9).

N

Scale in Feet
0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

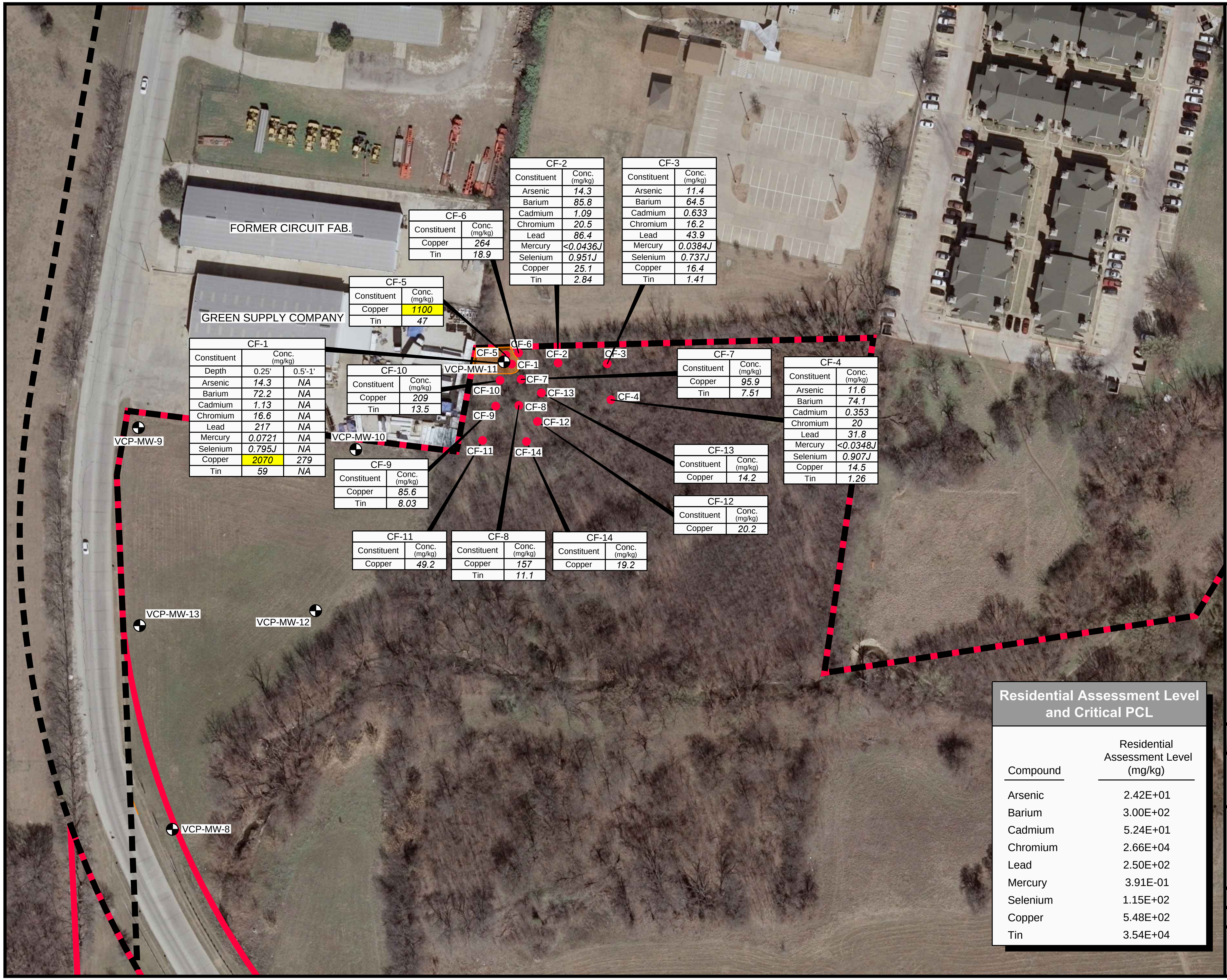
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.10

TEST PIT SOIL CONCENTRATION MAP
VOCs, SVOCs, TPH, PESTICIDES, HERBICIDES

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2015	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



CF-1		
Constituent	Conc. (mg/kg)	
Depth	0.25'	0.5'-1'
Arsenic	14.3	NA
Barium	72.2	NA
Cadmium	1.13	NA
Chromium	16.6	NA
Lead	217	NA
Mercury	0.0721	NA
Selenium	0.795J	NA
Copper	2070	279
Tin	59	NA

CF-2	
Constituent	Conc. (mg/kg)
Arsenic	14.3
Barium	85.8
Cadmium	1.09
Chromium	20.5
Lead	86.4
Mercury	<0.0436J
Selenium	0.951J
Copper	25.1
Tin	2.84

CF-3	
Constituent	Conc. (mg/kg)
Arsenic	11.4
Barium	64.5
Cadmium	0.633
Chromium	16.2
Lead	43.9
Mercury	0.0384J
Selenium	0.737J
Copper	16.4
Tin	1.41

CF-4	
Constituent	Conc. (mg/kg)
Arsenic	11.6
Barium	74.1
Cadmium	0.353
Chromium	20
Lead	31.8
Mercury	<0.0348J
Selenium	0.907J
Copper	14.5
Tin	1.26

CF-5	
Constituent	Conc. (mg/kg)
Copper	1100
Tin	47

CF-6	
Constituent	Conc. (mg/kg)
Copper	264
Tin	18.9

CF-7	
Constituent	Conc. (mg/kg)
Copper	95.9
Tin	7.51

CF-8	
Constituent	Conc. (mg/kg)
Copper	157
Tin	11.1

CF-9	
Constituent	Conc. (mg/kg)
Copper	85.6
Tin	8.03

CF-10	
Constituent	Conc. (mg/kg)
Copper	209
Tin	13.5

CF-11	
Constituent	Conc. (mg/kg)
Copper	49.2

CF-12	
Constituent	Conc. (mg/kg)
Copper	20.2

CF-13	
Constituent	Conc. (mg/kg)
Copper	14.2

CF-14	
Constituent	Conc. (mg/kg)
Copper	19.2

Residential Assessment Level and Critical PCL

Compound	Residential Assessment Level (mg/kg)
Arsenic	2.42E+01
Barium	3.00E+02
Cadmium	5.24E+01
Chromium	2.66E+04
Lead	2.50E+02
Mercury	3.91E-01
Selenium	1.15E+02
Copper	5.48E+02
Tin	3.54E+04

EXPLANATION

– – –	Property Owned By Exide
━	Undeveloped Buffer Property
◐	Monitoring Well Location
●	Soil Sample Location
🟧	PCLE Zone for copper

NOTES:
1. Samples CF-1 through CF-4 analyzed for VOCs, SVOCs, TPH, RCRA 8 metals, copper and tin. Only detected compounds shown.
2. Samples CF-5 through CF-10 analyzed for copper and tin.
3. Samples CF-11 through CF-14 and CF-1 (0.5-1) analyzed for copper only.
4. See SLERA for ecological assessment of this area.
5. The TRPP Residential Assessment Level for lead is 500 mg/kg, however the assessment level for this site was set at 250 mg/kg based on an agreement between Exide and the City of Frisco.

N

Scale in Feet
0 50 100

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

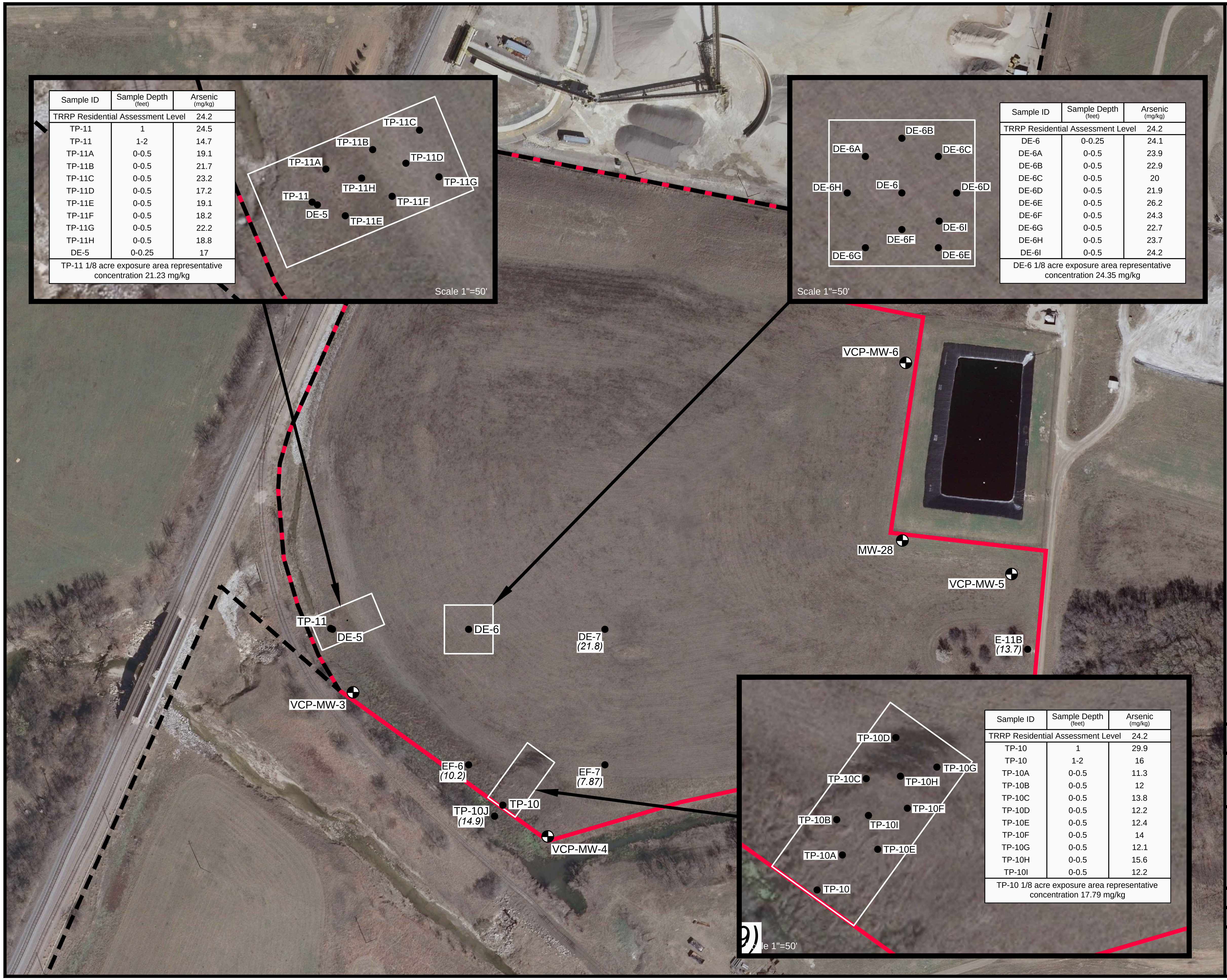
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.11

SURFACE SOIL CONCENTRATION MAP FORMER CIRCUIT FAB

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



Sample ID	Sample Depth (feet)	Arsenic (mg/kg)
TRRP Residential Assessment Level		24.2
TP-11	1	24.5
TP-11	1-2	14.7
TP-11A	0-0.5	19.1
TP-11B	0-0.5	21.7
TP-11C	0-0.5	23.2
TP-11D	0-0.5	17.2
TP-11E	0-0.5	19.1
TP-11F	0-0.5	18.2
TP-11G	0-0.5	22.2
TP-11H	0-0.5	18.8
DE-5	0-0.25	17
TP-11 1/8 acre exposure area representative concentration 21.23 mg/kg		

Sample ID	Sample Depth (feet)	Arsenic (mg/kg)
TRRP Residential Assessment Level		24.2
DE-6	0-0.25	24.1
DE-6A	0-0.5	23.9
DE-6B	0-0.5	22.9
DE-6C	0-0.5	20
DE-6D	0-0.5	21.9
DE-6E	0-0.5	26.2
DE-6F	0-0.5	24.3
DE-6G	0-0.5	22.7
DE-6H	0-0.5	23.7
DE-6I	0-0.5	24.2
DE-6 1/8 acre exposure area representative concentration 24.35 mg/kg		

Sample ID	Sample Depth (feet)	Arsenic (mg/kg)
TRRP Residential Assessment Level		24.2
TP-10	1	29.9
TP-10	1-2	16
TP-10A	0-0.5	11.3
TP-10B	0-0.5	12
TP-10C	0-0.5	13.8
TP-10D	0-0.5	12.2
TP-10E	0-0.5	12.4
TP-10F	0-0.5	14
TP-10G	0-0.5	12.1
TP-10H	0-0.5	15.6
TP-10I	0-0.5	12.2
TP-10 1/8 acre exposure area representative concentration 17.79 mg/kg		

EXPLANATION

– – –	Property Owned By Exide
🟥	Undeveloped Buffer Property
―	1/8 Acre Exposure Area Boundary
⊕	Monitoring Well Location
●	Surface Soil Sample Location
(21.8)	Arsenic Concentration (mg/Kg)

NOTES:
1. See Appendix 8 for calculation of representative concentrations.

N

Scale in Feet
0 75 150

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.12

SURFACE SOIL ARSENIC CONCENTRATION MAP M TRACT AREA

PROJECT: 1824	BY: AJD	REVISIONS
DATE: MAY, 2015	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Test Pit 7 - Excavation Depth 3 feet			
Battery chip observed in debris at 1 ft interval			
Soil Sample Interval	1.0 ft	2.0 ft	3.0 ft
Lead Concentration (mg/Kg)	1010	128	145

Test Pit 6 - Excavation Depth 3.5 feet			
Battery chip observed in debris at 2 feet			
Soil Sample Interval	1.0 ft	2.5 ft	3.5 ft
Lead Concentration (mg/Kg)	79.1JL	75.1	26.4

Test Pit 9 - Excavation Depth 5 feet			
Battery chip observed in debris at 5 ft interval			
Soil Sample Interval	1.0 ft	5.0 ft	5.0-6.0 ft
Lead Concentration (mg/Kg)	93.7	331	149J

Test Pit 1 - Excavation Depth 3 feet		
Battery chip observed in debris from 0-2 feet		
Soil Sample Interval	1.0 ft	2.0 ft
Lead Concentration (mg/Kg)	200	31.2

Test Pit 5 - Excavation Depth 3 feet		
Battery chips observed in 1 ft interval		
Soil Sample Interval	1.0 ft	3.0 ft
Lead Concentration (mg/Kg)	113	11.6

Test Pit 3 - Excavation Depth 2 feet		
Battery chip observed in 0.5 ft interval		
Soil Sample Interval	0.5 ft	1.5 ft
Lead Concentration (mg/Kg)	43.4JL	12.6JL

EXPLANATION

– – –	Former Operating Plant Boundary (Approximate)
▭	Undeveloped Buffer Property Subject to The Voluntary Cleanup Program
◐	Monitoring Well Location
●	Test Pit Location
▨	PCLE Zone Based on Presence of Battery Chip

NOTES:
1. Exceedance of the Residential Assessment Level indicated by highlighted values.
2. Data only shown for areas where battery chips were observed.
3. Slag not observed at any test pit locations.

N

Scale in Feet
0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

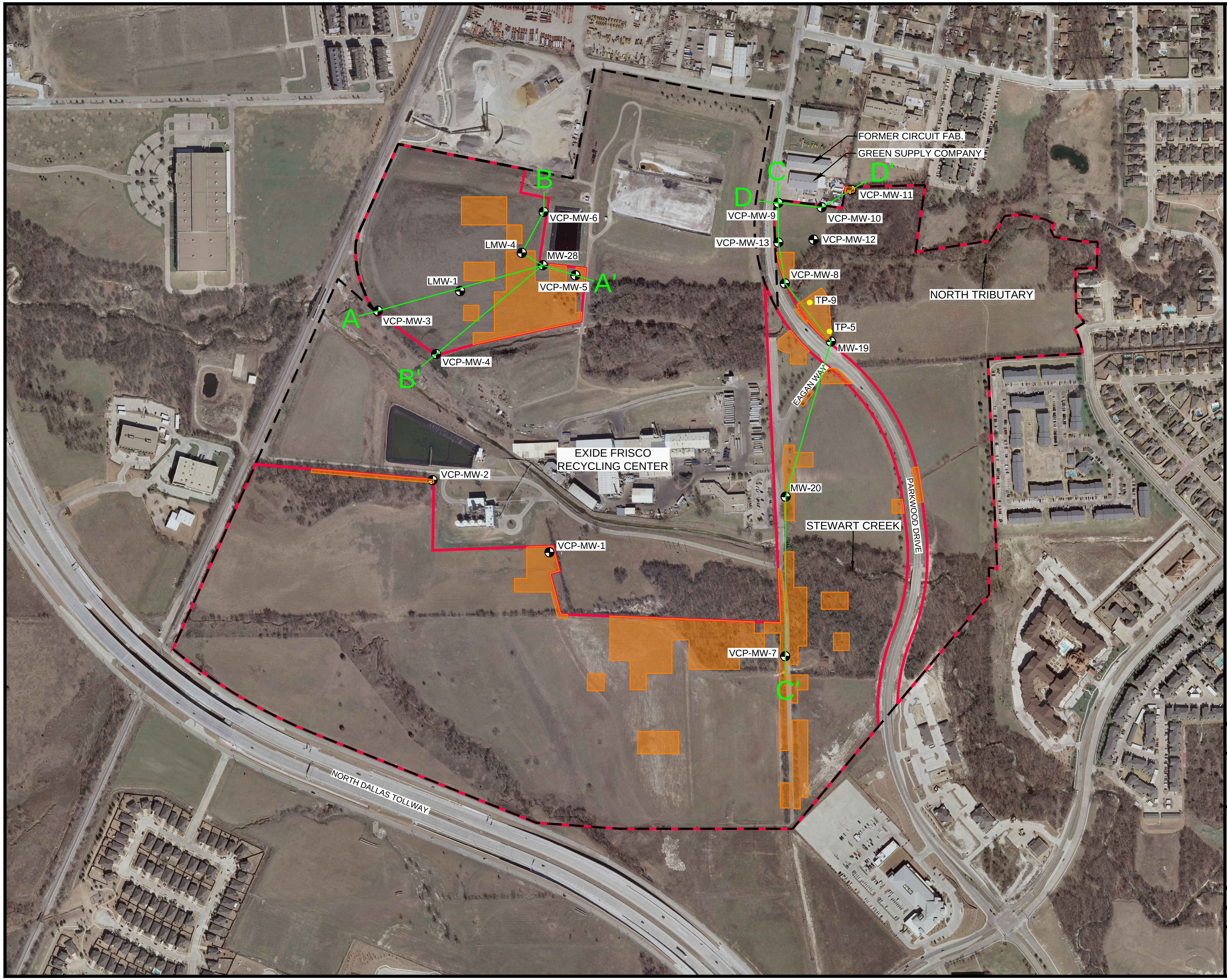
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4A.13

TEST PIT BATTERY CHIP LOCATION MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2015	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- - -	Property Owned By Exide
—	Undeveloped Buffer Property
◐	Monitoring Well Location
●	Test Pit Location
A___A'	Geologic Cross Section Location Lines
▨	PCLE Zone

NOTES:
1. LMW wells from 1996 facility investigation, included for geologic information only, not otherwise included in Undeveloped Buffer Property investigation.

N

Scale in Feet
0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

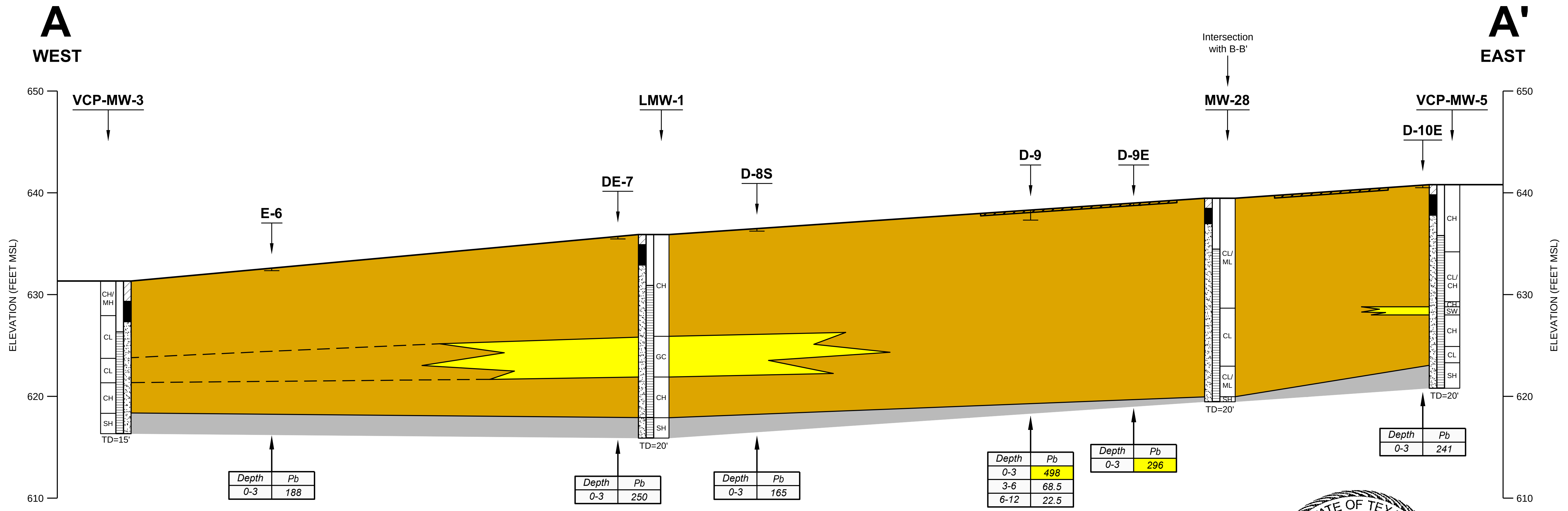
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4C.1

CROSS SECTION LOCATION MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2015	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

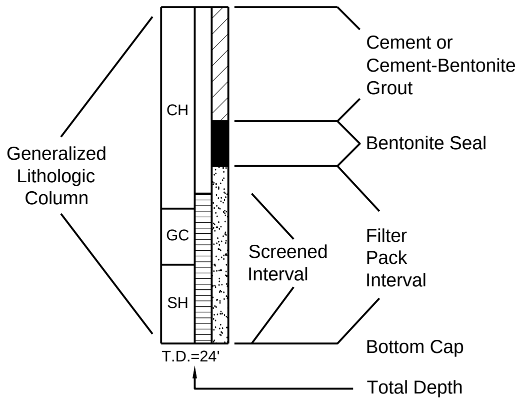


EXPLANATION

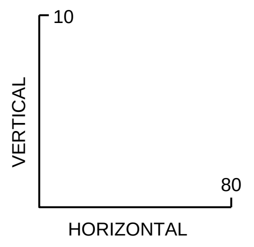
GENERALIZED LITHOLOGIC ABBREVIATIONS

🟧	Clay or Silty Clay with Minor Occurrences of Gravelly Clay
🟨	Gravel or Sand (Typically Clayey)
⬜	Eagle Ford Shale
▨	PCLE Zone

MONITORING WELL CONSTRUCTION



SCALE IN FEET



8x Vertical Exaggeration

WILLIAM F. VIENNE
GEOLOGY
No. 10492

4-1-14

Notes:
1. Ground surface topography is estimated. Monitoring well ground surface elevations were surveyed by a licensed surveyor.
2. LMW-1 information from 1996 facility investigation, included for geologic information only, not otherwise included in Undeveloped Buffer Property investigation.
3. See Figure 4C.1 for cross section location.
4. Concentrations in mg/Kg.
5. Depths given in inches below ground surface.
6. MSL = above mean sea level.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4C.2

GEOLOGIC CROSS SECTION A-A'

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
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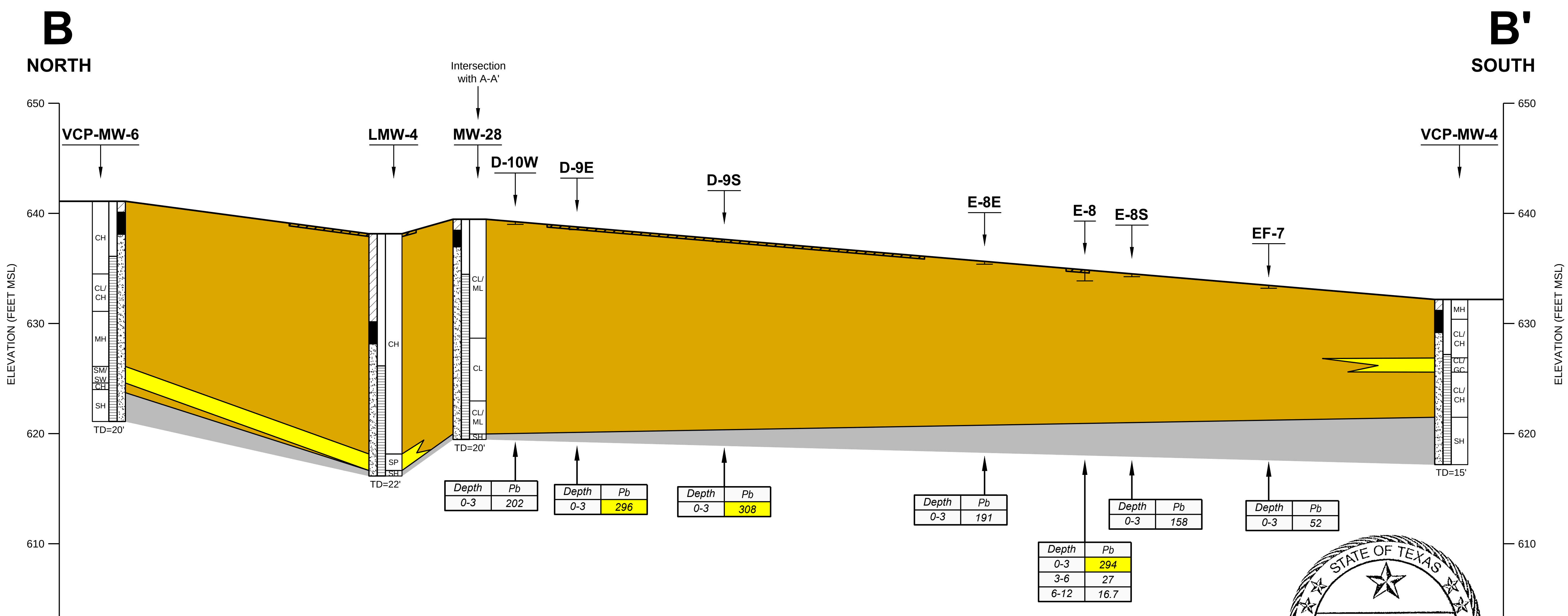


WILLIAM F. VIENNE
No. 10492

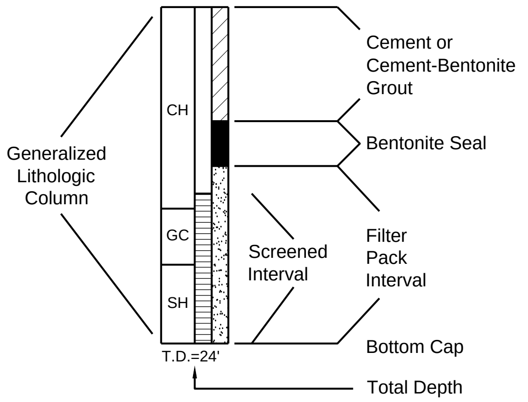
4-1-14

EXPLANATION

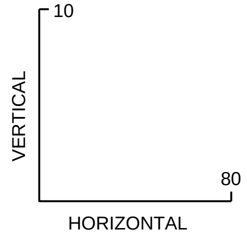
GENERALIZED LITHOLOGIC ABBREVIATIONS

🟧	Clay or Silty Clay with Minor Occurrences of Gravelly Clay
🟨	Gravel or Sand (Typically Clayey)
⬜	Eagle Ford Shale
▨	PCLE Zone

MONITORING WELL CONSTRUCTION



SCALE IN FEET



8x Vertical Exaggeration

Notes:
1. Ground surface topography is estimated. Monitoring well ground surface elevations were surveyed by a licensed surveyor.
2. LMW-4 included for geologic information only, not otherwise included in Undeveloped Buffer Property investigation.
3. See Figure 4C.1 for cross section location.
4. Concentrations in mg/Kg.
5. Depths given in inches below ground surface.
6. MSL = above mean sea level.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4C.3

GEOLOGIC CROSS SECTION B-B'

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Depth	Pb
0-3	436
3-6	122
6-12	96

Depth	Pb
0-3	80.5

Depth	Pb
1'	93.7
5'	331
5'-6'	149

Depth	Pb
0-3	259
3-6	69.9
6-12	39.7JH

Depth	Pb
0-3	90

Depth	Pb
1'	113
3'	11.6

Depth	Pb
0-3	92.5

Depth	Pb
0-3	38.6

Depth	Pb
0-3	426

Depth	Pb
0-3	200

Depth	Pb
0-3	21.2

Depth	Pb
0-3	1620

Depth	Pb
0-3	2030
2'-3'	14.2J

Depth	Pb
0-3	5000
0'-1'	1660
1'-2'	87.8J

Depth	Pb
0-3	1730

Depth	Pb
0-3	9640
0'-1'	3460
1'-2'	46.4J

EXPLANATION

GENERALIZED LITHOLOGIC ABBREVIATIONS

🟦	Concrete
🟩	Fill
🟧	Clay or Silty Clay with Minor Occurrences of Gravelly Clay
🟨	Gravel or Sand (Typically Clayey)
🟨	Austin Chalk Limestone
⬜	Eagle Ford Shale
▨	PCLE Zone

MONITORING WELL CONSTRUCTION

Generalized Lithologic Column
CH
GC
SH
T.D.=24'
Cement or Cement-Bentonite Grout
Bentonite Seal
Screened Interval
Filter Pack Interval
Bottom Cap
Total Depth

Notes:
1. Ground surface and creek bed topography are estimated. Monitoring well ground surface elevations were surveyed by a licensed surveyor.
2. See Figure 4C.1 for cross section location.
3. Concentrations in mg/Kg.
4. Depths given in inches below ground surface.
5. MSL = above mean sea level.
6. ? - Boundary uncertain.

STATE OF TEXAS
WILLIAM F. VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST

4-1-14

EXIDE TECHNOLOGIES

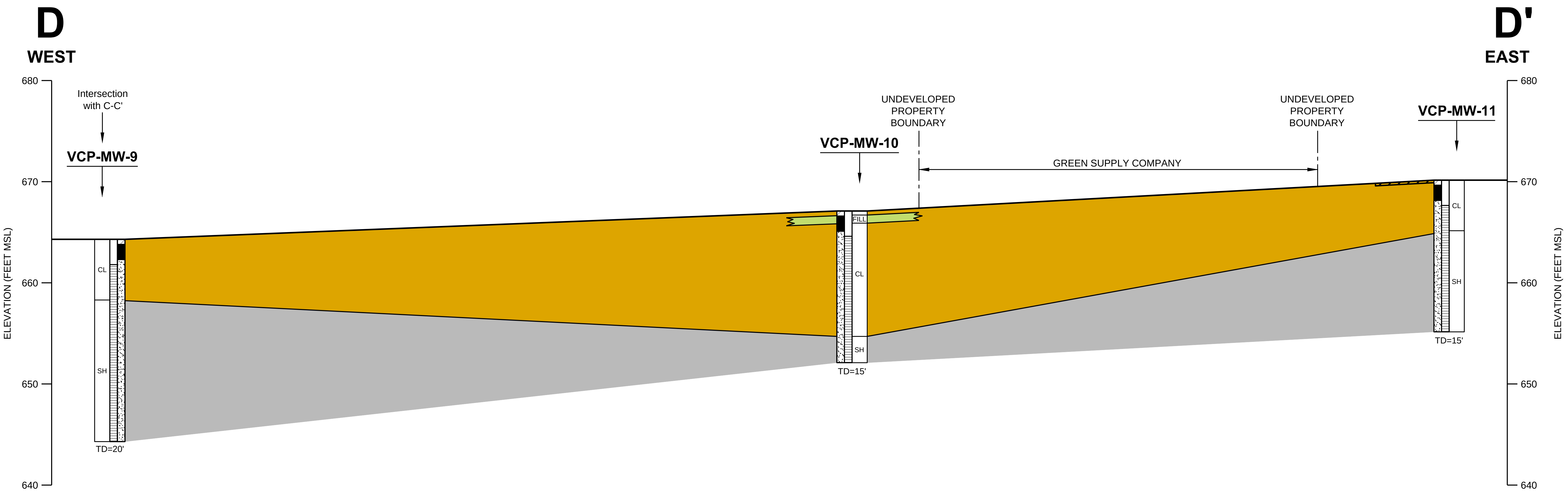
UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4C.4

GEOLOGIC CROSS SECTION C-C'

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

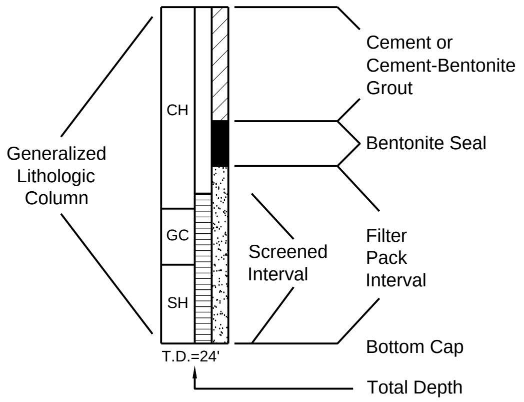


EXPLANATION

GENERALIZED LITHOLOGIC ABBREVIATIONS

🟩	Fill
🟧	Clay or Silty Clay with Minor Occurrences of Gravelly Clay
🟨	Gravel or Sand (Typically Clayey)
⬜	Eagle Ford Shale
▨	PCLE Zone

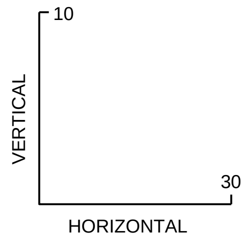
MONITORING WELL CONSTRUCTION



STATE OF TEXAS
WILLIAM F. VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST

4-1-14

SCALE IN FEET



3x Vertical Exaggeration

Notes:
1. Ground surface topography is estimated. Monitoring well ground surface elevations were surveyed by a licensed surveyor.
2. See Figure 4C.1 for cross section location.
3. MSL = above mean sea level.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 4C.5

GEOLOGIC CROSS SECTION D-D'

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

5.0 GROUNDWATER ASSESSMENT

5.1 Derivation of Assessment Levels

Groundwater assessment levels are the TRRP Tier 1 Residential groundwater PCLs for the ^{SW}GW, $^{GW}GW_{Ing}$, and $^{Air}GW_{Inh\text{-}V}$ exposure pathways. The selection of the exposure pathways and the basis for the groundwater classification are presented in Section 2. As presented on Table 5A, the applicable assessment levels for groundwater pathways found throughout the site ($^{GW}GW_{Ing}$, and $^{Air}GW_{Inh\text{-}V}$) correspond to the lowest residential Tier 1 PCL for all potentially complete pathways based on a Class 2 groundwater resource.

The ^{SW}GW exposure pathway is considered to be potentially complete in areas where groundwater may discharge to nearby surface water. At the Site, these surface water bodies include Stewart Creek and the North Tributary. VCP-MW-3 and VCP-MW-4 are considered point of exposure (POE) wells for Stewart Creek and VCP-MW-8 and VCP-MW-12 are considered POE wells for the North Tributary. Stewart Creek is considered a perennial stream and the North Tributary is classified as an intermittent stream according to documentation provided by the TCEQ (TCEQ, 2013b; TCEQ, 2013c). Based on these classifications, the ^{SW}GW PCLs were based on the chronic ^{SW}SW risk based exposure limits (RBELs) for Stewart Creek POE wells and the acute ^{SW}SW RBELs for the North Tributary POE wells. Derivation of the ^{SW}SW RBELs is presented in Section 6 and a summary of the POE well data and applicable assessment levels is presented on Table 4 of the SLERA.

The ^{SW}GW PCL for cadmium and lead at wells VCP-MW-3 and VCP-MW-4 (Stewart Creek) were calculated in accordance with TRRP-24 guidance (TCEQ, 2007) which allows for a dilution factor to be applied to COCs exceeding the ^{SW}SW RBEL if the groundwater discharge is calculated to be clearly less than 15% of the 7Q2 of the flow of the receiving water. The 7Q2 is defined as “the lowest average stream flow for seven consecutive days with a recurrence interval of two years, as statistically determined from historical data”. As previously documented in Appendix H of the SIR (PBW, 2012), the Stewart Creek 7Q2 flow rate is estimated to be 0.23 cfs. Based on the configuration of the Site relative to Stewart Creek, the lateral width of impacted groundwater that could potentially discharge to the creek (site-specific influent width) was assumed to be approximately 500 ft, which is based on the total distance that the Site borders the creek in this area and includes both monitoring wells. A groundwater discharge value would typically be calculated and compared to the 7Q2 flow rate to determine if a dilution factor is appropriate; however, a hydraulic conductivity value has not been determined for this area. The groundwater discharge to Stewart Creek in this area is assumed to meet the criteria for the default dilution value of 0.15 based on two factors – 1) a discharge rate of 0.002 cfs (less than 15% of the 7Q2 flow) was calculated for a 600 ft influent width discharge area located 500 ft upstream from well VCP-MW-4 (Golder, 2014); and 2) wells VCP-MW-3 and VCP-MW-4 produce very low volumes of water (wells were pumped dry during low-flow sampling events). Based on these conditions, the default 0.15 dilution factor was applied to the ^{SW}GW assessment levels for lead and cadmium (SLERA Table 4).

5.2 Nature and Extent of COCs and NAPL in Groundwater

The results of the initial groundwater sampling conducted during the Site assessment activities indicated that arsenic (well VCP-MW-9) and MTBE (well VCP-MW-10) were present in Site groundwater at concentrations exceeding the residential assessment levels (see Table 5A). In January 2014 these wells were re-sampled and the concentrations of arsenic and MTBE found to be below the assessment levels. The wells were sampled again in April 2015 and the concentrations of arsenic and MTBE found to be below the assessment levels. Due to the difference in the initial and subsequent arsenic and MTBE sampling results observed at wells VCP-MW-9 and VCP-MW-10 respectively, one additional quarterly groundwater monitoring event is recommended to be conducted at these wells. No other COCs were detected in Site groundwater at concentrations exceeding the assessment levels.

A summary of the groundwater sampling results is provided on Tables 5B.1 through 5B.4. Groundwater sample locations and results are presented on Figure 5B. Groundwater gauging data are presented on Table 5D and potentiometric surface maps are presented on Figures 4A.1, 4A.2, and 4A.3. See Section 2.0 for a discussion of hydrogeologic conditions.

5.3 Transport of COCs in Groundwater to Surface Water and Sediments

Monitoring wells VCP-MW-3 and VCP-MW-4, represent groundwater from the northwest area of the site that may discharge to Stewart Creek (considered a perennial stream). The dilution factor of 0.15 was applied to the chronic surface water criteria for evaluation of the groundwater to surface water pathway for Stewart Creek per the requirements outlined in Section 7.1.2 of *Determining PCLs for Surface Water and Sediment* (TRRP-24, December 2007) and described in Section 5.1 above. Stewart Creek is not an impaired water body as defined by 303(d) list (TCEQ 2012a), has sufficient flow as a perennial stream and there are detections of cadmium and lead that are greater than the chronic surface water criteria. As shown on SLERA Table 4, all of the detections and detection limits for groundwater samples in these wells are below the adjusted chronic criteria.

Monitoring wells VCP-MW-8 and VCP-MW-12 represent groundwater that may discharge from the northeast area of the Site to the North Tributary (intermittent flow). For the North Tributary, detections and detection limits in groundwater samples from these wells are well below the acute criteria. An evaluation of the groundwater data from the four monitoring wells located near the surface water bodies on the Undeveloped Buffer Property suggest that groundwater does not adversely impact surface water in Stewart Creek or the North Tributary.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

5.0 Tables

TABLE 5A
GROUNDWATER RESIDENTIAL ASSESSMENT LEVELS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Chemical of Concern	Source area size (acres)	Tier 1 $^{GW}GW_{Ing}$ PCL mg/l	Tier 1 $^{Air}GW_{InhV}$ PCL mg/l	Laboratory MQL mg/l	Maximum concentration Sample ID	Screen Interval ft	Sample date	Max Groundwater Conc mg/l
Metals								
Arsenic	30	1.00E-02	--	0.01	VCP-MW-9	2.5-20	1/16/2014	0.00673 J
Barium	30	2.00E+00	--	0.02	VCP-MW-8	6-16	4/26/2013	0.107
Cadmium	30	5.00E-03	--	0.005	MW-20	7-22	3/21/2013	0.0022 J
Chromium	30	1.00E-01	--	0.01	VCP-MW-2	5-15	3/21/2013	0.0023 J
Lead	30	1.50E-02	--	0.01	VCP-MW-2	5-15	3/21/2013	0.0081 J
Mercury	30	2.00E-03	9.40E-01	0.0002	--	--	--	<0.000082
Selenium	30	5.00E-02	--	0.04	--	--	--	<0.00417
Silver	30	1.22E-01	--	0.01	--	--	--	<0.00125
TPH by TCEQ Method TX1005								
TPH C6-C12	30	9.78E-01	2.27E+02	5	--	--	--	<0.825
TPH >C12-C28	30	9.78E-01	9.70E+02	5	--	--	--	<0.954
TPH >C28-C35	30	9.78E-01	9.70E+02	5	--	--	--	<0.954
TPH C6-C35	30	9.78E-01	9.70E+02	5	--	--	--	<1.55
Volatile Organic Compounds (VOCs) By EPA Method 8260								
1,1,1 Trichloroethane	30	2.00E-01	5.24E+03	0.005	--	--	--	<0.00098
1,1,2,2 Tetrachloroethane	30	4.56E-03	--	0.005	--	--	--	<0.0008
1,1,2 Trichloroethane	30	5.00E-03	1.04E+01	0.005	--	--	--	<0.00053
1,1 Dichloroethane	30	4.89E+00	5.57E+03	0.005	--	--	--	<0.0005
1,1 Dichloroethene	30	7.00E-03	2.15E+02	0.005	--	--	--	<0.00076
1,2 Dichloroethane	30	5.00E-03	4.26E+00	0.005	--	--	--	<0.00101
1,2 Dichloropropane	30	5.00E-03	1.50E+01	0.005	--	--	--	<0.00141
2 Butanone (MEK)	30	1.47E+01	6.19E+05	0.01	VCP-MW-10	2.5-15	4/26/2013	0.00319 J
2 Hexanone	30	1.22E-01	1.49E+03	0.01	--	--	--	<0.00142
4 Methyl 2 pentanone (MIBK)	30	1.96E+00	8.71E+04	0.01	--	--	--	<0.00111
Acetone	30	2.20E+01	1.00E+06	0.01	--	--	--	<0.00227
Benzene	30	5.00E-03	2.33E+01	0.005	--	--	--	<0.00056
Bromodichloromethane	30	1.47E-02	--	0.005	--	--	--	<0.00076
Bromoform	30	1.16E-01	6.65E+02	0.005	--	--	--	<0.00077
Bromomethane	30	3.42E-02	5.96E+00	0.01	VCP-MW-8	6-16	4/26/2013	0.0064J X8
Carbon disulfide	30	2.44E+00	6.30E+02	0.005	--	--	--	<0.0017
Carbon tetrachloride	30	5.00E-03	2.55E+00	0.005	--	--	--	<0.00092
Chlorobenzene	30	1.00E-01	1.50E+02	0.005	--	--	--	<0.00082
Chlorobromomethane	30	9.78E-01	--	0.005	--	--	--	<0.00081
Chloroethane	30	9.78E+00	1.50E+04	0.01	--	--	--	<0.00173
Chloroform	30	2.44E-01	2.58E+00	0.005	--	--	--	<0.00082
Chloromethane	30	7.02E-02	4.68E+00	0.01	--	--	--	<0.00085
cis1,2-Dichloroethene	30	7.00E-02	1.59E+02	0.005	--	--	--	<0.00056
cis1,3-Dichloropropene	30	1.69E-03	8.91E+01	0.005	--	--	--	<0.00097
Dibromochloromethane	30	1.09E-02	--	0.005	--	--	--	<0.00092
Ethylbenzene	30	7.00E-01	3.84E+03	0.005	--	--	--	<0.00129
Methyl tertbutyl ether	30	2.44E-01	5.22E+02	0.005	VCP-MW-10	2.5-15	1/16/2014	0.0356
Methylene Chloride	30	5.00E-03	2.76E+03	0.01	--	--	--	<0.00143
m-Xylene & p-Xylene	30	1.00E+01	1.37E+03	0.01	--	--	--	<0.00126
o-Xylene	30	1.00E+01	9.80E+04	0.005	--	--	--	<0.00093
Styrene	30	1.00E-01	1.96E+03	0.005	--	--	--	<0.00056
Tetrachloroethene	30	5.00E-03	6.45E+01	0.005	--	--	--	<0.00124
Toluene	30	1.00E+00	8.22E+03	0.005	--	--	--	<0.00055
trans1,2 Dichloroethene	30	1.00E-01	9.93E+01	0.005	--	--	--	<0.00088
trans1,3 Dichloropropene	30	9.13E-03	2.45E+01	0.005	--	--	--	<0.00059
Trichloroethene	30	5.00E-03	3.06E+00	0.005	--	--	--	<0.00158
Vinyl acetate	30	2.44E+01	1.83E+03	0.01	--	--	--	<0.0006
Vinyl chloride	30	2.00E-03	4.92E-01	0.005	--	--	--	<0.00085
Xylenes, Total	30	1.00E+01	1.32E+03	0.005	--	--	--	<0.00198

Notes:

1. Maximum concentration exceeds RAL indicated by blue shading: 🟦
2. SDL exceedance of RAL indicated by green shading: 🟩
3. RAL indicated by orange shading: 🟧
4. The RAL is considered the critical PCL, critical PCLs were not developed for compounds exceeding the RAL.
5. Only the most recent groundwater data is used for comparison to the RAL.
6. If compound not detected, MDL considered maximimum concentration.
7. < = Compound not detected above the MDL. J = Estimated value. NA = No PCL available for this compound.
8. RALs are the Tier 1 residential PCLs are default values published in the TRRP Rule 30 TAC §350, Table 1, last updated June 29, 2012.

TABLE 5A
GROUNDWATER RESIDENTIAL ASSESSMENT LEVELS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Chemical of Concern	Source area size (acres)	Tier 1 $^{GW}GW_{Ing}$ PCL mg/l	Tier 1 $^{Air}GW_{InhV}$ PCL mg/l	Laboratory MQL mg/l	Maximum concentration			
					Sample ID	Screen Interval ft	Sample date	Max Groundwater Conc mg/l
Semivolatile Organic Compounds (SVOCs) By EPA Method 8270								
1,2,4-Trichlorobenzene	30	7.00E-02	2.02E+01	0.002	--	--	--	<0.00016
1,2-Dichlorobenzene	30	6.00E-01	1.50E+02	0.00175	--	--	--	<0.00021
1,3-Dichlorobenzene	30	7.33E-01	2.45E+01	0.0015	--	--	--	<0.000187
1,4-Dichlorobenzene	30	7.50E-02	4.64E+02	0.002	--	--	--	<0.00016
2,4,5-Trichlorophenol	30	2.44E+00	--	0.002	--	--	--	<0.00029
2,4,6-Trichlorophenol	30	2.44E-02	6.39E+03	0.002	--	--	--	<0.00033
2,4-Dichlorophenol	30	7.33E-02	--	0.0025	--	--	--	<0.00026
2,4-Dimethylphenol	30	4.89E-01	--	0.0025	--	--	--	<0.000341
2,4-Dinitrophenol	30	4.89E-02	--	0.005	--	--	--	<0.000429
2,4-Dinitrotoluene	30	1.34E-03	--	0.0015	--	--	--	<0.00032
2,6-Dinitrotoluene	30	1.34E-03	--	0.001	--	--	--	<0.00029
2-Chloronaphthalene	30	1.96E+00	--	0.0015	--	--	--	<0.00019
2-Chlorophenol	30	1.22E-01	--	0.002	--	--	--	<0.00022
2-Methylnaphthalene	30	9.78E-02	--	0.0015	--	--	--	<0.00014
2-Methylphenol	30	1.22E+00	--	0.0015	--	--	--	<0.00019
2-Nitroaniline	30	7.33E-03	5.16E+02	0.0025	--	--	--	<0.00035
2-Nitrophenol	30	4.89E-02	--	0.001	--	--	--	<0.000242
3 & 4 Methylphenol	30	1.22E-01	--	0.001	--	--	--	<0.00022
3,3'-Dichlorobenzidine	30	2.03E-03	--	0.01	--	--	--	<0.00032
3-Nitroaniline	30	7.33E-03	6.14E+02	0.0025	--	--	--	<0.000176
4,6-Dinitro-2-methylphenol	30	2.44E-03	--	0.0025	--	--	--	<0.000912
4-Bromophenyl phenyl ether	30	6.08E-05	2.05E-01	0.0015	--	--	--	<0.00025
4-Chloro-3-methylphenol	30	1.22E-01	--	0.001	--	--	--	<0.00025
4-Chloroaniline	30	4.56E-03	--	0.001	--	--	--	<0.000231
4-Chlorophenyl phenyl ether	30	6.08E-05	1.59E-01	0.0015	--	--	--	<0.00023
4-Nitroaniline	30	4.56E-02	1.86E+04	0.0025	--	--	--	<0.000275
4-Nitrophenol	30	4.89E-02	--	0.0025	--	--	--	<0.000615
Acenaphthene	30	1.47E+00	--	0.001	--	--	--	<0.00016
Acenaphthylene	30	1.47E+00	--	0.001	--	--	--	<0.00016
Anthracene	30	7.33E+00	--	0.001	--	--	--	<0.00044
Benzidine	30	3.97E-06	8.38E-01	0.01	--	--	--	<0.0179
Benzo[a]anthracene	30	1.25E-03	2.65E+02	0.002	--	--	--	<0.00025
Benzo[a]pyrene	30	2.00E-04	5.01E+01	0.0015	--	--	--	<0.00013
Benzo[b]fluoranthene	30	1.25E-03	2.11E+02	0.002	--	--	--	<0.00018
Benzo[g,h,i]perylene	30	7.33E-01	--	0.0025	--	--	--	<0.00035
Benzo[k]fluoranthene	30	1.25E-02	1.26E+04	0.002	--	--	--	<0.00016
Benzyl alcohol	30	2.44E+00	--	0.0055	--	--	--	<0.00051
bis (2-Chloroisopropyl) ether	30	1.30E-02	1.12E+02	0.0015	--	--	--	<0.00044
Bis(2-chloroethoxy)methane	30	8.30E-04	1.04E+01	0.0015	--	--	--	<0.00019
Bis(2-chloroethyl)ether	30	8.30E-04	1.20E+01	0.0015	--	--	--	<0.00018
Bis(2-ethylhexyl) phthalate	30	6.00E-03	--	0.0025	--	--	--	<0.00059
Butyl benzyl phthalate	30	4.80E-01	--	0.0025	--	--	--	<0.00085
Carbazole	30	4.56E-02	--	0.00625	--	--	--	<0.00035
Chrysene	30	1.25E-01	7.55E+04	0.0015	--	--	--	<0.00024
Dibenz(a,h)anthracene	30	2.00E-04	1.35E+02	0.0025	--	--	--	<0.00029
Dibenzofuran	30	9.78E-02	--	0.0015	--	--	--	<0.00016
Diethyl phthalate	30	1.96E+01	--	0.0025	--	--	--	<0.00419
Dimethyl phthalate	30	1.96E+01	--	0.0025	--	--	--	<0.00018
Di-n-butyl phthalate	30	2.44E+00	--	0.0025	VCP-MW-6	5-20	3/19/2013	0.000131 J
Di-n-octyl phthalate	30	9.78E-01	--	0.005	--	--	--	<0.000176
Fluoranthene	30	9.78E-01	--	0.0025	--	--	--	<0.00031
Fluorene	30	9.78E-01	--	0.0015	--	--	--	<0.00012
Hexachlorobenzene	30	1.00E-03	7.38E-01	0.0015	--	--	--	<0.00025
Hexachlorobutadiene	30	1.17E-02	1.14E+00	0.002	--	--	--	<0.000198
Hexachlorocyclopentadiene	30	5.00E-02	7.01E-01	0.0015	--	--	--	<0.00015
Hexachloroethane	30	1.71E-02	9.50E+02	0.002	--	--	--	<0.00017
Indeno[1,2,3-cd]pyrene	30	1.25E-03	1.21E+03	0.002	--	--	--	<0.00029
Isophorone	30	9.61E-01	--	0.0015	--	--	--	<0.00015
Naphthalene	30	4.89E-01	4.09E+01	0.005	--	--	--	<0.00016
Nitrobenzene	30	4.89E-02	9.34E+01	0.0015	--	--	--	<0.0002
N-Nitrosodimethylamine	30	1.79E-05	2.61E+00	0.002	--	--	--	<0.000286
N-Nitrosodi-n-propylamine	30	1.30E-04	--	0.0025	--	--	--	<0.00024
N-Nitrosodiphenylamine	30	1.86E-01	--	0.0015	--	--	--	<0.00033
Pentachlorophenol	30	1.00E-03	--	0.0025	--	--	--	<0.00096
Phenanthrene	30	7.33E-01	--	0.0015	--	--	--	<0.00029
Phenol	30	7.33E+00	--	0.0015	--	--	--	<0.00014
Pyrene	30	7.33E-01	--	0.002	--	--	--	<0.00033

Notes:

1. Maximum concentration exceeds RAL indicated by blue shading: 🟦
2. SDL exceedance of RAL indicated by green shading: 🟩
3. RAL indicated by orange shading: 🟧
4. The RAL is considered the critical PCL, critical PCLs were not developed for compounds exceeding the RAL.
5. Only the most recent groundwater data is used for comparison to the RAL.
6. If compound not detected, MDL considered maximimum concentration.
7. < = Compound not detected above the MDL. J = Estimated value. NA = No PCL available for this compound.
8. RALs are the Tier 1 residential PCLs are default values published in the TRRP Rule 30 TAC §350, Table 1, last updated June 29, 2012.

TABLE 5B.1
SUMMARY OF GROUNDWATER SAMPLING RESULTS: METALS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential Assessment Level**	VCP-MW-2	VCP-MW-3	VCP-MW-4	VCP-MW-5	VCP-MW-6	VCP-MW-8	VCP-MW-8	VCP-MW-9
Sample Date:		3/21/2013	3/21/2013	3/21/2013	3/19/2013	3/19/2013	4/26/2013	1/16/2014	4/26/2013
Screen Interval (ft bgs):		5-15	5-15	5-15	5-20	5-20	6-16	6-16	2.5-20
Constituent	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Arsenic	1.00E-02	**0.0066 J**	<0.00328	<0.00328	<0.00328	<0.00328	<0.00328	<0.0034	**0.0166**
Barium	2.00E+00	**0.0192 J**	**0.0361**	**0.0173 J**	**0.0836**	**0.0967**	**0.107**	NA	**0.0152J**
Cadmium	5.00E-03	**0.0019 J**	**0.0004 J**	<0.00035	<0.00035	<0.00035	<0.00035	NA	<0.00035
Chromium	1.00E-01	**0.0023 J**	<0.00155	<0.00155	<0.00155	<0.00155	<0.00155	NA	<0.00155
Lead	1.50E-02	**0.0081 J**	**0.0064 J**	**0.0033 J**	<0.0029	<0.0029	<0.0029	NA	<0.0029
Mercury	2.00E-03	<0.000082	<0.000082	<0.000082	<0.000082	<0.000082	<0.000082	NA	<0.000082
Selenium	5.00E-02	<0.00417	<0.00417	<0.00417	<0.00417	<0.00417	<0.00417	NA	<0.00417
Silver	1.22E-01	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	NA	<0.00125

Location ID:	**Residential Assessment Level**	VCP-MW-9	VCP-MW-9	VCP-MW-10	VCP-MW-10	VCP-MW-12	VCP-MW-13	MW-19	MW-20	MW-28
Sample Date:		1/16/2014	4/22/2015	4/26/2013	1/16/2014	1/16/2014	1/16/2014	3/22/2013	3/21/2013	3/21/2013
Screen Interval (ft bgs):		2.5-20	2.5-20	2.5-15	2.5-15	9.5-29.5	4-24	7-22	7-22	5-20
Constituent	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Arsenic	1.00E-02	<0.00673	<0.00328	<0.00328	<0.00654	<0.00328	<0.00372	<0.00328	<0.00328	<0.00328
Barium	2.00E+00	NA	NA	**0.0426**	NA	NA	NA	**0.0689**	**0.0193 J**	**0.0786**
Cadmium	5.00E-03	NA	NA	<0.00035	NA	NA	NA	<0.00035	**0.0022 J**	<0.00035
Chromium	1.00E-01	NA	NA	<0.00155	NA	NA	NA	<0.00155	**0.0021 J**	<0.00155
Lead	1.50E-02	NA	NA	<0.0029	NA	NA	NA	<0.0029	**0.005 J**	<0.0029
Mercury	2.00E-03	NA	NA	<0.000082	NA	NA	NA	<0.000082	<0.000082	<0.000082
Selenium	5.00E-02	NA	NA	<0.00417	NA	NA	NA	<0.00417	<0.00417	<0.00417
Silver	1.22E-01	NA	NA	<0.00125	NA	NA	NA	<0.00125	<0.00125	<0.00125

NOTES:
1. Sample locations shown on Figure 5B.
2. Detected analytes are presented in **bold** type.
3. Tier I Texas Risk Reduction Program (TRRP) assessment levels are default values published in theTRRP rules (30 TAC §350, Table 3), last updated June 29, 2012.
4. The ^{SW}GW pathway is addressed in the Screening Level Ecological Risk Assessment provided in Section 9.
5. Concentrations or SDLs exceeding the assessment level are presented in highlighted cells (not applicable).
6. < = Compound not detected at the indicated detection limit. NA - Not analyzed for this compound.

TABLE 5B.2
SUMMARY OF GROUNDWATER SAMPLING RESULTS: VOCS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential Assess. Level**	VCP-MW-2	VCP-MW-3	VCP-MW-3	VCP-MW-4	VCP-MW-5	VCP-MW-6	VCP-MW-8	VCP-MW-8	VCP-MW-9	VCP-MW-9
Sample Date:		3/21/2013	3/21/2013	3/21/2013	3/21/2013	3/19/2013	3/19/2013	4/26/2013	1/16/2014	4/26/2013	1/16/2014
Screen Interval (ft bgs):		5-15	5-15	5-15	5-15	5-20	5-20	6-16	6-16	2.5-20	2.5-20
Constituent	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
1,1,1-Trichloroethane	2.00E-01	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	NA	<0.00098	NA
1,1,2,2-Tetrachloroethane	4.56E-03	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	NA	<0.0008	NA
1,1,2-Trichloroethane	5.00E-03	<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	NA	<0.00053	NA
1,1-Dichloroethane	4.89E+00	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NA	<0.0005	NA
1,1-Dichloroethene	7.00E-03	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	NA	<0.00076	NA
1,2-Dichloroethane	5.00E-03	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	NA	<0.00101	NA
1,2-Dichloroethene, Total	NP	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	NA	<0.00084	NA
1,2-Dichloropropane	5.00E-03	<0.00141	<0.00141	<0.00141	<0.00141	<0.00141	<0.00141	<0.00141	NA	<0.00141	NA
2-Butanone (MEK)	1.47E+01	<0.00157	<0.00157	<0.00157	<0.00157	<0.00157	<0.00157	<0.00157	NA	<0.00157	NA
2-Hexanone	1.22E-01	<0.00142	<0.00142	<0.00142	<0.00142	<0.00142	<0.00142	<0.00142	NA	<0.00142	NA
4-Methyl-2-pentanone (MIBK)	1.96E+00	<0.00111	<0.00111	<0.00111	<0.00111	<0.00111	<0.00111	<0.00111	NA	<0.00111	NA
Acetone	2.20E+01	<0.00227	<0.00227	<0.00227	<0.00227	<0.00227	<0.00227	<0.00227	NA	<0.00227	NA
Benzene	5.00E-03	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	NA	<0.00056	NA
Bromodichloromethane	1.47E-02	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	NA	<0.00076	NA
Bromoform	1.16E-01	<0.00077	<0.00077	<0.00077	<0.00077	<0.00077	<0.00077	<0.00077	NA	<0.00077	NA
Bromomethane	3.42E-02	<0.00215 X8	<0.00215 X8	<0.00215 X8	<0.00215 X8	<0.00215 X8	<0.00215 JL X8	**0.0064J X8**	NA	**0.00584J X8**	NA
Carbon disulfide	2.44E+00	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	NA	<0.0017	NA
Carbon tetrachloride	5.00E-03	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	NA	<0.00092	NA
Chlorobenzene	1.00E-01	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	NA	<0.00082	NA
Chlorobromomethane	9.78E-01	<0.00081	<0.00081	<0.00081	<0.00081	<0.00081	<0.00081	<0.00081	NA	<0.00081	NA
Chloroethane	9.78E+00	<0.00173	<0.00173	<0.00173	<0.00173	<0.00173	<0.00173	<0.00173	NA	<0.00173	NA
Chloroform	2.44E-01	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	NA	<0.00082	NA
Chloromethane	7.02E-02	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085	NA	<0.00085	NA
cis-1,2-Dichloroethene	7.00E-02	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	NA	<0.00056	NA
cis-1,3-Dichloropropene	1.69E-03	<0.00097	<0.00097	<0.00097	<0.00097	<0.00097	<0.00097	<0.00097	NA	<0.00097	NA
Dibromochloromethane	1.09E-02	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	NA	<0.00092	NA
Ethylbenzene	7.00E-01	<0.00129	<0.00129	<0.00129	<0.00129	<0.00129	<0.00129	<0.00129	NA	<0.00129	NA
Methyl tertbutyl ether	2.44E-01	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00012	<0.00044	<0.00012
Methylene Chloride	5.00E-03	<0.00143	<0.00143	<0.00143	<0.00143	<0.00143	<0.00143	<0.00143	NA	<0.00143	NA
m-Xylene & p-Xylene	1.00E+01	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	NA	<0.00126	NA
o-Xylene	1.00E+01	<0.00093	<0.00093	<0.00093	<0.00093	<0.00093	<0.00093	<0.00093	NA	<0.00093	NA
Styrene	1.00E-01	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	<0.00056	NA	<0.00056	NA
Tetrachloroethene	5.00E-03	<0.00124	<0.00124	<0.00124	<0.00124	<0.00124	<0.00124	<0.00124	NA	<0.00124	NA
Toluene	1.00E+00	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	NA	<0.00055	NA
trans-1,2-Dichloroethene	1.00E-01	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	NA	<0.00088	NA
trans-1,3-Dichloropropene	9.13E-03	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	<0.00059	NA	<0.00059	NA
Trichloroethene	5.00E-03	<0.00158	<0.00158	<0.00158	<0.00158	<0.00158	<0.00158	<0.00158	NA	<0.00158	NA
Vinyl acetate	2.44E+01	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	NA	<0.0006	NA
Vinyl chloride	2.00E-03	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085	NA	<0.00085	NA
Xylenes, Total	1.00E+01	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	NA	<0.00198	NA

TABLE 5B.2
SUMMARY OF GROUNDWATER SAMPLING RESULTS: VOCS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential**	VCP-MW-10	VCP-MW-10	VCP-MW-10	VCP-MW-11	VCP-MW-12	VCP-MW-13	MW-19	MW-20	MW-28
Sample Date:	**Assess.**	4/26/2013	1/16/2014	4/22/2015	1/16/2014	1/16/2014	1/16/2014	3/22/2013	3/21/2013	3/21/2013
Screen Interval (ft bgs):	**Level**	2.5-15	2.5-15	2.5-15	2.5-15	9.5-29.5	4-24	7-22	7-22	5-20
Constituent	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
1,1,1-Trichloroethane	2.00E-01	<0.00098	NA	NA	<0.00015	NA	NA	<0.00098	<0.00098	<0.00098
1,1,2,2-Tetrachloroethane	4.56E-03	<0.0008	NA	NA	<0.00022	NA	NA	<0.0008	<0.0008	<0.0008
1,1,2-Trichloroethane	5.00E-03	<0.00053	NA	NA	<0.00028	NA	NA	<0.00053	<0.00053	<0.00053
1,1-Dichloroethane	4.89E+00	<0.0005	NA	NA	<0.00011	NA	NA	<0.0005	<0.0005	<0.0005
1,1-Dichloroethene	7.00E-03	<0.00076	NA	NA	<0.00019	NA	NA	<0.00076	<0.00076	<0.00076
1,2-Dichloroethane	5.00E-03	<0.00101	NA	NA	<0.00014	NA	NA	<0.00101	<0.00101	<0.00101
1,2-Dichloroethene, Total	NP	<0.00084	NA	NA	<0.0003	NA	NA	<0.00084	<0.00084	<0.00084
1,2-Dichloropropane	5.00E-03	<0.00141	NA	NA	<0.00016	NA	NA	<0.00141	<0.00141	<0.00141
2-Butanone (MEK)	1.47E+01	**0.00319J**	NA	NA	<0.00076	NA	NA	<0.00157	<0.00157	<0.00157
2-Hexanone	1.22E-01	<0.00142	NA	NA	<0.00035	NA	NA	<0.00142	<0.00142	<0.00142
4-Methyl-2-pentanone (MIBK)	1.96E+00	<0.00111	NA	NA	<0.00045	NA	NA	<0.00111	<0.00111	<0.00111
Acetone	2.20E+01	<0.00227	NA	NA	<0.00209	NA	NA	<0.00227	<0.00227	<0.00227
Benzene	5.00E-03	<0.00056	NA	NA	<0.00008	NA	NA	<0.00056	<0.00056	<0.00056
Bromodichloromethane	1.47E-02	<0.00076	NA	NA	<0.00016	NA	NA	<0.00076	<0.00076	<0.00076
Bromoform	1.16E-01	<0.00077	NA	NA	<0.00019	NA	NA	<0.00077	<0.00077	<0.00077
Bromomethane	3.42E-02	**0.00632J X8**	NA	NA	<0.00025	NA	NA	<0.00215 X8	<0.00215 X8	<0.00215 X8
Carbon disulfide	2.44E+00	<0.0017	NA	NA	**0.000255 J**	NA	NA	<0.0017	<0.0017	<0.0017
Carbon tetrachloride	5.00E-03	<0.00092	NA	NA	<0.00015	NA	NA	<0.00092	<0.00092	<0.00092
Chlorobenzene	1.00E-01	<0.00082	NA	NA	<0.00012	NA	NA	<0.00082	<0.00082	<0.00082
Chlorobromomethane	9.78E-01	<0.00081	NA	NA	<0.00018	NA	NA	<0.00081	<0.00081	<0.00081
Chloroethane	9.78E+00	<0.00173	NA	NA	<0.00008	NA	NA	<0.00173	<0.00173	<0.00173
Chloroform	2.44E-01	<0.00082	NA	NA	<0.00013	NA	NA	<0.00082	<0.00082	<0.00082
Chloromethane	7.02E-02	<0.00085	NA	NA	<0.00018	NA	NA	<0.00085	<0.00085	<0.00085
cis-1,2-Dichloroethene	7.00E-02	<0.00056	NA	NA	<0.00006	NA	NA	<0.00056	<0.00056	<0.00056
cis-1,3-Dichloropropene	1.69E-03	<0.00097	NA	NA	<0.00018	NA	NA	<0.00097	<0.00097	<0.00097
Dibromochloromethane	1.09E-02	<0.00092	NA	NA	<0.00015	NA	NA	<0.00092	<0.00092	<0.00092
Ethylbenzene	7.00E-01	<0.00129	NA	NA	<0.00011	NA	NA	<0.00129	<0.00129	<0.00129
Methyl tertbutyl ether	2.44E-01	**3.64**	**0.0356**	**0.0577**	<0.00012	**0.000365 J**	<0.00012	<0.00044	<0.00044	<0.00044
Methylene Chloride	5.00E-03	<0.00143	NA	NA	<0.00015	NA	NA	<0.00143	<0.00143	<0.00143
m-Xylene & p-Xylene	1.00E+01	<0.00126	NA	NA	<0.00017	NA	NA	<0.00126	<0.00126	<0.00126
o-Xylene	1.00E+01	<0.00093	NA	NA	<0.00012	NA	NA	<0.00093	<0.00093	<0.00093
Styrene	1.00E-01	<0.00056	NA	NA	<0.00007	NA	NA	<0.00056	<0.00056	<0.00056
Tetrachloroethene	5.00E-03	<0.00124	NA	NA	<0.00013	NA	NA	<0.00124	<0.00124	<0.00124
Toluene	1.00E+00	<0.00055	NA	NA	<0.00015	NA	NA	<0.00055	<0.00055	<0.00055
trans-1,2-Dichloroethene	1.00E-01	<0.00088	NA	NA	<0.00009	NA	NA	<0.00088	<0.00088	<0.00088
trans-1,3-Dichloropropene	9.13E-03	<0.00059	NA	NA	<0.00021	NA	NA	<0.00059	<0.00059	<0.00059
Trichloroethene	5.00E-03	<0.00158	NA	NA	<0.00018	NA	NA	<0.00158	<0.00158	<0.00158
Vinyl acetate	2.44E+01	<0.0006	NA	NA	<0.00021	NA	NA	<0.0006	<0.0006	<0.0006
Vinyl chloride	2.00E-03	<0.00085	NA	NA	<0.00011	NA	NA	<0.00085	<0.00085	<0.00085
Xylenes, Total	1.00E+01	<0.00198	NA	NA	<0.00026	NA	NA	<0.00198	<0.00198	<0.00198

NOTES:

1. Sample locations shown on Figure 5B.
2. Detected analytes are presented in **bold** type.
3. Tier I Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) are default values published in theTRRP rules (30 TAC §350, Table 3), last updated June 29, 2012.
4. The ^{SW}GW pathway is addressed in the Screening Level Ecological Risk Assessment provided in Section 9.
5. Concentrations or detection limits exceeding the RAL are presented in highlighted cells.
6. < = Compound not detected at the indicated detection limit. NP = No published value. X8 = Laboratory not NELAC certified for this compound. NA - Sample not analyzed for this compound.

TABLE 5B.3
SUMMARY OF GROUNDWATER SAMPLING RESULTS: SVOCS

Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID:	**Residential Assess. Level**	VCP-MW-2	VCP-MW-3	VCP-MW-4	VCP-MW-4	VCP-MW-5	VCP-MW-6	VCP-MW-8	VCP-MW-9	VCP-MW-10
Sample Date:		3/21/2013	3/21/2013	3/21/2013	4/12/2013	3/19/2013	3/19/2013	4/26/2013	4/26/2013	4/26/2013
Screen Interval (ft bgs):		5-15	5-15	5-15	5-15	5-20	5-20	6-16	2.5-20	2.5-15
Constituent	mg/l	mg/l	mg/l	mg/l		mg/l	mg/l	mg/l	mg/l	mg/l
1,2,4-Trichlorobenzene	7.00E-02	<0.00016	<0.00016JL	<0.000115	<0.000115	<0.00016JL	<0.000113	<0.000115JL	<0.000115JL	<0.000132JL
1,2-Dichlorobenzene	6.00E-01	<0.00021	<0.00021JL	<0.000163	<0.000163	<0.00021JL	<0.00016	<0.000163JL	<0.000163JL	<0.000187JL
1,3-Dichlorobenzene	7.33E-01	<0.0001	<0.0001JL	<0.000163	<0.000163	<0.0001JL	<0.00016	<0.000163JL	<0.000163JL	<0.000187JL
1,4-Dichlorobenzene	7.50E-02	<0.00016	<0.00016JL	<0.000125	<0.000125JL	<0.00016JL	<0.000123	<0.000125JL	<0.000125JL	<0.000143JL
2,4,5-Trichlorophenol	2.44E+00	<0.00029	<0.00029JL	<0.00024	<0.00024	<0.00029	<0.000236	<0.00024	<0.00024	<0.000275
2,4,6-Trichlorophenol	2.44E-02	<0.00033	<0.00033JL	<0.000173	<0.000173	<0.00033	<0.00017	<0.000173	<0.000173	<0.000198
2,4-Dichlorophenol	7.33E-02	<0.00026	<0.00026JL	<0.000144	<0.000144	<0.00026JL	<0.000142	<0.000144	<0.000144	<0.000165
2,4-Dimethylphenol	4.89E-01	<0.00018	<0.00018JL	<0.000298	<0.000298JL	<0.00018	<0.000292	<0.000298JL	<0.000298JL	<0.000341JL
2,4-Dinitrophenol	4.89E-02	<0.0004	<0.0004JL	<0.000375	<0.000375	<0.0004JL	<0.000368	<0.000375J	<0.000375J	<0.000429J
2,4-Dinitrotoluene	1.34E-03	<0.00032	<0.00032JL	<0.000125	<0.000125	<0.00032	<0.000123	<0.000125	<0.000125	<0.000143
2,6-Dinitrotoluene	1.34E-03	<0.00029	<0.00029JL	<0.0000769	<0.0000769	<0.00029	<0.0000755	<0.0000769	<0.0000769	<0.0000879
2-Chloronaphthalene	1.96E+00	<0.00019	<0.00019JL	<0.0000769	<0.0000769	<0.00019JL	<0.0000755	<0.0000769	<0.0000769	<0.0000879
2-Chlorophenol	1.22E-01	<0.00022	<0.00022JL	<0.000125	<0.000125	<0.00022JL	<0.000123	<0.000125JL	<0.000125JL	<0.000143JL
2-Methylnaphthalene	9.78E-02	<0.00014	<0.00014JL	**0.000102 J**	<0.0000673	<0.00014JL	<0.000066	<0.0000673	<0.0000673	<0.0000769
2-Methylphenol	1.22E+00	<0.00019	<0.00019JL	<0.000115	<0.000115JL	<0.00019JL	<0.000113	<0.000115JL	<0.000115JL	<0.000132JL
2-Nitroaniline	7.33E-03	<0.00035	<0.00035JL	<0.000183	<0.000183	<0.00035	<0.000179	<0.000183	<0.000183	<0.000209
2-Nitrophenol	4.89E-02	<0.00022	<0.00022JL	<0.000212	<0.000212	<0.00022	<0.000208	<0.000212	<0.000212	<0.000242
3 & 4 Methylphenol	1.22E-01	<0.00016	<0.00016JL	<0.000192	<0.000192JL	<0.00016JL	<0.000189	<0.000192JL	<0.000192JL	<0.00022JL
3,3'-Dichlorobenzidine	2.03E-03	<0.00032JL	<0.00032JL	<0.000173	<0.000173	<0.00032JL	<0.00017	<0.000173	<0.000173	<0.000198
3-Nitroaniline	7.33E-03	<0.00013JL	<0.00013JL	<0.000154	<0.000154JL	<0.00013JL	<0.000151	<0.000154	<0.000154	<0.000176
4,6-Dinitro-2-methylphenol	2.44E-03	<0.00016	<0.00016JL	<0.000798	<0.000798	<0.00016	<0.000783	<0.000798JL	<0.000798JL	<0.000912JL
4-Bromophenyl phenyl ether	6.08E-05	<0.00025	<0.00025JL	**0.000102 J**	<0.0000962	<0.00025	<0.0000943	<0.0000962	<0.0000962	<0.00011
4-Chloro-3-methylphenol	1.22E-01	<0.00025	<0.00025JL	<0.000163	<0.000163	<0.00025	<0.00016	<0.000163	<0.000163	<0.000187
4-Chloroaniline	4.56E-03	<0.00011	<0.00011JL	<0.000202	<0.000202JL	<0.00011JL	<0.000198	<0.000202JL	<0.000202JL	<0.000231JL
4-Chlorophenyl phenyl ether	6.08E-05	<0.00023	<0.00023JL	<0.0000962	<0.0000962	<0.00023JL	<0.0000943	<0.0000962	<0.0000962	<0.00011
4-Nitroaniline	4.56E-02	<0.00023	<0.00023JL	<0.00024	<0.00024JL	<0.00023JL	<0.000236	<0.00024	<0.00024	<0.000275
4-Nitrophenol	4.89E-02	<0.00033	<0.00033JL	<0.000538	<0.000538JL	<0.00033JL	<0.000528	<0.000538JL	<0.000538JL	<0.000615JL
Acenaphthene	1.47E+00	<0.00016	<0.00016JL	**0.000105 J**	<0.0000769	<0.00016JL	<0.0000755	<0.0000769	<0.0000769	<0.0000879
Acenaphthylene	1.47E+00	<0.00016	<0.00016JL	**0.0001 J**	<0.0000577	<0.00016JL	<0.0000566	<0.0000577	<0.0000577	<0.0000659
Anthracene	7.33E+00	<0.00044	<0.00044JL	<0.0000481	<0.0000481	<0.00044	<0.0000472	<0.0000481	<0.0000481	<0.0000549
Benzidine	3.97E-06	<0.0179	<0.0179JL	<0.000587	<0.000587JL	<0.0179	<0.000575JL	<0.000587JL	<0.000587JL	<0.00067JL
Benzo[a]anthracene	1.25E-03	<0.00025	<0.00025JL	**0.0000921 J**	<0.0000769	<0.00025	<0.0000755	<0.0000769	<0.0000769	<0.0000879
Benzo[a]pyrene	2.00E-04	<0.00013	<0.00013JL	<0.0000769	<0.0000769	<0.00013	<0.0000755	<0.0000769	<0.0000769	<0.0000879
Benzo[b]fluoranthene	1.25E-03	<0.00018	<0.00018JL	<0.0000673	<0.0000673	<0.00018	<0.000066	<0.0000673	<0.0000673	<0.0000769
Benzo[g,h,i]perylene	7.33E-01	<0.00035	<0.00035JL	<0.0000769	<0.0000769	<0.00035	<0.0000755	<0.0000769	<0.0000769	<0.0000879
Benzo[k]fluoranthene	1.25E-02	<0.00016	<0.00016JL	<0.0000865	<0.0000865	<0.00016	<0.0000849	<0.0000865	<0.0000865	<0.0000989
Benzyl alcohol	2.44E+00	<0.00051	<0.00051JL	<0.000163	<0.000163	<0.00051JL	<0.00016	<0.000163JL	<0.000163JL	<0.000187JL
bis (2-Chloroisopropyl) ether	1.30E-02	<0.00018	<0.00018JL	<0.000385	<0.000385	<0.00018	<0.000377	<0.000385JL	<0.000385JL	<0.00044JL
Bis(2-chloroethoxy)methane	8.30E-04	<0.00019	<0.00019JL	**0.000125 J**	<0.000125	<0.00019	<0.000123	<0.000125JL	<0.000125JL	<0.000143JL
Bis(2-chloroethyl)ether	8.30E-04	<0.00018	<0.00018JL	<0.000144	<0.000144JL	<0.00018	<0.000142	<0.000144JL	<0.000144JL	<0.000165JL
Bis(2-ethylhexyl) phthalate	6.00E-03	<0.00059	<0.00059JL	<0.000356	<0.000356	<0.00059	<0.000349	<0.000356	<0.000356	<0.000407
Butyl benzyl phthalate	4.80E-01	<0.00085	<0.00085JL	**0.000163 J**	<0.000358J	<0.00085	<0.000113	<0.000514	<0.00026	<0.000252
Carbazole	4.56E-02	<0.00035	<0.00035JL	**0.000177 J**	<0.000163	<0.00035	<0.00016	<0.000163	<0.000163	<0.000187
Chrysene	1.25E-01	<0.00024	<0.00024JL	**0.0000974 J**	<0.0000769	<0.00024	<0.0000755	<0.0000769	<0.0000769	<0.0000879
Dibenz(a,h)anthracene	2.00E-04	<0.00029	<0.00029JL	<0.0000769	<0.0000769	<0.00029	<0.0000755	<0.0000769	<0.0000769	<0.0000879
Dibenzofuran	9.78E-02	<0.00016	<0.00016JL	**0.0001 J**	<0.0000769	<0.00016JL	<0.0000755	<0.0000769	<0.0000769	<0.0000879
Diethyl phthalate	1.96E+01	<0.00419	<0.00419JL	<0.00144	<0.00144	<0.00419	<0.00142	<0.00144	<0.00144	<0.00165
Dimethyl phthalate	1.96E+01	<0.00018	<0.00018JL	<0.0000673	<0.0000673	<0.00018	<0.000066	<0.0000673	<0.0000673	<0.0000769
Di-n-butyl phthalate	2.44E+00	<0.00187	<0.00187JL	**0.00019 J**	<0.000106	<0.00187	**0.000131J**	<0.000366	<0.000143	<0.000158
Di-n-octyl phthalate	9.78E-01	<0.00016	<0.00016JL	<0.000154	<0.000154	<0.00016	<0.000151	<0.000154	<0.000154	<0.000176
Fluoranthene	9.78E-01	<0.00031	<0.00031JL	<0.0000673	<0.0000673	<0.00031	<0.000066	<0.0000673	<0.0000673	<0.0000769
Fluorene	9.78E-01	<0.00012	<0.00012JL	**0.0000963 J**	<0.0000673	<0.00012JL	<0.000066	<0.0000673	<0.0000673	<0.0000769
Hexachlorobenzene	1.00E-03	<0.00025	<0.00025JL	<0.000106	<0.000106	<0.00025	<0.000104	<0.000106	<0.000106	<0.000121
Hexachlorobutadiene	1.17E-02	<0.00019	<0.00019JL	<0.000173	<0.000173	<0.00019JL	<0.00017	<0.000173JL	<0.000173JL	<0.000198JL
Hexachlorocyclopentadiene	5.00E-02	<0.00015	<0.00015JL	<0.000125	<0.000125JL	<0.00015JL	<0.000123JL	<0.000125JL	<0.000125JL	<0.000143JL
Hexachloroethane	1.71E-02	<0.00017	<0.00017JL	<0.0000962	<0.0000962	<0.00017JL	<0.0000943	<0.0000962JL	<0.0000962JL	<0.00011JL
Indeno[1,2,3-cd]pyrene	1.25E-03	<0.00029	<0.00029JL	<0.0000673	<0.0000673	<0.00029	<0.000066	<0.0000673	<0.0000673	<0.0000769
Isophorone	9.61E-01	<0.00015	<0.00015JL	<0.000106	<0.000106	<0.00015	<0.000104	<0.000106JL	<0.000106JL	<0.000121JL
Naphthalene	4.89E-01	<0.00016	<0.00016JL	<0.0000769	<0.0000769	<0.00016JL	<0.0000755	<0.0000769	<0.0000769	<0.0000879
Nitrobenzene	4.89E-02	<0.0002	<0.0002JL	<0.000106	<0.000106	<0.0002JL	<0.000104	<0.000106JL	<0.000106JL	<0.000121JL
N-Nitrosodimethylamine	1.79E-05	<0.00016	<0.00016JL	<0.00025	<0.00025JL	<0.00016	<0.000245	<0.00025JL	<0.00025JL	<0.000286JL
N-Nitrosodi-n-propylamine	1.30E-04	<0.00024	<0.00024JL	**0.000148 J**	<0.0000962	<0.00024	<0.0000943	<0.0000962	<0.0000962	<0.00011
N-Nitrosodiphenylamine	1.86E-01	<0.00033	<0.00033JL	<0.0000962	<0.0000962	<0.00033	<0.0000943	<0.0000962	<0.0000962	<0.00011
Pentachlorophenol	1.00E-03	<0.00096	<0.00096JL	<0.000587	<0.000587	<0.00096JL	<0.000575	<0.000587	<0.000587	<0.00067
Phenanthrene	7.33E-01	<0.00029	<0.00029JL	**0.000131 J**	<0.0000577	<0.00029	<0.0000566	<0.0000577	<0.0000577	<0.0000659
Phenol	7.33E+00	<0.00014	<0.00014JL	<0.0000385	<0.0000385JL	<0.00014JL	<0.0000377	<0.0000385JL	<0.0000385JL	<0.000044JL
Pyrene	7.33E-01	<0.00033	<0.00033JL	<0.000106	<0.000106	<0.00033	<0.000104	<0.000106	<0.000106	<0.000121

NOTES:
1. Sample locations shown on Figure 5B.
2. Detected analytes are presented in **bold** type. -- = Not sampled (insufficient sample volume).
3. Tier I Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) are default values published in theTRRP rules (30 TAC §350, Table 3), last updated June 29, 2012.
4. The ^{SW}GW pathway is addressed in the Screening Level Ecological Risk Assessment provided in Section 9.
5. Concentrations or detection limits exceeding the RAL are presented in highlighted cells.
7. < = Compound not detected at the indicated detection limit. J = Estimated value. JH = Estimated value with a potentially high bias.

TABLE 5B.4

SUMMARY OF GROUNDWATER SAMPLING RESULTS: TOTAL PETROLEUM HYDROCARBONS

Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Location ID: **Sample Date:** **Screen Interval (ft bgs):**	**Residential Assess. Level**	VCP-MW-2 3/21/2013 5-15	VCP-MW-3 3/21/2013 5-15	VCP-MW-4 3/21/2013 5-15	VCP-MW-5 3/19/2013 5-20	VCP-MW-6 3/19/2013 5-20	VCP-MW-8 4/26/2013 6-16
Constituent	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
TPH C6-C12	9.78E-01	<0.813	<0.811	<0.813	<0.825	<0.822	<0.819
TPH >C12-C28	9.78E-01	<0.941	<0.938	<0.94	<0.954	<0.951	<0.948
TPH >C28-C35	9.78E-01	<0.941	<0.938	<0.94	<0.954	<0.951	<0.948
TPH C6-C35	9.78E-01	<1.53	<1.52	<1.53	<1.55	<1.55	<1.54

Location ID: **Sample Date:** **Screen Interval (ft bgs):**	**Residential Assess. Level**	VCP-MW-9 4/26/2013 2.5-20	VCP-MW-10 4/26/2013 2.5-15	VCP-MW-11 1/16/2014 2.5-15	MW-19 3/22/2013 7-22	MW-20 3/21/2013 7-22	MW-28 3/21/2013 5-20
Constituent	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
TPH C6-C12	9.78E-01	<0.808	<0.808	<0.812	<0.81	<0.816	<0.823
TPH >C12-C28	9.78E-01	<0.934	<0.934	<0.939	<0.937	<0.944	<0.952
TPH >C28-C35	9.78E-01	<0.934	<0.934	<0.939	<0.937	<0.944	<0.952
TPH C6-C35	9.78E-01	<1.52	<1.52	<0.53	<1.52	<1.53	<1.55

NOTES:

1. Sample locations shown on Figures 5B.1 and 5B.2.
2. Detected analytes are presented in **bold** type (not applicable).
3. Tier I Texas Risk Reduction Program (TRRP) assessment levels are default values published in theTRRP rules (30 TAC §350, Table 3), last updated June 29, 2012.
4. Concentrations or SDLs exceeding the assessment level and/or critical PCL are presented in highlighted cells (not applicable).
5. < = Compound not detected at the indicated detection limit.

TABLE 5D
GROUNDWATER MEASUREMENTS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID	TOC Elevation (ft msl)	Ground Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
Former Operating Plant Wells							
B1R	682.72	682.80	49.5-59.5	03/11/13	4.64	4.72	678.08
				04/05/13	4.52	4.60	678.20
				04/29/13	4.81	4.89	677.91
				01/21/14	5.47	5.55	677.25
B3R	650.23	649.23	4-14	03/11/13	14.92	13.92	635.31
				04/05/13	14.96	13.96	635.27
				04/29/13	12.96	11.96	637.27
				01/21/14	12.66	11.66	637.57
B4R	664.58	661.40	4-9	03/11/13	7.66	4.48	656.92
				04/05/13	7.57	4.39	657.01
				04/29/13	8.79	5.61	655.79
				01/21/14	11.86	8.68	652.72
B5N	631.43	629.97	6.5-16.5	03/11/13	9.72	8.26	621.71
				04/05/13	9.68	8.22	621.75
				04/29/13	10.04	8.58	621.39
				01/21/14	10.31	8.85	621.12
B7N	645.60	644.08	14-24	03/11/13	14.33	12.81	631.27
				04/05/13	14.31	12.79	631.29
				04/29/13	14.52	13.00	631.08
				01/21/14	15.05	13.53	630.55
B9N	640.69	637.02	7-17	03/11/13	8.39	4.72	632.30
				04/05/13	8.76	5.09	631.93
				04/29/13	9.06	5.39	631.63
				01/21/14	9.14	5.47	631.55
LMW-1	638.74	635.90	5-20	04/29/13	9.14	6.30	629.60
				01/21/14	11.3	8.46	627.44
LMW-2	641.01	638.72	6-21	04/29/13	11.12	8.83	629.89
				01/21/14	12.23	9.94	628.78
LMW-3	639.78	637.76	6-16	04/29/13	12.08	10.06	627.70
				01/21/14	13.41	11.39	626.37
LMW-4	641.42	639.15	12-22	04/29/13	11.69	9.42	629.73
				01/21/14	13.07	10.80	628.35

TABLE 5D
GROUNDWATER MEASUREMENTS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID	TOC Elevation (ft msl)	Ground Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
Former Operating Plant Wells							
LMW-5	646.07	643.27	7-21	03/11/13	17.69	14.89	628.38
				04/05/13	17.02	14.22	629.05
				04/29/13	17.29	14.49	628.78
				01/21/14	18.1	15.30	627.97
LMW-8	648.72	645.57	7-21	03/11/13	14.93	11.78	633.79
				04/05/13	14.52	11.37	634.20
				04/29/13	14.63	11.48	634.09
				01/21/14	14.87	11.72	633.85
LMW-9	663.66	660.48	9-23	03/11/13	16.24	13.06	647.42
				04/05/13	20.21	17.03	643.45
				04/29/13	22.14	18.96	641.52
				01/21/14	19.85	16.67	643.81
LMW-17	648.70	646.34	10-20	03/11/13	18.52	16.16	630.18
				04/05/13	18.34	15.98	630.36
				04/29/13	16.81	14.45	631.89
				01/21/14	19.44	17.08	629.26
LMW-21	648.28	645.12	10-25	03/11/13	20.11	16.95	628.17
				04/05/13	19.29	16.13	628.99
				04/29/13	19.62	16.46	628.66
				01/21/14	20.18	17.02	628.10
LMW-22	646.99	643.32	5-20	03/11/13	17.18	13.51	629.81
				04/05/13	16.93	13.26	630.06
				04/29/13	17.16	13.49	629.83
				01/21/14	19.81	16.14	627.18
MW-10	644.82	645.12	7-17	03/11/13	8.71	9.01	636.11
				04/05/13	8.63	8.93	636.19
				04/29/13	8.37	8.67	636.45
				01/21/14	8.22	8.52	636.60
MW-11	626.54	625.58	7-17	03/11/13	5.94	4.98	620.60
				04/05/13	7.64	6.68	618.90
				04/29/13	9.13	8.17	617.41
				01/21/14	10.05	9.09	616.49

TABLE 5D
GROUNDWATER MEASUREMENTS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID	TOC Elevation (ft msl)	Ground Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
Former Operating Plant Wells							
MW-12	635.16	633.94	8-18.5	03/11/13	8.22	7.00	626.94
				04/05/13	8.17	6.95	626.99
				04/29/13	8.47	7.25	626.69
				01/21/14	8.55	7.33	626.61
MW-13	637.08	636.17	12-22	03/11/13	15.42	14.51	621.66
				04/05/13	15.33	14.42	621.75
				04/29/13	15.79	14.88	621.29
				01/21/14	16.2	15.29	620.88
MW-14	631.01	629.89	7-17	03/11/13	5.81	4.69	625.20
				04/05/13	5.74	4.62	625.27
				04/29/13	6.03	4.91	624.98
				01/21/14	6.2	5.08	624.81
MW-15	626.58	624.99	12-22	03/11/13	11.53	9.94	615.05
				04/05/13	10.97	9.38	615.61
				04/29/13	10.62	9.03	615.96
				01/21/14	13.84	12.25	612.74
MW-16	628.88	627.93	67.5-77.5	03/11/13	9.67	8.72	619.21
				04/05/13	9.61	8.66	619.27
				04/29/13	10.01	9.06	618.87
				01/21/14	12.07	11.12	616.81
MW-16S	628.00	627.51	7-17	03/11/13	8.92	8.43	619.08
				04/05/13	8.84	8.35	619.16
				04/29/13	9.22	8.73	618.78
				01/21/14	9.42	8.93	618.58
MW-17	629.00	628.58	7-17	03/11/13	8.29	7.87	620.71
				04/05/13	8.27	7.85	620.73
				04/29/13	8.71	8.29	620.29
				01/21/14	8.53	8.11	620.47
MW-18	633.00	631.84	5.5-15.5	03/11/13	2.53	1.37	630.47
				04/05/13	2.51	1.35	630.49
				04/29/13	3.19	2.03	629.81
				01/21/14	4.25	3.09	628.75

TABLE 5D
GROUNDWATER MEASUREMENTS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID	TOC Elevation (ft msl)	Ground Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
Former Operating Plant Wells							
MW-21	635.99	633.66	3-13	03/11/13	3.24	0.91	632.75
				04/05/13	3.17	0.84	632.82
				04/29/13	4.39	2.06	631.60
				01/21/14	3.5	1.17	632.49
MW-22	636.89	633.29	3-13	03/11/13	3.71	0.11	633.18
				04/05/13	3.62	0.02	633.27
				04/29/13	4.59	0.99	632.30
				01/21/14	4.21	0.61	632.68
MW-23	644.15	644.32	4.5-19.5	03/11/13	7.13	7.30	637.02
				04/05/13	7.04	7.21	637.11
				04/29/13	7.34	7.51	636.81
				01/21/14	7.52	7.69	636.63
MW-24	642.96	639.62	14-29	03/11/13	21.77	18.43	621.19
				04/05/13	21.72	18.38	621.24
				04/29/13	22.26	18.92	620.70
				01/21/14	22.54	19.20	620.42
MW-25	635.85	633.36	7-22	03/11/13	12.29	9.80	623.56
				04/05/13	11.71	9.22	624.14
				04/29/13	11.39	8.90	624.46
				01/21/14	11.59	9.10	624.26
MW-26	631.93	628.34	5-15	03/11/13	9.98	6.39	621.95
				04/05/13	9.52	9.52	622.41
				04/29/13	9.21	9.21	622.72
				01/21/14	5.8	5.80	626.13
MW-27	633.42	629.89	5-15	03/11/13	6.03	2.50	627.39
				04/05/13	5.92	2.39	627.50
				04/29/13	5.64	2.11	627.78
				01/21/14	4.9	1.37	628.52
MW-29	633.51	629.39	4.5-14.5	03/11/13	13.08	8.96	620.43
				04/05/13	6.96	6.96	626.55
				04/29/13	6.56	6.56	626.95
				01/21/14	6.62	6.62	626.89

TABLE 5D
GROUNDWATER MEASUREMENTS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID	TOC Elevation (ft msl)	Ground Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
Former Operating Plant Wells							
MW-30	645.15	645.48	12-32	04/05/13	11.47	11.80	633.68
				04/29/13	11.26	11.59	633.89
				01/21/14	11.85	12.18	633.30
MW-31	636.71	637.17	8-23	01/21/14	10.87	11.33	625.84
MW-32	630.96	631.37	2.5-5	01/21/14	4.16	4.57	626.80
MW-33	632.59	632.93	2.5-5	01/21/14	1.09	1.43	631.50
MW-34	632.83	633.15	2.5-5	01/21/14	4.31	4.63	628.52
MW-35	632.55	632.82	2.5-5	01/21/14	DRY	DRY	DRY
MW-36	633.63	633.86	2.5-5	01/21/14	DRY	DRY	DRY
MW-37	620.95	621.20	5-10	01/21/14	8.11	8.36	612.84
MW-38	623.14	623.50	5-15	01/21/14	7.10	7.46	616.04
MW-39	639.70	637.26	10-20	01/21/14	10.41	7.97	629.29
MW-40	635.51	633.00	5-15	01/21/14	5.40	2.89	630.11
MW-41	642.17	639.14	6-16	01/21/14	11.38	8.35	630.79
MW-42	642.24	638.71	5-15	01/21/14	9.38	5.85	632.86
MW-43	645.45	645.87	10-20	01/21/14	14.93	15.35	630.52
MW-44	637.50	634.33	5-15	01/21/14	9.21	6.04	628.29
MW-45	660.86	657.90	10-20	01/21/14	13.29	10.33	647.57
MW-46	630.98	631.38	10-20	01/21/14	5.21	5.61	625.77
P-1	647.24	645.95	10-20	03/11/13	13.91	13.91	633.33
				04/05/13	13.91	13.91	633.33
				04/29/13	13.72	13.72	633.52
				01/21/14	11.38	11.38	635.86
P-2	643.55	642.82	10-20	03/11/13	16.34	15.61	627.21
				04/05/13	16.31	15.58	627.24
				04/29/13	15.44	14.71	628.11
				01/21/14	16.4	15.67	627.15
PMW-19	678.86	677.89		12/13/11	NM	NM	NM
				01/16/12	16.67	15.70	662.19
				02/13/12	18.27	17.30	660.59

TABLE 5D
GROUNDWATER MEASUREMENTS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID	TOC Elevation (ft msl)	Ground Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
Former Operating Plant Wells							
PMW-19R	681.79	678.45	4-19	03/11/13	DRY	DRY	DRY
				04/05/13	DRY	DRY	DRY
				04/29/13	DRY	DRY	DRY
				01/21/14	22.22	18.88	659.57
PMW-20R	648.09	645.20	10-25	03/11/13	18.91	16.02	629.18
				04/05/13	19.06	16.17	629.03
				04/29/13	19.16	16.27	628.93
				01/21/14	19.9	17.01	628.19
Undeveloped Buffer Property Wells							
MW-19	653.34	650.33	7-22	01/16/12	18.59	15.58	634.75
				02/13/12	11.73	8.72	641.61
				03/11/13	12.81	9.80	640.53
				04/05/13	12.87	9.86	640.47
				04/29/13	12.51	9.50	640.83
				01/21/14	13.81	10.80	639.53
MW-20	644.70	641.73	7-22	01/16/12	24.02	21.05	620.68
				02/13/12	12.79	9.82	631.91
				03/11/13	16.34	13.37	628.36
				04/05/13	16.31	13.34	628.39
				04/29/13	14.59	11.62	630.11
				01/21/14	12.88	9.91	631.82
MW-28	642.91	639.47	5-20	03/11/13	14.81	11.37	628.10
				04/05/13	14.68	11.24	628.23
				04/29/13	13.67	10.23	629.24
				01/21/14	15.09	11.65	627.82
VCP-MW-1	655.88	652.99	2.5-10	03/11/13	12.81	9.92	643.07
				04/05/13	12.80	9.91	643.08
				04/29/13	12.81	9.92	643.07
				01/21/14	12.35	9.46	643.53
VCP-MW-2	631.16	627.74	5-15	03/11/13	12.17	8.75	618.99
				04/05/13	11.79	8.37	619.37
				04/29/13	11.26	7.84	619.90
				01/21/14	11.41	7.99	619.75

TABLE 5D
GROUNDWATER MEASUREMENTS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID	TOC Elevation (ft msl)	Ground Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
Undeveloped Buffer Property Wells							
VCP-MW-3	634.06	631.34	5-15	03/11/13	13.99	11.27	620.07
				04/05/13	13.72	11.00	620.34
				04/29/13	13.74	11.02	620.32
				01/21/14	15.38	12.66	618.68
VCP-MW-4	635.43	632.18	5-15	03/11/13	7.18	3.93	628.25
				04/05/13	6.74	3.49	628.69
				04/29/13	6.91	3.66	628.52
				01/21/14	9.01	5.76	626.42
VCP-MW-5	643.97	640.80	5-20	03/11/13	15.31	12.14	628.66
				04/05/13	15.27	12.10	628.70
				04/29/13	14.44	11.27	629.53
				01/21/14	15.98	12.81	627.99
VCP-MW-6	644.71	641.10	5-20	03/11/13	16.32	12.71	628.39
				04/05/13	16.49	12.88	628.22
				04/29/13	16.04	12.43	628.67
				01/21/14	16.67	13.06	628.04
VCP-MW-7	685.18	683.12	2.5-10	04/29/13	DRY	DRY	DRY
				01/21/14	DRY	DRY	DRY
VCP-MW-8	651.02	648.10	6-16	04/29/13	12.40	9.48	638.62
				01/21/14	12.63	9.71	638.39
VCP-MW-9	666.96	664.31	2.5-20	04/29/13	13.82	11.17	653.14
				01/21/14	7.35	4.70	659.61
				04/21/15	3.96	1.31	663.00
VCP-MW-10	669.74	667.11	2.5-15	04/29/13	13.21	10.58	656.53
				01/21/14	12.45	9.82	657.29
				04/21/15	4.33	1.70	665.41
VCP-MW-11	672.73	670.15	2.5-15	04/29/13	DRY	DRY	DRY
				01/21/14	17.21	14.63	655.52
VCP-MW-12	656.04	652.88	9.5-29.5	01/21/14	30.25	27.09	625.79
VCP-MW-13	657.38	645.90	4-24	01/21/14	24.92	13.44	632.46

TABLE 5D
GROUNDWATER MEASUREMENTS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Well ID	TOC Elevation (ft msl)	Ground Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft msl)
Stewart Creek Staff Gauges							
Staff Gauge ID	**Zero Elevation (feet amsl)**		**Measurement Date**		**Surface Water Measurement (feet above zero)**		**Surface Water Elevation (feet amsl)**
Staff Gauge No. 1	627.75		01/17/12		0.25		628.00
			02/13/12		0.32		628.07
(re-surveyed 5/16/13)	627.62		04/05/13		0.28		627.90
			04/29/13		-0.20		627.42
			01/21/14		NM		NM
Staff Gauge No. 2	613.75		01/17/12		0.09		613.84
			02/13/12		0.46		614.21
(re-surveyed 5/16/13)	613.53		04/05/13		0.24		613.77
			04/29/13		-0.15		613.38
			01/21/14		0.04		613.57

Notes:
1. bgs = below ground surface.
2. msl = above mean sea level.
3. btoc = below top of casing.
4. Stewart Creek staff gauges were re-surveyed on May 16, 2013 due to minor displacement caused by stream forces since they had last been gauged on February 13, 2012.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

5.0 Figures

EXPLANATION

— —	On-Site Property Boundary
▭	FRC Property Boundary
◐	Existing Monitoring Well Location
⊗	Well Plugged and Abandoned, Destroyed, or Not Found
⧓	Staff Gauge
(620.60)	Groundwater Elevation Measured 3/11/13 (Ft MSL)
—645—	Potentiometric Contour (Ft MSL) C.I.=5 Ft
– – – –	Inferred Potentiometric Contour

Notes:
1. Wells MW-16 and B1R are screened entirely in Eagle Ford Shale, and were not used to construct potentiometric contours.
2. Surface water Staff Gauges were not monitored during the water level measurement event.
3. NM - not measured.
4. At the time of this water measurement event, monitoring wells MW-30, MW-31, and VCP-MW-7 through VCP-MW-11 had not yet been installed.

WILLIAM F. VIENNE
GEOLOGY
No. 10492

8-7-15

N

Scale in Feet
0 75 150

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 5A.1

GROUNDWATER POTENTIOMETRIC SURFACE MAP MARCH 11, 2013

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: WFV	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

— —	On-Site Property Boundary
▬▬	FRC Property Boundary
◐	Existing Monitoring Well Location
⊗	Well Plugged and Abandoned, Destroyed, or Not Found
⋈	Staff Gauge
(620.60)	Groundwater/Surface Water Elevation Measured 4/5/13 (Ft MSL)
—645—	Potentiometric Contour (Ft MSL) C.I.=5 Ft
- - - -	Inferred Potentiometric Contour

Notes:

1. Wells MW-16 and B1R are screened entirely in Eagle Ford Shale, and were not used to construct potentiometric contours.
2. NM - not measured.
3. At the time of this water measurement event, monitoring wells MW-31 and VCP-MW-7 through VCP-MW-11 had not yet been installed.

WILLIAM F. VIENNE
No. 10492

8-7-15

N

Scale in Feet
0 75 150

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 5A.2

GROUNDWATER POTENTIOMETRIC SURFACE MAP APRIL 5, 2013

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: WFV	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

— · —	On-Site Property Boundary
▭▭▭	FRC Property Boundary
◐	Existing Monitoring Well Location
⊘	Well Plugged and Abandoned, Destroyed, or Not Found
⧓	Staff Gauge
(620.60)	Groundwater/Surface Water Elevation Measured 4/29/13 (Ft MSL)
—645—	Potentiometric Contour (Ft MSL) C.I.=5 Ft
– – – –	Inferred Potentiometric Contour

Notes:
1. Wells MW-16 and B1R are screened entirely in Eagle Ford Shale, and were not used to construct potentiometric contours.
2. At the time of this water measurement event, monitoring well MW-31 had not yet been installed.

WILLIAM F. VIENNE
GEOLOGY
No. 10492

8-7-15

N

Scale in Feet
0 75 150

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 5A.3

GROUNDWATER POTENTIOMETRIC SURFACE MAP APRIL 29, 2013

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: WFV	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

- - - Property Owned By Exide
▬ Undeveloped Buffer Property
● Monitoring Well Location

NOTE:
* - Well VCP-MW-11 only sampled for TPH and VOCs, wells VCP-MW-12 and VCP-MW-13 only sampled for arsenic and MTBE.

N

Scale in Feet
0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 5B

GROUNDWATER COC CONCENTRATION MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

6.0 SURFACE WATER ASSESSMENT AND CRITICAL PCL DEVELOPMENT

6.1 Type of Surface Water and Applicable Water Quality Criteria

Two surface water features are present at the Site, Stewart Creek which passes through Tract D, and the North Tributary to Stewart Creek which passes through Tracts G, H, J, K, and L. The North Tributary is considered intermittent and Stewart Creek is considered perennial. These features are both located upstream of the FOP. It is believed that much of the base flow in the creek is from surface runoff from residential and commercial irrigation systems in the neighborhoods of Frisco in the upstream portion of the watershed and following large rain events.

A potential intermittent spring, shown on Figure 1A.1, was identified in Tract D during the Phase I ESA (SWG, 2013). An exploratory excavation to a depth of seven feet below ground surface was advanced at the potential spring to evaluate the source. The upper foot of soil in the area was dark brown and high in organic matter, with the underlying one foot of soil being a loose clay. A moist/wet light brown and gray, fat clay was present from approximately 2 ft to 4 ft below ground surface. Below the fat clay, moist to dry brown silty clay interbedded with shaley clay extended to approximately 6.5 ft below ground surface, eventually transitioning to weathered shale. Observations made during these activities suggest that what was thought to be a possible spring may have been a seep, with the water occurring from infiltration of meteoric water encountering the fat clay approximately two feet below the ground surface (rejected recharge).

The Phase I ESA (SWG, 2013), identified what appears to be former stock tanks or small ponds located in the southern portion of the Site (see Figure 1A.1). These features were dry when inspected during the performance of the Site assessment activities in 2013 and 2014.

The critical PCL used for decision-making purposes for arsenic, cadmium and lead is the lower value between the human health contact recreation PCL and the acute ambient water quality criteria. Both criteria are important when evaluating potential impacts in perennial streams. The human health PCLs are based on a recreational exposure scenario whereby surface water is routinely contacted via incidental ingestion and dermal contact as described in TCEQ's TRRP-24 Guidance Document (TCEQ, 2007). The majority of Stewart Creek and the North Tributary that run through the Site are upstream of source areas associated with the FOP.

6.2 Surface Water Risk-Based Exposure Levels (RBELs) for Human Health and Aquatic Life Protection

Surface water RBELs for Human Health and Aquatic Life Protection are presented on Table 6A. TRRP-24 (TCEQ, 2007) details the process for determining the surface water risk-based exposure limit (^{SW}RBEL). For aquatic life and human health protection, the ^{SW}RBEL is equivalent to the surface water exposure pathway PCL (^{SW}SW). Per the guidance, the source medium and the exposure medium are the surface water, and the receptors are aquatic biota and humans that are directly or indirectly exposed to COCs in surface water. Many of the potential RBEL and PCL values are provided in the Texas Surface Water Quality Standards (TCEQ, 2012), while others for non-typical uses such as contact recreation have been developed by the TCEQ based on default assumptions. The RBEL used in this evaluation is based on exposure assumptions for a contact recreation scenario since this pathway is potentially complete. Appendix 9 provides additional discussion on the derivation of a contact recreation PCL for lead since there is not a value provided by TCEQ for this compound. Consistent with the perennial classification of Stewart Creek, chronic aquatic water criteria were used in the comparison to Site data to protect aquatic biota in accordance with TRRP-24 (TCEQ, 2007) guidance for perennial streams.

6.3 Nature and Extent of COCs in Surface Water

Lead and cadmium were not detected in Site surface water sampled from Stewart Creek. Surface water sampling results are presented on Table 6A and surface water sample locations are provided on Figure 6A. Note that sample SW-015, although included on the attached tables and figures, is actually located upstream of the Site. Because human and ecological receptors have the potential to contact surface water, the surface water data were compared to conservative screening levels (i.e., PCLs) that were developed to be protective of these potential exposure scenarios and pathways.

6.4 Critical PCL for Surface Water

The ecological PCLs derived for cadmium and lead were lower than the human health PCLs and the ecological PCLs are used as the critical PCLs for those metals. The human health contact recreation PCL is lower than the ecological PCLs for arsenic, therefore the human health PCL is considered the critical PCL for arsenic. The ecological PCLs are based on chronic exposure of aquatic life, and were calculated per TCEQ guidance (TCEQ, 2012b) using a hardness value for the nearest classified downstream segment. The ecological criteria for cadmium, chromium and lead were calculated based on a hardness of 106 mg/L for Segment 0823 (Lake Lewisville). The criteria for silver was adjusted using total suspended solids and chloride concentrations for Lake Lewisville used per TCEQ (2012b).

For analysis of surface water (Table 6A), the preferred method of analysis is EPA Method 6020A due to lower sample detection limits than EPA Method 6010B for the analytes of interest; however, data generated using EPA Method 6010B are also presented (i.e., data were not censored). None of the samples taken in 2014 and analyzed using the more sensitive EPA Method 6020A had results that exceeded the surface water criteria. Two samples taken in Stewart Creek in 2012 (SW-14, and SW-15) had detection limits that exceeded the chronic criteria for cadmium and lead, but all samples taken in 2014 had detection limits and concentrations below the chronic criteria for a perennial stream. Based on the screening comparison, surface water was not carried forward for further evaluation.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

6.0 Tables

TABLE 6A
SURFACE WATER DATA SUMMARY
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

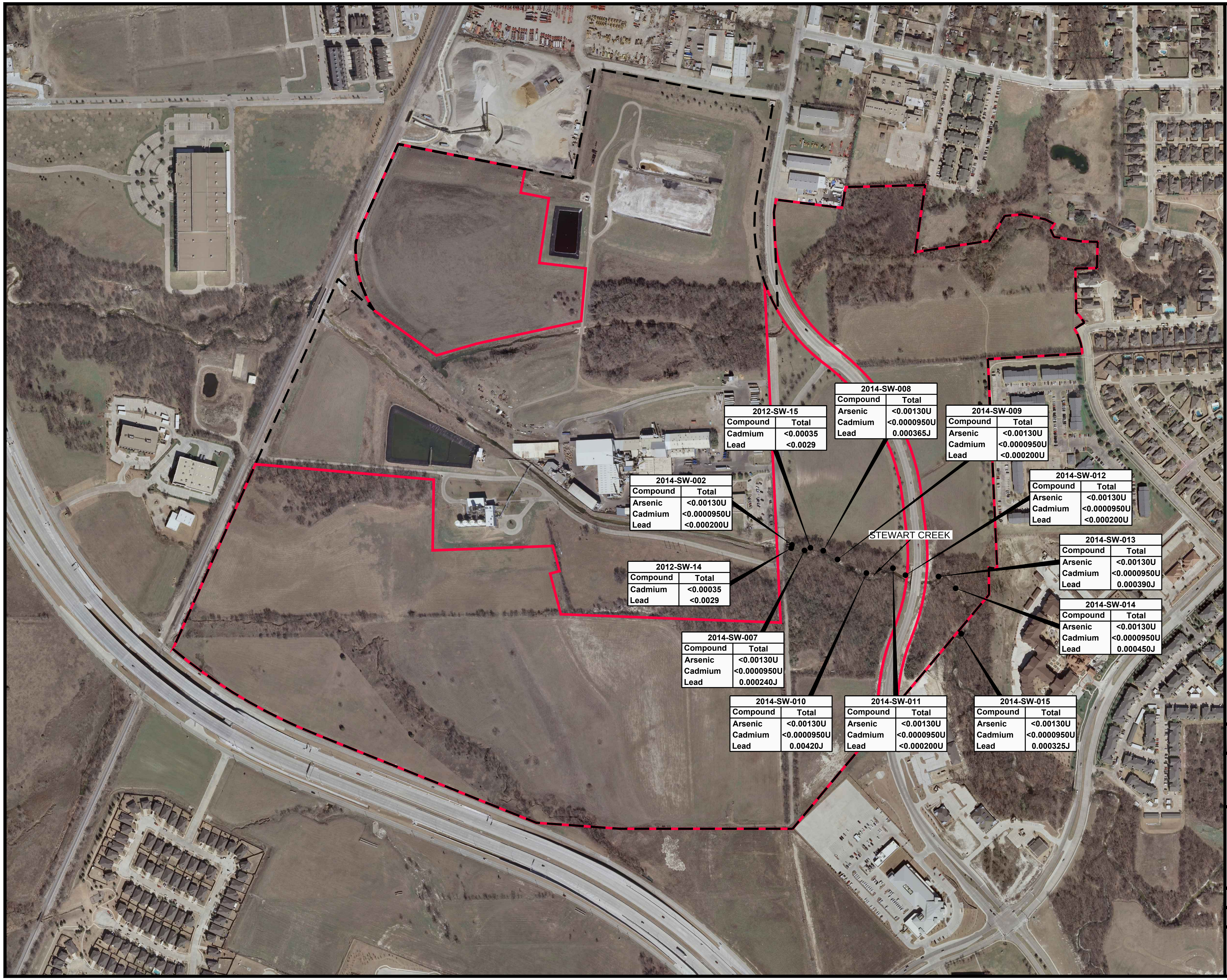
Sample ID	**Sample Date**	**Total Metals**			**Dissolved Metals**			**Analaytical Method**
		Arsenic (mg/L)	**Cadmium (mg/L)**	**Lead (mg/L)**	**Arsenic (mg/L)**	**Cadmium (mg/L)**	**Lead (mg/L)**	
Human Health Contact Recreation PCL		**NA**	**NA**	**NA**	**0.0285**	**0.149**	**0.015**	
Chronic Aquatic Life RBEL		**NA**	**NA**	**NA**	**0.15**	**0.000256**	**0.00268**	
Critical Surface Water PCL		**NA**	**NA**	**NA**	**0.0285**	**0.000256**	**0.00268**	
2012-SW-14	1/17/2012	Not Analyzed	<0.00035	<0.0029	Not Analyzed	<0.00035	<0.0029	SW6010B
2012-SW-15	1/17/2012	Not Analyzed	<0.00035	<0.0029	Not Analyzed	<0.00035	<0.0029	SW6010B
2014-SW-002	1/29/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-002	1/29/2014	< 0.00130 U	< 0.0000950 U	< 0.000200 U	< 0.00130 U	< 0.0000950 U	< 0.000200 U	SW6020A
2014-SW-007	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-007	1/31/2014	< 0.00130 U	< 0.0000950 U	**0.000240 J**	< 0.00130 U	< 0.0000950 U	< 0.000200 U	SW6020A
2014-SW-008	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-008	1/31/2014	< 0.00130 U	< 0.0000950 U	**0.000365 J**	< 0.00130 U	< 0.0000950 U	< 0.000200 U	SW6020A
2014-SW-009	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-009	1/31/2014	< 0.00130 U	< 0.0000950 U	< 0.000200 U	< 0.00130 U	< 0.0000950 U	< 0.000200 U	SW6020A
2014-SW-010	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-010	1/31/2014	< 0.00130 U	< 0.0000950 U	**0.000420 J**	< 0.00130 U	< 0.0000950 U	**0.000235 J**	SW6020A
2014-SW-011	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-011	1/31/2014	< 0.00130 U	< 0.0000950 U	< 0.000200 U	< 0.00130 U	< 0.0000950 U	< 0.000200 U	SW6020A
2014-SW-012	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-012	1/31/2014	< 0.00130 U	< 0.0000950 U	< 0.000200 U	< 0.00130 U	< 0.0000950 U	< 0.000200 U	SW6020A
2014-SW-013	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-013	1/31/2014	< 0.00130 U	< 0.0000950 U	**0.000390 J**	< 0.00130 U	< 0.0000950 U	< 0.000200 U	SW6020A
2014-SW-014	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-014	1/31/2014	< 0.00130 U	< 0.0000950 U	**0.000450 J**	< 0.00130 U	< 0.0000950 U	**0.000315 J**	SW6020A
2014-SW-015	1/31/2014	< 0.00328 U	< 0.000350 U	< 0.00290 U	< 0.00328 U	< 0.000350 U	< 0.00290 U	SW6010B
2014-SW-015*	1/31/2014	< 0.00130 U	< 0.0000950 U	**0.000325 J**	< 0.00130 U	< 0.0000950 U	< 0.000200 U	SW6020A

1. ^{SW}SW RBEL based on chronic ecological criteria.
2. Cadmium and lead RBELs calculated based on a hardness value of 106 mg/L for Lake Lewisville, Segment 0823.
3. Per TRRP-24, specific aquatic life criteria for arsenic, cadmium and lead apply to dissolved rather than total concentrations since the dissolved phase represents the bioavailable form.
4. mg/L = milligrams/Liter. < = Compound not detected at the indicated detection limit.
5. NA - Not Applicable
6. * = Sample 2014-SW-015 is located upstream of the Site boundary.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

6.0 FIGURES



2014-SW-008

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	0.000365J

2012-SW-15

Compound	Total
Cadmium	<0.00035
Lead	<0.0029

2014-SW-009

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	<0.000200U

2014-SW-002

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	<0.000200U

2014-SW-012

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	<0.000200U

2014-SW-013

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	0.000390J

2012-SW-14

Compound	Total
Cadmium	<0.00035
Lead	<0.0029

2014-SW-014

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	0.000450J

2014-SW-007

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	0.000240J

2014-SW-010

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	0.00420J

2014-SW-011

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	<0.000200U

2014-SW-015

Compound	Total
Arsenic	<0.00130U
Cadmium	<0.0000950U
Lead	0.000325J

EXPLANATION

– – –	Property Owned By Exide
━	Undeveloped Buffer Property
●	Surface Water Sample Location

Notes:
1. All Concentrations in mg/L.
2. No concentrations exceed the Aquatic Life RBELs:
   Lead - 0.0688 mg/L
   Cadmium - 0.00908 mg/L
3. When samples were analyzed by both 6010B and 6020A methods, results from the 6020A method are shown.

N

Scale in Feet
0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 6A

SURFACE WATER SAMPLE RESULTS

PROJECT: 1824	BY: AJD	REVISIONS
DATE: MAY, 2015	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

7.0 SEDIMENT ASSESSMENT AND CRITICAL PCL DEVELOPMENT

7.1 Type of Sediment and Applicable Criteria

As indicated in Section 6, Stewart Creek in the area of the FOP is classified by TCEQ as a perennial stream (TCEQ, 2011a). It is believed that much of the base flow in the creek is from surface runoff from residential and commercial irrigation systems in the neighborhoods of Frisco in the upstream portion of the watershed and from surface runoff from upstream property following large rain events. Sediment samples were collected from 12 locations in Stewart Creek on the east side of former Eagan Way/South 5th Street. One sample, 2014-SED-035, was collected upstream of the Site just outside of the Site boundary. Sediment collected for sampling was composed of light to dark brown material with greater than half of the material being comprised of coarse-grained material (i.e., sand and gravel).

Table 7A summarizes the analytical results for these samples. Because human and ecological receptors may potentially contact these sediments, the sediment data were compared to conservative screening levels (e.g., PCLs) that were developed to be protective of those potential human and ecological exposure pathways. The majority of Stewart Creek and the North Tributary that run through the Site are upstream of the FOP and potential source areas.

7.2 Sediment Risk-based Exposure Levels (RBELs)

Table 7A provides a summary of the RBELs and PCLs potentially applicable for sediment exposure pathways. TRRP-24 Guidance (TCEQ, 2007) details the process for determining the sediment risk-based exposure PCLs for human health exposure and provides default values for stakeholder use ($^{Tot}Sed_{Comb}$). Sediment PCLs protective of benthic organisms are provided in the TCEQ Ecological Risk Assessment Guidance (TCEQ, 2014), and are the midpoint of the benchmark value and the second effects level value for each compound. Stewart Creek and the North Tributary are freshwater bodies and, as such, PCLs for freshwater sediment were used in this evaluation.

7.3 Nature and Extent of COCs in Sediment

The critical PCL used for decision-making purposes for arsenic, cadmium and lead is the lower value of the human health and ecological receptor values. The ecological PCL was the lower of the two values and is utilized as the critical PCL. The ecological PCL was derived to be protective of benthic and aquatic organisms, and is the mid-point of the ecological benchmark and the second effects level per TCEQ guidance (TCEQ, 2014). The human health PCL is based on a recreational exposure scenario whereby sediment is routinely contacted via incidental ingestion and dermal contact as described in TCEQ's TRRP-24 Guidance Document (TCEQ, 2007).

Arsenic data are available from the 2014 surface water and sediment samples. Arsenic is not considered ecologically bioaccumulative. In this data set that represents Stewart Creek upstream of the FOP, all of the arsenic samples were below the freshwater sediment benthic PCL (21.4 mg/kg) except for sample 2014-SED-035 (42.7 mg/kg). This sample location is the most upstream and is located just upstream of the Undeveloped Buffer Property boundary. COC concentrations in sediment samples collected within the Undeveloped Buffer Property were below the applicable critical PCLs.

Cadmium was detected at low concentrations in all of the samples taken in 2014 and 2012 from the portion of Stewart Creek found within the Undeveloped Buffer Property. All values are below the freshwater sediment benchmark, and a 95% UCL using the 2014 data is 0.53 mg/kg. Cadmium is considered bioaccumulative in sediment and these data were evaluated in the SLERA for Stewart Creek dated May 24, 2014 for impacts to trophic receptors. The NOAEL-based HQs were less than one for the snowy egret and raccoon using 0.53 mg/kg as the exposure point concentration. No further ecological evaluation of cadmium in the Stewart Creek sediments located within the Undeveloped Buffer Property is necessary.

Lead was detected in concentrations below the freshwater sediment benchmark of 35.8 mg/Kg from the upstream portion of Stewart Creek in the Undeveloped Buffer Property. Similar to arsenic, lead is not considered bioaccumulative in sediment, but because lead has not been detected at concentrations greater than the benchmark of 35.8 mg/kg no further ecological evaluation for lead in sediment from this area is necessary.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

7.0 Tables

TABLE 7A
SEDIMENT DATA SUMMARY
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Sample ID	Sample Date		Metals (mg/Kg)		Total Organic Carbon (g/Kg)	Grain Size (%)			
		Arsenic	**Cadmium**	**Lead**		**Gravel**	**Sand**	**Silt**	**Clay**
TRRP Ecological Benchmarks (RG-263)		**9.79**	**0.99**	**35.8**	**NA**	**NA**	**NA**	**NA**	**NA**
TRRP Ecological Secondary Effects Level (SEL) for Sediment		**33**	**4.98**	**128**	**NA**	**NA**	**NA**	**NA**	**NA**
TRRP Ecological Protective Concentration Level for Sediment (mid-point of Benchmark and SEL)		**21.4**	**2.985**	**81.9**	**NA**	**NA**	**NA**	**NA**	**NA**
TRRP Tier 1 Human Health $^{Tot}Sed_{Comb}$ PCL		**110**	**1100**	**500**	**NA**	**NA**	**NA**	**NA**	**NA**
Critical Sediment PCL		**21.4**	**3.0**	**81.9**	**NA**	**NA**	**NA**	**NA**	**NA**
Stewart Creek									
2012-SED-14	1/12/2012	Not Analyzed	0.968 J-	5.7 J	10.1	47.2	36.6	7.7	8.5
2012-SED-15	1/12/2012	Not Analyzed	0.71 J-	10.6 J	10.7	11.6	53.6	20.0	14.8
2014-SED-026	1/31/2014	8.55	0.358	11.5	10.7	46.4	31.2	8.9	13.5
2014-SED-027	1/31/2014	14.3	0.281 J	16.4	15.7	1.1	16.6	28.1	54.2
2014-SED-028	1/31/2014	10.3	0.392 J	13.5	44.4	1.9	43.9	32.0	22.2
2014-SED-029	1/31/2014	13.4	0.260 J	12.0	10.4	37.7	11.2	12.8	38.3
2014-SED-030	1/31/2014	20.3	0.691 J	14.0	8.34	29.7	46.6	18.5	5.2
2014-SED-031	1/31/2014	12.5	0.588	11.3	8.06	49.9	38.0	7.3	4.8
2014-SED-032	1/31/2014	15.2	0.386	8.99	7.36	47.9	33.6	12.9	5.6
2014-SED-033	1/31/2014	10.5	0.331	6.56	9.59	34.1	40.7	21.4	3.8
2014-SED-034	1/31/2014	11.7	0.488	9.35	9.86	23.5	50.3	15.1	11.1
2014-SED-035	1/31/2014	42.7	0.612	19.8	15.2	21.7	46.5	19.3	12.5

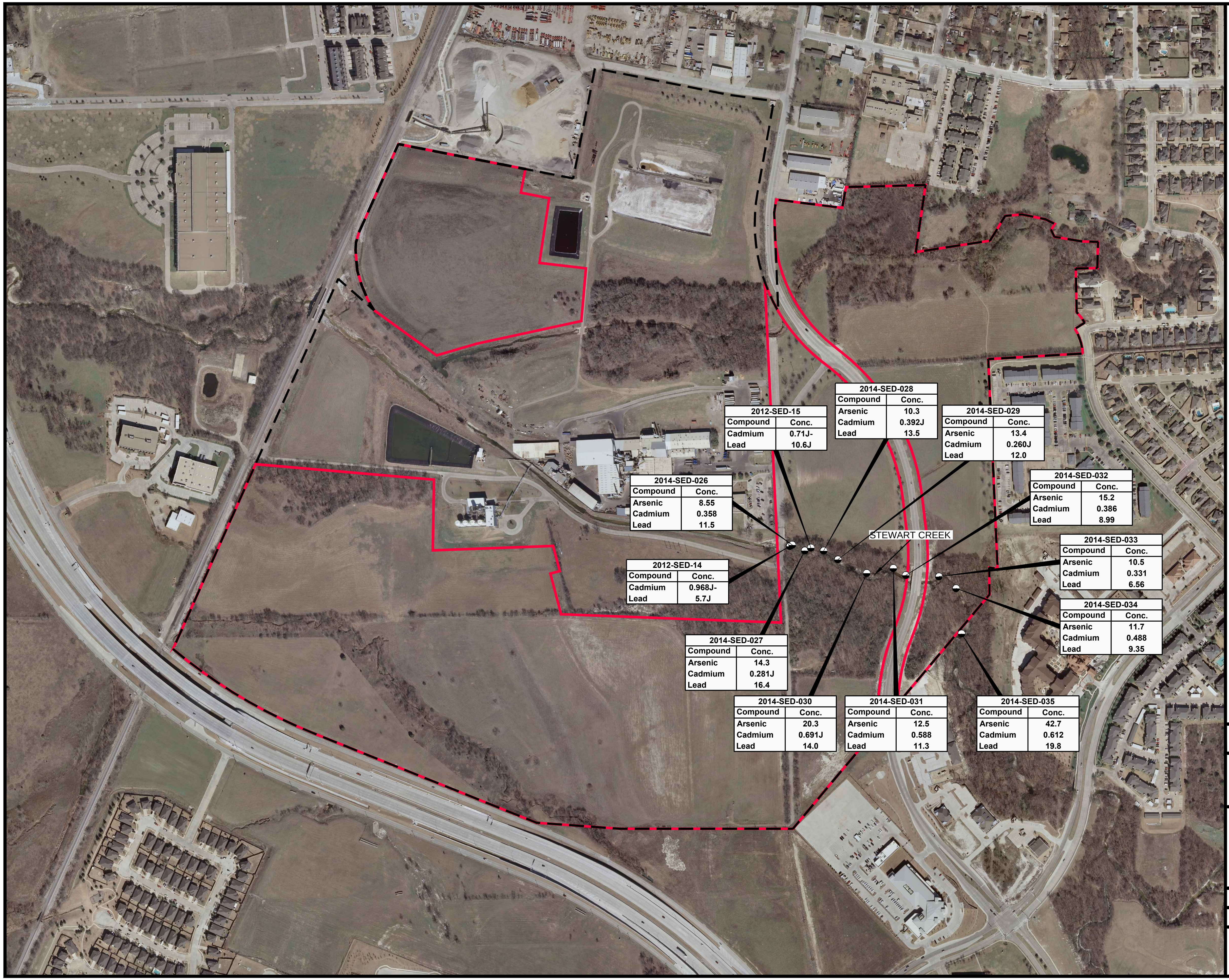
Notes:

1. No cadmium or lead concentrations exceeded their respective critical PCLs.
2. mg/Kg = milligrams/Kilogram. g/Kg = grams/Kilogram
3. NA - Not Applicable. J = Estimated Value. J- = estimated value with a potential low bias.
4. Highlighted value exceeds the Critical Sediment PCL.
5. * = Sample 2014-SED-035 is located upstream of the Site boundary.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

7.0 FIGURES



2012-SED-15

Compound	Conc.
Cadmium	0.71J-
Lead	10.6J

2014-SED-028

Compound	Conc.
Arsenic	10.3
Cadmium	0.392J
Lead	13.5

2014-SED-029

Compound	Conc.
Arsenic	13.4
Cadmium	0.260J
Lead	12.0

2014-SED-026

Compound	Conc.
Arsenic	8.55
Cadmium	0.358
Lead	11.5

2014-SED-032

Compound	Conc.
Arsenic	15.2
Cadmium	0.386
Lead	8.99

2014-SED-033

Compound	Conc.
Arsenic	10.5
Cadmium	0.331
Lead	6.56

2012-SED-14

Compound	Conc.
Cadmium	0.968J-
Lead	5.7J

2014-SED-034

Compound	Conc.
Arsenic	11.7
Cadmium	0.488
Lead	9.35

2014-SED-027

Compound	Conc.
Arsenic	14.3
Cadmium	0.281J
Lead	16.4

2014-SED-030

Compound	Conc.
Arsenic	20.3
Cadmium	0.691J
Lead	14.0

2014-SED-031

Compound	Conc.
Arsenic	12.5
Cadmium	0.588
Lead	11.3

2014-SED-035

Compound	Conc.
Arsenic	42.7
Cadmium	0.612
Lead	19.8

EXPLANATION

– – –	Property Owned By Exide
▬	Undeveloped Buffer Property
◒	Sediment Sample Location

Notes:
1. All Concentrations in mg/Kg.
2. No concentrations exceed the TRRP Critical Sediment PCL:
   Lead - 81.9 mg/Kg
   Cadmium - 3.0 mg/Kg
3. J = Estimated value.
4. J- = Estimated value with potential low bias.

N

Scale in Feet
0 250 500

Source of photo:
Imagery from NCTCOG, 2009 photography.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 7A

SEDIMENT SAMPLE RESULTS

PROJECT: 1824
BY: AJD
REVISIONS
DATE: MAY, 2015
CHECKED: TNN

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

9.0 ECOLOGICAL RISK ASSESSMENT

10.0 COC SCREENING

TRRP Rules 30 TAC §350.71(k)(1) and §350.71(k)(3) specify that a COC may be screened from critical PCL development if all detected COC concentrations and sample quantitation limits (SQLs) are less than applicable RALs or if all SQLs for analytes not detected are less than applicable RALs. Since the assessment of the Site and the selection of the remedy for the affected property will be evaluated using residential standards and a more conservative standard of 250 mg/kg for lead in soils, the Residential Assessment Level is considered the Critical PCL for all COCs. Since the RAL is used as the Critical PCL, no COCs were screened from PCL development (i.e., every COC was compared to the RAL/Critical PCL). However, the MQL or sample quantitation limit (SQL) of several COCs exceeded their respective PCLs and were consequently screened from evaluation using the COC screening guidelines.

10.1 Frequency of Detection

A COC can be screened from critical PCL development if more than 20 samples of the media were collected and the COC was detected in less than 5 percent of the samples (30 TAC 350.71(k)(2)(A)). No COCs at the Site were screened out based on frequency of detection.

10.2 Lab Contaminant or Blank Contaminant

A COC can be screened from critical PCL development if it is a common laboratory contaminant, as long as the concentration of the COC detected in each sample for that environmental medium does not exceed 10 times the maximum amount detected in any associated blank and the COC is not anticipated to be present based on knowledge of on-Site historical operations including consideration of companion and daughter products (30 TAC 350.71(k)(2)(B)). No COCs were screened from critical PCL development based on laboratory or blank contamination.

10.3 COC Not Sourced On-Site

A COC can be screened from critical PCL development if it can be demonstrated that the COC did not result from activity at the on-Site property based on appropriate evidence, including, but not limited to, the concentration and distribution of the COC in environmental media, source area information, consideration of companion and daughter products, and knowledge of on-Site historical operations (30 TAC 350.71(k)(2)(E)). This exclusion is applicable to COCs with sample quantitation limits exceeding the assessment levels (See Section 10.4). No COCs were screened from critical PCL development based on this criteria.

10.4 Appropriate Sample Quantitation Limits

Several non-detect compounds screened from critical PCL development had SQLs greater than the applicable RALs or laboratory MQLs, these compounds are indicated on Tables 4A, 5A and are summarized below. These COCs were analyzed by appropriate EPA methods that represent the best available technology. There is no indication that these compounds would be expected to be present at the Site based on knowledge of the Site history. The COCs are not considered daughter or companion products of any parent COCs that cannot be screened from critical PCL development.

COCs screened from PCL development based on appropriate sample quantitation limits and not being detected in any samples:

Soil	Groundwater
cis-1,3-Dichloropropene	TPH C6-C12
2,4-Dinitrotoluene	TPH >C12-C28
2,6-Dinitrotoluene	TPH >C28-C35
3-Nitroaniline	TPH C6-C35
4,6-Dinitro-2-methylphenol	1,1,2,2 Tetrachloroethane
Benzidine	cis1,3-Dichloropropene
Bis(2-chloroethyl)ether	Methylene Chloride
N-nitrosodimethylamine	Vinyl chloride
N-nitrosodi-n-propylamine	2,4-Dinitrotoluene
Pentachlorophenol	3,3'-Dichlorobenzidine
MCPA	4,6-Dinitro-2-methylphenol
	4-Bromophenyl phenyl ether
	4-Chlorophenyl phenyl ether
	Benzidine
	Benzo[a]anthracene
	Benzo[a]pyrene
	Benzo[b]fluoranthene
	Bis(2-chloroethoxy)methane
	Bis(2-chloroethyl)ether
	Dibenz(a,h)anthracene
	N-Nitrosodimethylamine
	N-Nitrosodi-n-propylamine

10.5 Screened COCs Expected to be Present Dropped from Future Sampling

Screened COCs are not expected to be present at the Site and will not be included in future sampling.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

10.0 Tables

TABLE 10A
COC SCREENING SUMMARY TABLE
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

1	2	3	4	5	6	7	8	9
Chemical of Concern	All detected concentrations and SQLs < residential assessment level in all sampled media §350.71(k)(1)	Frequency of detects <5% of the >20 samples in this medium §350.71(k)(2) (A)(i) through (iii)	Common lab contaminant §350.71(k)(2)(B)	Blank contaminant §350.71(k)(2)(C)	Max conc < background §350.71(k)(2)(D)	COC not sourced on-site §350.71(k)(2)(E)	COC anticipated but not detected in any sample in the medium and all detection limits are below the residential assessment levels §350.71(k)(3)	COC not anticipated and not detected in any sample in the medium §350.71(k)(4)
Metals by EPA Method 6010/7470								
Arsenic	No							
Barium	Yes							
Cadmium	Yes							
Chromium	Yes							
Lead	No							
Mercury	Yes							GW
Selenium	Yes							GW
Silver	Yes							GW
Copper	No							
Tin	Yes							
TPH by TCEQ Method TX1005								
TPH C6-C12	Yes							Soil, GW
TPH >C-12-C28	Yes							GW
TPH >C28-C35	Yes							GW
TPH C6-C35	Soil							GW
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	Yes							Soil, GW
1,1,2,2-Tetrachloroethane	Yes							Soil, GW
1,1,2-Trichloroethane	Yes							Soil, GW
1,1-Dichloroethane	Yes							Soil, GW
1,1-Dichloroethene	Yes							Soil, GW
1,2-Dichloroethane	Yes							Soil, GW
1,2-Dichloroethene, Total	Yes							Soil, GW
1,2-Dichloropropane	Yes							Soil, GW
2-Butanone (MEK)	Yes							Soil, GW
2-Hexanone	Yes							GW
4-Methyl-2-pentanone (MIBK)	Yes							Soil, GW
Acetone	Yes							Soil, GW
Benzene	Yes							Soil, GW
Bromodichloromethane	Yes							Soil, GW
Bromoform	Yes							Soil, GW
Bromomethane	Yes							Soil, GW
Carbon disulfide	Yes							Soil, GW
Carbon tetrachloride	Yes							Soil, GW
Chlorobenzene	Yes							Soil, GW
Chlorobromomethane	Yes							Soil, GW
Chloroethane	Yes							Soil, GW
Chloroform	Yes							Soil, GW
Chloromethane	Yes							Soil, GW
cis-1,2-Dichloroethene	Yes							Soil, GW
cis-1,3-Dichloropropene	Yes							Soil, GW
Dibromochloromethane	Yes							Soil, GW
Ethylbenzene	Yes							Soil, GW
Methyl tert-butyl ether	Yes							Soil
Methylene Chloride	Yes							GW
m-Xylene & p-Xylene	Yes							Soil, GW
o-Xylene	Yes							Soil, GW
Styrene	Yes							Soil, GW
Tetrachloroethene	Yes							Soil, GW
Toluene	Yes							Soil, GW
trans-1,2-Dichloroethene	Yes							Soil, GW
trans-1,3-Dichloropropene	Yes							Soil, GW
Trichloroethene	Yes							Soil, GW
Vinyl acetate	Yes							Soil, GW
Vinyl chloride	Yes							Soil, GW
Xylenes, Total	Yes							Soil, GW

TABLE 10A
COC SCREENING SUMMARY TABLE
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

1	2	3	4	5	6	7	8	9
Chemical of Concern	All detected concentrations and SQLs < residential assessment level in all sampled media §350.71(k)(1)	Frequency of detects <5% of the >20 samples in this medium §350.71(k)(2) (A)(i) through (iii)	Common lab contaminant §350.71(k)(2)(B)	Blank contaminant §350.71(k)(2)(C)	Max conc < background §350.71(k)(2)(D)	COC not sourced on-site §350.71(k)(2)(E)	COC anticipated but not detected in any sample in the medium and all detection limits are below the residential assessment levels §350.71(k)(3)	COC not anticipated and not detected in any sample in the medium §350.71(k)(4)
Semivolatile Organic Compounds (SVOCs) By EPA Method 8270								
1,2,4-Trichlorobenzene	Yes							Soil, GW
1,2-Dichlorobenzene	Yes							Soil, GW
1,3-Dichlorobenzene	Yes							Soil, GW
1,4-Dichlorobenzene	Yes							Soil, GW
2,4,5-Trichlorophenol	Yes							Soil, GW
2,4,6-Trichlorophenol	Yes							Soil, GW
2,4-Dichlorophenol	Yes							Soil, GW
2,4-Dimethylphenol	Yes							Soil, GW
2,4-Dinitrophenol	Yes							Soil, GW
2,4-Dinitrotoluene	GW							Soil, GW
2,6-Dinitrotoluene	GW							Soil, GW
2-Chloronaphthalene	Yes							Soil, GW
2-Chlorophenol	Yes							Soil, GW
2-Methylnaphthalene	Yes							Soil, GW
2-Methylphenol	Yes							Soil, GW
2-Nitroaniline	Yes							Soil, GW
2-Nitrophenol	Yes							Soil, GW
3 & 4 Methylphenol	Yes							Soil, GW
3,3'-Dichlorobenzidine	Yes							Soil, GW
3-Nitroaniline	GW							Soil, GW
4,6-Dinitro-2-methylphenol	GW							Soil, GW
4-Bromophenyl phenyl ether	Soil							Soil, GW
4-Chloro-3-methylphenol	Yes							Soil, GW
4-Chloroaniline	Yes							Soil, GW
4-Chlorophenyl phenyl ether	Soil							Soil, GW
4-Nitroaniline	Yes							Soil, GW
4-Nitrophenol	Yes							Soil, GW
Acenaphthene	Yes							Soil, GW
Acenaphthylene	Yes							Soil, GW
Anthracene	Yes							GW
Benzidine	No							Soil, GW
Benzo[a]anthracene	Yes							GW
Benzo[a]pyrene	Yes							GW
Benzo[b]fluoranthene	Yes							GW
Benzo[g,h,i]perylene	Yes							GW
Benzo[k]fluoranthene	Yes							GW
Benzyl alcohol	Yes							Soil, GW
bis (2-Chloroisopropyl) ether	Yes							Soil, GW
Bis(2-chloroethoxy)methane	Yes							Soil, GW
Bis(2-chloroethyl)ether	GW							Soil, GW
Bis(2-ethylhexyl) phthalate	Yes							GW
Butyl benzyl phthalate	Yes							GW
Carbazole	Yes							Soil, GW
Chrysene	Yes							GW
Dibenz(a,h)anthracene	Soil							Soil, GW
Dibenzofuran	Yes							Soil, GW
Diethyl phthalate	Yes							GW
Dimethyl phthalate	Yes							Soil, GW
Di-n-butyl phthalate	Yes							GW
Di-n-octyl phthalate	Yes							Soil
Fluoranthene	Yes							GW
Fluorene	Yes							Soil, GW
Hexachlorobenzene	Yes							Soil, GW
Hexachlorobutadiene	Yes							Soil, GW
Hexachlorocyclopentadiene	Yes							Soil, GW

TABLE 10A
COC SCREENING SUMMARY TABLE
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

1	2	3	4	5	6	7	8	9
Chemical of Concern	All detected concentrations and SQLs < residential assessment level in all sampled media §350.71(k)(1)	Frequency of detects <5% of the >20 samples in this medium §350.71(k)(2) (A)(i) through (iii)	Common lab contaminant §350.71(k)(2)(B)	Blank contaminant §350.71(k)(2)(C)	Max conc < background §350.71(k)(2)(D)	COC not sourced on-site §350.71(k)(2)(E)	COC anticipated but not detected in any sample in the medium and all detection limits are below the residential assessment levels §350.71(k)(3)	COC not anticipated and not detected in any sample in the medium §350.71(k)(4)
Hexachloroethane	Yes							Soil, GW
Indeno[1,2,3-cd]pyrene	Yes							GW
Isophorone	Yes							Soil, GW
Naphthalene	Yes							Soil, GW
Nitrobenzene	Yes							Soil, GW
N-Nitrosodimethylamine	No							Soil, GW
N-Nitrosodi-n-propylamine	No							Soil, GW
N-Nitrosodiphenylamine	Yes							Soil, GW
Pentachlorophenol	GW							Soil, GW
Phenanthrene	Yes							Soil, GW
Phenol	Yes							Soil, GW
Pyrene	Yes							GW
Pesticides by EPA Method 8081A								
4,4'-DDD	Yes							Soil
4,4'-DDE	Yes							Soil
4,4'-DDT	Yes							Soil
Aldrin	Yes							Soil
alpha-BHC	Yes							Soil
alpha-Chlordane	Yes							Soil
beta-BHC	Yes							Soil
Chlordane (technical)	Yes							Soil
delta-BHC	Yes							Soil
Dieldrin	Yes							Soil
Endosulfan I	Yes							Soil
Endosulfan II	Yes							Soil
Endosulfan sulfate	Yes							Soil
Endrin	Yes							Soil
Endrin aldehyde	Yes							Soil
Endrin ketone	Yes							Soil
gamma-BHC (Lindane)	Yes							Soil
gamma-Chlordane	Yes							Soil
Heptachlor	Yes							Soil
Heptachlor epoxide	Yes							Soil
Methoxychlor	Yes							Soil
Toxaphene	Yes							Soil
Herbicides by EPA Method 8151A								
2,4,5-T	Yes							Soil
2,4-D	Yes							Soil
2,4-DB	Yes							Soil
Dalapon	Yes							Soil
Dicamba	Yes							Soil
Dichlorprop	Yes							Soil
Dinoseb	Yes							Soil
MCPA	No							Soil
Mecoprop	Yes							Soil
Silvex (2,4,5-TP)	Yes							Soil

11.0 SOIL CRITICAL PCL DEVELOPMENT

As previously indicated, the Site assessment and the remedy for the affected property will be based on residential standards. Under this scenario, the RAL is considered the critical PCL, and further development of critical PCLs is not required.

11.1 Tier 2 or 3 PCL Development and Non-Default Parameters

11.1.1 Tier 2 and 3 Development

In accordance with 30 TAC §350.75(c)(1), Tier 2 $^{GW}Soil_{Ing}$ PCLs were developed for several compounds using site-specific data and equations provided in TRRP Figure 30 TAC §350.75(b)(1). Documentation for the development of the Tier 2 critical PCLs is provided in Appendix 9. The majority of these compounds were not detected in media at the Site, however, a Tier 2 PCL was developed to demonstrate that the SQL was below the PCL in most cases.

A Tier 3 $^{GW}Soil_{Ing}$ value for arsenic of 29.9 mg/kg was established based on data obtained using the Synthetic Precipitation Leaching Procedure (SPLP) which evaluates the potential for a COC to leach from the soil to underlying groundwater (see Section 4.2.5). Table 4D.11 presents the results of SPLP tests performed on soil samples containing elevated arsenic concentrations observed at various areas around the Site. All SPLP sample results were below the $^{GW}GW_{Ing}$ PCL of 0.01 mg/l. The critical PCL for arsenic is the lower of the PCLs for the $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ pathways. The PCL for the $^{Tot}Soil_{Comb}$ pathway is 24 mg/kg (TRRP Tier 1 PCL), therefore 24 mg/kg is the critical PCL for arsenic.

11.1.2 Non-Default Affected Property Parameters

Site-specific pH soil sample results were used to determine soil-water partition coefficient (Kd) values for calculating Tier 2 PCLs in accordance with 30 TAC §350.73(f)(1). Ten soil samples were evaluated for pH; the results are presented in Table 4E. The average pH value for soils was 7.5, with corresponding Kd values being 1,830 L/kg for lead and 30 L/kg for arsenic.

11.2 Soil PCL Adjustments

No residual saturation, cumulative risk, hazard index or other adjustments were made to PCLs for COCs detected at the Site.

11.3 Soil Critical PCLs

Since a residential assessment level and cleanup standard is being applied to the Site, the residential assessment level is the same as the critical PCL. The default parameters used to develop the Tier 1 or 2 critical PCLs assumed a 30-acre source, residential land use, and the groundwater ingestion pathway $^{GW}GW_{Ing}$. The lowest PCL was selected as the critical PCL and was used to evaluate whether a remedy would be required.

Figures 4A.1 through 4A.12 show COC concentrations in soil and reflect assessment level and critical PCL exceedances. Table 11A presents the COCs that exceed the RAL and presents a comparison of the maximum COC concentration or maximum representative COC concentration to the RAL to identify whether a response action is required.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

11.0 Tables

TABLE 11A
SURFACE SOIL CRITICAL PCLS
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

On-Site Surface Soil Critical PCLs

Land use for purpose of critical PCL development: Residential

Date of the Tier 1 PCL tables used in the determination of PCLs: June 29, 2012.

		$^{Tot}Soil_{Comb}$ PCL			$^{GW}SOIL_{Ing}$ PCL			MQL	Background	$^{SW}Soil$	$^{Sed}Soil$	Concentration (mg/kg)		
Chemical of Concern	**CAS No.**	**(mg/kg)**	**Tier**	**Source area size (acres)**	**(mg/kg)**	**Tier**	**Source area size (acres)**	**(mg/kg)**	**(mg/kg)**	**(mg/kg)**	**(mg/kg)**	**Max**	**Rep**	**Remedy or NFA**
Arsenic	7440-38-2	2.4E+01	1	30	3.0E+01	3	30	1	15.9*	NA	NA		24	NFA
Copper	7440-50-8	5.5E+02	1	30	1.8E+03	2	30	0.5	15	NA	NA	2070	NA	Remedy
Lead	7439-92-1	2.5E+02	1	30	9.6E+02	2	30	0.5	31.5*	NA	NA	9540	NA	Remedy

Notes:

1. Critical PCL = 🟧
2. The $^{Tot}Soil_{Comb}$ PCL for lead is 500 mg/kg, however, an assessment level of 250 mg/kg has been agreed to by the City of Frisco and Exide.
3. NFA = No further action. NA = Not applicable.
4. Surface soil is defined under TRRP as 0-15 ft bgs for residential land use.
5. * = Site-specific background concentration.

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

11.0 Figures

Figure 11A	Surface Soil PCLE Zone Maps *[See 4A Figures]*
Figure 11B	Subsurface Soil PCLE Zone Maps *[Not Applicable]*
Figure 11C	Cross Sections of the PCLE Zone *[See Figures 4C.1 – 4C.5]*

12.0 GROUNDWATER CRITICAL PCL DEVELOPMENT

12.1 Tier 2 or 3 PCL Development and Non-Default Parameters

Tier 2 or Tier 3 PCLs were not developed for groundwater COCs; therefore, this section is not applicable.

12.2 Groundwater PCL Adjustments

Groundwater PCL adjustments were not made for groundwater COCs; therefore, this section is not applicable.

12.3 Groundwater Critical PCLs

As discussed in Section 10, TRRP Rules 30 TAC §350.71(k)(1) and §350.71(k)(3) specify that a COC may be screened from critical PCL development if all detected COC concentrations and SQLs are less than applicable RALs or if all SQLs for analytes not detected are less than applicable RALs. The SQLs for several COCs were greater than the assessment level, however, these COCs were not detected in any samples and were screened from critical PCL development along with all other non-detect COCs.

As discussed in Section 5, concentrations of all COCs in all groundwater samples collected as part of this affected property assessment were less than applicable RALs with the exception of arsenic (VCP-MW-9) and MTBE (VCP-MW-10). Several wells, including VCP-MW-9 and VCP-MW-10, were sampled in January 2014 for arsenic and MTBE. Arsenic and MTBE were not detected above the assessment level or at any of the wells sampled during the January 2014 event. Wells VCP-MW-9 and VCP-MW-10 were sampled again in April 2015 for arsenic and MTBE, respectively, and concentrations were found to be below the RALs. Since the property assessment and subsequent response actions will be based on residential standards, and no adjustments to the default PCLs are proposed, the critical PCL is equivalent to the RAL all compounds.

APPENDICES

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

Appendices

APPENDIX 2
BORING LOGS AND MONITORING WELL COMPLETION DETAILS

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

Boring Logs and Monitoring Well Completion Details

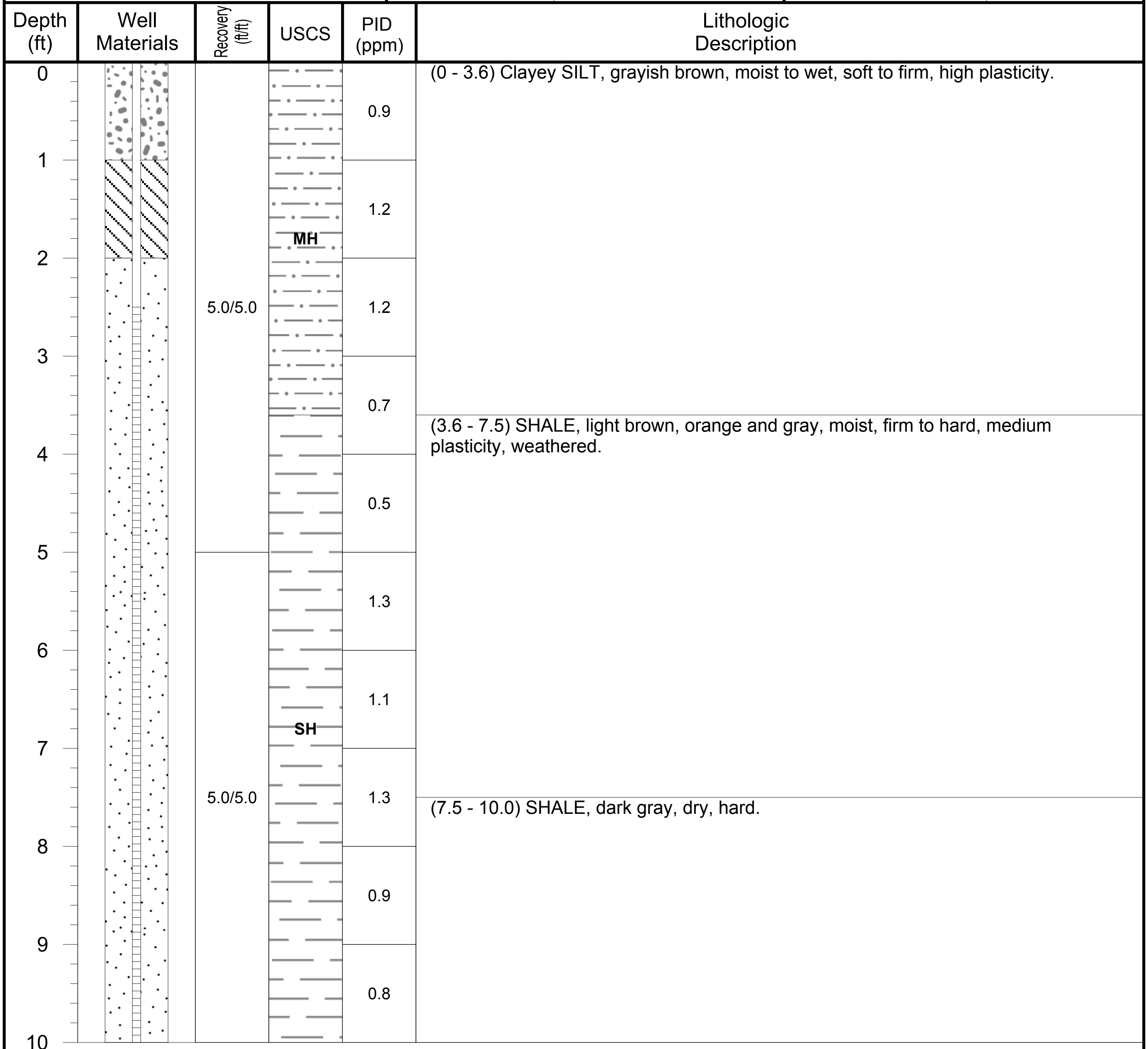
VCP-MW-1
VCP-MW-2
VCP-MW-3
VCP-MW-4
VCP-MW-5
VCP-MW-6
VCP-MW-7
VCP-MW-8
VCP-MW-9
VCP-MW-10
VCP-MW-11
VCP-MW-12
VCP-MW-13
MW-19
MW-20
MW-28

Exide Technologies	**Log of Boring:VCP-MW-1**

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	2/28/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	10
Driller's License:	56033	Northing:	7101502.004
Logged By:	Tim Jennings, P.G.	Easting:	2479866.95
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	652.99
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	655.88



Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0				0.9	(0 - 3.6) Clayey SILT, grayish brown, moist to wet, soft to firm, high plasticity.
1			MH	1.2	
2		5.0/5.0		1.2	
3				0.7	(3.6 - 7.5) SHALE, light brown, orange and gray, moist, firm to hard, medium plasticity, weathered.
4				0.5	
5				1.3	
6			SH	1.1	
7		5.0/5.0		1.3	(7.5 - 10.0) SHALE, dark gray, dry, hard.
8				0.9	
9				0.8	
10					

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Notes:
This log should not be used separately from the report to which it is attached.

Annular Materials	Well Materials
(0.0 - 1.0) Concrete	(+2.89 - 2.5) Casing, 2" Sch 40 FJT PVC
(1.0 - 2.0) Bentonite Hole Plug	(2.5 - 10.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot
(2.0 - 10.0) 20/40 Silica Sand	

Exide Technologies

Log of Boring:VCP-MW-2

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	3/1/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	20
Driller's License:	56033	Northing:	7101872.478
Logged By:	Tim Jennings, P.G.	Easting:	2479265.912
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	627.74
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	631.16

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0		5.0/5.0	MH	6.2	(0 - 4.0) Clayey SILT, dark grayish brown, moist, soft to firm, high plasticity, abundant roots to 4'.
1				7.0	
2				9.3	
3				8.7	
4			CL	7.2	(4.0 - 9.0) Silty CLAY, dark grayish brown, moist, soft, medium plasticity, rust colored mottling locally, friable, abundant roots, iron oxide mottling below 6'.
5		5.0/5.0		8.8	
6				7.2	
7				8.1	
8				8.1	
9			CL/CH	9.3	(9.0 - 11.1) Silty CLAY, dark grayish brown, moist, firm, medium to high plasticity, light gray laminae.
10		5.0/5.0		8.5	
11			CH	7.0	(11.1 - 13.6) Gravelly CLAY, light brown and orange, moist to wet, firm, high plasticity clay, ~20-30% fine to medium gravel in clay matrix, increasing moisture with depth.
12				6.6	
13				3.2	(13.6 - 15.6) Silty CLAY, light brown to orange, wet, soft, high plasticity, <5% fine to coarse sand.
14				7.2	
15		3.5/5.0	SH	8.1	(15.6 - 18.2) SHALE, gray to light brown, moist, hard, abundant iron oxide along bedding planes, weathered.
16				5.4	
17				5.2	
18				12.0	(18.2 - 20.0) SHALE, dark gray, dry, hard.
19				25.1	
20					

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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 20.0) 20/40 Silica Sand

Well Materials
(+3.42 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

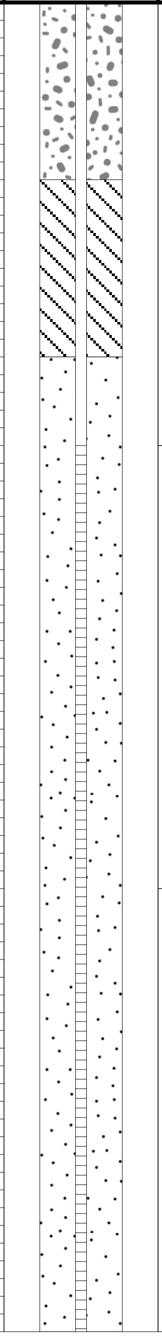
Exide Technologies

Log of Boring:VCP-MW-3

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	2/28/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	15
Driller's License:	56033	Northing:	7102743.49
Logged By:	Tim Jennings, P.G.	Easting:	2478984.765
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	631.34
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	634.06



Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0		4.3/5.0	CH/MH	0..8	(0 - 3.4) Silty CLAY/Clayey SILT, dark grayish brown, moist, soft to firm, high plasticity, abundant roots at 0-0.5'.
1				0.1	
2				0.5	
3			CL	0.3	(3.4 - 7.3) Silty gravelly CLAY; light brown, moist, firm to hard, medium plasticity clay, ~10-30% fine calcareous gravel.
4				1.1	
5		2.4/5.0		0.6	
6				0.6	
7				0.1	(7.3 - 7.6) Silty CLAY, light brown, moist firm to hard, medium plasticity, orange and green laminated.
8				-	(7.6 - 10.0) No recovery, CLAY as above, inferred based on field geologist's observations
9				-	
10		5.0/5.0	CH	0.4	(10.0 - 13.0) Silty CLAY, light brown, wet, soft, high plasticity.
11				0.5	
12				0.4	
13			SH	1.1	(13.0 - 15.0) SHALE, gray, moist, firm to hard, medium plasticity, abundant iron oxide partings, weathered.
14				0.4	
15					

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Notes:

Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 15.0) 20/40 Silica Sand

Well Materials
(+2.72 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 15.0) Screen, 2" Sch 40 FJT PVC,
0.010 slot

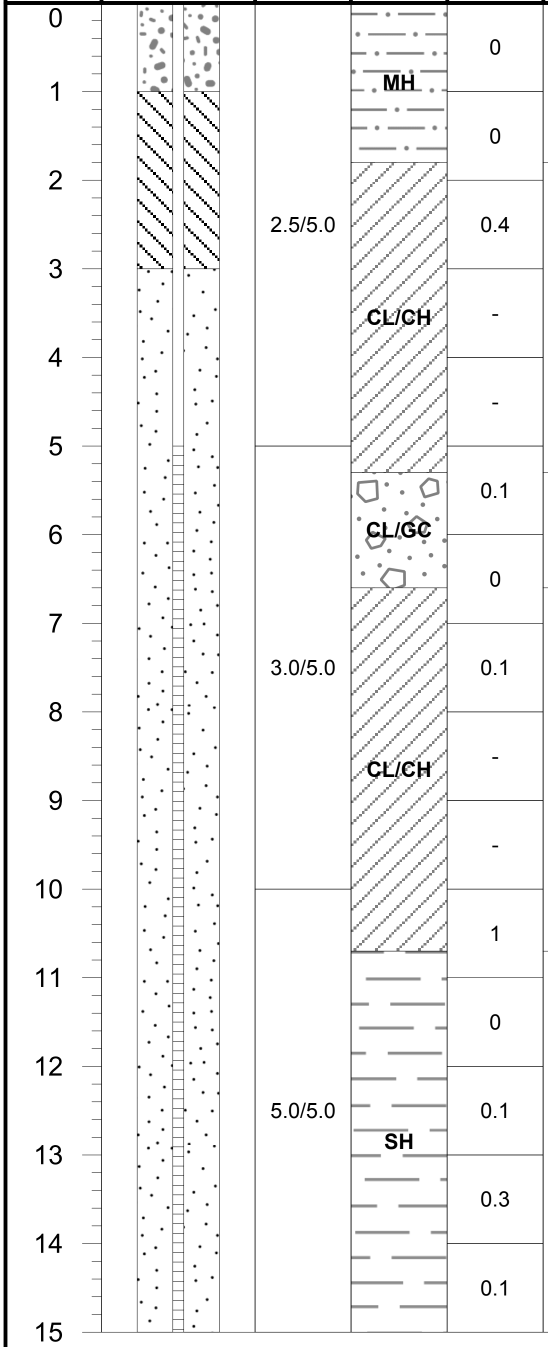
Exide Technologies

Log of Boring:VCP-MW-4

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	2/28/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	15
Driller's License:	56033	Northing:	7102521.052
Logged By:	Tim Jennings, P.G.	Easting:	2479285.077
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	632.18
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	635.43



Depth (ft)	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0	2.5/5.0	MH	0	(0 - 1.8) Clayey SILT, dark grayish brown, moist, soft, high plasticity, trace calcareous nodules.
1			0	
2		CL/CH	0.4	(1.8 - 5.3) Silty CLAY, brown to light brown, moist, soft to firm, medium to high plasticity, trace to 5% calcareous nodules.
3			-	
4			-	
5	3.0/5.0	CL/GC	0.1	(5.3 - 6.6) Gravelly CLAY/Clayey GRAVEL, sub-rounded gravel, moist, soft to firm, medium plasticity clay, ~40-60% fine to medium gravel in clay matrix.
6			0	
7		CL/CH	0.1	(6.6 - 10.7) Silty CLAY, orange, brown and gray mottled, moist, firm, medium to high plasticity.
8			-	
9			-	
10	5.0/5.0		1	
11		SH	0	(10.7 - 15.0) SHALE, orangish brown to gray, moist to dry, firm to hard, medium plasticity, abundant iron oxide along bedding planes.
12			0.1	
13			0.3	
14			0.1	
15				

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Notes:
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Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 3.0) Bentonite Hole Plug
(3.0 - 15.0) 20/40 Silica Sand

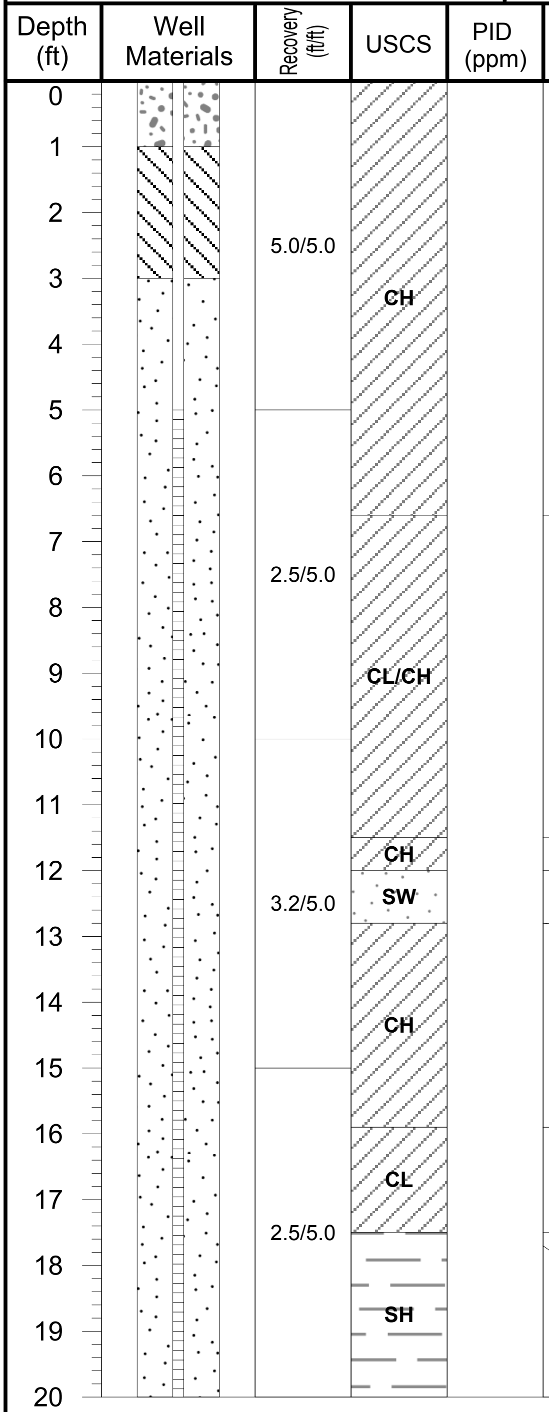
Well Materials
(+3.25 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies	**Log of Boring:VCP-MW-5**

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	20
Driller's License:	56033	Northing:	7102925.899
Logged By:	Tim Jennings, P.G.	Easting:	2480000.561
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	640.8
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	643.97



Lithologic Description

(0 - 6.6) Silty CLAY, dark grayish brown, moist to dry, firm to hard, high plasticity, few (<5%) small calcareous nodules below 3.3', dry below 3.5'.

(6.6 - 11.5) Sandy, silty CLAY; light brown, light gray and orange laminated, moist, very hard, medium to high plasticity, ~10-20% fine to coarse sand in clay matrix.

(11.5 - 12.0) Sandy, gravelly CLAY; brown orange, moist, firm, high plasticity clay.

(12.0 - 12.8) Clayey, gravelly SAND; wet, soft, ~20-30% clay, ~10-20% fine to medium gravel.

(12.8 - 15.9) Sandy, gravelly CLAY; brown orange, moist, firm, high plasticity clay, ~10-20% fine sand and fine gravel, possibly calcareous nodules.

(15.9 - 17.5) CLAY, orange and gray mottled, moist, firm, medium plasticity, <5% fine to medium gravel and calcareous nodules, possible reworked shale.

(17.5 - 17.7) SHALE, gray, moist, firm, high plasticity.

(17.7 - 20.0) SHALE, gray, very hard, poor recovery.

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Notes:
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Annular Materials	Well Materials
(0.0 - 1.0) Concrete	(+3.17 - 5.0) Casing, 2" Sch 40 FJT PVC
(1.0 - 3.0) Bentonite Hole Plug	(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot
(3.0 - 20.0) 20/40 Silica Sand	

Exide Technologies

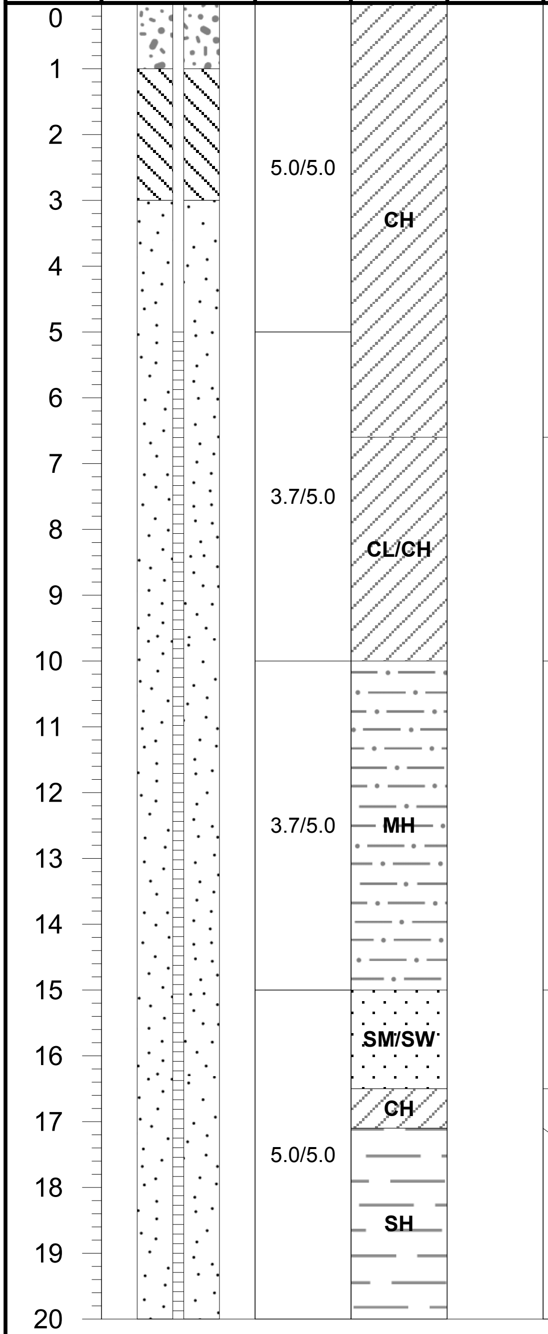
Log of Boring:VCP-MW-6

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	20
Driller's License:	56033	Northing:	7103251.552
Logged By:	Tim Jennings, P.G.	Easting:	2479837.08
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	641.1
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	644.71

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description



(0 - 6.6) Silty CLAY, dark grayish brown, moist to dry, soft to hard, high plasticity, <5% calcareous nodules, hard and dry below 3.7', brown, ~5-10% calcareous nodules at 5-6.6', very stiff 6-6.6'.

(6.6 - 10.0) Silty, gravelly CLAY; brown orange, moist, hard to very hard, medium to high plasticity clay, well laminated, ~10-20% fine to medium gravel and calcareous nodules.

(10.0 - 15.0) Clayey SILT, moist to wet, soft, high plasticity, ~20-30% fine to medium gravel and fine to coarse sand from 12.3'.

(15.0 - 16.5) Silty, gravelly SAND; brown, wet, soft, ~10% fines, ~20-30% fine to medium sub-rounded gravel in fine to coarse sand.

(16.5 - 17.1) Silty CLAY, brown, wet, soft, high plasticity, trace fine gravel in clay matrix.

(17.1 - 20.0) SHALE, gray and brown, moist, firm to hard, iron oxide staining along bedding planes, weathered.

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Notes:

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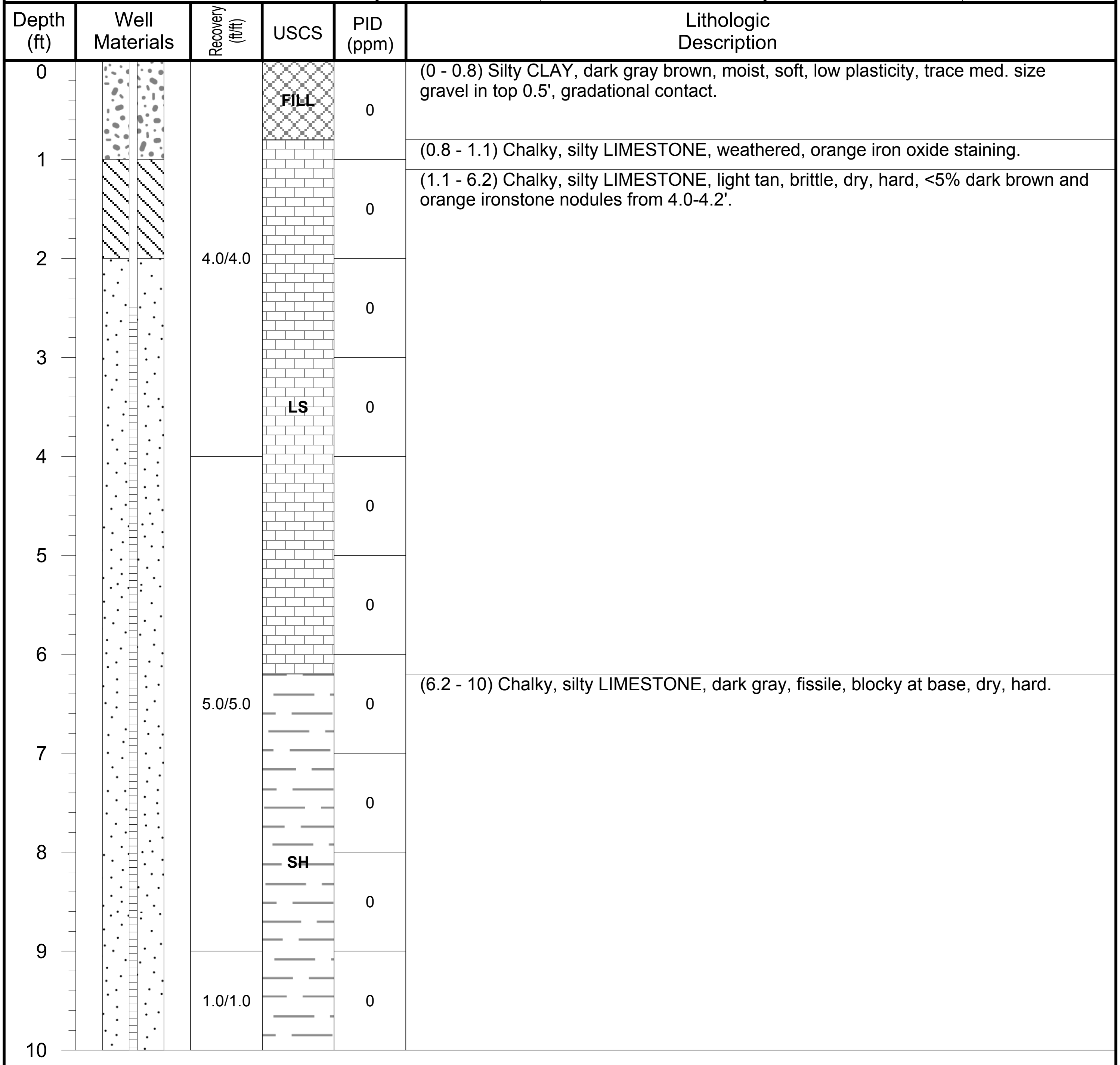
Annular Materials	Well Materials
(0.0 - 1.0) Concrete	(+3.61 - 5.0) Casing, 2" Sch 40 FJT PVC
(1.0 - 3.0) Bentonite Hole Plug	(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot
(3.0 - 20.0) 20/40 Silica Sand	

Exide Technologies	**Log of Boring:VCP-MW-7**

Undeveloped Buffer Property Frisco, TX	Completion Date:	4/18/2013	Drilling Method:	HSA
	Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
	Driller:	Joe Garcia	Total Depth (ft):	10
PBW Project No. 1824	Driller's License:	58780	Northing:	7100967.046
	Logged By:	Carolyn Sexton	Easting:	2481078.613
	Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	683.116976
	Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	685.176513



Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0		4.0/4.0	FILL	0	(0 - 0.8) Silty CLAY, dark gray brown, moist, soft, low plasticity, trace med. size gravel in top 0.5', gradational contact. (0.8 - 1.1) Chalky, silty LIMESTONE, weathered, orange iron oxide staining.
1				0	(1.1 - 6.2) Chalky, silty LIMESTONE, light tan, brittle, dry, hard, <5% dark brown and orange ironstone nodules from 4.0-4.2'.
2				0	
3			LS	0	
4		5.0/5.0		0	
5				0	
6				0	(6.2 - 10) Chalky, silty LIMESTONE, dark gray, fissile, blocky at base, dry, hard.
7				0	
8			SH	0	
9		1.0/1.0		0	
10					

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Tel (512) 671-3434 Fax (512) 671-3446

Notes:
This log should not be used separately from the report to which it is attached.

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 2.0) Bentonite Hole Plug
(2.0 - 10.0) Industrial Quartz Sand

Well Materials
(+2.06 - 2.5) Casing, 2" Sch 40 PVC
(2.5 - 10.0) Screen, 2" Sch 40 PVC, 0.010 slot

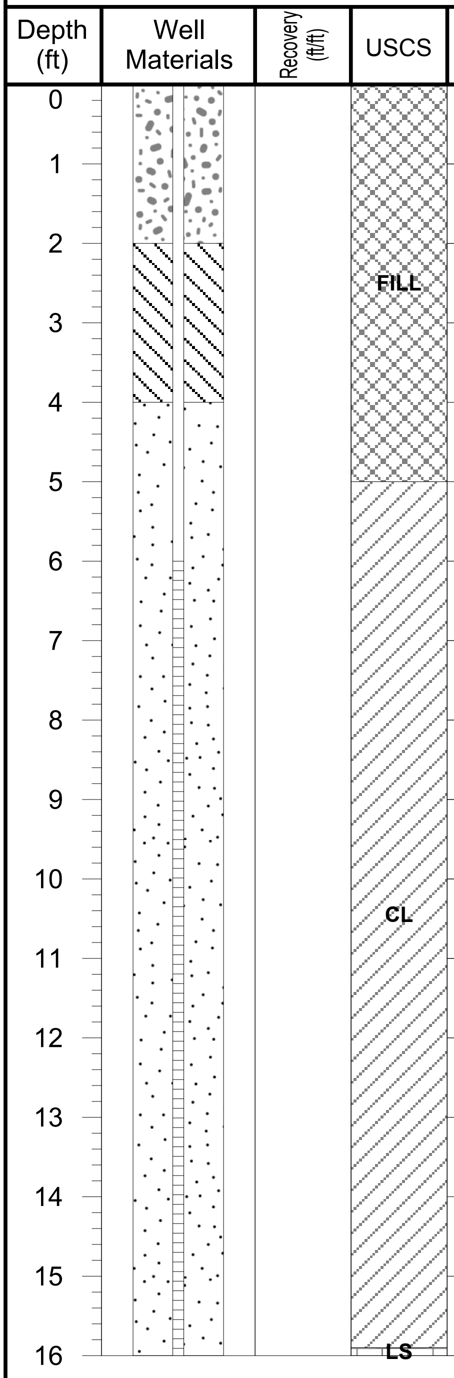
Exide Technologies

Log of Boring:VCP-MW-8

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	4/17/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	16
Driller's License:	58781	Northing:	7102884.374
Logged By:	Carolyn Sexton	Easting:	2481077.573
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	648.101225
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	651.023133



Depth (ft)	PID (ppm)
0	0
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0

Lithologic Description

(0 - 3.6) FILL, gray brown, dry, with silty clay, coarse sand to large gravel, asphalt-like nodules, calcareous nodules.

(3.6 - 7.4) Silty CLAY, dark brown, moist, low plasticity, ~10% graded angular fine to med. sand and calcareous nodules.

(7.4 - 11.1) Silty CLAY, medium-brown to gray, moist to wet, low to med. plasticity, ~10-20% coarse sand to medium gravel.

(11.1 - 15.9) Slightly silty CLAY, gray brown, moist to wet, low to med. plasticity, ~30-40% gravel from 11.1-11.3'.

(15.9 - 16) LIMESTONE, grayish tan, high toughness, competent, microcrystaline to very fine grained, contains veins of secondary calcite crystals.

PBW

Pastor, Behling & Wheeler, LLC
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Notes:
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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 16.0) Industrial Quartz Sand

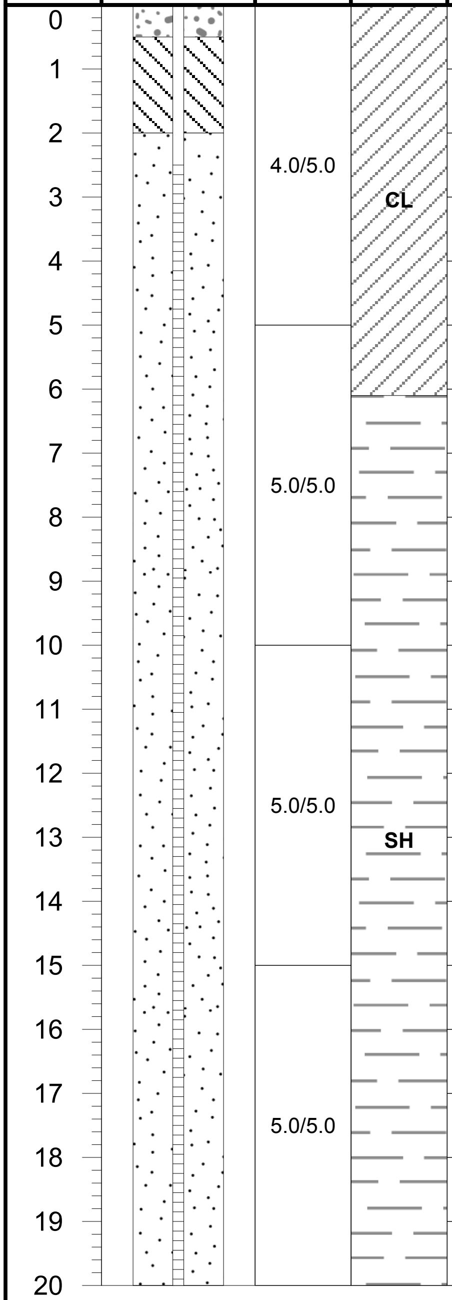
Well Materials
(+2.92 - 6.0) Casing, 2" Sch 40 PVC
(6.0 - 16.0) Screen, 2" Sch 40 PVC, 0.010 slot

Exide Technologies	**Log of Boring:VCP-MW-9**

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	4/17/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	20
Driller's License:	58782	Northing:	7103297.519
Logged By:	Carolyn Sexton	Easting:	2481042.415
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	664.314339
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	666.957891



Depth (ft)	Recovery (ft/ft)	USCS	PID (ppm)
0	4.0/5.0	CL	0
1			0
2			0
3			0
4			0
5	5.0/5.0		0
6		SH	0
7			0
8			0
9			0
10	5.0/5.0		0
11			0
12			0
13			0
14			0
15	5.0/5.0		0
16			0
17			0
18			0
19			0
20			

Lithologic Description

(0 - 0.7) Silty CLAY, dark brown, slighly moist, firm, low plasticity, with root fragments and angular coarse sand to med. gravel.

(0.7 - 2.7) Silty CLAY, dark brown to black, slightly moist, firm to hard, low plasticity, with calcareous nodules and 10-20% angular coarse sand to fine gravel.

(2.7 - 5) Gravelly CLAY, yellow-brown, moist to wet, firm, low plasticity, ~40-50% fine to med. carbonate gravel in clay matrix.

(5 - 6.1) Silty CLAY, gray with orange iron oxide staining, moist, soft to firm, low to medium plasticity, calcareous nodule lense from 5.5-5.6', laminated fine sand from 5.9-6.05'.

(6.1 - 18.8) SHALE, gray with orange iron oxide staining, moist, firm, low plasticity, moderately weathered throughout, contains horizontal silt and sand laminae and vertical iron oxide filled fractures, weathered.

(18.8 - 20) SHALE, dark gray, moist, firm, low plasticity, unweathered.

PBW

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Notes:
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Annular Materials	Well Materials
(0.0 - 0.5) Concrete	(+2.64 - 2.5) Casing, 2" Sch 40 PVC
(0.5 - 2.0) Bentonite Hole Plug	(2.5 - 20.0) Screen, 2" Sch 40 PVC,
(2.0 - 20.0) Industrial Quartz Sand	0.010 slot

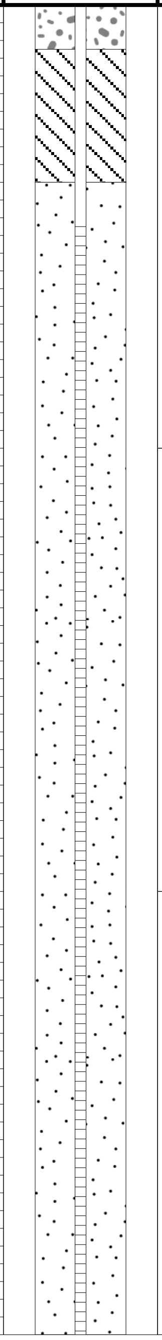
Exide Technologies

Log of Boring: VCP-MW-10

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	4/17/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	15
Driller's License:	58783	Northing:	7103274.856
Logged By:	Carolyn Sexton	Easting:	2481265.991
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	667.108585
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	669.744622



Depth (ft)	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0		CL FILL	0	(0 - 0.4) Silty CLAY, dark brown, with roots and 5-10% fine gravel and calcareous nodules. (0.4 - 1.2) FILL, light gray, interlayered soft clay and iron oxide stained sand, slightly moist, low to medium plasticity.
1			0	(1.2 - 5.6) Silty CLAY, dark brown-gray, moist, low to medium plasticity, coarse carbonate sand to fine gravel within clay matrix throughout, coarse gravel from 1.6-2.8'.
2	5.0/5.0		0	
3		CL	0	
4			0	
5			0	(5.6 - 12.4) SHALE, light to medium gray, moist, soft, friable and fissile, massive below 7.7', limonite and iron oxide staining throughout, weathered.
6			0	
7	5.0/5.0		0	
8			0	
9			0	
10		SH	0	
11			0	
12	5.0/5.0		0	(12.4 - 15) SHALE, dark gray, slightly moist, low plasticity, slightly weathered.
13			0	
14			0	
15				

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Notes:
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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 2.0) Bentonite Hole Plug
(2.0 - 15.0) Industrial Quartz Sand

Well Materials
(+2.64 - 2.5) Casing, 2" Sch 40 PVC
(2.5 - 15.0) Screen, 2" Sch 40 PVC,
0.010 slot

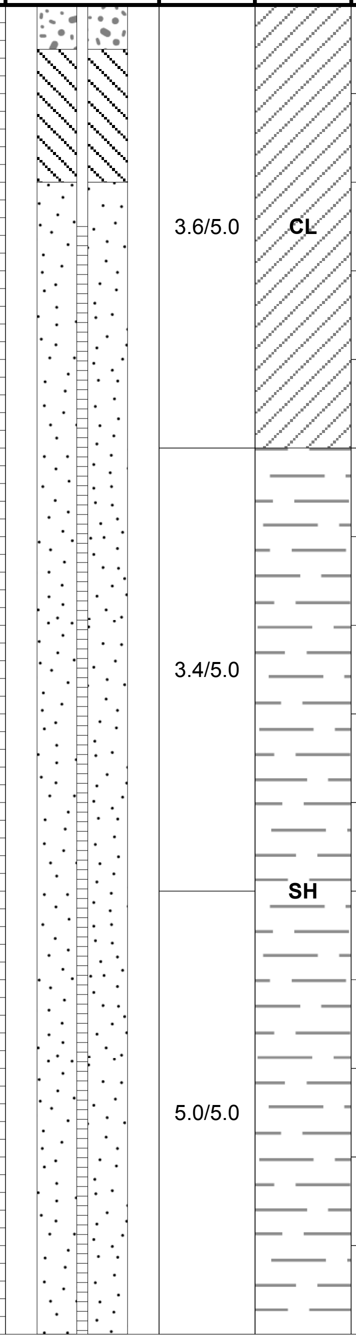
Exide Technologies

Log of Boring:VCP-MW-11

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	4/17/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	15
Driller's License:	58784	Northing:	7103365.27
Logged By:	Carolyn Sexton	Easting:	2481418.215
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	670.152153
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	672.734085



Depth (ft)	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0	3.6/5.0	CL	0	(0 - 0.8) Silty CLAY, deep brown, slightly moist, low plasticity, soft to firm, contains roots. (0.8 - 5) Slightly silty CLAY, yellow-gray, slightly dry, firm to hard, low plasticity, 10-30% coarse sand to fine gravel dispersed in clay matrix.
1			0	
2			0	
3			0	
4			0	
5	3.4/5.0	SH	0	(5 - 10) SHALE, gray, slightly dry, firm to hard, low plasticity, iron oxide staining and carbonate filled laminae throughout, weathered.
6			0	
7			0	
8			0	
9			0	
10	5.0/5.0		0	(10 - 12.8) SHALE, dark gray, friable, iron oxide staining, weathered.
11			0	
12			0	(12.8 - 15) SHALE, dark gray, dry, very hard, fissile, unweathered.
13			0	
14			0	
15				

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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 2.0) Bentonite Hole Plug
(2.0 - 15.0) Industrial Quartz Sand

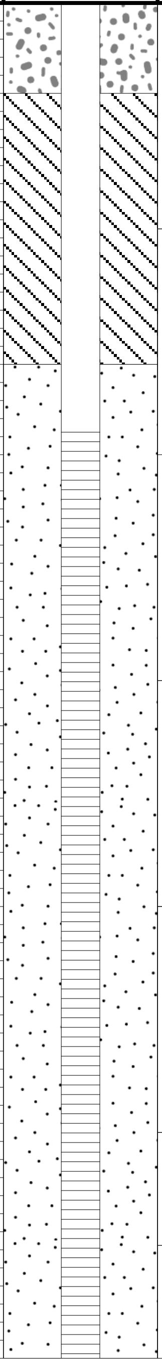
Well Materials
(+2.58 - 2.5) Casing, 2" Sch 40 PVC
(2.5 - 15.0) Screen, 2" Sch 40 PVC, 0.010 slot

Exide Technologies	**Log of Boring:VCP-MW-12**

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	12/12/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8
Driller:	Robert Flair	Total Depth (ft):	30
Driller's License:	2948	Northing:	7103109
Logged By:	Tim Jennings P.G.	Easting:	2481224.6
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	652.88
Sampling Method:	5' Continuous Samples	TOC Elev. (ft AMSL):	656.04



Depth (ft)	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0	3.0/5.0	CL	0	(0 - 1.5) Sandy gravelly CLAY, dark brown, moist, soft, ~20% fine to coarse limestone gravel
				(1.5 - 9.5) Gravelly CLAY, dark brown, moist, very firm-stiff, ~10-15% very fine to fine gravel and carbonate nodules
2			0.5	
			0.5	
4				
	2.2/5.0		0.5	
6			0.5	
8				
		CL/CH		(9.5 - 13) CLAY, olive gray, moist, firm, medium to high plasticity, few fine carbonate nodules
10	5.5/5.5		0.5	
			0.5	
12			1.1	
		SH	1.5	(13 - 25.5) SHALE, gray and orange banded, moist, friable, locally very clayey, weathered
14			1.6	
	5.0/5.0		2.2	
16			2.2	
			2.2	
18			2.2	
			2.2	
20	4.0/5.0		2.2	
			2.2	
22			1.6	
			1.6	
24			3.8	
	2.0/2.5		1.1	(25.5 - 27) SHALE, gray, moist to dry, locally friable, locally sandy, weathered
26			1.1	
	2.5/2.5		1.6	(27 - 30) SHALE, gray, dry, firm, friable, fissile
28			2.2	
			2.2	
30				

PBW

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Notes:
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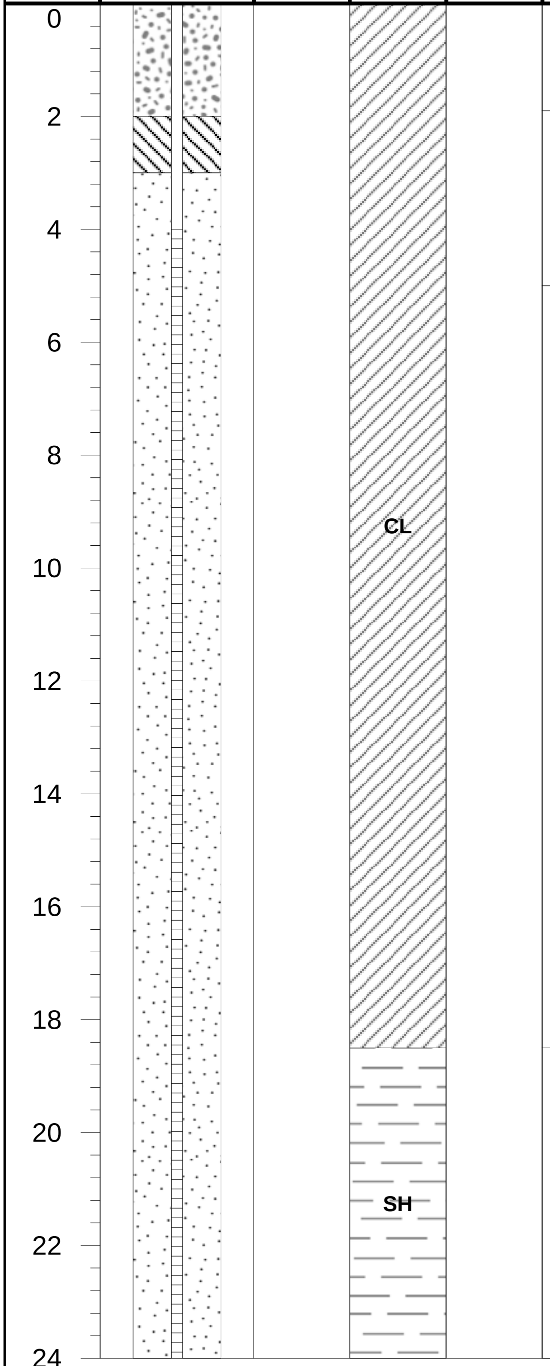
Annular Materials	Well Materials
(0.0 - 2.0) Concrete	(+3.2 - 9.5) Casing, 2" Sch 40 PVC
(2.0 - 8.0) Bentonite Hole Plug	(9.5 - 29.5) Screen, 2" Sch 40 PVC, 0.010 slot
(8.0 - 30.0) Industrial Quartz Sand	

Exide Technologies

Log of Boring:VCP-MW-13

Undeveloped Buffer Property Frisco, TX	Completion Date:	1/3/2014	Drilling Method:	HSA
	Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8
	Driller:	Robert Flair	Total Depth (ft):	24
PBW Project No. 1824	Driller's License:	2948	Northing:	7103094
	Logged By:	Tim Jennings, P.G.	Easting:	2481043.9
	Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	645.9
	Sampling Method:	3"x5' Continuous Split Barrel	TOC Elev. (ft AMSL):	657.38

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description



CLAY, gravel and sand, brown, moist, soft (fill).

Sandy gravelly CLAY, dark brown, moist, ~10-15% very fine sand and fine carbonate nodules, very stiff.

CLAY and sandy clay, light brown-orange-gray, moist to wet, very firm to firm, laminated, abundant carbonate nodules from 5-10', gypsum precipitate on bedding plane at 11', increasing moisture below 10' and locally wet below 15', very heavily weathered shale.

SHALE, weathered, dark gray with orange weathering locally, thin gravel interbeds locally, moist to wet, soft to firm, friable.

PBW

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Notes:
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Annular Materials	Well Materials
(0.0 - 2.0) Concrete	(+3.2 - 4.0) Casing, 2" Sch 40 FJT PVC
(2.0 - 3.0) Bentonite Hole Plug	(4.0 - 24.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot
(3.0 - 24.0) 16/30 Silica Sand	

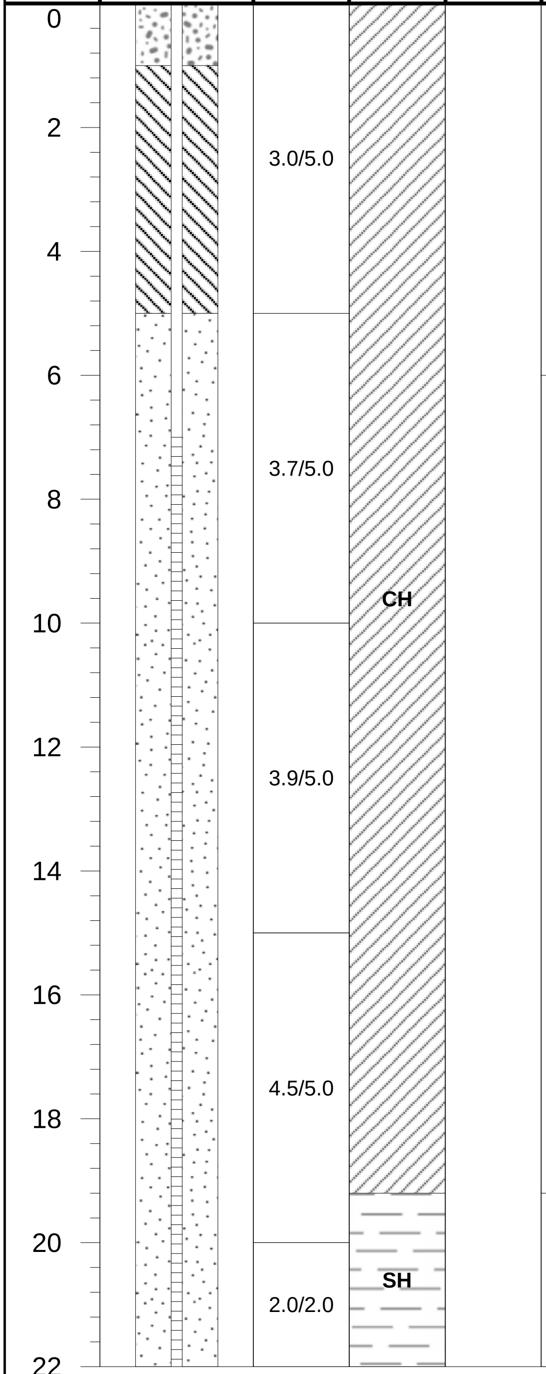
Exide Technologies	Log of Boring:MW-19

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	1/12/2012	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Mario Robles	Total Depth (ft):	22
Driller's License:	52694	Northing:	7102589.0425
Logged By:	Christopher Moore, P.G.	Easting:	2481314.6445
Field Supervisor:	Christopher Moore, P.G.	Ground Elev. (ft AMSL):	650.33
Sampling Method:	3"x 5' Barrel	TOC Elev. (ft AMSL):	653.34

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description



(0 - 6) CLAY, CH, dark grayish brown, moist, firm, medium to high plasticity, trace gravel. 2.0-3.5: with limestone gravel, no odor or staining observed.

(6.0 - 19.2) CLAY, CH, gray and yellowish brown, moist, firm, high plasticity.

9.5: wire fragment, possible fill/reworked material above.

Below 10.0: fractured, orange staining along fracture planes.

11.5-12.0: gravelly, moist to wet.

13.0-13.2: silty/gravelly, moist to wet.

13.9-14.2: gravelly, moist to wet.

(19.2 - 22.0) SHALE, dark gray, moist, hard, laminated, fissle.

PBW

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Notes:
Boring location hand probed to 5 feet to check for utilities.

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Annular Materials	Well Materials
(0.0 - 1.0) Concrete	(+2.6 - 7.0) Casing, 2" Sch 40 FJT PVC
(1.0 - 5.0) Bentonite Hole Plug	(7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot
(5.0 - 22.0) 20/40 Silica Sand	

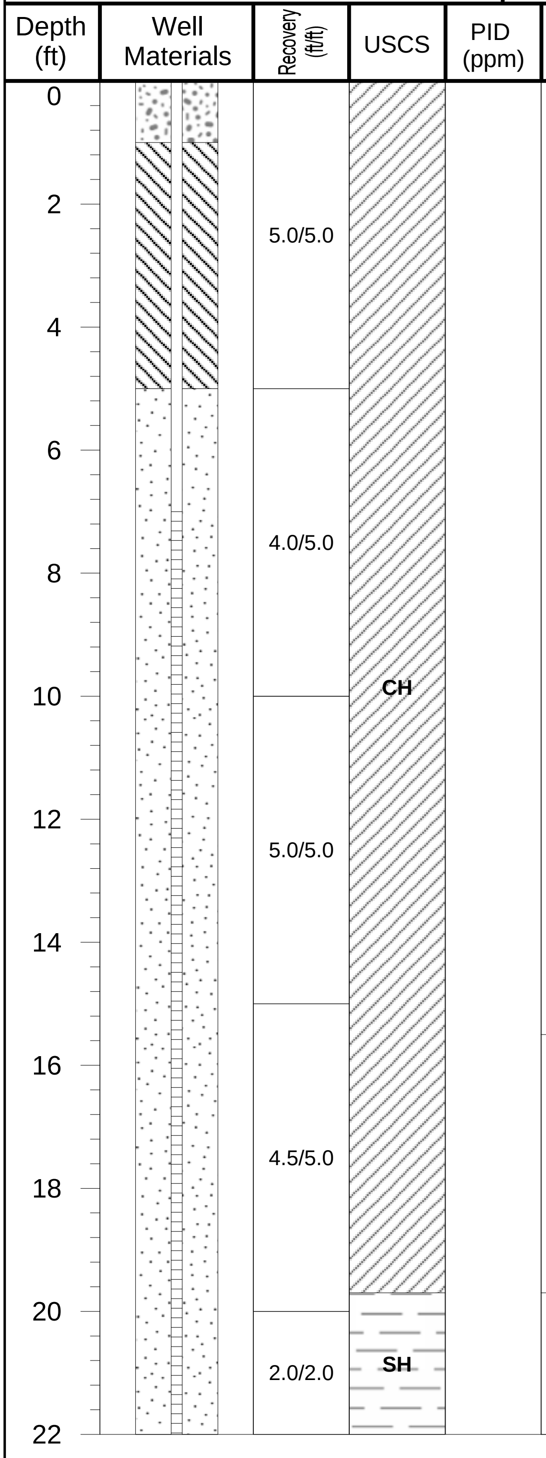
Exide Technologies

Log of Boring:MW-20

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	1/12/2012	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Mario Robles	Total Depth (ft):	22
Driller's License:	52694	Northing:	7101791.617
Logged By:	Christopher Moore, P.G.	Easting:	2481082.2078
Field Supervisor:	Christopher Moore, P.G.	Ground Elev. (ft AMSL):	641.73
Sampling Method:	3"x 5' Barrel	TOC Elev. (ft AMSL):	644.7



Lithologic Description

(0 - 15.5) CLAY, CH, dark grayish brown, moist, firm, medium to high plasticity, trace sand size carbonate nodules, no odor or staining observed.

(15.5 - 19.7) CLAY, CH, gray and yellowish brown, moist, firm, high plasticity, fractured, orange staining along fracture planes.

(19.7 - 22) SHALE, dark gray, moist, hard, laminated, fissle.

PBW

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Notes:

Boring location hand probed to 5 feet to check for utilities.

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Annular Materials	Well Materials
(0.0 - 1.0) Concrete	(+2.6 - 7.0) Casing, 2" Sch 40 FJT PVC
(1.0 - 5.0) Bentonite Hole Plug	(7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot
(5.0 - 22.0) 20/40 Silica Sand	

Exide Technologies

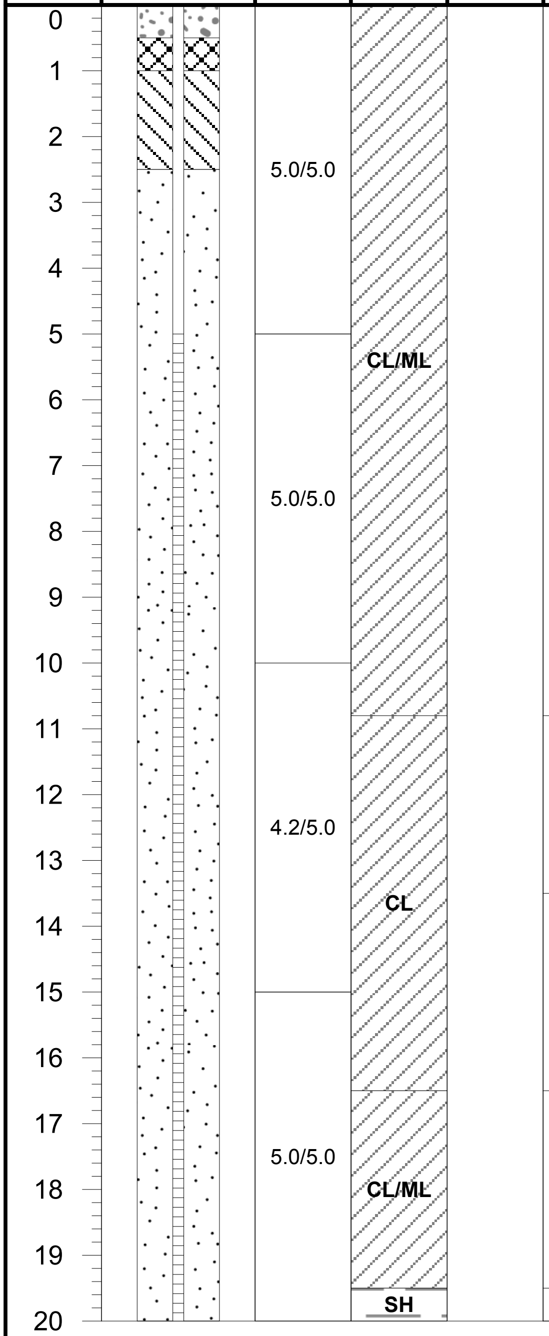
Log of Boring: MW-28

Undeveloped Buffer Property
Frisco, TX

PBW Project No. 1824

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	20
Driller's License:	56033	Northing:	7102977.699
Logged By:	Roberta Russell	Easting:	2479831.956
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	639.47
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	642.91

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description



(0 - 10.8) Silty CLAY/Clayey SILT, dark reddish brown, soft to firm, low to medium plasticity, calcareous nodules starting at 7.5'.

(10.8 - 13.5) Gravelly CLAY, yellowish brown, moist, wet at 12.8', soft to firm, low to medium plasticity clay, calcareous nodues, ~10% gravel in clay matrix.

(13.5 - 16.5) Sandy CLAY, yellowish brown, wet, soft to firm, low plasticty clay, calcareous nodules.

(16.5 - 19.5) Silty CLAY/Clayey SILT, yellowish brown, moist, soft to firm, low to medium plasticity.

(19.5 - 20.0) SHALE, dry, hard.

PBW

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Notes:
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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 1.0) Bentonite Grout
(1.0 - 2.5) Bentonite Hole Plug
(2.5 - 20.0) 20/40 Silica Sand

Well Materials
(+3.44 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

SURFACE SOIL SAMPLE DESCRIPTION

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

Sample ID	Sample Date	Depth (feet)	General Soil Description/Observations
A-6	3/28/2012	0"-3"	Not recorded
A-7	3/28/2012	0"-3"	Not recorded
A-8	3/28/2012	0"-3"	Not recorded
AB-6	3/18/2013	0"-3"	Brown Silty Clay on berm
AB-7	3/18/2013	0"-3"	Brown Silty Clay top of berm
B-18	3/28/2012	0"-3"	Not recorded
B-6	3/28/2012	0"-3"	Not recorded
B-7	3/28/2012	0"-3"	Not recorded
B-8	3/28/2012	0"-3"	Not recorded
B-9	3/28/2012	0"-3"	Not recorded
BC-16	3/18/2013	0"-3"	Brown Silty Clay
BC-17	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
BC-5	3/18/2013	0"-3"	Dark Brown Silty Clay
BC-6	3/18/2013	0"-3"	Dark Brown Silty Clay
BC-7	3/18/2013	0"-3"	Dark Brown Silty Clay
BC-8	3/18/2013	0"-3"	Dark Brown Silty Clay
C-16	3/23/2012	0"-3"	Not recorded
C-17	3/23/2012	0"-3"	Not recorded
C-18	3/28/2012	0"-3"	Not recorded
C-18C	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
C-19	3/18/2013	0"-3"	Dark Brown Silty Clay, wet, drainage area
C-20	3/28/2012	0"-3"	Not recorded
C-21C	3/18/2013	0"-3"	Dark Brown Loam/organic material
C-22	3/28/2012	0"-3"	Not recorded
C-22C	3/18/2013	0"-3"	Dark Brown Loamy clay, with roots
C-5	3/28/2012	0"-3"	Not recorded
C-6	3/28/2012	0"-3"	Not recorded
C-7	3/28/2012	0"-3"	Not recorded
C-8	3/28/2012	0"-3"	Not recorded
C-9	3/28/2012	0"-3"	Not recorded
C-9 (0-3) E	5/17/2012	0"-3"	Silty Clay
C-9 (0-3) N	5/17/2012	0"-3"	Silty Clay
C-9 (0-3) S	5/17/2012	0"-3"	Silty Clay
C-9 (0-3) W	5/17/2012	0"-3"	Silty Clay
C-9 (3-6)	5/17/2012	3"-6"	Sandy Clay/Top Soil
C-9 (6-12)	5/17/2012	6"-12"	Hard, Dark, Clay/Shale
CD-16	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
CD-17	3/18/2013	0"-3"	Dark Brown Silty Clay
CD-19	3/18/2013	0"-3"	Medium Brown/Gray Clayey Sand, organics
CD-21	3/18/2013	0"-3"	Dark Brown Loamy Clay with roots
CD-5	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
CD-6	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
CD-7	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
D-10	3/28/2012	0"-3"	Not recorded
D-10 (0-3) E	5/16/2012	0"-3"	Dark Clay
D-10 (0-3) S	5/16/2012	0"-3"	Dark Clay
D-10 (0-3) W	5/16/2012	0"-3"	Dark Clay
D-10 (3-6)	5/16/2012	3"-6"	Black Clay with limestone/caliche fragments
D-10 (6-12)	5/16/2012	6"-12"	Black Clay
D-16 (0-3) C	5/14/2012	0"-3"	Clay/Sand
D-16 (0-3) E	5/14/2012	0"-3"	Clay/Sand
D-16 (0-3) N	5/14/2012	0"-3"	Clay/Sand with caliche
D-16 (0-3) S	5/14/2012	0"-3"	Clay/Silt
D-16 (3-6)	5/14/2012	3"-6"	Clay with some caliche
D-16 (6-12)	5/14/2012	6"-12"	Clay with some caliche
D-17	3/23/2012	0"-3"	Not recorded
D-18C	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
D-19C	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
D-20C	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
D-21C	3/18/2013	0"-3"	Dark Brown Loamy Clay with roots
D-22C	3/18/2013	0"-3"	Dark Brown Loamy Clay with roots
D-5	3/28/2012	0"-3"	Not recorded
D-6	3/28/2012	0"-3"	Not recorded
D-7	3/28/2012	0"-3"	Not recorded
D-8	3/28/2012	0"-3"	Not recorded
D-8 (0-3) E	5/17/2012	0"-3"	Sandy Clay
D-8 (0-3) N	5/17/2012	0"-3"	Sandy Clay
D-8 (0-3) S	5/17/2012	0"-3"	Sandy Clay
D-8 (0-3) W	5/17/2012	0"-3"	Sandy Clay
D-8 (3-6)	5/17/2012	3"-6"	Black Clay/Shale
D-8 (6-12)	5/17/2012	6"-12"	Black Clay/Shale
D-9	3/28/2012	0"-3"	Not recorded
D-9 (0-3) E	5/17/2012	0"-3"	Dark Sandy Clay
D-9 (0-3) N	5/17/2012	0"-3"	Dark Sandy Clay
D-9 (0-3) S	5/17/2012	0"-3"	Dark Sandy Clay
D-9 (0-3) W	5/17/2012	0"-3"	Dark Sandy Clay
D-9 (3-6)	5/17/2012	3"-6"	Sandy Clay
D-9 (6-12)	5/17/2012	6"-12"	Dark, Black Clay/Shale
DE-17	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
DE-18	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
DE-19	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
DE-20	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
DE-21	3/18/2013	0"-3"	Medium Brown Sandy Clay Loam, with roots
DE-22	3/18/2013	0"-3"	Medium Brown Sandy Clay Loam, with roots
DE-5	3/18/2013	0"-3"	Dark Brown Silty Clay
DE-6	3/18/2013	0"-3"	Dark Brown Silty Clay
DE-7	3/18/2013	0"-3"	Dark Brown Silty Clay
E-10	3/28/2012	0"-3"	Not recorded

SURFACE SOIL SAMPLE DESCRIPTION

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Sample ID	Sample Date	Depth (feet)	General Soil Description/Observations
E-10 (0-3) E	5/17/2012	0"-3"	Dark Sandy Clay
E-10 (0-3) N	5/17/2012	0"-3"	Dark Sandy Clay
E-10 (0-3) W	5/17/2012	0"-3"	Dark Sandy Clay
E-10 (3-6)	5/17/2012	3"-6"	Black Clay/Shale
E-10 (6-12)	5/17/2012	6"-12"	Black Clay/Shale
E-16 (0-3) E	5/14/2012	0"-3"	Clay
E-16 (0-3) N	5/14/2012	0"-3"	Clay
E-16 (0-3) S	5/14/2012	0"-3"	Silty Clay
E-16 (0-3) W	5/14/2012	0"-3"	Not noted
E-16 (3-6)	5/14/2012	3"-6"	Black Clay with some caliche
E-16 (6-12)	5/14/2012	6"-12"	Black Clay with some caliche, collected 10 feet east of road
E-17	3/23/2012	0"-3"	Not recorded
E-18	3/28/2012	0"-3"	Not recorded
E-18C	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
E-20	3/28/2012	0"-3"	Not recorded
E-20C	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
E-21C	3/18/2013	0"-3"	Medium Brown Sandy Clay Loam, with roots
E-22	3/28/2012	0"-3"	Not recorded
E-6	3/28/2012	0"-3"	Not recorded
E-7	3/28/2012	0"-3"	Not recorded
E-8	3/28/2012	0"-3"	Not recorded
E-8 (0-3) E	5/17/2012	0"-3"	Silty Clay
E-8 (0-3) N	5/17/2012	0"-3"	Silty Clay
E-8 (0-3) S	5/17/2012	0"-3"	Silty Clay
E-8 (0-3) W	5/17/2012	0"-3"	Silty Clay
E-8 (3-6)	5/17/2012	3"-6"	Dark Clay/Shale
E-8 (6-12)	5/17/2012	6"-12"	Dark Clay/Shale
E-9	3/28/2012	0"-3"	Not recorded
E-9 (0-3) E	5/17/2012	0"-3"	Dark Sandy Clay
E-9 (0-3) N	5/17/2012	0"-3"	Dark Sandy Clay
E-9 (0-3) S	5/17/2012	0"-3"	Dark Sandy Clay
E-9 (0-3) W	5/17/2012	0"-3"	Dark Sandy Clay
E-9 (3-6)	5/17/2012	3"-6"	Dark Clay/Shale
E-9 (6-12)	5/17/2012	6"-12"	Dark Clay/Shale
EF-17	3/18/2013	0"-3"	Dark Brown Silty Clay
EF-19	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
EF-21	3/18/2013	0"-3"	Medium Brown Sandy Clay Loam, with roots
EF-6	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
EF-7	3/18/2013	0"-3"	Medium Brown Silty Clay, organics/roots
EW-1	3/22/2013	0.5'-1.5'	2" Asphalt, 4" Road Base, Brown Silty Clay
EW-2	3/22/2013	1'-2'	3" Asphalt, 4" Road Base, Brown Silty Clay
EW-3	3/22/2013	0.5'-1.5'	Silty Clay/Weathered Limestone
EW-4	3/22/2013	1'-2'	Asphalt, Silty Clay to Limestone
EW-5	3/22/2013	1'-2'	2 Layers of Asphalt, Silty Clay
EW-6	3/22/2013	1'-2'	6" Asphalt (cored), Brown Silty Clay
EW-7	3/22/2013	1'-2'	12" Asphalt (cored), Dark Brown Silty Clay
F-16	3/23/2012	0"-3"	Not recorded
F-16 (0-3) E	5/14/2012	0"-3"	Sandy Loam/Top Soil
F-16 (0-3) N	5/14/2012	0"-3"	Not noted
F-16 (0-3) S	5/14/2012	0"-3"	Sandy Loam/Top Soil
F-16 (0-3) W	5/14/2012	0"-3"	Sandy Loam/Top Soil
F-16 (3-6)	5/14/2012	3"-6"	Dense Black Clay
F-16 (6-12)	5/14/2012	6"-12"	Dense Black Clay
F-17	3/23/2012	0"-3"	Not recorded
F-17 (0-3) C	5/14/2012	0"-3"	Clayey Sand
F-17 (0-3) E	5/14/2012	0"-3"	Sandy Clay
F-17 (0-3) N	5/14/2012	0"-3"	Hard Clay
F-17 (3-6)	5/14/2012	3"-6"	Black Clay
F-17 (6-12)	5/14/2012	6"-12"	Black Clay
F-18C	3/18/2013	0"-3"	Dark Brown Silty Clay, more loam
F-19C	3/18/2013	0"-3"	Dark Brown Silty Clay, more loam
F-20C	3/18/2013	0"-3"	Medium Brown Sandy Clay
F-21C	3/18/2013	0"-3"	Medium Brown Sandy Clay Loam, with roots
F-7	3/28/2012	0"-3"	Not recorded
FG-18	3/18/2013	0"-3"	Medium Brown Sandy Clay, oragnics/roots
FG-19	3/18/2013	0"-3"	Medium Brown Sandy Clay (rocks), organics/roots
FG-20	3/18/2013	0"-3"	Dark Brown , Silty Clay, organics/roots
G-16	3/23/2012	0"-3"	Not recorded
G-16 (0-3) E	5/14/2012	0"-3"	Hard Black Clay
G-16 (0-3) N	5/14/2012	0"-3"	Sandy Loam/Top Soil
G-16 (0-3) S	5/14/2012	0"-3"	Sandy Loam/Top Soil
G-16 (0-3) W	5/14/2012	0"-3"	Black Clay
G-16 (3-6)	5/14/2012	3"-6"	Sandy Clay
G-16 (6-12)	5/14/2012	6"-12"	Very Hard Black Clay
G-17	3/23/2012	0"-3"	Not recorded
G-18	3/28/2012	0"-3"	Not recorded
G-18C	3/18/2013	0"-3"	Brown Silty Clay
G-19C	3/18/2013	0"-3"	Brown Silty Clay
G-20	3/28/2012	0"-3"	Not recorded
G-20C	3/18/2013	0"-3"	Brown Silty Clay
GH-16	3/19/2013	0"-3"	Dark Brown Silty Clay, organics/roots
GH-17	3/19/2013	0"-3"	Dark Brown Silty Clay, organics/roots
GH-19	3/18/2013	0"-3"	Brown Silty Clay
H-16	3/23/2012	0"-3"	Not recorded
H-17	3/23/2012	0"-3"	Not recorded
H-18C	3/19/2013	0"-3"	Dark Brown Silty Clay, organics/roots
H-19C	3/18/2013	0"-3"	Brown Silty Clay
H-20C	3/18/2013	0"-3"	Medium Brown Sandy Clay, organics/roots

SURFACE SOIL SAMPLE DESCRIPTION

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Sample ID	Sample Date	Depth (feet)	General Soil Description/Observations
HI-15	3/19/2013	0"-3"	Brown Silty Clay
HI-16	3/19/2013	0"-3"	Dark Brown Silty Clay, organics/roots
HI-17	3/19/2013	0"-3"	Dark Brown Silty Clay, organics/roots
HI-19	3/18/2013	0"-3"	Dark Brown Silty Clay, organics/roots
HI-2	3/20/2013	0"-3"	Brown Silty Clay
HI-20	3/18/2013	0"-3"	Brown Silty Clay
HI-3	3/20/2013	0"-3"	Brown Silty Clay, Loamy
HI-4	3/20/2013	0"-3"	Brown Silty Clay, Loamy
HI-5	3/20/2013	0"-3"	Brown Silty Clay
HI-6	3/20/2013	0"-3"	Brown Silty Clay
HI-7	3/20/2013	0"-3"	Dark Brown Clay, cohesive, roots
I-16	3/23/2012	0"-3"	Not recorded
I-17	3/23/2012	0"-3"	Not recorded
I-18	3/28/2012	0"-3"	Not recorded
I-18 (0-3) E	5/15/2012	0"-3"	Dark Clay
I-18 (0-3) N	5/15/2012	0"-3"	Dark Sandy Loam
I-18 (0-3) S	5/15/2012	0"-3"	Light Brown Sandy Loam
I-18 (0-3) W	5/15/2012	0"-3"	Dark Brown Clay/Loam
I-18 (3-6)	5/15/2012	3"-6"	Loamy Clay
I-18 (6-12)	5/15/2012	6"-12"	Clay/Shale and roadbase (crushed caliche/limestone)
I-18A1	3/19/2013	0"-3"	Brown Silty Clay
I-18A2	3/19/2013	0"-3"	Medium Brown Silty Clay, organics/roots
I-18A3	3/19/2013	0"-3"	Brown Silty Clay
I-18A4	3/19/2013	0"-3"	Brown Silty Clay
I-18C	3/19/2013	0"-3"	Dark Brown Silty Clay, organics/roots
I-19C	3/19/2013	0"-3"	Brown Silty Clay
I-20	3/28/2012	0"-3"	Not recorded
I-20C	3/18/2013	0"-3"	Brown Silty Clay
I-3	3/27/2012	0"-3"	Not recorded
I-4	3/27/2012	0"-3"	Not recorded
I-5	3/27/2012	0"-3"	Not recorded
I-6	3/27/2012	0"-3"	Not recorded
I-7	3/27/2012	0"-3"	Not recorded
IJ-15	3/19/2013	0"-3"	Brown Silty Clay, organic matter, roots, loam
IJ-16	3/19/2013	0"-3"	Dark Brown Silty Clay, organics/roots
IJ-2	3/20/2013	0"-3"	Medium Brown Sandy Silt, organics, pebbles, roots
IJ-3	3/20/2013	0"-3"	Medium Brown Sandy Silt, organics, pebbles
IJ-4	3/20/2013	0"-3"	Dark Brown Clay, organics, pebbles
IJ-5	3/20/2013	0"-3"	Dark Brown Sandy Clay, organics, shells
IJ-6	3/20/2013	0"-3"	Dark Brown Sandy Clay, organics, shells
J-16	3/23/2012	0"-3"	Not recorded
J-17	3/23/2012	0"-3"	Not recorded
J-18C	3/19/2013	0"-3"	Medium Brown Silty Clay, organics/roots
J-2	3/27/2012	0"-3"	Not recorded
J-20C	3/19/2013	0"-3"	Brown Silty Clay
J-3	3/27/2012	0"-3"	Not recorded
J-4	3/27/2012	0"-3"	Not recorded
J-5	3/27/2012	0"-3"	Not recorded
J-6	3/27/2012	0"-3"	Not recorded
J-7	3/27/2012	0"-3"	Not recorded
JK-15	3/19/2013	0"-3"	Brown Silty Clay
JK-16	3/19/2013	0"-3"	Brown Silty Clay
JK-17	3/19/2013	0"-3"	Brown Silty Clay
JK-18	3/19/2013	0"-3"	Brown Silty Clay
JK-2	3/20/2013	0"-3"	Dark Brown Silty Clay
JK-20	3/19/2013	0"-3"	Brown Silty Clay
JK-3	3/20/2013	0"-3"	Dark Brown Silty Clay
JK-4	3/20/2013	0"-3"	Dark Brown Silty Clay
JK-5	3/20/2013	0"-3"	Dark Brown Silty Clay
JK-6	3/20/2013	0"-3"	Medium Brown Clay, organics
K-1	3/28/2012	0"-3"	Not recorded
K-10	3/26/2012	0"-3"	Not recorded
K-16	3/23/2012	0"-3"	Not recorded
K-17	3/23/2012	0"-3"	Not recorded
K-18	3/28/2012	0"-3"	Not recorded
K-18C	3/19/2013	0"-3"	Brown Silty Clay
K-19C	3/19/2013	0"-3"	Brown Silty Clay
K-2	3/28/2012	0"-3"	Not recorded
K-20	3/28/2012	0"-3"	Not recorded
K-20C	3/19/2013	0"-3"	Brown Silty Clay/Loam
K-2C	3/20/2013	0"-3"	Dark Brown Silty Clay
K-3C	3/20/2013	0"-3"	Dark Brown Silty Clay
K-4	3/28/2012	0"-3"	Not recorded
K-4C	3/20/2013	0"-3"	Dark Brown Silty Clay
K-5C	3/20/2013	0"-3"	Dark Brown Silty Clay
K-6	3/26/2012	0"-3"	Not recorded
K-7	3/26/2012	0"-3"	Not recorded
K-8	3/26/2012	0"-3"	Not recorded
K-9	3/26/2012	0"-3"	Not recorded
KL-1	3/20/2013	0"-3"	Dark Brown Silty Clay
KL-15	3/19/2013	0"-3"	Medium Brown Sandy soil, very fine, organics/roots
KL-3	3/20/2013	0"-3"	Dark Brown Silty Clay
KL-5	3/20/2013	0"-3"	Dark Brown Clay, organics
KL-6	3/20/2013	0"-3"	Dark Brown Clay, organics
KL-7	3/20/2013	0"-3"	Dark Brown Clay, organics
KL-8	3/20/2013	0"-3"	Dark Brown Clay, organics
KL-9	3/20/2013	0"-3"	Dark Brown Clay, organics
L-10	3/26/2012	0"-3"	Not recorded

SURFACE SOIL SAMPLE DESCRIPTION

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Sample ID	Sample Date	Depth (feet)	General Soil Description/Observations
L-16	3/23/2012	0"-3"	Not recorded
L-16 (0-3) E	5/15/2012	0"-3"	Black Clay w/small limestone nodules
L-16 (0-3) N	5/15/2012	0"-3"	Black Clay w/small limestone nodules
L-16 (0-3) S	5/15/2012	0"-3"	Fine Sand with limestone nodules
L-16 (0-3) W	5/15/2012	0"-3"	Fine Grained Organic Soil, east side of roadway
L-16 (3-6)	5/15/2012	3"-6"	Organic Silty Loam
L-16 (6-12)	5/15/2012	6"-12"	Light Tan Limestone/Austin Chalk
L-16A1	3/19/2013	0"-3"	Dark Brown Sandy Loam, high organics/roots/leaves
L-16A2	3/19/2013	0"-3"	Dark Brown Sandy Loam, high organics/roots/leaves
L-16A3	3/19/2013	0"-3"	Brown Loamy Sand
L-16A4	3/19/2013	0"-3"	Brown Silty Clay, organic matter, roots, loam
L-17	3/26/2012	0"-3"	Not recorded
L-17 (0-3) E	5/15/2012	0"-3"	Organic Silty Loam
L-17 (0-3) N	5/15/2012	0"-3"	Organic Silty Loam
L-17 (0-3) S	5/15/2012	0"-3"	Loamy Sand, location surrrounded by rusty tin cans
L-17 (0-3) W	5/15/2012	0"-3"	Loamy Sand, collected 7 ft west of old barn
L-17 (3-6)	5/15/2012	3"-6"	Tan Clay
L-17 (6-12)	5/15/2012	6"-12"	Dark Clay
L-18C	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, organics
L-19C	3/19/2013	0"-3"	Broken Shale/Sand
L-20C	3/19/2013	0"-3"	Sand/Sediment along Steward Creek creek bed
L-2C	3/20/2013	0"-3"	Dark Brown Silty Clay
L-3C	3/20/2013	0"-3"	Dark Brown Silty Clay
L-4C	3/20/2013	0"-3"	Dark Brown Silty Clay
L-5C	3/20/2013	0"-3"	Dark Brown Silty Clay
L-6	3/26/2012	0"-3"	Not recorded
L-7	3/26/2012	0"-3"	Not recorded
L-8	3/26/2012	0"-3"	Not recorded
L-9	3/26/2012	0"-3"	Not recorded
LM-1	3/20/2013	0"-3"	Brown Silty Clay, wet/mud, creek drainage
LM-10	3/19/2013	0"-3"	Medium Brown/Tan Sandy Silt, roots, pebbles
LM-19	3/19/2013	0"-3"	Brown Clay/Loam
LM-2	3/20/2013	0"-3"	Dark Brown Silty Clay
LM-3	3/20/2013	0"-3"	Dark Brown Silty Clay
LM-4	3/20/2013	0"-3"	Dark Brown Silty Clay
LM-5	3/20/2013	0"-3"	Dark Brown Silty Clay
LM-6	3/20/2013	0"-3"	Dark Brown Silty Clay, organics
LM-7	3/20/2013	0"-3"	Dark Brown Silty Clay, organics
LM-8	3/20/2013	0"-3"	Medium Brown Silt, organics
LM-9	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
M-1	3/28/2012	0"-3"	Not recorded
M-10	3/26/2012	0"-3"	Not recorded
M-11	3/26/2012	0"-3"	Not recorded
M-12	3/26/2012	0"-3"	Not recorded
M-12 (0-3) E	5/16/2012	0"-3"	Sandy Loam with limestone
M-12 (0-3) N	5/16/2012	0"-3"	Sandy Loam with limestone
M-12 (0-3) S	5/16/2012	0"-3"	Sandy Loam with limestone
M-12 (0-3) W	5/16/2012	0"-3"	Sandy Loam with limestone
M-13	3/26/2012	0"-3"	Not recorded
M-14	3/26/2012	0"-3"	Not recorded
M-14 (0-3) E	5/15/2012	0"-3"	Organic Silty Loam
M-14 (0-3) N	5/15/2012	0"-3"	Sandy Loam with limestone
M-14 (0-3) S	5/15/2012	0"-3"	Sandy Loam with limestone
M-14 (0-3) W	5/15/2012	0"-3"	Organic Silty Loam
M-14 (3-6)	5/16/2012	3"-6"	Dark Loamy Soil
M-14 (6-12)	5/16/2012	6"-12"	Dark Loamy Soil
M-15	3/26/2012	0"-3"	Not recorded
M-15 (0-3) E	5/16/2012	0"-3"	Sandy Loam with limestone
M-15 (0-3) N	5/16/2012	0"-3"	Organic Silty Loam
M-15 (0-3) S	5/16/2012	0"-3"	Organic Silty Loam
M-15 (0-3) W	5/16/2012	0"-3"	Organic Silty Loam
M-15 (3-6)	5/16/2012	3"-6"	Organic Silty Loam with limestone
M-15 (6-12)	5/16/2012	6"-12"	Limestone
M-16	3/26/2012	0"-3"	Not recorded
M-16 (0-3) E	5/15/2012	0"-3"	Silty Loam, collected around farm debris
M-16 (0-3) N	5/15/2012	0"-3"	Silty Loamy Soil with limestone
M-16 (0-3) S	5/15/2012	0"-3"	Silty Loam with coarse gravel
M-16 (0-3) W	5/15/2012	0"-3"	Silty Clay with limestone, collected on western edge of roadway
M-16 (3-6)	5/16/2012	3"-6"	Limestone, refusal at 6-inches
M-16A1	3/22/2013	0"-3"	Dark Brown Silty Clay, moist, with limestone fragments
M-16A1	3/22/2013	0'-1'	Dark Gray Weathered Limestone with asphalt
M-16A1	3/22/2013	1'-2'	Dark Gray Weathered Limestone with asphalt
M-16A3	3/22/2013	0"-3"	Dark Grayish Brown Clayey Silt, moist, soft
M-16A3	3/22/2013	0'-1'	Tan Limestone, dry, hard, very weathered
M-16A3	3/22/2013	1'-2'	Tan Limestone, dry, hard, very weathered
M-16A4	3/19/2013	0"-3"	Loamy Sand/Clay
M-17	3/26/2012	0"-3"	Not recorded
M-17 (0-3) E	5/15/2012	0"-3"	Black Clay with limestone
M-17 (0-3) N	5/15/2012	0"-3"	Black Clay with limestone
M-17 (0-3) S	5/15/2012	0"-3"	Black Clay, debris from old farmhouse in area
M-17 (0-3) W	5/15/2012	0"-3"	Black Clay, debris from old farmhouse in area
M-17 (3-6)	5/16/2012	3"-6"	Loam with weathered limestone
M-17 (6-12)	5/16/2012	6"-12"	Loam with weathered limestone
M-18	3/28/2012	0"-3"	Not recorded
M-18C	3/19/2013	0"-3"	Brown Silty Clay
M-19C	3/19/2013	0"-3"	Brown Clay/Loam
M-1C	3/20/2013	0"-3"	Brown Silt Clay, wet, organic mud
M-2C	3/20/2013	0"-3"	Brown Silty Clay

SURFACE SOIL SAMPLE DESCRIPTION

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Sample ID	Sample Date	Depth (feet)	General Soil Description/Observations
M-3	3/28/2012	0"-3"	Not recorded
M-3C	3/20/2013	0"-3"	Brown Silty Clay
M-4C	3/20/2013	0"-3"	Brown Silty Clay
M-5	3/28/2012	0"-3"	Not recorded
M-5C	3/20/2013	0"-3"	Dark Brown Silty Clay
M-6C	3/20/2013	0"-3"	Dark Brown Silty Clay
M-7	3/28/2012	0"-3"	Not recorded
M-7C	3/20/2013	0"-3"	Dark Brown Silty Clay
M-8C	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
M-9	3/26/2012	0"-3"	Not recorded
MN-2	3/20/2013	0"-3"	Brown Silty Clay
MN-4	3/20/2013	0"-3"	Medium Brown Silty Clay, roots, pebbles, worms
MN-6	3/20/2013	0"-3"	Dark Brown Silty Clay
MN-8	3/20/2013	0"-3"	Dark Brown Clay, organics
MN-9	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
N-10	3/26/2012	0"-3"	Not recorded
N-11	3/26/2012	0"-3"	Not recorded
N-11 (0-3) E	5/16/2012	0"-3"	Brown Sand with limestone
N-11 (0-3) N	5/16/2012	0"-3"	Brown Sand
N-11 (0-3) S	5/16/2012	0"-3"	Brown Sand
N-11 (0-3) W	5/16/2012	0"-3"	Brown Sand
N-12	3/26/2012	0"-3"	Not recorded
N-12 (0-3) E	5/16/2012	0"-3"	Brown Sand with limestone
N-12 (0-3) N	5/16/2012	0"-3"	Brown Sand with limestone
N-12 (0-3) S	5/16/2012	0"-3"	Brown Sand with limestone
N-12 (0-3) W	5/16/2012	0"-3"	Brown Sand with limestone
N-13	3/26/2012	0"-3"	Not recorded
N-14	3/26/2012	0"-3"	Not recorded
N-15	3/26/2012	0"-3"	Not recorded
N-16	3/26/2012	0"-3"	Not recorded
N-16 (0-3) E	5/16/2012	0"-3"	Brown Sand with limestone
N-16 (0-3) N	5/16/2012	0"-3"	Brown Sand with limestone
N-16 (0-3) S	5/16/2012	0"-3"	Brown Sand with limestone
N-16 (0-3) W	5/16/2012	0"-3"	Sandy Loam, collected between road and drainage ditch
N-16 (3-6)	5/16/2012	3"-6"	Brown Clay, refusal at 6"
N-16A1	3/19/2013	0"-3"	Brown Sand/Clay
N-16A2	3/19/2013	0"-3"	Gravelly Clay
N-16WA	3/22/2013	0"-3"	Silty Clay/Loam on underlain by Limestone
N-17	3/26/2012	0"-3"	Not recorded
N-18/19	3/19/2013	0"-3"	Sandy/Broken Shale
N-18C	3/19/2013	0"-3"	Broken Shale/Sand
N-2C	3/20/2013	0"-3"	Brown Silty Clay
N-3C	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
N-4C	3/20/2013	0"-3"	Medium Brown Silty Clay, roots, pebbles
N-5C	3/20/2013	0"-3"	Medium Brown Silty Clay, roots, pebbles, worms
N-6C	3/20/2013	0"-3"	Brown Silty Clay, creek floodway
N-7C	3/20/2013	0"-3"	Dark Brown Silty Clay
N-8C	3/20/2013	0"-3"	Dark Brown Silty Clay
N-9	3/26/2012	0"-3"	Not recorded
NO-13	3/19/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
NO-14	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
NO-16	3/19/2013	0"-3"	Tan Sand/broken shale
NO-17	3/19/2013	0"-3"	Light Brown Sandy Clay
NO-2	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
NO-3	3/20/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
NO-5	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
NO-6	3/20/2013	0"-3"	Brown Silty Clay, creek floodway
NO-7	3/20/2013	0"-3"	Dark Brown Silty Clay
NO-8	3/20/2013	0"-3"	Dark Brown Silty Clay
NO-9	3/20/2013	0"-3"	Dark Brown Silty clay, organics, pebbles
O-10C	3/20/2013	0"-3"	Dark Brown Silty clay, organics, pebbles
O-11	3/28/2012	0"-3"	Not recorded
O-11C	3/19/2013	0"-3"	Medium Brown Silty Clay, organics/roots
O-12C	3/19/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
O-13	3/28/2012	0"-3"	Not recorded
O-13C	3/19/2013	0"-3"	Light Brown Sandy Silt, roots, pebbles
O-14C	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
O-15	3/28/2012	0"-3"	Not recorded
O-15	3/22/2013	0'-1'	Dark Brown Silty Clay
O-15	3/22/2013	1'-2'	Dark Brown Silty Clay, moist, med. plasticity, trace nodules
O-15	3/22/2013	2'-3'	Yellow/Brown Weathered Limestone and Silty Clay, moist
O-15 (0-3) E	5/16/2012	0"-3"	Dark Brown Loam with limestone
O-15 (0-3) N	5/16/2012	0"-3"	Dark Brown Loam with limestone
O-15 (0-3) S	5/16/2012	0"-3"	Dark Sandy Loam
O-15 (0-3) W	5/16/2012	0"-3"	Dark Sandy Loam
O-15 (3-6)	5/16/2012	3"-6"	Loam, collected between road and drainage ditch
O-15 (6-12)	5/16/2012	6"-12"	Loam with rock/broken limestone, collected between road and drainage ditch
O-15A1	3/22/2013	0"-3"	Brown Silty Clay, moist
O-15A1	3/22/2013	0'-1'	Brown Silty Clay, moist, Limestone fragments, 10-20%
O-15A1	3/22/2013	1'-2'	Brown Silty Clay, moist, Limestone fragments, 10-20%
O-15A1	3/22/2013	2'-3'	Light Gray/Pale Yellowish Brown weathered Limestone
O-15A1	3/22/2013	3'-4'	Light Gray/Pale Yellowish Brown weathered Limestone
O-15A10	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
O-15A11	3/22/2013	0'-1'	Brown Silty Clay with limestone fragments, moist
O-15A11	3/22/2013	1'-2'	Brown Silty Clay with limestone fragments, moist
O-15A11	3/22/2013	2.5'-3'	Gray Limestone, dry
O-15A12	3/22/2013	0"-3"	Dark Reddish Brown Silty Clay, moist, firm, med. plasticity
O-15A12	3/22/2013	0'-1'	Yellowish Brown Silty clay, Limestone fragments, 30-40%

SURFACE SOIL SAMPLE DESCRIPTION

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

Sample ID	Sample Date	Depth (feet)	General Soil Description/Observations
O-15A12	3/22/2013	1'-2'	Yellowish Brown Silty clay, Limestone fragments, 30-40%
O-15A12	3/22/2013	2'-3'	Yellowish Brown Silty clay, Limestone fragments, 30-40%
O-15A13	3/19/2013	0"-3"	Dark Brown Silty Clay
O-15A14	3/19/2013	0"-3"	Dark Brown Silty Clay
O-15A15	3/19/2013	0"-3"	Dark Brown Silty Clay with gravel
O-15A16	3/19/2013	0"-3"	Dark Brown Silty Clay
O-15A2	3/19/2013	0"-3"	Dark Brown Silty Clay with gravel/shale
O-15A3	3/19/2013	0"-3"	Dark Brown Silty Clay
O-15A4	3/19/2013	0"-3"	Dark Brown Silty Clay with gravel/shale
O-15A5	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
O-15A6	3/22/2013	0"-3"	Brown Silty Clay
O-15A6	3/22/2013	0'-1'	Brown Silty Clay, moist
O-15A6	3/22/2013	1'-2'	Brown Silty Clay, moist
O-15A6	3/22/2013	2'-2.5'	Tan Limestone
O-15A7	3/22/2013	0"-3"	Brown Silty Clay and Clayey Silt with gravel, moist, firm, med. plasticity, limestone fragments, 20-0%
O-15A7	3/22/2013	0'-1'	Brown Silty Clay and Clayey Silt with gravel, moist, firm, med. plasticity, limestone fragments, 20-0%
O-15A7	3/22/2013	1'-2'	Brown Silty Clay and Clayey Silt with gravel, moist, firm, med. plasticity, limestone fragments, 20-0%
O-15A7	3/22/2013	2'-2.5'	Tan Weathered Limestone, dry, hard
O-15A8	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
O-15A8	3/22/2013	0'-1'	Brown Silty Clay, medium plasticity, limestone fragments
O-15A8	3/22/2013	1'-2'	Tan/Yellow Limestone, weathered, dry
O-15A8	3/22/2013	2'-3'	Tan/Yellow Limestone, weathered, dry
O-15A9	3/22/2013	0"-3"	Brown Silty Clay, moist, Limestone fragments, 10-20%
O-15A9	3/22/2013	0'-1'	Brown Silty Clay, moist, Limestone fragments, 10-20%
O-15A9	3/22/2013	1'-2'	Tan Weathered Limestone, dry, hard
O-15C	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
O-17	3/28/2012	0"-3"	Not recorded
O-18	3/19/2013	0"-3"	Tan Sand/broken shale
O-3	3/28/2012	0"-3"	Not recorded
O-5	3/28/2012	0"-3"	Not recorded
O-5C	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
O-6C	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
O-7	3/28/2012	0"-3"	Not recorded
O-7C	3/20/2013	0"-3"	Brown Silty Clay, wet/mud, creek drainage
O-8C	3/20/2013	0"-3"	Dark Brown Silty Clay
O-9	3/28/2012	0"-3"	Not recorded
O-9C	3/20/2013	0"-3"	Dark Brown Silty clay, organics, pebbles
OP-10	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
OP-12	3/19/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
OP-4	3/20/2013	0"-3"	Medium Gray Clay, roots, pebbles
OP-6	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
OP-8	3/20/2013	0"-3"	Dark Brown Silty Clay
P-10C	3/20/2013	0"-3"	Dark Brown Silty clay, organics, roots, pebbles
P-11C	3/19/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
P-12C	3/19/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
P-13C	3/19/2013	0"-3"	Medium Brown Sandy Silt, organics, pebbles
P-14C	3/19/2013	0"-3"	Medium Brown Sandy Silt, organics/roots/pebbles
P-15C	3/19/2013	0"-3"	Medium Brown Sandy Clay, roots, pebbles
P-17C	3/19/2013	0"-3"	Tan Sand/broken shale
P-6C	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
P-7C	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, gravel @ 2"
P-8C	3/20/2013	0"-3"	Brown Silty Clay
P-9C	3/20/2013	0"-3"	Dark Brown Silty Clay
PQ-10	3/20/2013	0"-3"	Dark Brown Silty clay, organics, pebbles
PQ-11	3/19/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
PQ-12	3/19/2013	0"-3"	Light Brown/Tan Sandy Silt, roots, pebbles
PQ-13	3/19/2013	0"-3"	Medium Brown Sandy Clay, organics, pebbles
PQ-14	3/19/2013	0"-3"	Medium Brown Sandy Silt, organics, pebbles
PQ-16	3/19/2013	0"-3"	Tan Sand/broken shale
PQ-7	3/20/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
PQ-9	3/19/2013	0"-3"	Medium Brown Sandy Silt, roots, pebbles
Q-10/11	3/20/2013	0"-3"	Dark Brown Silty Clay
Q-10C	3/19/2013	0"-3"	Brown Silty Clay
Q-11	3/28/2012	0"-3"	Not recorded
Q-11C	3/19/2013	0"-3"	Brown Silty Clay
Q-12/13	3/19/2013	0"-3"	Brown Silty Clay
Q-12C	3/19/2013	0"-3"	Brown Silty Clay
Q-13	3/28/2012	0"-3"	Not recorded
Q-13C	3/19/2013	0"-3"	Brown Silty Clay
Q-14/15	3/19/2013	0"-3"	Gravelly Clay (broken shale)
Q-14C	3/19/2013	0"-3"	Medium Brown Sandy Clay, organics, pebbles
Q-15	3/28/2012	0"-3"	Not recorded
Q-8	3/28/2012	0"-3"	Not recorded
Q-9	3/28/2012	0"-3"	Not recorded
QR-16	3/19/2013	0"-3"	Dark Brown Silty Clay

APPENDIX 3
MONITOR WELL DEVELOPMENT AND PURGING DATA

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 **Project Name:** Exide FRC Plant **Date:** 3/7/13

Well Location (well ID, etc.): VCP-MW-1

Developed by: Kevin Dworsky

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): 2.5' - 10.0'

Filter Pack Interval (ft. BGL): 2.0' - 10.0'

Starting Water Level (ft. BMP): 12.09

Casing Stickup (ft.): ~ 2.98

Starting Water Level (ft. BGL): 9.11

Total Depth (ft. BGL): 12.92

Casing Diameter (In ID): 2"

Casing Volume (gal.): 0.153

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: ~~Bailer~~ Disposable Bailer **Surge Equipment:** Bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1014	—	—	—	—	—	—	—	Surged well w/ Bailer
1024	0.1	—	—	—	—	TAN	—	Pulled to allow recovery
1034	—	—	—	—	—	—	—	Surged well w/ bailer
1039	0.1	—	17.24	6.55	1360	TAN	1000+	
1100	—	—	—	—	—	—	—	Surged well w/ bailer
1122	0.1	—	20.50	6.69	—	TAN	—	Started pulling water
								Had to allow water
								to recharge to get
								enough out to
								take measurements.
								NOT ENOUGH WATER
								to cover conductivity
								& Turbidity probes

otal Discharge (gallons): 0.3

Observations/Comments:

PASTOR, BEHLING, & WHEELER, LLC
620 E. Airline
Victoria, Texas 77901
Phone: (361) 573-6442 Fax: (361) 573-6449

WELL DEVELOPMENT RECORD

PAGE ____ of ____

Project Number: 1824 Project Name: Exide - Frisco Date: 1-9-14

Well Location (well ID, etc.): VCP-MW-1

Developed by: S. Berndt

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): 2.5-10

Filter Pack Interval (ft. BGL): ——

Starting Water Level (ft. BMP): 11.86

Casing Stickup (ft.): 2.60

Starting Water Level (ft. BGL):

Total Depth (ft. ~~BGL~~): BMP 12.93

Casing Diameter (In ID): 2.0

Casing Volume (gal.): 0.18 gal

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Alconox / DI Rinse

Purging: bailer

Surge Equipment: bailer

Disposal of Discharged Water: onsite drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: e-line

Thermometer:

pH Meter:

Field Calibration:

Conductivity Meter:

Field Calibration:

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (°C)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DTW
825	surge started for 5mins Purged 500ml							
~~840~~	for 10 minutes							~~12.76~~
840	DTW 12.76							

Total Discharge (gallons):

Observations/Comments:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

WELL DEVELOPMENT RECORD

PAGE 1 **of** 1

Project Number:
Project Name:
Date: 3/7/13

Well Location (well ID, etc.): VCP - MW - 2
Developed by: Kevin Dworsky
Measuring Point (MP) of Well: TOC / PVC
Screened Interval (ft. BGL): 5.0' - 15.0'
Filter Pack Interval (ft. BGL): 4.0' - 20.0'

Starting Water Level (ft. BMP): 13.52
Casing Stickup (ft.): 3.48
Starting Water Level (ft. BGL): 10.04
Total Depth (ft. BGL): 23.69
Casing Diameter (In ID): 2
Casing Volume (gal.): 1.627

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: **Dedicated Equipment** - Di WATER & Liquid-nox
Purging: Mini Typhoon Pump **Surge Equipment:** Pump
Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck
pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
Thermometer: Horiba U-52
Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
819	—	1.1	—	—	—	Tan	—	Pump On. Surged Well
825	3.5	↓	18.40	4.65	8430	TAN	49.8	Well dry. Pump Off
828	—	0.75	—	—	—	Neutral	—	Pump On. Surged well
830	~~5.5~~ 5.0	↓	18.52	4.68	8470	Neutral	28.8	well dry. Pump Off
838	—	0.7	—	—	—	Neutral	—	Pump On. Surged well.
~~839~~								
841	7.0	↓	1889	5.20	8300	Neutral	4.3	Well dry. Pump Off
851	—	0.5	—	—	—	Neutral	—	Pump On. Surged Well
852	7.5	↓	18.64	5.09	9330	Neutral	21.6	well dry. Pump Off
902	—	0.5	—	—	—	Neutral	—	Pump On
903	8.0	↓	18.64	4.92	8350	Neutral	29.2	Pump Off. Well dry
								ORP: 184 mV
3/8/13								DO: 2.83 mg/L
Surged and	bailed	w/ PVC	Bailer.	WL = 15.97'				TDS: 5.27 g/L
737-747		—						Surged well
747-815	5	—	18.03	5.19	8390		62.7	Bailed. Well clear

Total Discharge (gallons): 9

Observations/Comments:

Remove 13 gallons over 2 days

PASTOR, BEHLING, & WHEELER, LLC
620 E. Airline
Victoria, Texas 77901
Phone: (361) 573-6442 Fax: (361) 573-6449

WELL CONSTRUCTION SUMMARY

Well (number, ID, etc. VCP-MW-2

Project: Exide FRC
Location: Frisco, TX
Elevation: Ground Level
Staff: T. Jennings
Supervisor: E. Pastor
Top of Casing:

DRILLING SUMMARY

Total Depth: 20'
Borehole Dia.: 8"
Driller: Chris Combs
Driller's Number:
Rig: CME75
Bit(s): 8" Auger
Drilling Company: Strata Core
Drilling Fluid: NA

WELL DESIGN:

Basis: Geologic Log ____ Geophysical Log ____

Casing String(s): C= CASING S= SCREEN

0 - 5	C1	
5 - 15	S1	

CASING: C1 2" Sch 40 PVC Riser
C2
C3
C4

SCREEN: S1 2" Sch 40 w/0.01 Slot
S2

CENTRALIZERS: NA

FILTER MATERIAL: 20/40 Silica Sand
4-20' used 9-50 lbSks

CEMENT: 0-2'

OTHER: Bentonite Seal - 3/8" Bentonite chips 2-4'

CONSTRUCTION TIME LOG

TASK	START		FINISH	
Drilling:				
	10	20	10	55
Geoph. Logging:				
Casing:	10	55	10	55
Filter Placement:	10	55	11	15
Bentonite Seal:	11	15	11	15
Grout/Cement:				
Development:				
Other:				
Surface Comp.:	14	00		

DECONTAMINATION:

COMMENTS:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: EXIDE-FRISCO-VCP Date: 3-20-13

Sample Number: VCP-MW2	Starting Water Level (ft. BMP): 12.17
Sampling Location (well ID, etc.): VCP-MW2	Casing Stickup (ft.): —
Sampled by: JTB	Starting Water Level (ft. BGL): 12.17
Measuring Point (MP) of Well: TOC/PVC	Total Depth (ft. BGL): 15 —
Screened Interval (ft. BGL):	Casing Diameter (in ID): 2.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, i.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1340 Time	Cum. Vol. (gal. or [✓ L])	Purge Rate (gal. or [✓ L /m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1350		.10	20.1	4.91	8450	2.33	263	28	13.14
1358		.10	19.6	6.05	8120	2.37	177		13.47
1402		.50	turned the pump up to evacuate the well						
1415		.50							15.75
1440		.50							20.31
1458	well is dry								
3/21/13 1410		0	20.1	4.69	8690	0.63	233.6	7.6	14.96

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 4' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1430	250mL	P	1	N	HNO3	TOTAL METALS
1430	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1430	40mL	G	3	N	HCL	VOCS
1430	40mL	G	3	N	HCL	TPH
	1L	G	2	N	—	SVOCS

Comments:

TCEQ - NO SAMPLES

Pastor, Behling & Wheeler, LLC
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Round Rock, TX 78664
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SWG - SPLIT SAMPLES AT THIS WELL

WELL DEVELOPMENT RECORD

PAGE______of ______

Project Number: **Project Name:** Exide FRC **Date:** 3/7/13

Well Location (well ID, etc.): VCP - MW - 3

Developed by: Kevin Dworsky

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): 5.0' – 15.0'

Filter Pack Interval (ft. BGL): 4.0' – 15.0'

Starting Water Level (ft. BMP): 14.66

Casing Stickup (ft.): ~ 2.90

Starting Water Level (ft. BGL): 11.76

Total Depth (ft. BGL): 18.10

Casing Diameter (In ID): 2

Casing Volume (gal.): 0.550

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: **Dedicated Equipment** - DI WATER & Liquidnox

Purging: Disposable bailer **Surge Equipment:** Bailer

Disposal of Discharged Water: 55 Gallon Drums

***INSTRUMENTS** (indicate make, model, I.D.)*

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1728	—	—	—	—	—	—	—	Surged well w/ baile
1738	—	—	—	—	—	—	—	Began purging water
1745	4	—	16.78	6.15	3580	TAN	1000+	
3/8/13 : Surged and bailed the well with a disposable bailer.								
1009	—	—	—	—	—	—	—	Surged for 1 min
1010	—	—	—	—	—	—	—	STARTED bailing water
1023	1	—	16.56	5.93	3470	TAN	1000+	
1104	0.5	—	16.64	5.98	3570	TAN	1000+	

Total Discharge (gallons): 4

Observations/Comments:

PASTOR, BEHLING, & WHEELER, LLC
620 E. Airline
Victoria, Texas 77901
Phone: (361) 573-6442 Fax: (361) 573-6449

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1824 **Project Name:** Erick J Parcel **Date:** 3/13/13

Well Location (well ID, etc.): VCP-[redacted]mw-3	**Starting Water Level (ft. BMP):** 14.23
Developed by: Kevin Dwaasky	**Casing Stickup (ft.):** ~2.90
Measuring Point (MP) of Well: toc/pvc	**Starting Water Level (ft. BGL):**
Screened Interval (ft. BGL): 5.0' - 15.0'	**Total Depth (ft. BGL):** 18.10
Filter Pack Interval (ft. BGL): 4.0' - 15.0'	**Casing Diameter (In ID):** 2
	Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: Bailer (disposable) **Surge Equipment:** bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Conductivity Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

ORP Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DO Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1300	—	—	—	—	—	—	—	Surged Well
1310	—	—	—	—	—	—	—	Began bailing
1315	—	—	18.60	5.72	3750	TAN	1000+	
1320	2	—	18.09	5.82	3740	TAN	1000+	STOPPED
1425	—	—	—	—	—	—	—	Began bailing
1435	—	—	18.66	6.05	3710	TAN	1000+	
1438	3	—	18.42	5.97	3690		1000+	STOPPED
1608	—	—	—	—	—	—	—	Began Bailing
1612	3.5	—	18.21	6.21	3550		1000+	STOPPED

Total Discharge (gallons):

Observations/Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: EXIDE-FRISCO-VCP Date: 3-20-13

Sample Number: VCP-MW3

Sampling Location (well ID, etc.): VCP-MW3

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 13.99

Casing Stickup (ft.): –

Starting Water Level (ft. BGL): 13.99

Total Depth (ft. BGL): 15 18.10

Casing Diameter (In ID): 2.0

Casing Volume (gal.): –

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micro Other: TVRB

SAMPLING MEASUREMENTS

1016 Time	Cum. Vol. (gal. or [✓ L])	Purge Rate (gal. or [✓ L/m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1026		.10	17.5	7.46	3394			45	14.89
1031		.11	17.5	7.49	3471			36	15.09
1036		.10	17.6	7.48	3492			49	15.51
1038	turned the pump up to evacuate the well								
1040		.45							16.45
1045		.45							17.72
1048		.45							18.10 (DRY)
3/21/13 0905								54	14.82
0950			16.9	5.87	3570	4.21	242	–	

Water Level (ft. BMP) at End of Purge: DRY

Sample Intake Depth (ft. BMP): 2' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected						
Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
0930	250ML	P	1	Y-10	HNO3	TOTAL METALS
0930	250ML	P	1	Y.45	HNO3	DISSOLVED METALS
0930	250ML	P	1	N	HNO3	TOTAL METALS-UNFILTERED
0930	40ML	G	3	N	HCL	VOCS
0930	40ML	G	3	N	HCL	TPH
0930	1L	G	2	N	NONE	SVOCS

Comments:

TCEQ - SPLIT A TOTAL METALS-FILTERED PRESERVED

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SWG - WILL BE SPLITTING ALL ANALYSIS ON THIS WELL

WELL DEVELOPMENT RECORD

PAGE 1 **of** 1

Project Number:
Project Name: Exide FRC
Date: 3/7/13

Well Location (well ID, etc.): VCP-MW-4
Developed by: Kevin Dworsky
Measuring Point (MP) of Well: TOC/PVC
Screened Interval (ft. BGL): 5.0' - 15.0'
Filter Pack Interval (ft. BGL): 3.0' - 15.0'

Starting Water Level (ft. BMP): 7.30
Casing Stickup (ft.): ~ 3.36
Starting Water Level (ft. BGL): 3.94
Total Depth (ft. BGL): 18.51'
Casing Diameter (In ID): 2
Casing Volume (gal.): 1.794

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment - Liquinox & DI Water
Purging: PVC bailer **Surge Equipment:** Bailer
Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck
pH Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52
Turbidimeter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1635	—	—	—	—	—	—	—	Began surging well
1645	—	—	—	—	—	—	—	Began purging water w/ Bailer
1704	8	—	17.14	6.91	1170	TAN	1000+	~~well~~ WL Approx. 1.5' from TO
3/8/13 : Surged and bailed down well w/ disposable bailer								
935	—	—	—	—	—	—	—	Surged well for 1 min
936	—	—	—	—	—	—	—	Began bailing well
949	7	—	16.62	6.61	1210	TAN	1000+	
1056	~~3.5~~ 10.5	—	19.92	6.66	1200	TAN	1000+	
1130	~~1.5~~ 12	—	16.97	6.75	1290	TAN	1000+	
~~3/15/13 Bailed well dry. WL = 7.34~~								

otal Discharge (gallons): 8

Observations/Comments:

Removed 20 gallons

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1824 **Project Name:** Exide J Parcel **Date:** 3/13/13

Well Location (well ID, etc.): VCP-MW-4

Starting Water Level (ft. BMP): 7.34

Developed by: Kevin Dworsky

Casing Stickup (ft.): ~ 3.36

Measuring Point (MP) of Well: TOC/PVC

Starting Water Level (ft. BGL):

Screened Interval (ft. BGL): 5.0' - 15.0'

Total Depth (ft. BGL): 18.51

Filter Pack Interval (ft. BGL): 3.0' - 15.0'

Casing Diameter (In ID): 2"

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: Disposable Bailer Surge Equipment: Bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1334	—	—	—	—	—	—	—	Surged Well
1339	—	—	—	—	—	—	—	Began Bailing
1349	—	~~16.26~~	16.26	8.64	1510	TAN	1000+	
1359	—	~~16.96~~	16.96	8.55	1340	TAN	1000+	
1409	9	~~17.27~~	17.27	6.67	1630	TAN	779	
1616	—	—	—	—	—	—	—	Began bailing
1628	12.5	—	17.31	6.50	1120	NEUTRAL	211	STOPPED
1645	—	—	—	—	—	—	—	Began bailing
1650	13.5	—	17.56	6.67	1330	NEUTRAL	171	STOPPED

Total Discharge (gallons): __________________

Observations/Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824
Project Name: EXIDE-FRISCO-VCP
Date: 3-20-13

Sample Number: VCP-MW4	Starting Water Level (ft. BMP): 7.18
Sampling Location (well ID, etc.): VCP-MW4	Casing Stickup (ft.): —
Sampled by: JTB	Starting Water Level (ft. BGL): 7.18
Measuring Point (MP) of Well: TOC PVC	Total Depth (ft. BGL): 15
Screened Interval (ft. BGL):	Casing Diameter (In ID): 2.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump
Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK
Thermometer: YSI ~~556~~ PRO PLUS

pH Meter: YSI ~~556~~ PRO PLUS
Field Calibration: 7-4

Conductivity Meter: YSI ~~556~~ PRO PLUS
Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron
Other: TURB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1537		.10	17.3	6.67	1350	5.43	173.5	12.6	8.27
1543		.10	16.9	6.68	1320	5.30	176.5	11.7	8.68
1550		.11	17.1	6.71	1320	5.31	177.1	12.3	8.91
1553		.50	turned pump up to evacuate the well						
1600		.50							10.47
1610		.50							12.04
1622		.50							13.40
1631		.50							14.69
1650	CHANGED TO →	.70							16.40
1656		DRY							
3/21/13 1500			17.5	6.48	1120	5.14	196.7	9.1	7.81

Water Level (ft. BMP) at End of Purge: DRY
Sample Intake Depth (ft. BMP): 4' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
[illegible] 1515 JB	250mL	P	1	N	HNO3	TOTAL METALS
[illegible] 1515 JB	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
[illegible] 1515 JB	[illegible] L	G	2	N	—	SVOCS
	40mL	G	3	N	HCL	VOCS

Comments: 40mL G 3 N HCL TBlk

TCEQ-SPLIT TOTAL METALS - UNFILTERED PRESERVED

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SWG - SPLITTING ALL ANALYSIS ON THIS WELL

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: **Project Name:** **Date:**

Well Location (well ID, etc.): VCP - MW -5

Developed by: Kevin Dworsky

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): 5.0' – 20.0'

Filter Pack Interval (ft. BGL): 3.0' - 20.0'

Starting Water Level (ft. BMP): 15.61

Casing Stickup (ft.): ~ 3.42

Starting Water Level (ft. BGL): 12.19

Total Depth (ft. BGL): 23.30

Casing Diameter (In ID): 2"

Casing Volume (gal.): 1.230

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: **Dedicated Equipment** – DI WATER & Liquidnox

Purging: ~~Weighted~~ PVC bailer **Surge Equipment:** bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1305	—	—	—	—	—	—	—	Began surging Well
1315	—	—	—	—	—	—	—	Began bailing WATER
13 22	1	—	19.77	7.07	1020	TAN	1000+	Continued bailing
1338	4	—	18.79	7.11	1040	TAN	1000+	
1348	—	0.1	—	—	—		—	PLACED TYPHOON pump down
	4.3	↓						well
1352	[illegible]		19.53	7.18	1060	TAN	1000+	Well dry. Pump Off.
1407	—	0.7	—	—	—	TAN	—	Pump On
1408	5	↓	20.36	7.16	1070	TAN	1000+	well dry. Pump off
3/8/13 : Bailed WATER w/ A disposable bailer. WL = 15.60'								
855	—	—	—	—	—	—	—	Surged for 1 min.
915	4	—	17.77	7.07	1040	TAN	1000+	Bailed WATER for 19 min
1038	~~3~~ 7	—	17.59	7.22	1020	TAN	1000+	
1118	~~[illegible]~~ 8	—	17.85	7.09	1010	TAN	936	

Total Discharge (gallons): ~~5~~

Observations/Comments:

Removed ~~[illegible]~~ 13 gal Total

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1824 **Project Name:** Exide J Parcel **Date:** 3/13/13

Well Location (well ID, etc.): VCP- MW-5
Starting Water Level (ft. BMP): 15.43
Developed by: Kevin Dworsky
Casing Stickup (ft.): ~ 3.42
Measuring Point (MP) of Well: TOC/PVC
Starting Water Level (ft. BGL):
Screened Interval (ft. BGL): 5.0' - 20.0'
Total Depth (ft. BGL): 23.30
Filter Pack Interval (ft. BGL): 3.0' - 20.0'
Casing Diameter (In ID): 2
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: Disposable Bailer Surge Equipment: Bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1453	—	—	—	—	—	—	—	Surged Well
1508	—	—	—	—	—	—	—	Began Bailing
1550	8	—	18.79	7.04	1020	Neutral	91	

Total Discharge (gallons): 8

Observations/Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824
Project Name: EXIDE-FRISCO-VCP
Date: 3-19-13

Sample Number: VCPMW5
Sampling Location (well ID, etc.): VCP-MW5
Sampled by: JTB
Measuring Point (MP) of Well: TOC | PVC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 15.31
Casing Stickup (ft.): –
Starting Water Level (ft. BGL): 15.31
Total Depth (ft. BGL): 20 –
Casing Diameter (In ID): 2.0
Casing Volume (gal.): –

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump
Sampling: same
Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)
Water Level: KECK
Thermometer: YSI 556
pH Meter: YSI 556
Field Calibration: 7-4
Conductivity Meter: YSI 556
Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron
Other: TURB

SAMPLING MEASUREMENTS

1538 Time	Cum. Vol. (gal. or [✓ L])	Purge Rate (gal. or [✓ L /m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1548		.14	19.8	7.08	1306			5.5	15.78
1553		.13	19.6	7.12	1303			4.1	15.82
1558		.13	19.6	7.13	1302			4.4	15.83

Water Level (ft. BMP) at End of Purge: 15.83
Sample Intake Depth (ft. BMP): 2.5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1615	40mL	G	8	N	HCL	VOCS
1615	1L	G	2	N	–	SVOCS
1615	40mL	G	3	N	HCL	TPH
1615	250mL	P	1		HNO3	TOTAL METALS
1615	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS

Comments:
TCEQ - TOTAL METALS, VOCS, TPH

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SWG - WILL BE SPLITTING ALL ANALYSIS ON THIS WELL

Ⓐ FIELD BLANK TAKEN AT THIS WELL - FB-1 -1650

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number:
Project Name: Exide FRC
Date: 3/7/13

Well Location (well ID, etc.): VCP - MW - 6
Starting Water Level (ft. BMP): 16.71
Developed by: Kevin Dworsky
Casing Stickup (ft.):
Measuring Point (MP) of Well: TOC / PVC
Starting Water Level (ft. BGL):
Screened Interval (ft. BGL): 5.0' - 20.0'
Total Depth (ft. BGL): 23.56
Filter Pack Interval (ft. BGL): 3.0' - 20.0'
Casing Diameter (In ID): 2
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: **Dedicated Equipment** - DI Water & Liquinox
Purging: PVC Bailer / Mini - Typhoon Pump **Surge Equipment:** Bailer / pump
Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck
pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
Thermometer: Horiba U-52
Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1435 -	1445	—						Surged well with bailer
1508	6	—	19.15	6.91	1210	TAN	1000+	Removed water 1445-1508
1522	—	1.46	—	—	—	TAN	—	Turned Pump On. Surged
1527	[illegible]	↓	19.45	6.79	1210	TAN	1000+	Surged well.
1532			19.47	6.78	1220	TAN	1000+	
1537			19.50	6.77	1210	NEUTRAL	173	Surge well.
1542			19.48	6.77	1220	TAN	1000+	
1547			19.48	6.77	1220	NEUTRAL	51.6	Surged Well.
1552	50	↓	19.50	6.77	1220	TAN	1000+	
1557		1.4	19.49	6.75	1200	NEUTRAL	59.9	
1602		↓	19.50	6.75	1200	NEUTRAL	23.9	
1607	71	↓	19.51	6.75	1200	NEUTRAL	3.9	

Total Discharge (gallons):

Observations/Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824
Project Name: EXIDE-FRISCO-VCP
Date: 3-19-13

Sample Number: VCP-MW-6	Starting Water Level (ft. BMP): 16.32
Sampling Location (well ID, etc.): VCP-MW-6	Casing Stickup (ft.): —
Sampled by: JTB	Starting Water Level (ft. BGL): 16.32
Measuring Point (MP) of Well: TOC / PVC	Total Depth (ft. BGL): 20 —
Screened Interval (ft. BGL):	Casing Diameter (In ID): 2.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump
Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK
Thermometer: YSI 556

pH Meter: YSI 556
Field Calibration: 7-4

Conductivity Meter: YSI 556
Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micro
Other: TURB

SAMPLING MEASUREMENTS

1236 Time	Cum. Vol (gal. or [✓ L])	Purge Rate (gal. or [✓ L/m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1246		.18	20.0	6.93	1476			32	16.34
1251		.20	20.0	6.96	1478			21.8	16.34
1257		.20	20.0	6.97	1479			9.8	16.34
1309								6.1	

Water Level (ft. BMP) at End of Purge: 16.34
Sample Intake Depth (ft. BMP): 2' off BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1330	40mL	G	3	N	HCL	VOCS
1330	1L	G	2	N	—	SVOCS
1330	40mL	G	3	N	HCL	TPH
1330	250mL	P	1	N	HNO3	TOTAL METALS
1330	250mL	P	1	Y .45	HNO3	DISSOLVED METALS

Comments:
TCEQ - TOTAL METALS, TPH, VOC

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SWG - WILL BE SPLITTING ALL ANALYSIS ~~[illegible]~~ JR ON THIS WELL
SWG - MS/MSD and duplicate @ this well

PBW - MS/MSD and duplicate @ this well - DUP1

WELL DEVELOPMENT RECORD

PAGE 1 **of** 1

Project Number: 1755 **Project Name:** Exide J Parcel **Date:** 4/23/13

Well Location (well ID, etc.): VCP - MW - 7

Starting Water Level (ft. BMP): 12.45

Developed by: Kevin Dworsky

Casing Stickup (ft.): ~ 1.94

Measuring Point (MP) of Well: TOC / PVC

Starting Water Level (ft. BGL): 10.51

Screened Interval (ft. BGL):

Total Depth (ft. BGL): 12.92

Filter Pack Interval (ft. BGL):

Casing Diameter (In ID): 2

Casing Volume (gal.): 0.075

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: **Dedicated Equipment** / DI WATER & Liquinox Rinse

Purging: PVC Bailer **Surge Equipment:** PVC Bailer

Disposal of Discharged Water: **55 Gallon Drums**

INSTRUMENTS (indicate make, model, I.D.)

Water Level: **Keck**

pH Meter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: **Horiba U-52**

Turbidimeter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
926	—	—	—	—	—	—	—	—	—	Began Surging
936	—	—	—	—	—	—	—	—	—	Stopped Surging
937	—	—	—	—	—	—	—	—	—	Attempted To Purge

Total Discharge (gallons): 0

Observations/Comments:
After surging, no water left in well. WL after purging = 12.85'

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: Exide Battery Date: 1-9-14

Well Location (well ID, etc.): VCP-MW-7

Starting Water Level (ft. BMP): 12.85

Developed by: S. Berndt

Casing Stickup (ft.): 2.25

Measuring Point (MP) of Well: TOC/PVC

Starting Water Level (ft. BGL):

Screened Interval (ft. BGL): 2.5-10

Total Depth (ft. ~~BGL~~): BMP 12.92

Filter Pack Interval (ft. BGL):

Casing Diameter (In ID): 2.0

Casing Volume (gal.): 0.012 gals

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Alconox di rinse

Purging: bailer Surge Equipment: bailer

Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: e-line Thermometer:

pH Meter: Field Calibration:

Conductivity Meter: Field Calibration:

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (°C)	pH	Spec. Cond. (μmhos/cm)	Color	Turbidity & Sediment	

Jason said no need in developing (Not enough water)

Total Discharge (gallons):

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 **Project Name:** Exide J Parcel **Date:** 4/22/13

Well Location (well ID, etc.): VCP · MW-8	**Starting Water Level (ft. BMP):** 12.35
Developed by: Kevin Dwoesky	**Casing Stickup (ft.):** ~ 3.06
Measuring Point (MP) of Well: TOC/PVC	**Starting Water Level (ft. BGL):** ~ 9.29
Screened Interval (ft. BGL):	**Total Depth (ft. BGL):** 18.77
Filter Pack Interval (ft. BGL):	**Casing Diameter (In ID):** 2
	Casing Volume (gal.): 1.027

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment / DI WATER & Liquid NOX rinse

Purging: WATERA Tubing Surge Equipment: PVC Bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	**Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
Conductivity Meter: Horiba U-52	**Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	**Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
ORP Meter: Horiba U-52	**Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**
DO Meter: Horiba U-52	**Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
1702										STARTED Surge
1717										STOPPED Surge
1723	—	0.8	—							STARTED Pumping
1728	~~5~~ 4	↓	21.93	6.96	1090	145	5.16	TAN	1000+	WELL DRY
1743	—	1.0								STARTED Pumping
1748	9	↓	19.55	6.62	1170	174	4.90	TAN	1000+	Well dry
1803	—									STARTED Pumping
1809	14	↓	18.56	6.59	1160	176	4.25	TAN	1000+	Well dry

Total Discharge (gallons): 14

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 **Project Name:** Exide **Date:** 4/23/13

Well Location (well ID, etc.): VCP-MW-8	**Starting Water Level (ft. BMP):** 12.60
Developed by: Kevin Dworsky	**Casing Stickup (ft.):** ~ 3.06
Measuring Point (MP) of Well: TOC/PVC	**Starting Water Level (ft. BGL):** ~
Screened Interval (ft. BGL):	**Total Depth (ft. BGL):** 13.77 → 18.78
Filter Pack Interval (ft. BGL):	**Casing Diameter (In ID):** 2
	Casing Volume (gal.): 1.019

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: Waterra Tubing **Surge Equipment:** Same

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Conductivity Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

ORP Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DO Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
1048	—	1.0	—	—	—	—	—	—	—	STARTED Purging
1054	6	↓	17.30	6.62	1160	168	2.45	TAN	1000+	STOPPED Purging
1100	—	0.93	—	—	—	—	—	—	—	STARTED Purging
	~~—~~		~~17.30~~	~~6.62~~	~~1160~~	~~168~~	~~2.45~~	~~TAN~~	~~10~~	
1106	11	↓	16.86	6.70	1170	164	2.50	TAN	1000+	well Dry
1145	—	0.39	—	—	WL= 12.70'		—	—	—	STARTED Purging
1154	19	↓	16.38	6.66	1180	174	2.36	TAN	1000+	WELL DRY
1412	—		—	—	WL =	12.52'	—	—	—	STARTED Purging
1423	29	↓	15.50	6.75	1200	181	2.63	TAN	1000+	Well Dry
1510	—	0.93	—	—	WL= 12.70'		—	—	—	STARTED Purging
1525	43	↓	15.94	6.66	1220	186	2.20	TAN	1000+	Well Dry
1630	—	0.74	—	—	—	—	—	—	—	STARTED Purging
1701	66	↓	17.19	6.58	1170	192	1.88	NEUTRAL	117	STOPPED Pump

Total Discharge (gallons): 66

Observations/Comments:
Used Torpedo Type pump for last 30 min

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: EXIDE-FRISCO Date: 4-26-13

Sample Number: VCP-MW-8

Sampling Location (well ID, etc.): VCP-MW-8

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 12,41

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 12,41

Total Depth (ft. BGL):

Casing Diameter (In ID):

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI ~~556~~ PRO PLUS

pH Meter: YSI ~~556~~ PRO PLUS Field Calibration: 7-4

Conductivity Meter: YSI ~~556~~ PRO PLUS Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micro Other: TVRB

SAMPLING MEASUREMENTS

1226 Time	Cum. Vol. (gal. or [✓ L])	Purge Rate (gal. or [✓ L/m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1234		.15	19,3	6,71	1150	0,64	114,7	8,7	12,69
1240		,20	19,4	6,71	1160	0,67	104,1	7,5	12,71
1245		,20	19,4	6.72	1160	0,64	104,7	8,4	12,71

Water Level (ft. BMP) at End of Purge: 12,71

Sample Intake Depth (ft. BMP): 3' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1300	250mL	P	1	N	HNO3	TOTAL METALS
1300	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1300	40mL	G	3	—	HCL	VOCS
1300	40mL	G	3	—	HCL	TPH
Comments:	1L	G	2	—	—	SVOCS

SWG-- SPLIT ALL SAMPLES AND TOOK A DUPLICATE

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Ⓐ TOOK AN MS/MSD and DUPLICATE AT THIS WELL

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 **Project Name:** Exide T Parcel **Date:** 4/22/13

Well Location (well ID, etc.): VCP-MW-9

Starting Water Level (ft. BMP): 9.03

Developed by: Kevin Dworkey

Casing Stickup (ft.): ~3.00

Measuring Point (MP) of Well: TOC/PVC

Starting Water Level (ft. BGL): ~

Screened Interval (ft. BGL):

Total Depth (ft. BGL): 22.93

Filter Pack Interval (ft. BGL):

Casing Diameter (In ID): 2

Casing Volume (gal.): 2.224

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: **Dedicated Equipment** / DI Water ; Liquidnox Rinse

Purging: Watera Tubing **Surge Equipment:** PVC Bailer

Disposal of Discharged Water: **55 Gallon Drums**

INSTRUMENTS (indicate make, model, I.D.)

Water Level: **Keck**

pH Meter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: **Horiba U-52**

Turbidimeter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: **Horiba U-52** **Field Calibration:** **Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
1524	—	—	—	—	—	—	—	—	—	Began surging
1534	—	—	—	—	—	—	—	—	—	Stopped surging
1538	—	1.67	—	—	—	—	—	—	—	Began pumping
1541	5	↓	20.80	7.15	840	123	6.21	TAN	1000+	Stopped Pumping
1548	—	1.33	—	—	—	—	—	—	—	Began Pumping
1551	9	↓	20.71	7.02	889	144	6.96	TAN	1000+	Well dry
1606	—	0.2	—	—	—	—	—	—	—	Began pumping
1609	9.6	↓	20.85	7.28	967	133	8.07	TAN	1000+	Well dry
1624	—	0.2								Began pumping
1626	10.0	↓	20.88	7.01	954	152	6.54	TAN	1000+	Well dry

Total Discharge (gallons): 10.0

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 **Project Name:** Exide **Date:** 4/23/13

Well Location (well ID, etc.): VCP - MW-9	**Starting Water Level (ft. BMP):** 13.37
Developed by: Kevin Dworsky	**Casing Stickup (ft.):** ~ 3.00
Measuring Point (MP) of Well: TOC/PVC	**Starting Water Level (ft. BGL):** 10.37
Screened Interval (ft. BGL):	**Total Depth (ft. BGL):** 22.83
Filter Pack Interval (ft. BGL):	**Casing Diameter (In ID):** 2
	Casing Volume (gal.): 1.530

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: WATERA **Surge Equipment:** SAME

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Conductivity Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

ORP Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DO Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
1028	—	0.83	—	—	—	—	—	—	—	Began Purging
1034	5	↓	18.97	6.79	893	156	5.21	TAN	1000+	Well dry
1133	—	0.6	—	—	WL =	19.41'	—	—	—	Began purging
1135	6.2	↓	17.31	7.08	845	158	4.60	TAN	1000+	Well dry
1137	—	1.0	—	—	WL =	19.86'	—	—	—	Began purging
1138	7.2	↓	18.22	7.12	797	151	4.41	TAN	1000+	Well Dry
1500	—	0.6	—	—	WL =	20.77'	—	—	—	Began purging
1501	7.8	↓	17.17	7.06	776	168	5.19	TAN	1000+	Well dry.
1609	—	0.4	—	—	WL =	21.16'	—	—	—	Began purging
1640	8.2	↓	16.14	7.09	768	175	6.65	TAN	1000+	Well dry.

Total Discharge (gallons): 8.2

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 **Project Name:** Exide **Date:** 4/24/13

Well Location (well ID, etc.): VCP-MW-9	**Starting Water Level (ft. BMP):** 15.42
Developed by: Kevin Dworsky	**Casing Stickup (ft.):** ~ 3.00
Measuring Point (MP) of Well: TOC/PVC	**Starting Water Level (ft. BGL):** 12.42
Screened Interval (ft. BGL):	**Total Depth (ft. BGL):** 22.93
Filter Pack Interval (ft. BGL):	**Casing Diameter (In ID):** 2
	Casing Volume (gal.): 1.202 = 4.549 L

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: Peristaltic Pump **Surge Equipment:** None

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Conductivity Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

ORP Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DO Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
928	—	0.2	—	—	—	—	—	—	—	Pump On
938	2	↓	16.91	6.83	744	165	3.95	NEUTRAL	2.2	WL= 16.45
943	3	↓	17.28	6.79	737	164	4.28	↓	4.4	WL= 16.91
948	4	↓	17.46	6.79	735	164	4.83	↓	5.2	WL= 17.40
953	5	↓	17.66	6.79	736	164	5.30	↓	3.9	WL= 17.81
959	6	↓	17.80	6.80	740	164	5.30	↓	5.7	WL= 18.25

TURNED PERISTALTIC PUMP ALL THE WAY UP TO DRY UP WELL.

Total Discharge (gallons): 5

Observations/Comments:

Intake at 1.5' from TD

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824
Project Name: EXIDE-FRISCO
Date: 4/25/13

Sample Number: VCP-MW-9
Sampling Location (well ID, etc.): VCP-MW-9
Sampled by: JTB
Measuring Point (MP) of Well: TOC | PVC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 14.30
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 14.30
Total Depth (ft. BGL): 22.93
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump
Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)
Water Level: KECK
Thermometer: YSI ~~556~~ PRO PLUS
pH Meter: YSI ~~556~~ PRO PLUS
Field Calibration: 7-4
Conductivity Meter: YSI ~~556~~ PRO PLUS
Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron
Other: TURB

SAMPLING MEASUREMENTS

1122 Time	Cum. Vol (gal. or [✓ L])	Purge Rate (gal. or [✓ L/m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1130		.15	19.8	6.93	750	3.07	101.1	8.5	15.17
1136		.15	19.9	6.95	760	2.94	102.3	10.4	15.67
1141		.15	19.9	6.96	760	2.91	102.4	10.9	16.12
1143		turn	the	pump	up				
1145		.70							
1150									18.11
1155									19.57
1200		.70							20.91
1205									DRY
4/26/13 1130			19.7	6.91	710	3.61	103.3	6.7	14.52

Water Level (ft. BMP) at End of Purge: DRY
Sample Intake Depth (ft. BMP): 3' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
4/26/13 1140	250ML	P	1	N	HNO3	TOTAL METALS
1140	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
1140	40ML	G	3	—	HCL	VOCS
1140	40ML	G	3	—	HCL	TPH

Comments: 1L G 2 — — SVOCS

SWG - SPLIT ALL SAMPLES

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: Project Name: EXIDE Date: 4-21-15

Sample Number: VCP-MW9

Sampling Location (well ID, etc.): VCP-MW-9

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 3.96

Casing Stickup (ft.): 1

Starting Water Level (ft. BGL):

Total Depth (ft. BGL): 22.95

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (indicate make, model, i.d.)

Water Level: KECK Thermometer: HORIBA

pH Meter: HORIBA Field Calibration: 7-4

Conductivity Meter: HORIBA Field Calibration: 1413

Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0809 Time	Cum. Vol. (gal. or [✓ L])	Purge Rate (gal. or [✓ L/m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0814	—	.2	17.7	7.21	1280	2.74	98	36	4.29
0817		.2							[illegible]
0819			18.0	7.21	1250	1.67	101	6.9	4.68
0824			18.0	7.24	1240	1.48	102	8.6	5.67
0827	turned the pump up to run the well dry								
0934	well is dry (15 gallons removed)								
4-22-15 0807			18.5	7.21	1520	1.62	106	8.9	WL-4.77

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0810		P	1	N	—	METALS
0810		P	1	N	HNO3	METALS

Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 **Project Name:** Exide J Parks **Date:** 4/22/13

Well Location (well ID, etc.): VCP-MW-10	**Starting Water Level (ft. BMP):** 13.46
Developed by: Kevin Dworsky	**Casing Stickup (ft.):** ~ 2.87
Measuring Point (MP) of Well: TOC / PVC	**Starting Water Level (ft. BGL):** ~ 10.59
Screened Interval (ft. BGL):	**Total Depth (ft. BGL):** 17.82
Filter Pack Interval (ft. BGL):	**Casing Diameter (In ID):** 2
	Casing Volume (gal.): 0.648

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment / DI Water & Liquid nox rinse

Purging: Watera Tubing **Surge Equipment:** PVC Bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
1404 - 1414										Surged well
1419	—	0.42								Began pumping
1424	2.5	↓	21.54	6.65	1610	110	8.70	TAN	1000+	STOPPED Pumping
1434	—	0.1								Began pumping
1436	2.7	↓	21.21	7.03	1630	111	8.91	TAN	1000+	Well dry
1500	—	0.2								Began pumping
1501	2.9	↓	21.89	7.20	1650	115	10.30	TAN	1000+	Well dry

Total Discharge (gallons): 2.9

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 **of** 1

Project Number: 1755 **Project Name:** Exide **Date:** 4/23/13

Well Location (well ID, etc.): VCP-MW-10	**Starting Water Level (ft. BMP):** 13.05
Developed by: Kevin Dworsky	**Casing Stickup (ft.):** ~2.87
Measuring Point (MP) of Well: TOC/PVC	**Starting Water Level (ft. BGL):** ~10.18
Screened Interval (ft. BGL):	**Total Depth (ft. BGL):** 17.82
Filter Pack Interval (ft. BGL):	**Casing Diameter (In ID):** 2
	Casing Volume (gal.): 0.763

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: **Dedicated Equipment** ~~/ DI WATER & Liquino Nox Rinse~~

Purging: WATERA Tubing **Surge Equipment:** SAME

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
1013	—	1.0	—	—	—	—	—	—	—	Began Purging
1015	2	↓	18.15	6.39	1800	201	7.07	TAN	1000+	Well Dry
1127	—	0.6	—	—	—	WL = 15.46		—	—	Began Purging
1128	2.6	↓	15.97	7.07	1700	162	7.12	TAN	1000+	Well Dry
1327	—	0.3	—	—	WL = 16.19'		—	—	—	Began purging
1328	2.9	↓	15.62	7.30	1660	151	7.82	TAN	1000+	Well dry
1449	—	0.3	—	—	WL= 16.61'		—	—	—	Began purgeing
1450	3.2	↓	14.94	7.25	1800	169	7.40	TAN	1000+	Well Dry
1554	—	0.3	—	—	WL= 16.82'		—	—	—	Began purging
1555	3.5	↓	14.18	7.16	1780	181	7.67	Tan	1000+	Well Dry

Total Discharge (gallons): 3.5

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 **of** 1

Project Number: 1755 **Project Name:** Exide **Date:** 4/24/13

Well Location (well ID, etc.): VCP-MW-10	**Starting Water Level (ft. BMP):** 13.73
Developed by: Kevin Durocher	**Casing Stickup (ft.):** ~ 2.87
Measuring Point (MP) of Well: TOC/PVC	**Starting Water Level (ft. BGL):** ~ ~~[illegible]~~ 10.86
Screened Interval (ft. BGL):	**Total Depth (ft. BGL):** 17.82
Filter Pack Interval (ft. BGL):	**Casing Diameter (In ID):** 2
	Casing Volume (gal.): 0.654 = 2.477 L

QUALITY ASSURANCE

***METHODS** (describe):*

Cleaning Equipment: Dedicated Equipment

Purging: Peristaltic Pump **Surge Equipment:** None

Disposal of Discharged Water: 55 Gallon Drums

***INSTRUMENTS** (indicate make, model, I.D.)*

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Conductivity Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

ORP Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DO Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality					Appearance		Remarks
	Cum. Vol. (gal. / [✓ L])	Purge Rate (gal. / [✓ Lpm])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	ORP (mV)	DO (mg/L)	Color	Turbidity & Sediment	
844	—	0.2	—	—	—	—	—	—	—	Pump On
849	1	↓	11.13	6.58	2030	175	9.36	NEUTRAL	12.9	WL=14.3
854	2	↓	13.00	6.79	2000	170	8.71	↓	17.9	WL=14.65
859	3	↓	13.37	6.87	2000	170	9.00	↓	14.2	WL=14.9
904	4	↓	14.07	6.90	1960	171	9.08	↓	8.9	WL=15.3
909	5	↓	14.54	6.90	1840	173	9.02	↓	4.8	WL=15.75

Turned Peristaltic on all the way to dry up well

Total Discharge (~~gallons~~): ~~[illegible]~~ 2.5 gal

Observations/Comments:
Tubing set 1' from bottom

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: EXIDE-FRISCO Date: 4/25/13

Sample Number: VCP-MW-10

Sampling Location (well ID, etc.): VCP-MW-10

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 13.28

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 13.28

Total Depth (ft. BGL): 17.84

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI ~~556~~ PRO PLUS Field Calibration: 7-4

Conductivity Meter: YSI ~~556~~ PRO PLUS Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1024 Time	Cum. Vol (gal. or [✓ L])	Purge Rate (gal. or [✓ L]/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1033		.15	19.5	7.05	1870	3.62	151.1	18.7	14.39
1041		.15	19.6	7.08	1810	3.57	139.4	18.0	15.11
1046		.15	19.6	7.08	1820	3.56	140.1	12.4	15.68
1047		turn the pump up							
1048		.70							
1059		well is dry							
									13.24
4/26/13 1034			19.4	7.14	1790	4.18	142.1	8.1	

Water Level (ft. BMP) at End of Purge: 17.84 Sample Intake Depth (ft. BMP): 2' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
4/26/13 1040	250mL	P	1	N	HNO3	TOTAL METALS
1040	250mL	P	1	Y - .45	HNO3	DISSOLVED METALS
1040	40mL	G	3	—	HCL	VOCS
1040	40mL	G	3	—	HCL	TPH
	1L	G	2	—	—	SVOCS

Comments:

SWG - SPLIT ALL SAMPLES

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number:
Project Name: EXIDE - FRISCO
Date: 4-21-15

Sample Number: VCP-MW-10
Sampling Location (well ID, etc.): VCP-MW-10
Sampled by: JTB
Measuring Point (MP) of Well: TOC/PVC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 4.33
Casing Stickup (ft.): 1
Starting Water Level (ft. BGL):
Total Depth (ft. BGL): 17.95
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: perastaltic pump
Sampling: Same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)
Water Level: KECK
Thermometer: HORIBA
pH Meter: HORIBA
Field Calibration: 7-4
Conductivity Meter: HORIBA
Field Calibration: 1413
Filter / Filter Size: —
Other:

SAMPLING MEASUREMENTS

1024 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or [✓ L/m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
		.2							
1028	turned off (weather)								
1041		.2							
1046			17.7	7.27	955	1.97	159	17	5.26
1051			17.7	7.26	950	1.47	156	12	5.98
1053	turn on pump higher to run well dry (11 gallons removed)								
4-22-15 0820									WL-8.11
0825			18.2	7.46	1170	2.29	172	9.7	

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
0828	40mL	G	3	N	HCL	

Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: Exide - Frisco Date: 1-9-14

Well Location (well ID, etc.): VCP-MW-11	Starting Water Level (ft. BMP): 14.86
Developed by: S. Berndt	Casing Stickup (ft.): 2.60
Measuring Point (MP) of Well: TOC / PVC	Starting Water Level (ft. BGL):
Screened Interval (ft. BGL): 2.5-15	Total Depth (ft. ~~BGL~~): 17.80 BMP
Filter Pack Interval (ft. BGL):	Casing Diameter (In ID): 2.0"
	Casing Volume (gal.): 0.50 gals.

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Alconox / DI Rinse

Purging: bailer Surge Equipment: bailer

Disposal of Discharged Water: onsite drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: e-line Thermometer:

pH Meter: Field Calibration:

Conductivity Meter: Field Calibration:

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (°C)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	
1001	Surging started for 10 mins Purged							
	1½ gallons 1018 DRY							
1019	DTW 17.51							

Total Discharge (gallons):

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1856 **Project Name:** Exide FRS Landfill **Date:** 3/5/13

Well Location (well ID, etc.): MW-28	**Starting Water Level (ft. BMP):** 14.96
Developed by: Kevin Dworsky	**Casing Stickup (ft.):** 3.31
Measuring Point (MP) of Well: TOC / PVC	**Starting Water Level (ft. BGL):** 11.65
Screened Interval (ft. BGL): ~~7.0' – 21.5'~~ 5.0 - 19.5'	**Total Depth (ft. BGL):** 23.42
Filter Pack Interval (ft. BGL): ~~4.0' – 22.0'~~ 2.5 - 20.0	**Casing Diameter (In ID):** 2
	Casing Volume (gal.): 1.354

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: **Dedicated Equipment** – DI Water & Liquinox

Purging: Mini-Typhoon Pump **Surge Equipment:** Same

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Conductivity Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

ORP Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DO Meter: Horiba U-52 **Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution**

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1431	–	0.25	–	–	–	Tan	–	Pump On
1436	1	↓	18.86	7.07	980	Neutral	59.2	Pump off
1441	–	0.20	–	–	–	Tan	–	Pump On. Surged Well
1446	2	↓	18.13	7.10	951	Tan	558	Pump off
1456	–	0.15	–	–	–	Tan	–	Pump On. Surged Well.
~~[illegible]~~ 150	2	↓	16.91	7.16	943	Neutral	276	
1506	3	↓	16.62	7.13	946	Neutral	178	Pump off.
1516	–	–	–	–	–	–	–	Pump On.
1521								Dry
~~[illegible]~~								

Total Discharge (gallons): 3

Observations/Comments:

Well kept running dry

~~gallons~~

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1856 **Project Name:** Exide FRC Landfill **Date:** 3/6/13

Well Location (well ID, etc.): MW-28

Developed by: Kevin Dworsky

Measuring Point (MP) of Well: TOC /PVC

Screened Interval (ft. BGL): ~~20'-21.5'~~ 5.0'-19.5'

Filter Pack Interval (ft. BGL): ~~4.0'-22.0'~~ 2.5'-20.0'

Starting Water Level (ft. BMP): 15.01

Casing Stickup (ft.): ~ 3.31

Starting Water Level (ft. BGL): 11.70

Total Depth (ft. BGL): 23.42

Casing Diameter (In ID): 2

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: ~~[illegible]~~ Mini-Typhoon Pump **Surge Equipment:** Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Conductivity Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

ORP Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DO Meter: Horiba U-52 **Field Calibration:** Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
940	—	0.4	—	—	—	Tan	—	Pump on
950	4	↓	17.14	7.01	946	Neutral	83.6	Pump was turning on
								and off during interv
								ORP: 143 mV
								DO: 6.81 mg/L
								TDS: 0.607 g/L

Total Discharge (gallons): 4

Observations/Comments:

Well pumped dry

7 gallons removed over 2 days

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: EXIDE-FRISCO Date: 3-20-13

Sample Number: MW-28
Sampling Location (well ID, etc.): MW-28
Sampled by: JTB
Measuring Point (MP) of Well: TOC | PVC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 14.58
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 14.58
Total Depth (ft. BGL): 125 —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)
Water Level: KECK
Thermometer: YSI 556
pH Meter: YSI 556
Field Calibration: 7-4
Conductivity Meter: YSI 556
Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron
Other: TURB

SAMPLING MEASUREMENTS

0828 Time	Cum. Vol. (gal. or [✓ L])	Purge Rate (gal. or [✓ L /m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0838		.11	17.7	7.31	1171			7.4	15.23
0843		.11	17.4	7.33	1166			7.2	16.43
0848		.11	17.4	7.34	1161			6.8	15.64
0853		.11	17.7	7.34	1165			6.9	15.82
0858		.11	17.6	7.35	1163			8.9	15.91
0903			17.5	7.36	1162				16.07
0905-	turned the pump up to evacuate the well, pump is @ .45LPM								
0935		.45							18.75
	turned pump all the way up.								
0945-	well is dry								
3/21/13 0815	—	—	18.2	7.45	950	5.21	276	7.8	14.55

Water Level (ft. BMP) at End of Purge: DRY
Sample Intake Depth (ft. BMP): 3' off bottom

SAMPLE INVENTORY

Bottles Collected						
Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
0830	40mL	G	3	N	HCL	VOCS
0830	1L	G	2	N	—	SVOCS
0830	40mL	G	3	N	HCL	TPH
0830	250mL	P	1	N	HNO3	TOTAL METALS
Comments:	250mL	P	1	Y - .45	HNO3	DISSOLVED METALS

TCEQ - NO SAMPLES

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SWG- IS SPLITING ALL ANALYSIS AT THIS LOCATION

GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: EXIDE-FRISCO-VCP Date: 3-21-13

Sample Number: MW-19	Starting Water Level (ft. BMP): 12.86
Sampling Location (well ID, etc.): MW-19	Casing Stickup (ft.): —
Sampled by: JTB	Starting Water Level (ft. BGL): 12.86
Measuring Point (MP) of Well: TOC | PVC	Total Depth (ft. BGL): 25.20 —
Screened Interval (ft. BGL):	Casing Diameter (in ID): 2.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556 PRO PLUS

pH Meter: YSI 556 PRO PLUS Field Calibration: 7-4

Conductivity Meter: YSI 556 PRO PLUS Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TURB

SAMPLING MEASUREMENTS

1603 Time	Cum. Vol. (gal. or [✓ L])	Purge Rate (gal. or [✓ L/m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1613		.10	20.1	6.51	2880	0.56	137.4	6.1	13.41
1618		.10	20.0	6.63	2010	0.43	129.5	3.2	13.86
1625		.10	19.7	6.60	2020	0.42	128.4		14.12
1630-		.50	turned up the pump to evacuate the well						
1645									16.45
1704									18.64
1715		.50							20.34
1720		.60	turned pump up again						20.80
1733									
1747	well is dry								25.20
1412			18.3	6.85	1320	0.76	121.7	9.4	13.09

3/22/13

Water Level (ft. BMP) at End of Purge: 25.20 Sample Intake Depth (ft. BMP): 6' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1420	40mL	G	2	N	HCL	VOCS
1420	1L	G	2	N	NONE	SVOCS
1420	40mL	G	1	N	HCL	TPH
1420	250mL	P	1	N	HNO3	TOTAL METALS
1420	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS

Comments:

TCEQ - TOTAL METALS - FILTERED
DUPLICATE AT THIS WELL - PRESERVED

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
(512) 671-3434 Fax (512) 671-3446

SWG - SPLITTING ALL ANALYSIS ON THIS WELL

GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: EXIDE-FRISCO-VCP Date: 3-20-13

Sample Number: MW-20

Sampling Location (well ID, etc.): MW-20

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 13.54

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 13.54

Total Depth (ft. BGL): 25.20

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: Same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI ~~556~~ PRO PLUS

pH Meter: YSI ~~556~~ PRO PLUS Field Calibration: 7-4

Conductivity Meter: YSI ~~556~~ PRO PLUS Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1221 Time	Cum. Vol (gal. or [✓ L])	Purge Rate (gal. or [✓ L/m])	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1236		.10	20.6	6.04	7330	0.73	125.5	6.0	14.78
1241		.10	20.6	6.10	7290	0.72	117.6	7.2	15.10
1246		.10	20.2	6.26	7210	0.87	116.3	5.9	15.48
1247		.40	turned the pump up to evacuate the well						
1255		.40							
1257		.50							
1300		.50							17.90
1305		.50							18.89
1320	well is dry								
3/21/13 1315								72	18.97
1343			21.8	6.15	7380	0.89	131.2	—	—

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 5' off bottom

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1330	250mL	P	1	Y-10	HNO3	TOTAL METALS
1330	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1330	250mL	P	1	N	HNO3	TOTAL METALS UNFILTERED
1330	40mL	G	3	N	HCL	VOCS
1330	40mL	G	3	N	HCL	TPH

Comments: TCEQ - NO SAMPLES

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
(512) 671-3434 Fax (512) 671-3446

SWG - SPLIT ALL ANALYSIS AT THIS WELL

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: Exide - Frisco Date: 1-3-14

Well Location (well ID, etc.): VCP-MW-12

Developed by: Steve Berndt

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. ~~BGL~~) BMP 13 - 33

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 26.81

Casing Stickup (ft.): 3.0'?

Starting Water Level (ft. BGL):

Total Depth (ft. ~~BGL~~) BMP 33.20

Casing Diameter (In ID): 2.0"

Casing Volume (gal.): 1.065

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: DI Rinse

Purging: bailer

Surge Equipment: bailer

Disposal of Discharged Water: onsite drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: e-line

Thermometer: NA

pH Meter: NA

Field Calibration:

Conductivity Meter:

Field Calibration:

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (°C)	pH	Spec. Cond. (μmhos/cm)	Color	Turbidity & Sediment	
1116	began development w/ disposable bailer (surging)							
1126	began removal of water							
1134	Approx 2 gals removed not dry							
1138	began bailing water again and stopped after							
	2 more gals. removed							
1142	DTW	32.32						
1144	bailed (started) and bailed for 5 mins							
	and only removed about a 1/4 gallon							
1149	DTW	32.94						
1249	DTW	32.02						
1249	-1259	surged with bailer						
1259	-1306	removed all water (0.25 gals)						
1307	DTW	33.08						

Total Discharge (gallons): 4.5 gallons

Observations/Comments:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

WELL DEVELOPMENT RECORD

PAGE ____ of ______

Project Number:

Project Name:

Date: 1-9-14

Well Location (well ID, etc.): VCP-mw-12

Developed by: S Berndt

Measuring Point (MP) of Well: Toc / PVC

Screened Interval (ft. BGL): 9.5-25.5

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 30.08

Casing Stickup (ft.): 3.30

Starting Water Level (ft. BGL):

Total Depth (ft. ~~BGL~~): 33.20 Bmp

Casing Diameter (In ID): 2

Casing Volume (gal.): 0.53

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Alconox / DI Rinse

Purging: bailer

Surge Equipment: bailer

Disposal of Discharged Water: on site drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: e-line

Thermometer:

pH Meter:

Field Calibration:

Conductivity Meter:

Field Calibration:

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (°C)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	
1040	Surged for 10 mins					Purged for 10 mins		
with 1½ gals removed.								
1100	DTW 32.71							

Total Discharge (gallons):

Observations/Comments:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1824 Project Name: Exide-Frisco Date: 1-3-14

Well Location (well ID, etc.): YCP-MW-13

Developed by: Steve Berndt

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): ?

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 0

Casing Stickup (ft.):

Starting Water Level (ft. BGL):

Total Depth (ft. ~~BGL~~): BMP 26.91

Casing Diameter (In ID): 2.0"

Casing Volume (gal.): 0.0

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: DI Rinse

Purging: NA Surge Equipment: NA

Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: e-line Thermometer:

pH Meter: Field Calibration:

Conductivity Meter: Field Calibration:

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (°C)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	
1155	no	water						
1315?	—"—	"—	still					

Total Discharge (gallons):

Observations/Comments:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

WELL DEVELOPMENT RECORD

PAGE ____ of ____

Project Number: 1824 Project Name: Exide Frisco Date: 1-9-14

Well Location (well ID, etc.): VCP-MW-13

Developed by: S. Berndt

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): 4-24

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 25.30

Casing Stickup (ft.): 2.65

Starting Water Level (ft. BGL):

Total Depth (ft. B~~GL~~): 26.93 BMP

Casing Diameter (In ID): 2.0"

Casing Volume (gal.): 0.24 gals

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Alconox / DI Rinse

Purging: bailer Surge Equipment: bailer

Disposal of Discharged Water: on site drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: e-line Thermometer:

pH Meter: Field Calibration:

Conductivity Meter: Field Calibration:

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (°C)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	
921	Surge started				for	10 mins	931	purging
~~8~~ 76	mins	at	939		(0.45 gals)			~~DTW 26.63~~
940								
								DTW-26.63

Total Discharge (gallons):

Observations/Comments:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

APPENDIX 5
WATER WELL RECORDS

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

Friday, April 05, 2013

CLIENT

PASTOR, BEHLING and WHEELER, L.L.C.
2201 Double Creek Drive
Suite 4004
Round Rock, TX 78664

SITE

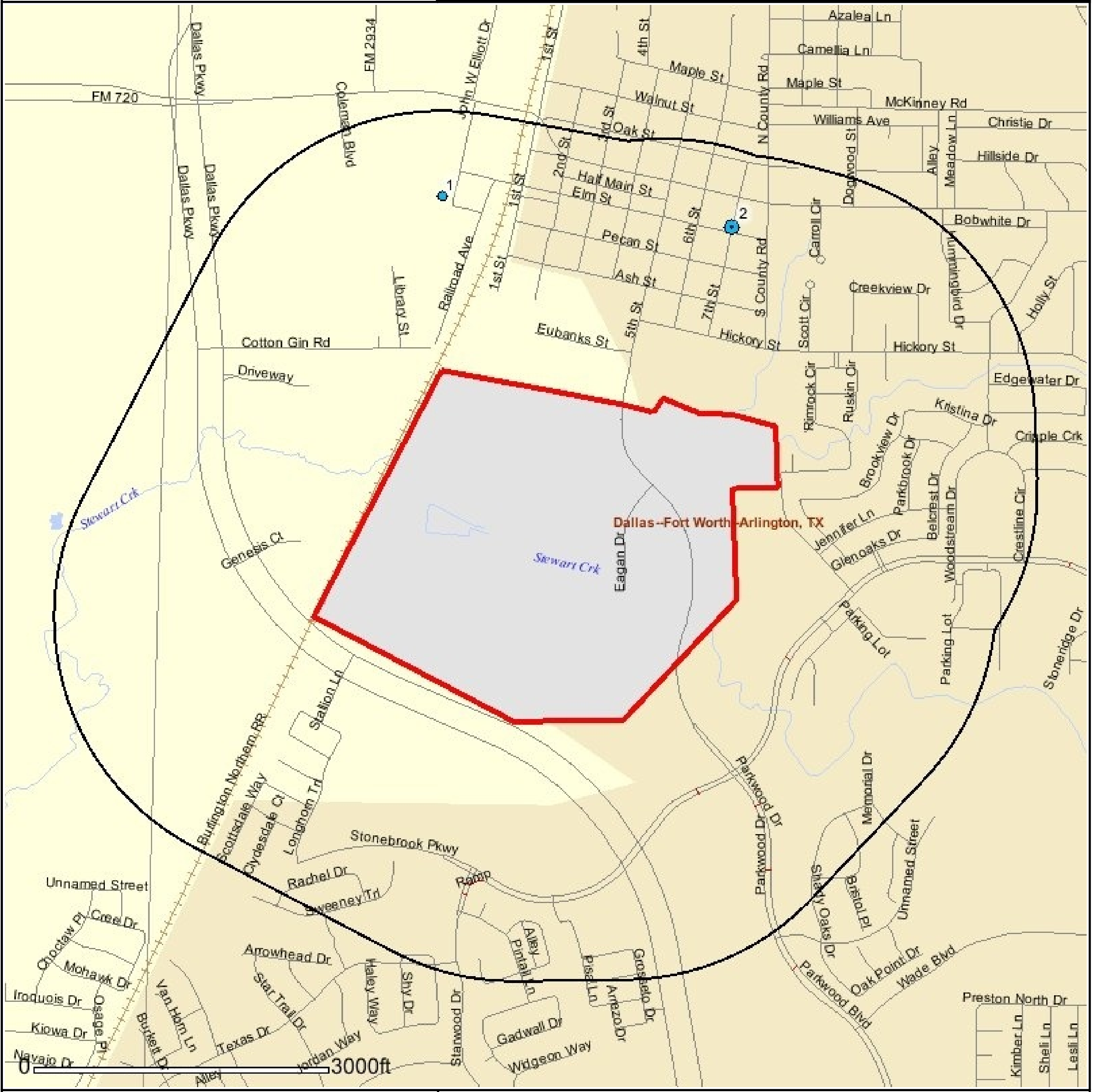
Exide Undeveloped Buffer Property
7471 South 5th Street
Frisco, TX 75034
PO #: 1824
ES #: 104926

BISMap #: 040513-15172

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

Map of Wells within 0.5 Mile(s)



★ Site
● Well
⊙ Cluster
Limited Access Hwy
Primary Highway
Secondary Highway
Roads
Railroad
☐ County
☐ State
☐ Urban Area
☐ Water Bodies

One inch = 0.32 miles

Exide Undeveloped Buffer Property

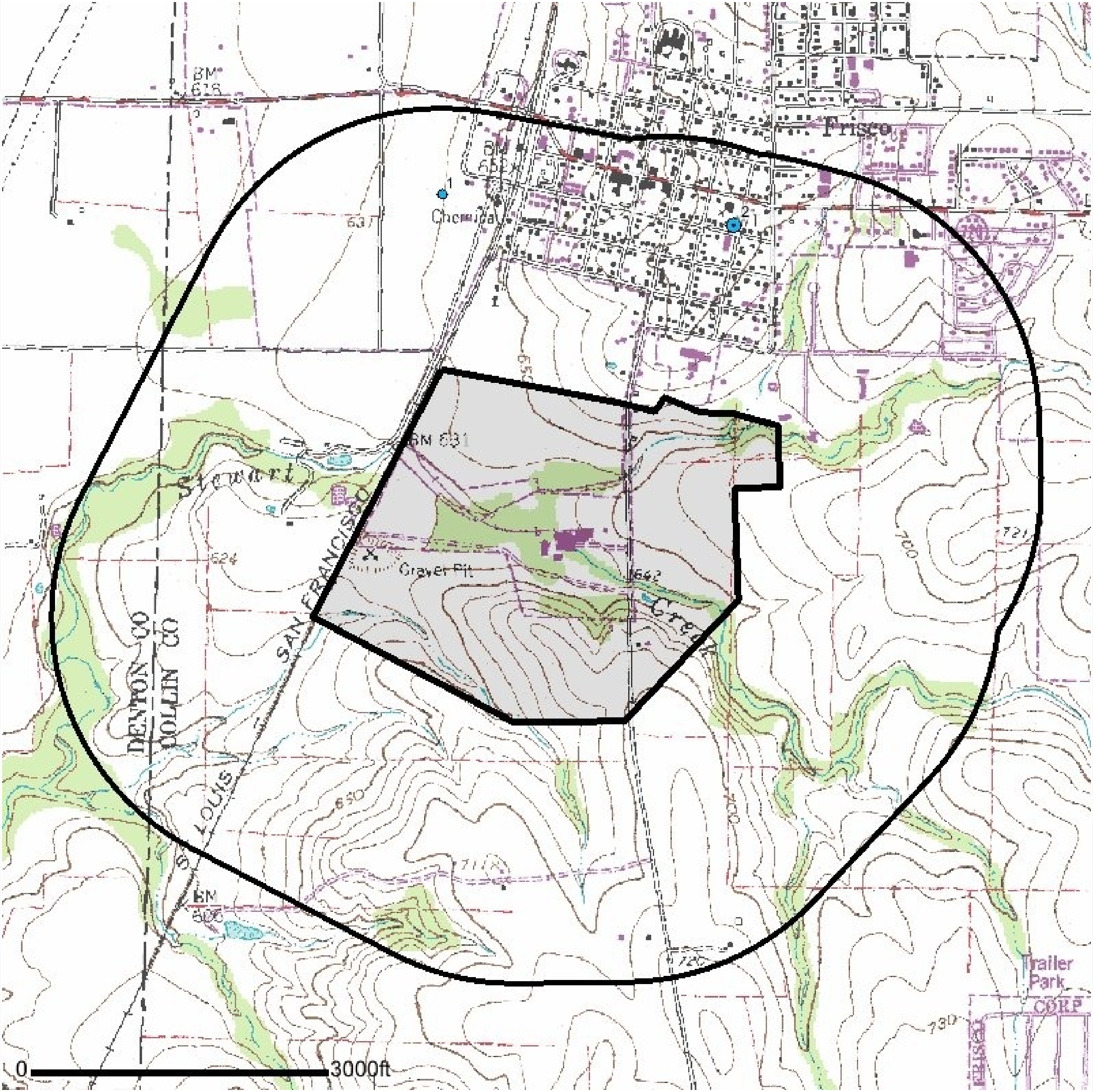
Banks Environmental Data
1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512-478-0059 FAX 512-478-1433

N

Water Well Report™

on USGS Topo

Map of Wells within 0.5 Mile(s)



★ Subject Site
● Site
⊙ Cluster
Existing Road
State Line
County Line
Unimproved Road

One inch = 0.32 miles

Exide Undeveloped Buffer Property

N

Banks Environmental Data
1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512-478-0059   FAX 512-478-1433

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

on 1996 Aerial Photo

Map of Wells within 0.5 Mile(s)

★ Subject Site
● Site
◉ Cluster
Primary Highway
State Line
County Line
Roads & Ramps
Railroad
Limited Access Hwy

One inch = 0.32 miles

Exide Undeveloped Buffer Property

N

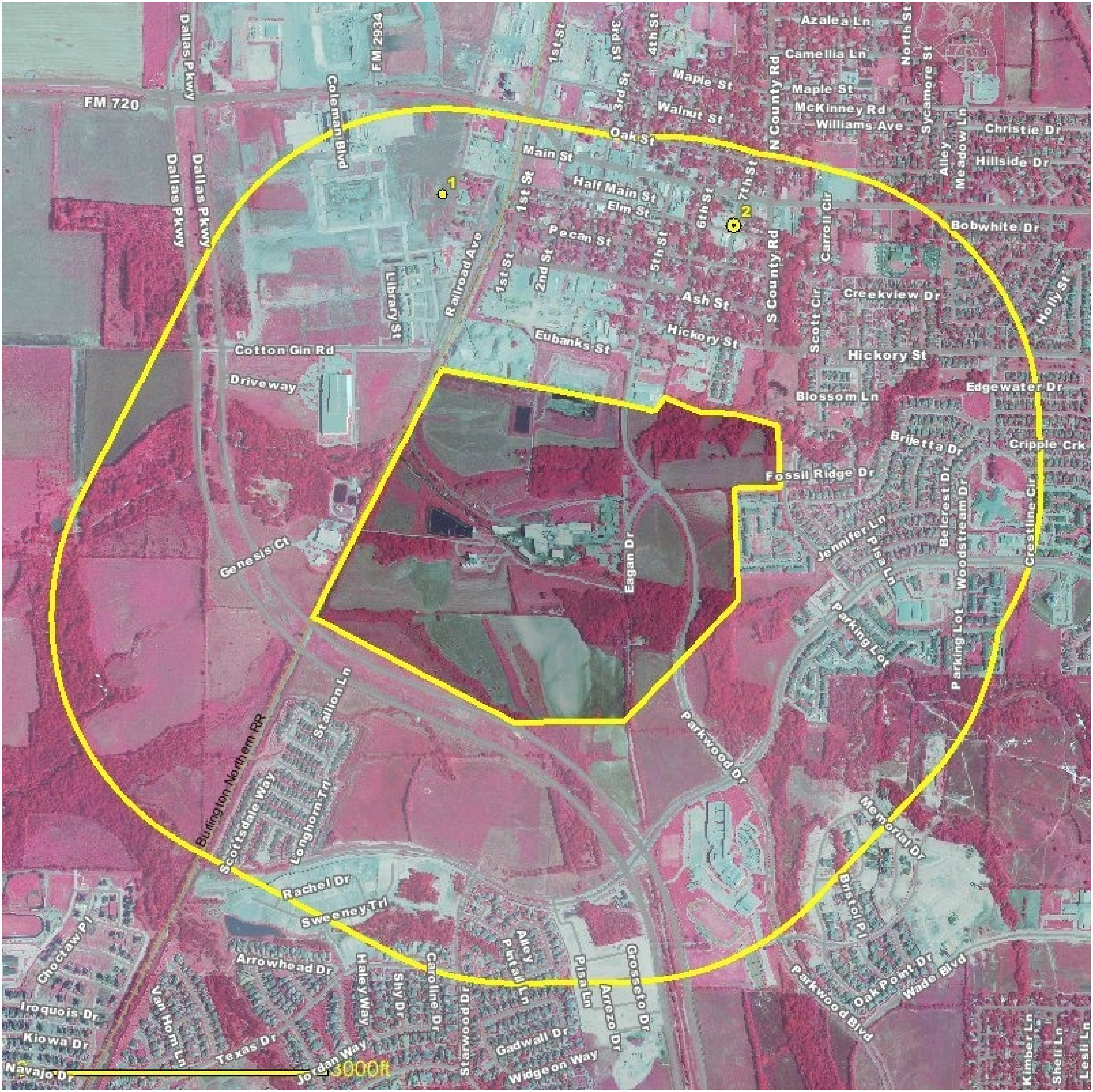
Banks Environmental Data
1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512-478-0059 FAX 512-478-1433

BANKS
ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

on 2004 Aerial Photo

Map of Wells within 0.5 Mile(s)



★ Subject Site
● Site
⊙ Cluster
Primary Highway
State Line
County Line
Roads & Ramps
Railroad
Limited Access Hwy

One inch = 0.32 miles

Exide Undeveloped Buffer Property

N

Banks Environmental Data
1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512-478-0059   FAX 512-478-1433

Water Well Report™

DETAILS

Map #	Source ID	Owner of Well	Type of Well	Depth Drilled	Completion Date	Longitude	Latitude	Driller's Log
1	18-50-8C	Frisco Concrete	Domestic	620	2/14/1980	-96.83156	33.15007	View
2	18-50-803	City of Frisco Well #2	Plugged or Destroyed	2796	3/22/1950	-96.82194	33.14916	View
2	G04300005A	CITY OF FRISCO MAHER MASO	Public Supply	2796	3/22/1950	-96.82194	33.14928	View
2	18-50-802	City of Frisco Well #1	Plugged or Destroyed	1632	1/1/1940	-96.82194	33.14944	View
2	18-50-804	City of Frisco Well No.1-A	Plugged or Destroyed	1680	1/1/1924	-96.82222	33.14944	View

Send original copy by
certified mail to the
Texas Department of Water Resources
P. O. Box 13087
Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

For TDWR use only
Well No. 18-50-8C
Located on map Yes
Received: C.F.S.

1) OWNER Frisco Concrete (Name) Address (Street or RFD) Frisco (City) Texas (State) 75034 (Zip)

2) LOCATION OF WELL: County Collin City Limits miles in W (N.E., S.W., etc.) direction from Frisco (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ **Legal description:**
Section No. ______ Block No. ______ Township ______
Abstract No. ______ Survey Name ______
Distance and direction from two intersecting section or survey lines ______

☐ **See attached map.**

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☒ Domestic ☐ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other ______

5) DRILLING METHOD (Check): ☒ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other ______

6) WELL LOG:

Date drilled 2-14-80

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
6 1/4	Surface	620

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other ______
If Gravel Packed give interval . . . from 600 ft. to 620 ft.

From (ft.)	To (ft.)	Description and color of formation material
Surface	to 4'	= Black Soil
4'	to 14'	- Clay
14'	to 580'	- Shale blue
580'	to 620'	- Sand

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.)		Gage Casing Screen
			From	To	
4 1/2	N	Steel	0	600	9 1/

CEMENTING DATA
Cemented from 0 ft. to 600 ft.
Method used Pressure
Cemented by Boyd Drilling Co. (Company or Individual)

9) WATER LEVEL:
Static level 300 ft. below land surface Date ______
Artesian flow ______ gpm. Date ______

10) PACKERS: Type Depth

RECEIVED
JUL 26 1982
CR/TD

11) TYPE PUMP:
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder
☐ Other ______
Depth to pump bowls, cylinder, jet, etc., 530 ft.

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ______ Depth of strata ______
Was a chemical analysis made? ☐ Yes ☐ No

12) WELL TESTS:
☐ Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: ______ gpm with ______ ft. drawdown after ______ hrs.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME Boyd Drilling Co. (Type or Print) Water Well Drillers Registration No. 481

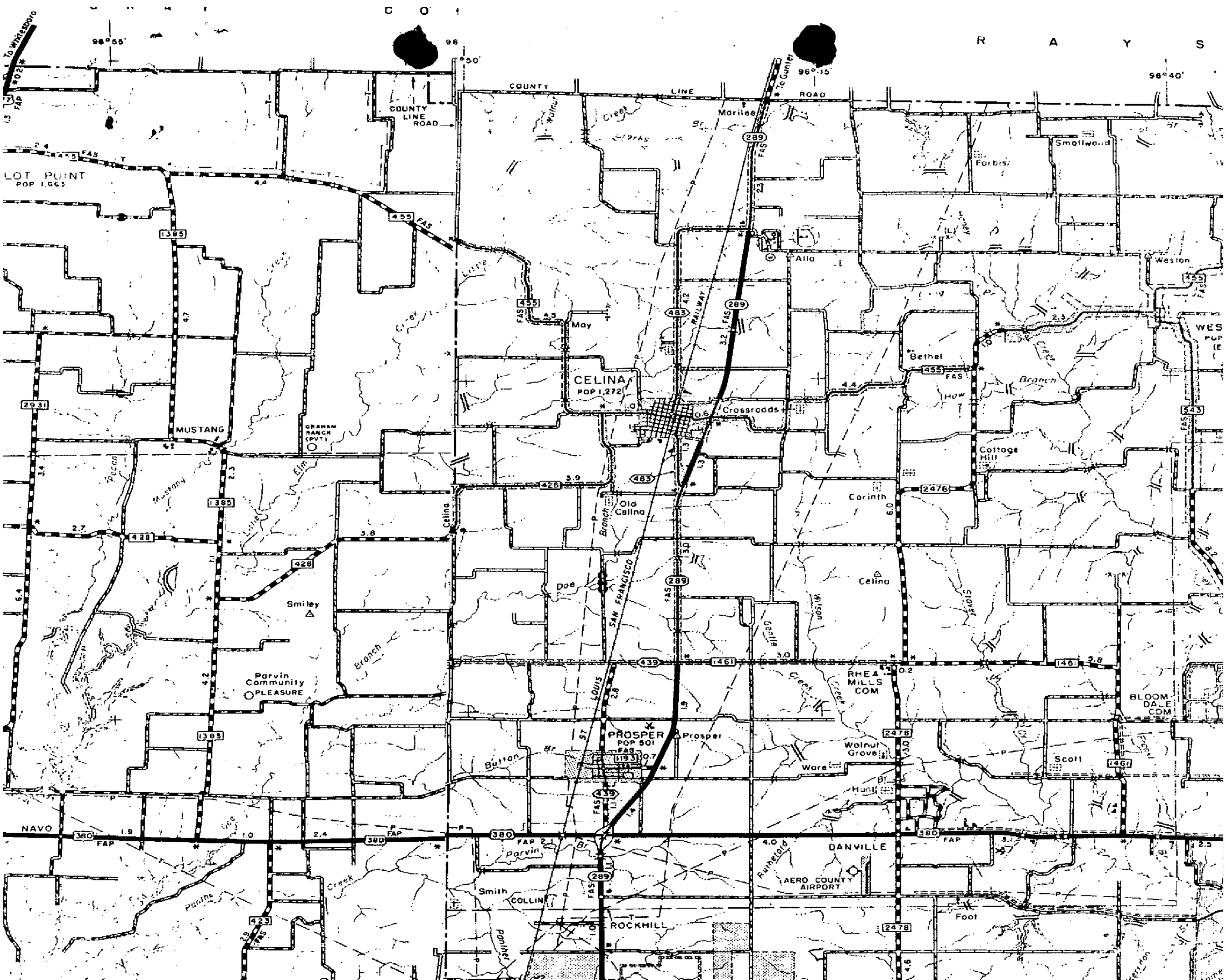
ADDRESS P. O. Box # 344 (Street or RFD) Frisco (City) Texas (State) 75034 (Zip)

(Signed) Claud Boyd (Water Well Driller) Boyd Drilling Co. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 1-12-79)

DEPARTMENT OF WATER RESOURCES COPY



JUL 26 1982

CR/TD

18-50-8C

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer: Paluxy and Twin Mountains

Field No. ______

Owner's Well No. 2

State Well No. 18-50-803

County COLLIN

1. Location: ___ 1/4, ___ 1/4 Sec. ___, Block ___ Survey ___
2. Owner: CITY OF FRISCO Address: ___
   Tenant: ___ Address: ___
   Driller: J. L. MYERS' SONS Address: ___
3. Elevation of L.S. is 705 ft. above msl, determined by TOPO
4. Drilled: 3-22 1950; Dug, Cable Tool, [✓ Rotary]
5. Depth: Rept. 2796 ft. Meas. ___ ft.
6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed ___
7. Pump: Mfgr. JOHNSTON Type TURBINE
   No. Stages ___, Bowls Diam. ___ in., Setting 630 ft (8-13-74)
   Column Diam. 5 in., Length Tailpipe ___ ft.
8. Motor: Fuel ELEC Make & Model U.S. MOTORS HP. 50
9. Yield: Flow ___ gpm, Pump 200 gpm, [✓ Meas.] Rept., Est. 8-21-73
10. Performance Test: Date ___ Length of Test ___ Made by ___
    Static Level ___ ft. Pumping Level ___ ft. Drawdown ___ ft.
    Production ___ gpm Specific Capacity ___ gpm/ft.
11. Water Level (P.L.) 246 ft. [✓ rept.] meas. 3 1950 above below ___ which is ___ ft. above below surface.
    ___ ft. rept. meas. ___ 19__ above below ___ which is ___ ft. above below surface.
    ___ ft. rept. meas. ___ 19__ above below ___ which is ___ ft. above below surface.
    ___ ft. rept. meas. ___ 19__ above below ___ which is ___ ft. above below surface.
12. Use: Dom., Stock, [✓ Public Supply] Ind., Irr., Waterflooding, Observation, Not Used, ___
13. Quality: (Remarks on taste, odor, color, etc.) ___
    K.Pun. Temp. — °F, Date sampled for analysis 4-51 Laboratory TSDH
    Temp. 104 °F, Date sampled for analysis 3-18-76 Laboratory TSDH
    Temp. ___ °F, Date sampled for analysis ___ Laboratory ___
14. Other data available as circled: [✓ Driller's Log] Radioactivity Log, [✓ Electric Log,] Formation Samples, Pumping Test, ___
15. Record by: P. NORDSTROM Date 3-18 1976
    Source of Data J.L. MYERS CO., CITY, OBS.
16. Remarks:
    no gauge on airline

CASING & BLANK PIPE

Cemented From 0 ft. to 1440 ft.

Diam. (in.)	Type	Setting, ft. from	to
8	STEEL	0	696
7	"	696	1440
5	LINER	1360	2796

WELL SCREEN

Screen Openings ___

Diam. (in.)	Type	Setting, ft. from	to
5	Perf.	opposite all water bearing sands	

pump set at: 630'

E-log

see-802

TWDBE-WD-2

(Sketch)

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer PALUXY and TWIN MOUNTAINS

Field No.

Owner's Well No. 2

State Well No. 18-50-803

County COLLIN

1. Location: 1/4, 1/4 Sec. , Block , Survey

2. Owner: CITY OF FRISCO Address:

Tenant: Address:

Driller: J. L. MYERS' SONS Address:

3. Elevation of L.S. is 705 ft. above msl, determined by TOPO

4. Drilled: 3-22 1950; Dug, Cable Tool, [✓ Rotary]

5. Depth: Rept. 2796 ft. Meas. ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfgr. JOHNSTON Type TURBINE

No. Stages , Bowls Diam. in., Setting 630 ft (8-13-74)

Column Diam. 5 in., Length Tailpipe ft.

8. Motor: Fuel ELEC Make & Model U.S. MOTORS HP. 50

9. Yield: Flow gpm, Pump 200 gpm, [✓ Meas.] Rept., Est. 8-21-73

10. Performance Test: Date Length of Test Made by

Static Level ft. Pumping Level ft. Drawdown ft.

Production gpm Specific Capacity gpm/ft.

11. Water Level (P.L.) 246 ft. [✓ rept.] meas. 3 1950 above below which is ft. above below surface.

ft. rept. meas. 19 above below which is ft. above below surface.

ft. rept. meas. 19 above below which is ft. above below surface.

ft. rept. meas. 19 above below which is ft. above below surface.

12. Use: Dom., Stock, [✓ Public Supply] Ind., Irr., Waterflooding, Observation, Not Used,

13. Quality: (Remarks on taste, odor, color, etc.)

K. Pum. Temp. — °F, Date sampled for analysis 4-51 Laboratory TSDH

Temp. 104 °F, Date sampled for analysis 3-18-76 Laboratory TSDH

Temp. °F, Date sampled for analysis Laboratory

14. Other data available as circled: [✓ Driller's Log] Radioactivity Log, [✓ Electric Log,] Formation Samples, Pumping Test,

15. Record by: P. NORDSTROM Date 3-18 1976

Source of Data J. L. MYERS CO., CITY, OBS.

16. Remarks:

no gauge on airline

CASING & BLANK PIPE

Cemented From 0 ft. to 1440 ft.

Diam. (in.)	Type	Setting, ft. from	to
8	STEEL	0	696
7	"	696	1440
5	LINER	1360	2796

WELL SCREEN

Screen Openings

Diam. (in.)	Type	Setting, ft. from	to
5	Perf.	opposite all water bearing sands	

E-log

see-802

(Sketch)

TWDBE-WD-2

18-50-803

Depth	Thickness	Formation
38	38	Austin chalk
525	487	Eagle Ford
880	355	Woodbine
1330	450	Shale and lime
1360	30	Kiamichi Shale
1420	60	Goodland lime
1430	10	Walnut shale
1632	202	Paluxy
1833	201	Lime and shale
1923	90	Glen Rose sand and lime
2378	455	Lime and shale
2388	10	Sand
2391	3	Rock
2420	29	Sand
2426	6	Shale
2470	44	Sand
2560	90	Sandy lime and shale
2637	77	Sand
2796	159	Lime

m GW-1

TEXAS BOARD OF WATER ENGINEERS

GROUND-WATER DIVISION

WELL SCHEDULE

Date 6-23, 1960 Field No. ______

Record by RWN Office No. DT850803

Source of data Dhs + Jeff Black & 1957 Travis Pk. Rept + Sand

1. **Location:** County Collin
   Map By Fire Station
   Survey (block south of water tower)
2. **Owner:** City of Frisco #2 Address ______
   Tenant ______ Address ______
   Driller J L Myers Sons' Address ______
3. **Topography:** ______
4. **Elevation:** 695 ± ft. [✓ above] below MSL
5. **Type:** Dug, [✓ drilled], driven, bored, jetted 1950
6. **Depth:** Rept. ~~2660~~ 2796 ft. Meas. ______ ft.
7. **Casing:** Diam. 7 in., to 5 in. cemented Type ______
   Depth ______ ft., Finish ______
8. **Chief Aquifer:** K Trinity (Ktp) From ______ ft. to ______ ft.
   Others ______
9. **Water level:** 143 ft. [✓ rept.] meas. Spring 1961 above LSD
   UTM AIRLINE MEASURE ~~which~~ is ______ ft. above [✓ below] surface
10. **Pump:** Type T Capacity ______ gpm
    Power: Kind E Horsepower 50
11. **Yield:** Flow ______ gpm, Pump 175 gpm, Meas., [✓ Rept.] Est. ______
    ~~Drawdown~~ PL 407 ft. after ______ hours pumping ? gpm 10/23/56
12. **Use:** Dom., Stock, [✓ PS], RR., Ind., Obs. Irr. ______
    Adequacy, permanence ______
13. **Quality:** ______
    Temp. ______ °F ______ Sample [✓ Yes] No 5/
14. **Log:** [✓ Yes] No J L Myers
15. **Remarks:** PS @ 550 in 1956
    well #65 in Sands 1952 Travis Pk. Rep.

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDBE-GW ONLY
Program No. 6072
Proj. No.

CHEMICAL WATER ANALYSIS REPORT

County DT Collin
State Well No. 18-50-803
Well No. 2
Date Collected 03-18-76
By A L. NORDSTROM

Send report to:

Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

Location at Fire Station
Source (type of well) Turb.-Elec. 50 HP Owner City of FRISCO, Box 177, FRISCO 75034
Date Drilled 3-22-50 Depth 2796 ft. WBF KCPA - KCTM
Producing intervals 1440-2796 Water level ft.
Sampled after pumping hrs. Yield GPM meas./est. Temperature 104 °F °C
Point of collection faucet on well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P.S. Remarks Send copy to owner

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. 308656 Date Received MAR 20 1976 Date Reported APR. 12, 1976

	MG/L	ME/L
Silica	18	
Calcium	3	0.15
Magnesium	<1	-.-
Sodium	302	13.14
Total		13.29
☐ Potassium	.	
☐ Manganese	.	
☐ Boron	.	
3/☐ Total Iron	.	
☐ (other) MG/L		

%Na
SAR
RSC

Specific Conductance (micromhos/cm³) 1350
Diluted Conductance (micromhos/cm³) 11 x 135
1485

"☐" items will be analyzed if checked.

	MG/L	ME/L
Carbonate	7	0.24
186 Bicarbonate	378	6.20
Sulfate	79	1.65
Chloride	192	5.40
Fluoride	0.5	.
Nitrate	<0.4	.
pH	8.6	Total 13.49

1/ Dissolved Solids (sum in MG/L) 790
Phenolphthalein Alkalinity as CaCO₃ 0.12 6
Total Alkalinity as CaCO₃ 6.44 322
Total Hardness as CaCO₃ 0.15 8

2/ Nitrogen Cycle
Ammonia - N .
Nitrite - N .
Nitrate - N .
Organic Nitrogen .

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBE-WD-1 (Rev. 1-25-72)

Analyst Checked By

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY

Program No. ________ Lab No. 03

Work No. ________

CHEMICAL WATER ANALYSIS REPORT

County 043 Collin

State Well No. 18-50-803

________ Well No. ________

Date Collected 04-01-51

Send report to:

Ground Water Division
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

Location ________ Sample No. ☐ By ________

Source (type of well) T, E 50 HP Owner City of Frisco

Date Drilled 1950 Depth 2796 ft. WBF KCPA-KCTM

Producing intervals ________ Water level ________ ft. Sample depth ________ ft.

Sampled after pumping ________ hrs. Yield ________ GPM meas. est. Temperature ________ °F ________ °C

Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other

Use P.S. Remarks ________

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. ________ Date Received ________ Date Reported ________

	MG/L	ME/L
Silica	20	
Calcium	6	.
Magnesium	1	.
Sodium	314	.
Total		.
☐ Potassium	.	
☐ Manganese	.	%Na ________
☐ Boron	.	SAR ________
3/ ☒ Total Iron	0.1	RSC ________

☐ (other) ________ MG/L

Specific Conductance (micromhos/cm^3) ________

Diluted Conductance (micromhos/cm^3) ________ X ________

"☐" items will be analyzed if checked.

	MG/L	ME/L
Carbonate		.
Bicarbonate	415	.
Sulfate	98	.
Chloride	188	.
Fluoride	.2	.
Nitrate	<.4	.
pH	8.4	Total .

1/ Dissolved Solids (sum in MG/L) 832

Phenolphthalein Alkalinity as C aCO$_3$ ________

Total Alkalinity as C aCO$_3$ 335

Total Hardness as C aCO$_3$ 19

2/ Nitrogen Cycle

Ammonia - N .

Nitrite - N .

Nitrate - N .

Organic Nitrogen .

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TDWR-0148

Analyst ________ Checked By ________

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY
Program No. ________ Lab No. 03
Work No. ________

CHEMICAL WATER ANALYSIS REPORT

County 043 Collin
State Well No. 18-50-803
________ Well No. ________
Date Collected 08-09-66

Send report to:

Ground Water Division
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

Location ________ Sample No. ☐ By ________
Source (type of well) ________ Owner FRISCO
Date Drilled 3-50 Depth 2796 ft. WBF KCPA-KCTM ☐☐☐☐
Producing intervals ________ Water level ________ ft. Sample depth ☐☐☐☐ ft.
Sampled after pumping ________ hrs. Yield ________ GPM meas. est. Temperature ☐☐☐ °F ☐☐☐ °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P Remarks ________

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. ________ Date Received ________ Date Reported ________

	MG/L	ME/L
Silica		
Calcium	3	.
Magnesium	0	.
Sodium	310	.
Total		.
☐ Potassium	.	
☐ Manganese	.	%Na ________
☐ Boron	.	SAR ________
3/ N Total Iron	0.14	RSC ________
☐ (other) ________ MG/L		

Specific Conductance (micromhos/cm^3) 1544
Diluted Conductance (micromhos/cm^3) x

	MG/L	ME/L
Carbonate	7	.
Bicarbonate	383	.
Sulfate	87	.
Chloride	200	.
Fluoride	.6	.
Nitrate	<.4	.
pH	8.5	Total .

1/ Dissolved Solids (sum in MG/L) 796
Phenolphthalein Alkalinity as C aCO$_3$ 6
Total Alkalinity as C aCO$_3$ 326
Total Hardness as C aCO$_3$ 8

2/ Nitrogen Cycle
Ammonia - N .
Nitrite - N .
Nitrate - N .
Organic Nitrogen .

" ☐ " items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

Analyst ________ Checked By ________

TDWR-0148

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDB ONLY
Organization No. 422 Lab No. ☐☐
Work No. 6042 (IAC (86-87)-1585)

CHEMICAL WATER ANALYSIS REPORT

County ☐☐☐ Colln
State Well No. 18-50-803
Well No.
Date Collected 07-28-87

Send Reply To:
Water Availability Data and Studies Section
Texas Water Development Board
Stephen F. Austin Building
1700 Congress Ave.
Austin, Texas 78711
Attn: Robert R. Flores Rm. 304-6

Owner City of Frisco 1 Send copy to owner Sample No. 1 By RRF
Address P.O. Box 177, Frisco, TX 75034 Well Location
Date Drilled Depth ft. WBF ☐☐☐☐ Source (type of well)
Producing intervals Water level ft. Sample depth ☐☐☐☐ ft.
Sampled after pumping hrs. Yield GPM meas. est. Temperature ☐☐☐ °F ☐☐☐ °C
Point of collection Appearance ☑ clear ☐ turbid ☐ colored ☐ other
Use Remarks

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

Laboratory No. [redacted] Date Received AUG 03 '87 Date Reported AUG 24 '87

```
                                  WATER ANALYSIS
State Well No:18-50-8              Date:081987                  Sample No:FB7-1956
                           MG/L       ME/L                                     MG/L       ME/L
      Silica:00955:         13                   Carbonate:00445:          6          .20
     Calcium:00915:          1         .07     Bicarbonate:00440:         555         9.10
   Magnesium:00925:         <1         .05         Sulfate:00946:         189         3.94
      Sodium:00930:         359       15.61        Chloride:00940:         78         2.20
   Potassium:00935:          1         .03        Fluoride:00950:         2.4          .13
          T.Cations                   15.75  Nitrate as NO3:71851:       <0.04        0
   Manganese:01055:                %Na_______          T. Anions                     15.56
                                                       pH:00403:          8.5
       Boron:01020:                SAR_______
                                                 TDS(Calc):70301:         923
   Total Iron:01045:               RSC_______       P. Alk.:00415:          5
Other_______________                                T. Alk.:00410:         465
   (Specific Cond.:00095:          1200        T. Hardness:00900:           6
Diluted Conductance (micromhos/cm3)
       11      x151      =1661                    Ammonia-N:00610:
__ items will be analyzed if checked.             Nitrite-N:00615:
                                                  Nitrate-N:00620:
                                          OrganicNitrogen:00605:
```

TEXAS WATER DEVELOPMENT BOARD — WATER LEVEL MEASUREMENTS

OLD WELL NUMBER

AS OF

WELL LOCATION: LAT.
LONG.

☐ Normal
☐ Publ.
☐ USGS

YR. REC. BEGINS

LAST CHEMICAL ANALYSIS

STATE WELL NUMBER
DEPTH OF WELL

LAND SURFACE DATUM ELEVATION
COMPLETION INTERVAL

DATE OF CURRENT MEASUREMENT MO.	DAY	YR.	CURRENT DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	Measurement Number	DEPTH TO WATER FROM MP	ELEVATION OF DEPTH TO WATER FROM MEAN SEA LEVEL	Measuring Agency	Measurement Method	REMARKS	WELL USE	FIELD OBSERVATIONS
10	12	93	-488.15					01	3		P	pump ~~set at 630 ft.~~
2	8	95	-442					01	3		P	
11	10	95						01		43		
11	07	96	444.8					01	1		U	
11	17	97	444.7			446.50		01	1	20	U	Very Spotty
11	10	98	451.0			452.80		01	1	20	U	FROM THE TOP VERY SPOTTY
11	9	99	452.5			454.3		01	1	20	U	
11	14	00						01		32		
12	4	01	461.85					01	1	20	U	
11	08	02	—		CH	—		01	1	40	U	

AQUIFER 2-18 Travis peak + Paluxy sand

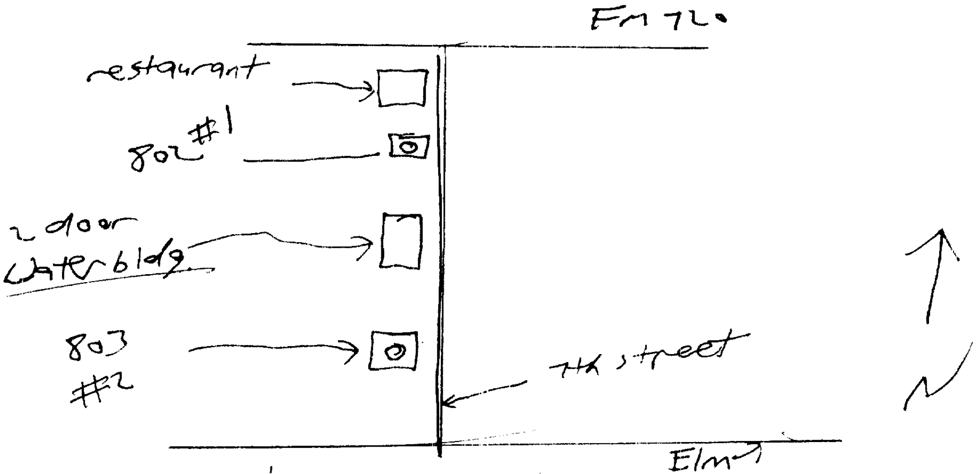
WATERSHED

COUNTY Collin

WELL CLASS AND NUMBER 18-50-803

MEASURING POINT (MP) ~~1.0~~ 1.8 1996

TWDB-0518



Do not need [illegible]

see 18-50-802
sketch ~~for location~~
~~to get key if locked~~

don't need to
measure in ~~1993~~.
11/93 - 2/94. E.W.

18-50-803

04/05/2013
10:55:05AM

Texas Commission on Environmental Quality

Water System Data Sheet

WSDSR

PWS ID	PWS Name	Central Registry RN
0430005	**CITY OF FRISCO** Superior	**RN101420602**

Organization/Customer *	Central Registry CN
CITY OF FRISCO	**CN600245526**

* Regulatory mail will be addressed to this organization / person

Responsible Official **	Title
MAHER MASO	**MAYOR**

License Type	License Number

Mailing Address:

Street Address	C/O or Address Line 2
6101 FRISCO SQUARE BLVD	

City	State	Zip
FRISCO	**TX**	**75034 - 3253**

Business Phone	Other Phone	Other Phone Type	Email
(972) 292-5100 Ext.	**(972) 335-5505 Ext.** **(972) 292-5050 Ext.**	**CELLULAR**	**MMASO@FRISCOTEXAS.GOV**

** Regulatory mail will be addressed to this person

PWS Contact - If different than above ***	Title
GARY HARTWELL	**MICROBIAL CONTACT**

License Type	License Number

Mailing Address for PWS Primary Contact:

Street Address	C/O or Address Line 2
11300 RESEARCH RD	

City	State	Zip
FRISCO	**TX**	**75034 - 2047**

Business Phone	Other Phone	Other Phone Type	Email
(972) 292-5800 Ext.			**ghartwell@friscotexas.gov**

*** Copies of most regulatory mail will be addressed to this person

Emergency Contact Name ****	Emergency Phone	Emergency Email
KEVIN GRANT	**(469) 853-4659 Ext.**	**KGRANT@FRISCOTEXAS.GOV**

License Type	License Number

**** This contact information will be used only in the event of an emergency

Owner Type	Owner Type Options: AFFECTED COUNTIES, COUNTY, DISTRICT/AUTHORITY, EXEMPT, FEDERAL GOVERNMENT, INVESTOR, MUNICIPALITY, NATIVE AMERICAN, PRIVATE, SUBMETER \ ALLOCATION, STATE GOVERNMENT, NOT RETAIL PUBLIC UTILITIES, WATER SUPPLY CORPORATION, MISC/UNKNOWN
MUNICIPALITY	

System Type	System Type Options: SB 361, COMMUNITY, COMMUNITY (NON-GOVERNMENT OWNED), TRANSIENT/NON-COMMUNITY, NON-PUBLIC, NON-TRANSIENT/NON-COMMUNITY
COMMUNITY	

Customer Class	Customer Category	Population Served	# of Connect	# of Meters	# I/C w/other PWS
RESIDENTIAL	**RESIDENTIAL AREA**	**116,989**	**46,984**	**36,329**	**1**

Total Product (MGD)	Average Daily Consump.	Total Storage (MG)	Elev. Storage (MG)	Booster Pump Cap. (MGD)	Aux.Prod.Cap. Max.Pur.Cap.(MGD)	Pressure Tank Cap.(MG)
0.000	**20.316**	**36.250**	**10.250**	**64.152**	**60.531**	**0.00000**

Activity Status	Deactivation Date	Reason
ACTIVE		

Operator Grade	Number
WATER GRADE B DISTRIBUTION	**4**
WATER GRADE B SURFACE	**1**
WATER GRADE C DISTRIBUTION	**15**
WATER GRADE C GROUND	**1**
WATER GRADE D	**1**

Last Survey Date	Surveyor	Survey Type	Code	Region	County	Def.Score
04/28/2011	**IMRAN KHAWAJA**	**SURVEY**		**4**	**COLLIN**	**0**
02/28/2008	**IMRAN KHAWAJA**	**SURVEY**		**4**	**COLLIN**	**0**
11/30/2005	**IMRAN KHAWAJA**	**SURVEY**		**4**	**COLLIN**	**7**

<table>
<tr><th colspan="8">(Entry Point)</th></tr>
<tr><td>Entry Point</td><td>EP Name/Source Summation (Activity Status)</td><td>Plant Name (Activity Status)</td><td>WUD Plant Num</td><td>Chemical Mon Type</td><td>Chem Sample Point</td><td>Distribution Mon Type</td><td>Dist Sample Point</td></tr>
<tr><td>001</td><td>SAMPLE TAP / LAKE LAVON(A)</td><td>EAST PS - 3 MASTER METERS(A)</td><td>20902</td><td></td><td>No</td><td></td><td>No</td></tr>
</table>

<table>
<tr><th colspan="7">(Active Sources)</th></tr>
<tr><td>Source Number</td><td>Source Name (Activity Status)</td><td>Operational Status</td><td>Source Type</td><td>Depth</td><td>Tested GPM</td><td>Rated GPM</td></tr>
<tr><td>P0430005A</td><td>SW FROM NTMWD(A)</td><td>O</td><td>S</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td colspan="2">Water Body</td><td colspan="2">Segment Number</td><td colspan="3">Surface Water Intake Type</td></tr>
<tr><td colspan="2"></td><td colspan="2">()</td><td colspan="3"></td></tr>
<tr><td>GPS Latitude (decimal)</td><td>GPS Longitude (decimal)</td><td>GPS Elevation</td><td>GPS Date</td><td>GPS Cert. No.</td><td colspan="2">Seller</td></tr>
<tr><td>Not Available</td><td>Not Available</td><td>Not Available</td><td>Not Available</td><td>Not Available</td><td colspan="2">0430044</td></tr>
</table>

(Inactive/Offline Sources)

SourceNumber	Name	Status	Depth
G0430005B	**HWY 289 / LOOP 33**	**N**	**2742**
G0430005D	**LEBANON**	**N**	**1800**
G0430005A	**PS 1 - 7TH / ELM**	**N**	**2796**
G0430005C	**STONEBRIAR**	**N**	**2670**

Code Explanations
Monitoring Type Codes: (GW) GROUNDWATER , (GWP) GROUNDWATER - PURCHASED , (GUP) GROUNDWATER UNDER THE INFLUENCE - PURCHASED , (SWP) SURFACE WATER - PURCHASED , (GU) GROUNDWATER UNDER THE INFLUENCE OF SURFACE WATER , (N) NO SOURCES , (SW) SURFACE WATER
Activity Status Codes: (A) ACTIVE , (C) CCN CANCELLED , (D) DELETED/DISSOLVED , (G) SB 361 , (I) INACTIVE , (M) MERGED/ANNEXED , (N) NON-PUBLIC , (P) PROPOSED , (U) UNKNOWN-NO ACTIVITY OR NON-RESPONSIVE , (W) UTILITY WATER SYS XFER
Operational Status Codes: (C) CAPPED , (D) DEMAND , (E) EMERGENCY , (F) FORMER PWS SOURCE , (I) INACTIVE PWS SYSTEM , (N) NON-DRINKING WATER , (O) OPERATING , (P) PLUGGED , (T) TEST , (Y) PWS NOT ACTIVE AND NOT EXPECTED TO BE SO
Source Types: (G) GROUND WATER , (S) SURFACE WATER , (U) GROUND WATER UNDER THE INFLUENCE

- End of Report -

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer Paluxy   Field No. ______   State Well No. 18-50-802

Owner's Well No. 1   County COLLIN

1. Location: ___ 1/4, ___ 1/4 Sec. ___, Block ___ Survey ___
N of fire Sta. NE of water tank
2. Owner: CITY OF FRISCO   Address: P.O. Box 177, FRISCO 75034
Tenant: ______   Address: ______
Driller: MYERS ?   Address: ______
3. Elevation of LS is 705 ft. above msl, determined by TOPO
4. Drilled: ± 19 40; Dug, Cable Tool, Rotary, ______
5. Depth: Rept. 1632 ft. Meas. ______ ft.
6. Completion: Open Hole [✓ Straight Wall] Underreamed, Gravel Packed ______
7. Pump: Mfgr. Red Jacket   Type Sub
No. Stages ___, Bowls Diam. ___ in., Setting 605 ft.
Column Diam. ___ in., Length Tailpipe ___ ft.
8. Motor: Fuel ELEC   Make & Model ______   HP. 25
9. Yield: Flow ___ gpm, Pump 121 gpm [✓ Meas.] Rept., Est. 8-21-73
10. Performance Test: Date ______ Length of Test ______ Made by ______
Static Level ___ ft. Pumping Level ___ ft. Drawdown ___ ft.
Production ___ gpm   Specific Capacity ___ gpm/ft.
11. Water Level: 443 ft. rept. [✓ meas] 11-6 1973 ~~above~~ [✓ below] airline   which is ___ ft. above below surface.
440 ft. rept. [✓ meas] 11-5 1974 above [✓ below] "   which is ___ ft. above below surface.
402.0 ft. rept. [✓ meas] 3-18 1976 above below "   which is ___ ft. above below surface.
415 ft. rept. [✓ meas.] 8-21 1973 above below " (Myers Co.)   which is ___ ft. above below surface.
12. Use: Dom., Stock, [✓ Public Supply,] Ind., Irr., Waterflooding, [✓ Observation] Not Used, ______
13. Quality: (Remarks on taste, odor, color, etc.) 2-17-43
Temp. — °F, Date sampled for analysis 4-51   Laboratory TSDH
Temp. — °F, Date sampled for analysis 6-6-59   Laboratory "
Fe Temp. 84 °F, Date sampled for analysis 3-18-76   Laboratory "
14. Other data available as circled: [✓ Driller's Log,] Radioactivity Log, Electric Log,
Formation Samples, Pumping Test, austin 3-18-76
15. Record by: John Derton P. NORDSTROM   Date 11-6 1973
Source of Data CITY, OBS
16. Remarks: airline set at 607 ft

CASING & BLANK PIPE

Cemented From ______ ft. to ______ ft.

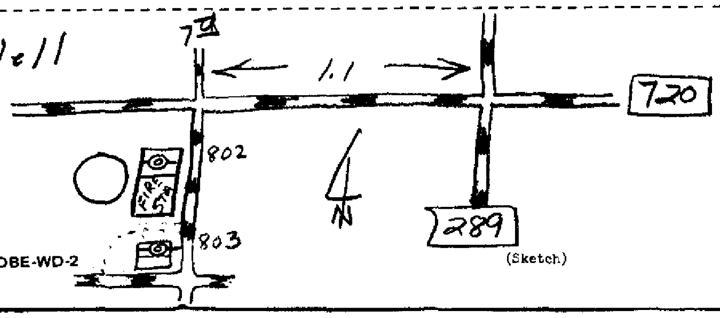
Diam. (in.)	Type	Setting, ft.	
		from	to
8 5/8	steel	0	696
7	"	696	1440
5	strainer	1428	1632

WELL SCREEN

Screen Openings ______

Diam. (in.)	Type	Setting, ft.	
		from	to
5	perf	1440	1632

ObsWell



TWDBE-WD-2

(Sketch)

obs

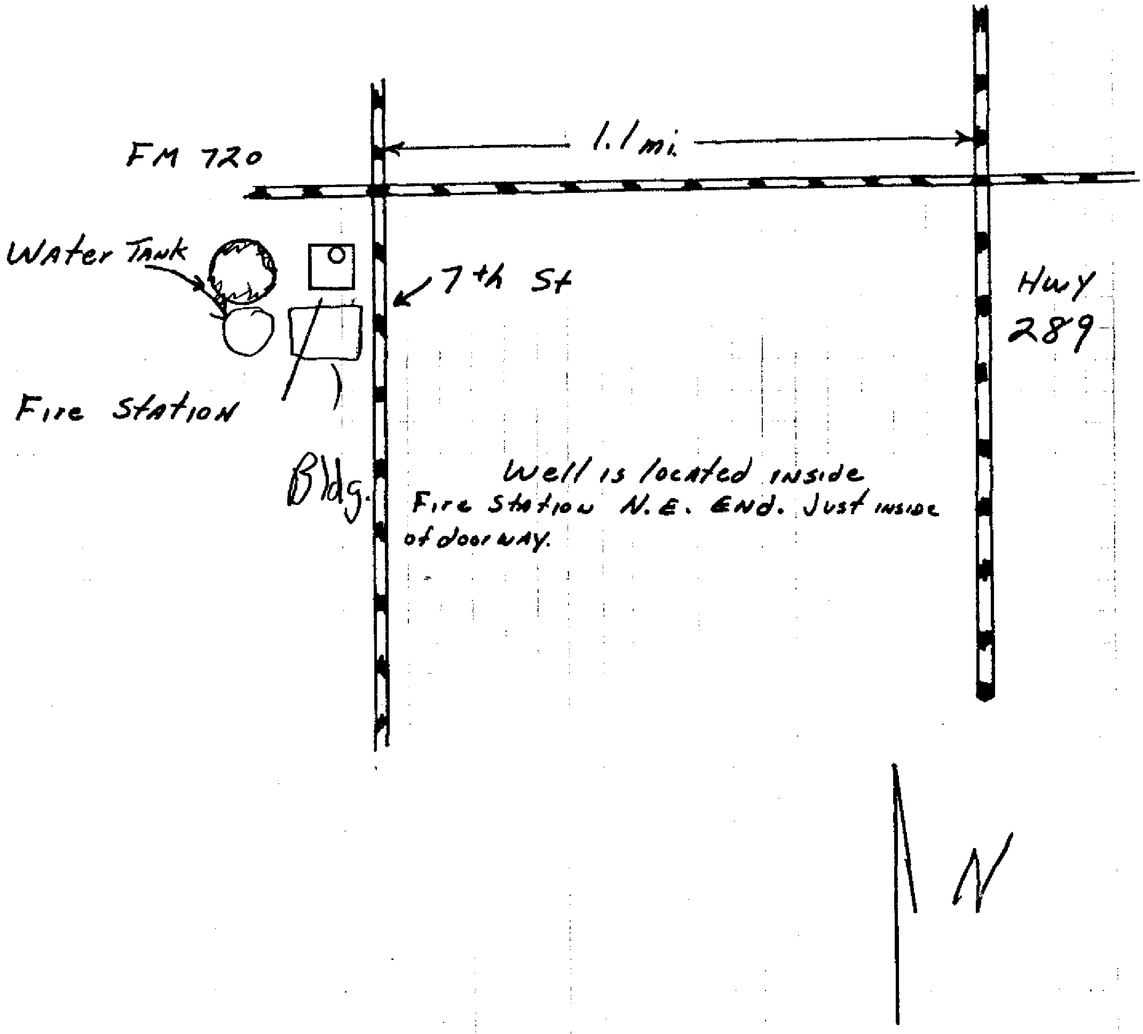
18-50-802

TEXAS WATER DEVELOPMENT BOAR

BY______ DATE______ DIVISION______ SHEET NO.______ OF______

CHKD______ DATE______ JOB NAME______

18-50-802 ______ JOB NO.______ PROG. CODE______



Well is located inside Fire Station N.E. End. Just inside of door way.

18-50-802

TWDBS-SI-3

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDBE-GW ONLY
Program No. 6072
Proj. No.

CHEMICAL WATER ANALYSIS REPORT

County ~~DT~~ COLLIN ~~[illegible]~~
State Well No. 18-50-802
Well No. 1
Date Collected 03-18-76
By R.L. NORDSTROM

Send report to:

Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

Location at Firestation
Source (type of well) Sub Elec 25 HP Owner CITY OF FRISCO, P.O. BOX 177, FRISCO 75034
Date Drilled 1940 Depth 1632 ft. WBF PALUXY
Producing intervals UNKL! Water level (205' on airline)
Sampled after pumping ______ hrs. Yield ______ GPM meas./est. Temperature 084 °F ___ °C
Point of collection hydrant off well pipe Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P.S. Remarks Send copy to Owner

(FOR LABORATORY USE ONLY)

192
+49

Laboratory No. 308648

CHEMICAL ANALYSIS

Date Received MAR 29 1976

KEY PUNCHED

Date Reported APR. 12, 1976

	MG/L	ME/L
Silica	16	
Calcium	2	0.09
Magnesium	<1	–.–
Sodium	262	11.38
Total		11.47
☐ Potassium	.	
☐ Manganese	.	
☐ Boron	.	
3/ ☒ Total Iron	0.1	
☐ (other) ______ MG/L		

%Na ______
SAR ______
RSC ______

	MG/L	ME/L
Carbonate	17	0.56
Bicarbonate	530	8.76
Sulfate	90	1.87
Chloride	19	0.54
Fluoride	1.1	.
Nitrate	<0.4	.
pH	8.7	Total 11.73

261

1/ Dissolved Solids (sum in MG/L)	670
Phenolphthalein Alkalinity as C aCO3 0.28	14
Total Alkalinity as C aCO3 9.32	466
Total Hardness as C aCO3 0.09	5
2/ Nitrogen Cycle	
Ammonia - N	.
Nitrite - N	.
Nitrate - N	.
Organic Nitrogen	.

Specific Conductance (micromhos/cm3) 1057
Diluted Conductance (micromhos/cm3) 9 x 130
1170

"☐" items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBE-WD-1 (Rev. 1-25-72)

Analyst ______ Checked By ______

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDB USE ONLY
Program No. ____
Proj. No. ____

CHEMICAL WATER ANALYSIS REPORT

County ☐☐ Collin
State Well No. 18-50-802
Well No. 1
Date Collected 04-01-51
By CITY

Send report to:
Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

Location ____
Source (type of well) S, E 25 Owner FRISCO
Date Drilled ± 1940 Depth 1632 ft. WBF PALUXY
Producing intervals ____ Water level ____ ft.
Sampled after pumping ____ hrs. Yield ____ GPM meas. est. Temperature ____ °F ____ °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P.S. Remarks ____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. ____ Date Received ____ Date Reported ____

	MG/L	ME/L
Silica	19	
Calcium	8	
Magnesium	2	
Sodium	290	
Total		
☐ Potassium		
☐ Manganese		%Na ____
☐ Boron		SAR ____
3/ ~~☐~~ Total Iron	.14	RSC ____

☐ (other) ____ MG/L
Specific Conductance (micromhos/cm3) ____
Diluted Conductance (micromhos/cm3) ____ X

	MG/L	ME/L
Carbonate		
259 Bicarbonate	527	
Sulfate	95	
Chloride	110	
Fluoride	.7	
Nitrate	< .4	
pH	8.4	Total

1/ Dissolved Solids (sum in MG/L) 775
Phenolphthalein Alkalinity as C aCO3 ____
Total Alkalinity as C aCO3 405
Total Hardness as C aCO3 28

2/ Nitrogen Cycle
Ammonia - N ____
Nitrite - N ____
Nitrate - N ____
Organic Nitrogen ____

" ☐ " items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBS-SI-27

Analyst ____ Checked By ____

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDB USE ONLY
Program No.
Proj. No.

CHEMICAL WATER ANALYSIS REPORT

0 4 3 D T Collin
County

State Well No. 18-50-802
Well No. 1
Date Collected 06-06-59
By CITY

Send report to:
Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

Location at Fire Sta
Source (type of well) Owner FRISCO
Date Drilled ±'40 [illegible] Depth 1632 ft. WBF Paluxy
Producing intervals Water level ft.
Sampled after pumping hrs. Yield GPM meas./est. Temperature °F °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P. S. Remarks

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. Date Received Date Reported

	MG/L	ME/L
Silica		
Calcium	2	.10
Magnesium	1	.08
Sodium	263	11.44
Total		11.62
☐ Potassium	.	
☐ Manganese	.	
☐ Boron	.	
3/ ☒ Total Iron	0.1~~4~~	

%Na
SAR
RSC

☐ (other) MG/L

Specific Conductance (micromhos/cm³) 1260
Diluted Conductance (micromhos/cm³) X

	MG/L	ME/L
Carbonate		.
Bicarbonate		.
Sulfate	104	2.17
Chloride	22	.62
Fluoride	1.1	.06
Nitrate	.4	. /
pH	8.6	
Total		.

1/ Dissolved Solids (sum in MG/L)	756
Phenolphthalein Alkalinity as C aCO3	
Total Alkalinity as C aCO3	462
Total Hardness as C aCO3	5

2/ Nitrogen Cycle
Ammonia - N .
Nitrite - N .
Nitrate - N .
Organic Nitrogen .

" ☐ " items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBS-SI-27

Analyst Checked By

DT1850802
9-400
(July 1938)

UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

ANALYTICAL STATEMENT

(Parts per million)

Collin County 1943

Location Frisco, Texas

Source well 1,680 ft. deep;

pumping 6 to 8 hours at
75 GPM;
Well #1
send analysis to
Jeff Black
Box 132, Frisco

Use Public supply

Color

Suspended matter

Hardness (calc.) 8

Ignition loss 15

Total dissolved solids 690

K × 10⁵ at 25°C.

pH 8.2

Date Feb. 17

SiO_2 13

Fe 0.03

Ca 2.3

Mg 0.6

Na 272 calc

K 3.2

CO_3 52

HCO_3 470 576

SO_4 96

Cl 19

F 0.9

NO_3 2.5

Chemist J. H. Rowley 3/30/43

KEY PUNCHED

Sum 693

W. R. Lab. No. 5056

Collector P. P. Livingston

16—21877

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer PALUXY
Field No. ____
Owner's Well No. ____
State Well No. 18 50 802
DT County COLLIN

1. Location: __ 1/4, __ 1/4 Sec. __, Block __ Survey __
NORTH of FIRE STATION N.E. of WATER TANK
2. Owner: City of FRISCO Address: ____
Tenant: ____ Address: ____
Driller: MEYERS Drlg Co. Address: DALLAS
3. Elevation of LSD is [redacted] 705 ft. above msl, determined by ~~USGS~~ TOPO
4. Drilled: ~~1946~~ 1940's Dug, Cable Tool, Rotary, ____
5. Depth: Rept. 1632 ft. Meas. ____ ft.
6. Completion: Open Hole, [✓ Straight Wall] Underreamed, ~~Gravel~~ Packed
7. Pump: Mfgr. Red Jacket Type Subm
No. Stages ____, Bowls Diam. ____ in., Setting 605 ~~455~~ ft.
Column Diam. ____ in., Length Tailpipe ____ ft.
8. Motor: Fuel ELEC Make & Model ____ HP 25 30
9. Yield: Flow ____ gpm, Pump 121 120 gpm, [✓ Meas.], Rept., Est. 8-21-73
10. Performance Test: Date ____ Length of Test ____ Made by ____
Static Level ____ ft. Pumping Level ____ ft. Drawdown ____ ft.
Production ____ gpm Specific Capacity ____ gpm/ft.
11. Water Level: 443 ft. rept. [✓ meas.] 11-6 1973 above [✓ below] LSD-AIRLINE which is ____ ft. above below surface.
440.0 ft. rept. [✓ meas.] 11-5- 1974 above [✓ below] do which is ____ ft. above below surface.
402.0 ft. rept. [✓ meas.] 3-18 1976 above [✓ below] do which is ____ ft. above below surface.
____ ft. rept. meas. 19__ above below ____ which is ____ ft. above below surface.
12. Use: Dom., Stock, [✓ Public Supply] Ind., Irr., Waterflooding, [✓ Observation] Not Used, ____
13. Quality: (Remarks on taste, odor, color, etc.) ____
Temp. ____ °F, Date sampled for analysis 4-51 Laboratory TSDH
Temp. ____ °F, Date sampled for analysis 6-6-59 Laboratory "
Fe Temp. 84 °F, Date sampled for analysis 3-18-76 Laboratory "
14. Other data available as circled: [✓ Driller's Log] Radioactivity Log, Electric Log, AUSTIN -
Formation Samples, Pumping Test, ____
15. Record by: John DERTON - P. NORDSTROM Date 11-6 1973 3-18-76
Source of Data WATER Supt. + DrLR
16. Remarks:
AIRLINE SET @ [redacted] 607'
→ WSE Bill McLain @ 9620
collected from tank after running 20 min w/Chlo. off

original pump is send took excess pipe off) can't use

new one is adjacent

Not used anymore got new number

CASING & BLANK PIPE

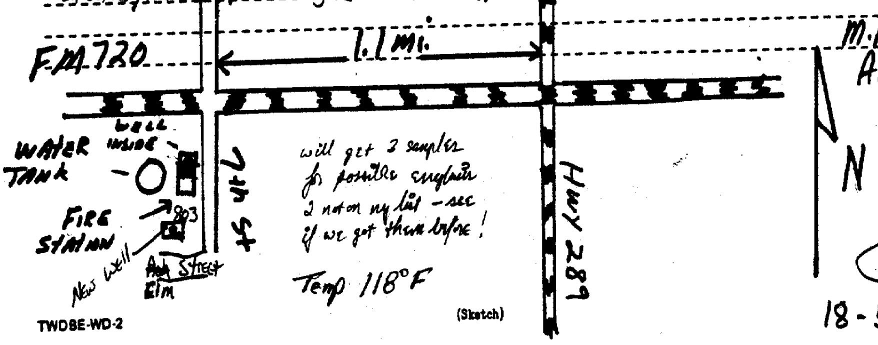
Cemented From ____ ft. to ____ ft.

Diam. (in.)	Type	Setting, ft. from	Setting, ft. to
8 5/8	steel	0	696
7	"	696 747	1440 1435 (80' lap)
5	strainer	1428	1632
	last 100' slotted		

WELL SCREEN

Screen Openings ____

Diam. (in.)	Type	Setting, ft. from	Setting, ft. to
5	Perf	1440	1632



will get 2 samples for possible anglysis 2 not on my list - see if we got them before!

Temp 118°F

M.P. 0.00 Air Line

(Sketch)

065

18-50-802

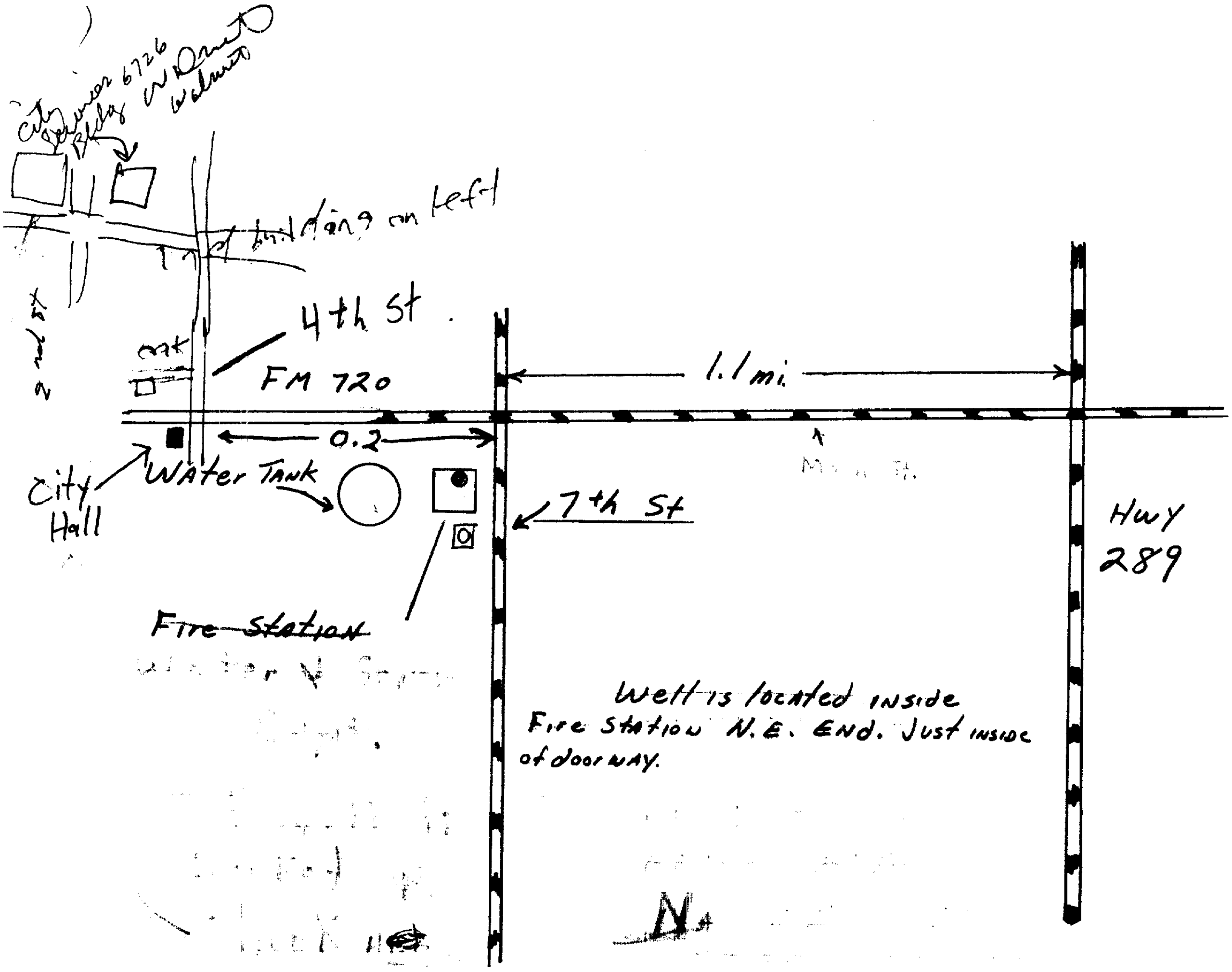
TWDBE-WD-2

TEXAS WATER DEVELOPMENT BOAI

BY________ DATE________ DIVISION________________________________ SHEET NO.______ OF_____

CHKD______ DATE________ JOB NAME________________________________

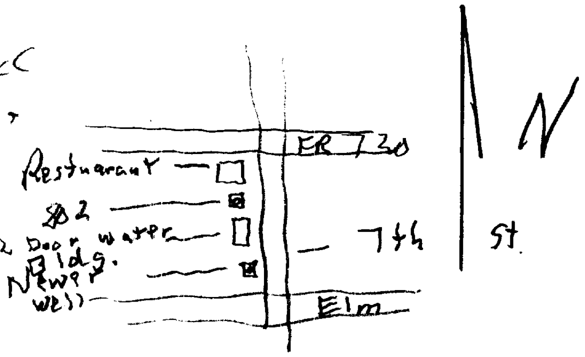
18-50-802________ JOB NO.______________ PROG. CODE__________



Well is located inside Fire Station N.E. End. Just inside of door way.

~~City Hall~~

at public safety office ask CH for key.



18-50-802

TEXAS DEPARTMENT OF WATER RESOURCES—WATER LEVEL MEASUREMENTS(IN FT.)

AS OF 05-01-84

☒ Normal
☐ Publ.
☐ USGS

OLD WELL NUMBER

COORDINATES 33-08-51N 096-49-16W

YR. REC. BEGINS 73

LAST CHEMICAL ANALYSIS 03-76

STATE WELL NUMBER DT-18-50-802

DEPTH OF WELL 1632

LAND SURFACE DATUM ELEVATION 705.00

COMPLETION INTERVAL 1440-1632

DATE OF CURRENT MEASUREMENT MO. DAY YR.	CURRENT DEPTH TO WATER FROM LSD	CHANGE IN LEVEL SINCE THE LAST MEASUREMENT	Measurement Number	DEPTH TO WATER FROM MP	MP	Measuring Agency	Measurement Method	REMARKS	WELL USE	FIELD OBSERVATIONS
08 21 73	415.00			415.00	+0.00	09	3		1	
11 06 73	443.00	-28.00		443.00	+0.00	01	3		1	
11 05 74	440.00	+3.00		440.00	+0.00	01	3		1	
11 26 75	435.00	+5.00		435.00	+0.00	01	3		1	
03 18 76	402.00	+33.00		402.00	+0.00	01	3		1	
11 22 76	437.00	-35.00		437.00	+0.00	01	3		1	
11 14 77	519.00	-82.00		519.00	+0.00	01	3	02	1	
10 03 78	522.00	-3.00		522.00	+0.00	01	3	02	1	
12 -- 79	470.00	+52.00		470.00	+0.00	09	3		1	
12 -- 79	520.00	-50.00	2	520.00	+0.00	09	3	02	1	
05 02 80					+0.00	01		42	1	
10 15 80	502.00			502.00	+0.00	01	3	02	1	
03 16 82	545.00	-43.00		545.00	+0.00	01	3	02	1	
03 17 83	522.00	+23.00		522.00	+0.00	01	3		1	
03 27 84	510.00	+12.00		510.00	+0.00	01	3		M	
3 15 85	530.00			530.00	0.00	1	3		m	
3 17 86	527.00			527.00	0.00	1	3		m	
1 1[illegible] [illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]		m	
1 14 88	532.00			532.00	[illegible]	1	3		m	
[illegible]	[illegible]			[illegible]	[illegible]		3		m	
3 16 [illegible]	[illegible]			[illegible]	+0.00	[illegible]	3		m	

AQUIFER 138 - PALUXY FORMATION

WATERSHED 08 - TRINITY RIVER BASIN

COUNTY 043 - COLLIN

CURRENT 18-50-802

TDWR-0518

TEXA VATER DEVELOPMENT ARD
WATER LEVEL OBSERVATION WELL REPORT

TATE WELL NUMBER 18-50-802
EPTH OF WELL

ELEVATION OF LAND SURFACE
WATER USE

DATE OF CURRENT MEASUREMENT			CURRENT DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	MEASUREMENT NUMBER	ELEVATION OF WATER LEVEL	MEASURING AGENCY	MEASUREMENT METHOD	REMARKS	MEASURING POINT	FIELD OBSERVATIONS
MO	DAY	YEAR									
1	10	91	514,0		01		01	3		+0.00	UNUSED
1	23	92							1		measured wrong well measured well on south side
1	19	93	562.00		01		01	3		+0.00	
1	13	94	577.0				01				
2	8	95	-542		01		01	3			
11	07	96	Airline gone	unable to	reach	water	01		~~42~~ 43		
11	10	98	607.98				81	2			
11	9	99	628,00				01	2			
12	4	01	677.80	MP=1.5	cm		01	2	52	U	REMOVE PVC Plug
11	08	02	—		C11	—			40	U	

18-50-802

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer Paluxy

Field No.

Owner's Well No. 1-A

State Well No. 18-50-804

County COLLIN

1. Location: 1/4, 1/4 Sec. , Block Survey

2. Owner: CITY OF FRISCO Address:

Tenant: Address:

Driller: J. L. MYERS & SON Address:

3. Elevation of LS is 705 ft. above msl, determined by TOPO

4. Drilled: 1924; Dug, [✓ Cable Tool], Rotary,

5. Depth: Rept. 1680 ft. Meas. ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfgr. Type AIR

No. Stages , Bowls Diam. in., Setting ft.

Column Diam. in., Length Tailpipe ft. none

8. Motor: Fuel Make & Model HP.

9. Yield: Flow gpm, Pump 75 gpm, Meas., [✓ Rept.], Est. 1943

10. Performance Test: Date Length of Test Made by

Static Level ft. Pumping Level ft. Drawdown ft.

Production gpm Specific Capacity gpm/ft.

11. Water Level: 250 ft. [✓ rept.] meas. 1924 above below which is ft. above below surface.

~~UTM~~ ft. rept. meas. ~~3-10~~ ~~1977~~ above below ~~No place To Meas.~~ which is ft. above below surface.

ft. rept. meas. 19 above below which is ft. above below surface.

ft. rept. meas. 19 above below which is ft. above below surface.

12. Use: Dom., Stock, [✓ Public Supply], Ind., Irr., Waterflooding, Observation, [✓ Not Used], completely gone

13. Quality: (Remarks on taste, odor, color, etc.)

Temp. — °F, Date sampled for analysis 2-17-43 Laboratory USGS

Temp. °F, Date sampled for analysis Laboratory

Temp. °F, Date sampled for analysis Laboratory

14. Other data available as circled: Driller's Log, Radioactivity Log, Electric Log, Formation Samples, Pumping Test,

15. Record by: P. NORDSTROM Date 3-18 1976

Source of Data obs, city, U.S.G.S. records

16. Remarks: ~~No AIRLINE~~

CASING & BLANK PIPE

Cemented From ft. to ft.

Diam. (in.)	Type	Setting, ft.	
		from	to
10			

WELL SCREEN

Screen Openings

Diam. (in.)	Type	Setting, ft.	
		from	to

see 802

(Sketch)

TWDBE-WD-2

18-50-804

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

~~Texas State Department of Health Laboratories~~
~~1100 West 49th Street~~
~~Austin, Texas 78756~~
USGS

TWDBE-GW ONLY
Program No.
Proj. No.

CHEMICAL WATER ANALYSIS REPORT

County DT COLLIN
State Well No. 18-50-804
Well No. 1
Date Collected 02-17-43
By USGS

Send report to:

Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

Location
Source (type of well) AIR PUMP Owner CITY OF FRISCO
Date Drilled 1924 Depth 1680 ft. WBF Paluxy
Producing intervals Water level ft.
Sampled after pumping hrs. Yield 75 GPM meas./est. Temperature °F °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P.S. Remarks

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. Date Received Date Reported

	MG/L	ME/L		MG/L	ME/L
Silica	13		Carbonate		.
Calcium	2.3	.	Bicarbonate	470	.
Magnesium	0.6	.	Sulfate	96	.
Sodium	272	.	Chloride	19	.
Total		.	Fluoride	.9	.
☑ Potassium	3.2		Nitrate	2.5	.
☐ Manganese	.	%Na	pH	8.2	Total .
☐ Boron	.	SAR	1/ Dissolved Solids (sum in MG/L)		690
3/ ☑ Total Iron	.03	RSC	Phenolphthalein Alkalinity as C aCO3		
☐ (other) MG/L			Total Alkalinity as C aCO3		
Specific Conductance (micromhos/cm3)			Total Hardness as C aCO3		8
Diluted Conductance (micromhos/cm3)	X		2/ Nitrogen Cycle Ammonia - N		.
			Nitrite - N		.
			Nitrate - N		.
			Organic Nitrogen		.

"☐" items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBE-WD-1 (Rev. 1-25-72)

Analyst Checked By

Water Well Report™

DISCLAIMER/DETAILS

Banks Environmental Data, Inc. has performed a thorough and diligent search of all wells recorded with Texas state agencies. All mapped locations are based on information obtained from the originating agency. Although Banks performs quality assurance and quality control on all research projects, we recognize that any inaccuracies of the records and mapped well locations could be traced to the appropriate regulatory authority or driller. Many water well schedules may have never been submitted to the regulatory authority by the driller and, may explain the possible unaccountability of privately drilled wells. Therefore, Banks Environmental Data, Inc. cannot guarantee the accuracy of the data or well locations of those maps and records maintained by the Texas regulatory authorities. Banks Environmental Data, Inc. Water Well Report™ is prepared from existing state water well databases and additional file research conducted at Texas' regulatory authorities. Submission of driller's log records became mandatory in 1985. The state of Texas has processed these records in several different filing systems within two state regulatory authorities. The water well files, records and map locations are maintained by the Texas Commission on Environmental Quality (TCEQ) and the Texas Water Development Board (TWDB). Actual water well site locations of this report are geocoded and geoplotted directly from the drilling records, drilling schedules, and driller's logs and maps submitted by the water well driller and maintained at these two primary water well regulatory authorities. Below is a description of the filing systems accessed for well drilling records.

The Texas Water Development Board (TWDB) maintains two datasets of located water well records:

1) TWDB Groundwater Data GW - A registered water well driller is required by law to send in a report to the State for every well that is drilled. This requirement began in 1966. TWDB GW wells are assigned a State Identification Number unique to that well (ie: 65-03-4 01.) Where exact latitude/longitude data was not provided by the driller, latitude and longitude were assigned that locate the well in the center of a 2 ½-minute grid on a topographic map. Records may also include analytical data.

2) TWDB Submitted Drillers Reports WIID - The Submitted Driller’s Report Database is populated from the online Texas Well Report Submission and Retrieval System which is a cooperative Texas Department of Licensing and Regulation (TDLR) and Texas Water Development Board (TWDB) application that registered water-well drillers use to submit their required reports. This system was started 2/5/01 and is optional for the drillers to use. Reports that drillers submit by mail are geoplotted/geocoded by a TWDB staff member. WIID wells are assigned a unique tracking number by the Texas Well Report Submission and Retrieval System. (ie: 972 63, 9416)

The Texas Commission on Environmental Quality (TCEQ) maintains two datasets of water well records. Where TCEQ’s datasets are included in the Banks Environmental Data, Inc. Water Well Report, a description and example identifier are listed below.

1) Water Utility Database - This database contains a collection of data from Texas Water Districts, Public Drinking Water Systems and Water and Sewer Utilities who submit information to the TCEQ.

Public Water Systems Database PWS - The Public Water Systems records included in the WUD report are obtained digitally from TCEQ. The PWS database does not contain Drillers Reports or analytical data. The PWS Watersource name is the unique identifier in Banks Reports (StateID- S2200199A, G2200322A). Public water system IDs that begin with ‘G’ are groundwater wells. PWS IDs that begin with ‘S’ are surface intakes.

2) TCEQ Central Records - Several different types of Driller’s Reports are filed with TCEQ Central Records.

A) Plotted Water Well Reports - Plotted Well logs are filed at TCEQ Central File Room based on county name, and grid number. Water well site locations are documented on the logs by the drillers. The accuracy and location of the Plotted wells are relative to the information provided on the drillers report. (ie: 65-59-1)

From 1991 to the 2001, Texas Well Reports contain a grid location box, where drillers mark an X to indicate where the well is located within the 2.5 minute quadrant. These locations have not been verified by the state.

B) Partially Numbered Well Completion Reports that were provided a State Identification Number by the TWDB that establishes the well location somewhere within a 2.5 minute quadrant of a 7.5 minute quadrangle map. This method was the standard procedure from 1986 through 1991.

Some of the historical well logs have a letter following the grid number. TWDB assigned letters to the correlating grid number to identify these wells (ie: 65-59-1A). In some instances, a single well number can represent more than one well location. This type of mapping and filing procedure ceased in June 1986.

Local Groundwater Conservation Districts/Subsidence Districts maintain separate databases from state agencies. Duplicates groundwater wells are likely between local GCDs/GSDs and TWDB and TCEQ databases.

Where reasonably ascertainable, local GCD/SD data are included in the water well report. For example, in the Harris/Galveston area the Harris Galveston Subsidence District dataset is included in the report. (ie: HGSD1234) HGSD does not maintain well completion logs.

U.S. Geological Survey (USGS) maintains The National Water Information System (NWIS)Inventory. Banks water well report includes NWIS inventory (ie: USGS1234).

MEMORANDUM

TO: Matt Love
CC: Eric Pastor

FROM: Larry Eagan

DATE: December 18, 2012

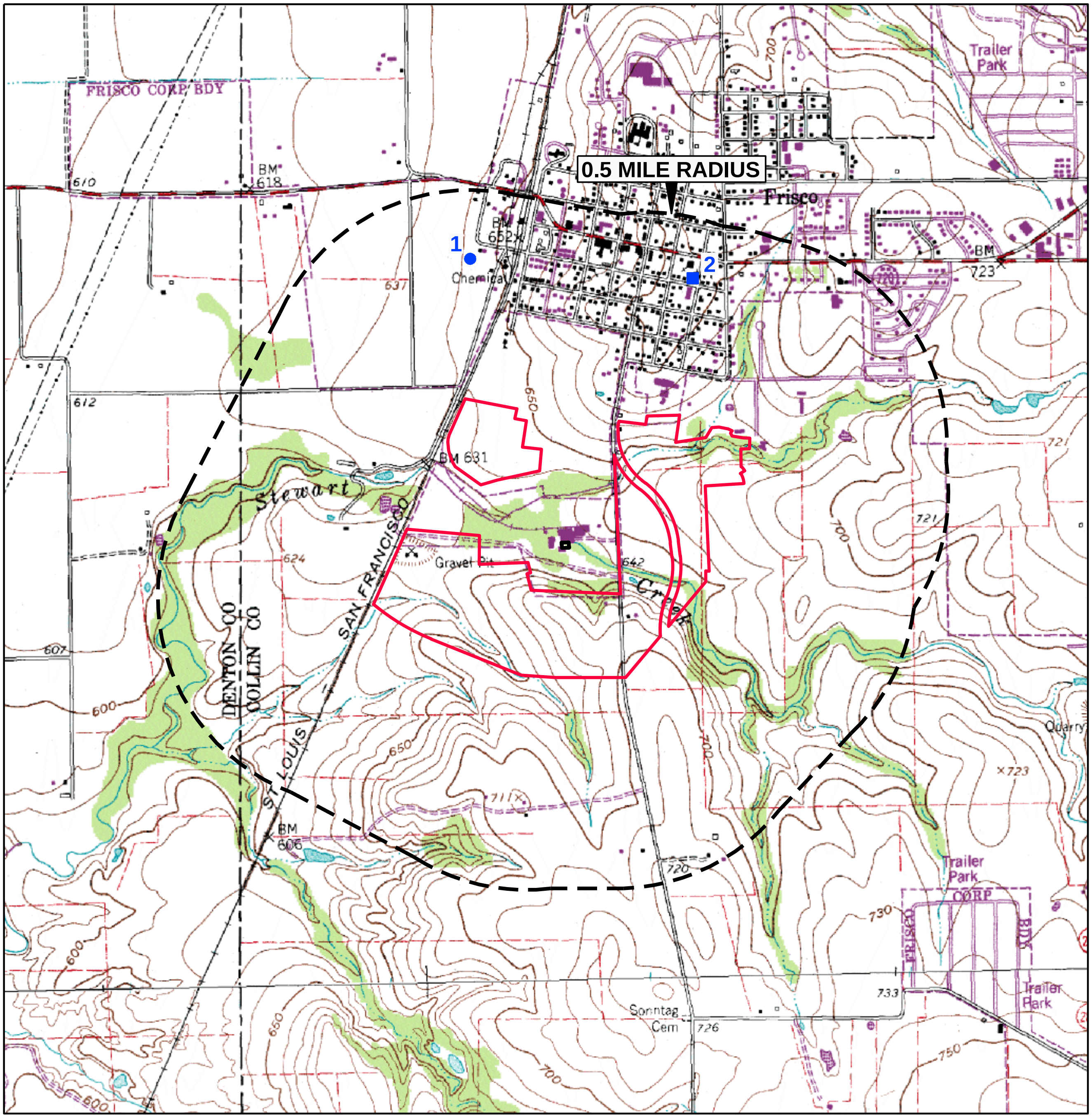
RE: Exide Frisco Recycling Center – Water Well Field Survey

A field water well survey and interviews were conducted by Larry Eagan during October and November 2012 to evaluate the status of wells located within a half-mile radius of the Exide Frisco Recycling Center in Frisco, Texas. The status of wells identified in a February 1, 2012 search of Texas state water well records was confirmed. In addition, a search for other wells not identified in Texas state well records was conducted by a drive-by survey and discussions with City of Frisco personnel and other persons. Well locations identified in the water well records search and field survey are presented on Figure 1.

Well location 1, located in the vicinity of the intersection at Pecan Street and John W. Elliot Dr., indicates a single well designated as owned by Frisco Concrete and as active in Texas state records. Donnie Mayfield, a current City of Frisco (the City) employee who oversaw the demolition of three home sites located in the vicinity of the well, was interviewed regarding the well on October 19, 2012. Mr. Mayfield indicated that the old Frisco Concrete cement plant was in the vicinity of the demolished home sites. Lynn Floyd, of Floyd Architectural Millwork at 8734 John W. Elliot Dr., the only current business owner and operator in the vicinity of the reported well, was interviewed on October 22, 2012. Mr. Floyd, who has operated a business at this address for 15 years, indicated that he was not aware of any active wells in the area. In addition, a walking survey performed on October 22, 2012, by Mr. Eagan did not indicate evidence of an active well in the area. As a result of this evaluation, the well is believed destroyed.

Well location number 2 is located in the vicinity of the corner of Elm and 7th Streets where the original fire station was located. Mr. Eagan met with Mr. Mayfield of the City on October 19, 2012, regarding these wells, which are all deep wells (1700-2200 ft.) and owned by the City of Frisco. Two of the wells are capped and not currently in use by the City, but could be utilized in an emergency. According to Mr. Mayfield, the other two wells have been plugged and abandoned.

Well location number 3, located at 8661 7th Street, was a suspected well location identified by a drive-by survey. A small concrete structure, possibly suggesting the presence of a well, was observed in the backyard at 8661 7th Street. The owner of the property, Janet Lovelady, was interviewed over the phone on November 7, 2012. She indicated that there is no active well currently on the property, but that there had been a well on the property in the distant past that was believed to have caved in. The water well records survey did not indicate a well at or near this location.



EXPLANATION

● Water Well
(Destroyed or Plugged and Abandoned)

■ Water Well Cluster
(Unused or Plugged and Abandoned)

— Undeveloped Buffer Property Boundary

N

Scale in Feet

0 600 1200

SOURCE:
Base map from www.tnris.org, Frisco, TX 7.5 min. USGS quadrangle dated 1995.

EXIDE TECHNOLOGIES

UNDEVELOPED BUFFER PROPERTY
VCP INVESTIGATION
FRISCO, TEXAS

Figure 2C

WATER WELL MAP

PROJECT: 1824	BY: AJD	REVISIONS
DATE: APRIL, 2014	CHECKED: TNN	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

APPENDIX 6
MONITORING WELL RECORDS

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

STATE OF TEXAS WELL REPORT for Tracking #317604

Owner:	**Exide**	Owner Well #:	**VCPMW1**
Address:	**7471 5th Ave Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 10 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 1 ft with 1 cement (#sacks and material)** 2nd Interval: **From 1 ft to 2 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 2 ft to 10 ft with 6 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI 5070 Brush Creek Rd Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#317604**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-6ft brown clay
6-10ft tan clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2in new pvc riser 0-2.5ft s40
2in new pvc screen 2.5-10ft 0.010

STATE OF TEXAS WELL REPORT for Tracking #317605

Owner:	**Exide**	Owner Well #:	**VCPMW2**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 20 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 20 ft with 8 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#317605**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-6ft brown clay
6-20ft tan clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2in new pvc riser 0-5ft s40
2in new pvc screen 5-20ft 0.010

STATE OF TEXAS WELL REPORT for Tracking #317606

Owner:	**Exide**	Owner Well #:	**VCPMW3,VCPMW4**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 15 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 15 ft with 8 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#317606**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-6ft brown clay
6-15ft tan clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2in new pvc riser 0-5ft s40
2in new pvc screen 5-15ft 0.010

STATE OF TEXAS WELL REPORT for Tracking #317608

Owner:	**Exide**	Owner Well #:	**VCPMW5,VCPMW6**
Address:	**7471 5th Ave Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 20 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 20 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI 5070 Brush Creek Rd Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#317608**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-6ft brown clay
6-20ft tan clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2in new pvc riser 0-5ft s40
2in new pvc screen 5-20ft 0.010

STATE OF TEXAS WELL REPORT for Tracking #317238

Owner:	**Exide Technologies**	Owner Well #:	**MW-7**
Address:	**PO Box 14294** **Reading , PA 19612**	Grid #:	**18-50-8**
Well Location:	**7471 5th Street** **Frisco , TX 75034**	Latitude:	**33° 08' 26" N**
Well County:	**Collin**	Longitude:	**096° 49' 45" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:
Started: **5/18/2013**
Completed: **5/18/2013**

Diameter of Hole: Diameter: **8.25 in From Surface To 10 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand Pack**

Annular Seal Data:
1st Interval: **From 0 ft to 1 ft with 1 Concrete (#sacks and material)**
2nd Interval: **From 1 ft to 1.5 ft with 1 Bentonite (#sacks and material)**
3rd Interval: **From 1.5 ft to 10 ft with 4 Sand (#sacks and material)**
Method Used: **Gravity**
Cemented By: **Robert L. Flair**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level:
Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:
Sunbelt Industrial Services
2415 Cullen St

	Fort Worth , TX 76107
Driller License Number:	**2948**
Licensed Well Driller Signature:	**Robert L. Flair**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**DE13040**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#317238**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-10' Limestone

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Riser 0-2.5' SCH 40
2" New Screen 2.5-10' 0.010 Slot

STATE OF TEXAS WELL REPORT for Tracking #317232

Owner:	**Exide Technologies**	Owner Well #:	**MW-11**
Address:	**PO Box 14294** **Reading , PA 19612**	Grid #:	**18-50-8**
Well Location:	**7471 5th Street** **Frisco , TX 75034**	Latitude:	**33° 08' 26" N**
Well County:	**Collin**	Longitude:	**096° 49' 45" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:
Started: **5/17/2013**
Completed: **5/17/2013**

Diameter of Hole: Diameter: **8.25 in From Surface To 15 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand Pack**

Annular Seal Data:
1st Interval: **From 0 ft to 1 ft with 1 Concrete (#sacks and material)**
2nd Interval: **From 1 ft to 1.5 ft with 1 Bentonite (#sacks and material)**
3rd Interval: **From 1.5 ft to 15 ft with 6 Sand (#sacks and material)**
Method Used: **Gravity**
Cemented By: **Robert L. Flair**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level:
Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:
Sunbelt Industrial Services
2415 Cullen St

	Fort Worth , TX 76107
Driller License Number:	**2948**
Licensed Well Driller Signature:	**Robert L. Flair**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**DE13040**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#317232**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-10' Tan Clay
10-15' Shale

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Riser 0-2.5' SCH 40
2" New Screen 2.5-15' 0.010 Slot

STATE OF TEXAS WELL REPORT for Tracking #317234

Owner:	**Exide Technologies**	Owner Well #:	**MW-10**
Address:	**PO Box 14294** **Reading , PA 19612**	Grid #:	**18-50-8**
Well Location:	**7471 5th Street** **Frisco , TX 75034**	Latitude:	**33° 08' 26" N**
Well County:	**Collin**	Longitude:	**096° 49' 45" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:
Started: **5/17/2013**
Completed: **5/17/2013**

Diameter of Hole: Diameter: **8.25 in From Surface To 15 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand Pack**

Annular Seal Data:
1st Interval: **From 0 ft to 1 ft with 1 Concrete (#sacks and material)**
2nd Interval: **From 1 ft to 1.5 ft with 1 Bentonite (#sacks and material)**
3rd Interval: **From 1.5 ft to 15 ft with 6 Sand (#sacks and material)**
Method Used: **Gravity**
Cemented By: **Robert L. Flair**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level:
Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:
Sunbelt Industrial Services
2415 Cullen St

	Fort Worth , TX 76107
Driller License Number:	**2948**
Licensed Well Driller Signature:	**Robert L. Flair**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**DE13040**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-10' Tan Clay
10-15' Shale

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Riser 0-2.5' SCH 40
2" New Screen 2.5-15' 0.010 Slot

STATE OF TEXAS WELL REPORT for Tracking #317235

Owner: **Exide Technologies**

Owner Well #: **MW-8**

Address: **PO Box 14294**
Reading , PA 19612

Grid #: **18-50-8**

Well Location: **7471 5th Street**
Frisco , TX 75034

Latitude: **33° 08' 26" N**

Well County: **Collin**

Longitude: **096° 49' 45" W**

Elevation: **No Data**

GPS Brand Used: **Google Earth**

Type of Work: **New Well**

Proposed Use: **Monitor**

Drilling Date: Started: **5/17/2013**
Completed: **5/17/2013**

Diameter of Hole: Diameter: **8.25 in From Surface To 15 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand Pack**

Annular Seal Data:
1st Interval: **From 0 ft to 1 ft with 1 Concrete (#sacks and material)**
2nd Interval: **From 1 ft to 3 ft with 1 Bentonite (#sacks and material)**
3rd Interval: **From 3 ft to 15 ft with 6 Sand (#sacks and material)**
Method Used: **Gravity**
Cemented By: **Robert L. Flair**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Sunbelt Industrial Services**
2415 Cullen St

	Fort Worth , TX 76107
Driller License Number:	**2948**
Licensed Well Driller Signature:	**Robert L. Flair**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**DE13040**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#317235**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-10' Tan Clay
10-15' Shale

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Riser 0-5' SCH 40
2" New Screen 5-15' 0.010 Slot

STATE OF TEXAS WELL REPORT for Tracking #317236

Owner:	**Exide Technologies**	Owner Well #:	**MW-9**
Address:	**PO Box 14294** **Reading , PA 19612**	Grid #:	**18-50-8**
Well Location:	**7471 5th Street** **Frisco , TX 75034**	Latitude:	**33° 08' 26" N**
Well County:	**Collin**	Longitude:	**096° 49' 45" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:
Started: **5/17/2013**
Completed: **5/17/2013**

Diameter of Hole: Diameter: **8.25 in From Surface To 20 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand Pack**

Annular Seal Data:
1st Interval: **From 0 ft to 1 ft with 1 Concrete (#sacks and material)**
2nd Interval: **From 1 ft to 1.5 ft with 1 Bentonite (#sacks and material)**
3rd Interval: **From 1.5 ft to 20 ft with 8 Sand (#sacks and material)**
Method Used: **Gravity**
Cemented By: **Robert L. Flair**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level:
Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:
Sunbelt Industrial Services
2415 Cullen St

	Fort Worth , TX 76107
Driller License Number:	**2948**
Licensed Well Driller Signature:	**Robert L. Flair**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**DE13040**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#317236**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-10' Tan Clay
10-20' Shale

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Riser 0-2.5' SCH 40
2" New Screen 2.5-20' 0.010 Slot

STATE OF TEXAS WELL REPORT for Tracking #277393

Owner:	**Exide Technologies**	Owner Well #:	**MW# 19,20**
Address:	**7471 South 5th St. Frisco , TX 75034**	Grid #:	**18-50-8**
Well Location:	**7471 South 5th St. Frisco , TX 75034**	Latitude:	**33° 08' 28" N**
Well County:	**Collin**	Longitude:	**096° 49' 39" W**
Elevation:	**638 ft.**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:
Started: **1/12/2012**
Completed: **1/12/2012**

Diameter of Hole: Diameter: **8 1/4 in From Surface To 22 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **Sand Packed**

Annular Seal Data:
1st Interval: **From 22 ft to 5 ft with 12 Sand (#sacks and material)**
2nd Interval: **From 5 ft to 3 ft with 1 Bentonite (#sacks and material)**
3rd Interval: **From 3 ft to 0 ft with 1 Cement (#sacks and material)**
Method Used: **TCEQ Standards**
Cemented By: **Strata Core**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level:
Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:
Strata Core Services
5070 Brush Creek Rd

	Fort Worth , TX 76119
Driller License Number:	**52694**
Licensed Well Driller Signature:	**Mario Robles**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#277393**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 - 2' Brown Clay w/ concrete rubble
2 - 12' Dk Brown Clay
12 - 19' Gray Weathered Clay
19 - 22' Gray Shale

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" N PVC Screen 22 - 7 .010
2" N PVC Riser 7 - 0 Sch 40

STATE OF TEXAS WELL REPORT for Tracking #317593

Owner:	**Exide**	Owner Well #:	**MW28**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 20 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 20 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#317593**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-6ft brown clay
6-20ft tan clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2in new pvc riser 0-5ft s40
2in new pvc screen 5-20ft 0.010

STATE OF TEXAS WELL REPORT for Tracking #349524

Owner:	**Exide Technologies**	Owner Well #:	**MW-12**
Address:	**P.O.Box 14294** **Reading , PA 19612**	Grid #:	**18-50-8**
Well Location:	**7471 5th Street** **Frisco , TX 75034**	Latitude:	**33° 08' 26" N**
Well County:	**Collin**	Longitude:	**096° 49' 45" W**
Elevation:	**634 ft.**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **12/12/2013**
Completed: **12/12/2013**

Diameter of Hole: Diameter: **8.25 in From Surface To 30 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **16/30 Sand Pack**

Annular Seal Data:
1st Interval: **From 0 ft to 2 ft with 1 Concrete (#sacks and material)**
2nd Interval: **From 2 ft to 8 ft with 3 Bentonite (#sacks and material)**
3rd Interval: **From 8 ft to 30 ft with 15 Sand (#sacks and material)**
Method Used: **Gravity**
Cemented By: **Robert L. Flair**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:
Sunbelt Industrial Services
2415 Cullen St

	Fort Worth , TX 76107
Driller License Number:	**2948**
Licensed Well Driller Signature:	**Robert L. Flair**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**DE13392**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#349524**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-8' Black Clay
8-26' Tan Clay
26-30' Gray Shaley Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Riser 0-10' SCH 40
2" New Screen 10-30' 0.010 Slot

STATE OF TEXAS WELL REPORT for Tracking #351257

Owner: **Exide Technologies**

Owner Well #: **VCP-MW-13**

Address: **P.O. Box 14294**
Reading , PA 19612

Grid #: **18-50-8**

Well Location: **7471 5th Street**
Frisco , TX 75034

Latitude: **33° 08' 26" N**

Well County: **Collin**

Longitude: **096° 49' 45" W**

Elevation: **634 ft.**

GPS Brand Used: **Google Earth**

Type of Work: **New Well**

Proposed Use: **Monitor**

Drilling Date: Started: **1/3/2014**
Completed: **1/3/2014**

Diameter of Hole: Diameter: **8.25 in From Surface To 24 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **16/30 Sand Pack**

Annular Seal Data:
1st Interval: **From 0 ft to 2 ft with 1 Concrete (#sacks and material)**
2nd Interval: **From 2 ft to 3 ft with 1 Bentonite (#sacks and material)**
3rd Interval: **From 3 ft to 24 ft with 12 Sand (#sacks and material)**
Method Used: **Gravity**
Cemented By: **Robert L. Flair**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No Data**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Sunbelt Industrial Services**
2415 Cullen St

	Fort Worth , TX 76107
Driller License Number:	**2948**
Licensed Well Driller Signature:	**Robert L. Flair**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**DE13392**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0-16' Black Clay
16-20' Weathered Tan Clay
20-24' Weathered Shale

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Riser 0-4' SCH 40
2" New Screen 4-24'

APPENDIX 7
AQUIFER TESTING DATA

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

APPENDIX 7

HYDRAULIC CONDUCTIVITY MEASUREMENTS, SUSTAINABLE WELL YIELD CALCULATIONS, AND GROUNDWATER CLASSIFICATION

Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Project Background

Aquifer characterization activities were performed at two wells located on the undeveloped buffer property at the Exide facility located in Frisco, Texas, to support PCL development and response action planning for the Affected Property Assessment Report (APAR). Results of aquifer characterization were not used to determine the groundwater resource classification in accordance with TRRP regulatory guidance (RG-366/TRRP-8 Groundwater Classification). A Class 2 groundwater resource has been assumed for the purpose of the APAR, aquifer testing information is provided for general information.

Single Well Slug Test Procedures

Site-specific hydraulic conductivity for the water-bearing zone found in the vicinity of well MW-19 and MW-20 was determined using slug tests. The slug tests used in this investigation were single-well, instantaneous head-change tests (soil boring logs and monitoring well construction diagrams can be found in Appendix 2 of the APAR). Slug tests were conducted at two locations (MW-19 and MW-20) within the saturated clay zone. Two slug tests were performed at each location and the average conductivity was used to calculate the yield for each well.

The procedure for the slug tests were as follows:

- The static water level was measured;
- An instantaneous positive or negative head displacement was induced by rapidly lowering the slug into the well or withdrawing the slug from the well;
- The head displacement and groundwater recovery were measured and recorded at 1-second intervals using a pressure transducer and data logger. Data was monitored real-time in the field during slug testing;
- The test was completed once the water level restabilized to within 10% of the original water level; and
- Steps 1 through 4 were repeated until two slug tests were performed at each well.

Calculation of Hydraulic Conductivity

The slug test data were analyzed using AQTESOLV v3.0 software (HydroSOLVE, Inc.). Hydraulic conductivity (K) was calculated using the Bouwer and Rice method. Data plots from individual slug tests are attached.

An average representative hydraulic conductivity value for each well was calculated and this average used to calculate an estimated well yield. The following table lists the measured K value for each slug-test, the mean K for the individual test wells, and the mean K for the water-bearing unit.

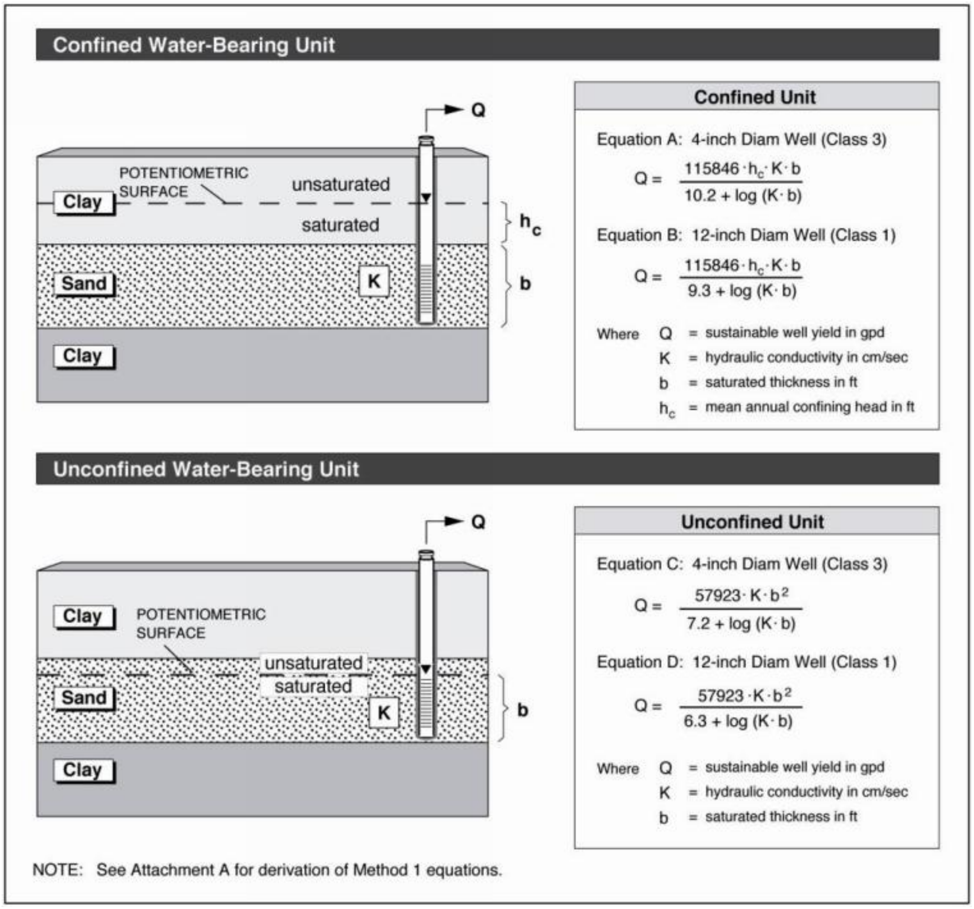
Table 7.1a
Hydraulic Conductivity Results at the wells MW-19 and MW-20

Well ID	Test Number	Hydraulic Conductivity K, [cm/sec]	Average K [cm/sec]
MW-19	1	2.196 E-8	4.5 E-8
MW-19	2	6.765 E-8	
MW-20	1	7.836 E-9	2.5 E-8
MW-20	2	4.245 E-8	

GWBU Average: 3.5 E-8 cm/sec

Calculation of Well Yield

Well yield for the saturated zone associated with these wells was estimated using the idealized well function equation (i.e., Method 1), as described in Attachment B of the TCEQ guidance document for groundwater classification (RG-366/TRRP-8). The Method 1 equations and corresponding input parameters (i.e., saturated thickness and hydraulic conductivity) are illustrated in the figure below. For the saturated zone in the vicinity of wells MW-19 and MW-20, the Method 1 equation for an unconfined water-bearing unit and a 4-inch diameter well screen was used (Equation C in the figure below).



An example well yield calculation using the data for monitoring well MW-19 is presented below.

$$Q = \frac{57923 \times K \times b^2}{7.2 + \log(K \times b)}$$

where,
Q = sustainable well yield in gpd;
K = representative hydraulic conductivity from Table 7.1a (4.5 E-8 cm/sec); and
b = saturated thickness (10 ft at MW-19).

Using these inputs, the calculated well yield at monitoring well MW-19 is:

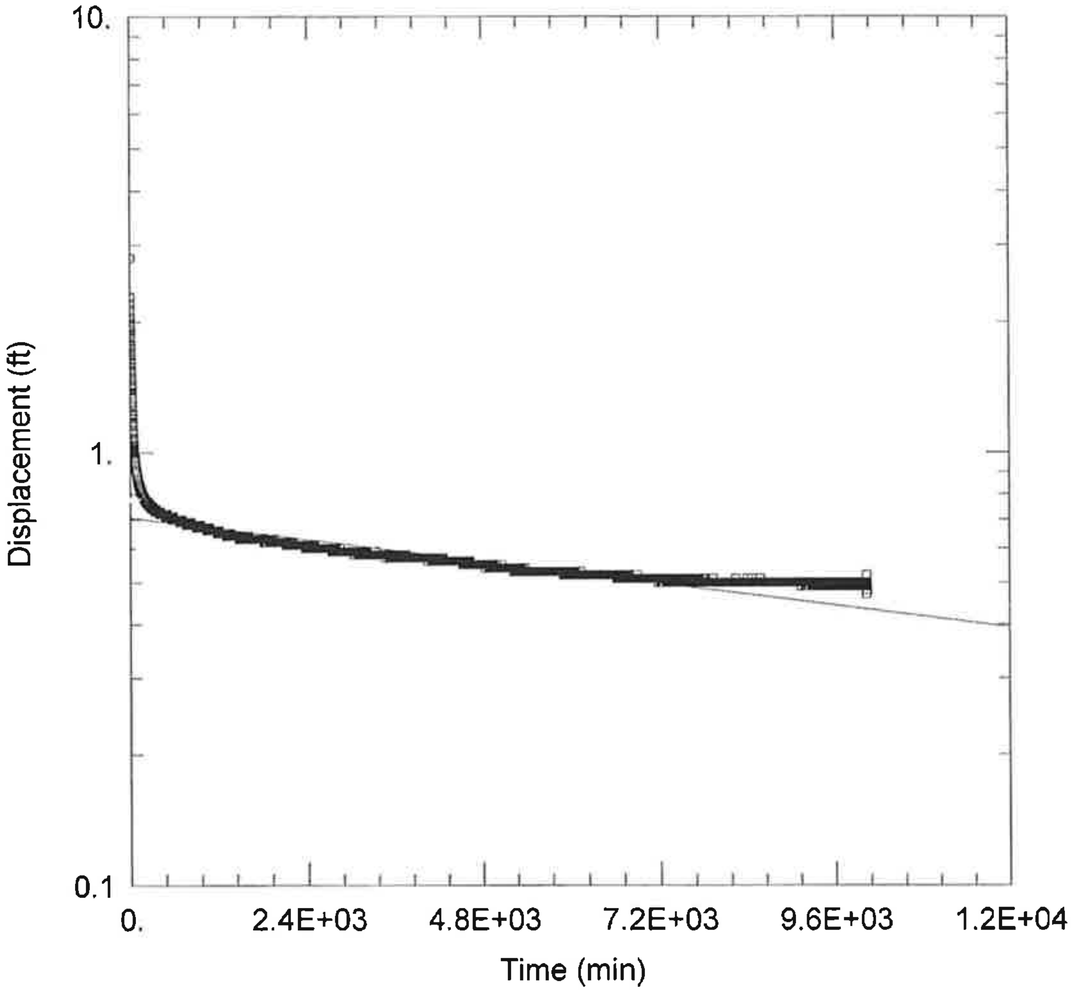
$$Q = \frac{57923 \times 0.000000045 \times 10^2}{7.2 + \log(0.000000045 \times 10)} \text{ = 0.3 gpd}$$

The saturated thickness (b) at each well was determined using stratigraphic information from the boring logs and static water level measured prior to initiating the slug tests at each well. Boring logs and well construction diagrams are presented in Appendix 2 of the APAR.

Calculated well yields for each well and the average estimated sustainable well yield for the saturated zone encountered at well MW-19 and MW-20 are presented in the table below.

Table 7.2a
Calculated Well Yield

Well ID	Saturated Thickness b, [ft]	Well Yield Q, [gpd]
Saturated Unit Hydraulic Conductivity = 3.5 E-8 cm/sec		
MW-19	10.0	0.3
MW-20	9.0	0.2
Uppermost Groundwater-bearing Unit Well Yield: 0.25 gpd		



MW-19 SLUG OUT 1

Data Set: J:\...\MW-19_SlugOut1.aqt
Date: 05/17/13 Time: 16:17:17

PROJECT INFORMATION

Company: PBW, LLC
Client: Exide
Test Location: Frisco Plant
Test Well: MW-19
Test Date: 2/21/12

AQUIFER DATA

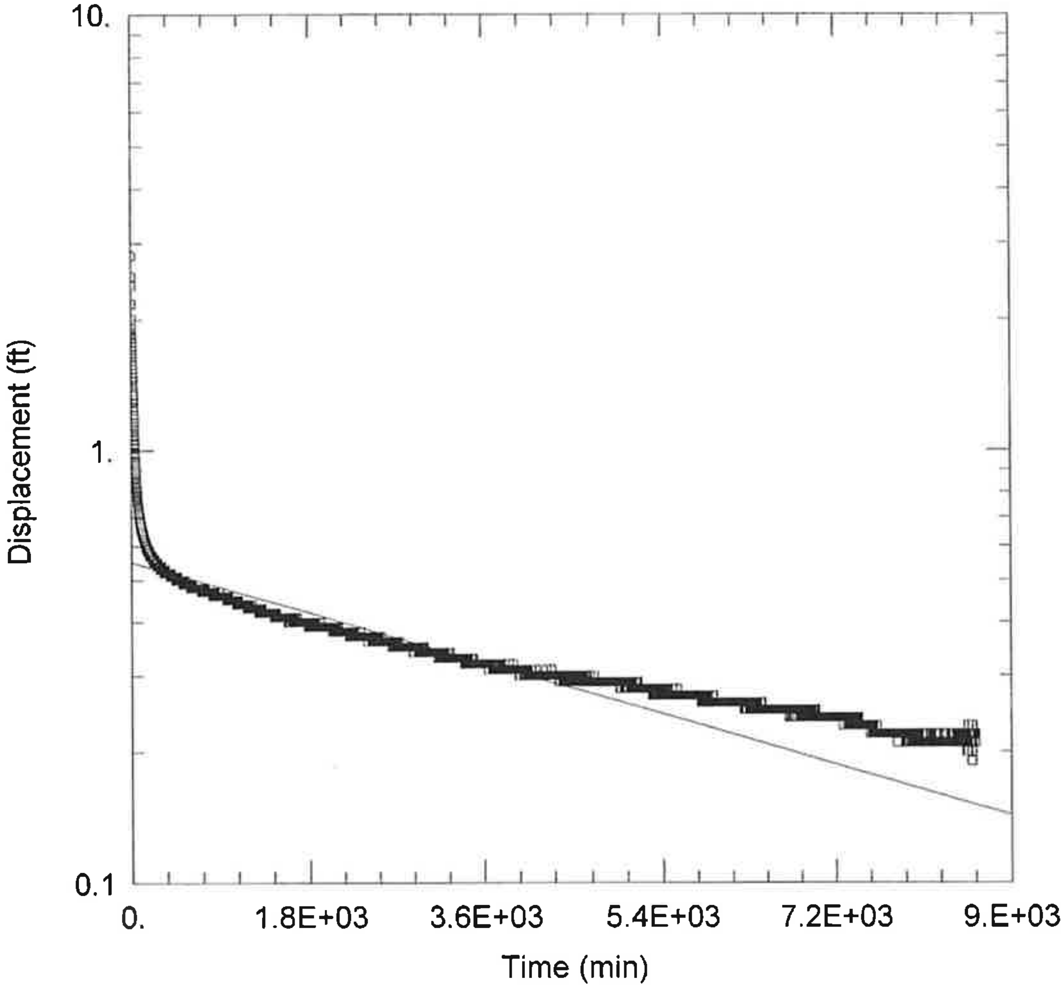
Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-19)

Initial Displacement: 2.81 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.2
Casing Radius: 0.083 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 2.196E-08 cm/sec
y0 = 0.7066 ft



MW-19 SLUG OUT 2

Data Set: J:\...\MW-19_SlugOut2.aqt
Date: 05/17/13 Time: 16:17:34

PROJECT INFORMATION

Company: PBW, LLC
Client: Exide
Test Location: Frisco Plant
Test Well: MW-19
Test Date: 2/21/12

AQUIFER DATA

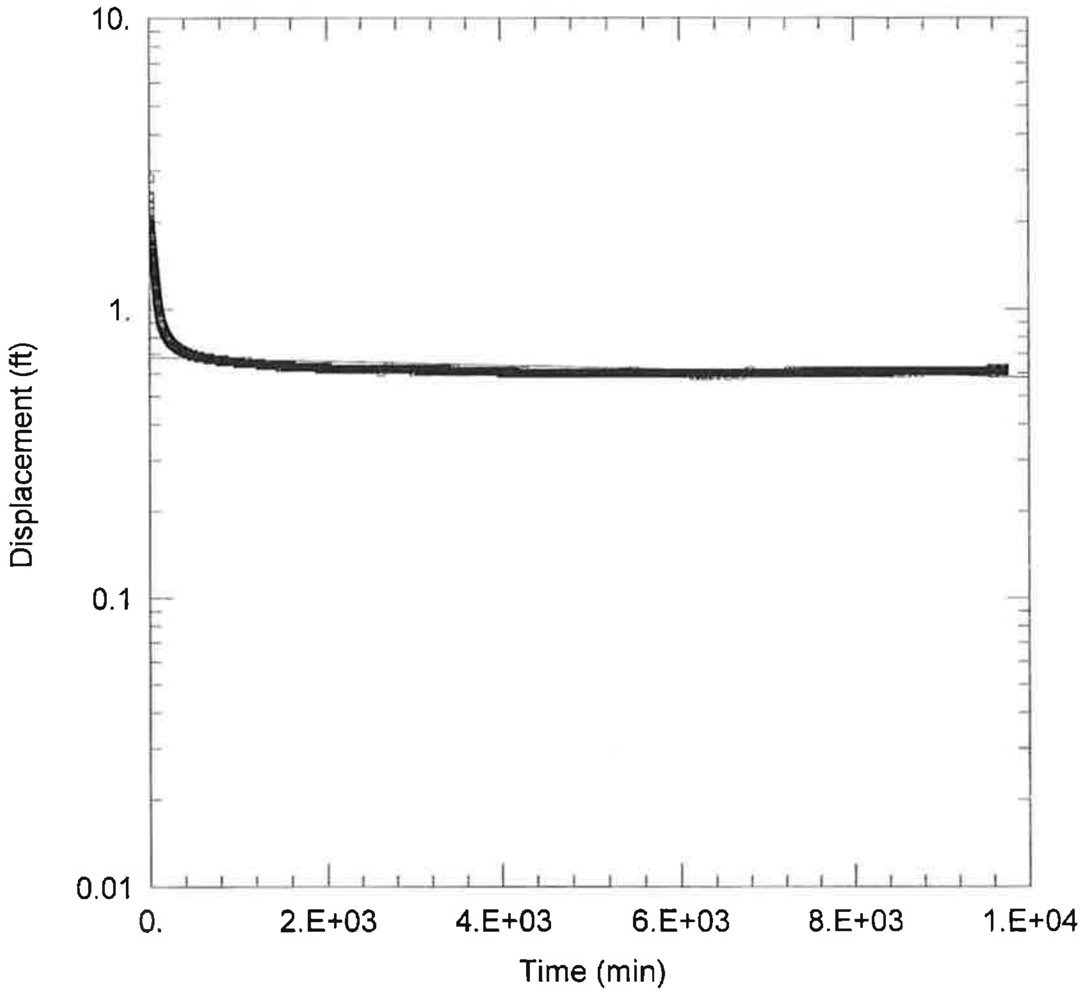
Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-19)

Initial Displacement: 2.81 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.2
Casing Radius: 0.083 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 6.765E-08 cm/sec
y0 = 0.5509 ft



MW-20 SLUG OUT 1

Data Set: J:\...\MW-20_Out1.aqt
Date: 05/17/13 Time: 16:17:43

PROJECT INFORMATION

Company: PBW, LLC
Client: Exide
Test Location: Frisco Plant
Test Well: MW-20
Test Date: 2/21/12

AQUIFER DATA

Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

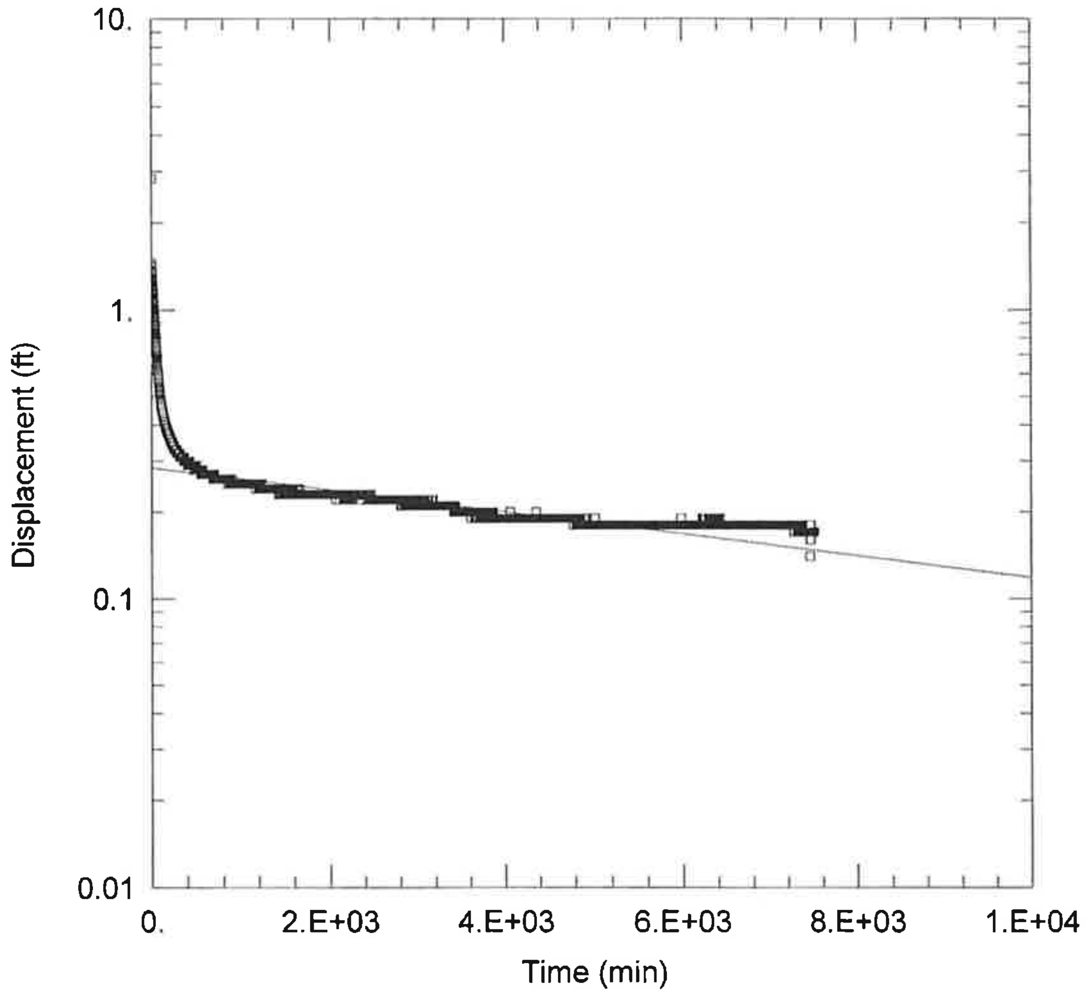
WELL DATA (MW-20)

Initial Displacement: 2.84 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 9. ft
Total Well Penetration Depth: 9. ft
Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 7.836E-09 cm/sec
y0 = 0.6824 ft



MW-20 SLUG OUT 2

Data Set: J:\...\MW-20_Out2.aqt
Date: 05/17/13
Time: 16:17:50

PROJECT INFORMATION

Company: PBW, LLC
Client: Exide
Test Location: Frisco Plant
Test Well: MW-20
Test Date: 2/21/12

AQUIFER DATA

Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-20)

Initial Displacement: 2.84 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 9. ft
Total Well Penetration Depth: 9. ft
Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 4.245E-08 cm/sec
y0 = 0.2844 ft

APPENDIX 8
STATISTICS DATA TABLES AND CALCULATIONS

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

Site-specific Background Concentration

Representative Arsenic Concentration: M Tract Area

EXIDE
TECHNOLOGIES

Matthew A. Love
Director – Global Environmental Remediation

Exide Technologies
P.O. Box 14294
Reading, PA 19612-4294
610.921.4054 tel
610.921.4062 fax
matt.love@exide.com
www.exide.com

May 30, 2013

Mr. Gary Beyer, PG
Texas Commission on Environmental Quality
Remediation Division
MC-127
12100 Park 35 Circle, Bldg. D
Austin, TX 78753

Re: Revised Site-specific Background Soil Concentration Evaluation
Exide Technologies Former Operating Plant
7471 South 5th Street, Frisco, Texas

Dear Mr. Beyer:

Please find enclosed two copies of the Revised Site-specific Background Soil Concentration Evaluation performed for Exide Technologies Former Operating Plant in Frisco, Texas. This evaluation was prepared for Exide Technologies by Pastor, Behling & Wheeler, LLC (PBW) and represents an update to the evaluation previously submitted to you on April 12, 2013. Specifically, this update incorporates data for three additional soil samples that were collected from within the background study area on May 9, 2013 in accordance with your verbal request.

Should you or your staff have any questions or comments regarding this revised evaluation, please contact this office at (610) 921-4054.

Sincerely,

EXIDE TECHNOLOGIES

Matthew A. Love
Director, Global Environmental Remediation

cc: Paul James - EPA
Larry Champagne - TCEQ
Bill Shafford – TCEQ
Sam Barrett – Regional TCEQ (Ft. Worth)
Vanessa Coleman – Exide
Aileen Hooks – Baker Botts, LLP
Eric Pastor - Pastor, Behling & Wheeler, LLC

HAND DELIVERED

RECEIVED
MAY 31 2013
TCEQ Remediation Division

PBW

Consulting Engineers
and Scientists

Pastor, Behling & Wheeler, LLC
2201 Double Creek Drive, Suite 4004
Round Rock, TX 78664

Tel (512) 671-3434
Fax (512) 671-3446

May 30, 2013
PBW Project No. 1755

Mr. Gary Beyer
MC-127
Project Manager
Voluntary Cleanup Program – Corrective Action Section
Remediation Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Revised Site-specific Background Soil Concentration Evaluation
Exide Technologies Frisco Recycling Center, 7471 South 5th Street, Frisco, Texas 75034
TCEQ SWR No. 30516;EPA ID No. TXD006451090; Customer No. CN600129787; Regulated Entity No. RN100218643

Dear Mr. Beyer:

Pastor, Behling & Wheeler, LLC (PBW), on behalf of Exide Technologies (Exide), is pleased to provide herewith the results of a site-specific background soil concentration evaluation performed in support of the affected property assessment for the former operating plant at the Exide Frisco Recycling Center (the Site). This information represents an update to the previous letter regarding site-specific background concentrations submitted to you on April 12, 2013. Upon your approval, this evaluation will be included as Appendix 8 to the Affected Property Assessment Report (APAR) for the Site.

As you know, collection of background soil samples for the Site was specified in a Sampling and Analysis Work Plan (Work Plan) that was submitted to the United States Environmental Protection Agency (EPA) on November 14, 2011. This Work Plan was approved by EPA on December 2, 2011. The background study area was approved by the EPA in a meeting on January 4, 2012. Soil samples used in the April 12, 2013 site-specific background evaluation were collected from the background study area on March 29, 2012. In accordance with your verbal request, three additional soil samples were collected from the background study area on May 9, 2013. Collection, analysis and validation activities were performed in accordance with procedures described in the EPA-approved Work Plan. Sample location information, sample analytical reports, statistical evaluation results and calculation details for determination of site-specific background concentrations are provided in Appendix A to this letter. As indicated therein, the proposed site-specific background soil concentrations for arsenic and lead are 15.9 mg/kg and 31.5 mg/kg, respectively.

Please review the enclosed information and let us know if you have any questions or comments. You can contact us at (512) 671-3434 or you can reach Mr. Matt Love of Exide at (610) 921-4054.

Sincerely,

PASTOR, BEHLING & WHEELER, LLC
Engineering Registration No. 4760
Geoscience Registration No. 50248

William F. Vienne, P.G.
Project Hydrogeologist

Eric F. Pastor, P.E.
Principal Engineer

cc: Mr. Paul James – EPA

STATE OF TEXAS
WILLIAM F. VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST

5-30-13

STATE OF TEXAS
ERIC F. PASTOR
67019
REGISTERED
PROFESSIONAL ENGINEER

5-30-13

APPENDIX A

SITE-SPECIFIC BACKGROUND SOIL CONCENTRATION EVALUATION

TOLERANCE LIMIT CALCULATIONS

APPENDIX A
SITE-SPECIFIC BACKGROUND SOIL CONCENTRATION EVALUATION
TOLERANCE LIMIT CALCULATIONS

Background soil samples were collected on March 29, 2012 and May 9, 2013, within an area of the City of Frisco's Grand Park near the intersection of Legacy Drive and Stonebrook Parkway (see Figures 1 and 2). The background sample area was approved by the United States Environmental Protection Agency (EPA) in a meeting on January 4, 2012. The samples were collected from a depth interval of 0 to 2 feet below ground surface. Background soil sample analytical results are summarized in Table 1. The data were validated and the data are considered usable for the intended purpose. The laboratory analytical reports and the data usability summaries are provided as Attachment 1.

Tolerance limits were calculated for background metals using the procedure described in Gibbons (1994) and the EPA Pro-UCL Technical Guide (EPA, 2010). Relevant pages from Gibbons (1994) describing this procedure are provided as Attachment 2. A step-by-step discussion of the procedure and calculations is provided below.

Step 1 – Identify outlying values using the following 5 steps (EPA, 2010):

1. Identify extreme high values that may be potential outliers;
2. Apply a statistical test;
3. Scientifically review the statistical outliers and decide on their proper disposition;
4. Conduct data analysis with and without the statistical outliers; and
5. Document the entire process.

The Dixon test, performed using EPA's *Pro UCL* statistical software package (EPA, 2010), statistically evaluated potential outliers for arsenic and lead. If multiple outliers were suspected, the test was applied to the least extreme value first and then subsequent values. The results of the outlier tests are provided in Attachment 3.

Following the above procedure, outliers were removed based on statistical analysis and professional judgment. For lead, outlying concentrations for samples 2012-BG-9 and 2012-BG-10 were excluded from tolerance limit calculations. Due to the high number of non-detect results, outlier tests and tolerance limit calculations were not performed for cadmium. The arsenic data set did not contain outliers and the full data set was utilized for tolerance limit calculations.

Step 2 - Calculate the Background Mean and Standard Deviation

After confirming the data were normally distributed, the background mean and standard deviation were calculated for arsenic and lead using EPA' s *Pro UCL* statistical software package (EPA, 2010). These parameters are summarized in Table 1.

Step 3- Calculate Tolerance Limit

Since the purpose of the tolerance limit is to identify metals concentrations that are higher than background, a one-sided upper tolerance limit was calculated. As provided in Gibbons (1994), the tolerance limit is calculated from:

TL = mean + K * (std. deviation)

Where K is a factor determined from statistical tables based on the number of samples in the background data set and the desired confidence and coverage goals. Consistent with Gibbons (1994) a 95% confidence level with 95% coverage was used. Based on these goals and background data sets of 11 samples for lead (after exclusion of 2 outliers) and 10 samples for arsenic, Table 4.2 of Gibbons (1994, see Attachment 2) was used to set K at 2.815 for the lead background data set and 2.911 for the arsenic background data set. The resultant upper tolerance limits, which are proposed as site-specific background concentrations, are listed in Table 1.

REFERENCES

Gibbons, Robert D., 1994. Statistical Methods for Groundwater Monitoring. John Wiley & Sons, Inc.

United States Environmental Protection Agency (EPA), 2010. Pro UCL Version 4.1 Statistical Software for Environmental Applications for Data Sets available at http://www.epa.gov/osp/hstl/tsc/softwaredocs.htm, Pro UCL Version 4.1 User Guide (Draft) and Pro UCL 4.1 Technical Guide (Draft). EPA 600/R-07/041. Office of Research and Development. May.

Table

TABLE 1
BACKGROUND SAMPLE SOIL ANALYTICAL AND STATISTICAL ANALYSIS RESULTS

Sample I. D.	Concentration (mg/Kg)		
	Arsenic	Cadmium	Lead
2012-BG-1	11.2	< 0.0313 UJ	13.2 J
2012-BG-2	9.29	< 0.0287 UJ	13 J
2012-BG-3	11.6	< 0.0301 UJ	11.5 J
2012-BG-4	10.8	< 0.0315 UJ	15.7 J
2012-BG-5	14.8	< 0.031 UJ	13.5 J
2012-BG-6	10.0	< 0.0314 UJ	14.3 J
2012-BG-7	9.74	< 0.031 UJ	14.1 J
2012-BG-8	9.83	0.122 J	24 J
2012-BG-9	12.6	8.09 J	*302 J*
2012-BG-10	11	< 0.615 UJ	*67.6 J*
2012-BG-11	--	--	20.6
2012-BG-12	--	--	27.5
2012-BG-13	--	--	18.9
Background Mean	11.1	Not Calculated[3]	16.9
Standard Deviation	1.64	Not Calculated[3]	5.16
K-Value	2.911	--	2.815
UTL[4]	15.9	Not Calculated[3]	31.5

Notes:

[1] All samples collected from the 0 to 2 ft below ground surface depth interval.

[2] See Figures 1 and 2 for sample locations.

[3] Statistical analysis was not performed on cadmium due to the high number of non-detect results.

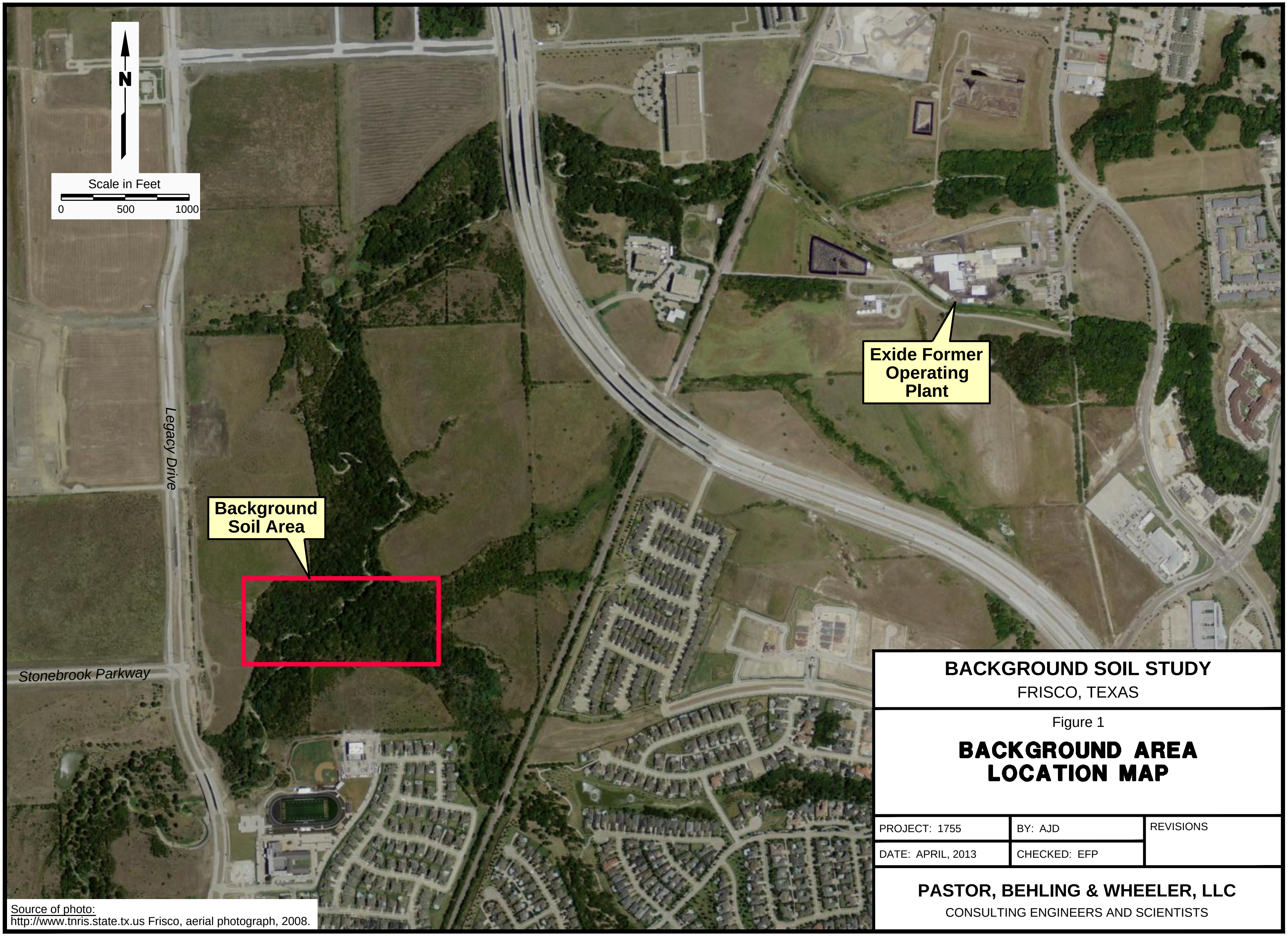
[4] UTL = upper tolerance limit

Data Qualifiers: J = estimated concentration; UJ - compound not detected at the indicated detection limit, estimated value.

mg/Kg - milligram/Kilogram

Values presented in *italic* type were excluded from background statistical analyses because they were statistically identified as outliers.

Figures



Source of photo:
http://www.tnris.state.tx.us Frisco, aerial photograph, 2008.

BACKGROUND SOIL STUDY

FRISCO, TEXAS

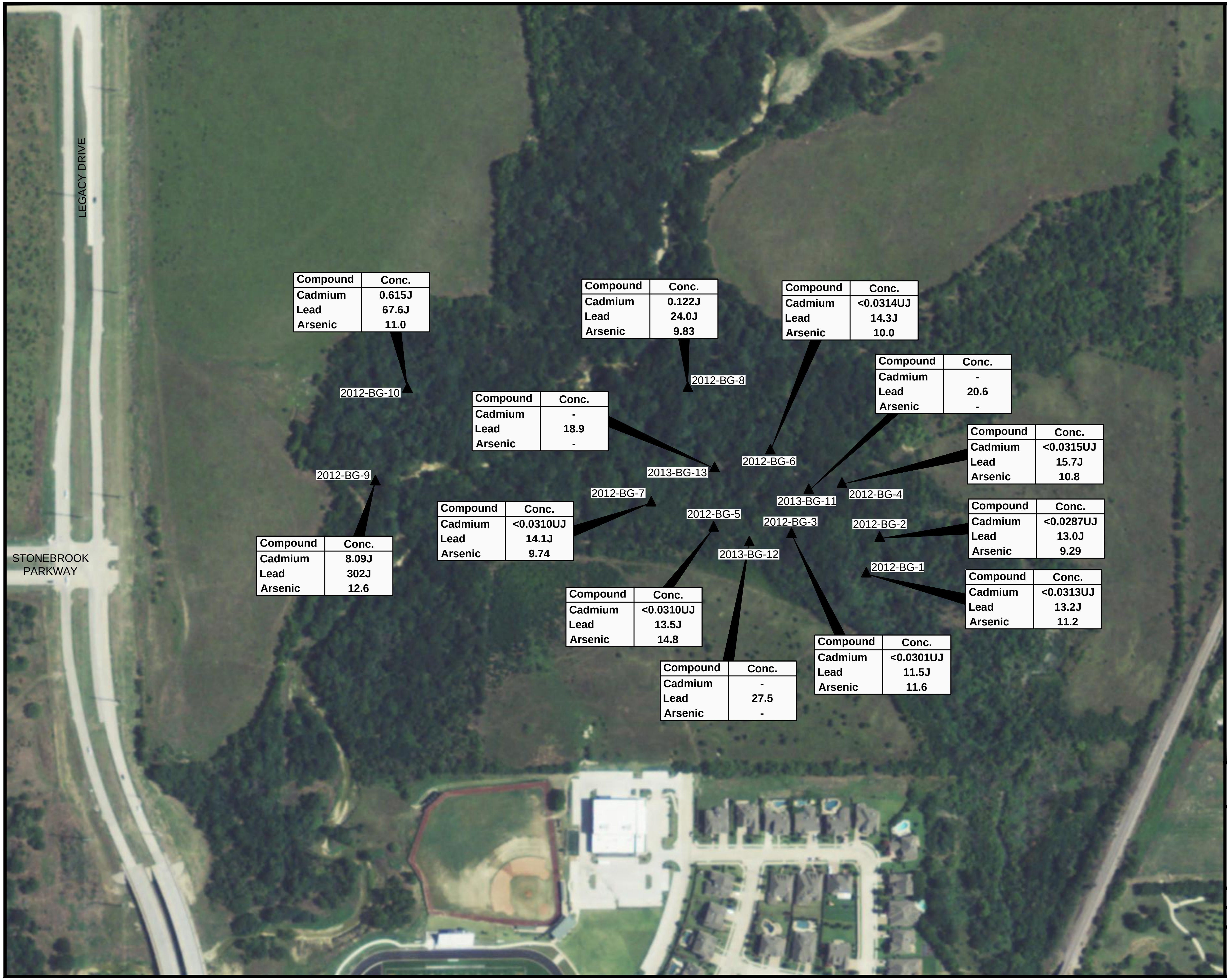
Figure 1

BACKGROUND AREA LOCATION MAP

PROJECT: 1755	BY: AJD	REVISIONS
DATE: APRIL, 2013	CHECKED: EFP	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS



Compound	Conc.
Cadmium	0.615J
Lead	67.6J
Arsenic	11.0

Compound	Conc.
Cadmium	0.122J
Lead	24.0J
Arsenic	9.83

Compound	Conc.
Cadmium	<0.0314UJ
Lead	14.3J
Arsenic	10.0

Compound	Conc.
Cadmium	-
Lead	20.6
Arsenic	-

Compound	Conc.
Cadmium	-
Lead	18.9
Arsenic	-

Compound	Conc.
Cadmium	<0.0315UJ
Lead	15.7J
Arsenic	10.8

Compound	Conc.
Cadmium	<0.0310UJ
Lead	14.1J
Arsenic	9.74

Compound	Conc.
Cadmium	<0.0287UJ
Lead	13.0J
Arsenic	9.29

Compound	Conc.
Cadmium	8.09J
Lead	302J
Arsenic	12.6

Compound	Conc.
Cadmium	<0.0313UJ
Lead	13.2J
Arsenic	11.2

Compound	Conc.
Cadmium	<0.0310UJ
Lead	13.5J
Arsenic	14.8

Compound	Conc.
Cadmium	<0.0301UJ
Lead	11.5J
Arsenic	11.6

Compound	Conc.
Cadmium	-
Lead	27.5
Arsenic	-

EXPLANATION

▲ Soil Sample Location

Note:
1. All samples collected from a depth of 0 to 2 Ft. below ground surface.
2. All concentrations are in mg/Kg.
3. Data Qualifiers:
    J = Estimated Concentrations
    UJ = Estimated, Not-Detected

N

Scale in Feet
0 125 250

Source of photo:
http://www.tnris.state.tx.us Frisco, aerial photograph, 2010.

BACKGROUND SOIL STUDY
FRISCO, TEXAS

Figure 2

ARSENIC, CADMIUM AND LEAD IN BACKGROUND SOIL SAMPLES

PROJECT: 1755	BY: AJD	REVISIONS
DATE: MAY, 2013	CHECKED: EFP	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Attachment 1
Analytical Reports and Data Usability Summaries

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

TestAmerica Job ID: 600-52867-1
Client Project/Site: Exide Recycling Center, Frisco TX Projec

For:
Pastor, Behling & Wheeler LLC
2201 Double Creek Dr
Suite 4004
Round Rock, Texas 78664

Attn: Mr. Chris Moore

Authorized for release by:
4/25/2012 3:58:18 PM
Cathy Upton
LAN Analyst
cathy.upton@testamericainc.com

Designee for

Sachin Kudchadkar
Project Manager II
sachin.kudchadkar@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

TestAmerica Houston
TRRP Data Package Cover Page

Job Number: 600-52867-1

Project Name/Number: Exide Recycling Center, Frisco TX

This Data Package consists of:

This signature page, the laboratory review checklist, and the following Reportable Data:

- ☒ R1 Field Chain-of-Custody Form
- ☒ R2 Sample Identification Cross-reference;
- ☒ R3 Test Reports (Analytical Data Sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC Chapter 5
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☒ R4 Surrogate Recovery Data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☒ R5 Test Reports/Summary Forms for Blank Samples;
- ☒ R6 Test Reports/Summary Forms for Laboratory Control Samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - d) The laboratory's LCS QC limits
- ☒ R7 Test Reports for Matrix Spike/Matrix Spike Duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked sample,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☒ R8 Laboratory analytical duplicates (if applicable) recovery and precision, including:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☒ R9 List of method quantitation limit (MQL) and detectability check sample results for each analyte for each method and matrix;
- ☒ R10 Other problems or anomalies

The exception report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under Texas laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm, to the best of my knowledge, that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton		04/25/2012
Name (printed)	Signature	Date
Data Delivery Analyst		
Official Title (printed)		

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 04/13/12
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-52867
Reviewer Name: TWR	Prep Batch Number(s): 600-76449- ICP

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			1
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			3
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston

LRC Date: 04/13/12

Project Name: Exide Recycling Center, Frisco TX

Laboratory Job Number: 600-52867

Reviewer Name: TWR

Prep Batch Number(s): 600-76449- ICP

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?			X		
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?			X		
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?				X	4
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports

Laboratory Name: TestAmerica-Houston	LRC Date: 04/13/12
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-52867
Reviewer Name: TWR	Prep Batch Number(s): 600-76449- ICP

ER #[1]	**DESCRIPTION**
1	See Case Narrative
2	The lead recoveries in samples 52867-10 MS and MSD were above acceptance limits due to matrix interference. Method performance is demonstrated by an acceptable LCS recovery.
3	The cadmium and lead RPDs between samples 52867-1 and 52867-1 MD were above acceptance limits due to the non-homogenous nature of the samples.
4	The lead percent difference between samples 52867-1 and 52867-1 SD was above acceptance limits due to matrix interference.

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

Detection Check Standard

Matrix: Soil
Method: 6010B
Preparation: 3050
Date Analyzed: 3/28/2012
Date Prepared: 3/27/2012
Instrument: Thermo 6500
TALS Batches: 75833
Prep/Reagent Factor = 50
Units: mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.299654	0.5	0.315	25
Antimony	0.231553	0.45	0.485	2.5
Arsenic	0.217923	0.5	0.43	1
Barium	0.011322	0.03	0.02	1
Beryllium	0.014513	0.02	0.02	0.25
Boron	0.385535	0.6	0.755	20
Cadmium	0.025642	0.05	0.045	0.25
Calcium	0.86399	1.5	2.88	100
Chromium	0.050606	0.1	0.1	0.5
Cobalt	0.067622	0.1	0.095	0.5
Copper	0.173703	0.5	0.43	0.5
Iron	2.534007	4	3.77	20
Lithium	0.007932	0.01	0.04	10
Lead	0.104832	0.2	0.2	0.5
Selenium	0.258884	0.5	0.555	2
Manganese	0.038111	0.05	0.065	1.5
Molybdenum	0.136448	0.35	0.345	0.5
Nickel	0.116599	0.15	0.145	1
Silver	0.118848	0.2	0.19	0.5
Sodium	0.885548	2.4	2.215	100
Strontium	0.00252	0.005	0.965	0.25
Thallium	0.276988	0.7	0.595	1.5
Tin	0.08729	0.15	0.14	1
Titanium	0.014529	0.03	0.045	0.5
Vanadium	0.079068	0.15	0.195	0.5
Zinc	0.108432	0.2	0.34	1.5

Case Narrative

Job ID: 600-52867-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-52867-1

Comments
No additional comments.

Receipt
The samples were received on 3/30/2012 9:31 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 9.00 C.

Except:

The following sample(s) was received at the laboratory outside the required temperature criteria: 2012-BG-1 (600-52867-1), 2012-BG-10 (600-52867-9), 2012-BG-2 (600-52867-2), 2012-BG-3 (600-52867-3), 2012-BG-4 (600-52867-7), 2012-BG-5 (600-52867-6), 2012-BG-6 (600-52867-8), 2012-BG-7 (600-52867-4), 2012-BG-8 (600-52867-10), 2012-BG-9 (600-52867-5).

The container label for the following sample(s) did not match the information listed on the Chain-of-Custody (COC): 2012-BG-8 (600-52867-10). The container labels list 2012-BG-8. The COC lists 2012-BG-10.

Method Summary

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Pastor, Behling & Wheeler LLC
TestAmerica Job ID: 600-52867-1
Project/Site: Exide Recycling Center, Frisco TX Projec

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-52867-1	2012-BG-1	Solid	03/29/12 08:18	03/30/12 09:31
600-52867-2	2012-BG-2	Solid	03/29/12 08:40	03/30/12 09:31
600-52867-3	2012-BG-3	Solid	03/29/12 09:00	03/30/12 09:31
600-52867-4	2012-BG-7	Solid	03/29/12 09:46	03/30/12 09:31
600-52867-5	2012-BG-9	Solid	03/29/12 10:20	03/30/12 09:31
600-52867-6	2012-BG-5	Solid	03/29/12 11:25	03/30/12 09:31
600-52867-7	2012-BG-4	Solid	03/29/12 15:16	03/30/12 09:31
600-52867-8	2012-BG-6	Solid	03/29/12 15:32	03/30/12 09:31
600-52867-9	2012-BG-10	Solid	03/29/12 16:20	03/30/12 09:31
600-52867-10	2012-BG-8	Solid	03/29/12 16:25	03/30/12 09:31

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Client Sample ID: 2012-BG-1

Lab Sample ID: 600-52867-1

Date Collected: 03/29/12 08:18
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 77.2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0313	U	0.305	0.0313	mg/Kg	☼	04/04/12 14:49	04/05/12 09:26	1
Lead	**13.2**		0.611	0.128	mg/Kg	☼	04/04/12 14:49	04/05/12 09:26	1
Arsenic	**11.2**		1.22	0.266	mg/Kg	☼	04/04/12 14:49	04/05/12 09:26	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**23**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**77**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-2

Lab Sample ID: 600-52867-2

Date Collected: 03/29/12 08:40
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 85.0

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0287	U	0.280	0.0287	mg/Kg	☼	04/04/12 14:49	04/05/12 09:30	1
Lead	**13.0**		0.560	0.117	mg/Kg	☼	04/04/12 14:49	04/05/12 09:30	1
Arsenic	**9.29**		1.12	0.244	mg/Kg	☼	04/04/12 14:49	04/05/12 09:30	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**85**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-3

Lab Sample ID: 600-52867-3

Date Collected: 03/29/12 09:00
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 80.3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0301	U	0.294	0.0301	mg/Kg	☼	04/04/12 14:49	04/05/12 09:42	1
Lead	**11.5**		0.588	0.123	mg/Kg	☼	04/04/12 14:49	04/05/12 09:42	1
Arsenic	**11.6**		1.18	0.256	mg/Kg	☼	04/04/12 14:49	04/05/12 09:42	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**20**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**80**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-7

Lab Sample ID: 600-52867-4

Date Collected: 03/29/12 09:46
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 78.8

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0310	U	0.302	0.0310	mg/Kg	☼	04/04/12 14:49	04/05/12 09:46	1
Lead	**14.1**		0.604	0.127	mg/Kg	☼	04/04/12 14:49	04/05/12 09:46	1
Arsenic	**9.74**		1.21	0.263	mg/Kg	☼	04/04/12 14:49	04/05/12 09:46	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-7

Lab Sample ID: 600-52867-4
Date Collected: 03/29/12 09:46
Matrix: Solid
Date Received: 03/30/12 09:31

General Chemistry (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**79**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-9

Lab Sample ID: 600-52867-5
Date Collected: 03/29/12 10:20
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 80.6

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**8.09**		0.310	0.0318	mg/Kg	☼	04/04/12 14:49	04/05/12 09:49	1
Lead	**302**		0.620	0.130	mg/Kg	☼	04/04/12 14:49	04/05/12 09:49	1
Arsenic	**12.6**		1.24	0.270	mg/Kg	☼	04/04/12 14:49	04/05/12 09:49	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**81**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-5

Lab Sample ID: 600-52867-6
Date Collected: 03/29/12 11:25
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 81.2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0310	U	0.302	0.0310	mg/Kg	☼	04/04/12 14:49	04/05/12 09:53	1
Lead	**13.5**		0.604	0.127	mg/Kg	☼	04/04/12 14:49	04/05/12 09:53	1
Arsenic	**14.8**		1.21	0.263	mg/Kg	☼	04/04/12 14:49	04/05/12 09:53	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**81**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-4

Lab Sample ID: 600-52867-7
Date Collected: 03/29/12 15:16
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 77.6

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0315	U	0.307	0.0315	mg/Kg	☼	04/04/12 14:49	04/05/12 09:57	1
Lead	**15.7**		0.614	0.129	mg/Kg	☼	04/04/12 14:49	04/05/12 09:57	1
Arsenic	**10.8**		1.23	0.268	mg/Kg	☼	04/04/12 14:49	04/05/12 09:57	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**22**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**78**		1.0	1.0	%			04/02/12 13:22	1

Client Sample Results

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Client Sample ID: 2012-BG-6

Lab Sample ID: 600-52867-8

Date Collected: 03/29/12 15:32
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 78.6

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0314	U	0.306	0.0314	mg/Kg	☼	04/04/12 14:49	04/05/12 10:01	1
Lead	**14.3**		0.612	0.128	mg/Kg	☼	04/04/12 14:49	04/05/12 10:01	1
Arsenic	**10.0**		1.22	0.267	mg/Kg	☼	04/04/12 14:49	04/05/12 10:01	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**79**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-10

Lab Sample ID: 600-52867-9

Date Collected: 03/29/12 16:20
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 79.2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.615**		0.303	0.0311	mg/Kg	☼	04/04/12 14:49	04/05/12 10:05	1
Lead	**67.6**		0.607	0.127	mg/Kg	☼	04/04/12 14:49	04/05/12 10:05	1
Arsenic	**11.0**		1.21	0.264	mg/Kg	☼	04/04/12 14:49	04/05/12 10:05	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**79**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-8

Lab Sample ID: 600-52867-10

Date Collected: 03/29/12 16:25
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 79.7

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.122**	**J**	0.308	0.0316	mg/Kg	☼	04/04/12 14:49	04/05/12 10:09	1
Lead	**24.0**		0.615	0.129	mg/Kg	☼	04/04/12 14:49	04/05/12 10:09	1
Arsenic	**9.83**		1.23	0.268	mg/Kg	☼	04/04/12 14:49	04/05/12 10:09	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**20**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**80**		1.0	1.0	%			04/02/12 13:22	1

Definitions/Glossary

Qualifiers

Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
F	Duplicate RPD exceeds the control limit
N	MS, MSD: Spike recovery exceeds upper or lower control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

QC Sample Results

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-76449/1-A
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76449

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		04/04/12 14:49	04/05/12 08:56	1
Lead	0.105	U	0.500	0.105	mg/Kg		04/04/12 14:49	04/05/12 08:56	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		04/04/12 14:49	04/05/12 08:56	1

Lab Sample ID: LCS 600-76449/2-A
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76449

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	71.0	68.92		mg/Kg		97	81 - 119
Lead	144	138.8		mg/Kg		96	79 - 121
Arsenic	138	138.4		mg/Kg		100	78 - 122

Lab Sample ID: 600-52867-10 MS
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: 2012-BG-8
Prep Type: Total/NA
Prep Batch: 76449

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.122	J	30.8	26.61		mg/Kg	☼	86	75 - 125
Lead	24.0		61.5	163.2	N	mg/Kg	☼	226	75 - 125
Arsenic	9.83		61.5	63.80		mg/Kg	☼	88	75 - 125

Lab Sample ID: 600-52867-10 MSD
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: 2012-BG-8
Prep Type: Total/NA
Prep Batch: 76449

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.122	J	29.6	24.72		mg/Kg	☼	83	75 - 125	7	20
Lead	24.0		59.2	145.7	N	mg/Kg	☼	206	75 - 125	11	20
Arsenic	9.83		59.2	61.49		mg/Kg	☼	87	75 - 125	4	20

Lab Sample ID: 600-52867-10 DU
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: 2012-BG-8
Prep Type: Total/NA
Prep Batch: 76449

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cadmium	0.122	J	0.9071	F	mg/Kg	☼	153	20
Lead	24.0		63.49	F	mg/Kg	☼	90	20
Arsenic	9.83		10.04		mg/Kg	☼	2	20

Method: Moisture - Percent Moisture

Lab Sample ID: 600-52867-5 DU
Matrix: Solid
Analysis Batch: 76213

Client Sample ID: 2012-BG-9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	19		21		%		6	
Percent Solids	81		79		%		2	

Unadjusted Detection Limits

Client: Pastor, Behling & Wheeler LLC

TestAmerica Job ID: 600-52867-1

Project/Site: Exide Recycling Center, Frisco TX Projec

Method: 6010B - Metals (ICP)

Analyte	MQL	MDL	Units	Method
Arsenic	1.00	0.218	mg/Kg	6010B
Cadmium	0.250	0.0256	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B

General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

Metals

Prep Batch: 76449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-52867-1	2012-BG-1	Total/NA	Solid	3050B	
600-52867-2	2012-BG-2	Total/NA	Solid	3050B	
600-52867-3	2012-BG-3	Total/NA	Solid	3050B	
600-52867-4	2012-BG-7	Total/NA	Solid	3050B	
600-52867-5	2012-BG-9	Total/NA	Solid	3050B	
600-52867-6	2012-BG-5	Total/NA	Solid	3050B	
600-52867-7	2012-BG-4	Total/NA	Solid	3050B	
600-52867-8	2012-BG-6	Total/NA	Solid	3050B	
600-52867-9	2012-BG-10	Total/NA	Solid	3050B	
600-52867-10	2012-BG-8	Total/NA	Solid	3050B	
600-52867-10 DU	2012-BG-8	Total/NA	Solid	3050B	
600-52867-10 MS	2012-BG-8	Total/NA	Solid	3050B	
600-52867-10 MSD	2012-BG-8	Total/NA	Solid	3050B	
LCS 600-76449/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-76449/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 76526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-52867-1	2012-BG-1	Total/NA	Solid	6010B	76449
600-52867-2	2012-BG-2	Total/NA	Solid	6010B	76449
600-52867-3	2012-BG-3	Total/NA	Solid	6010B	76449
600-52867-4	2012-BG-7	Total/NA	Solid	6010B	76449
600-52867-5	2012-BG-9	Total/NA	Solid	6010B	76449
600-52867-6	2012-BG-5	Total/NA	Solid	6010B	76449
600-52867-7	2012-BG-4	Total/NA	Solid	6010B	76449
600-52867-8	2012-BG-6	Total/NA	Solid	6010B	76449
600-52867-9	2012-BG-10	Total/NA	Solid	6010B	76449
600-52867-10	2012-BG-8	Total/NA	Solid	6010B	76449
600-52867-10 DU	2012-BG-8	Total/NA	Solid	6010B	76449
600-52867-10 MS	2012-BG-8	Total/NA	Solid	6010B	76449
600-52867-10 MSD	2012-BG-8	Total/NA	Solid	6010B	76449
LCS 600-76449/2-A	Lab Control Sample	Total/NA	Solid	6010B	76449
MB 600-76449/1-A	Method Blank	Total/NA	Solid	6010B	76449

General Chemistry

Analysis Batch: 76213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-52867-1	2012-BG-1	Total/NA	Solid	Moisture	
600-52867-2	2012-BG-2	Total/NA	Solid	Moisture	
600-52867-3	2012-BG-3	Total/NA	Solid	Moisture	
600-52867-4	2012-BG-7	Total/NA	Solid	Moisture	
600-52867-5	2012-BG-9	Total/NA	Solid	Moisture	
600-52867-5 DU	2012-BG-9	Total/NA	Solid	Moisture	
600-52867-6	2012-BG-5	Total/NA	Solid	Moisture	
600-52867-7	2012-BG-4	Total/NA	Solid	Moisture	
600-52867-8	2012-BG-6	Total/NA	Solid	Moisture	
600-52867-9	2012-BG-10	Total/NA	Solid	Moisture	
600-52867-10	2012-BG-8	Total/NA	Solid	Moisture	

Lab Chronicle

Client Sample ID: 2012-BG-1

Lab Sample ID: 600-52867-1

Date Collected: 03/29/12 08:18
Date Received: 03/30/12 09:31

Matrix: Solid
Percent Solids: 77.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:26	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-2

Lab Sample ID: 600-52867-2

Date Collected: 03/29/12 08:40
Date Received: 03/30/12 09:31

Matrix: Solid
Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:30	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-3

Lab Sample ID: 600-52867-3

Date Collected: 03/29/12 09:00
Date Received: 03/30/12 09:31

Matrix: Solid
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:42	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-7

Lab Sample ID: 600-52867-4

Date Collected: 03/29/12 09:46
Date Received: 03/30/12 09:31

Matrix: Solid
Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:46	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-9

Lab Sample ID: 600-52867-5

Date Collected: 03/29/12 10:20
Date Received: 03/30/12 09:31

Matrix: Solid
Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:49	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Lab Chronicle

Client Sample ID: 2012-BG-5

Lab Sample ID: 600-52867-6

Date Collected: 03/29/12 11:25

Matrix: Solid

Date Received: 03/30/12 09:31

Percent Solids: 81.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:53	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-4

Lab Sample ID: 600-52867-7

Date Collected: 03/29/12 15:16

Matrix: Solid

Date Received: 03/30/12 09:31

Percent Solids: 77.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:57	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-6

Lab Sample ID: 600-52867-8

Date Collected: 03/29/12 15:32

Matrix: Solid

Date Received: 03/30/12 09:31

Percent Solids: 78.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 10:01	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-10

Lab Sample ID: 600-52867-9

Date Collected: 03/29/12 16:20

Matrix: Solid

Date Received: 03/30/12 09:31

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 10:05	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-8

Lab Sample ID: 600-52867-10

Date Collected: 03/29/12 16:25

Matrix: Solid

Date Received: 03/30/12 09:31

Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 10:09	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Certification Summary

Client: Pastor, Behling & Wheeler LLC
TestAmerica Job ID: 600-52867-1
Project/Site: Exide Recycling Center, Frisco TX Projec

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Houston	Arkansas DEQ	State Program	6	88-0759
TestAmerica Houston	Louisiana	NELAC	6	30643
TestAmerica Houston	Oklahoma	State Program	6	9503
TestAmerica Houston	Texas	NELAC	6	T104704223-10-6-TX
TestAmerica Houston	USDA	Federal		P330-08-00217
TestAmerica Houston	Utah	NELAC	8	GULF

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.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Houston Job Number: 600-52867-1

SDG No.:

Project: Exide Recycling Center, Frisco TX Projec

Client Sample ID	Lab Sample ID
2012-BG-1	600-52867-1
2012-BG-2	600-52867-2
2012-BG-3	600-52867-3
2012-BG-7	600-52867-4
2012-BG-9	600-52867-5
2012-BG-5	600-52867-6
2012-BG-4	600-52867-7
2012-BG-6	600-52867-8
2012-BG-10	600-52867-9
2012-BG-8	600-52867-10

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID:	2012-BG-1	Lab Sample ID:	600-52867-1
Lab Name:	TestAmerica Houston	Job No.:	600-52867-1
SDG ID.:			
Matrix:	Solid	Date Sampled:	03/29/2012 08:18
Reporting Basis:	DRY	Date Received:	03/30/2012 09:31
% Solids:	77.2		

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0313	0.305	0.0313	mg/Kg	U		1	6010B
7439-92-1	Lead	13.2	0.611	0.128	mg/Kg			1	6010B
7440-38-2	Arsenic	11.2	1.22	0.266	mg/Kg			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 2012-BG-2

Lab Sample ID: 600-52867-2

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG ID.:

Matrix: Solid

Date Sampled: 03/29/2012 08:40

Reporting Basis: DRY

Date Received: 03/30/2012 09:31

% Solids: 85.0

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0287	0.280	0.0287	mg/Kg	U		1	6010B
7439-92-1	Lead	13.0	0.560	0.117	mg/Kg			1	6010B
7440-38-2	Arsenic	9.29	1.12	0.244	mg/Kg			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 2012-BG-3

Lab Sample ID: 600-52867-3

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG ID.:

Matrix: Solid

Date Sampled: 03/29/2012 09:00

Reporting Basis: DRY

Date Received: 03/30/2012 09:31

% Solids: 80.3

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0301	0.294	0.0301	mg/Kg	U		1	6010B
7439-92-1	Lead	11.5	0.588	0.123	mg/Kg			1	6010B
7440-38-2	Arsenic	11.6	1.18	0.256	mg/Kg			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID:	2012-BG-7	Lab Sample ID:	600-52867-4
Lab Name:	TestAmerica Houston	Job No.:	600-52867-1
SDG ID.:			
Matrix:	Solid	Date Sampled:	03/29/2012 09:46
Reporting Basis:	DRY	Date Received:	03/30/2012 09:31
% Solids:	78.8		

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0310	0.302	0.0310	mg/Kg	U		1	6010B
7439-92-1	Lead	14.1	0.604	0.127	mg/Kg			1	6010B
7440-38-2	Arsenic	9.74	1.21	0.263	mg/Kg			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 2012-BG-9

Lab Sample ID: 600-52867-5

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG ID.:

Matrix: Solid

Date Sampled: 03/29/2012 10:20

Reporting Basis: DRY

Date Received: 03/30/2012 09:31

% Solids: 80.6

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	8.09	0.310	0.0318	mg/Kg			1	6010B
7439-92-1	Lead	302	0.620	0.130	mg/Kg			1	6010B
7440-38-2	Arsenic	12.6	1.24	0.270	mg/Kg			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 2012-BG-5

Lab Sample ID: 600-52867-6

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG ID.:

Matrix: Solid

Date Sampled: 03/29/2012 11:25

Reporting Basis: DRY

Date Received: 03/30/2012 09:31

% Solids: 81.2

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0310	0.302	0.0310	mg/Kg	U		1	6010B
7439-92-1	Lead	13.5	0.604	0.127	mg/Kg			1	6010B
7440-38-2	Arsenic	14.8	1.21	0.263	mg/Kg			1	6010B

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1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 2012-BG-4

Lab Sample ID: 600-52867-7

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG ID.:

Matrix: Solid

Date Sampled: 03/29/2012 15:16

Reporting Basis: DRY

Date Received: 03/30/2012 09:31

% Solids: 77.6

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0315	0.307	0.0315	mg/Kg	U		1	6010B
7439-92-1	Lead	15.7	0.614	0.129	mg/Kg			1	6010B
7440-38-2	Arsenic	10.8	1.23	0.268	mg/Kg			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 2012-BG-6

Lab Sample ID: 600-52867-8

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG ID.:

Matrix: Solid

Date Sampled: 03/29/2012 15:32

Reporting Basis: DRY

Date Received: 03/30/2012 09:31

% Solids: 78.6

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0314	0.306	0.0314	mg/Kg	U		1	6010B
7439-92-1	Lead	14.3	0.612	0.128	mg/Kg			1	6010B
7440-38-2	Arsenic	10.0	1.22	0.267	mg/Kg			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 2012-BG-10

Lab Sample ID: 600-52867-9

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG ID.:

Matrix: Solid

Date Sampled: 03/29/2012 16:20

Reporting Basis: DRY

Date Received: 03/30/2012 09:31

% Solids: 79.2

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.615	0.303	0.0311	mg/Kg			1	6010B
7439-92-1	Lead	67.6	0.607	0.127	mg/Kg			1	6010B
7440-38-2	Arsenic	11.0	1.21	0.264	mg/Kg			1	6010B

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 2012-BG-8

Lab Sample ID: 600-52867-10

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG ID.:

Matrix: Solid

Date Sampled: 03/29/2012 16:25

Reporting Basis: DRY

Date Received: 03/30/2012 09:31

% Solids: 79.7

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.122	0.308	0.0316	mg/Kg	J		1	6010B
7439-92-1	Lead	24.0	0.615	0.129	mg/Kg			1	6010B
7440-38-2	Arsenic	9.83	1.23	0.268	mg/Kg			1	6010B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Houston   Job No.: 600-52867-1

SDG No.:

ICV Source: MET0412CCV_00001   Concentration Units: mg/L

CCV Source: MET0412CCV_00001

Analyte	ICV 600-76526/4 04/05/2012 08:23				CCV 600-76526/9 04/05/2012 08:42				CCV 600-76526/21 04/05/2012 09:34			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.5109		0.500	102	0.5084		0.500	102	0.5001		0.500	100
Cadmium	0.5118		0.500	102	0.5089		0.500	102	0.5069		0.500	101
Lead	0.5079		0.500	102	0.5043		0.500	101	0.4950		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 Houston

Job No.: 600-52867-1

SDG No.:

ICV Source: MET0412CCV_00001

Concentration Units: mg/L

CCV Source: MET0412CCV_00001

Analyte	CCV 600-76526/33 04/05/2012 10:20				CCV 600-76526/45 04/05/2012 11:06							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.5046		0.500	101	0.5057		0.500	101				
Cadmium	0.5125		0.500	102	0.5188		0.500	104				
Lead	0.4987		0.500	100	0.4979		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.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Method: 6010B Instrument ID: TJA1

Lab Sample ID: CRI 600-76526/6 Concentration Units: mg/L

CRQL Check Standard Source: MET0212LOW_00003

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Cadmium	0.00500	0.005300		106	0-500
Lead	0.0100	0.009440	J	94	0-500
Arsenic	0.0100	0.01147	J	115	0-500

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 Houston   Job No.: 600-52867-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 600-76526/5 04/05/2012 08:27		CCB 600-76526/10 04/05/2012 08:46		CCB 600-76526/22 04/05/2012 09:38		CCB 600-76526/34 04/05/2012 10:24	
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.0200	0.00328	U	0.00328	U	0.00328	U	0.00328	U
Cadmium	0.00500	0.000730	U	0.000730	U	0.000730	U	0.000730	U
Lead	0.0100	0.00290	U	0.00290	U	0.00290	U	0.00290	U

Italicized analytes were not requested for this sequence.

FORM III-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	CCB 600-76526/46 04/05/2012 11:10							
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.0200	0.00328	U						
Cadmium	0.00500	0.000730	U						
Lead	0.0100	0.00290	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG No.:

Concentration Units: mg/Kg

Lab Sample ID: MB 600-76449/1-A

Instrument Code: TJA1

Batch No.: 76526

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	0.0256	U		6010B
7439-92-1	Lead	0.105	U		6010B
7440-38-2	Arsenic	0.218	U		6010B

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Lab Sample ID: ICSA 600-76526/7 Instrument ID: TJA1

Lab File ID: A040512 ICS Source: METISA_00072

Concentration Units: mg/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**0.0006**	
Cadmium		**-0.0038**	
Lead		**0.0048**	
Aluminum	*500*	*496*	*99*
Antimony		*0.0033*	
Barium		*0.0014*	
Beryllium		*-0.0001*	
Boron		*-0.0038*	
Calcium	*500*	*447*	*89*
Chromium		*0.0018*	
Cobalt		*-0.0006*	
Copper		*0.0125*	
Iron	*200*	*194*	*97*
Lithium		*0.0042*	
Magnesium	*500*	*511*	*102*
Manganese		*-0.0078*	
Molybdenum		*0.0003*	
Nickel		*-0.0006*	
Potassium		*0.0420*	
Selenium		*-0.0050*	
Silicon		*0.0106*	
Silver		*-0.0006*	
Sodium		*0.155*	
Strontium		*-0.0091*	
Thallium		*-0.0127*	
Tin		*-0.0016*	
Titanium		*-0.0034*	
Vanadium		*0.0031*	
Zinc		*-0.0052*	

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 Houston Job No.: 600-52867-1

SDG No.:

Lab Sample ID: ICSAB 600-76526/8 Instrument ID: TJA1

Lab File ID: A040512 ICS Source: METISB_00074

Concentration Units: mg/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Arsenic	**1.00**	**1.04**	**104**
Cadmium	**0.500**	**0.478**	**96**
Lead	**1.00**	**0.994**	**99**
Aluminum	*510*	*510*	*100*
Antimony	*1.00*	*1.06*	*106*
Barium	*1.00*	*1.05*	*105*
Beryllium	*0.500*	*0.504*	*101*
Boron	*1.00*	*1.06*	*106*
Calcium	*510*	*459*	*90*
Chromium	*1.00*	*0.992*	*99*
Cobalt	*1.00*	*0.962*	*96*
Copper	*1.00*	*1.10*	*110*
Iron	*210*	*206*	*98*
Lithium	*1.00*	*1.20*	*120*
Magnesium	*510*	*528*	*103*
Manganese	*1.00*	*0.990*	*99*
Molybdenum	*1.00*	*1.01*	*101*
Nickel	*1.00*	*0.967*	*97*
Potassium	*10.0*	*14.4*	*144*
Selenium	*1.00*	*1.03*	*103*
Silicon	*1.00*	*1.03*	*103*
Silver	*0.500*	*0.553*	*111*
Sodium	*10.0*	*13.5*	*135*
Strontium	*0.500*	*0.506*	*101*
Thallium	*1.00*	*0.984*	*98*
Tin	*1.00*	*1.01*	*101*
Titanium	*1.00*	*1.02*	*102*
Vanadium	*1.00*	*1.01*	*101*
Zinc	*1.00*	*1.04*	*104*

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 Houston Job No.: 600-52867-1

SDG No.:

Lab Sample ID: ICSA 600-76526/82 Instrument ID: TJA1

Lab File ID: A040512 ICS Source: METISA_00072

Concentration Units: mg/L

	True	Found	
Analyte	Solution A	Solution A	Percent Recovery
Arsenic		**0.0005**	
Cadmium		**-0.0083**	
Lead		**0.0030**	
Aluminum	*500*	*468*	*94*
Antimony		*0.0075*	
Barium		*0.0019*	
Beryllium		*-0.0023*	
Boron		*-0.0029*	
Calcium	*500*	*437*	*87*
Chromium		*0.0013*	
Cobalt		*-0.0010*	
Copper		*0.0080*	
Iron	*200*	*201*	*100*
Lithium		*0.0061*	
Magnesium	*500*	*471*	*94*
Manganese		*-0.0066*	
Molybdenum		*-0.0011*	
Nickel		*0.0000*	
Potassium		*0.673*	
Selenium		*-0.0187*	
Silicon		*-0.0073*	
Silver		*-0.0020*	
Sodium		*0.0380*	
Sodium		*0.234*	
Strontium		*-0.0086*	
Thallium		*0.0347*	
Tin		*-0.0066*	
Titanium		*-0.0039*	
Vanadium		*0.0060*	
Zinc		*-0.0081*	

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 Houston   Job No.: 600-52867-1

SDG No.:

Lab Sample ID: ICSAB 600-76526/83   Instrument ID: TJA1

Lab File ID: A040512   ICS Source: METISB_00074

Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Arsenic	**1.00**	**1.08**	**108**
Cadmium	**0.500**	**0.538**	**108**
Lead	**1.00**	**1.00**	**100**
Aluminum	*510*	*480*	*94*
Antimony	*1.00*	*1.18*	*118*
Barium	*1.00*	*1.18*	*118*
Beryllium	*0.500*	*0.422*	*84*
Boron	*1.00*	*1.16*	*116*
Calcium	*510*	*447*	*88*
Chromium	*1.00*	*0.896*	*90*
Cobalt	*1.00*	*0.857*	*86*
Copper	*1.00*	*0.960*	*96*
Iron	*210*	*213*	*101*
Lithium	*1.00*	*1.41*	*141*
Magnesium	*510*	*485*	*95*
Manganese	*1.00*	*0.952*	*95*
Molybdenum	*1.00*	*1.01*	*101*
Nickel	*1.00*	*1.00*	*100*
Potassium	*10.0*	*17.5*	*175*
Selenium	*1.00*	*0.968*	*97*
Silicon	*1.00*	*0.986*	*99*
Silver	*0.500*	*0.540*	*108*
Sodium	*10.0*	*12.7*	*127*
Sodium	*10.0*	*15.6*	*156*
Strontium	*0.500*	*0.570*	*114*
Thallium	*1.00*	*1.23*	*123*
Tin	*1.00*	*0.961*	*96*
Titanium	*1.00*	*1.02*	*102*
Vanadium	*1.00*	*0.936*	*94*
Zinc	*1.00*	*1.09*	*109*

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: 2012-BG-8 MS

Lab ID: 600-52867-10 MS

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG No.:

Matrix: Solid

Concentration Units: mg/Kg

% Solids: 79.7

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	26.61		0.122	J	30.8	86	75-125		6010B
Lead	163.2		24.0		61.5	226	75-125	N	6010B
Arsenic	63.80		9.83		61.5	88	75-125		6010B

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

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: 2012-BG-8 MSD

Lab ID: 600-52867-10 MSD

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG No.:

Matrix: Solid

Concentration Units: mg/Kg

% Solids: 79.7

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	24.72		29.6	83	75-125	7	20		6010B
Lead	145.7		59.2	206	75-125	11	20	N	6010B
Arsenic	61.49		59.2	87	75-125	4	20		6010B

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

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: 2012-BG-8 PDS

Lab ID: 600-52867-10 PDS

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG No.:

Matrix: Solid

Concentration Units: mg/Kg

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	24.31		0.122	J	30.8	79	75-125		6010B
Lead	72.52		24.0		61.5	79	75-125		6010B
Arsenic	62.29		9.83		61.5	85	75-125		6010B

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 VB - IN

6-IN
DUPLICATES
METALS

Client ID: 2012-BG-8 DU

Lab ID: 600-52867-10 DU

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG No.:

% Solids for Sample: 79.7

% Solids for Duplicate: 79.7

Matrix: Solid

Concentration Units: mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Cadmium	0.302	0.122	J	0.9071		153	F	6010B
Lead	0.604	24.0		63.49		90	F	6010B
Arsenic	1.21	9.83		10.04		2		6010B

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 600-76449/2-A

Lab Name: TestAmerica Houston   Job No.: 600-52867-1

Sample Matrix: Solid   LCS Source: METSLCSS_00016

Analyte	Solid(mg/Kg)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	71.0	68.92		97	81	119		6010B
Lead	144	138.8		96	79	121		6010B
Arsenic	138	138.4		100	78	122		6010B

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: 600-52867-10

SDG No:

Lab Name: TestAmerica Houston   Job No: 600-52867-1

Matrix: Solid   Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Cadmium	0.122	J	0.158	U	NC		6010B
Lead	24.0		28.94		21	*	6010B
Arsenic	9.83		12.14		NC		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS

Lab Name: TestAmerica Houston

Job Number: 600-52867-1

SDG Number:

Matrix: Solid

Instrument ID: TJA1

Method: 6010B

XMDL Date: 05/15/2008 13:46

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Arsenic		0.02	0.00328
Cadmium		0.005	0.00073
Lead		0.01	0.0029

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Houston Job No: 600-52867-1

SDG No.:

Instrument ID: TJA1 Date: 03/14/2006 13:24

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Cadmium		25	6010B
Lead		50	6010B
Arsenic		50	6010B

FORM XI - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Prep Method: 3050B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 600-76449/1-A	04/04/2012 14:49	76449	1.00		50
LCS 600-76449/2-A	04/04/2012 14:49	76449	0.50		50
600-52867-1	04/04/2012 14:49	76449	1.06		50
600-52867-2	04/04/2012 14:49	76449	1.05		50
600-52867-3	04/04/2012 14:49	76449	1.06		50
600-52867-4	04/04/2012 14:49	76449	1.05		50
600-52867-5	04/04/2012 14:49	76449	1.00		50
600-52867-6	04/04/2012 14:49	76449	1.02		50
600-52867-7	04/04/2012 14:49	76449	1.05		50
600-52867-8	04/04/2012 14:49	76449	1.04		50
600-52867-9	04/04/2012 14:49	76449	1.04		50
600-52867-10	04/04/2012 14:49	76449	1.02		50
600-52867-10 DU	04/04/2012 14:49	76449	1.04		50
600-52867-10 MS	04/04/2012 14:49	76449	1.02		50
600-52867-10 MSD	04/04/2012 14:49	76449	1.06		50

FORM XII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Instrument ID: TJA1 Method: 6010B

Start Date: 04/05/2012 08:11 End Date: 04/05/2012 16:21

Lab Sample ID	D / F	Type	Time	Analytes																			
				As	Cd	Pb																	
ZZZZZZ			08:11																				
STD 600-76526/2 IC			08:15	X	X	X																	
ZZZZZZ			08:19																				
ICV 600-76526/4	1		08:23	X	X	X																	
ICB 600-76526/5	1		08:27	X	X	X																	
CRI 600-76526/6	1		08:31	X	X	X																	
ICSA 600-76526/7	1		08:35	X	X	X																	
ICSAB 600-76526/8	1		08:39	X	X	X																	
CCV 600-76526/9	1		08:42	X	X	X																	
CCB 600-76526/10	1		08:46	X	X	X																	
MB 600-76449/1-A	1	T	08:56	X	X	X																	
LCS 600-76449/2-A	1	T	08:59	X	X	X																	
ZZZZZZ			09:03																				
ZZZZZZ			09:07																				
ZZZZZZ			09:11																				
ZZZZZZ			09:15																				
ZZZZZZ			09:19																				
ZZZZZZ			09:22																				
600-52867-1	1	T	09:26	X	X	X																	
600-52867-2	1	T	09:30	X	X	X																	
CCV 600-76526/21	1		09:34	X	X	X																	
CCB 600-76526/22	1		09:38	X	X	X																	
600-52867-3	1	T	09:42	X	X	X																	
600-52867-4	1	T	09:46	X	X	X																	
600-52867-5	1	T	09:49	X	X	X																	
600-52867-6	1	T	09:53	X	X	X																	
600-52867-7	1	T	09:57	X	X	X																	
600-52867-8	1	T	10:01	X	X	X																	
600-52867-9	1	T	10:05	X	X	X																	
600-52867-10	1	T	10:09	X	X	X																	
600-52867-10 DU	1	T	10:13	X	X	X																	
600-52867-10 MS	1	T	10:16	X	X	X																	
CCV 600-76526/33	1		10:20	X	X	X																	
CCB 600-76526/34	1		10:24	X	X	X																	
600-52867-10 MSD	1	T	10:28	X	X	X																	
ZZZZZZ			10:32																				
ZZZZZZ			10:36																				
ZZZZZZ			10:39																				
ZZZZZZ			10:43																				
ZZZZZZ			10:47																				
ZZZZZZ			10:51																				
ZZZZZZ			10:55																				

13-IN

ANALYSIS RUN LOG

METALS

Lab Name: TestAmerica Houston   Job No.: 600-52867-1

SDG No.:

Instrument ID: TJA1   Method: 6010B

Start Date: 04/05/2012 08:11   End Date: 04/05/2012 16:21

Lab Sample ID	D/F	Type	Time	Analytes																			
				As	Cd	Pb																	
600-52867-10 PDS	1	T	10:59	X	X	X																	
600-52867-10 SD	5	T	11:03	X	X	X																	
CCV 600-76526/45	1		11:06	X	X	X																	
CCB 600-76526/46	1		11:10	X	X	X																	
ZZZZZZ			11:43																				
ZZZZZZ			11:48																				
CCV 600-76526/49			11:52																				
CCB 600-76526/50			11:56																				
ZZZZZZ			13:04																				
ZZZZZZ			13:08																				
ZZZZZZ			13:12																				
ZZZZZZ			13:16																				
ZZZZZZ			13:20																				
ZZZZZZ			13:23																				
ZZZZZZ			13:27																				
ZZZZZZ			13:31																				
ZZZZZZ			13:35																				
ZZZZZZ			13:39																				
CCV 600-76526/61			13:43																				
CCB 600-76526/62			13:46																				
ZZZZZZ			13:50																				
ZZZZZZ			13:54																				
ZZZZZZ			13:58																				
ZZZZZZ			14:02																				
ZZZZZZ			14:06																				
ZZZZZZ			14:10																				
ZZZZZZ			14:13																				
ZZZZZZ			14:17																				
ZZZZZZ			14:21																				
ZZZZZZ			14:25																				
CCV 600-76526/73			14:29																				
CCB 600-76526/74			14:33																				
ZZZZZZ			14:37																				
ZZZZZZ			14:40																				
ZZZZZZ			14:44																				
ZZZZZZ			14:48																				
ZZZZZZ			14:52																				
CCV 600-76526/80			14:56																				
CCB 600-76526/81			15:00																				
ICSA 600-76526/82	1		16:17	X	X	X																	
ICSAB 600-76526/83	1		16:21	X	X	X																	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Houston   Job No.: 600-52867-1

SDG No.:

Instrument ID: TJA1   Method: 6010B

Start Date: 04/05/2012 08:11   End Date: 04/05/2012 16:21

Prep Types

T = Total/NA

```
Method: 20076010                         04/05/12 07:05:55 AM        page 1

METHOD INFORMATION **

Sample Introduction Device:    Normal
Calibration Mode:              Concentration


Default Setup:

   Number of Repeats : 2               Auto-store Analysis Data? Yes
   Flush Time (sec)  : 45.0            Auto-store Stdzn Data?    Yes
   Auto-Increment Sample Names? No     Store Individual Repeats? No
                                       Auto-print Analysis Data? Yes
                                       Auto-print Stdzn Report : +Readback
                                       Condensed Print Format?   Yes

Default File Names:

   Analysis Data File     : A040512    Autosampler Table    : TRAVIS
                                       Sample Limits Table : LCTAB
   Calibration Data File  : CALDATA    Blank Limits Table  : BLCTAB
   Calibration Stds Table : CALSTDS    QC Check Table      : LCTAB


Standardization Rpt.                     04/05/12 08:14:23 AM        page 1

Method: 20076010     Standard: S0
Run Time: 04/05/12 08:11:00

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Avge    .00650    .00161    -.00132   .00204    -.01731   .00851    .00118
 SDev    .00007    .00017     .00049   .00054     .00016   .00271    .00191
 %RSD    1.0203    10.491    36.874    26.468    .92193    31.799    161.90

 #1      .00655    .00149    -.00166   .00242    -.01742   .00660    -.00017
 #2      .00646    .00173    -.00097   .00166    -.01720   .01043    .00253

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Mg2790
 Avge    .01624    -.00002   -.00032   .00538    .00314    .06376    .03379
 SDev    .00040     .00014    .00017   .00013    .00303    .00007    .00004
 %RSD    2.4555    562.34    54.584    2.4690    96.353    .11604    .12218

 #1      .01652    -.00012   -.00044   .00547    .00100    .06381    .03382
 #2      .01596    .00007    -.00019   .00529    .00529    .06370    .03376

 Elem    Mn2576    Mo2020    Ni2316    K_7664    Si2881    Ag3280    Na3302
 Avge    .00023    .00021    -.00104   .41525    .03766    -.00023   -.00232
 SDev    .00002    .00053     .00005   .00064    .00007     .00002    .00063
 %RSD    7.2195    258.41    4.7673    .15366    .17848    7.6669    27.012

 #1      .00022    -.00017   -.00100   .41570    .03771    -.00024   -.00276
 #2      .00024    .00058    -.00107   .41480    .03761    -.00022   -.00188

 Elem    Na5889    Sr4215    Tl1908    Sn1899    Ti3349    V_2924    Zn2138
 Avge    .21540    .01174    -.00154   .00011    -.00238   .00002    .00800
 SDev    .00135    .00068     .00052   .00050     .00013   .00003    .00064
 %RSD    .62478    5.8102    33.883    453.60    5.3007    141.42    7.9845

 #1      .21635    .01222    -.00191   .00046    -.00247   .00000    .00846
 #2      .21445    .01125    -.00117   -.00024   -.00229   .00005    .00755

 Elem    2203/1    2203/2    1960/1    1960/2
 Avge    .00903    -.00348   -.00633   .00315
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 SDev     .00112     .00025     .00214    .00066
 %RSD     12.454     7.2195     33.728    21.049

 #1       .00982     -.00330    -.00784   .00362
 #2       .00823     -.00365    -.00482   .00268


 IntStd   1          2          3          4          5          6          7
 Mode     *Counts    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED
 Elem     Y          --         --         --         --         --         --
 Wavlen   371.030    --         --         --         --         --         --
 Avge     40984      --         --         --         --         --         --
 SDev     91.92388   --         --         --         --         --         --
 %RSD     .2242921   --         --         --         --         --         --

 #1       40919      --         --         --         --         --         --
 #2       41049      --         --         --         --         --         --


                                             04/05/12 08:18:29 AM         page 2

Method: 20076010     Standard: STD
Run Time: 04/05/12 08:15:06

 Elem     Al3082     Sb2068     As1890     Ba4934     Be3130     B_2496     Cd2265
 Avge     .94035     1.0149     1.1302     13.259     23.455     6.8887     14.141
 SDev     .00109      .0011      .0026       .018       .022      .0033       .013
 %RSD     .11583     .11261     .22856     .13463     .09546     .04832     .09368

 #1       .94112     1.0157     1.1320     13.272     23.471     6.8910     14.150
 #2       .93958     1.0141     1.1284     13.247     23.439     6.8863     14.132

 Elem     Ca3179     Cr2677     Co2286     Cu3247     Fe2714     Li6707     Mg2790
 Avge     2.9926     2.2974     1.3607     1.3914     5.0142     19.190     1.3044
 SDev      .0032      .0033      .0022      .0014      .0051       .004      .0018
 %RSD     .10750     .14303     .16182     .10059     .10126     .02245     .13755

 #1       2.9949     2.2997     1.3622     1.3924     5.0178     19.193     1.3057
 #2       2.9903     2.2951     1.3591     1.3904     5.0106     19.187     1.3031

 Elem     Mn2576     Mo2020     Ni2316     K_7664     Si2881     Ag3280     Na3302
 Avge     1.9177     1.6852     5.8341     2.6218     .90840     .78124     .13320
 SDev      .0031      .0005      .0154      .0012     .00187     .00078     .00005
 %RSD     .16313     .03054     .26318     .04675     .20612     .09955     .03786

 #1       1.9199     1.6848     5.8232     2.6209     .90972     .78179     .13323
 #2       1.9155     1.6855     5.8449     2.6226     .90707     .78069     .13316

 Elem     Na5889     Sr4215     Tl1908     Sn1899     Ti3349     V_2924     Zn2138
 Avge     16.173     43.371     .33411     2.8098     11.766     .57673     3.2754
 SDev       .009       .052     .00079      .0108       .018     .00104      .0036
 %RSD     .05568     .12051     .23557     .38600     .15121     .18043     .10991

 #1       16.167     43.408     .33355     2.8175     11.778     .57746     3.2780
 #2       16.180     43.334     .33467     2.8021     11.753     .57599     3.2729

 Elem     2203/1     2203/2     1960/1     1960/2
 Avge     4.0719     8.1787     1.2197     1.0621
 SDev      .0235      .0139      .0083      .0046
 %RSD     .57725     .17043     .68349     .43240

 #1       4.0885     8.1886     1.2256     1.0654
 #2       4.0553     8.1689     1.2138     1.0589
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 IntStd  1          2          3          4          5          6          7
 Mode    *Counts    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED
 Elem    Y          --         --         --         --         --         --
 Wavlen  371.030    --         --         --         --         --         --
 Avge    40970      --         --         --         --         --         --
 SDev    57.98276   --         --         --         --         --         --
 %RSD    .1415249   --         --         --         --         --         --

 #1      40929      --         --         --         --         --         --
 #2      41011      --         --         --         --         --         --


                                             04/05/12 08:18:45 AM         page 3

Method: 20076010         Slope = Conc(SIR)/IR

Element Wavelen    High std    Low std     Slope    Y-intercept   Date Standardized
Al3082  308.215    STD         S0          21.4168  -.139265      04/05/12 08:15:06
Sb2068  206.838    STD         S0          1.98029  -.003189      04/05/12 08:15:06
As1890  189.042    STD         S0          1.75047  .002307       04/05/12 08:15:06
Ba4934  493.409    STD         S0          .150861  -.000307      04/05/12 08:15:06
Be3130  313.042    STD         S0          .042631  .000738       04/05/12 08:15:06
B_2496  249.678    STD         S0          .290691  -.002474      04/05/12 08:15:06
Cd2265  226.502    STD         S0          .070863  -.000084      04/05/12 08:15:06
Ca3179  317.933    STD         S0          6.71963  -.109117      04/05/12 08:15:06
Cr2677  267.716    STD         S0          .870534  .000021       04/05/12 08:15:06
Co2286  228.616    STD         S0          1.46951  .000466       04/05/12 08:15:06
Cu3247  324.753    STD         S0          1.44224  -.007760      04/05/12 08:15:06
Fe2714  271.441    STD         S0          3.82594  -.012029      04/05/12 08:15:06
Li6707  670.784    STD         S0          .104567  -.006667      04/05/12 08:15:06
Pb2203  220.353                NONE        .000000  .000000      *04/05/12 08:15:06
Se1960  196.026                NONE        .000000  .000000      *04/05/12 08:15:06
Mg2790  279.078    STD         S0          15.7404  -.531928      04/05/12 08:15:06
Mn2576  257.610    STD         S0          1.04325  -.000242      04/05/12 08:15:06
Mo2020  202.030    STD         S0          1.18698  -.000245      04/05/12 08:15:06
Ni2316  231.604    STD         S0          .342752  .000355       04/05/12 08:15:06
K_7664  766.491    STD         S0          9.06403  -3.76382      04/05/12 08:15:06
Si2881  288.158    STD         S0          2.27576  -.085708      04/05/12 08:15:06
Ag3280  328.068    STD         S0          1.27998  .000297       04/05/12 08:15:06
Na3302  330.232    STD         S0          147.587  .342206       04/05/12 08:15:06
Na5889  588.995    STD         S0          1.25331  -.269966      04/05/12 08:15:06
Sr4215  421.552    STD         S0          .023074  -.000271      04/05/12 08:15:06
Tl1908  190.864    STD         S0          5.97782  .009193       04/05/12 08:15:06
Sn1899  189.989    STD         S0          .711824  -.000079      04/05/12 08:15:06
Ti3349  334.941    STD         S0          .169950  .000404       04/05/12 08:15:06
V_2924  292.402    STD         S0          3.43476  -.000084      04/05/12 08:15:06
Zn2138  213.856    STD         S0          .612854  -.004905      04/05/12 08:15:06
2203/1  220.351    STD         S0          .495133  -.004471      04/05/12 08:15:06
2203/2  220.352    STD         S0          .243518  .000847       04/05/12 08:15:06
1960/1  196.021    STD         S0          1.63333  .010346       04/05/12 08:15:06
1960/2  196.022    STD         S0          1.88471  -.005934      04/05/12 08:15:06
---------------------------------------------------------------------------
Method: 20076010
                                      Known         Measured        Residual
Element   Wavelength  Standard    Concentration  Concentration   Concentration
Al3082    308.215     S0             .000000        -.000000        .000000
                      STD            20.0000        20.0000         .000000

                                      Known         Measured        Residual
Element   Wavelength  Standard    Concentration  Concentration   Concentration
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Sb2068   206.838     S0              .000000         -.000000        .000000
                     STD             2.00000         2.00666         -.006658

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
As1890   189.042     S0              .000000         -.000000        .000000
                     STD             2.00000         1.98066         .019338


                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Ba4934   493.409     S0              .000000         .000000         -.000000

Standardization      Readback Report      04/05/12 08:18:45 AM         page 4


                     STD             2.00000         2.00000         .000000

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Be3130   313.042     S0              .000000         .000000         -.000000
                     STD             1.00000         1.00064         -.000640

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
B_2496   249.678     S0              .000000         -.000000        .000000
                     STD             2.00000         2.00000         .000000

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Cd2265   226.502     S0              .000000         .000000         -.000000
                     STD             1.00000         1.00198         -.001980

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Ca3179   317.933     S0              .000000         .000000         -.000000
                     STD             20.0000         20.0000         .000000

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Cr2677   267.716     S0              .000000         -.000000        .000000
                     STD             2.00000         2.00000         .000000

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Co2286   228.616     S0              .000000         .000000         -.000000
                     STD             2.00000         2.00000         .000000

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Cu3247   324.753     S0              .000000         -.000000        .000000
                     STD             2.00000         1.99894         .001060

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Fe2714   271.441     S0              .000000         .000000         -.000000
                     STD             20.0000         19.1720         .828014

                                      Known         Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Li6707   670.784     S0              .000000         -.000000        .000000
                     STD             2.00000         2.00000         .000000
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                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Pb2203   220.353     NONE            .000000         .000000         .000000
                                     .000000         .000000         .000000


                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Se1960   196.026     NONE            .000000         .000000         .000000
                                     .000000         .000000         .000000

Standardization      Readback Report      04/05/12 08:18:45 AM          page 5


                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Mg2790   279.078     S0              .000000         .000000         -.000000
                     STD             20.0000         20.0000         .000000

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Mn2576   257.610     S0              .000000         -.000000        .000000
                     STD             2.00000         2.00038         -.000380

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Mo2020   202.030     S0              .000000         .000000         -.000000
                     STD             2.00000         2.00000         .000000

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Ni2316   231.604     S0              .000000         .000000         -.000000
                     STD             2.00000         2.00000         .000000

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
K_7664   766.491     S0              .000000         .000000         -.000000
                     STD             20.0000         20.0000         .000000

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Si2881   288.158     S0              .000000         -.000000        .000000
                     STD             2.00000         1.98159         .018410

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Ag3280   328.068     S0              .000000         -.000000        .000000
                     STD             1.00000         1.00027         -.000274

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Na3302   330.232     S0              .000000         -.000000        .000000
                     STD             20.0000         20.0000         .000000

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Na5889   588.995     S0              .000000         -.000000        .000000
                     STD             20.0000         20.0000         .000000

                                      Known           Measured        Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Sr4215   421.552     S0              .000000         -.000000        .000000
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                     STD             1.00000         1.00048          -.000480

                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Tl1908   190.864     S0              .000000        -.000000          .000000
                     STD             2.00000         2.00644          -.006442


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                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Sn1899   189.989     S0              .000000         .000000          -.000000
                     STD             2.00000         2.00000           .000000

                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Ti3349   334.941     S0              .000000        -.000000           .000000
                     STD             2.00000         2.00000           .000000

                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
V_2924   292.402     S0              .000000        -.000000           .000000
                     STD             2.00000         1.98084           .019164

                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
Zn2138   213.856     S0              .000000        -.000000           .000000
                     STD             2.00000         2.00245          -.002452

                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
2203/1   220.351     S0              .000000         .000000          -.000000
                     STD             2.00000         2.01167          -.011672

                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
2203/2   220.352     S0              .000000         .000000          -.000000
                     STD             2.00000         1.99251           .007490

                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
1960/1   196.021     S0              .000000        -.000000           .000000
                     STD             2.00000         2.00251          -.002508

                                      Known          Measured          Residual
Element  Wavelength  Standard     Concentration   Concentration   Concentration
1960/2   196.022     S0              .000000         .000000          -.000000
                     STD             2.00000         1.99584           .004162


Analysis Report                           04/05/12 08:23:38 AM         page 1

Method: 20076010   Sample Name: S2 met0312cal_00001    Operator: DCL
Run Time: 04/05/12 08:19:49
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    20.062    2.0021    2.0079    2.0117    1.0046    2.0075    1.0035
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 SDev      .108     .0105     .0034     .0080     .0043     .0072     .0045
 %RSD    .53872    .52344    .17087    .39667    .42799    .36024    .44968

 #1      20.138    2.0095    2.0103    2.0173    1.0076    2.0126    1.0067
 #2      19.986    1.9947    2.0054    2.0060    1.0016    2.0024    1.0003

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    20.037    2.0041    1.9997    2.0053    20.068    2.0112    2.0120
 SDev      .097     .0087     .0087     .0071      .102     .0069     .0133
 %RSD    .48199    .43327    .43634    .35542    .50935    .34246    .66050

 #1      20.105    2.0102    2.0059    2.0103    20.140    2.0160    2.0214
 #2      19.969    1.9979    1.9935    2.0002    19.996    2.0063    2.0026

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    2.0198    20.017    2.0020    2.0051    2.0346    20.129    2.0004
 SDev     .0176      .098     .0092     .0052     .0098      .052     .0094
 %RSD    .87012    .48924    .46169    .25959    .48039    .25727    .47154

 #1      2.0322    20.087    2.0085    2.0087    2.0415    20.166    2.0070
 #2      2.0074    19.948    1.9954    2.0014    2.0276    20.093    1.9937

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.0021    20.148    20.139    1.0065    2.0100    2.0052    2.0057
 SDev     .0037      .106      .045     .0040     .0009     .0041     .0086
 %RSD    .37401    .52623    .22463    .40098    .04263    .20587    .42954

 #1      1.0048    20.223    20.171    1.0094    2.0094    2.0081    2.0118
 #2      .99948    20.073    20.107    1.0037    2.0106    2.0022    1.9996

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    2.0027    2.0049    2.0119    2.0121    2.0138    2.0228
 SDev     .0094     .0089     .0140     .0129     .0274     .0127
 %RSD    .47099    .44537    .69469    .64341    1.3585    .62702

 #1      2.0093    2.0112    2.0218    2.0212    2.0331    2.0318
 #2      1.9960    1.9986    2.0020    2.0029    1.9944    2.0139


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40910     --        --        --        --        --        --
 SDev    187.3833  --        --        --        --        --        --
 %RSD    .4580435  --        --        --        --        --        --

Analysis Report                          04/05/12 08:23:38 AM         page 2



 #1      40777     --        --        --        --        --        --
 #2      41042     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: ICV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 08:23:41
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1
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 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     2.5262    .50106    .51094    .50765    .51673    .50924    .51176
 SDev       .0025   .00202    .00002    .00059    .00067    .00027    .00049
 %RSD     .10056    .40227    .00361    .11678    .12954    .05365    .09601

 #1       2.5280    .50249    .51095    .50807    .51720    .50904    .51211
 #2       2.5244    .49964    .51093    .50723    .51626    .50943    .51141

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     12.758    .50825    .50913    .51394    2.5656    .46889    .50795
 SDev       .016    .00066    .00002    .00049      .0072   .00038    .00028
 %RSD     .12679    .12902    .00464    .09459    .28052    .08210    .05404

 #1       12.770    .50871    .50914    .51428    2.5707    .46916    .50776
 #2       12.747    .50778    .50911    .51360    2.5605    .46862    .50814

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .51923    5.0785    .50230    .51617    .52070    12.401    .96954
 SDev     .00097      .0050   .00049    .00149    .00169      .012    .00167
 %RSD     .18773    .09816    .09707    .28927    .32535    .09371    .17251

 #1       .51992    5.0820    .50264    .51722    .51950    12.393    .97072
 #2       .51854    5.0750    .50195    .51511    .52190    12.409    .96835

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .25250    12.983    12.284    .25270    .52289    .51327    .51341
 SDev     .00002      .028      .000    .00030    .00125    .00300    .00049
 %RSD     .00936    .21936    .00200    .11876    .23856    .58496    .09588

 #1       .25252    13.003    12.284    .25291    .52377    .51539    .51376
 #2       .25249    12.963    12.284    .25249    .52201    .51115    .51307

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .51399    .51640    .50506    .50939    .51385    .52198
 SDev     .00103    .00026    .00109    .00014    .00150    .00221
 %RSD     .19969    .04946    .21667    .02658    .29237    .42405

 #1       .51471    .51658    .50429    .50949    .51279    .52355
 #2       .51326    .51622    .50584    .50930    .51491    .52042


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
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 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40765     --        --        --        --        --        --
 SDev     114.5513  --        --        --        --        --        --
 %RSD     .2810040  --        --        --        --        --        --

 #1       40846     --        --        --        --        --        --
 #2       40684     --        --        --        --        --        --
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Method: 20076010   Sample Name: ICB                   Operator: DCL
Run Time: 04/05/12 08:27:32
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Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00093   .00073    .00299    -.00008   .00002    .00247    .00000
 SDev     .00410   .00102    .00048     .00004   .00000    .00017    .00005
 %RSD    443.12    139.15    16.153    46.481    4.0994    6.9154    2462.3

 #1      -.00383   .00145    .00265    -.00011   .00002    .00259    -.00003
 #2      .00198    .00001    .00333    -.00006   .00002    .00235    .00003

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.02864   .00039    -.00008   -.00034   -.00880   .00010    -.00020
 SDev     .00280   .00052     .00008    .00010    .00974   .00000     .00045
 %RSD    9.7793    133.66    90.402    30.192    110.74    .35716    221.62

 #1      -.03062   .00002    -.00003   -.00042   -.01569   .00010    .00012
 #2      -.02666   .00076    -.00014   -.00027   -.00191   .00010    -.00052

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00157    -.00399   .00004    .00325    -.00014   -.03319   -.00020
 SDev    .00592     .00192   .00004    .00097     .00001    .00805    .00052
 %RSD    376.17    48.094    101.02    29.861    4.4792    24.242    263.82

 #1      .00576    -.00535   .00001    .00394    -.00013   -.03888   -.00057
 #2      -.00261   -.00263   .00006    .00256    -.00014   -.02750   .00017

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00011   .00366    -.01189   -.00003   .00400    -.00029   .00022
 SDev     .00004   .05524     .00060    .00003   .00286     .00013   .00007
 %RSD    41.319    1507.9    5.0380    104.67    71.607    45.529    33.284

 #1      -.00014   -.03540   -.01147   -.00005   .00602    -.00039   .00017
 #2      -.00007   .04273    -.01232   -.00001   .00197    -.00020   .00027

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00028    -.00235   -.00072   .00005    .00403    .00034
 SDev    .00034     .00047    .00049   .00092    .00631    .00572
 %RSD    122.71    20.041    68.472    1730.7    156.36    1669.9

 #1      .00004    -.00268   -.00106   .00070    .00849    .00439
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 #2      .00052    -.00202   -.00037   -.00060   -.00043   -.00370

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41413     --        --        --        --        --        --
 SDev    24.04163  --        --        --        --        --        --
 %RSD    .0580533  --        --        --        --        --        --

 #1      41430     --        --        --        --        --        --
 #2      41396     --        --        --        --        --        --
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Method: 20076010   Sample Name: CRI met0212low_00003   Operator: DCL
Run Time: 04/05/12 08:31:23
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .07702    .00960    .01147    .00932    .00517    .00916    .00531
 SDev    .00406    .00044    .00151    .00010    .00000    .00050    .00013
 %RSD    5.2760    4.5769    13.179    1.0659    .06108    5.4792    2.3721

 #1      .07414    .00991    .01254    .00925    .00517    .00951    .00522
 #2      .07989    .00929    .01040    .00940    .00517    .00880    .00540

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .03954    .00990    .00913    .00931    .07409    .00761    .00945
 SDev    .00181    .00005    .00022    .00031    .00564    .00007    .00048
 %RSD    4.5829    .53310    2.4244    3.3491    7.6131    .95635    5.1079

 #1      .03826    .00994    .00898    .00909    .07010    .00756    .00911
 #2      .04082    .00986    .00929    .00953    .07808    .00766    .00979

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .01094    .09492    .00934    .01062    .00995    .57154    .00992
 SDev    .00007    .00247    .00000    .00006    .00009    .02606    .00171
 %RSD    .67308    2.5971    .03817    .53435    .91666    4.5590    17.199

 #1      .01089    .09318    .00935    .01058    .00988    .55311    .00872
 #2      .01099    .09666    .00934    .01066    .01001    .58996    .01113

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00491    .58710    .55200    .00400    .00736    .00779    .00966
 SDev    .00016    .02908    .00468    .00003    .00214    .00108    .00001
 %RSD    3.1666    4.9528    .84767    .61582    29.074    13.822    .10183

 #1      .00480    .56654    .54869    .00399    .00585    .00703    .00967
 #2      .00502    .60766    .55531    .00402    .00887    .00855    .00966

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00938    .00618    .00485    .01174    .00738    .01272
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 SDev    .00011    .00028    .00243    .00194    .00435    .00206
 %RSD    1.1544    4.4923    50.039    16.507    58.921    16.222

 #1      .00930    .00598    .00657    .01037    .00430    .01418
 #2      .00945    .00638    .00314    .01311    .01045    .01126

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41294     --        --        --        --        --        --
 SDev    215.6676  --        --        --        --        --        --
 %RSD    .5222670  --        --        --        --        --        --

 #1      41447     --        --        --        --        --        --
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 #2      41142     --        --        --        --        --        --
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Method: 20076010   Sample Name: ICSA metisa_00072      Operator: DCL
Run Time: 04/05/12 08:35:14
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    495.64    .00334    .00061    .00136    -.00011   -.00378   -.00383
 SDev       .06    .00167    .00003    .00005     .00001    .00013    .00006
 %RSD    .01210    50.167    5.4827    3.5463    9.4379    3.4028    1.5767

 #1      495.68    .00452    .00064    .00133    -.00012   -.00369   -.00379
 #2      495.60    .00215    .00059    .00139    -.00011   -.00387   -.00387

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    446.94    .00176    -.00064   .01255    193.77    .00423    .00480
 SDev       .11    .00025     .00011   .00015       .06    .00001    .00139
 %RSD    .02570    14.214    17.784    1.2075    .03030    .11960    28.905

 #1      446.86    .00158    -.00056   .01266    193.81    .00424    .00579
 #2      447.02    .00193    -.00072   .01244    193.73    .00423    .00382

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00499   511.12    -.00784   .00028    -.00057   .04202    .01057
 SDev     .00161      .53     .00003   .00025     .00022   .01321    .00045
 %RSD    32.266    .10346    .33862    88.410    38.374    31.449    4.2890

 #1      -.00613   510.74    -.00783   .00045    -.00073   .03267    .01089
 #2      -.00385   511.49    -.00786   .00010    -.00042   .05136    .01025

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00065   -.02326   .15488    -.00914   -.01271   -.00163   -.00343
 SDev     .00031    .00335   .00125     .00000    .00569    .00376    .00009
 %RSD    48.549    14.419    .80353    .00580    44.774    230.15    2.7373

 #1      -.00087   -.02089   .15400    -.00914   -.00868   .00103    -.00350
 #2      -.00042   -.02563   .15576    -.00914   -.01673   -.00429   -.00336

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 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00309    -.00522   -.04142   .02791    -.00168   -.00665
 SDev    .00020     .00026    .00276   .00070     .00239    .00122
 %RSD    6.3906    5.0546    6.6569    2.5226    142.42    18.360

 #1      .00295    -.00541   -.03947   .02841    -.00337   -.00751
 #2      .00323    -.00504   -.04337   .02742    .00001    -.00579

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    37354     --        --        --        --        --        --
 SDev    57.27565  --        --        --        --        --        --
 %RSD    .1533300  --        --        --        --        --        --
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 #1      37395     --        --        --        --        --        --
 #2      37314     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: ICSAB metisb_00074     Operator: DCL
Run Time: 04/05/12 08:39:04
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    509.71    1.0551    1.0413    1.0518    .50364    1.0556    .47803
 SDev      1.67     .0062     .0014     .0033    .00102     .0032    .00038
 %RSD    .32782    .58536    .13565    .31344    .20338    .30620    .07858

 #1      510.89    1.0595    1.0423    1.0541    .50437    1.0578    .47829
 #2      508.53    1.0507    1.0403    1.0495    .50292    1.0533    .47776

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    458.89    .99191    .96220    1.0979    205.75    1.2004    .99400
 SDev      1.09    .00221    .00208     .0040       .46     .0047    .00313
 %RSD    .23838    .22334    .21577    .36719    .22163    .39054    .31499

 #1      459.67    .99347    .96367    1.1008    206.07    1.2037    .99622
 #2      458.12    .99034    .96073    1.0951    205.43    1.1971    .99179

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.0295    527.78    .98981    1.0138    .96708    14.423    1.0267
 SDev     .0011      1.34    .00242     .0027    .00571      .066     .0040
 %RSD    .10866    .25425    .24444    .26357    .59061    .45982    .39100

 #1      1.0288    528.73    .99153    1.0119    .97112    14.470    1.0295
 #2      1.0303    526.83    .98810    1.0156    .96304    14.376    1.0239

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .55315    12.125    13.510    .50578    .98399    1.0108    1.0184
 SDev    .00213      .026      .053    .00147    .00786     .0006     .0032

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 %RSD    .38554    .21632    .38990    .28976    .79837    .06305    .30987

 #1      .55466    12.107    13.547    .50682    .97843    1.0113    1.0206
 #2      .55164    12.144    13.473    .50474    .98954    1.0104    1.0162

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.0103    1.0368    .94996    1.0160    1.0279    1.0304
 SDev     .0024     .0023    .00057     .0050     .0075     .0021
 %RSD    .23754    .22100    .06001    .49029    .72745    .19996

 #1      1.0120    1.0384    .94955    1.0195    1.0226    1.0319
 #2      1.0086    1.0352    .95036    1.0125    1.0331    1.0289

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    37444     --        --        --        --        --        --
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 SDev     49.49748  --        --        --        --        --        --
 %RSD     .1321907  --        --        --        --        --        --

 #1       37409     --        --        --        --        --        --
 #2       37479     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 08:42:55
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     2.5290    .49710    .50836    .50471    .51267    .50306    .50885
 SDev      .0064    .00047    .00383    .00128    .00207    .00063    .00235
 %RSD     .25460    .09434    .75260    .25309    .40389    .12484    .46256

 #1       2.5336    .49677    .51107    .50561    .51413    .50350    .51052
 #2       2.5245    .49743    .50566    .50381    .51121    .50262    .50719

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     12.669    .50473    .50564    .51002    2.5684    .46762    .50428
 SDev       .052    .00188    .00184    .00078     .0084    .00057    .00284
 %RSD     .40819    .37344    .36408    .15328    .32615    .12118    .56268

 #1       12.706    .50606    .50694    .51057    2.5743    .46802    .50628
 #2       12.633    .50340    .50434    .50947    2.5625    .46722    .50227

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .51639    5.0730    .49902    .50941    .51239    12.400    .96194
 SDev     .00272     .0200    .00177    .00092    .00194      .010    .00252
 %RSD     .52608    .39435    .35431    .18086    .37777    .08419    .26215

 #1       .51831    5.0871    .50027    .51006    .51376    12.408    .96372
 #2       .51447    5.0588    .49777    .50876    .51102    12.393    .96016


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 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .25203    12.942    12.240    .25182    .51575    .51046    .51057
 SDev     .00017      .098      .004    .00056    .00110    .00172    .00141
 %RSD     .06876    .75978    .03244    .22357    .21223    .33665    .27704

 #1       .25215    12.872    12.243    .25222    .51498    .51168    .51157
 #2       .25190    13.012    12.237    .25142    .51653    .50925    .50957

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .51105    .51338    .50173    .50555    .50998    .51966
 SDev     .00230    .00098    .00507    .00172    .00193    .00311
 %RSD     .45042    .19122    1.0101    .34066    .37802    .59873

 #1       .51268    .51408    .50531    .50677    .51134    .52186
 #2       .50942    .51269    .49815    .50433    .50862    .51746

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
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 Wavlen   371.030   --        --        --        --        --        --
 Avge     40938     --        --        --        --        --        --
 SDev     54.44722  --        --        --        --        --        --
 %RSD     .1329976  --        --        --        --        --        --

 #1       40977     --        --        --        --        --        --
 #2       40900     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCB                     Operator: DCL
Run Time: 04/05/12 08:46:46
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00151    -.00048   -.00058   -.00013   -.00004   .00132    -.00014
 SDev     .00231     .00429    .00060    .00005    .00002   .00073     .00012
 %RSD     152.72    885.32    102.35    37.400    47.108    55.219    83.004

 #1       .00314    .00255    -.00016   -.00010   -.00003   .00183    -.00006
 #2       -.00012   -.00352   -.00100   -.00017   -.00005   .00080    -.00022

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.03940   .00011    -.00041   -.00082   -.01726   .00007    -.00069
 SDev      .00046   .00036     .00012    .00042    .00304   .00006     .00111
 %RSD     1.1685    337.06    30.211    51.103    17.601    97.408    160.49

 #1       -.03972   .00036    -.00032   -.00052   -.01941   .00011    .00009
 #2       -.03907   -.00015   -.00050   -.00112   -.01512   .00002    -.00148

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00040    -.00352   -.00006   .00244    -.00057   -.03656   -.00331
 SDev     .00090     .00149    .00004   .00054     .00016    .02566    .00122
 %RSD     225.26    42.339    56.701    22.119    28.266    70.184    36.776

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 #1       -.00024   -.00247   -.00004   .00282    -.00069   -.01842   -.00245
 #2       .00104    -.00458   -.00009   .00206    -.00046   -.05471   -.00417

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00056   -.05405   -.01932   -.00008   .00048    .00085    .00013
 SDev      .00002    .01643    .00196    .00002   .00223    .00020    .00008
 %RSD     4.4545    30.398    10.121    21.377    462.68    24.199    64.515

 #1       -.00058   -.04243   -.01794   -.00007   .00206    .00070    .00019
 #2       -.00054   -.06567   -.02070   -.00009   -.00110   .00099    .00007

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00002   .00049    -.00458   .00125    -.00342   .00231
 SDev      .00030   .00019     .00292   .00313     .00833   .00281
 %RSD     1660.4    39.433    63.782    250.50    243.39    121.72

 #1       .00019    .00035    -.00664   .00346    -.00931   .00430
 #2       -.00023   .00062    -.00251   -.00096   .00247    .00032

 IntStd   1         2         3         4         5         6         7
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 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41153     --        --        --        --        --        --
 SDev     137.1787  --        --        --        --        --        --
 %RSD     .3333383  --        --        --        --        --        --

 #1       41056     --        --        --        --        --        --
 #2       41250     --        --        --        --        --        --


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Method: 20076010   Sample Name: mb 600-76449/1-a       Operator: DCL
Run Time: 04/05/12 08:56:01
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00029    .00270    .00088    .00134    -.00009   -.00182   .00004
 SDev     .00163    .00181    .00106    .00006     .00001    .00073   .00007
 %RSD     562.50    66.980    120.95    4.2262    8.6293    39.899    184.18

 #1       .00144    .00142    .00163    .00138    -.00009   -.00131   .00009
 #2       -.00086   .00398    .00013    .00130    -.00010   -.00233   -.00001

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .44249    .00055    -.00061   .00010    .01262    .00033    -.00032
 SDev     .00244    .00000     .00015   .00018    .00017    .00001     .00021
 %RSD     .55044    .09992    25.073    179.44    1.3838    2.7525    66.076

 #1       .44421    .00055    -.00072   .00023    .01250    .00034    -.00017
 #2       .44076    .00055    -.00050   -.00003   .01275    .00032    -.00047

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00142    .01541    .00017    .00007    -.00001   .10786    .00140
 SDev     .00123    .00193    .00004    .00070     .00061   .00779    .00042
 %RSD     86.648    12.535    21.898    935.71    4226.0    7.2243    30.050

 #1       .00229    .01678    .00019    .00057    -.00044   .11337    .00111
 #2       .00055    .01405    .00014    -.00042   .00041    .10235    .00170

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00017   .32051    .20841    .00027    -.00084   .03140    .00031
 SDev      .00018   .01025    .00261    .00000     .00196   .00101    .00000
 %RSD     102.40    3.1975    1.2510    .18983    234.01    3.2058    .03043

 #1       -.00030   .31326    .20657    .00027    .00055    .03212    .00031
 #2       -.00005   .32776    .21026    .00027    -.00222   .03069    .00031

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00009    .02873    -.00140   .00021    -.00258   .00342
 SDev     .00013    .00041     .00081   .00073     .00148   .00259
 %RSD     147.42    1.4151    58.128    338.34    57.573    75.688

 #1       .00017    .02902    -.00197   .00073    -.00363   .00525
 #2       -.00000   .02844    -.00082   -.00030   -.00153   .00159
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 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40822     --        --        --        --        --        --
 SDev    42.42641  --        --        --        --        --        --
 %RSD    .1039303  --        --        --        --        --        --

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 #1      40792     --        --        --        --        --        --
 #2      40852     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: lcs 600-76449/2-a      Operator: DCL
Run Time: 04/05/12 08:59:52
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    85.544    .80432    1.3842    2.6595    1.5579    .85507    .68916
 SDev      .285    .00586     .0022     .0038     .0028    .00383    .00032
 %RSD    .33334    .72818    .15603    .14470    .18023    .44841    .04663

 #1      85.746    .80018    1.3827    2.6622    1.5560    .85778    .68938
 #2      85.343    .80846    1.3858    2.6568    1.5599    .85235    .68893

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    91.525    1.0206    1.4055    1.1087    175.50    .08617    1.3881
 SDev      .018     .0002     .0012     .0048       .08    .00038     .0029
 %RSD    .01976    .01889    .08322    .43339    .04485    .44082    .20999

 #1      91.512    1.0204    1.4063    1.1121    175.56    .08644    1.3860
 #2      91.538    1.0207    1.4046    1.1053    175.45    .08590    1.3901

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.9471    41.139    5.1055    .91644    1.2851    48.273    5.8637
 SDev     .0139      .021     .0010    .00492     .0053      .285     .0089
 %RSD    .71402    .05213    .01979    .53694    .41501    .59034    .15235

 #1      1.9373    41.154    5.1062    .91296    1.2889    48.475    5.8700
 #2      1.9569    41.124    5.1048    .91992    1.2814    48.072    5.8574

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .46541    3.5615    6.6014    2.4338    1.6348    1.6096    3.9656
 SDev    .00103     .0399     .0468     .0065     .0089     .0030     .0005
 %RSD    .22034    1.1190    .70965    .26713    .54425    .18796    .01244

 #1      .46614    3.5897    6.6345    2.4384    1.6285    1.6118    3.9653
 #2      .46468    3.5333    6.5683    2.4292    1.6411    1.6075    3.9660

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .63795    2.2258    1.3690    1.3976    1.9058    1.9677
 SDev    .00041     .0026     .0008     .0048     .0033     .0225
 %RSD    .06447    .11694    .05577    .34014    .17285    1.1435
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 #1      .63824    2.2277    1.3695    1.3943    1.9082    1.9518
 #2      .63766    2.2240    1.3684    1.4010    1.9035    1.9836


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED

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 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    43392     --        --        --        --        --        --
 SDev    50.91169  --        --        --        --        --        --
 %RSD    .1173297  --        --        --        --        --        --

 #1      43356     --        --        --        --        --        --
 #2      43428     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53032-a-1-a@10     Operator: DCL
Run Time: 04/05/12 09:03:43
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .32499    .00629    .00585    3.5253    -.00004   .00089    -.00088
 SDev    .00436    .00153    .00029     .0115     .00001   .00038     .00009
 %RSD    1.3428    24.331    4.9546    .32711    18.298    42.172    10.134

 #1      .32807    .00737    .00565    3.5335    -.00004   .00116    -.00095
 #2      .32190    .00521    .00606    3.5172    -.00003   .00063    -.00082

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.7603    .03176    .00389    .07808    38.014    .00047    .00549
 SDev     .0075    .00032    .00013    .00036      .157    .00002    .00091
 %RSD    .42330    .99457    3.3589    .45883    .41298    4.1853    16.613

 #1      1.7656    .03198    .00398    .07833    38.125    .00049    .00613
 #2      1.7551    .03154    .00379    .07783    37.903    .00046    .00484

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00339    3.5295    .26752    .00668    .01493    -.10164   .23016
 SDev    .00135     .0186    .00116    .00131    .00042     .01288   .00390
 %RSD    39.762    .52634    .43274    19.544    2.7859    12.676    1.6952

 #1      .00434    3.5426    .26834    .00761    .01464    -.09253   .23292
 #2      .00243    3.5163    .26670    .00576    .01522    -.11075   .22741

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00040   -.15250   .00543    3.1699    .00203    .00683    .14415
 SDev     .00007    .07122   .00119     .0119    .00202    .00073    .00087
 %RSD    16.707    46.700    21.955    .37613    99.585    10.685    .60127

 #1      -.00045   -.20285   .00627    3.1783    .00346    .00631    .14476
 #2      -.00035   -.10214   .00459    3.1614    .00060    .00735    .14354

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00623    .03536    .00237    .00704    -.00050   .00533
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 SDev     .00043    .00004    .00012    .00143     .00158    .00281
 %RSD     6.9310    .12486    4.9844    20.242    312.46    52.670

 #1       .00654    .03533    .00228    .00805    -.00162    .00732

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 #2       .00593    .03539    .00245    .00604    .00061    .00335

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41473     --        --        --        --        --        --
 SDev     63.63961  --        --        --        --        --        --
 %RSD     .1534483  --        --        --        --        --        --

 #1       41428     --        --        --        --        --        --
 #2       41518     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53032-a-2-a@10     Operator: DCL
Run Time: 04/05/12 09:07:34
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     216.96    .00082    .00413    .02011    -.00008   .00162    -.00049
 SDev       1.09    .00135    .00003    .00011     .00001   .00012     .00009
 %RSD     .50304    163.93    .77244    .55221    10.784    7.1838    18.369

 #1       217.73    -.00013   .00411    .02019    -.00007   .00170    -.00055
 #2       216.19    .00177    .00416    .02003    -.00008   .00153    -.00042

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .89704    .00916    .00083    .02678    3.0370    .00060    .00398
 SDev     .00308    .00010    .00005    .00012     .0066    .00003    .00023
 %RSD     .34305    1.0321    6.1159    .43759    .21761    4.4920    5.8525

 #1       .89921    .00923    .00086    .02670    3.0417    .00058    .00415
 #2       .89486    .00909    .00079    .02686    3.0324    .00062    .00382

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00015    1.6769    .05901    .00079    .00991    -.02938   .44076
 SDev     .00231     .0030    .00020    .00043    .00020     .01562   .00137
 %RSD     1592.5    .17993    .33662    54.978    2.0410    53.172    .31026

 #1       -.00149   1.6790    .05915    .00048    .00977    -.04043   .44173
 #2       .00178    1.6748    .05886    .00110    .01005    -.01834   .43979

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00015   .39837    .33727    .00491    -.00010   .00242    .03633
 SDev      .00004   .03838    .00173    .00001     .00507   .00106    .00000
 %RSD     30.032    9.6338    .51371    .17001    5098.0    43.789    .00804

 #1       -.00018   .42550    .33850    .00491    -.00368   .00317    .03634
 #2       -.00012   .37123    .33605    .00490    .00348    .00167    .03633

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
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 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .02076    .02375    -.01339   .01267    .00271    -.00114

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 SDev     .00003    .00008     .00020   .00025    .00515     .00089
 %RSD     .14380    .33335    1.4975    1.9693    190.49    78.137

 #1       .02074    .02369    -.01325   .01285    -.00094   -.00176
 #2       .02078    .02380    -.01353   .01250    .00635    -.00051

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40716     --        --        --        --        --        --
 SDev     50.20458  --        --        --        --        --        --
 %RSD     .1233058  --        --        --        --        --        --

 #1       40751     --        --        --        --        --        --
 #2       40680     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53032-a-3-a@10     Operator: DCL
Run Time: 04/05/12 09:11:25
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     19.677    .00233    .00324    .03123    .00129    .09816    -.00010
 SDev       .003    .00069    .00096    .00008    .00000    .00012     .00001
 %RSD     .01636    29.595    29.684    .24837    .09419    .12320    9.3984

 #1       19.675    .00184    .00256    .03128    .00129    .09808    -.00011
 #2       19.679    .00282    .00392    .03117    .00129    .09825    -.00009

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     85.870    .00929    .00086    .14430    3.3765    .04630    .00119
 SDev       .117    .00002    .00000    .00024     .0119    .00004    .00106
 %RSD     .13668    .17895    .13847    .16468    .35109    .08650    88.713

 #1       85.953    .00931    .00086    .14414    3.3849    .04632    .00194
 #2       85.787    .00928    .00086    .14447    3.3681    .04627    .00044

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00054    1.3971    .25262    .00062    .00062    5.5721    .78798
 SDev     .00118     .0001    .00032    .00025    .00050     .0122    .00281
 %RSD     218.43    .00595    .12806    39.927    80.937    .21830    .35663

 #1       -.00029   1.3972    .25285    .00044    .00026    5.5635    .78997
 #2       .00137    1.3971    .25239    .00079    .00097    5.5807    .78599

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00018   12.569    11.965    .28682    -.00177   .00424    .42292
 SDev      .00024     .029      .002    .00050     .00038   .00151    .00073
 %RSD     130.20    .23469    .01437    .17506    21.306    35.649    .17282

 #1       -.00035   12.548    11.966    .28717    -.00204   .00531    .42343
 #2       -.00001   12.590    11.964    .28646    -.00150   .00317    .42240
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 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00354    .01867    -.00085   .00222    .00029    .00066
 SDev     .00005    .00014     .00278   .00020    .00157    .00098
 %RSD     1.2845    .73893    325.27    8.9763    531.86    148.68

 #1       .00358    .01857    .00111    .00236    -.00081   -.00003
 #2       .00351    .01876    -.00282   .00207    .00140    .00136

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41264     --        --        --        --        --        --
 SDev     125.1579  --        --        --        --        --        --
 %RSD     .3033138  --        --        --        --        --        --

 #1       41352     --        --        --        --        --        --
 #2       41175     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53032-a-4-a@10     Operator: DCL
Run Time: 04/05/12 09:15:16
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     1.2558    -.00179   .00315    .02995    .00019    .01326    -.00013
 SDev      .0022     .00316   .00009    .00001    .00000    .00001     .00004
 %RSD     .17416    176.10    2.8181    .03532    .03531    .07378    29.240

 #1       1.2574    -.00403   .00309    .02996    .00019    .01325    -.00011
 #2       1.2543    .00044    .00321    .02994    .00019    .01327    -.00016

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     140.14    .00077    .25208    -.00027   1.1523    .39576    .00143
 SDev        .32    .00018    .00107     .00009    .0141    .00077    .00200
 %RSD     .22658    23.693    .42324    33.671    1.2220    .19377    140.00

 #1       140.37    .00090    .25284    -.00033   1.1623    .39630    .00284
 #2       139.92    .00064    .25133    -.00020   1.1424    .39521    .00001

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00244    11.926    .27862    -.00039   .00046    -.00012   1.5267
 SDev     .00284      .029    .00056     .00082   .00000     .00962    .0047
 %RSD     116.48    .24588    .20164    210.41    .03062    8003.4    .30568

 #1       .00444    11.947    .27902    -.00097   .00046    .00668    1.5300
 #2       .00043    11.905    .27822    .00019    .00046    -.00692   1.5234

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00008    .39294    .42019    .11058    -.00367   .00596    .05396
 SDev     .00004    .05128    .00216    .00009     .00054   .00168    .00015

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 %RSD     57.576    13.051    .51395    .08480    14.636    28.120    .28764

 #1       .00011    .42921    .42172    .11064    -.00405   .00714    .05407
 #2       .00005    .35668    .41867    .11051    -.00329   .00477    .05385

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00143    .00771    .00076    .00176    .00326    .00202
 SDev     .00013    .00008    .00212    .00194    .00240    .00305
 %RSD     8.7518    1.0521    278.89    110.01    73.687    150.90

 #1       .00134    .00765    .00226    .00313    .00495    .00418
 #2       .00152    .00776    -.00074   .00039    .00156    -.00014

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40750     --        --        --        --        --        --
 SDev     53.03301  --        --        --        --        --        --
 %RSD     .1301407  --        --        --        --        --        --

 #1       40713     --        --        --        --        --        --
 #2       40788     --        --        --        --        --        --
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Method: 20076010   Sample Name: 600-53032-a-5-a@10     Operator: DCL
Run Time: 04/05/12 09:19:08
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00283    -.00006   .00264    .00046    -.00018   .00027    -.00000
 SDev     .00140     .00057   .00059    .00003     .00001   .00015     .00010
 %RSD     49.511    952.53    22.284    5.9172    3.5957    56.547    10448.

 #1       .00382    .00034    .00306    .00048    -.00017   .00038    .00007
 #2       .00184    -.00046   .00222    .00044    -.00018   .00016    -.00007

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00628   .00004    -.00025   -.00068   -.00514   -.00038   .00012
 SDev      .00361   .00017     .00003    .00006    .00426    .00002   .00046
 %RSD     57.502    414.46    10.652    8.1900    82.927    4.2702    390.37

 #1       -.00372   .00017    -.00026   -.00072   -.00213   -.00037   -.00021
 #2       -.00883   -.00008   -.00023   -.00064   -.00816   -.00039   .00044

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00175    -.04103   -.00008   -.00036   -.00021   -.26711   -.00281
 SDev     .00072     .00245    .00002    .00048    .00014    .01580    .00011
 %RSD     41.414    5.9705    22.049    133.31    68.317    5.9161    3.9707

 #1       .00226    -.03929   -.00007   -.00002   -.00011   -.25593   -.00289
 #2       .00124    -.04276   -.00009   -.00069   -.00031   -.27828   -.00273


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 Elem     Ag3280     Na3302     Na5889     Sr4215     Tl1908     Sn1899     Ti3349
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     -.00008    .04540     -.02049    -.00015    -.00572    .00864     .00006
 SDev      .00019    .06487      .00047     .00002     .00007    .00193     .00006
 %RSD     235.33     142.87     2.2992     13.116     1.1440     22.364     89.408

 #1       .00005     -.00047    -.02015    -.00014    -.00568    .00727     .00010
 #2       -.00022    .09127     -.02082    -.00017    -.00577    .01001     .00002

 Elem     V_2924     Zn2138     2203/1     2203/2     1960/1     1960/2
 Units    ppm        ppm        ppm        ppm        ppm        ppm
 Avge     -.00005    .00496     -.00100    .00068     .00419     .00053
 SDev      .00006    .00005      .00222    .00042     .00176     .00020
 %RSD     133.82     1.0685     221.70     61.970     42.083     38.770

 #1       -.00000    .00500     -.00257    .00097     .00543     .00067
 #2       -.00009    .00492     .00057     .00038     .00294     .00038

 IntStd   1          2          3          4          5          6          7
 Mode     *Counts    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED
 Elem     Y          --         --         --         --         --         --
 Wavlen   371.030    --         --         --         --         --         --
 Avge     42277      --         --         --         --         --         --
 SDev     97.58073   --         --         --         --         --         --
 %RSD     .2308128   --         --         --         --         --         --

 #1       42208      --         --         --         --         --         --
 #2       42346      --         --         --         --         --         --
-----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53032-a-6-a@10     Operator: DCL
Run Time: 04/05/12 09:22:59
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082     Sb2068     As1890     Ba4934     Be3130     B_2496     Cd2265
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     1.7942     .00048     .00342     5.3991     -.00016    -.00037    -.00008
 SDev      .0077     .00294     .00129      .0103      .00001     .00011     .00007
 %RSD     .42995     614.61     37.640     .19119     8.4467     30.518     90.424

 #1       1.7996     -.00160    .00251     5.4064     -.00017    -.00029    -.00013
 #2       1.7887     .00256     .00433     5.3918     -.00015    -.00045    -.00003

 Elem     Ca3179     Cr2677     Co2286     Cu3247     Fe2714     Li6707     Pb2203
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     2.8331     .00372     .00292     .01096     4.6224     .00080     .00592
 SDev      .0030     .00020     .00009     .00019      .0113     .00008     .00044
 %RSD     .10423     5.2862     3.0045     1.7822     .24459     9.9566     7.4413

 #1       2.8310     .00359     .00286     .01082     4.6144     .00075     .00561
 #2       2.8352     .00386     .00298     .01110     4.6304     .00086     .00623

 Elem     Se1960     Mg2790     Mn2576     Mo2020     Ni2316     K_7664     Si2881
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .00108     5.8144     .14950     -.00000    .00328     -.00858    .29949
 SDev     .00023      .0038     .00011      .00034    .00024      .16552    .00036
 %RSD     21.676     .06523     .07396     8777.7     7.3492     1928.5     .11846

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 #1       .00091     5.8117     .14942     .00024     .00345     -.12562    .29924
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 #2      .00124    5.8171    .14958    -.00025   .00311    .10846    .29974

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00003   -.07954   .01824    4.3630    -.00219   .00558    .17254
 SDev     .00046    .12319   .00251     .0120     .00035   .00004    .00016
 %RSD    1779.6    154.87    13.758    .27419    15.853    .76906    .09366

 #1      -.00035   -.16665   .01647    4.3714    -.00243   .00561    .17242
 #2      .00030    .00757    .02001    4.3545    -.00194   .00555    .17265

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00363    .01328    .00566    .00605    .00262    .00031
 SDev    .00025    .00001    .00144    .00006    .00218    .00144
 %RSD    6.8744    .05559    25.503    .99938    83.121    468.70

 #1      .00345    .01329    .00464    .00609    .00416    -.00071
 #2      .00381    .01328    .00668    .00601    .00108    .00132

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41611     --        --        --        --        --        --
 SDev    217.7889  --        --        --        --        --        --
 %RSD    .5233926  --        --        --        --        --        --

 #1      41765     --        --        --        --        --        --
 #2      41457     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-1-a        Operator: DCL
Run Time: 04/05/12 09:26:50
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    165.86    .00323    .18399    1.3651    .01223    .07936    -.00120
 SDev       .06    .00126    .00231     .0011    .00002    .00026     .00011
 %RSD    .03379    38.858    1.2528    .08155    .12910    .32741    9.2878

 #1      165.82    .00412    .18236    1.3659    .01224    .07917    -.00128
 #2      165.90    .00234    .18562    1.3643    .01222    .07954    -.00113

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    879.41    .22450    .12918    .23684    254.29    .12936    .21545
 SDev       .29    .00009    .00012    .00000       .04    .00008    .00136
 %RSD    .03332    .03833    .09118    .00037    .01492    .06073    .62894

 #1      879.20    .22444    .12926    .23684    254.32    .12930    .21449
 #2      879.62    .22457    .12909    .23684    254.27    .12941    .21640

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881

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 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00416   29.005    9.8049    .01270    .34814    32.209    7.3132
 SDev     .00176     .030     .0009    .00019    .00055      .005     .0024
 %RSD    42.332    .10191    .00937    1.5260    .15848    .01693    .03297
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 #1      -.00292   28.984    9.8043    .01256    .34853    32.205    7.3114
 #2      -.00541   29.026    9.8056    .01283    .34774    32.213    7.3149

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00318   3.0923    3.5207    4.3634    -.02418   .03305    .31460
 SDev     .00020    .0119     .0021     .0020     .00026   .00015    .00033
 %RSD    6.3435    .38505    .06103    .04565    1.0927    .46801    .10377

 #1      -.00304   3.1007    3.5192    4.3648    -.02437   .03316    .31437
 #2      -.00332   3.0839    3.5222    4.3620    -.02399   .03294    .31483

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .67215    .86862    .19230    .22702    -.00945   -.00152
 SDev    .00029    .00057    .00169    .00119     .00121    .00325
 %RSD    .04263    .06534    .88045    .52242    12.851    213.45

 #1      .67235    .86822    .19110    .22618    -.01030   .00078
 #2      .67194    .86902    .19350    .22786    -.00859   -.00382


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    45401     --        --        --        --        --        --
 SDev    31.11270  --        --        --        --        --        --
 %RSD    .0685287  --        --        --        --        --        --

 #1      45423     --        --        --        --        --        --
 #2      45379     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-2-a        Operator: DCL
Run Time: 04/05/12 09:30:41
Comment: TRACE 61E
Mode: CONC    Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    139.76    .00527    .16588    1.1628    .01086    .08101    -.00053
 SDev       .09    .00026    .00164     .0002    .00002    .00081     .00011
 %RSD    .06143    4.9166    .98889    .01968    .19842    1.0036    20.202

 #1      139.70    .00508    .16472    1.1626    .01088    .08044    -.00045
 #2      139.82    .00545    .16704    1.1630    .01085    .08159    -.00060

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    973.73    .19185    .11833    .21335    239.05    .11890    .23206
 SDev      1.63    .00012    .00010    .00062       .04    .00021    .00053
 %RSD    .16732    .06369    .08344    .29053    .01585    .17777    .23008

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 #1      974.88    .19176    .11840    .21291    239.08    .11875    .23168
 #2      972.58    .19193    .11826    .21379    239.02    .11905    .23244

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
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 Avge    -.00217   25.494    8.3864    .01311    .31465    32.065    6.4082
 SDev     .00212     .004     .0003    .00005    .00131      .031     .0025
 %RSD    97.641    .01604    .00298    .39536    .41675    .09549    .03932

 #1      -.00067   25.491    8.3866    .01315    .31373    32.044    6.4065
 #2      -.00366   25.497    8.3862    .01307    .31558    32.087    6.4100

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00338   2.2577    2.6242    5.0595    -.02303   .03289    .28885
 SDev     .00002    .0311     .0024     .0023     .00455   .00099    .00006
 %RSD    .63912    1.3778    .09001    .04622    19.739    3.0219    .02208

 #1      -.00337   2.2357    2.6225    5.0578    -.02624   .03219    .28889
 #2      -.00340   2.2796    2.6258    5.0611    -.01981   .03359    .28880

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .55162    .93788    .21178    .24220    -.00622   -.00014
 SDev    .00041    .00077    .00031    .00064     .00091    .00272
 %RSD    .07433    .08267    .14674    .26651    14.623    1911.1

 #1      .55133    .93733    .21156    .24174    -.00557   .00178
 #2      .55191    .93843    .21200    .24266    -.00686   -.00207


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    44574     --        --        --        --        --        --
 SDev    15.55635  --        --        --        --        --        --
 %RSD    .0349001  --        --        --        --        --        --

 #1      44585     --        --        --        --        --        --
 #2      44563     --        --        --        --        --        --
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Method: 20076010   Sample Name: CCV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 09:34:32
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    2.4546    .49335    .50006    .49925    .49788    .49638    .50685
 SDev     .0061    .00225    .00230    .00066    .00039    .00002    .00011
 %RSD    .24742    .45533    .46069    .13308    .07884    .00332    .02084

 #1      2.4589    .49177    .49843    .49972    .49816    .49639    .50693
 #2      2.4503    .49494    .50169    .49878    .49760    .49637    .50678


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 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    12.490    .49262    .49205    .49543    2.5451    .46228    .49504
 SDev      .011    .00026    .00014    .00122     .0111    .00184    .00097
 %RSD    .08782    .05274    .02851    .24697    .43772    .39865    .19689

 #1      12.498    .49281    .49215    .49629    2.5372    .46358    .49435
 #2      12.482    .49244    .49195    .49456    2.5529    .46098    .49573
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 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .49928    4.9376    .48846    .49969    .51016    12.237    .94401
 SDev     .00281     .0034    .00013    .00013    .00035      .057    .00076
 %RSD     .56359    .06967    .02704    .02557    .06850    .46695    .08059

 #1       .49729    4.9400    .48855    .49978    .50991    12.278    .94455
 #2       .50127    4.9352    .48836    .49960    .51041    12.197    .94348

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .24780    12.825    12.033    .24873    .51237    .49948    .50262
 SDev     .00017      .030      .075    .00029    .00369    .00208    .00072
 %RSD     .06877    .23260    .62466    .11755    .72000    .41554    .14357

 #1       .24768    12.846    12.086    .24894    .50976    .49801    .50313
 #2       .24792    12.804    11.979    .24852    .51498    .50095    .50211

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .49993    .50861    .48494    .50009    .48468    .50664
 SDev     .00001    .00056    .00291    .00001    .00537    .00153
 %RSD     .00265    .11103    .60081    .00105    1.1088    .30275

 #1       .49994    .50901    .48288    .50008    .48088    .50556
 #2       .49992    .50821    .48700    .50009    .48848    .50773


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41424     --        --        --        --        --        --
 SDev     43.13351  --        --        --        --        --        --
 %RSD     .1041281  --        --        --        --        --        --

 #1       41454     --        --        --        --        --        --
 #2       41393     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: CCB                    Operator: DCL
Run Time: 04/05/12 09:38:23
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .01817    .00052    .00197    -.00009   -.00023   .00094    -.00013
 SDev     .00109    .00149    .00175     .00004    .00001   .00031     .00007

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 %RSD     5.9825    286.49    88.515    39.055    5.2736    33.327    54.145

 #1       .01740    -.00053   .00321    -.00007   -.00022   .00072    -.00017
 #2       .01894    .00157    .00074    -.00012   -.00024   .00116    -.00008

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.03347   .00032    -.00011   -.00155   -.01181   .00006    -.00004
 SDev      .00007   .00015     .00061    .00021    .02791   .00001     .00067
 %RSD     .21076    46.911    570.48    13.736    236.22    14.315    1804.0
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 #1      -.03342   .00021    -.00054   -.00140   -.03155   .00005    -.00051
 #2      -.03352   .00042    .00032    -.00170   .00792    .00007    .00044

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00064    -.00262   -.00000   .00116    -.00033   -.01863   -.00563
 SDev    .00328     .00059    .00002   .00068     .00096    .00045    .00008
 %RSD    509.99    22.677    3806.2    58.586    288.35    2.4404    1.3887

 #1      .00296    -.00304   .00001    .00164    -.00102   -.01895   -.00558
 #2      -.00167   -.00220   -.00001   .00068    .00035    -.01831   -.00569

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00014   -.02446   -.01740   -.00006   .00316    .00021    .00009
 SDev     .00084    .18888    .00079    .00001   .00215    .00016    .00001
 %RSD    596.64    772.34    4.5654    21.916    68.032    77.087    7.3662

 #1      -.00073   -.15801   -.01684   -.00007   .00468    .00032    .00009
 #2      .00045    .10910    -.01796   -.00005   .00164    .00009    .00009

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00003   -.00287   -.00112   .00050    -.00025   .00109
 SDev     .00005    .00011    .00377   .00088     .00163   .00410
 %RSD    170.19    3.7542    336.61    174.45    659.23    376.83

 #1      -.00007   -.00294   -.00379   .00113    .00091    .00398
 #2      .00001    -.00279   .00155    -.00012   -.00140   -.00181


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41082     --        --        --        --        --        --
 SDev    101.1163  --        --        --        --        --        --
 %RSD    .2461298  --        --        --        --        --        --

 #1      41011     --        --        --        --        --        --
 #2      41154     --        --        --        --        --        --
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Method: 20076010   Sample Name: 600-52867-a-3-a       Operator: DCL
Run Time: 04/05/12 09:42:14
Comment: TRACE 61E


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Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    184.45    .00510    .19704    1.5667    .01327    .07298    -.00139
 SDev       .45    .00222    .00235     .0024    .00000    .00009     .00016
 %RSD    .24138    43.450    1.1908    .15246    .02016    .12267    11.459

 #1      184.76    .00354    .19870    1.5684    .01327    .07305    -.00128
 #2      184.13    .00667    .19538    1.5650    .01327    .07292    -.00151

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
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 Avge     859.02     .24577     .13746     .24872     264.29     .13749     .19584
 SDev       1.43     .00032     .00082     .00035        .35     .00038     .00102
 %RSD     .16673     .12913     .59464     .14204     .13057     .27548     .51995

 #1       860.03     .24599     .13803     .24897     264.53     .13775     .19512
 #2       858.00     .24555     .13688     .24847     264.05     .13722     .19656

 Elem     Se1960     Mg2790     Mn2576     Mo2020     Ni2316     K_7664     Si2881
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     -.00571    30.059     11.321     .01206     .39336     34.318     8.7683
 SDev      .00031      .031       .015     .00025     .00187       .118      .0078
 %RSD     5.4683     .10228     .13222     2.0465     .47642     .34491     .08938

 #1       -.00549    30.081     11.332     .01223     .39468     34.401     8.7738
 #2       -.00593    30.038     11.311     .01188     .39203     34.234     8.7627

 Elem     Ag3280     Na3302     Na5889     Sr4215     Tl1908     Sn1899     Ti3349
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     -.00296    2.7202     3.0763     3.9701     -.01960    .03340     .34548
 SDev      .00022     .0881      .0116      .0056      .00156    .00084     .00027
 %RSD     7.5066     3.2372     .37675     .14111     7.9674     2.5011     .07716

 #1       -.00281    2.7824     3.0845     3.9740     -.01849    .03400     .34567
 #2       -.00312    2.6579     3.0681     3.9661     -.02070    .03281     .34529

 Elem     V_2924     Zn2138     2203/1     2203/2     1960/1     1960/2
 Units    ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .78853     .81602     .17019     .20866     -.01193    -.00261
 SDev     .00077     .00073     .00019     .00162      .00297     .00101
 %RSD     .09762     .08977     .11270     .77795     24.867     38.954

 #1       .78907     .81654     .17033     .20751     -.00983    -.00332
 #2       .78799     .81550     .17006     .20980     -.01403    -.00189


 IntStd   1          2          3          4          5          6          7
 Mode     *Counts    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED
 Elem     Y          --         --         --         --         --         --
 Wavlen   371.030    --         --         --         --         --         --
 Avge     46272      --         --         --         --         --         --
 SDev     177.4838   --         --         --         --         --         --
 %RSD     .3835622   --         --         --         --         --         --

 #1       46147      --         --         --         --         --         --
 #2       46398      --         --         --         --         --         --

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Method: 20076010   Sample Name: 600-52867-a-4-a        Operator: DCL
Run Time: 04/05/12 09:46:05
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082     Sb2068     As1890     Ba4934     Be3130     B_2496     Cd2265
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     136.40     .00326     .16113     1.1871     .01086     .09457     -.00060
 SDev        .26     .00015     .00183      .0023     .00000     .00036      .00018
 %RSD     .19129     4.4866     1.1356     .19487     .03736     .38518     29.764

 #1       136.59     .00316     .16242     1.1887     .01086     .09483     -.00072
 #2       136.22     .00337     .15984     1.1855     .01086     .09432     -.00047
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 Elem     Ca3179     Cr2677     Co2286     Cu3247     Fe2714     Li6707     Pb2203
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     917.38     .19054     .12035     .22625     236.34     .11879     .23301
 SDev        .26     .00020     .00006     .00116        .14     .00030     .00032
 %RSD     .02813     .10735     .04657     .51155     .05744     .25375     .13533

 #1       917.20     .19069     .12039     .22707     236.44     .11900     .23279
 #2       917.56     .19040     .12031     .22543     236.24     .11857     .23323

 Elem     Se1960     Mg2790     Mn2576     Mo2020     Ni2316     K_7664     Si2881
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     -.00045    26.105     8.1422     .01076     .32513     33.545     8.3980
 SDev      .00172      .015      .0062     .00037     .00012       .096      .0155
 %RSD     381.53     .05678     .07608     3.4107     .03650     .28762     .18405

 #1       -.00166    26.115     8.1466     .01102     .32504     33.613     8.4090
 #2       .00076     26.094     8.1378     .01050     .32521     33.477     8.3871

 Elem     Ag3280     Na3302     Na5889     Sr4215     Tl1908     Sn1899     Ti3349
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     -.00270    1.8977     2.1697     4.6632     -.02071    .03455     .31282
 SDev      .00008     .0154      .0097      .0124      .00268    .00128     .00121
 %RSD     2.9089     .81010     .44618     .26690     12.928     3.7118     .38704

 #1       -.00265    1.9086     2.1766     4.6720     -.02260    .03546     .31368
 #2       -.00276    1.8869     2.1629     4.6544     -.01881    .03365     .31196

 Elem     V_2924     Zn2138     2203/1     2203/2     1960/1     1960/2
 Units    ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .53538     .91612     .21069     .24417     -.00496    .00180
 SDev     .00008     .00199     .00020     .00037      .00369    .00073
 %RSD     .01508     .21767     .09679     .15196     74.459     40.390

 #1       .53544     .91753     .21055     .24391     -.00757    .00129
 #2       .53532     .91471     .21084     .24443     -.00235    .00232


 IntStd   1          2          3          4          5          6          7
 Mode     *Counts    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED
 Elem     Y          --         --         --         --         --         --
 Wavlen   371.030    --         --         --         --         --         --
 Avge     44593      --         --         --         --         --         --

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 SDev     38.18377   --         --         --         --         --         --
 %RSD     .0856273   --         --         --         --         --         --

 #1       44566      --         --         --         --         --         --
 #2       44620      --         --         --         --         --         --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-5-a        Operator: DCL
Run Time: 04/05/12 09:49:55
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082     Sb2068     As1890     Ba4934     Be3130     B_2496     Cd2265
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     209.83     .02774     .20344     1.6811     .01479     .06013     .13049
 SDev       1.17     .00002     .00321      .0066     .00006     .00001     .00026
 %RSD     .55784     .06381     1.5770     .39115     .42766     .02045     .19963
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 #1      209.01    .02772    .20117    1.6764    .01474    .06014    .13030
 #2      210.66    .02775    .20571    1.6857    .01483    .06012    .13067

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    929.47    .26152    .08421    .34496    206.66    .17459    4.8791
 SDev      3.28    .00077    .00012    .00174       .72    .00115     .0282
 %RSD    .35238    .29310    .14248    .50344    .35072    .65841    .57798

 #1      927.15    .26098    .08412    .34373    206.14    .17378    4.8591
 #2      931.78    .26206    .08429    .34619    207.17    .17540    4.8990

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00230   33.386    4.0391    .00438    .29051    33.054    9.6141
 SDev     .00039     .115     .0133    .00004    .00145      .227     .0400
 %RSD    17.131    .34317    .32970    .99285    .49758    .68820    .41620

 #1      -.00258   33.305    4.0297    .00441    .28949    32.893    9.5858
 #2      -.00202   33.467    4.0485    .00435    .29154    33.214    9.6424

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00259   1.3924    1.6273    3.4859    -.01474   .07542    .27626
 SDev     .00019    .0814     .0153     .0141     .00026   .00160    .00064
 %RSD    7.3750    5.8442    .94068    .40445    1.7477    2.1142    .23136

 #1      -.00246   1.4499    1.6165    3.4760    -.01456   .07655    .27580
 #2      -.00273   1.3348    1.6381    3.4959    -.01492   .07429    .27671

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .62637    1.0591    4.7669    4.9352    -.00627   -.00031
 SDev    .00221     .0047     .0268     .0289     .00257    .00069
 %RSD    .35214    .44379    .56208    .58565    41.008    222.39

 #1      .62481    1.0558    4.7479    4.9147    -.00808   .00018
 #2      .62793    1.0625    4.7858    4.9556    -.00445   -.00080


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 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    44546     --        --        --        --        --        --
 SDev    125.8650  --        --        --        --        --        --
 %RSD    .2825506  --        --        --        --        --        --

 #1      44635     --        --        --        --        --        --
 #2      44457     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-6-a       Operator: DCL
Run Time: 04/05/12 09:53:46
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
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 Avge     153.77    .00282    .24460    1.3233    .01475    .08252    -.00465
 SDev        .26    .00047    .00043     .0019    .00001    .00101     .00010
 %RSD     .16986    16.808    .17421    .14284    .03087    1.2186    2.2419

 #1       153.95    .00316    .24490    1.3246    .01474    .08181    -.00472
 #2       153.58    .00249    .24430    1.3219    .01475    .08323    -.00457

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     803.18    .22033    .17785    .22841    358.90    .16205    .22361
 SDev        .99    .00002    .00036    .00043       .32    .00032    .00025
 %RSD     .12274    .01105    .20417    .18825    .09014    .19517    .11173

 #1       803.88    .22035    .17810    .22871    359.13    .16227    .22378
 #2       802.48    .22031    .17759    .22811    358.67    .16182    .22343

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00565   24.820    8.5837    .01422    .38535    29.564    5.9619
 SDev      .00125     .032     .0099    .00051    .00001      .045     .0113
 %RSD     22.179    .12730    .11575    3.5744    .00349    .15334    .19005

 #1       -.00654   24.842    8.5908    .01458    .38536    29.596    5.9699
 #2       -.00477   24.797    8.5767    .01386    .38534    29.532    5.9539

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00471   2.3530    2.6901    4.3674    -.02631   .02878    .35316
 SDev      .00007    .0108     .0039     .0041     .00568   .00030    .00030
 %RSD     1.5148    .45754    .14385    .09468    21.587    1.0371    .08595

 #1       -.00476   2.3606    2.6928    4.3703    -.02229   .02900    .35337
 #2       -.00466   2.3454    2.6874    4.3644    -.03032   .02857    .35294

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .67945    .94340    .19543    .23769    -.01151   -.00273
 SDev     .00097    .00079    .00341    .00133     .00143    .00260
 %RSD     .14271    .08419    1.7455    .55994    12.421    95.190
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 #1       .68014    .94397    .19784    .23675    -.01050   -.00456
 #2       .67877    .94284    .19302    .23863    -.01252   -.00089

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     49102     --        --        --        --        --        --
 SDev     159.0990  --        --        --        --        --        --
 %RSD     .3240141  --        --        --        --        --        --

 #1       48990     --        --        --        --        --        --
 #2       49215     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-7-a        Operator: DCL
Run Time: 04/05/12 09:57:37
Comment: TRACE 61E
Mode: CONC    Corr. Factor: 1
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 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     153.62    .00448    .17628    1.2593    .01201    .08109    -.00127
 SDev        .21    .00180    .00017     .0021    .00002    .00066     .00005
 %RSD     .13460    40.094    .09703    .16548    .16933    .81801    3.8821

 #1       153.76    .00321    .17640    1.2608    .01202    .08155    -.00123
 #2       153.47    .00576    .17615    1.2579    .01199    .08062    -.00130

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     833.75    .20636    .12254    .22003    257.08    .13211    .25626
 SDev        .67    .00037    .00044    .00036       .46    .00016    .00116
 %RSD     .08092    .18125    .36033    .16485    .17824    .11946    .45315

 #1       834.23    .20662    .12285    .22028    257.41    .13222    .25544
 #2       833.27    .20610    .12223    .21977    256.76    .13199    .25709

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00286   26.990    8.0869    .01099    .32688    34.490    6.9109
 SDev      .00100     .034     .0120    .00036    .00145      .027     .0113
 %RSD     34.951    .12670    .14809    3.3101    .44378    .07857    .16299

 #1       -.00357   27.015    8.0954    .01124    .32791    34.509    6.9189
 #2       -.00215   26.966    8.0785    .01073    .32586    34.471    6.9030

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00351   1.7745    2.0466    4.1464    -.01742   .03227    .28788
 SDev      .00037    .0405     .0036     .0061     .00310   .00468    .00052
 %RSD     10.460    2.2845    .17783    .14745    17.767    14.488    .18163

 #1       -.00325   1.8031    2.0491    4.1507    -.01523   .03558    .28825
 #2       -.00377   1.7458    2.0440    4.1420    -.01961   .02896    .28751

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
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 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .60007    .89159    .22939    .26970    -.01122   .00132
 SDev     .00099    .00175    .00007    .00178     .00485   .00392
 %RSD     .16435    .19629    .03001    .65861    43.232    298.34

 #1       .60077    .89283    .22944    .26844    -.00779   -.00146
 #2       .59937    .89035    .22935    .27096    -.01465   .00409

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     45390     --        --        --        --        --        --
 SDev     99.70206  --        --        --        --        --        --
 %RSD     .2196588  --        --        --        --        --        --

 #1       45460     --        --        --        --        --        --
 #2       45319     --        --        --        --        --        --
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Method: 20076010   Sample Name: 600-52867-a-8-a       Operator: DCL
Run Time: 04/05/12 10:01:28
Comment: TRACE 61E
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Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     181.54    .00332    .16430    1.4661    .01313    .06762    -.00192
 SDev        .25    .00116    .00143     .0029    .00004    .00109     .00011
 %RSD     .13866    34.851    .86799    .19443    .32405    1.6172    5.6372

 #1       181.72    .00414    .16531    1.4682    .01316    .06840    -.00184
 #2       181.36    .00250    .16330    1.4641    .01310    .06685    -.00199

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     770.24    .23069    .11619    .21617    253.11    .14461    .23334
 SDev        .92    .00018    .00000    .00070       .30    .00014    .00066
 %RSD     .11935    .07947    .00247    .32589    .11920    .09665    .28477

 #1       770.89    .23082    .11619    .21667    253.32    .14470    .23381
 #2       769.59    .23056    .11619    .21567    252.90    .14451    .23287

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00333   28.456    8.4308    .00874    .33041    30.965    8.3328
 SDev      .00245     .039     .0129    .00109    .00048      .035     .0144
 %RSD     73.733    .13823    .15256    12.452    .14453    .11196    .17253

 #1       -.00159   28.483    8.4399    .00951    .33074    30.989    8.3430
 #2       -.00506   28.428    8.4217    .00797    .33007    30.940    8.3226

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00349   1.2850    1.7006    3.3359    -.01836   .03224    .31945
 SDev      .00013    .0084     .0013     .0045     .00089   .00118    .00091
 %RSD     3.5992    .65208    .07792    .13449    4.8594    3.6678    .28532


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 #1       -.00358   1.2909    1.6997    3.3391    -.01773   .03140    .32009
 #2       -.00341   1.2791    1.7015    3.3328    -.01899   .03307    .31880

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .66581    .78842    .20765    .24618    -.00906   -.00046
 SDev     .00126    .00104    .00454    .00326     .00148    .00442
 %RSD     .18979    .13181    2.1843    1.3260    16.365    955.43

 #1       .66670    .78916    .20444    .24849    -.01011   .00266
 #2       .66491    .78769    .21085    .24387    -.00801   -.00359

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     45320     --        --        --        --        --        --
 SDev     70.71068  --        --        --        --        --        --
 %RSD     .1560253  --        --        --        --        --        --

 #1       45270     --        --        --        --        --        --
 #2       45370     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-9-a       Operator: DCL
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Run Time: 04/05/12 10:05:18
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082   Sb2068   As1890   Ba4934   Be3130   B_2496   Cd2265
 Units   ppm      ppm      ppm      ppm      ppm      ppm      ppm
 Avge    180.12   .01278   .18152   1.5714   .01279   .05833   .01013
 SDev       .66   .00021   .00206    .0052   .00006   .00043   .00001
 %RSD    .36481   1.6743   1.1349   .32926   .45173   .73387   .06508

 #1      180.58   .01293   .18006   1.5751   .01283   .05802   .01013
 #2      179.65   .01262   .18297   1.5677   .01275   .05863   .01014

 Elem    Ca3179   Cr2677   Co2286   Cu3247   Fe2714   Li6707   Pb2203
 Units   ppm      ppm      ppm      ppm      ppm      ppm      ppm
 Avge    973.22   .23874   .11128   .24649   223.74   .13212   1.1146
 SDev      6.27   .00125   .00103   .00121     1.15   .00022    .0080
 %RSD    .64400   .52411   .93039   .48915   .51408   .16360   .71978

 #1      977.65   .23962   .11201   .24734   224.55   .13227   1.1203
 #2      968.79   .23785   .11055   .24564   222.92   .13197   1.1090

 Elem    Se1960   Mg2790   Mn2576   Mo2020   Ni2316   K_7664   Si2881
 Units   ppm      ppm      ppm      ppm      ppm      ppm      ppm
 Avge    -.00167  30.128   7.6806   .00843   .35202   29.681   8.9719
 SDev     .00316    .180    .0386   .00078   .00253     .062    .0392
 %RSD    189.54   .59736   .50271   9.3069   .71793   .20756   .43660

 #1      -.00390  30.255   7.7079   .00899   .35381   29.724   8.9995
 #2      .00057   30.001   7.6533   .00788   .35023   29.637   8.9442

 Elem    Ag3280   Na3302   Na5889   Sr4215   Tl1908   Sn1899   Ti3349
 Units   ppm      ppm      ppm      ppm      ppm      ppm      ppm
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 Avge    -.00321  1.5840   1.9556   4.2853   -.01567  .03525   .29108
 SDev     .00023   .0406    .0024    .0144    .00322  .00040   .00136
 %RSD    7.2863   2.5642   .12079   .33651   20.534   1.1470   .46675

 #1      -.00305  1.6128   1.9573   4.2955   -.01339  .03496   .29204
 #2      -.00338  1.5553   1.9540   4.2751   -.01794  .03553   .29012

 Elem    V_2924   Zn2138   2203/1   2203/2   1960/1   1960/2
 Units   ppm      ppm      ppm      ppm      ppm      ppm
 Avge    .68448   .81831   1.0688   1.1375   -.00441  -.00030
 SDev    .00286   .00332    .0116    .0063    .00131   .00409
 %RSD    .41835   .40632   1.0819   .54964   29.617   1382.2

 #1      .68651   .82066   1.0770   1.1420   -.00534  -.00319
 #2      .68246   .81596   1.0607   1.1331   -.00349  .00260

 IntStd  1        2        3        4        5        6        7
 Mode    *Counts  NOTUSED  NOTUSED  NOTUSED  NOTUSED  NOTUSED  NOTUSED
 Elem    Y        --       --       --       --       --       --
 Wavlen  371.030  --       --       --       --       --       --
 Avge    44752    --       --       --       --       --       --
 SDev    371.2310 --       --       --       --       --       --
 %RSD    .8295388 --       --       --       --       --       --

 #1      44489    --       --       --       --       --       --
 #2      45014    --       --       --       --       --       --
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Method: 20076010   Sample Name: 600-52867-a-10-a       Operator: DCL
Run Time: 04/05/12 10:09:09
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    176.16    .00714    .15979    1.5229    .01253    .05583    .00198
 SDev       .19    .00093    .00145     .0014    .00002    .00001    .00003
 %RSD    .10579    13.053    .90528    .09390    .15091    .01639    1.5242

 #1      176.29    .00780    .15876    1.5239    .01254    .05582    .00201
 #2      176.02    .00648    .16081    1.5219    .01252    .05583    .00196

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    928.25    .23173    .11370    .23212    223.82    .12926    .39026
 SDev       .82    .00031    .00022    .00044       .32    .00017    .00023
 %RSD    .08835    .13220    .19115    .19136    .14429    .12811    .06013

 #1      928.83    .23195    .11385    .23243    224.04    .12937    .39009
 #2      927.67    .23152    .11354    .23180    223.59    .12914    .39042

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00511   29.118    7.9677    .00844    .33726    24.871    8.8696
 SDev     .00297     .003      .0055    .00084    .00034      .016      .0077
 %RSD    58.077    .01058    .06957    9.9760    .10236    .06478    .08683

 #1      -.00720   29.120    7.9716    .00904    .33750    24.882    8.8750
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 #2      -.00301   29.116    7.9638    .00785    .33701    24.859    8.8641

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00269   1.3437    1.6660    4.0950    -.01589   .03296    .31845
 SDev     .00050    .0257     .0008     .0032     .00121   .00262    .00068
 %RSD    18.713    1.9098    .04591    .07745    7.6379    7.9382    .21475

 #1      -.00234   1.3619    1.6665    4.0973    -.01504   .03481    .31893
 #2      -.00305   1.3256    1.6655    4.0928    -.01675   .03111    .31797

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .69003    .74775    .36039    .40519    -.00908   -.00312
 SDev    .00055    .00034    .00036    .00017     .00739    .00075
 %RSD    .07965    .04498    .09888    .04290    81.461    24.067

 #1      .69041    .74751    .36013    .40507    -.01430   -.00365
 #2      .68964    .74799    .36064    .40531    -.00385   -.00259

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    44872     --        --        --        --        --        --
 SDev    3.535534  --        --        --        --        --        --
 %RSD    .0078792  --        --        --        --        --        --
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 #1      44869     --        --        --        --        --        --
 #2      44874     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-10-b du    Operator: DCL
Run Time: 04/05/12 10:13:01
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    172.08    .00893    .16631    1.5305    .01240    .05887    .01503
 SDev       .42    .00059    .00120     .0018    .00002    .00010    .00025
 %RSD    .24680    6.6008    .71940    .11828    .13118    .17572    1.6511

 #1      172.38    .00852    .16715    1.5318    .01241    .05880    .01521
 #2      171.78    .00935    .16546    1.5292    .01239    .05895    .01486

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    957.57    .22795    .11498    .24673    224.05    .12826    1.0520
 SDev      1.20    .00021    .00009    .00027       .24    .00034     .0011
 %RSD    .12583    .09431    .07776    .10939    .10602    .26499    .10034

 #1      958.42    .22810    .11504    .24693    223.88    .12850    1.0528
 #2      956.72    .22779    .11492    .24654    224.22    .12802    1.0513

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00361   29.251    8.0647    .00788    .34216    26.407    7.9528
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 SDev     .00162     .027     .0046    .00009    .00159      .109     .0105
 %RSD    44.816    .09373    .05708    1.0807    .46347    .41090    .13167

 #1      -.00246   29.271    8.0680    .00782    .34328    26.484    7.9602
 #2      -.00475   29.232    8.0615    .00794    .34103    26.330    7.9454

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00286   1.4009    1.6927    4.2511    -.01551   .04125    .29336
 SDev     .00025    .0315     .0081     .0011     .00138   .00011    .00022
 %RSD    8.8830    2.2498    .47993    .02498    8.8979    .26140    .07482

 #1      -.00268   1.3786    1.6985    4.2519    -.01648   .04132    .29351
 #2      -.00303   1.4232    1.6870    4.2504    -.01453   .04117    .29320

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .67046    .81491    1.0048    1.0756    -.00538   -.00272
 SDev    .00028    .00061     .0018     .0007     .00016    .00250
 %RSD    .04188    .07503    .17422    .06584    2.9573    92.149

 #1      .67066    .81534    1.0061    1.0761    -.00550   -.00095
 #2      .67026    .81448    1.0036    1.0751    -.00527   -.00449


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    44536     --        --        --        --        --        --
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 SDev     152.7351  --        --        --        --        --        --
 %RSD     .3429474  --        --        --        --        --        --

 #1       44428     --        --        --        --        --        --
 #2       44644     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-10-c ms    Operator: DCL
Run Time: 04/05/12 10:16:52
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     222.12    .33247    1.0367    2.3811    .43148    .67739    .43237
 SDev        .56    .00102     .0042     .0058    .00063    .00136    .00125
 %RSD     .25249    .30577    .40507    .24380    .14493    .20119    .28876

 #1       222.52    .33319    1.0337    2.3852    .43192    .67835    .43326
 #2       221.73    .33175    1.0397    2.3770    .43104    .67643    .43149

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     982.28    1.0880    .92207    1.1567    245.93    .66481    2.6520
 SDev       1.08     .0019    .00239     .0030       .39    .00188     .0070
 %RSD     .10998    .17370    .25935    .26315    .15845    .28354    .26444

 #1       983.04    1.0894    .92376    1.1589    246.20    .66615    2.6570

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 #2       981.51    1.0867    .92038    1.1546    245.65    .66348    2.6471

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .81109    42.428    8.9553    .76357    1.1789    42.136    8.1642
 SDev     .00019      .083     .0157    .00140     .0027      .125     .0191
 %RSD     .02308    .19667    .17558    .18292    .22666    .29695    .23449

 #1       .81095    42.487    8.9664    .76258    1.1808    42.225    8.1777
 #2       .81122    42.369    8.9441    .76456    1.1770    42.048    8.1507

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .46579    12.220    13.414    4.9718    .84921    .83291    .64707
 SDev     .00123      .016      .051     .0110    .00229    .00322    .00136
 %RSD     .26319    .13132    .37666    .22041    .26994    .38698    .21095

 #1       .46666    12.231    13.450    4.9796    .84759    .83519    .64804
 #2       .46492    12.208    13.379    4.9641    .85083    .83063    .64610

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     1.5593    1.7767    2.5521    2.7020    .77486    .82920
 SDev      .0030     .0032     .0076     .0067    .00186    .00065
 %RSD     .19313    .18094    .29761    .24877    .24010    .07832

 #1       1.5614    1.7789    2.5575    2.7068    .77355    .82966
 #2       1.5571    1.7744    2.5467    2.6973    .77618    .82874


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
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 Elem     Y          --         --         --         --         --         --
 Wavlen   371.030    --         --         --         --         --         --
 Avge     43888      --         --         --         --         --         --
 SDev     41.71930   --         --         --         --         --         --
 %RSD     .0950596   --         --         --         --         --         --

 #1       43858      --         --         --         --         --         --
 #2       43917      --         --         --         --         --         --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 10:20:44
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082     Sb2068     As1890     Ba4934     Be3130     B_2496     Cd2265
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     2.4680     .50321     .50463     .50436     .49482     .50215     .51247
 SDev      .0076     .00511     .00598     .00238     .00259     .00181     .00157
 %RSD     .30600     1.0159     1.1861     .47107     .52398     .36038     .30609

 #1       2.4733     .50683     .50886     .50604     .49665     .50343     .51357
 #2       2.4627     .49960     .50040     .50268     .49298     .50087     .51136

 Elem     Ca3179     Cr2677     Co2286     Cu3247     Fe2714     Li6707     Pb2203
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm

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 Avge     12.605     .49180     .49003     .49413     2.5838     .46852     .49868
 SDev       .048     .00289     .00162     .00091      .0184     .00183     .00161
 %RSD     .38252     .58827     .33068     .18337     .71312     .39084     .32249

 #1       12.640     .49385     .49118     .49477     2.5708     .46981     .49982
 #2       12.571     .48976     .48889     .49349     2.5969     .46722     .49754

 Elem     Se1960     Mg2790     Mn2576     Mo2020     Ni2316     K_7664     Si2881
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .49837     4.9528     .48756     .50591     .51834     12.434     .95359
 SDev     .00093      .0222     .00234     .00080     .00004       .017     .00736
 %RSD     .18556     .44775     .48019     .15753     .00745     .13591     .77173

 #1       .49772     4.9685     .48921     .50647     .51831     12.446     .95880
 #2       .49903     4.9371     .48590     .50535     .51836     12.422     .94839

 Elem     Ag3280     Na3302     Na5889     Sr4215     Tl1908     Sn1899     Ti3349
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .24999     12.973     12.176     .25157     .52780     .49716     .50502
 SDev     .00026       .167       .028     .00102     .00101     .00403     .00239
 %RSD     .10262     1.2856     .22822     .40544     .19183     .81035     .47371

 #1       .25018     12.855     12.195     .25229     .52852     .50001     .50671
 #2       .24981     13.091     12.156     .25085     .52709     .49431     .50333

 Elem     V_2924     Zn2138     2203/1     2203/2     1960/1     1960/2
 Units    ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .49927     .51396     .48139     .50732     .47785     .50869
 SDev     .00253     .00205     .00090     .00196     .00041     .00118
 %RSD     .50604     .39963     .18716     .38670     .08585     .23230

 #1       .50105     .51541     .48203     .50871     .47756     .50786
 #2       .49748     .51251     .48075     .50593     .47814     .50953
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 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40821     --        --        --        --        --        --
 SDev    31.11270  --        --        --        --        --        --
 %RSD    .0762174  --        --        --        --        --        --

 #1      40799     --        --        --        --        --        --
 #2      40843     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCB                    Operator: DCL
Run Time: 04/05/12 10:24:35
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .02641    .00045    .00103    -.00010   -.00038   .00086    -.00014
 SDev    .00058    .00222    .00048     .00002    .00002   .00053     .00002
 %RSD    2.2015    492.35    46.697    21.879    5.0491    62.044    12.827


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 #1      .02682    .00202    .00069    -.00008   -.00037   .00123    -.00016
 #2      .02600    -.00112   .00137    -.00011   -.00040   .00048    -.00013

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.02297   .00017    -.00057   -.00213   -.01807   .00009    .00017
 SDev     .00062   .00039     .00026    .00034    .00078   .00009    .00059
 %RSD    2.7090    228.92    44.929    16.077    4.3141    93.132    350.35

 #1      -.02342   .00045    -.00075   -.00189   -.01752   .00015    .00058
 #2      -.02253   -.00011   -.00039   -.00237   -.01863   .00003    -.00025

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00259    -.00410   .00004    .00149    -.00065   -.02847   -.00455
 SDev    .00183     .00375   .00004    .00188     .00027    .03649    .00248
 %RSD    70.538    91.388    98.145    126.45    41.375    128.16    54.574

 #1      .00130    -.00145   .00006    .00282    -.00084   -.00267   -.00279
 #2      .00388    -.00675   .00001    .00016    -.00046   -.05428   -.00630

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00058   -.07631   -.01416   -.00006   .00105    -.00004   .00006
 SDev     .00000    .15125    .00226    .00003   .00141     .00023   .00007
 %RSD    .54180    198.20    15.934    43.417    133.96    651.65    119.77

 #1      -.00058   -.18326   -.01256   -.00004   .00205    -.00020   .00010
 #2      -.00057   .03064    -.01575   -.00008   .00006    .00013    .00001

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00006    -.00199   -.00307   .00179    .00077    .00350
 SDev    .00043     .00004    .00396   .00286    .00296    .00126
 %RSD    762.55    2.1002    129.21    160.33    386.30    36.061
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 #1      .00036    -.00196   -.00587   .00381    -.00132   .00261
 #2      -.00025   -.00202   -.00026   -.00024   .00285    .00440


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41109     --        --        --        --        --        --
 SDev    144.2498  --        --        --        --        --        --
 %RSD    .3508959  --        --        --        --        --        --

 #1      41007     --        --        --        --        --        --
 #2      41211     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-10-d msd   Operator: DCL
Run Time: 04/05/12 10:28:26
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265

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 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    240.25    .29557    1.0384    2.4661    .43044    .64760    .41751
 SDev       .53    .00142     .0030     .0051    .00003    .00032    .00049
 %RSD    .22121    .48064    .28907    .20529    .00679    .04883    .11754

 #1      240.62    .29457    1.0363    2.4697    .43042    .64783    .41786
 #2      239.87    .29658    1.0405    2.4626    .43046    .64738    .41716

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    972.14    1.1047    .92036    1.1624    263.14    .67895    2.4609
 SDev       .64     .0001    .00107     .0024       .12    .00186     .0038
 %RSD    .06570    .00700    .11609    .20506    .04705    .27413    .15510

 #1      972.60    1.1047    .92111    1.1641    263.23    .68027    2.4582
 #2      971.69    1.1046    .91960    1.1607    263.05    .67763    2.4636

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .80172    44.169    9.0864    .73720    1.1896    42.828    10.545
 SDev    .00303      .015     .0080    .00209     .0018      .137      .005
 %RSD    .37836    .03455    .08768    .28371    .15280    .31964    .04542

 #1      .79957    44.158    9.0920    .73572    1.1909    42.925    10.549
 #2      .80386    44.179    9.0808    .73868    1.1883    42.731    10.542

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .46461    12.314    13.521    4.9981    .85236    .81325    .62914
 SDev    .00103      .005      .041     .0085    .00034    .00108    .00083
 %RSD    .22188    .04421    .30221    .16969    .04034    .13301    .13146

 #1      .46534    12.310    13.550    5.0041    .85212    .81402    .62972
 #2      .46388    12.318    13.492    4.9921    .85261    .81249    .62855

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.6116    1.7839    2.3600    2.5113    .76078    .82218
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 SDev     .0009     .0007     .0014     .0050     .00693    .00802
 %RSD    .05354    .03648    .06116    .19923    .91138    .97507

 #1      1.6122    1.7843    2.3589    2.5078    .76568    .81651
 #2      1.6110    1.7834    2.3610    2.5149    .75588    .82785


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    44374     --        --        --        --        --        --
 SDev    180.3122  --        --        --        --        --        --
 %RSD    .4063511  --        --        --        --        --        --

 #1      44246     --        --        --        --        --        --
 #2      44501     --        --        --        --        --        --


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Method: 20076010   Sample Name: mb 600-76449/28-a      Operator: DCL
Run Time: 04/05/12 10:32:17
Comment: TRACE 61E
Mode: CONC    Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .02859    .00378    .00074    .00029    -.00046   -.00138   .00003
 SDev    .00652    .00048    .00037    .00001     .00000    .00018   .00011
 %RSD    22.788    12.796    50.705    3.4653    .96741    13.276    419.37

 #1      .03320    .00412    .00100    .00028    -.00046   -.00125   .00010
 #2      .02399    .00344    .00047    .00029    -.00045   -.00151   -.00005

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .34176    .00015    -.00044   -.00221   .02153    .00034    .00084
 SDev    .03191    .00027     .00019    .00032   .02599    .00012    .00061
 %RSD    9.3356    183.12    43.791    14.571    120.69    34.038    73.530

 #1      .36432    -.00004   -.00030   -.00244   .03991    .00042    .00127
 #2      .31920    .00034    -.00057   -.00198   .00316    .00026    .00040

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00088    .01508    .00039    .00166    -.00039   .04546    .00417
 SDev    .00208    .00839    .00017    .00158     .00068   .05631    .00553
 %RSD    236.97    55.618    44.301    95.497    174.38    123.87    132.84

 #1      .00235    .02101    .00051    .00277    .00009    .08528    .00808
 #2      -.00059   .00915    .00027    .00054    -.00087   .00564    .00025

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00014    .17031    .06628    .00002    -.00170   .00085    .00021
 SDev    .00053    .15464    .00530    .00008     .00381   .00102    .00011
 %RSD    374.34    90.802    7.9938    539.79    224.39    119.80    52.701

 #1      .00052    .27965    .07003    .00007    .00100    .00157    .00029
 #2      -.00023   .06096    .06254    -.00004   -.00439   .00013    .00013

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
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 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00011   .01799    .00081    .00085    -.00467   .00365
 SDev      .00017   .00050    .00107    .00146     .00050   .00287
 %RSD     148.26    2.7567    132.30    171.63    10.660    78.723

 #1       -.00023   .01834    .00005    .00188    -.00431   .00568
 #2       .00001    .01764    .00157    -.00018   -.00502   .00162


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40520     --        --        --        --        --        --
 SDev     580.5347  --        --        --        --        --        --
 %RSD     1.432694  --        --        --        --        --        --

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 #1       40110     --        --        --        --        --        --
 #2       40931     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52989-b-1-a        Operator: DCL
Run Time: 04/05/12 10:36:08
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .09291    .00057    .00685    .01620    -.00049   -.00061   -.00064
 SDev     .00055    .00297    .00094    .00005     .00000    .00097    .00008
 %RSD     .59613    516.58    13.702    .30431    .18793    158.39    12.191

 #1       .09252    -.00152   .00752    .01616    -.00049   -.00130   -.00069
 #2       .09331    .00267    .00619    .01623    -.00049   .00007    -.00058

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     1.1479    2.2178    .00566    6.4954    24.327    .00131    .17292
 SDev      .0036     .0015    .00035     .0083      .027    .00002    .00047
 %RSD     .31656    .06749    6.1918    .12711    .10950    1.5835    .26972

 #1       1.1454    2.2167    .00541    6.5013    24.309    .00132    .17259
 #2       1.1505    2.2188    .00590    6.4896    24.346    .00129    .17325

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00584    .08507    11.782    .16911    .91285    .43366    .12520
 SDev     .00085    .00005      .004    .00073    .00035    .00707    .00002
 %RSD     14.528    .06278    .03775    .43001    .03786    1.6311    .01568

 #1       .00524    .08503    11.779    .16962    .91261    .43866    .12519
 #2       .00644    .08510    11.785    .16859    .91309    .42866    .12522

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00026    37.519    33.365    .00788    -.01155   .01092    .11856
 SDev     .00009      .014      .082    .00005     .00010   .00119    .00020
 %RSD     33.390    .03787    .24450    .65299    .83897    10.863    .17290

 #1       .00020    37.529    33.422    .00784    -.01148   .01175    .11841
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 #2      .00033    37.509    33.307    .00792    -.01162   .01008    .11870

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00986    .03770    .16491    .17693    .00280    .00736
 SDev    .00016    .00006    .00021    .00080    .00269    .00007
 %RSD    1.6623    .16028    .12532    .45383    96.044    .98844

 #1      .00975    .03774    .16505    .17637    .00090    .00741
 #2      .00998    .03765    .16476    .17750    .00470    .00731


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED

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 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41048     --        --        --        --        --        --
 SDev    32.52691  --        --        --        --        --        --
 %RSD    .0792412  --        --        --        --        --        --

 #1      41025     --        --        --        --        --        --
 #2      41071     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53045-a-1-a        Operator: DCL
Run Time: 04/05/12 10:39:59
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    149.24    .00513    .31549    5.5010    .00996    .03424    .00921
 SDev       .15    .00160    .00099     .0015    .00002    .00011    .00013
 %RSD    .09884    31.211    .31336    .02772    .20541    .31381    1.4243

 #1      149.13    .00626    .31619    5.5021    .00997    .03432    .00930
 #2      149.34    .00400    .31479    5.5000    .00995    .03417    .00911

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    60.092    .28424    .08492    1.9645    201.54    .13053    1.7845
 SDev      .038    .00044    .00003     .0006       .14    .00013     .0027
 %RSD    .06402    .15610    .03978    .02989    .07011    .09877    .14971

 #1      60.119    .28456    .08495    1.9641    201.64    .13044    1.7864
 #2      60.065    .28393    .08490    1.9649    201.44    .13062    1.7826

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00631    18.514    1.4182    .01730    .15972    9.4530    7.0947
 SDev    .00148      .001     .0013    .00003    .00040     .0168     .0076
 %RSD    23.539    .00441    .09511    .16613    .25383    .17751    .10766

 #1      .00526    18.514    1.4191    .01728    .15943    9.4412    7.0893
 #2      .00735    18.515    1.4172    .01732    .16000    9.4649    7.1001

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .02635    10.837    10.352    .51895    -.01052   .15986    .23210
 SDev    .00021      .073      .035    .00028     .00107   .00147    .00028
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 %RSD    .78048    .67007    .33517    .05355    10.151    .91874    .12142

 #1      .02649    10.889    10.328    .51915    -.00977   .16090    .23229
 #2      .02620    10.786    10.377    .51876    -.01128   .15883    .23190

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .26233    3.0335    1.7009    1.8264    .00143    .00874
 SDev    .00014     .0010     .0048     .0016    .00041    .00243
 %RSD    .05264    .03188    .28022    .08895    28.663    27.798

 #1      .26243    3.0341    1.7042    1.8275    .00172    .00703

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 #2      .26224    3.0328    1.6975    1.8252    .00114    .01046

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    45604     --        --        --        --        --        --
 SDev    116.6726  --        --        --        --        --        --
 %RSD    .2558358  --        --        --        --        --        --

 #1      45522     --        --        --        --        --        --
 #2      45687     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53045-a-1-b du     Operator: DCL
Run Time: 04/05/12 10:43:49
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    171.37    .00507    .37174    6.6749    .01031    .03687    .01072
 SDev       .31    .00045    .00114     .0145    .00000    .00007    .00006
 %RSD    .17942    8.9547    .30768    .21756    .04154    .18637    .60294

 #1      171.58    .00475    .37255    6.6851    .01031    .03682    .01077
 #2      171.15    .00539    .37093    6.6646    .01031    .03692    .01068

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    68.227    .33374    .08157    2.3475    225.67    .15675    2.1075
 SDev      .006    .00027    .00025     .0081       .04    .00033     .0119
 %RSD    .00901    .08090    .30552    .34438    .01621    .21146    .56236

 #1      68.231    .33393    .08174    2.3532    225.70    .15699    2.0991
 #2      68.222    .33355    .08139    2.3417    225.64    .15652    2.1158

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00450    19.324    1.4479    .01959    .18475    10.042    7.2078
 SDev    .00336      .008     .0010    .00023    .00029      .017     .0103
 %RSD    74.668    .04122    .06938    1.1909    .15539    .17100    .14342

 #1      .00688    19.318    1.4486    .01975    .18495    10.054    7.2151
 #2      .00213    19.329    1.4472    .01942    .18455    10.030    7.2005

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
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 Avge     .03336    11.103    10.623    .56938    -.01051   .18839    .23091
 SDev     .00010      .035      .036    .00115     .00441   .00077    .00015
 %RSD     .28659    .31713    .33627    .20164    42.014    .40995    .06681

 #1       .03342    11.128    10.648    .57020    -.00739   .18893    .23102
 #2       .03329    11.078    10.597    .56857    -.01363   .18784    .23080

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .27678    3.4898    2.0013    2.1606    -.00443   .00897

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 SDev     .00017     .0001     .0050     .0153     .00169   .00420
 %RSD     .06077    .00421    .25044    .70683    38.227    46.796

 #1       .27666    3.4899    1.9977    2.1498    -.00323   .01194
 #2       .27690    3.4897    2.0048    2.1713    -.00563   .00600

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     45480     --        --        --        --        --        --
 SDev     142.1285  --        --        --        --        --        --
 %RSD     .3125111  --        --        --        --        --        --

 #1       45580     --        --        --        --        --        --
 #2       45379     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53045-a-1-c ms     Operator: DCL
Run Time: 04/05/12 10:47:40
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     194.17    .28332    1.1935    6.4526    .45174    .67230    .45526
 SDev        .91    .00265     .0004     .0336    .00010    .00107    .00014
 %RSD     .46750    .93441    .03750    .52072    .02217    .15888    .02997

 #1       194.82    .28145    1.1939    6.4764    .45167    .67306    .45536
 #2       193.53    .28519    1.1932    6.4288    .45181    .67155    .45517

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     71.470    1.1959    .96315    2.9071    224.21    .63206    2.6120
 SDev       .034     .0011    .00028     .0180       .13    .00410     .0035
 %RSD     .04795    .08978    .02884    .61994    .05948    .64832    .13560

 #1       71.446    1.1966    .96334    2.9198    224.31    .63496    2.6095
 #2       71.494    1.1951    .96295    2.8943    224.12    .62916    2.6145

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .80854    30.215    2.4929    .86112    1.1138    21.383    7.0683
 SDev     .00083      .017     .0020    .00107     .0011      .135     .0268
 %RSD     .10315    .05521    .08196    .12391    .10156    .63349    .37883

 #1       .80795    30.204    2.4944    .86037    1.1146    21.479    7.0873
 #2       .80913    30.227    2.4915    .86188    1.1130    21.287    7.0494
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 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .48752    21.296    20.708    1.0174    .92577    .93454    .56829
 SDev     .00109      .076      .157     .0048    .00367    .00105    .00132
 %RSD     .22283    .35757    .76005    .47431    .39609    .11256    .23272

 #1       .48828    21.350    20.819    1.0208    .92318    .93528    .56923
 #2       .48675    21.242    20.597    1.0140    .92837    .93379    .56736

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 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     1.1971    3.7097    2.4820    2.6771    .75404    .83579
 SDev      .0024     .0051     .0043     .0075    .00366    .00308
 %RSD     .20211    .13845    .17515    .27965    .48580    .36882

 #1       1.1988    3.7133    2.4851    2.6718    .75663    .83362
 #2       1.1954    3.7061    2.4789    2.6823    .75145    .83797

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     44906     --        --        --        --        --        --
 SDev     41.01219  --        --        --        --        --        --
 %RSD     .0913290  --        --        --        --        --        --

 #1       44935     --        --        --        --        --        --
 #2       44877     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53045-a-1-d msd    Operator: DCL
Run Time: 04/05/12 10:51:31
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     210.99    .27775    1.2321    7.7035    .44656    .64545    .45288
 SDev        .08    .00127     .0012     .0028    .00015    .00060    .00126
 %RSD     .03960    .45716    .09481    .03667    .03400    .09336    .27892

 #1       211.05    .27685    1.2329    7.7055    .44645    .64503    .45199
 #2       210.93    .27864    1.2313    7.7015    .44667    .64588    .45378

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     74.972    1.2223    .95078    3.2940    252.46    .64716    2.9506
 SDev       .076     .0002    .00043     .0049       .17    .00093     .0090
 %RSD     .10190    .01634    .04535    .14767    .06809    .14290    .30439

 #1       74.918    1.2224    .95047    3.2975    252.34    .64781    2.9442
 #2       75.026    1.2222    .95108    3.2906    252.58    .64650    2.9569

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .79440    30.123    2.4724    .85549    1.1381    21.463    6.5642
 SDev     .00203      .027     .0014    .00062     .0015      .026     .0014
 %RSD     .25605    .09096    .05706    .07217    .13162    .12059    .02198

 #1       .79296    30.104    2.4714    .85505    1.1391    21.481    6.5652
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 #2       .79584    30.142    2.4734    .85592    1.1370    21.444    6.5632

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .48765    21.537    20.769    1.0566    .91798    .96583    .51871
 SDev     .00036      .015      .033     .0002    .00138    .00079    .00002

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 %RSD     .07390    .06851    .15966    .01782    .15073    .08190    .00462

 #1       .48790    21.526    20.792    1.0567    .91896    .96527    .51870
 #2       .48739    21.547    20.745    1.0564    .91701    .96639    .51873

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     1.1782    4.3391    2.8071    3.0223    .74790    .81765
 SDev      .0001     .0027     .0177     .0046    .00434    .00088
 %RSD     .00997    .06119    .63176    .15235    .58091    .10747

 #1       1.1781    4.3372    2.7946    3.0191    .74482    .81703
 #2       1.1783    4.3410    2.8197    3.0256    .75097    .81828

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     44991     --        --        --        --        --        --
 SDev     70.71068  --        --        --        --        --        --
 %RSD     .1571663  --        --        --        --        --        --

 #1       45041     --        --        --        --        --        --
 #2       44941     --        --        --        --        --        --
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Method: 20076010   Sample Name: 600-53048-b-1-a        Operator: DCL
Run Time: 04/05/12 10:55:22
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     13.523    .00645    .01374    1.4061    -.00021   .00788    .11349
 SDev       .014    .00236    .00424     .0007     .00001   .00109    .00001
 %RSD     .10606    36.617    30.841    .04813    3.0583    13.780    .01256

 #1       13.533    .00812    .01674    1.4066    -.00021   .00865    .11348
 #2       13.512    .00478    .01074    1.4056    -.00022   .00711    .11350

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     7.4422    .45771    .03212    .10694    43.163    .00383    6.6654
 SDev      .0144    .00117    .00025    .00011      .077    .00003     .0239
 %RSD     .19368    .25471    .78772    .10484    .17937    .77812    .35892

 #1       7.4524    .45853    .03194    .10702    43.218    .00385    6.6824
 #2       7.4320    .45689    .03230    .10686    43.109    .00381    6.6485

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00103    1.5786    .32704    .02381    .05578    .54221    1.4722
 SDev     .00096     .0064    .00080    .00107    .00009    .01478     .0062
 %RSD     93.313    .40764    .24518    4.5099    .15320    2.7265    .42424
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 #1      .00035    1.5831    .32761    .02457    .05572    .55266    1.4766
 #2      .00171    1.5740    .32648    .02305    .05584    .53175    1.4678


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 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00032   .92044    .27763    .04891    -.00031   .03400    .23842
 SDev     .00033   .05379    .00104    .00001     .00322   .00037    .00043
 %RSD    104.60    5.8443    .37439    .02188    1047.9    1.0840    .17903

 #1      -.00055   .88240    .27836    .04892    .00197    .03374    .23873
 #2      -.00008   .95848    .27689    .04890    -.00258   .03426    .23812

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .01837    12.384    6.3437    6.8263    -.00637   .00473
 SDev    .00037      .024     .0063     .0327     .00868   .00290
 %RSD    2.0116    .19050    .09921    .47959    136.23    61.339

 #1      .01863    12.400    6.3482    6.8495    -.01251   .00678
 #2      .01811    12.367    6.3393    6.8032    -.00023   .00268

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40710     --        --        --        --        --        --
 SDev    2.828427  --        --        --        --        --        --
 %RSD    .0069477  --        --        --        --        --        --

 #1      40708     --        --        --        --        --        --
 #2      40712     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: PDS 600-52867-a-10-a   Operator: DCL
Run Time: 04/05/12 10:59:13
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    181.01    .87113    1.0122    2.3880    .40678    .92567    .39503
 SDev       .51    .00270     .0026     .0052    .00002    .00207    .00004
 %RSD    .28186    .31051    .25295    .21738    .00521    .22367    .01106

 #1      181.37    .87304    1.0140    2.3917    .40676    .92714    .39500
 #2      180.65    .86921    1.0103    2.3844    .40679    .92421    .39506

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    927.63    1.0123    .87598    1.0806    231.13    1.1363    1.1785
 SDev      1.36     .0009    .00006     .0039       .04     .0050     .0013
 %RSD    .14663    .08690    .00662    .35824    .01736    .44289    .10645

 #1      926.67    1.0129    .87594    1.0833    231.10    1.1399    1.1776
 #2      928.59    1.0117    .87602    1.0778    231.16    1.1328    1.1794

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .79545    36.401    8.6098    .84029    1.1455    35.808    9.6073
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 SDev     .00177      .016     .0021    .00262     .0021      .132     .0175
 %RSD     .22237    .04522    .02436    .31133    .18749    .36856    .18172

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 #1       .79671    36.389    8.6113    .83844    1.1470    35.901    9.6197
 #2       .79420    36.413    8.6083    .84214    1.1440    35.715    9.5950

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .44257    10.956    12.692    4.6141    .84182    .82970    1.1403
 SDev     .00122      .037      .059     .0098    .00003    .00038     .0015
 %RSD     .27466    .33901    .46615    .21320    .00358    .04616    .13518

 #1       .44343    10.983    12.734    4.6210    .84179    .82997    1.1414
 #2       .44171    10.930    12.650    4.6071    .84184    .82943    1.1392

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     1.4853    1.5878    1.1101    1.2127    .74999    .81819
 SDev      .0006     .0014     .0010     .0014    .00169    .00181
 %RSD     .04326    .08665    .09256    .11280    .22500    .22116

 #1       1.4857    1.5888    1.1094    1.2117    .75119    .81947
 #2       1.4848    1.5868    1.1109    1.2137    .74880    .81691

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     43973     --        --        --        --        --        --
 SDev     91.92388  --        --        --        --        --        --
 %RSD     .2090462  --        --        --        --        --        --

 #1       44038     --        --        --        --        --        --
 #2       43908     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: SD 600-52867-a-10a@5   Operator: DCL
Run Time: 04/05/12 11:03:04
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     40.076    .00560    .03948    .35600    .00251    .01343    .00016
 SDev       .033    .00138    .00083    .00054    .00002    .00050    .00003
 %RSD     .08286    24.586    2.1078    .15044    .81809    3.6984    15.690

 #1       40.099    .00463    .04007    .35638    .00253    .01379    .00018
 #2       40.052    .00657    .03889    .35562    .00250    .01308    .00014

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     275.31    .05554    .02660    .05002    52.916    .02711    .09407
 SDev        .74    .00019    .00041    .00006      .101    .00005    .00059
 %RSD     .26721    .33878    1.5321    .12426    .19024    .19504    .62333

 #1       275.83    .05568    .02631    .04997    52.988    .02715    .09449
 #2       274.79    .05541    .02688    .05006    52.845    .02707    .09366

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
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 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00055    6.9967    1.9368    .00331    .08359    4.8129    2.0463
 SDev     .00079     .0187     .0047    .00159    .00033     .0160     .0034
 %RSD     142.72    .26761    .24019    48.022    .39681    .33197    .16620

 #1       .00111    7.0099    1.9401    .00443    .08383    4.8242    2.0487
 #2       -.00001   6.9834    1.9336    .00218    .08336    4.8016    2.0439

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00073   .21244    .31815    .90381    .00331    .00866    .07286
 SDev      .00018   .05641    .00131    .00130    .00174    .00113    .00009
 %RSD     24.760    26.554    .41085    .14346    52.532    13.049    .11814

 #1       -.00085   .17255    .31908    .90472    .00454    .00786    .07292
 #2       -.00060   .25233    .31723    .90289    .00208    .00946    .07280

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .16180    .17675    .08215    .10003    -.00339   .00252
 SDev     .00030    .00047    .00142    .00017     .00058   .00089
 %RSD     .18436    .26623    1.7278    .16984    17.172    35.267

 #1       .16201    .17708    .08316    .10015    -.00298   .00315
 #2       .16159    .17641    .08115    .09991    -.00380   .00189


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40968     --        --        --        --        --        --
 SDev     116.6726  --        --        --        --        --        --
 %RSD     .2847862  --        --        --        --        --        --

 #1       40886     --        --        --        --        --        --
 #2       41051     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 11:06:55
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     2.4688    .50455    .50571    .51170    .48994    .50688    .51884
 SDev      .0013    .00058    .00246    .00045    .00176    .00028    .00147
 %RSD     .05413    .11551    .48600    .08760    .35820    .05557    .28368

 #1       2.4697    .50496    .50745    .51202    .49118    .50708    .51988
 #2       2.4678    .50414    .50398    .51139    .48870    .50668    .51780

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     12.604    .49005    .48598    .49136    2.5880    .47574    .49788
 SDev       .036    .00135    .00098    .00041     .0001    .00081    .00312
 %RSD     .28706    .27563    .20097    .08255    .00534    .17115    .62629

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 #1      12.629    .49100    .48667    .49164    2.5879    .47632    .50008
 #2      12.578    .48909    .48529    .49107    2.5881    .47517    .49567

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .49370    4.9349    .48745    .50639    .52766    12.667    .94825
 SDev    .00099     .0172    .00136    .00056    .00125      .033    .00227
 %RSD    .20124    .34780    .27963    .11068    .23699    .25894    .23898

 #1      .49441    4.9471    .48842    .50599    .52854    12.690    .94985
 #2      .49300    4.9228    .48649    .50679    .52677    12.643    .94665

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .25080    12.906    12.361    .25617    .53038    .49665    .50744
 SDev    .00008      .076      .016    .00032    .00546    .00046    .00128
 %RSD    .03233    .58953    .12572    .12659    1.0296    .09267    .25218

 #1      .25086    12.852    12.372    .25640    .52652    .49697    .50834
 #2      .25075    12.960    12.350    .25594    .53424    .49632    .50653

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .49781    .51849    .47244    .51059    .46611    .50756
 SDev    .00141    .00125    .00056    .00496    .00186    .00056
 %RSD    .28328    .24069    .11878    .97097    .39871    .11058

 #1      .49881    .51937    .47204    .51410    .46742    .50795
 #2      .49681    .51761    .47284    .50709    .46480    .50716


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40357     --        --        --        --        --        --
 SDev    96.16652  --        --        --        --        --        --
 %RSD    .2382896  --        --        --        --        --        --

 #1      40289     --        --        --        --        --        --
 #2      40425     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCB                    Operator: DCL
Run Time: 04/05/12 11:10:46
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .04108    .00065    .00263    -.00009   -.00056   .00170    -.00006
 SDev    .00174    .00191    .00040     .00014    .00003   .00091     .00001
 %RSD    4.2449    293.30    15.103    160.13    6.0748    53.484    14.174

 #1      .04231    .00200    .00291    .00001    -.00053   .00235    -.00006
 #2      .03984    -.00070   .00235    -.00018   -.00058   .00106    -.00007


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 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
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 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.03609   .00052    -.00048   -.00259   -.01283   .00012    .00040
 SDev      .00107   .00061     .00012    .00041    .01036   .00011    .00088
 %RSD     2.9545    118.36    25.689    16.015    80.727    88.392    219.74

 #1       -.03533   .00095    -.00039   -.00229   -.00551   .00020    .00102
 #2       -.03684   .00008    -.00056   -.00288   -.02015   .00005    -.00022

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00170    -.00462   .00009    .00088    -.00080   -.04163   -.00687
 SDev     .00235     .00592   .00007    .00143     .00013    .03842    .00352
 %RSD     138.28    128.32    83.360    162.46    15.659    92.291    51.300

 #1       .00336    -.00043   .00014    .00189    -.00071   -.01446   -.00438
 #2       .00004    -.00881   .00004    -.00013   -.00089   -.06880   -.00936

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00040   .00972    -.01841   -.00005   .00311    .00060    .00022
 SDev      .00011   .05445     .00330    .00005   .00043    .00054    .00022
 %RSD     27.969    560.42    17.932    118.02    13.893    90.582    100.18

 #1       -.00048   .04822    -.01608   -.00001   .00280    .00098    .00037
 #2       -.00032   -.02878   -.02075   -.00008   .00341    .00021    .00006

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00034    -.00281   -.00138   .00129    .00238    .00136
 SDev     .00084     .00001    .00369   .00317    .00702    .00704
 %RSD     245.09    .52637    267.90    245.45    295.42    517.57

 #1       .00094    -.00282   -.00399   .00353    -.00259   .00633
 #2       -.00025   -.00280   .00123    -.00095   .00735    -.00362


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41269     --        --        --        --        --        --
 SDev     147.0782  --        --        --        --        --        --
 %RSD     .3563891  --        --        --        --        --        --

 #1       41165     --        --        --        --        --        --
 #2       41373     --        --        --        --        --        --


Analysis Report                          04/05/12 11:47:30 AM         page 1

Method: 20076010   Sample Name: 600-52989-b-1-a@5      Operator: DCL
Run Time: 04/05/12 11:43:41
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .05366    -.00085   .00305    .00317    -.00072   -.00155   -.00030
 SDev     .00014     .00014   .00145    .00002     .00000    .00026    .00006
 %RSD     .26554    16.170    47.465    .74610    .62173    16.649    20.148

 #1       .05356    -.00075   .00408    .00318    -.00072   -.00136   -.00034
 #2       .05376    -.00095   .00203    .00315    -.00072   -.00173   -.00026
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 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .21867    .44744    .00070    1.2984    4.9646    .00023    .03521
 SDev     .00032    .00188    .00003     .0038     .0046    .00001    .00142
 %RSD     .14412    .42089    3.5111    .29387    .09307    5.3052    4.0281

 #1       .21889    .44877    .00068    1.3011    4.9679    .00024    .03621
 #2       .21845    .44611    .00072    1.2957    4.9613    .00022    .03421

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00273    .01136    2.4724    .03386    .18879    .02834    .01622
 SDev     .00241    .00086     .0102    .00130    .00023    .01119    .00055
 %RSD     88.291    7.5605    .41096    3.8431    .12284    39.469    3.4059

 #1       .00443    .01197    2.4796    .03294    .18895    .03626    .01661
 #2       .00102    .01075    2.4652    .03478    .18862    .02043    .01583

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00019   7.3444    6.7705    .00140    -.00330   .00232    .02410
 SDev      .00029    .0292     .0033    .00001     .00201   .00068    .00013
 %RSD     154.63    .39703    .04941    .73442    61.021    29.146    .54437

 #1       -.00039   7.3238    6.7681    .00141    -.00188   .00184    .02419
 #2       .00002    7.3650    6.7729    .00140    -.00472   .00280    .02400

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00199    .00500    .03212    .03675    .00631    .00093
 SDev     .00001    .00030    .00175    .00125    .00447    .00137
 %RSD     .35574    6.0985    5.4343    3.4135    70.859    147.12

 #1       .00199    .00479    .03336    .03764    .00947    .00191
 #2       .00200    .00522    .03089    .03586    .00315    -.00004


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41184     --        --        --        --        --        --
 SDev     126.5721  --        --        --        --        --        --
 %RSD     .3073295  --        --        --        --        --        --
Analysis Report                          04/05/12 11:47:30 AM         page 2



 #1       41095     --        --        --        --        --        --
 #2       41274     --        --        --        --        --        --


Analysis Report                          04/05/12 11:52:17 AM         page 1

Method: 20076010   Sample Name: lcs 600-76449/2-a      Operator: DCL
Run Time: 04/05/12 11:48:28
Comment: TRACE 61E
Mode: CONC    Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     82.925    .80453    1.3855    2.7259    1.4713    .87220    .70440
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 SDev      .098    .00568    .0034     .0031     .0013    .00068    .00073
 %RSD    .11830    .70586   .24534    .11228    .08659    .07823    .10343

 #1      82.994    .80051   1.3831    2.7281    1.4704    .87268    .70492
 #2      82.855    .80854   1.3879    2.7237    1.4722    .87171    .70389

 Elem    Ca3179    Cr2677   Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm      ppm       ppm       ppm       ppm       ppm
 Avge    90.825    .98283   1.3402    1.0696    176.28    .08859    1.3652
 SDev      .095    .00012    .0008     .0016       .22    .00012     .0000
 %RSD    .10455    .01260   .06092    .15368    .12473    .13612    .00185

 #1      90.757    .98274   1.3407    1.0707    176.44    .08868    1.3652
 #2      90.892    .98291   1.3396    1.0684    176.12    .08851    1.3653

 Elem    Se1960    Mg2790   Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm      ppm       ppm       ppm       ppm       ppm
 Avge    1.8839    39.886   4.9732    .91425    1.3221    49.443    7.0882
 SDev     .0002      .002    .0022    .00186     .0021      .035     .0025
 %RSD    .00999    .00586   .04448    .20302    .16006    .07102    .03536

 #1      1.8838    39.884   4.9748    .91294    1.3236    49.467    7.0899
 #2      1.8840    39.888   4.9717    .91556    1.3206    49.418    7.0864

 Elem    Ag3280    Na3302   Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm      ppm       ppm       ppm       ppm       ppm
 Avge    .46359    3.3639   6.7620    2.5116    1.7197    1.5541    3.9654
 SDev    .00059     .1002    .0245     .0025     .0083     .0016     .0008
 %RSD    .12610    2.9799   .36173    .09891    .48276    .10304    .01920

 #1      .46400    3.4348   6.7793    2.5134    1.7139    1.5552    3.9659
 #2      .46318    3.2930   6.7448    2.5099    1.7256    1.5529    3.9649

 Elem    V_2924    Zn2138   2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm      ppm       ppm       ppm       ppm
 Avge    .62118    2.2606   1.2749    1.4104    1.7441    1.9538
 SDev    .00059     .0049    .0054     .0027     .0013     .0003
 %RSD    .09543    .21621   .42262    .19369    .07203    .01770

 #1      .62076    2.2571   1.2787    1.4085    1.7433    1.9540
 #2      .62160    2.2640   1.2711    1.4123    1.7450    1.9535


 IntStd  1         2        3         4         5         6         7
 Mode    *Counts   NOTUSED  NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --       --        --        --        --        --
 Wavlen  371.030   --       --        --        --        --        --
 Avge    42638     --       --        --        --        --        --
 SDev    36.06245  --       --        --        --        --        --
 %RSD    .0845772  --       --        --        --        --        --

Analysis Report                           04/05/12 11:52:17 AM         page 2



 #1      42664     --       --        --        --        --        --
 #2      42613     --       --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 11:52:20
Comment: TRACE 61E
Mode: CONC    Corr. Factor: 1
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 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     2.4143    .50134    .49877    .50764    .47316    .50228    .51140
 SDev      .0055    .00063    .00158    .00054    .00099    .00009    .00077
 %RSD     .22607    .12625    .31636    .10677    .20918    .01694    .15086

 #1       2.4182    .50178    .49765    .50802    .47386    .50222    .51195
 #2       2.4104    .50089    .49988    .50726    .47246    .50234    .51086

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     12.265    .47428    .47020    .47808    2.5292    .47177    .48556
 SDev       .021    .00025    .00075    .00024     .0080    .00009    .00127
 %RSD     .16750    .05325    .15955    .04928    .31774    .01953    .26152

 #1       12.280    .47446    .47073    .47825    2.5235    .47184    .48646
 #2       12.251    .47410    .46967    .47791    2.5348    .47171    .48466

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .48305    4.7675    .47510    .49945    .51024    12.512    .92297
 SDev     .00047     .0064    .00085    .00143    .00134      .000    .00386
 %RSD     .09718    .13406    .17933    .28656    .26301    .00184    .41875

 #1       .48338    4.7720    .47570    .49844    .51119    12.512    .92570
 #2       .48271    4.7629    .47450    .50046    .50929    12.512    .92023

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .24590    12.646    12.275    .25483    .53474    .48138    .49806
 SDev     .00007      .067      .017    .00020    .00314    .00111    .00089
 %RSD     .02964    .52681    .13615    .08001    .58806    .22964    .17914

 #1       .24595    12.599    12.264    .25497    .53251    .48216    .49869
 #2       .24584    12.693    12.287    .25468    .53696    .48060    .49743

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .48325    .50883    .45335    .50166    .44710    .50107
 SDev     .00031    .00081    .00260    .00321    .00117    .00129
 %RSD     .06482    .15824    .57420    .63914    .26154    .25722

 #1       .48347    .50939    .45151    .50393    .44627    .50199
 #2       .48303    .50826    .45520    .49940    .44793    .50016


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
Analysis Report                           04/05/12 11:56:08 AM         page 3


 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40862     --        --        --        --        --        --
 SDev     43.13351  --        --        --        --        --        --
 %RSD     .1055603  --        --        --        --        --        --

 #1       40892     --        --        --        --        --        --
 #2       40831     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: CCB                   Operator: DCL
Run Time: 04/05/12 11:56:11
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Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .05030    .00186    .00132    -.00011   -.00073   .00118    -.00009
 SDev    .00300    .00242    .00085     .00017    .00002   .00026     .00005
 %RSD    5.9593    129.65    64.409    148.05    2.3410    21.923    55.032

 #1      .05242    .00357    .00193    .00001    -.00072   .00137    -.00005
 #2      .04818    .00016    .00072    -.00023   -.00074   .00100    -.00012

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.03471   .00004    -.00022   -.00329   -.01076   .00007    -.00012
 SDev     .00349   .00054     .00015    .00039    .00160   .00004     .00021
 %RSD    10.068    1283.3    70.185    11.877    14.851    51.995    169.85

 #1      -.03718   .00042    -.00032   -.00301   -.01189   .00005    -.00027
 #2      -.03223   -.00034   -.00011   -.00356   -.00963   .00010    .00002

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00330    -.00672   -.00004   .00112    -.00043   -.03965   -.01094
 SDev    .00161     .00499    .00011   .00041     .00061    .02934    .00243
 %RSD    48.798    74.252    283.85    36.503    142.57    74.000    22.194

 #1      .00444    -.01025   .00004    .00140    -.00086   -.06040   -.00923
 #2      .00216    -.00319   -.00011   .00083    .00000    -.01890   -.01266

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00025   .07204    -.01704   -.00009   .00233    .00020    .00013
 SDev     .00024   .12694     .00012    .00004   .00042    .00020    .00028
 %RSD    96.885    176.20    .71344    44.472    18.220    98.708    212.20

 #1      -.00042   -.01772   -.01695   -.00006   .00263    .00006    .00033
 #2      -.00008   .16180    -.01712   -.00012   .00203    .00034    -.00007

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00007   -.00251   -.00064   .00013    .00079    .00455
 SDev     .00048    .00007    .00071   .00004    .00083    .00200
 %RSD    651.76    2.6883    111.22    30.215    105.16    43.888

 #1      .00026    -.00256   -.00114   .00016    .00138    .00597
Analysis Report                           04/05/12 11:59:59 AM         page 4


 #2      -.00041   -.00246   -.00014   .00011    .00020    .00314

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40954     --        --        --        --        --        --
 SDev    71.41779  --        --        --        --        --        --
 %RSD    .1743832  --        --        --        --        --        --

 #1      41005     --        --        --        --        --        --
 #2      40904     --        --        --        --        --        --
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Analysis Report                           04/05/12 01:08:25 PM         page 1

Method: 20076010   Sample Name: mb 600-76503/1-a       Operator: DCL
Run Time: 04/05/12 13:04:37
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .09286    .00384    .00160    .00171    -.00117   -.00187   .00000
 SDev    .00011    .00062    .00003    .00000     .00001    .00030   .00007
 %RSD    .11883    16.045    1.8702    .02034    .57686    15.966    1719.7

 #1      .09279    .00340    .00162    .00171    -.00117   -.00208   .00005
 #2      .09294    .00427    .00158    .00171    -.00118   -.00166   -.00004

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .19448    .00080    -.00017   -.00338   .06755    .00021    .00124
 SDev    .00878    .00001     .00033    .00006   .02747    .00000    .00047
 %RSD    4.5151    1.7755    198.34    1.6773    40.671    1.4928    37.658

 #1      .20069    .00079    .00007    -.00334   .08697    .00021    .00091
 #2      .18827    .00082    -.00040   -.00342   .04812    .00021    .00157

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00225    .00531    .00043    -.00085   -.00046   -.07826   .00222
 SDev    .00143    .00104    .00007     .00068    .00008    .00007   .00101
 %RSD    63.535    19.546    17.222    80.739    18.149    .08665    45.659

 #1      .00124    .00458    .00048    -.00036   -.00040   -.07821   .00293
 #2      .00326    .00604    .00038    -.00133   -.00051   -.07831   .00150

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00050    .27311    .02337    -.00014   -.00459   .03110    .00022
 SDev    .00029    .09772    .00087     .00001    .00092   .00081    .00005
 %RSD    57.845    35.781    3.7213    6.8254    20.062    2.6006    22.789

 #1      .00071    .34221    .02275    -.00014   -.00394   .03053    .00019
 #2      .00030    .20401    .02398    -.00013   -.00524   .03167    .00026

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00025    .02873    .00311    .00030    -.00248   .00461
 SDev    .00001    .00170    .00087    .00113     .00127   .00277
 %RSD    2.8021    5.9240    27.973    375.03    51.035    60.169

 #1      .00025    .02993    .00372    -.00050   -.00159   .00265
 #2      .00024    .02753    .00249    .00110    -.00338   .00657


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40550     --        --        --        --        --        --
 SDev    45.96194  --        --        --        --        --        --
 %RSD    .1133477  --        --        --        --        --        --

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 #1      40517     --        --        --        --        --        --
 #2      40582     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: lcs 600-76503/2-a      Operator: DCL
Run Time: 04/05/12 13:08:28
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    78.583    .84570    1.3799    2.6763    1.4545    .90180    .75833
 SDev      .113    .01379     .0007     .0014     .0006    .00056    .00010
 %RSD    .14362    1.6304    .05081    .05317    .04247    .06179    .01291

 #1      78.663    .83595    1.3804    2.6753    1.4541    .90140    .75840
 #2      78.503    .85545    1.3794    2.6773    1.4550    .90219    .75827

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    92.901    .99104    1.3389    1.0986    163.70    .08526    1.3355
 SDev      .047    .00079     .0011     .0024       .05    .00009     .0022
 %RSD    .05102    .07948    .08491    .21417    .02999    .10093    .16229

 #1      92.934    .99160    1.3397    1.1003    163.73    .08532    1.3370
 #2      92.867    .99048    1.3381    1.0970    163.66    .08520    1.3339

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.9141    38.506    4.9463    .95945    1.4070    47.961    3.4086
 SDev     .0013      .039     .0043    .00432     .0110      .044     .0040
 %RSD    .06954    .10055    .08652    .45048    .77914    .09236    .11813

 #1      1.9132    38.533    4.9493    .95640    1.4147    47.993    3.4114
 #2      1.9151    38.478    4.9433    .96251    1.3992    47.930    3.4057

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .47515    3.4485    6.8976    2.6607    1.7742    1.5328    3.6932
 SDev    .00103     .0857     .0149     .0031     .0032     .0024     .0020
 %RSD    .21597    2.4844    .21556    .11610    .17769    .15637    .05351

 #1      .47588    3.5090    6.9081    2.6585    1.7720    1.5311    3.6918
 #2      .47443    3.3879    6.8871    2.6629    1.7765    1.5345    3.6945

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .59646    2.2126    1.2132    1.3966    1.7402    2.0010
 SDev    .00009     .0002     .0044     .0010     .0106     .0073
 %RSD    .01520    .00923    .36317    .07504    .61036    .36518

 #1      .59652    2.2128    1.2163    1.3973    1.7478    1.9959
 #2      .59640    2.2125    1.2101    1.3958    1.7327    2.0062


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED

Analysis Report                          04/05/12 01:12:16 PM         page 3


 Elem    Y         --        --        --        --        --        --
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 Wavlen  371.030   --        --        --        --        --        --
 Avge    43002     --        --        --        --        --        --
 SDev    245.3661  --        --        --        --        --        --
 %RSD    .5705855  --        --        --        --        --        --

 #1      42829     --        --        --        --        --        --
 #2      43176     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52201-a-24-a       Operator: DCL
Run Time: 04/05/12 13:12:19
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    158.68    .02199    .06908    4.3538    .00843    .20093    -.00266
 SDev       .13    .00528    .00071     .0005    .00002    .00006     .00004
 %RSD    .08200    23.998    1.0333    .01143    .27081    .03032    1.3483

 #1      158.77    .02572    .06958    4.3542    .00845    .20088    -.00268
 #2      158.59    .01826    .06858    4.3535    .00842    .20097    -.00263

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    897.99    .17948    .05311    .08625    151.66    .14029    .21821
 SDev       .71    .00024    .00002    .00026       .03    .00015    .00096
 %RSD    .07938    .13475    .03111    .30259    .01869    .10771    .43872

 #1      898.49    .17931    .05309    .08643    151.64    .14039    .21754
 #2      897.49    .17965    .05312    .08606    151.68    .14018    .21889

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00591   43.396    2.8399    .01286    .10734    41.760    5.2226
 SDev     .00289     .027     .0002    .00123    .00033      .022     .0026
 %RSD    48.904    .06167    .00801    9.5331    .31149    .05247    .04996

 #1      -.00387   43.377    2.8400    .01373    .10758    41.776    5.2245
 #2      -.00795   43.415    2.8397    .01199    .10710    41.745    5.2208

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00304   4.7574    5.5625    3.3129    .00735    .03203    .28969
 SDev     .00034    .0295     .0116     .0005    .00320    .00281    .00016
 %RSD    11.145    .62013    .20908    .01470    43.618    8.7762    .05659

 #1      -.00280   4.7783    5.5707    3.3132    .00961    .03401    .28980
 #2      -.00328   4.7366    5.5542    3.3125    .00508    .03004    .28957

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .27973    .57395    .18366    .23549    -.00467   -.00653
 SDev    .00032    .00035    .00276    .00006     .00335    .00266
 %RSD    .11308    .06026    1.5013    .02436    71.773    40.737

 #1      .27950    .57419    .18171    .23545    -.00230   -.00465

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 #2      .27995    .57370    .18561    .23553    -.00703   -.00841

 IntStd  1         2         3         4         5         6         7
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 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     42252     --        --        --        --        --        --
 SDev     45.96194  --        --        --        --        --        --
 %RSD     .1087818  --        --        --        --        --        --

 #1       42219     --        --        --        --        --        --
 #2       42284     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52201-a-24-b du    Operator: DCL
Run Time: 04/05/12 13:16:10
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     193.91    .00911    .08279    4.0972    .00964    .20798    -.00353
 SDev        .02    .00042    .00028     .0029    .00000    .00093     .00010
 %RSD     .01166    4.6058    .34166    .07064    .02957    .44707    2.8805

 #1       193.89    .00881    .08259    4.0952    .00964    .20732    -.00346
 #2       193.92    .00941    .08299    4.0993    .00963    .20864    -.00360

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     975.22    .24862    .05823    .09163    183.31    .17793    .21736
 SDev       1.11    .00016    .00034    .00025       .10    .00005    .00008
 %RSD     .11411    .06384    .59186    .27647    .05487    .02785    .03517

 #1       976.01    .24873    .05798    .09181    183.38    .17790    .21742
 #2       974.43    .24851    .05847    .09145    183.24    .17797    .21731

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.01115   49.831    3.1533    .01229    .12164    47.106    5.3626
 SDev      .00340     .029     .0001    .00063    .00071      .035     .0020
 %RSD     30.514    .05912    .00211    5.1189    .57953    .07345    .03745

 #1       -.01356   49.852    3.1532    .01274    .12214    47.081    5.3612
 #2       -.00875   49.810    3.1533    .01185    .12115    47.130    5.3640

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00302   5.5399    6.3129    3.5303    .00684    .03009    .24836
 SDev      .00041    .0145     .0113     .0007    .00000    .00011    .00045
 %RSD     13.433    .26104    .17886    .02112    .00791    .34965    .18268

 #1       -.00273   5.5501    6.3209    3.5298    .00684    .03002    .24868
 #2       -.00331   5.5297    6.3049    3.5308    .00684    .03016    .24804

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .35024    .58016    .18299    .23455    -.00702   -.01322

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 SDev     .00002    .00121    .00656    .00316     .00029    .00496
 %RSD     .00670    .20893    3.5819    1.3484    4.0815    37.529

 #1       .35025    .57931    .18763    .23231    -.00722   -.01673
 #2       .35022    .58102    .17836    .23678    -.00681   -.00971
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 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    42081     --        --        --        --        --        --
 SDev    36.76955  --        --        --        --        --        --
 %RSD    .0873780  --        --        --        --        --        --

 #1      42055     --        --        --        --        --        --
 #2      42107     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52201-a-24-c ms    Operator: DCL
Run Time: 04/05/12 13:20:00
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    239.28    .31159    1.0063    4.0960    .42487    .93310    .44059
 SDev       .06    .00104     .0018     .0035    .00025    .00161    .00008
 %RSD    .02714    .33532    .17646    .08453    .05840    .17291    .01908

 #1      239.33    .31085    1.0050    4.0984    .42504    .93196    .44053
 #2      239.23    .31233    1.0075    4.0935    .42469    .93424    .44065

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    976.73    1.0925    .86544    1.0134    194.99    .76236    1.1325
 SDev       .02     .0000    .00116     .0009       .08    .00004     .0001
 %RSD    .00160    .00432    .13371    .08411    .03998    .00560    .00767

 #1      976.72    1.0925    .86626    1.0140    195.05    .76233    1.1325
 #2      976.74    1.0926    .86463    1.0128    194.94    .76239    1.1324

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .84573    65.595    3.8863    .81128    1.0083    64.983    6.3992
 SDev    .00345      .009     .0011    .00540     .0030      .019     .0032
 %RSD    .40833    .01391    .02955    .66555    .29410    .02897    .05019

 #1      .84328    65.601    3.8871    .80747    1.0062    64.969    6.4015
 #2      .84817    65.589    3.8854    .81510    1.0104    64.996    6.3970

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .48620    17.232    19.337    4.1429    .98219    .77658    .56242
 SDev    .00022      .013      .004     .0027    .00322    .00242    .00049
 %RSD    .04540    .07631    .01910    .06514    .32749    .31218    .08672

 #1      .48635    17.241    19.334    4.1448    .98447    .77829    .56276
 #2      .48604    17.223    19.339    4.1410    .97992    .77486    .56207

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 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.2062    1.7232    1.0155    1.1909    .77695    .88011
 SDev     .0001     .0001     .0015     .0009    .00215    .00410
 %RSD    .00458    .00758    .14702    .07361    .27729    .46617
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 #1       1.2062    1.7233    1.0145    1.1916    .77543    .87721
 #2       1.2061    1.7232    1.0166    1.1903    .77847    .88302

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41734     --        --        --        --        --        --
 SDev     7.778174  --        --        --        --        --        --
 %RSD     .0186377  --        --        --        --        --        --

 #1       41728     --        --        --        --        --        --
 #2       41739     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52201-a-24-d msd   Operator: DCL
Run Time: 04/05/12 13:23:52
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     234.48    .30058    .97605    4.7321    .41429    .86620    .42992
 SDev       3.00    .00497    .01260     .0654    .00569    .01220    .00588
 %RSD     1.2811    1.6524    1.2907    1.3816    1.3734    1.4088    1.3676

 #1       232.36    .29707    .96715    4.6859    .41027    .85757    .42576
 #2       236.61    .30409    .98496    4.7784    .41832    .87483    .43408

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     927.64    1.0543    .83842    .97537    195.86    .74452    1.0768
 SDev      12.21     .0145    .01196    .01234      2.75    .01009     .0133
 %RSD     1.3164    1.3766    1.4264    1.2647    1.4035    1.3559    1.2362

 #1       919.01    1.0440    .82997    .96665    193.92    .73738    1.0674
 #2       936.28    1.0646    .84688    .98409    197.80    .75166    1.0862

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .83058    62.901    3.8315    .79607    .97836    60.863    4.7544
 SDev     .00622      .859     .0530    .01077    .01422      .808     .0675
 %RSD     .74910    1.3656    1.3834    1.3528    1.4536    1.3280    1.4206

 #1       .82618    62.294    3.7940    .78845    .96830    60.292    4.7066
 #2       .83497    63.509    3.8690    .80368    .98842    61.435    4.8021

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .47402    16.789    18.589    3.9499    .96786    .73817    .50892
 SDev     .00620      .187      .251     .0550    .01239    .01023    .00688
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 %RSD     1.3084    1.1154    1.3481    1.3917    1.2796    1.3855    1.3519

 #1       .46963    16.657    18.412    3.9110    .95910    .73094    .50406
 #2       .47840    16.922    18.767    3.9888    .97661    .74540    .51379

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     1.1550    1.5269    .95864    1.1359    .74569    .87302
 SDev      .0157     .0208    .01224     .0138    .00543    .00662
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 %RSD     1.3612    1.3651    1.2769    1.2190    .72805    .75809

 #1       1.1439    1.5122    .94999    1.1261    .74185    .86834
 #2       1.1662    1.5417    .96730    1.1457    .74952    .87770

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41850     --        --        --        --        --        --
 SDev     444.7702  --        --        --        --        --        --
 %RSD     1.062760  --        --        --        --        --        --

 #1       42165     --        --        --        --        --        --
 #2       41536     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53078-a-1-a@10     Operator: DCL
Run Time: 04/05/12 13:27:43
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .41794    .01091    .00549    12.220    -.00122   .00204    -.00130
 SDev     .00492    .00299    .00173      .048     .00001   .00124     .00006
 %RSD     1.1767    27.426    31.504    .38961    1.1977    60.588    4.7576

 #1       .42142    .01303    .00671    12.254    -.00121   .00292    -.00126
 #2       .41447    .00880    .00426    12.187    -.00124   .00117    -.00134

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     1.5923    .02773    .00571    .07393    35.881    .00055    .00486
 SDev      .0274    .00032    .00009    .00063      .167    .00006    .00052
 %RSD     1.7185    1.1397    1.5322    .85478    .46528    11.010    10.808

 #1       1.6117    .02795    .00577    .07438    35.999    .00060    .00523
 #2       1.5730    .02750    .00565    .07348    35.763    .00051    .00449

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00023    3.1921    .29201    .00694    .01489    -.16192   .99437
 SDev     .00039     .0212    .00158    .00110    .00017     .02059   .00838
 %RSD     168.44    .66493    .54058    15.840    1.1728    12.715    .84290

 #1       -.00004   3.2071    .29313    .00772    .01476    -.14737   1.0003
 #2       .00050    3.1771    .29090    .00616    .01501    -.17648   .98844


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 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00078   -.09288   .00932    3.0052    .00156    .00769    .08842
 SDev      .00033    .05180   .00228     .0100    .00043    .00109    .00038
 %RSD     42.698    55.775    24.440    .33416    27.668    14.130    .43467

 #1       -.00102   -.12951   .01093    3.0123    .00125    .00692    .08870
 #2       -.00054   -.05625   .00771    2.9981    .00186    .00846    .08815

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
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 Avge    .00613    .03742    .00187    .00636    -.00051   .00060
 SDev    .00032    .00021    .00116    .00021     .00163   .00023
 %RSD    5.2163    .55950    61.903    3.3032    316.53    38.624

 #1      .00636    .03757    .00268    .00650    -.00167   .00077
 #2      .00591    .03727    .00105    .00621    .00064    .00044

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41050     --        --        --        --        --        --
 SDev    90.50967  --        --        --        --        --        --
 %RSD    .2204864  --        --        --        --        --        --

 #1      40986     --        --        --        --        --        --
 #2      41114     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53078-a-2-a@10     Operator: DCL
Run Time: 04/05/12 13:31:34
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    207.07    .00727    .00251    .03281    -.00122   .00242    -.00075
 SDev       .58    .00259    .00172    .00006     .00000   .00089     .00020
 %RSD    .28073    35.668    68.699    .16645    .11345    36.904    26.017

 #1      207.48    .00910    .00373    .03285    -.00122   .00305    -.00089
 #2      206.66    .00544    .00129    .03277    -.00122   .00179    -.00061

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .93381    .00998    .00029    .01846    2.9773    .00041    .00285
 SDev    .00207    .00014    .00030    .00045     .0040    .00003    .00051
 %RSD    .22168    1.3521    106.36    2.4447    .13511    7.7958    17.768

 #1      .93528    .01007    .00007    .01878    2.9802    .00043    .00320
 #2      .93235    .00988    .00050    .01814    2.9745    .00039    .00249

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00049   1.7292    .06706    .00003    .01011    -.21788   .40662
 SDev     .00537    .0116    .00033    .00117    .00011     .02263   .00371
 %RSD    1089.3    .67314    .48738    4167.7    1.0572    10.387    .91225

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 #1      .00330    1.7374    .06729    -.00080   .01004    -.20188   .40924
 #2      -.00429   1.7210    .06683    .00085    .01019    -.23388   .40400

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00097   .11708    .29936    .00473    -.00046   .00142    .03811
 SDev     .00034   .00322    .00127    .00003     .00127   .00035    .00013
 %RSD    34.491    2.7494    .42328    .54317    272.61    24.708    .34925

 #1      -.00121   .11481    .30026    .00475    -.00136   .00117    .03820
 #2      -.00073   .11936    .29847    .00471    .00043    .00167    .03802
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 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .01920    .02241    -.01213   .01033    .00298    -.00223
 SDev     .00007    .00020     .00055   .00103    .00094     .00759
 %RSD     .37594    .88560    4.5413    10.004    31.408    340.27

 #1       .01915    .02255    -.01252   .01106    .00364    .00314
 #2       .01925    .02227    -.01174   .00960    .00232    -.00760

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40974     --        --        --        --        --        --
 SDev     122.3295  --        --        --        --        --        --
 %RSD     .2985503  --        --        --        --        --        --

 #1       40888     --        --        --        --        --        --
 #2       41061     --        --        --        --        --        --
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Method: 20076010   Sample Name: 600-53078-a-3-a@10     Operator: DCL
Run Time: 04/05/12 13:35:26
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     204.44    .00010    .00248    .00993    -.00126   .00186    -.00193
 SDev        .02    .00081    .00355    .00002     .00001   .00007     .00002
 %RSD     .01184    834.65    143.00    .24145    .53431    3.7669    .77631

 #1       204.46    .00067    -.00003   .00995    -.00126   .00181    -.00194
 #2       204.42    -.00048   .00499    .00992    -.00126   .00191    -.00192

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .92142    .01615    .00529    .03391    42.639    .00034    .00327
 SDev     .00152    .00008    .00009    .00027      .085    .00001    .00066
 %RSD     .16509    .52229    1.7194    .78323    .19825    3.5286    20.121

 #1       .92250    .01621    .00536    .03410    42.699    .00034    .00373
 #2       .92035    .01609    .00523    .03372    42.579    .00035    .00280

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881

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 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00023   1.3937    .08659    .00140    .01909    -.19924   .57031
 SDev      .00149    .0025    .00031    .00146    .00048     .01211   .00057
 %RSD     650.31    .17804    .35860    104.32    2.4922    6.0805    .10065

 #1       -.00128   1.3954    .08681    .00243    .01876    -.20781   .57071
 #2       .00082    1.3919    .08637    .00037    .01943    -.19068   .56990

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00026   .20661    .35427    .00290    -.00270   .00217    .19108
 SDev      .00020   .03806    .00362    .00002     .00189   .00069    .00071
 %RSD     77.769    18.422    1.0223    .52390    69.962    31.584    .37325

 #1       -.00040   .17969    .35171    .00291    -.00137   .00266    .19158
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 #2      -.00011   .23352    .35683    .00289    -.00404   .00169    .19057

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .02236    .14904    -.01153   .01067    -.00115   .00023
 SDev    .00010    .00006     .00355   .00276     .00597   .00075
 %RSD    .42975    .04067    30.811    25.899    517.97    323.16

 #1      .02230    .14899    -.01405   .01262    -.00538   .00077
 #2      .02243    .14908    -.00902   .00871    .00307    -.00030


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40802     --        --        --        --        --        --
 SDev    91.92388  --        --        --        --        --        --
 %RSD    .2252926  --        --        --        --        --        --

 #1      40867     --        --        --        --        --        --
 #2      40737     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53078-a-4-a@10     Operator: DCL
Run Time: 04/05/12 13:39:17
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    28.676    .00030    .00218    .38546    -.00112   .00166    -.00037
 SDev      .002    .00055    .00133    .00040     .00000   .00052     .00011
 %RSD    .00608    182.98    61.110    .10336    .42313    31.099    28.735

 #1      28.675    .00068    .00124    .38574    -.00113   .00129    -.00045
 #2      28.677    -.00009   .00312    .38518    -.00112   .00202    -.00030

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    2.2360    .00011    .00041    -.00384   1.6641    .00544    .00046
 SDev     .0040    .00006    .00069     .00053    .0202    .00003    .00111
 %RSD    .18095    56.556    166.24    13.703    1.2144    .61815    241.75

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 #1      2.2331    .00006    -.00007   -.00422   1.6498    .00541    -.00032
 #2      2.2388    .00015    .00090    -.00347   1.6784    .00546    .00124

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00160    3.9672    .05149    -.00065   .00171    8.3918    .29215
 SDev    .00437     .0092    .00001     .00033   .00005     .0147    .00213
 %RSD    273.31    .23230    .01856    50.407    2.7250    .17476    .72955

 #1      .00469    3.9607    .05148    -.00042   .00175    8.3814    .29064
 #2      -.00149   3.9738    .05149    -.00088   .00168    8.4021    .29365

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00125   19.005    18.604    .01380    -.00159   .00430    .34320
 SDev     .00046     .245      .024    .00004     .00278   .00065    .00008
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 %RSD     37.030    1.2880    .12777    .26805    175.04    15.227    .02266

 #1       -.00158   18.832    18.588    .01378    -.00356   .00384    .34325
 #2       -.00092   19.178    18.621    .01383    .00038    .00476    .34314

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00167    .01039    -.00018   .00078    .00711    -.00116
 SDev     .00047    .00032     .00339   .00336    .01110     .00100
 %RSD     28.251    3.1174    1834.5    430.73    156.12    86.581

 #1       .00134    .01016    .00221    -.00159   .01496    -.00045
 #2       .00201    .01062    -.00258   .00315    -.00074   -.00187


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40892     --        --        --        --        --        --
 SDev     21.92031  --        --        --        --        --        --
 %RSD     .0536047  --        --        --        --        --        --

 #1       40908     --        --        --        --        --        --
 #2       40877     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: CCV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 13:43:08
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     2.4718    .52646    .51383    .53405    .45894    .52333    .53794
 SDev       .0090   .00131    .00560    .00153    .00165    .00338    .00248
 %RSD     .36398    .24802    1.0903    .28578    .35985    .64523    .46129

 #1       2.4654    .52554    .50987    .53297    .45777    .52094    .53619
 #2       2.4781    .52739    .51779    .53513    .46011    .52571    .53970


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 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     12.288    .46609    .46268    .47095    2.6130    .48717    .49240
 SDev       .043    .00098    .00138    .00048      .0142   .00159    .00289
 %RSD     .35274    .20955    .29889    .10245    .54523    .32637    .58748

 #1       12.258    .46540    .46170    .47061    2.6029    .48605    .49036
 #2       12.319    .46678    .46365    .47129    2.6231    .48830    .49445

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .49787    4.7113    .47632    .50547    .51539    12.896    .93689
 SDev     .00196      .0230   .00166    .00175    .00052      .047    .00371
 %RSD     .39436    .48853    .34942    .34670    .10161    .36403    .39650

 #1       .49649    4.6951    .47515    .50423    .51576    12.863    .93427
 #2       .49926    4.7276    .47750    .50671    .51502    12.929    .93952

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
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 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .24723    12.782    12.639    .26730    .56150    .47735    .50559
 SDev    .00034      .033      .031    .00091    .00617    .00342    .00171
 %RSD    .13613    .25702    .24251    .33905    1.0985    .71700    .33799

 #1      .24699    12.759    12.618    .26666    .55714    .47493    .50438
 #2      .24747    12.806    12.661    .26795    .56586    .47977    .50679

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .48021    .52394    .44307    .51707    .45051    .52161
 SDev    .00150    .00168    .00356    .00256    .00148    .00221
 %RSD    .31260    .31988    .80233    .49542    .32814    .42295

 #1      .47915    .52276    .44056    .51526    .44946    .52005
 #2      .48127    .52513    .44558    .51888    .45155    .52317


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40918     --        --        --        --        --        --
 SDev    158.3919  --        --        --        --        --        --
 %RSD    .3870960  --        --        --        --        --        --

 #1      41030     --        --        --        --        --        --
 #2      40806     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: CCB                    Operator: DCL
Run Time: 04/05/12 13:46:59
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .11137    .00190    .00197    -.00018   -.00137   .00066    -.00014
 SDev    .00561    .00083    .00162     .00003    .00004   .00022     .00007

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 %RSD    5.0371    43.589    82.032    13.831    3.1333    33.583    53.413

 #1      .11533    .00249    .00083    -.00016   -.00140   .00082    -.00019
 #2      .10740    .00131    .00312    -.00020   -.00134   .00050    -.00009

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.04987   -.00027   -.00064   -.00486   -.02935   -.00006   .00036
 SDev     .00222    .00006    .00045    .00001    .01310    .00025   .00069
 %RSD    4.4496    20.283    70.093    .29001    44.636    417.49    191.20

 #1      -.04830   -.00031   -.00096   -.00485   -.03862   .00012    .00084
 #2      -.05144   -.00023   -.00032   -.00487   -.02009   -.00024   -.00013

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00207    -.01013   -.00010   .00123    -.00109   -.13649   -.00780
 SDev    .00328     .01724    .00001   .00126     .00077    .11935    .00197
 %RSD    158.48    170.21    14.496    102.85    71.020    87.438    25.206

 #1      .00439    .00206    -.00011   .00212    -.00163   -.05210   -.00641
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 #2      -.00025   -.02232   -.00009   .00034    -.00054   -.22088   -.00919

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00089   -.19471   -.02073   -.00012   .00024    -.00035   -.00014
 SDev     .00017    .12645    .00903    .00001   .00035     .00129    .00004
 %RSD    19.449    64.940    43.572    6.2685    150.19    365.81    30.990

 #1      -.00101   -.28412   -.01434   -.00011   .00049    .00056    -.00011
 #2      -.00077   -.10530   -.02712   -.00013   -.00001   -.00126   -.00017

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00024   -.00269   -.00177   .00142    .00205    .00208
 SDev     .00001    .00004    .00286   .00246    .00072    .00528
 %RSD    2.7499    1.4402    161.20    172.54    35.327    253.84

 #1      -.00024   -.00266   -.00379   .00316    .00154    .00581
 #2      -.00025   -.00271   .00025    -.00031   .00256    -.00165


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40006     --        --        --        --        --        --
 SDev    1257.943  --        --        --        --        --        --
 %RSD    3.144425  --        --        --        --        --        --

 #1      39116     --        --        --        --        --        --
 #2      40895     --        --        --        --        --        --
----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53078-a-5-a@10     Operator: DCL
Run Time: 04/05/12 13:50:50
Comment: TRACE 61E


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Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .42093    .00170    .00180    .00337    -.00137   -.00132   -.00004
 SDev    .00131    .00038    .00012    .00001     .00002    .00040    .00002
 %RSD    .31056    22.169    6.7479    .34778    1.4577    30.675    53.194

 #1      .42001    .00143    .00172    .00336    -.00135   -.00103   -.00005
 #2      .42185    .00197    .00189    .00337    -.00138   -.00160   -.00002

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .42561    .00051    -.00005   .00120    .30444    .00002    -.00011
 SDev    .00073    .00015     .00003   .00010    .00067    .00000     .00044
 %RSD    .17184    29.484    49.134    8.5334    .21866    16.779    385.50

 #1      .42613    .00040    -.00003   .00113    .30397    .00002    .00020
 #2      .42509    .00061    -.00007   .00127    .30491    .00002    -.00042

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00146    .87856    .01261    -.00000   .00022    -.21128   .21021
 SDev    .00108    .00030    .00010     .00010   .00019     .00705   .00038
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 %RSD    74.087    .03445    .81707    95887.    84.985    3.3369    .18181

 #1      .00223    .87877    .01268    .00007    .00036    -.21627   .20994
 #2      .00070    .87834    .01253    -.00007   .00009    -.20630   .21048

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00037    .23812    .09326    .00040    -.00238   .00511    .00131
 SDev    .00002    .02534    .00054    .00001     .00031   .00080    .00008
 %RSD    5.8773    10.643    .57580    1.8218    13.150    15.619    6.0604

 #1      .00036    .22020    .09364    .00040    -.00216   .00454    .00125
 #2      .00039    .25604    .09288    .00039    -.00260   .00567    .00136

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00171    .00697    .00041    -.00038   .00262    .00088
 SDev    .00030    .00011    .00102     .00015   .00079    .00123
 %RSD    17.228    1.5735    248.30    39.047    30.065    139.82

 #1      .00150    .00689    .00113    -.00027   .00318    .00175
 #2      .00192    .00704    -.00031   -.00048   .00207    .00001


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41118     --        --        --        --        --        --
 SDev    14.84924  --        --        --        --        --        --
 %RSD    .0361142  --        --        --        --        --        --

 #1      41128     --        --        --        --        --        --
 #2      41107     --        --        --        --        --        --

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Method: 20076010   Sample Name: 600-53078-a-6-a@10     Operator: DCL
Run Time: 04/05/12 13:54:40
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    17.497    .00230    .00289    .02852    -.00028   .06273    -.00033
 SDev      .050    .00064    .00025    .00009     .00003   .00008     .00000
 %RSD    .28816    27.803    8.5097    .32919    9.3143    .12946    .85356

 #1      17.462    .00185    .00271    .02845    -.00026   .06267    -.00033
 #2      17.533    .00275    .00306    .02858    -.00030   .06278    -.00034

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    80.879    .00759    .00032    .12517    3.4655    .02752    .00105
 SDev      .307    .00028    .00046    .00087     .0209    .00011    .00012
 %RSD    .37963    3.6284    140.09    .69739    .60318    .39397    11.645

 #1      80.662    .00739    .00000    .12455    3.4508    .02744    .00096
 #2      81.096    .00778    .00065    .12579    3.4803    .02759    .00113

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
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 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00031    1.1281    .22702    .00014    .00003    5.6019    .21668
 SDev     .00002     .0054    .00096    .00018    .00075     .0109    .00365
 %RSD     6.4675    .47520    .42284    126.33    2699.6    .19513    1.6868

 #1       .00029    1.1243    .22634    .00027    -.00050   5.5942    .21409
 #2       .00032    1.1319    .22770    .00002    .00056    5.6096    .21926

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00090   12.404    12.371    .19800    -.00232   .00373    .29994
 SDev      .00024     .240      .004    .00076     .00005   .00085    .00146
 %RSD     26.224    1.9311    .02902    .38287    2.0399    22.784    .48768

 #1       -.00107   12.234    12.374    .19746    -.00236   .00313    .29890
 #2       -.00074   12.573    12.369    .19854    -.00229   .00434    .30097

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00276    .00731    -.00149   .00232    -.00067   .00079
 SDev     .00013    .00025     .00164   .00100     .00239   .00117
 %RSD     4.7036    3.3753    110.34    43.327    359.80    147.09

 #1       .00267    .00714    -.00033   .00161    -.00236   .00162
 #2       .00285    .00749    -.00265   .00303    .00103    -.00003


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     41092     --        --        --        --        --        --
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 SDev     193.0402  --        --        --        --        --        --
 %RSD     .4697812  --        --        --        --        --        --

 #1       41228     --        --        --        --        --        --
 #2       40955     --        --        --        --        --        --
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Method: 20076010   Sample Name: 600-53078-a-7-a@10     Operator: DCL
Run Time: 04/05/12 13:58:31
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .77853    -.00011   .00150    .02032    -.00124   .01172    -.00014
 SDev     .01163     .00063   .00103    .00036     .00002   .00039     .00001
 %RSD     1.4942    574.54    68.415    1.7619    1.7944    3.3359    4.7596

 #1       .78675    .00034    .00077    .02057    -.00125   .01200    -.00015
 #2       .77030    -.00056   .00223    .02007    -.00122   .01145    -.00014

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     113.61    .00069    .15946    -.00327   .92891    .25764    .00108
 SDev       2.00    .00013    .00248     .00054   .00965    .00397    .00046
 %RSD     1.7575    18.970    1.5564    16.569    1.0390    1.5402    42.062

 #1       115.02    .00079    .16121    -.00289   .93573    .26044    .00141
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 #2      112.20    .00060    .15770    -.00366   .92208    .25483    .00076

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00196    7.0821    .25300    -.00071   -.00017   -.14099   .71023
 SDev    .00011     .1305    .00452     .00074    .00008    .05990   .01230
 %RSD    5.6117    1.8420    1.7859    104.09    48.006    42.485    1.7325

 #1      .00188    7.1744    .25620    -.00123   -.00022   -.09863   .71893
 #2      .00203    6.9899    .24981    -.00019   -.00011   -.18334   .70153

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00039   .22443    .31030    .08254    -.00265   .00372    .05641
 SDev     .00008   .03795    .01085    .00137     .00079   .00019    .00111
 %RSD    19.764    16.908    3.4974    1.6657    29.922    5.0197    1.9602

 #1      -.00044   .19760    .31797    .08351    -.00321   .00359    .05719
 #2      -.00033   .25126    .30263    .08157    -.00209   .00385    .05562

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00119    .01147    -.00131   .00228    .00242    .00172
 SDev    .00013    .00022     .00093   .00115    .00338    .00153
 %RSD    10.995    1.9216    71.271    50.453    140.09    88.581

 #1      .00129    .01163    -.00197   .00309    .00002    .00281
 #2      .00110    .01132    -.00065   .00147    .00481    .00064


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 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40186     --        --        --        --        --        --
 SDev    542.3509  --        --        --        --        --        --
 %RSD    1.349585  --        --        --        --        --        --

 #1      39803     --        --        --        --        --        --
 #2      40570     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53128-a-1-a        Operator: DCL
Run Time: 04/05/12 14:02:22
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .16126    -.01533   .02477    .02017    -.00143   -.00024   -.00023
 SDev    .00307     .00045   .00068    .00002     .00000    .00007    .00011
 %RSD    1.9050    2.9443    2.7631    .10752    .26354    28.261    48.168

 #1      .15909    -.01565   .02429    .02018    -.00143   -.00019   -.00015
 #2      .16343    -.01501   .02526    .02015    -.00144   -.00029   -.00031

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .50424    .02318    .47012    -.00312   .08895    .00038    .00257
 SDev    .00041    .00014    .00133     .00036   .02665    .00007    .00009
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 %RSD    .08130    .58416    .28337    11.398    29.957    19.639    3.5118

 #1      .50453    .02308    .47106    -.00337   .10780    .00033    .00251
 #2      .50395    .02327    .46918    -.00287   .07011    .00043    .00264

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .04039    -.02228   .00291    .00268    .03256    -.30742   .04245
 SDev    .00088     .00558   .00008    .00037    .00032     .04382   .00158
 %RSD    2.1706    25.060    2.6841    13.773    .99844    14.254    3.7155

 #1      .04101    -.02623   .00285    .00242    .03279    -.33840   .04357
 #2      .03977    -.01833   .00296    .00294    .03233    -.27643   .04134

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00056    .28937    .09262    .00127    -.04856   .06710    .00044
 SDev    .00090    .25079    .00246    .00000     .00003   .00121    .00007
 %RSD    161.13    86.667    2.6514    .26620    .05623    1.7969    16.624

 #1      .00119    .46670    .09088    .00127    -.04854   .06625    .00039
 #2      -.00008   .11203    .09436    .00127    -.04858   .06795    .00049

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00019    .02517    .00274    .00249    .06263    .02928
 SDev    .00012    .00011    .00016    .00006    .00116    .00073
 %RSD    64.115    .44209    5.8197    2.2446    1.8536    2.5097

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 #1      .00011    .02510    .00262    .00245    .06345    .02980
 #2      .00028    .02525    .00285    .00253    .06181    .02876

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41264     --        --        --        --        --        --
 SDev    321.0265  --        --        --        --        --        --
 %RSD    .7779819  --        --        --        --        --        --

 #1      41491     --        --        --        --        --        --
 #2      41037     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53079-a-1-a        Operator: DCL
Run Time: 04/05/12 14:06:13
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    5.4533    .00470    .02685    74.248    -.00059   .01161    -.00035
 SDev     .0047    .00076    .00119      .369     .00001   .00090     .00022
 %RSD    .08555    16.277    4.4245    .49643    1.4842    7.7216    63.284

 #1      5.4500    .00524    .02769    73.988    -.00059   .01224    -.00019
 #2      5.4566    .00416    .02601    74.509    -.00058   .01097    -.00050

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
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 Avge    4.6174    .04321    .03693    .13662    62.340    .00164    .01665
 SDev     .0070    .00018    .00075    .00035      .196    .00002    .00032
 %RSD    .15217    .41655    2.0343    .25840    .31389    1.0495    1.9201

 #1      4.6124    .04334    .03746    .13687    62.202    .00165    .01687
 #2      4.6224    .04308    .03640    .13637    62.478    .00163    .01642

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00346    .40139    2.6644    .00659    .09021    2.3156    1.5231
 SDev    .00016    .00083     .0082    .00112    .00091     .0232     .0031
 %RSD    4.5536    .20720    .30651    16.968    1.0133    1.0023    .20089

 #1      .00335    .40198    2.6586    .00738    .09086    2.3320    1.5209
 #2      .00357    .40080    2.6702    .00580    .08957    2.2992    1.5253

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00021    .48384    .32098    .60642    -.00049   .02835    .03075
 SDev    .00096    .19519    .00035    .00122     .00112   .00049    .00012
 %RSD    445.06    40.342    .11024    .20075    229.00    1.7334    .38636

 #1      .00089    .62186    .32073    .60556    .00030    .02870    .03084
 #2      -.00046   .34582    .32123    .60728    -.00128   .02801    .03067

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2

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 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .03989    .38582    .01505    .01745    -.00294   .00666
 SDev    .00002    .00080    .00076    .00010     .00088   .00020
 %RSD    .03941    .20624    5.0507    .57007    29.965    3.0565

 #1      .03988    .38525    .01558    .01752    -.00356   .00681
 #2      .03991    .38638    .01451    .01738    -.00232   .00652

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    40746     --        --        --        --        --        --
 SDev    155.5635  --        --        --        --        --        --
 %RSD    .3817884  --        --        --        --        --        --

 #1      40636     --        --        --        --        --        --
 #2      40856     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53079-a-1-b du     Operator: DCL
Run Time: 04/05/12 14:10:04
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    5.5756    .00279    .02544    74.277    -.00054   .01100    -.00029
 SDev     .0056    .00340    .00080      .166     .00002   .00057     .00013
 %RSD    .10080    122.01    3.1383    .22359    3.9287    5.1909    44.065

 #1      5.5716    .00038    .02600    74.395    -.00056   .01060    -.00038
 #2      5.5796    .00520    .02487    74.160    -.00053   .01141    -.00020
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 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     4.5428    .04829    .03809    .13981    64.127    .00175    .01540
 SDev      .0171    .00051    .00029    .00004      .169    .00011    .00023
 %RSD     .37626    1.0539    .76194    .03158    .26295    6.4340    1.4960

 #1       4.5307    .04793    .03788    .13978    64.007    .00167    .01524
 #2       4.5548    .04865    .03829    .13984    64.246    .00183    .01556

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00119    .42717    2.7425    .00702    .09196    2.3990    1.5353
 SDev     .00158    .01163     .0048    .00043    .00037     .0511     .0038
 %RSD     132.63    2.7230    .17671    6.1376    .40292    2.1283    .24949

 #1       .00230    .41895    2.7391    .00672    .09170    2.3629    1.5326
 #2       .00007    .43540    2.7459    .00733    .09223    2.4351    1.5380

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00028    .51679    .32544    .57057    .00205    .02799    .03121
 SDev     .00011    .14921    .00322    .00102    .00010    .00040    .00013
 %RSD     40.538    28.874    .99068    .17941    4.8372    1.4166    .42012


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 #1       .00035    .62230    .32316    .57129    .00198    .02771    .03112
 #2       .00020    .41128    .32772    .56984    .00212    .02827    .03131

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .04221    .36600    .01301    .01659    -.00504   .00430
 SDev     .00046    .00069    .00244    .00087     .00324   .00074
 %RSD     1.0986    .18971    18.739    5.2650    64.406    17.268

 #1       .04189    .36550    .01129    .01721    -.00274   .00483
 #2       .04254    .36649    .01474    .01597    -.00733   .00378

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     40586     --        --        --        --        --        --
 SDev     18.38478  --        --        --        --        --        --
 %RSD     .0452983  --        --        --        --        --        --

 #1       40573     --        --        --        --        --        --
 #2       40599     --        --        --        --        --        --
-----------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53079-a-1-c ms     Operator: DCL
Run Time: 04/05/12 14:13:55
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     18.435    .85396    1.0381    82.312    .44694    1.0328    .53422
 SDev       .085    .01825     .0051      .210    .00128     .0043    .00180
 %RSD     .46355    2.1375    .49066    .25505    .28602    .41314    .33704

 #1       18.374    .84105    1.0345    82.164    .44604    1.0298    .53295
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 #2       18.495     .86686     1.0417     82.461     .44785     1.0358     .53549

 Elem     Ca3179     Cr2677     Co2286     Cu3247     Fe2714     Li6707     Pb2203
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     14.315     .96195     .94943     1.0627     72.579     .49836     .65526
 SDev       .047     .00359     .00316      .0033       .219     .00224     .00511
 %RSD     .32619     .37330     .33262     .30597     .30235     .44919     .77981

 #1       14.282     .95941     .94720     1.0604     72.424     .49678     .65165
 #2       14.348     .96448     .95167     1.0650     72.734     .49994     .65887

 Elem     Se1960     Mg2790     Mn2576     Mo2020     Ni2316     K_7664     Si2881
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .92432     9.9306     3.6109     1.0264     1.0805     13.476     3.2172
 SDev     .00296      .0374      .0099      .0037      .0016       .080      .0087
 %RSD     .32026     .37618     .27351     .36252     .15076     .59007     .27036

 #1       .92223     9.9041     3.6039     1.0237     1.0817     13.419     3.2110
 #2       .92641     9.9570     3.6179     1.0290     1.0793     13.532     3.2233

 Elem     Ag3280     Na3302     Na5889     Sr4215     Tl1908     Sn1899     Ti3349
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm

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 Avge     .49191     10.377     10.821     1.0823     1.1051     .95775     .98957
 SDev     .00120       .021       .059      .0035      .0062     .00230     .00309
 %RSD     .24462     .20194     .54682     .32366     .56264     .24038     .31224

 #1       .49106     10.362     10.779     1.0798     1.1007     .95613     .98739
 #2       .49276     10.392     10.862     1.0848     1.1095     .95938     .99176

 Elem     V_2924     Zn2138     2203/1     2203/2     1960/1     1960/2
 Units    ppm        ppm        ppm        ppm        ppm        ppm
 Avge     1.0072     1.3895     .57783     .69397     .81785     .97755
 SDev      .0034      .0055     .00067     .00733     .00169     .00528
 %RSD     .33902     .39456     .11606     1.0561     .20621     .54049

 #1       1.0047     1.3856     .57736     .68879     .81905     .97382
 #2       1.0096     1.3934     .57831     .69915     .81666     .98129

 IntStd   1          2          3          4          5          6          7
 Mode     *Counts    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED
 Elem     Y          --         --         --         --         --         --
 Wavlen   371.030    --         --         --         --         --         --
 Avge     40172      --         --         --         --         --         --
 SDev     177.4838   --         --         --         --         --         --
 %RSD     .4418042   --         --         --         --         --         --

 #1       40298      --         --         --         --         --         --
 #2       40047      --         --         --         --         --         --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53079-a-1-d msd    Operator: DCL
Run Time: 04/05/12 14:17:46
Comment: TRACE 61E
Mode: CONC    Corr. Factor: 1

 Elem     Al3082     Sb2068     As1890     Ba4934     Be3130     B_2496     Cd2265
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     18.995     .89289     1.0561     87.201     .45635     1.0626     .54672
 SDev       .005     .00645      .0034       .074     .00071      .0002     .00069
 %RSD     .02648     .72284     .32477     .08521     .15496     .02082     .12692
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 #1      18.991    .88832    1.0585    87.253    .45685    1.0624    .54721
 #2      18.998    .89745    1.0537    87.148    .45585    1.0628    .54623

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    14.712    .97859    .96990    1.0867    74.634    .51492    .69398
 SDev      .014    .00207    .00128     .0007      .074    .00083    .00089
 %RSD    .09474    .21172    .13164    .06321    .09966    .16168    .12815

 #1      14.722    .98006    .97080    1.0872    74.686    .51433    .69461
 #2      14.702    .97713    .96899    1.0862    74.581    .51550    .69335

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .93666    10.146    3.7006    1.0534    1.0948    13.915    3.3288
 SDev    .00253      .001     .0050     .0021     .0032      .027     .0058
 %RSD    .26968    .01168    .13510    .20276    .29396    .19695    .17366

 #1      .93845    10.147    3.7042    1.0519    1.0971    13.895    3.3329

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 #2      .93488    10.145    3.6971    1.0549    1.0925    13.934    3.3247

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .50252    10.513    11.117    1.0374    1.1369    .98069    1.0140
 SDev    .00035      .106      .040     .0007     .0007    .00140     .0012
 %RSD    .06896    1.0052    .35744    .06991    .05766    .14266    .12227

 #1      .50277    10.588    11.089    1.0379    1.1374    .98168    1.0148
 #2      .50228    10.439    11.145    1.0368    1.1365    .97970    1.0131

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.0309    1.4519    .60873    .73660    .82180    .99410
 SDev     .0023     .0004    .00208    .00030    .00705    .00026
 %RSD    .22687    .02538    .34153    .03998    .85823    .02640

 #1      1.0326    1.4516    .61020    .73681    .82678    .99429
 #2      1.0293    1.4521    .60726    .73639    .81681    .99391

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    39664     --        --        --        --        --        --
 SDev    94.04520  --        --        --        --        --        --
 %RSD    .2371017  --        --        --        --        --        --

 #1      39598     --        --        --        --        --        --
 #2      39731     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53079-a-2-a       Operator: DCL
Run Time: 04/05/12 14:21:37
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    26.514    .06902    .10198    83.384    .00006    .02871    .02895
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 SDev      .074     .00783    .00030      .051    .00001    .00137    .00008
 %RSD     .27781    11.340    .29898    .06143    20.343    4.7826    .26554

 #1       26.462    .07455    .10220    83.348    .00007    .02968    .02901
 #2       26.567    .06348    .10177    83.420    .00005    .02773    .02890

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     149.21    .07209    .03531    1.0603    37.873    .01461    2.3999
 SDev        .26    .00056    .00026     .0026      .048    .00002     .0022
 %RSD     .17528    .77441    .74347    .24213    .12542    .14918    .09112

 #1       149.40    .07249    .03550    1.0585    37.907    .01460    2.4015
 #2       149.03    .07170    .03513    1.0621    37.840    .01463    2.3984

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00281    3.9957    2.7260    .01063    .05192    6.8288    5.4384
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 SDev     .00089     .0074     .0033    .00104    .00008     .0162     .0013
 %RSD     31.524    .18544    .12250    9.8347    .15337    .23770    .02433

 #1       .00218    4.0009    2.7284    .01137    .05198    6.8173    5.4375
 #2       .00344    3.9905    2.7237    .00989    .05186    6.8403    5.4394

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00911    1.0470    .94033    5.7906    .00285    .02700    .26492
 SDev     .00026     .2114    .00626     .0055    .00038    .00148    .00020
 %RSD     2.8986    20.194    .66610    .09460    13.348    5.4677    .07456

 #1       .00929    1.1966    .93590    5.7867    .00312    .02596    .26506
 #2       .00892    .89754    .94476    5.7944    .00258    .02804    .26478

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .12803    4.2705    2.0989    2.5504    .00208    .00317
 SDev     .00032     .0036     .0136     .0035    .00048    .00109
 %RSD     .25003    .08473    .64680    .13752    23.217    34.250

 #1       .12825    4.2730    2.1085    2.5480    .00174    .00240
 #2       .12780    4.2679    2.0893    2.5529    .00242    .00394


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     42422     --        --        --        --        --        --
 SDev     140.7142  --        --        --        --        --        --
 %RSD     .3316972  --        --        --        --        --        --

 #1       42323     --        --        --        --        --        --
 #2       42522     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53079-a-3-a        Operator: DCL
Run Time: 04/05/12 14:25:29
Comment: TRACE 61E
Mode: CONC    Corr. Factor: 1
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 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    16.527    1.1475    2.0650    103.73    .00045    -.00192   .01144
 SDev      .024     .0168     .0004       .04    .00001     .00048   .00003
 %RSD    .14446    1.4656    .01835    .03401    2.7170    25.147    .26581

 #1      16.511    1.1356    2.0648    103.76    .00046    -.00226   .01142
 #2      16.544    1.1594    2.0653    103.71    .00044    -.00158   .01147

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    14.395    .17647    .12062    1.7969    206.82    .01337    23.423
 SDev      .027    .00023    .00037     .0038       .39    .00001      .012
 %RSD    .18925    .13184    .30655    .21151    .18914    .06400    .05056

 #1      14.414    .17664    .12088    1.7942    207.10    .01338    23.431

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 #2      14.376    .17631    .12036    1.7996    206.54    .01337    23.415

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.01112   .93300    22.531    .05295    .07742    1.8152    2.5900
 SDev     .00218   .00576      .046    .00044    .00070     .0103     .0001
 %RSD    19.628    .61747    .20584    .82304    .90863    .56942    .00538

 #1      -.00958   .93708    22.564    .05326    .07791    1.8225    2.5899
 #2      -.01267   .92893    22.498    .05265    .07692    1.8079    2.5901

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .02985    .36458    .20170    5.4351    .02537    .02895    .14872
 SDev    .00005    .03694    .00105     .0021    .00307    .00001    .00027
 %RSD    .16586    10.131    .51954    .03819    12.078    .04472    .18070

 #1      .02981    .33846    .20095    5.4337    .02321    .02896    .14891
 #2      .02988    .39070    .20244    5.4366    .02754    .02894    .14853

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .10033    4.6893    20.453    24.908    -.02309   -.00514
 SDev    .00035     .0041      .054      .009     .00051    .00353
 %RSD    .34596    .08839    .26563    .03773    2.2018    68.704

 #1      .10057    4.6923    20.491    24.902    -.02345   -.00264
 #2      .10008    4.6864    20.414    24.915    -.02273   -.00763


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    39504     --        --        --        --        --        --
 SDev    86.97414  --        --        --        --        --        --
 %RSD    .2201682  --        --        --        --        --        --

 #1      39442     --        --        --        --        --        --
 #2      39565     --        --        --        --        --        --
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Method: 20076010   Sample Name: CCV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 14:29:20
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Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    2.4418    .54821    .50988    .54335    .44420    .52541    .54235
 SDev     .0034    .00912    .00371    .00760    .00151    .00031    .00125
 %RSD    .14104    1.6642    .72693    1.3996    .33943    .05866    .23093

 #1      2.4442    .55467    .51250    .54872    .44527    .52563    .54323
 #2      2.4393    .54176    .50726    .53797    .44313    .52520    .54146

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
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 Avge    12.212    .45484    .44677    .45456    2.6136    .49863    .49019
 SDev      .032    .00127    .00108    .00110     .0163    .00074    .00263
 %RSD    .26495    .27980    .24213    .24145    .62284    .14885    .53581

 #1      12.235    .45574    .44753    .45534    2.6251    .49915    .49205
 #2      12.189    .45394    .44600    .45378    2.6021    .49810    .48833

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .48106    4.6533    .46776    .50122    .48781    13.447    .91348
 SDev    .00060     .0144    .00217    .00116    .00049      .000    .00524
 %RSD    .12540    .30934    .46471    .23058    .10000    .00242    .57326

 #1      .48149    4.6634    .46930    .50203    .48815    13.447    .91718
 #2      .48064    4.6431    .46623    .50040    .48746    13.446    .90977

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .24443    12.897    12.889    .26692    .56006    .46774    .49893
 SDev    .00108      .057      .013    .00059    .00122    .00051    .00104
 %RSD    .44034    .44280    .10421    .21900    .21766    .10969    .20818

 #1      .24519    12.937    12.898    .26734    .56092    .46811    .49967
 #2      .24367    12.857    12.879    .26651    .55920    .46738    .49820

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .46974    .52498    .42125    .52466    .41818    .51256
 SDev    .00067    .00054    .00359    .00214    .00840    .00329
 %RSD    .14159    .10291    .85299    .40848    2.0077    .64244

 #1      .47021    .52536    .42379    .52618    .42411    .51023
 #2      .46927    .52460    .41871    .52315    .41224    .51489


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    39398     --        --        --        --        --        --
 SDev    111.7229  --        --        --        --        --        --
 %RSD    .2835750  --        --        --        --        --        --

 #1      39477     --        --        --        --        --        --
 #2      39319     --        --        --        --        --        --
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Method: 20076010   Sample Name: CCB                    Operator: DCL
Run Time: 04/05/12 14:33:11
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .11760    .01152    .00082    .00098    -.00147   .00130    -.00028
 SDev     .00057    .00155    .00054    .00008     .00001   .00041     .00002
 %RSD     .48174    13.466    65.992    8.2229    .68374    31.707    8.8078


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 #1       .11800    .01262    .00044    .00104    -.00147   .00159    -.00030
 #2       .11720    .01043    .00120    .00092    -.00148   .00101    -.00026

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.05451   .00014    -.00114   -.00532   -.04671   .00044    .00104
 SDev      .00032   .00014     .00022    .00035    .00293   .00005    .00005
 %RSD     .59299    98.568    19.049    6.5037    6.2703    11.889    4.5259

 #1       -.05428   .00024    -.00130   -.00508   -.04879   .00048    .00100
 #2       -.05473   .00004    -.00099   -.00557   -.04464   .00041    .00107

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00187    .02422    .00004    .00109    -.00096   .12706    -.01650
 SDev     .00323    .00489    .00006    .00107     .00038   .03219     .00194
 %RSD     172.69    20.198    156.88    98.839    39.291    25.331    11.735

 #1       .00415    .02768    .00008    .00184    -.00069   .14982    -.01513
 #2       -.00041   .02076    -.00000   .00033    -.00123   .10430    -.01787

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00128   -.23414   -.00421   -.00010   -.00031   -.00029   -.00001
 SDev      .00025    .04726    .00225    .00004    .00050    .00081    .00001
 %RSD     19.295    20.186    53.401    36.903    164.45    282.46    59.458

 #1       -.00111   -.26756   -.00262   -.00007   .00005    .00028    -.00001
 #2       -.00146   -.20072   -.00580   -.00013   -.00066   -.00086   -.00002

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     -.00003   -.00249   .00144    .00083    .00090    .00235
 SDev      .00044    .00016   .00277    .00146    .00352    .00308
 %RSD     1538.3    6.2649    192.19    175.01    391.02    130.93

 #1       .00028    -.00260   .00340    -.00020   .00339    .00453
 #2       -.00034   -.00238   -.00052   .00186    -.00159   .00017


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     39313     --        --        --        --        --        --
 SDev     145.6640  --        --        --        --        --        --
 %RSD     .3705237  --        --        --        --        --        --
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 #1      39210     --        --        --        --        --        --
 #2      39416     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53079-a-4-a        Operator: DCL
Run Time: 04/05/12 14:37:02
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265

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 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    4.7783    .01031    .02698    67.009    -.00070   .01149    -.00071
 SDev     .0054    .00160    .00119      .148     .00000   .00021     .00008
 %RSD    .11344    15.552    4.4034    .22063    .46469    1.8231    11.736

 #1      4.7745    .01144    .02782    66.904    -.00071   .01164    -.00077
 #2      4.7822    .00917    .02614    67.114    -.00070   .01134    -.00065

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    4.3865    .03815    .03694    .12327    57.009    .00209    .01722
 SDev     .0015    .00015    .00043    .00031      .004    .00006    .00012
 %RSD    .03389    .38922    1.1542    .24856    .00640    2.8463    .69929

 #1      4.3876    .03805    .03724    .12306    57.012    .00213    .01730
 #2      4.3855    .03826    .03664    .12349    57.007    .00204    .01713

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00049    .40522    2.6310    .00610    .08271    2.5636    1.3999
 SDev    .00120    .00326     .0006    .00074    .00046     .0008     .0003
 %RSD    243.17    .80380    .02268    12.144    .55378    .03155    .01988

 #1      -.00035   .40752    2.6314    .00662    .08303    2.5641    1.3997
 #2      .00134    .40292    2.6306    .00557    .08238    2.5630    1.4001

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00016   .46625    .33322    .62569    .00220    .02502    .02665
 SDev     .00032   .11180    .00100    .00092    .00001    .00048    .00002
 %RSD    195.82    23.979    .30018    .14632    .50236    1.9221    .07407

 #1      .00006    .54531    .33251    .62505    .00219    .02468    .02666
 #2      -.00039   .38719    .33393    .62634    .00221    .02536    .02663

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .03834    .33475    .01558    .01804    -.00172   .00160
 SDev    .00009    .00014    .00077    .00020     .00120   .00120
 %RSD    .24534    .04214    4.9290    1.1277    69.764    75.148

 #1      .03841    .33465    .01612    .01789    -.00256   .00075
 #2      .03827    .33485    .01504    .01818    -.00087   .00245


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
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 Avge     39303     --        --        --        --        --        --
 SDev     89.09545  --        --        --        --        --        --
 %RSD     .2266887  --        --        --        --        --        --

 #1       39240     --        --        --        --        --        --
 #2       39366     --        --        --        --        --        --


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Method: 20076010   Sample Name: 600-53079-a-5-a        Operator: DCL
Run Time: 04/05/12 14:40:54
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     25.271    .04728    .09755    82.028    -.00007   .02496    .02815
 SDev       .076    .00072    .00214      .167     .00000   .00035    .00020
 %RSD     .29941    1.5171    2.1922    .20341    4.0362    1.3881    .70505

 #1       25.325    .04778    .09907    82.146    -.00007   .02472    .02801
 #2       25.218    .04677    .09604    81.910    -.00006   .02521    .02829

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     143.02    .06526    .03630    1.0938    36.389    .01421    2.1907
 SDev        .16    .00006    .00012     .0032      .028    .00004     .0017
 %RSD     .11280    .08956    .32585    .29107    .07604    .29326    .07713

 #1       143.13    .06531    .03621    1.0960    36.409    .01424    2.1919
 #2       142.91    .06522    .03638    1.0915    36.370    .01418    2.1895

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .00151    3.7365    2.4944    .00921    .05010    6.6369    5.0378
 SDev     .00075     .0104     .0029    .00034    .00054     .0248     .0150
 %RSD     49.566    .27846    .11608    3.6932    1.0801    .37345    .29764

 #1       .00098    3.7438    2.4964    .00897    .05048    6.6545    5.0484
 #2       .00203    3.7291    2.4923    .00945    .04972    6.6194    5.0272

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .01042    .99022    .90510    5.5408    .00130    .02399    .24933
 SDev     .00015    .03101    .00390     .0104    .00272    .00103    .00030
 %RSD     1.4449    3.1312    .43040    .18748    208.62    4.2931    .12087

 #1       .01031    .96829    .90786    5.5482    .00322    .02326    .24954
 #2       .01052    1.0121    .90235    5.5335    -.00062   .02472    .24912

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .12140    4.1663    1.8800    2.3460    -.00096   .00274
 SDev     .00062     .0062     .0081     .0015     .00149   .00038
 %RSD     .50959    .14806    .43343    .06564    154.88    13.732

 #1       .12184    4.1707    1.8858    2.3449    -.00201   .00247
 #2       .12096    4.1620    1.8743    2.3471    .00009    .00300


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
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 Elem     Y          --         --         --         --         --         --
 Wavlen   371.030    --         --         --         --         --         --
 Avge     41790      --         --         --         --         --         --
 SDev     94.04520   --         --         --         --         --         --
 %RSD     .2250397   --         --         --         --         --         --

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 #1       41724      --         --         --         --         --         --
 #2       41857      --         --         --         --         --         --
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Method: 20076010   Sample Name: 600-53079-a-6-a        Operator: DCL
Run Time: 04/05/12 14:44:44
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082     Sb2068     As1890     Ba4934     Be3130     B_2496     Cd2265
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     16.699     1.1272     2.0498     103.10     .00046     -.00268    .01089
 SDev       .030      .0145      .0022        .35     .00000      .00058    .00011
 %RSD     .18060     1.2869     .10878     .34431     .19952     21.740     .98820

 #1       16.721     1.1169     2.0514     103.35     .00046     -.00227    .01097
 #2       16.678     1.1374     2.0482     102.85     .00046     -.00309    .01081

 Elem     Ca3179     Cr2677     Co2286     Cu3247     Fe2714     Li6707     Pb2203
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     17.126     .18212     .12314     1.8598     222.12     .01359     20.399
 SDev       .054     .00107     .00036      .0078        .86     .00004       .027
 %RSD     .31412     .58793     .29182     .42105     .38649     .29945     .13034

 #1       17.165     .18288     .12340     1.8654     222.73     .01362     20.418
 #2       17.088     .18136     .12289     1.8543     221.51     .01356     20.381

 Elem     Se1960     Mg2790     Mn2576     Mo2020     Ni2316     K_7664     Si2881
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     -.01467    1.0979     21.250     .04297     .07465     1.9763     2.5507
 SDev      .00173     .0037       .082     .00024     .00049      .0107      .0036
 %RSD     11.822     .33557     .38691     .54828     .65184     .54319     .14169

 #1       -.01589    1.1005     21.309     .04280     .07499     1.9839     2.5532
 #2       -.01344    1.0953     21.192     .04313     .07430     1.9687     2.5481

 Elem     Ag3280     Na3302     Na5889     Sr4215     Tl1908     Sn1899     Ti3349
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .04980     .49396     .27334     5.7011     .03312     .02717     .14907
 SDev     .00003     .07293     .00010      .0188     .00049     .00040     .00075
 %RSD     .06568     14.764     .03487     .32914     1.4711     1.4697     .50526

 #1       .04978     .44240     .27341     5.7144     .03278     .02689     .14960
 #2       .04982     .54553     .27327     5.6878     .03347     .02745     .14854

 Elem     V_2924     Zn2138     2203/1     2203/2     1960/1     1960/2
 Units    ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .10149     5.2213     17.504     21.847     -.02401    -.01000
 SDev     .00051      .0171       .018       .031      .00379     .00449
 %RSD     .49879     .32834     .10440     .14072     15.764     44.952

 #1       .10184     5.2334     17.517     21.869     -.02133    -.01317
 #2       .10113     5.2091     17.491     21.825     -.02669    -.00682
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 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED

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 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    38386     --        --        --        --        --        --
 SDev    120.9153  --        --        --        --        --        --
 %RSD    .3150024  --        --        --        --        --        --

 #1      38300     --        --        --        --        --        --
 #2      38471     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: PDS 600-52201-a-24-a   Operator: DCL
Run Time: 04/05/12 14:48:35
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    162.83    .98004    .98527    5.4246    .38627    1.1692    .44097
 SDev       .26    .00871    .00432     .0114    .00053     .0003    .00031
 %RSD    .16064    .88871    .43898    .21011    .13632    .02532    .06955

 #1      163.02    .98620    .98833    5.4327    .38664    1.1690    .44118
 #2      162.65    .97388    .98221    5.4166    .38590    1.1694    .44075

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    898.38    .94218    .79133    .91037    159.44    1.2884    1.0501
 SDev      2.23    .00047    .00112    .00141       .19     .0006     .0043
 %RSD    .24808    .04972    .14160    .15526    .11899    .04597    .41011

 #1      899.96    .94251    .79212    .91137    159.58    1.2879    1.0532
 #2      896.81    .94185    .79054    .90937    159.31    1.2888    1.0471

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .81807    49.982    3.5488    .88217    .91611    55.752    5.9779
 SDev    .00311      .074     .0040    .00168    .00148      .046     .0052
 %RSD    .38050    .14725    .11311    .18983    .16194    .08322    .08773

 #1      .82027    50.034    3.5516    .88098    .91716    55.785    5.9816
 #2      .81587    49.930    3.5459    .88335    .91506    55.719    5.9741

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .45494    15.184    18.051    3.8979    .97891    .83199    1.1445
 SDev    .00178      .149      .019     .0009    .00025    .00527     .0012
 %RSD    .39076    .97844    .10740    .02334    .02531    .63365    .10217

 #1      .45619    15.289    18.065    3.8973    .97873    .83572    1.1453
 #2      .45368    15.079    18.037    3.8986    .97909    .82826    1.1437

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    1.0777    1.5418    .89456    1.1279    .70792    .87315
 SDev     .0011     .0014    .00786     .0025    .00501    .00216
 %RSD    .10675    .09372    .87875    .22425    .70739    .24798
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 #1      1.0785    1.5429    .90012    1.1297    .71146    .87468

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 #2      1.0768    1.5408    .88900    1.1261    .70438    .87162

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    39404     --        --        --        --        --        --
 SDev    120.2082  --        --        --        --        --        --
 %RSD    .3050659  --        --        --        --        --        --

 #1      39319     --        --        --        --        --        --
 #2      39489     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: SD 600-52201-a-24a@5   Operator: DCL
Run Time: 04/05/12 14:52:26
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    34.759    .01010    .01865    1.0102    .00051    .04680    -.00082
 SDev      .039    .00102    .00059     .0010    .00003    .00109     .00009
 %RSD    .11149    10.131    3.1431    .10311    5.6554    2.3343    11.207

 #1      34.786    .01083    .01906    1.0109    .00053    .04758    -.00076
 #2      34.731    .00938    .01824    1.0094    .00049    .04603    -.00089

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    253.81    .04011    .01194    .01420    35.001    .02998    .05121
 SDev       .44    .00036    .00057    .00018      .061    .00009    .00024
 %RSD    .17216    .88962    4.7732    1.2754    .17490    .28780    .45985

 #1      254.12    .04036    .01235    .01407    35.044    .03004    .05138
 #2      253.50    .03985    .01154    .01432    34.957    .02992    .05105

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00206   9.8787    .64625    .00449    .02415    8.8001    1.1482
 SDev     .00059    .0207    .00062    .00101    .00068     .0030     .0022
 %RSD    28.694    .20948    .09547    22.431    2.8357    .03405    .19291

 #1      -.00248   9.8933    .64669    .00520    .02463    8.8022    1.1497
 #2      -.00164   9.8640    .64581    .00378    .02366    8.7980    1.1466

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00040   1.1118    1.0937    .72938    .00414    .00627    .06292
 SDev     .00059    .1307     .0023    .00014    .00033    .00236    .00015
 %RSD    148.99    11.754    .21222    .01888    7.9074    37.691    .24320

 #1      .00002    1.2042    1.0953    .72947    .00437    .00794    .06303
 #2      -.00081   1.0194    1.0920    .72928    .00391    .00460    .06281

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .06202    .14470    .04291    .05537    .00053    -.00335
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 SDev     .00014    .00028    .00128    .00029    .00223     .00200
 %RSD     .22899    .19154    2.9783    .51610    417.80    59.609

 #1       .06212    .14489    .04381    .05516    .00211    -.00477
 #2       .06192    .14450    .04201    .05557    -.00104   -.00194

 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     38352     --        --        --        --        --        --
 SDev     3.535534  --        --        --        --        --        --
 %RSD     .0092185  --        --        --        --        --        --

 #1       38350     --        --        --        --        --        --
 #2       38355     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCV met0412ccv_00001   Operator: DCL
Run Time: 04/05/12 14:56:17
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     2.4528    .53337    .51248    .54287    .43925    .53275    .55126
 SDev      .0007    .00023    .00004    .00020    .00034    .00126    .00030
 %RSD     .02859    .04235    .00795    .03697    .07745    .23642    .05521

 #1       2.4523    .53322    .51245    .54301    .43900    .53186    .55105
 #2       2.4533    .53353    .51251    .54273    .43949    .53364    .55148

 Elem     Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     12.234    .45344    .44507    .44837    2.6356    .51123    .49303
 SDev       .004    .00006    .00027    .00020     .0010    .00042    .00029
 %RSD     .02964    .01231    .06070    .04519    .03848    .08260    .05846

 #1       12.232    .45348    .44488    .44823    2.6349    .51153    .49323
 #2       12.237    .45340    .44526    .44851    2.6364    .51093    .49282

 Elem     Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .48181    4.6771    .46691    .50103    .50165    13.916    .91157
 SDev     .00261     .0057    .00028    .00124    .00044      .012    .00164
 %RSD     .54125    .12092    .06064    .24835    .08816    .08581    .17952

 #1       .48365    4.6731    .46671    .50015    .50196    13.924    .91273
 #2       .47996    4.6811    .46711    .50191    .50134    13.908    .91041

 Elem     Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .24468    13.068    13.173    .27037    .56883    .46850    .50073
 SDev     .00048      .103      .020    .00017    .00084    .00077    .00040
 %RSD     .19694    .78587    .15411    .06399    .14728    .16537    .08068

 #1       .24434    12.995    13.188    .27024    .56943    .46905    .50045
 #2       .24503    13.141    13.159    .27049    .56824    .46796    .50102

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 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .46853    .53040    .41916    .52996    .41326    .51613
 SDev    .00011    .00069    .00263    .00175    .00170    .00476
 %RSD    .02259    .12990    .62807    .32994    .41142    .92259

 #1      .46846    .52992    .41730    .53120    .41205    .51950
 #2      .46861    .53089    .42102    .52873    .41446    .51277

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    38127     --        --        --        --        --        --
 SDev    86.26703  --        --        --        --        --        --
 %RSD    .2262623  --        --        --        --        --        --

 #1      38188     --        --        --        --        --        --
 #2      38066     --        --        --        --        --        --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: CCB                    Operator: DCL
Run Time: 04/05/12 15:00:08
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .13209    .00335    .00249    .00019    -.00162   .00068    -.00016
 SDev    .00550    .00381    .00176    .00021     .00002   .00164     .00000
 %RSD    4.1609    113.60    70.624    113.83    1.4384    242.28    .93319

 #1      .13598    .00605    .00373    .00034    -.00160   .00184    -.00016
 #2      .12821    .00066    .00125    .00004    -.00163   -.00048   -.00016

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.05456   -.00004   -.00032   -.00545   -.00831   .00068    .00067
 SDev     .00113    .00066    .00079    .00091    .03775   .00001    .00007
 %RSD    2.0802    1849.6    244.11    16.635    454.24    1.4410    9.8636

 #1      -.05536   .00043    -.00088   -.00481   -.03500   .00069    .00062
 #2      -.05376   -.00050   .00024    -.00609   .01838    .00068    .00072

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00128    .03810    -.00005   .00067    -.00078   .24016    -.01914
 SDev    .00081    .00043     .00008   .00042     .00020   .00147     .00438
 %RSD    63.309    1.1272    151.80    62.179    26.133    .61210    22.881

 #1      .00071    .03779    .00000    .00038    -.00092   .23912    -.01605
 #2      .00186    .03840    -.00011   .00097    -.00063   .24120    -.02224

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00029   -.01589   .00307    -.00012   -.00194   -.00100   -.00016
 SDev     .00112    .20524   .00139     .00007    .00111    .00313    .00043

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 %RSD    383.82    1291.6    45.371    63.324    57.436    312.13    263.19
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 #1      -.00108   -.16101   .00208    -.00006   -.00115   -.00322   .00014
 #2      .00050    .12923    .00405    -.00017   -.00273   .00121    -.00047

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00012   -.00289   .00177    .00012    .00677    -.00146
 SDev     .00082    .00013   .00348    .00164    .00318     .00037
 %RSD    673.55    4.4732    196.66    1354.3    46.992    25.527

 #1      .00046    -.00280   -.00069   .00128    .00452    -.00120
 #2      -.00071   -.00298   .00423    -.00104   .00902    -.00173

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    38120     --        --        --        --        --        --
 SDev    9.192388  --        --        --        --        --        --
 %RSD    .0241140  --        --        --        --        --        --

 #1      38127     --        --        --        --        --        --
 #2      38114     --        --        --        --        --        --


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Method: 20076010   Sample Name: ICSA metisa_00072      Operator: DCL
Run Time: 04/05/12 16:17:18
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    468.02    .00752    .00055    .00186    -.00233   -.00291   -.00826
 SDev       .71    .00203    .00437    .00001     .00001    .00040    .00015
 %RSD    .15124    27.055    795.64    .45126    .58664    13.603    1.7811

 #1      468.52    .00608    -.00254   .00186    -.00234   -.00319   -.00816
 #2      467.52    .00896    .00364    .00187    -.00232   -.00263   -.00836

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    437.23    .00130    -.00099   .00801    200.75    .00611    .00295
 SDev       .56    .00048     .00055   .00030       .14    .00002    .00109
 %RSD    .12800    37.178    55.814    3.7659    .07083    .33183    37.011

 #1      437.63    .00095    -.00060   .00780    200.85    .00612    .00372
 #2      436.84    .00164    -.00138   .00822    200.65    .00609    .00218

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.01869   471.09    -.00658   -.00109   .00002    .67316    -.00730
 SDev     .00277      .06     .00002    .00003   .00012    .00583     .00231
 %RSD    14.808    .01199    .27738    2.6118    752.82    .86672    31.589

 #1      -.02065   471.13    -.00659   -.00111   -.00007   .67728    -.00567
 #2      -.01673   471.06    -.00657   -.00107   .00010    .66903    -.00893

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00204   .03798    .23352    -.00864   .03471    -.00659   -.00387
 SDev     .00028   .14060    .00150     .00001   .00020     .00073    .00011
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 %RSD     13.697     370.23     .64266     .14608     .58715     11.050     2.8721

 #1       -.00184    .13739     .23458     -.00865    .03456     -.00711    -.00379
 #2       -.00224    -.06144    .23246     -.00863    .03485     -.00608    -.00395

 Elem     V_2924     Zn2138     2203/1     2203/2     1960/1     1960/2
 Units    ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .00602     -.00810    -.00370    .00627     .00608     -.03108
 SDev     .00022      .00009     .00100    .00114     .00667      .00082
 %RSD     3.5828     1.1162     27.051     18.143     109.59     2.6333

 #1       .00586     -.00816    -.00299    .00708     .00137     -.03166
 #2       .00617     -.00803    -.00440    .00547     .01080     -.03050


 IntStd   1          2          3          4          5          6          7
 Mode     *Counts    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED    NOTUSED
 Elem     Y          --         --         --         --         --         --
 Wavlen   371.030    --         --         --         --         --         --
 Avge     31758      --         --         --         --         --         --
 SDev     73.53911   --         --         --         --         --         --
 %RSD     .2315609   --         --         --         --         --         --

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 #1       31706      --         --         --         --         --         --
 #2       31810      --         --         --         --         --         --
---------------------------------------------------------------------------
Method: 20076010   Sample Name: ICSAB metisb_00074     Operator: DCL
Run Time: 04/05/12 16:21:09
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem     Al3082     Sb2068     As1890     Ba4934     Be3130     B_2496     Cd2265
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     479.84     1.1838     1.0792     1.1843     .42203     1.1633     .53753
 SDev        .00      .0030      .0033      .0013     .00045      .0018     .00036
 %RSD     .00086     .25605     .30937     .11176     .10591     .15355     .06712

 #1       479.83     1.1816     1.0768     1.1852     .42234     1.1645     .53778
 #2       479.84     1.1859     1.0815     1.1833     .42171     1.1620     .53727

 Elem     Ca3179     Cr2677     Co2286     Cu3247     Fe2714     Li6707     Pb2203
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     446.90     .89591     .85653     .96046     212.81     1.4127     1.0009
 SDev        .38     .00037     .00088     .00076        .11      .0013      .0016
 %RSD     .08430     .04101     .10225     .07894     .05000     .09119     .16370

 #1       447.17     .89617     .85715     .96099     212.89     1.4117     .99975
 #2       446.64     .89565     .85591     .95992     212.74     1.4136     1.0021

 Elem     Se1960     Mg2790     Mn2576     Mo2020     Ni2316     K_7664     Si2881
 Units    ppm        ppm        ppm        ppm        ppm        ppm        ppm
 Avge     .96773     484.77     .95231     1.0066     1.0047     17.531     .98573
 SDev     .01118        .01     .00059      .0007      .0063       .048     .00052
 %RSD     1.1553     .00186     .06195     .06485     .62616     .27200     .05261

 #1       .95983     484.78     .95273     1.0070     1.0091     17.497     .98609
 #2       .97564     484.76     .95190     1.0061     1.0002     17.564     .98536

 Elem     Ag3280     Na3302     Na5889     Sr4215     Tl1908     Sn1899     Ti3349
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 Units    ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .53992    12.656    15.571    .57024    1.2285    .96063    1.0204
 SDev     .00061      .184      .031    .00059     .0064    .00053     .0010
 %RSD     .11289    1.4507    .19634    .10415    .52037    .05530    .09528

 #1       .54035    12.786    15.550    .57066    1.2240    .96025    1.0211
 #2       .53949    12.526    15.593    .56982    1.2330    .96100    1.0197

 Elem     V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units    ppm       ppm       ppm       ppm       ppm       ppm
 Avge     .93558    1.0894    .83971    1.0815    .85735    1.0229
 SDev     .00092     .0009    .00329     .0041    .00617     .0199
 %RSD     .09848    .08587    .39198    .37942    .71916    1.9409

 #1       .93623    1.0888    .84204    1.0786    .86171    1.0089
 #2       .93493    1.0901    .83738    1.0844    .85299    1.0370


 IntStd   1         2         3         4         5         6         7
 Mode     *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED

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 Elem     Y         --        --        --        --        --        --
 Wavlen   371.030   --        --        --        --        --        --
 Avge     31641     --        --        --        --        --        --
 SDev     2.828427  --        --        --        --        --        --
 %RSD     .0089391  --        --        --        --        --        --

 #1       31643     --        --        --        --        --        --
 #2       31639     --        --        --        --        --        --
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METALS BATCH WORKSHEET

Lab Name: TestAmerica Houston   Job No.: 600-52867-1

SDG No.:

Batch Number: 76449   Batch Start Date: 04/04/12 14:49   Batch Analyst: Racelis, Froilan Noel E

Batch Method: 3050B   Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	InitialAmount	FinalAmount	METH202 00020	METHCL 00037	METHNO3 00027
MB 600-76449/1		3050B, 6010B		CALC NOT SET TO RUN	1.00 g	50 mL	4 mL	2.5 mL	5 mL
LCS 600-76449/2		3050B, 6010B		CALC NOT SET TO RUN	0.50 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-1	2012-BG-1	3050B, 6010B	T	CALC NOT SET TO RUN	1.06 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-2	2012-BG-2	3050B, 6010B	T	CALC NOT SET TO RUN	1.05 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-3	2012-BG-3	3050B, 6010B	T	CALC NOT SET TO RUN	1.06 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-4	2012-BG-7	3050B, 6010B	T	CALC NOT SET TO RUN	1.05 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-5	2012-BG-9	3050B, 6010B	T	CALC NOT SET TO RUN	1.00 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-6	2012-BG-5	3050B, 6010B	T	CALC NOT SET TO RUN	1.02 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-7	2012-BG-4	3050B, 6010B	T	CALC NOT SET TO RUN	1.05 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-8	2012-BG-6	3050B, 6010B	T	CALC NOT SET TO RUN	1.04 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-9	2012-BG-10	3050B, 6010B	T	CALC NOT SET TO RUN	1.04 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-10	2012-BG-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.02 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-10 DU	2012-BG-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.04 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-10 MS	2012-BG-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.02 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-10 MSD	2012-BG-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.06 g	50 mL	4 mL	2.5 mL	5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	METSLCSS 00016	METSPIKEA 00011	METSPIKEB 00012			
MB 600-76449/1		3050B, 6010B							
LCS 600-76449/2		3050B, 6010B		0.5 g					
600-52867-A-1	2012-BG-1	3050B, 6010B	T						
600-52867-A-2	2012-BG-2	3050B, 6010B	T						
600-52867-A-3	2012-BG-3	3050B, 6010B	T						
600-52867-A-4	2012-BG-7	3050B, 6010B	T						
600-52867-A-5	2012-BG-9	3050B, 6010B	T						
600-52867-A-6	2012-BG-5	3050B, 6010B	T						

METALS BATCH WORKSHEET

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Batch Number: 76449 Batch Start Date: 04/04/12 14:49 Batch Analyst: Racelis, Froilan Noel E

Batch Method: 3050B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	METSLCSS 00016	METSPIKEA 00011	METSPIKEB 00012			
600-52867-A-7	2012-BG-4	3050B, 6010B	T						
600-52867-A-8	2012-BG-6	3050B, 6010B	T						
600-52867-A-9	2012-BG-10	3050B, 6010B	T						
600-52867-A-10	2012-BG-8	3050B, 6010B	T						
600-52867-A-10 DU	2012-BG-8	3050B, 6010B	T						
600-52867-A-10 MS	2012-BG-8	3050B, 6010B	T		250 uL	250 uL			
600-52867-A-10 MSD	2012-BG-8	3050B, 6010B	T		250 uL	250 uL			

Batch Notes	
Balance ID	B-6
Hood ID or number	M5
Hot Block ID number	HB 02
Temperature	95 Degrees C
ID number of the thermometer	517

Basis	Basis Description
T	Total/NA

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GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Houston
Job Number: 600-52867-1
SDG No.:
Project: Exide Recycling Center, Frisco TX Projec

Client Sample ID	Lab Sample ID
2012-BG-1	600-52867-1
2012-BG-2	600-52867-2
2012-BG-3	600-52867-3
2012-BG-7	600-52867-4
2012-BG-9	600-52867-5
2012-BG-5	600-52867-6
2012-BG-4	600-52867-7
2012-BG-6	600-52867-8
2012-BG-10	600-52867-9
2012-BG-8	600-52867-10

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Houston   Job Number: 600-52867-1

SDG Number:

Matrix: Solid   Instrument ID: NOEQUIP

Method: Moisture   RL Date: 09/05/2005 11:35

Analyte	Wavelength/ Mass	RL (%)	
Percent Moisture		1	
Percent Solids		1	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Instrument ID: NOEQUIP Method: Moisture

Start Date: 04/02/2012 13:22 End Date: 04/02/2012 13:22

Lab Sample ID	D/F	Type	Time	Analytes																			
				%Sol	Moist																		
ZZZZZZ			13:22																				
ZZZZZZ			13:22																				
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ZZZZZZ			13:22																				
ZZZZZZ			13:22																				
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ZZZZZZ			13:22																				
ZZZZZZ			13:22																				
600-52867-1	1	T	13:22	X	X																		
600-52867-2	1	T	13:22	X	X																		
600-52867-3	1	T	13:22	X	X																		
600-52867-4	1	T	13:22	X	X																		
600-52867-5	1	T	13:22	X	X																		
600-52867-5 DU	1	T	13:22	X	X																		
600-52867-6	1	T	13:22	X	X																		
600-52867-7	1	T	13:22	X	X																		
600-52867-8	1	T	13:22	X	X																		
600-52867-9	1	T	13:22	X	X																		
600-52867-10	1	T	13:22	X	X																		
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Prep Types

T = Total/NA

FORM XIII-IN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Houston

Job No.: 600-52867-1

SDG No.:

Batch Number: 76213

Batch Start Date: 04/02/12 13:22

Batch Analyst: Daniel, Kevin R

Batch Method: Moisture

Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry		
600-52867-A-1	2012-BG-1	Moisture	T	10	3.01 g	13.72 g	11.28 g		
600-52867-A-2	2012-BG-2	Moisture	T	11	3.01 g	13.94 g	12.30 g		
600-52867-A-3	2012-BG-3	Moisture	T	12	3.01 g	13.60 g	11.51 g		
600-52867-A-4	2012-BG-7	Moisture	T	13	3.01 g	13.57 g	11.33 g		
600-52867-A-5	2012-BG-9	Moisture	T	14	3.01 g	15.05 g	12.72 g		
600-52867-A-5 DU	2012-BG-9	Moisture	T	15	3.01 g	14.88 g	12.44 g		
600-52867-A-6	2012-BG-5	Moisture	T	16	3.01 g	13.38 g	11.43 g		
600-52867-A-7	2012-BG-4	Moisture	T	17	3.01 g	14.91 g	12.24 g		
600-52867-A-8	2012-BG-6	Moisture	T	18	3.01 g	14.88 g	12.34 g		
600-52867-A-9	2012-BG-10	Moisture	T	19	3.01 g	13.80 g	11.56 g		
600-52867-A-10	2012-BG-8	Moisture	T	20	3.01 g	14.71 g	12.33 g		

Batch Notes	
Balance ID	b-2 No Unit
Date samples were placed in the oven	04/02/2012

Basis	Basis Description
T	Total/NA

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Chain of Custody Record

TAL-4124 (1007)

Temperature on Receipt ______

Drinking Water? Yes ☐ No ☒

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client: PBW, LLC

Address: 2201 Double Creek Dr, Ste 4004

City: Round Rock State: TX Zip Code: 78664

Project Name and Location (State): Exide Frisco (TX)

Contract/Purchase Order/Quote No.

Project Manager: Sachin Kuchadkar Chris Moore

Date: 3/29/12

Chain of Custody Number: 090335

Telephone Number (Area Code)/Fax Number: 512-671-3434 / 3446

Lab Number

Page 1 of 1

Site Contact: Chris Moore

Lab Contact

Carrier/Waybill Number: Fed Ex

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Cd+Pb 6010/6020
2012-BG-1	3/29/12	0818				X	X						X
2012-BG-2	↓	0840				↓	↓						↓
2012-BG-3	↓	0900				↓	↓						↓
2012-BG-7	↓	0946				↓	↓						↓
2012-BG-9	↓	1020				↓	↓						↓
2012-BG-5	↓	1125				↓	↓						↓
2012-BG-4	↓	1516				↓	↓						↓
2012-BG-6	↓	1532				↓	↓						↓
2012-BG-10	↓	1620				↓	↓						↓
2012-BG-10	↓	1625				↓	↓						↓

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☒ Archive For Indefinite Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Std

QC Requirements (Specify) IV

1. Relinquished By — Date 3/28/12 Time 1712

1. Received By Nina — Date 3.30.12 Time 931

2. Relinquished By — Date — Time

2. Received By — Date — Time

3. Relinquished By — Date — Time

3. Received By — Date — Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Pastor, Behling & Wheeler LLC

Job Number: 600-52867-1

Login Number: 52867

List Number: 1

Creator: Capps, Dana

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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.	False	
Cooler Temperature is recorded.	True	9.0
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

DATA VALIDATION AND USABILITY SUMMARY

FRISCO RECYCLING CENTER
EXIDE TECHNOLOGIES
FRISCO, TEXAS

MARCH 2012 SOIL SAMPLING EVENT
BACKGROUND AND ADDITIONAL SITE SAMPLES

Prepared by:

Quality Assurance Associates (*QAA, L.L.C.*)
1007 Francis Drive
College Station, TX 77840
www.qaallc.com
979-694-7199

June 13, 2012

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ATTACHMENTS

1.0 PROJECT OVERVIEW AND SUMMARY

Quality Assurance Associates (QAA) completed a third party QA/QC data validation of chemical analysis data from the Exide Technologies Frisco Recycling Center in Frisco, Texas. The independent data validation, which included a data verification process and usability determination, was completed in accord with the Quality Assurance Project Plan (revised November 2011), hereinafter called the QAPP, using Level IV data packages and electronic data deliverables (EDD) supplied by the laboratory (TestAmerica-Houston). The data include 17 metals samples, with 7 soil samples from the site and 10 background soil samples, as listed in Table 1. The samples were collected by Pastor, Behling, and Wheeler, LLC (PBW) in March 2012 and the results will be used to define the nature, location, extent, and movement of hazardous wastes and/or hazardous constituents, which are present at or have been released from the site, specifically by comparison of the results to delineation standards and to establish background levels of metals. QAA performed the validation per the procedures specified in section 6.0 of the QAPP using the guidelines presented in the U.S. EPA Contract Laboratory Program *National Functional Guidelines for Inorganic Superfund Data Review* (January 2010), hereinafter called the NFG, and the QC requirements in the analytical methodology used by the laboratory.

The results of the review are summarized in Table 4, which lists all of the qualified sample results. All qualified data is considered useable with limitations as discussed in Section 5.0. Additionally, all unqualified results for non-detects are at or below the delineation standards and thus suitable for demonstrating conformance with standards.

2.0 PROCEDURES

QAA completed the validation by examining the hardcopy packages and EDD produced by the laboratory, which include analysis results, QC reports, and raw data. QAA examined the data for all of the samples for:

- Data Package Completeness,
- Chain-of-Custody Procedures,
- Sample Preservation and Holding Time,
- Instrument Calibration and Performance,
- Calibration Verification,
- Blanks (Laboratory and Field),
- Matrix Spike/Matrix Spike Duplicates (MS/MSD),
- Matrix Duplicates (MD),
- Serial Dilutions (SD),
- Laboratory Control Sample/Laboratory Control Sample Duplicates (LCS/LCSD), and
- Field Duplicates

The remaining QC Level IV checks (surrogates, internal standards, and target compound identification) do not apply for the SW846-6010 methodology employed by the laboratory for this event.

Additionally, using the EDD, the validator verified that the reporting limits and detection limits for all of the samples were properly adjusted for sample-specific factors such as dilution, dry-weight correction, and use of a smaller or larger sample aliquot. For three of the 17 samples with one from each laboratory work order, the validator reviewed the raw data and determined that the sample results were correctly calculated and reported.

The validator performed the validation using data validation checklists (Attachment A) and the following QC criteria:

- Laboratory Accuracy – the method-specified recovery control limits of 75-125% for metals with a data rejection limit of 30%
- Laboratory Precision – the method-specified RPD control limit of 20% or an absolute difference control limit of 1x the reporting limit (if either result is less than or equal to 5x the reporting limit) per the NFG

After completing the examination, the validator applied qualifying flags to any data with a QC deficiency. The qualifiers were applied in accord with the NFG and include the expected direction of bias if apparent from the QC outcome. The validator considered each QC deficiency separately and then, for multiple deficiencies, applied the most severe flag. The data validation qualifiers (DVQs) are defined in Table 2. Note that the DVQ replaces all qualifiers applied by the laboratory.

Upon completion of the validation, QAA performed data verification to assess the entire data set for overall trends in data quality and usability. Data quality was examined in terms of precision, accuracy, representativeness, sensitivity, completeness, and comparability. Data usability was then determined considering the intended use, laboratory reporting limits, and QC deficiencies found during validation using the U.S. EPA’s Guidance for Data Useability in Risk Assessment, Part A (April 1992).

3.0 DATA VALIDATION RESULTS

The soil samples were analyzed for total metals and synthetic precipitation leaching procedure (SPLP) metals. All of the samples were included in the validation and the outcomes are summarized below.

3.1 PRECISION

QAA evaluated the sampling and analytical precision of the sample results using the relative percent difference (RPD) for the laboratory control sample duplicates (LCSD), the unspiked matrix duplicates (MD) and matrix spike duplicates (MSD), and the field duplicates (FD). LCSD are prepared using a clean sample matrix (reagent water or sand) and provide an indication of the precision of the preparation and analysis technique on a sample free of matrix effects. MD and MSD are prepared by the laboratory using a field sample. They provide an indication of the precision of the preparation and analysis technique on the specific sample matrix. FD are prepared by the sampler in the field and provide an indication of the precision of the sampling technique plus the preparation and analysis technique on the specific sample matrix.

3.1.1 LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) PRECISION

No LCSD were analyzed or required per the analytical methodology for the tests performed during this event.

3.1.2 MATRIX DUPLICATE (MD) AND MATRIX SPIKE DUPLICATE (MSD) PRECISION

The laboratory analyzed an MD and MSD with every analytical batch (maximum 20 samples) and reported RPDs for all target compounds for MD and MSD prepared using a sample from the site. As indicated in Table 1, at least one MD and MSD was prepared using a sample from the site for each test and each investigative media (site soil, background soil).

Some MD and MSD RPDs are above the QC criteria (maximum 20%) and the validator qualified the associated data per the NFG as detailed in Table 3. Table 4 lists all qualified sample results. Note that, for cases where either result for the duplicate pair is less than 5x the reporting limit, the validator compared the absolute difference between the two results to a control limit of 1x the reporting limit rather than evaluating the RPD per the NFG. Additionally, the validator considered samples of the same media to be of similar matrix (e.g., if deficiencies were noted for a MD or MSD prepared using a background soil sample, all background soil samples in the same analytical batch were qualified).

3.1.3 FIELD DUPLICATE (FD) PRECISION

No FD were collected or required per the QAPP for the media sampled during this event.

3.2 ACCURACY

QAA evaluated the analytical accuracy of the sample results using the results for the laboratory control samples (LCS/LCSD), matrix spikes (MS/MSD) and post-digestion spikes (PDS), and serial dilutions (SD). LCS/LCSD are prepared using a clean sample matrix (reagent water or sand) and provide an indication of the accuracy of the preparation and analysis technique on a sample free of matrix effects. MS/MSD are prepared using a field sample and provide an indication of the accuracy of the preparation and analysis technique on the specific sample matrix. PDS are prepared like MS/MSD except the spike is added after preparation just before analysis rather than before preparation. SD are prepared using a field sample and indicate whether or not matrix interferences are affecting the accuracy of the preparation and analysis technique on the specific sample matrix.

3.2.1 LABORATORY CONTROL SAMPLE (LCS/LCSD) ACCURACY

The laboratory analyzed a LCS with every analytical batch (maximum 20 samples) as required and reported recoveries for all target compounds. No LCSD were analyzed or required for the analytical methodology used for this event. All LCS recoveries are within the QC criteria (75-125% for metals).

3.2.2 MATRIX SPIKE (MS/MSD) AND POST-DIGESTION SPIKE (PDS) ACCURACY

The laboratory analyzed an MS and MSD for every analytical batch (maximum 20 samples) and reported recoveries for all target compounds for MS/MSD prepared using a sample from the site. Additionally, the laboratory analyzed a PDS for every metals analytical batch and reported recoveries for any target metals with a MS/MSD recovery outside the control limits. As indicated in Table 1, at least one MS/MSD was prepared using a sample from the site for each test and each investigative media (site soil, background soil).

Some MS, MSD and/or PDS recoveries are outside the QC criteria (75-125% for metals) and the validator qualified the associated data per the NFG as detailed in Table 3. Table 4 lists all qualified sample results. Note that if an analyte was detected in the unspiked parent sample at a concentration well above (greater than four times) the concentration of spike added to the sample, thereby rendering the recoveries inconclusive, the check was waived and the validator did not qualify the data. Additionally, the validator considered samples of the same media to be of similar matrix (e.g., if deficiencies were noted for a MS/MSD prepared using a background soil sample, all background soil samples in the same analytical batch were qualified).

3.2.3 SERIAL DILUTION (SD) %DIFFERENCE

For each metals MS/MSD, the laboratory analyzed an SD and reported the %difference for all target metals detected above 50x the method detection limit (MDL) for SD prepared using a sample from the site.

Some SD %differences are above the QC criteria (10%) and the validator qualified the associated data per the NFG as detailed in Table 3. Table 4 lists all qualified sample results. Note that the validator considered samples of the same media (site soil, background soil) to be of similar matrix (e.g., if deficiencies were noted for a SD prepared using a background soil sample, all background soil samples in the same analytical batch were qualified).

3.3 REPRESENTATIVENESS

QAA evaluated representativeness of the sample results by examining the custody procedures, calculating holding times, examining blanks for evidence of contamination, and examining sample results for outliers or suspect values.

3.3.1 CHAIN-OF-CUSTODY

All samples were delivered to the laboratory by an overnight, commercial carrier within two days of collection with properly executed chain-of-custody records, which confirms that sample integrity was maintained. The validator noted a few minor inconsistencies between the information on the custody records and that assigned by the laboratory. However, all issues were resolved and/or do not affect the integrity of the investigative samples. Details are listed in the validator’s checklists included as Attachment A.

3.3.2 SAMPLE PRESERVATION AND HOLDING TIME

All samples were properly preserved and analyzed within the holding times listed in Table 5-1 of the QAPP, which confirms that sample results are not affected by sample degradation, except as follows:

- The samples in work order 600-52864 and 600-52867 were received at 9.0 C.

The samples were analyzed for total arsenic, cadmium, and lead, which require preservation at 4±2 C per Table 3 in the QAPP. However, no preservation is required for metals in solid samples per the analytical method and thus analyte degradation is not suspected and the sample results were not qualified.

3.3.3 BLANK CONTAMINATION

The laboratory analyzed a preparation blank for every analytical batch (maximum 20 samples) and a calibration blank for every 10 metals analyses. Additionally, the QAPP requires one equipment rinsate blank per day of soil sample collection, which requires re-usable equipment. However, no equipment rinsate blanks were collected with the 17 soil samples for this event.

One detect is reported in the laboratory QC blanks and the validator qualified the associated data per the NFG as detailed in Table 3. Table 4 lists all qualified sample results. Note that the validator calculated a blank equivalent concentration taking into account the sample weight, moisture content, and dilution factor for each sample when determining if the contamination in the blank is near that in the sample, and thus if data quality is affected for that sample.

3.3.4 SAMPLE RESULTS EVALUATION

As previously noted, no field duplicate results are available for comparison. For samples with total metals and SPLP metals, the validator examined the results to determine the maximum possible leachate concentration and found no apparent outliers.

3.4 SENSITIVITY

QAA evaluated sensitivity by examining the instrument performance and the sample reporting limits as compared to decision criteria.

3.4.1 INSTRUMENT PERFORMANCE AND CALIBRATION

The laboratory calibrated each instrument and analyzed a calibration verification standard at the beginning of every analytical shift and for every 10 metals analyses. Recoveries for all calibration verification standards are within the QC criteria (70-130%), which indicates the instruments were properly calibrated and stable throughout the analytical shift.

The laboratory also analyzed quarterly low-level detectability check standards (DCS).The DCS confirm the reasonableness of the laboratory method detection limits (MDLs) (i.e., they indicate that the analyte is recoverable at a spike level within about 3x the MDL) for all investigative samples.

3.4.2 COMPARISON OF REPORTING LIMITS TO DECISION CRITERIA

The laboratory reported non-detects at the sample detection limit (SDL), which is the method detection limit (MDL) adjusted for sample-specific actions such as dilution, dry-weight correction, or use of a smaller sample aliquot. Detects above the SDL but below the SQL, which is the method quantitation limit (MQL) adjusted for sample-specific actions, are reported as laboratory J values. All of the SDLs for non-detects are at or below the delineations standards for this event.

3.5 COMPLETENESS

QAA evaluated completeness by examining the laboratory data packages and by determining the amount of valid data obtained for the samples.

The Level IV data packages contain all necessary information, or the information was provided upon request as follows:

- For work orders 600-52584-1 and 600-52864-1, the original packages do not include the post digestion spike (PDS) results, serial dilution (SD) results, and/or raw data for one or more metals analytical shifts. The laboratory added the necessary data and submitted revised reports.
- For the same two work orders, the packages do not include the bench logs for the synthetic precipitation leaching procedure. The laboratory provided these pages separately and they are included in Attachment B.

QAA evaluated field completeness by comparing the total number of tests performed with the total number of tests planned for investigative samples. All planned investigative samples were collected and analyzed for the requested tests, giving a field completeness of 100%. The typical goal is 90%. (The QAPP does not include completeness goals.)

QAA evaluated laboratory completeness by comparing the total number of valid analytical results with the total number of results reported for investigative samples. The validator did not reject any results, giving a laboratory completeness of 100%. The typical goal is 90%. (The QAPP does not include completeness goals.)

3.6 COMPARABILITY

Samples were analyzed using standard EPA protocols as shown in Table 1. The methodologies employed by the laboratory are specified for use in the QAPP and provide definitive, quantitative data. The hardcopy sample results are reported with the sample detection limit (SDL) and the method quantitation limit (MQL). The EDD includes the SDL (under the Low Limit column) and the sample quantitation limit (SQL, under the High Limit column). A detection limit corresponds to the lowest concentration at which a target analyte can be positively identified but not necessarily accurately measured and is statistically determined by the laboratory. A quantitation limit reflects the lowest concentration at which a target analyte can be both positively identified and accurately measured. The SDLs and SQLs reported by the laboratory are adjusted for sample-specific actions such as dilution or use of a smaller aliquot size and include dry-weight correction for all solid samples. Results for the total metals soil samples are reported in mg/kg and results for the SPLP samples are reported in mg/L. Non-detects are reported as less than the SDL and detects between the SDL and SQL are reported with a laboratory J flag. Since these detects are below the calibration range, the validator qualified each as estimated with an unknown bias (J).

The analytical results were reviewed and are classified as Level IV data. The analytical results are considered comparable to other results similarly generated.

4.0 DATA VERIFICATION RESULTS

Upon completion of the validation, data verification was completed to summarize overall trends in data quality as follows:

1. Precision is the degree of mutual agreement among individual measurements of the same property, usually under prescribed similar conditions, without assumption of any prior information as to the true result. Precision is measured through the analysis of replicate or duplicate samples and calculation of the relative percent difference (RPD) between the results. The validator assessed precision using the laboratory duplicates. The laboratory prepared at least one MD and MSD using a sample from the site for each test and each investigative media. The RPDs for these laboratory duplicates are within the limits, which indicates good precision for the analytical method on the specific sample matrix, or the validator qualified the results for similar samples in the same analytical batch as the duplicate. Of the 50 results, 30 results (all of which are for total metals in soil) are qualified as estimated (J) based on laboratory duplicate precision.
2. Accuracy is the degree of agreement of a measurement with an accepted reference or true value. Accuracy is measured through the analysis of reference samples or the introduction of reference materials (spikes) to field samples and calculation of the percent recovery of the known value. The validator assessed accuracy using the laboratory spikes and matrix spikes. The laboratory prepared a laboratory control sample (LCS) using reagent water or sand with each analytical batch and reported the recoveries for all target compounds. All LCS recoveries are within the limits, which indicates good accuracy for the analytical method on a sample free of matrix effects. Additionally, the laboratory prepared at least one matrix spike using a sample from the site for each test and each investigative media and also prepared several post digestion spikes (PDS) and serial dilutions (SD) for the metals analyses. The MS/MSD and PDS recoveries are within the laboratory limits, which indicates good accuracy for the analytical method on the specific sample matrix, or the validator qualified the results for similar samples in the same analytical batch as the MS/MSD. Likewise, the SD %differences are within the laboratory limits, which indicates there is no matrix interference affecting the accuracy of the results, or the validator qualified the results for similar samples in the same analytical batch as the SD. None of the results are qualified as rejected due to extremely poor accuracy. Of the 50 results, 20 results (all of which are for total metals in soil) are qualified as estimated based on matrix spike, post digestion spike, and/or serial dilution results.
3. Representativeness expresses the degree to which sample data accurately and precisely represent environmental conditions and parameter variations at a sampling location. Representativeness is a qualitative parameter most concerned with the proper design of the sampling program and is also ensured by using the proper analytical procedures. The validator assessed representativeness by examining custody procedures, sample preservation and holding times, the laboratory blanks, and comparable sample results. Sample preservation and holding times met the method requirements, which indicates the results are not affected by sample degradation. The laboratory prepared a method blank with each analytical batch and analyzed calibration blanks throughout each analytical shift. The laboratory blanks show no contamination, which indicates the samples were not affected by laboratory procedures, or the validator qualified the samples associated with the blank that have a concentration similar to that in the blank. This resulted in the qualification of two detects below the reporting limit (i.e., laboratory J values) for cadmium as not detected substantially above the blank concentration (U). No field duplicates were required or collected for this event. A comparison of total metals versus SPLP metals results do not show any apparent outliers.
4. Sensitivity (S) is the capability of a method or instrument to discriminate between measurement responses representing different levels of the parameter of interest. Sensitivity is expressed in terms of the laboratory detection

limits (which are a measure of the concentration an instrument can detect or ‘see’ in a sample) and the laboratory reporting limits or quantitation limits (which are a measure of the concentration an instrument can accurately measure in a sample). The laboratory method detection limits (MDLs) are confirmed reasonable by detectability check standards (DCS). For all non-detects, the sample detection limits (SDLs) are at or below the decision criteria (i.e., the delineation standards for the site). Additionally, proper analytical procedures were used and calibration results met the method requirements.

5. Completeness (C) is the amount of valid data obtained from a measurement system compared to the amount that was expected and required to meet the project data goals. QAA calculated field completeness at 100% and laboratory completeness at 100%.

6. Comparability (C) is an expression of the confidence with which one data set can be compared to another. The samples were analyzed using standard EPA protocols as specified in the QAPP. The analytical results were reviewed and are classified as Level IV data and are considered comparable to other results similarly generated. Note that results are reported in mg/kg with dry-weight correction for total metals in soils and in mg/L for SPLP metals.

5.0 RECONCILIATION WITH USER REQUIREMENTS

Samples results will be used to define the nature, location, extent, and movement of hazardous wastes and/or hazardous constituents, which are present at or have been released from the site, specifically by comparison of the results to delineation standards and to establish background levels for metals.

5.1 USABILITY OF UNQUALIFIED DATA FOR NONDETECTED RESULTS

The laboratory reported non-detects at the sample detection limit (SDL), which is the method detection limit (MDL) adjusted for sample-specific actions such as dilution, dry-weight correction, or use of a smaller sample aliquot. The MDLs are confirmed reasonable by the analysis of detectability check standards (DCS) and the SDLs for all nondetected results are at or below the decision criteria (i.e., the delineation standards for the site).

5.2 USABILITY OF QUALIFIED DATA

Table 4 shows the qualified data for all samples. No results are qualified as rejected (R) and thus all data is suitable for the intended use. Some results are qualified as not substantially above the blank concentration (U) or as estimated (J or UJ) with a low, high, or indeterminate bias.

Analytes that were not detected substantially above the blank concentration (U) should be considered not present at the reporting limit or SQL. Thus, the reported concentration is replaced with the SQL. Table 4 includes the SQL under the ‘Adjusted Result’ column for U-flagged results.

For data that are estimated, results that are considered biased low (J-) can be used for determining the presence of the analyte and as an indication that the concentration of the analyte exceeds a given criterion. However, the concentration reported may be low. Results that are biased high (J+) can be used for determining the presence of the analyte and as an indication that the concentration of the analyte is less than a given criterion. However, the concentration reported may be high. Similarly, results with an indeterminate bias may be either low or high. Note that none of the SPLP metals data is qualified as estimated and that the site soil samples that are qualified as estimated are above the delineation standard and exceed the standard by a factor of two or more.

TABLE 1
EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER
MARCH 2012 SOIL SAMPLING EVENT

SAMPLE SUMMARY

Lab ID	**Client ID**	**Matrix**	**Media**	**Type**	**Collection Date**	**Receive Date**	**QC Batch**[1]				
							Total Arsenic	**Total Cadmium**	**Total Lead**	**SPLP Cadmium**	**SPLP Lead**
600-52584-1	2012-BSA-3A(0-2)	Solid	Site Soil	INV	3/23/12	3/24/12	NA	600-75633	NA	600-75853	NA
600-52584-1	2012-BSA-3A(0-2)	Solid	Site Soil	MD	3/23/12	3/24/12	NA	600-75633	NA	600-75853	NA
600-52584-1	2012-BSA-3A(0-2)	Solid	Site Soil	MS	3/23/12	3/24/12	NA	600-75633	NA	600-75853	NA
600-52584-1	2012-BSA-3A(0-2)	Solid	Site Soil	MSD	3/23/12	3/24/12	NA	600-75633	NA	600-75853	NA
600-52584-2	2012-BSA-1A(0-2)	Solid	Site Soil	INV	3/23/12	3/24/12	NA	NA	600-75633	NA	NA
600-52864-1	2012-BSA-4a (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	600-76437	600-76437
600-52864-1	2012-BSA-4a (0-1')	Solid	Site Soil	MD	3/29/12	3/30/12	NA	NA	NA	600-76437	600-76437
600-52864-1	2012-BSA-4a (0-1')	Solid	Site Soil	MS	3/29/12	3/30/12	NA	NA	NA	600-76437	600-76437
600-52864-1	2012-BSA-4a (0-1')	Solid	Site Soil	MSD	3/29/12	3/30/12	NA	NA	NA	600-76437	600-76437
600-52864-2	2012-BSA-4b (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	NA	NA
600-52864-2	2012-BSA-4b (0-1')	Solid	Site Soil	MD	3/29/12	3/30/12	NA	600-76199	600-76199	NA	NA
600-52864-2	2012-BSA-4b (0-1')	Solid	Site Soil	MS	3/29/12	3/30/12	NA	600-76199	600-76199	NA	NA
600-52864-2	2012-BSA-4b (0-1')	Solid	Site Soil	MSD	3/29/12	3/30/12	NA	600-76199	600-76199	NA	NA
600-52864-3	2012-BSA-4c (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	600-76437	600-76437
600-52864-4	2012-BSA-4d (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	600-76437	600-76437
600-52864-5	2012-BSA-4e (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	NA	600-76906
600-52864-5	2012-BSA-4e (0-1')	Solid	Site Soil	MD	3/29/12	3/30/12	NA	NA	NA	NA	600-76906
600-52864-5	2012-BSA-4e (0-1')	Solid	Site Soil	MS	3/29/12	3/30/12	NA	NA	NA	NA	600-76906
600-52864-5	2012-BSA-4e (0-1')	Solid	Site Soil	MSD	3/29/12	3/30/12	NA	NA	NA	NA	600-76906
600-52867-1	2012-BG-1	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-2	2012-BG-2	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA

Lab ID	**Client ID**	**Matrix**	**Media**	**Type**	**Collection Date**	**Receive Date**	**QC Batch**$^{(1)}$				
							Total Arsenic	**Total Cadmium**	**Total Lead**	**SPLP Cadmium**	**SPLP Lead**
600-52867-3	2012-BG-3	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-4	2012-BG-7	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-5	2012-BG-9	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-6	2012-BG-5	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-7	2012-BG-4	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-8	2012-BG-6	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-9	2012-BG-10	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-10	2012-BG-8	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-10	2012-BG-8	Solid	Background Soil	MD	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-10	2012-BG-8	Solid	Background Soil	MS	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-10	2012-BG-8	Solid	Background Soil	MSD	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA

INV - Investigative Sample
NA – Not Analyzed

(1) The following analytical methods were used:

- Total Metals (As, Cd, Pb): SW-846 3050B/6010B
- SPLP Metals (Cd, Pb): SW-846 1312/3010A/6010B

TABLE 2
EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER
MARCH 2012 SOIL SAMPLING EVENT

DATA VALIDATION QUALIFIERS (DVQs)

The DVQ replaces all flags applied by the laboratory.

J = Estimated. The analyte was positively identified; however, the reported sample concentration is approximate due to exceedance of one or more QC requirements. Directional bias cannot be determined

J- = Estimated low. The analyte was positively identified; however, the reported sample concentration is approximate due to exceedance of one or more QC requirements. The actual value is expected to be lower.

J+ = Estimated high. The analyte was positively identified; however, the reported sample concentration is approximate due to exceedance of one or more QC requirements. The actual value is expected to be higher.

UJ = Estimated. The analyte was not detected above the reporting limit; however, the reporting limit is approximate due to exceedance of one or more QC requirements.

U = Blank contamination. The analyte was not detected substantially above the level reported in an associated laboratory and/or field blanks.

R = Rejected. The sample result is rejected due to serious QC deficiencies that make it impossible to verify the presence or absence of the analyte.

NOTE: For multiple deficiencies, the reviewer applied the most severe flag. (R>U>J>J-/J+ and R>UJ)

TABLE 3

EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER

MARCH 2012 SOIL SAMPLING EVENT

QC DEFICIENCIES AND DATA QUALIFICATION ACTIONS

Sample					**Method**		**Batch**		**Date/Time**		**Analyte**		**Validation**	
Lab ID	**Client ID**	**Type**	**Matrix**	**Prep Type**	**Prep**	**Analy**	**Prep**	**Analy**	**Prep**	**Analy**	**Name**	**Lab Flag**	**QC Deficiency**	**Action**
MATRIX DUPLICATE (MD) PRECISION														
600-52864-1	2012-BSA-4a (0-1')	MD	Solid	Total/NA	Moisture			600-76163		04/01/2012 16:34	Percent Moisture		Poor MD precision (48 RPD)	None (flagging based on analyte RPD)
600-52864-2	2012-BSA-4b (0-1')	MD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012 16:43	Cadmium	F	Poor MD precision (83 RPD)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
600-52864-2	2012-BSA-4b (0-1')	MD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012 16:43	Lead	F	Poor MD precision (94 RPD)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
600-52867-10	2012-BG-8	MD	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/2012 14:49	04/05/2012 10:13	Cadmium	F	Poor MD precision (difference > +/- 1xRL)	J/UJ to detects/NDs for similar samples (all BG soils) digested in this batch
600-52867-10	2012-BG-8	MD	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/2012 14:49	04/05/2012 10:13	Lead	F	Poor MD precision (90 RPD)	J/UJ to detects/NDs for similar samples (all BG soils) digested in this batch
MATRIX SPIKE DUPLICATE (MSD) PRECISION														
600-52864-2	2012-BSA-4b (0-1')	MSD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012 16:59	Lead	4 N	Poor MSD precision (32 RPD)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
MATRIX SPIKE (MS/MSD) AND POST-DIGESTION SPIKE (PDS) ACCURACY														
600-52584-1	2012-BSA-3A(0-2)	MS	Solid	Total/NA	3050B	6010B	600-75633	600-75753	03/26/2012 13:13	03/27/2012 15:37	Cadmium	4	Extremely low MS recovery (-532%), PDS (NC), SD passes at 7.3%	None (check waived because unspiked sample conc > 4x spike added)
600-52584-1	2012-BSA-3A(0-2)	MSD	Solid	Total/NA	3050B	6010B	600-75633	600-75753	03/26/2012 13:13	03/27/2012 15:39	Cadmium	4	Extremely low MSD recovery (-916%), PDS (NC), SD passes at 4.1%	None (check waived because unspiked sample conc > 4x spike added)

Sample					Method		Batch		Date/Time		Analyte		Validation	
Lab ID	**Client ID**	**Type**	**Matrix**	**Prep Type**	**Prep**	**Analy**	**Prep**	**Analy**	**Prep**	**Analy**	**Name**	**Lab Flag**	**QC Deficiency**	**Action**
600-52864-2	2012-BSA-4b (0-1')	MS	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012 16:47	Lead	4	High MS recovery (1188%), PDS passes at 86%	None (check waived because unspiked sample conc > 4x spike added)
600-52864-2	2012-BSA-4b (0-1')	MSD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012 16:59	Lead	4 N	High MSD recovery (1840%), PDS passes at 86%	None (check waived because unspiked sample conc > 4x spike added)
600-52864-2	2012-BSA-4b (0-1')	PDS	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012	Cadmium	4 N	Low PDS recovery (73%)	None (MS/MSD recoveries pass at 92% and 102%)
600-52867-10	2012-BG-8	MS	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/2012 14:49	04/05/2012 10:16	Lead	N	High MS recovery (226%), PDS passes at 79%	J to detects for similar samples (all BG soils) digested in this batch
600-52867-10	2012-BG-8	MSD	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/2012 14:49	04/05/2012 10:28	Lead	N	High MSD recovery (206%), PDS passes at 79%	J to detects for similar samples (all BG soils) digested in this batch
SERIAL DILUTION (SD) %DIFFERENCE														
600-52864-2	2012-BSA-4b (0-1')	SD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012	Cadmium	4 N	SD indicates matrix interference (33 %D)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
600-52864-2	2012-BSA-4b (0-1')	SD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012	Lead	4 N	SD indicates matrix interference (31 %D)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
600-52867-10	2012-BG-8	SD	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/2012 14:49	04/05/2012 11:03	Lead	F	SD indicates matrix interference (21 %D)	J/UJ to detects/NDs for similar samples (all BG soils) digested in this batch
LABORATORY BLANK CONTAMINATION														
LB 600-76425/1-B		LB	Solid	SPLP West	3010A	6010B	600-76437	600-76509	04/04/2012 11:55	04/05/2012 09:33	Cadmium	J	Laboratory blank contamination (0.000400 J mg/L)	U at RL to Js, J+ to detects <10x blank equivalent concentration for samples digested in the same batch

TABLE 4
EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER
MARCH 2012 SOIL SAMPLING EVENT

QUALIFIED SAMPLE RESULTS

Lab ID	Client ID	Matrix	Prep Type	Analysis Method	Analyte	Result	Flag	SDL	SQL	Delin. Std	Unit	DVQ	Adjusted Result	Comment
600-52864-1	2012-BSA-4a (0-1')	Solid	Total/ NA	6010B	Cadmium	9.80		0.0301	0.293	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-1	2012-BSA-4a (0-1')	Solid	Total/ NA	6010B	Lead	1510		0.123	0.587	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52864-1	2012-BSA-4a (0-1')	Solid	SPLP West	6010B	Cadmium	0.00180	J b	0.000350	0.00500	0.005	mg/L	U	0.00500	Laboratory blank contamination (0.000400 J mg/L)
600-52864-2	2012-BSA-4b (0-1')	Solid	Total/ NA	6010B	Cadmium	3.26		0.0400	0.390	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-2	2012-BSA-4b (0-1')	Solid	Total/ NA	6010B	Lead	344		0.163	0.779	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52864-3	2012-BSA-4c (0-1')	Solid	Total/ NA	6010B	Cadmium	16.8		0.0417	0.407	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-3	2012-BSA-4c (0-1')	Solid	Total/ NA	6010B	Lead	2730		0.171	0.814	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52864-3	2012-BSA-4c (0-1')	Solid	SPLP West	6010B	Cadmium	0.00410	J b	0.000350	0.00500	0.005	mg/L	U	0.00500	Laboratory blank contamination (0.000400 J mg/L)
600-52864-4	2012-BSA-4d (0-1')	Solid	Total/ NA	6010B	Cadmium	16.9		0.0377	0.368	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-4	2012-BSA-4d (0-1')	Solid	Total/ NA	6010B	Lead	3000		0.154	0.736	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52864-5	2012-BSA-4e (0-1')	Solid	Total/ NA	6010B	Cadmium	6.18		0.0340	0.331	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-5	2012-BSA-4e (0-1')	Solid	Total/ NA	6010B	Lead	634		0.139	0.662	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52867-1	2012-BG-1	Solid	Total/ NA	6010B	Cadmium	0.0313	U	0.0313	0.305	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-1	2012-BG-1	Solid	Total/ NA	6010B	Lead	13.2		0.128	0.611	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-2	2012-BG-2	Solid	Total/ NA	6010B	Cadmium	0.0287	U	0.0287	0.280	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)

Lab ID	Client ID	Matrix	Prep Type	Analysis Method	Analyte	Result	Flag	SDL	SQL	Delin. Std	Unit	DVQ	Adjusted Result	Comment
600-52867-2	2012-BG-2	Solid	Total/ NA	6010B	Lead	13.0		0.117	0.560	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-3	2012-BG-3	Solid	Total/ NA	6010B	Cadmium	0.0301	U	0.0301	0.294	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-3	2012-BG-3	Solid	Total/ NA	6010B	Lead	11.5		0.123	0.588	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-4	2012-BG-7	Solid	Total/ NA	6010B	Cadmium	0.0310	U	0.0310	0.302	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-4	2012-BG-7	Solid	Total/ NA	6010B	Lead	14.1		0.127	0.604	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-5	2012-BG-9	Solid	Total/ NA	6010B	Cadmium	8.09		0.0318	0.310	NA	mg/Kg	J	none	Poor MD precision (difference > +/- 1xRL)
600-52867-5	2012-BG-9	Solid	Total/ NA	6010B	Lead	302		0.130	0.620	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-6	2012-BG-5	Solid	Total/ NA	6010B	Cadmium	0.0310	U	0.0310	0.302	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-6	2012-BG-5	Solid	Total/ NA	6010B	Lead	13.5		0.127	0.604	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-7	2012-BG-4	Solid	Total/ NA	6010B	Cadmium	0.0315	U	0.0315	0.307	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-7	2012-BG-4	Solid	Total/ NA	6010B	Lead	15.7		0.129	0.614	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-8	2012-BG-6	Solid	Total/ NA	6010B	Cadmium	0.0314	U	0.0314	0.306	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-8	2012-BG-6	Solid	Total/ NA	6010B	Lead	14.3		0.128	0.612	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-9	2012-BG-10	Solid	Total/ NA	6010B	Cadmium	0.615		0.0311	0.303	NA	mg/Kg	J	none	Poor MD precision (difference > +/- 1xRL)
600-52867-9	2012-BG-10	Solid	Total/ NA	6010B	Lead	67.6		0.127	0.607	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-10	2012-BG-8	Solid	Total/ NA	6010B	Cadmium	0.122	J	0.0316	0.308	NA	mg/Kg	J	none	Poor MD precision (difference > +/- 1xRL); Result is between SDL and SQL

Lab ID	Client ID	Matrix	Prep Type	Analysis Method	Analyte	Result	Flag	SDL	SQL	Delin. Std	Unit	DVQ	Adjusted Result	Comment
600-52867-10	2012-BG-8	Solid	Total/ NA	6010B	Lead	24.0		0.129	0.615	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)

ATTACHMENT A

VALIDATOR’S CHECKLISTS

Data Validation Checklist - General

Client Name: PBW	Project Number/ Manager: 1755/Eric Pastor
Site Name: Exide	QC Level: IV
Laboratory: TestAmerica (Houston)	Laboratory Job No: 600-52584-1, 600-52864-1, 600-52867-1
Reviewer: Taryn Scholz	Date Checked: 5/8/12
Parameters: As/Cd/Pb - SPLP and Total	Methods: SW1312&3010A/ SW3050B/ SW6010B

ITEM	YES	NO	N/A	CRITERIA
Laboratory NELAP accredited?	x			
Signed Narrative included?	x			
No analytical discrepancies noted in narrative?		x		see Narrative Comments
Chain of Custody (COC)/ Sample Receipt				
Date/time of sample collection included?	x			
Sample temp upon receipt 2-6 C?		x		see comment no. 1
Proper containers/preservation?	x			
COCs properly executed and seals used?	x			some minor discrepancies, see comment no. 2
Samples received within 2 days?	x			
No. of samples analyzed agrees with work plan?			x	(Sampling and Analysis Work Plan, Rev Nov 2011) see comment no. 3
Analytical Results				
Field, Laboratory, and Batch ID included?	x			
Date of sample collection/receipt included?	x			
Date of sample preparation/analysis included?	x			
NDs at DL or QL and J-values as needed?	x			NDs at SDL and J-values reported; SDL,MQL (Adj) included in HC and EDD (called MDL and MQL in EDD)
Target analyte list complete?			x	see comment no. 3
RLs acceptable?	x			SDL <= Delineation Std for NDs
MDLs reasonable per DCS?	x			DCS spike within approx 3x MDL and within 3 mos
No sample dilutions required?		x		dilutions only for detects
Prep/Analysis method references included?	x			
Sample matrix included?	x			
Sample result units reported correctly?	x			mg/kg for soils and mg/L for SPLP
Soils/sediments on dry weight?	x			
Holding time to analysis not expired?	x			
Holding time to preparation not expired?	x			
QC Samples				
Lab QC frequency met?	x			1 MB/LCS per 20
Field duplicate frequency met?			x	1/20 for SW, GW
Equipment blank frequency met?		x		1/day/reusable eq type - see comment no. 4
Field blank frequency met?			x	1/day/eq type for VOC (i.e., TPH)
Trip blank frequency met?			x	1/cooler w VOC (i.e., TPH)
MS/MSD or MS/DUP frequency met?	x			1/20 for SW, Sed, GW - also done for soils
Completeness criteria met?	x			
Field Notes				
Agree with custody records?			x	not included
Field instruments calibrated daily?			x	
Well conditions constant before sampling?			x	
Samples filtered? If so, give turbid/size			x	

Definitions: AA - Atomic Absorption; CCV - Continuing Calibration Verification; COI - Compound of Interest; %D - Percent Difference, DL - Detection Limit; DUP - Duplicate; FDUP - Field Duplicate; ICP - Inductively Coupled Plasma; ICV - Initial Calibration Verification; IDL - Instrument Detection Limit; LCS - Laboratory Control Sample; MDL - Method Detection Limit; MS/MSD - Matrix Spike/Matrix Spike Duplicate; QL - Quantitation Limit; %R - Percent Recovery; RL - Reporting Limit; RPD - Relative Percent Difference; RRF - Relative Response Factor; RT - Retention Time; RSD - Relative Standard Deviation; TA - Target Analyte

COMMENTS

Comment no. 1

The samples in work order 600-52864 and 600-52867 were received at 9.0 C. The samples were analyzed for total arsenic, cadmium, and lead, which requires preservation at 4±2 C per Table 3 in the QAPP. However, no preservation is required for metals in solid samples per the analytical method and thus analyte degradation is not suspected and the sample results were not qualified.

Comment no. 2
For sample 600-52584-2, SPLP-lead is requested on the chain-of-custody but results are not reported. This test was canceled based on the total lead result.
SPLP-cadmium was added for samples 600-52864-1,3,4 and SPLP-lead was added for samples 600-52864-1,3,4,5 based on the total metals results.
For samples in work order 600-52867, arsenic is not requested on the chain-of-custody but is reported per the client's request
For sample 600-52867-10, the sampler entered a field ID of 2012-BG-10 on the custody record. The laboratory assigned the correct ID of 2012-BG-8 upon receipt per the sample labels and sampler's instructions.
Comment no. 3
All samples for this event are additional samples not delineated in the work plan - 10 background samples for As/Cd/Pb, 1 sample at BSA-1, 1 sample at BSA-3, and 5 samples at BSA-4 for total/SPLP metals determination determination.
Comment no. 4
No equipment blanks collected with the additional samples for this event

Lab Job No.	Method	Batch/Sample	Narrative Comment	Validator Action
600-52584-1	6010B	-1 MS/D	%R out for Cd but background result > 4x spk added, LCS passes	none - check waived
		-1	SDL for Cd elev due to analyte > linear range	NA, result is detect
		-1 PDS	%R not calculated due to background result > 4x spk added, SD confirms MI (actually passes)	NA
		SPLP	extant sample for PDS/SD	NA
600-52864-1	6010B	76425	Cd >MDL but < MQL in leachate blank, appropriate flags applied	flagged per NFG
		-2 MS/D	%R out for Pb but background result > 4x spk added, LCS passes	none - check waived
		-2 MSD	RPD for Pb above limit due to nonhomogen nature	flagged per NFG
		-2 MD	RPD for Cd, Pb above limit due to nonhomogen nature	flagged per NFG
		-2 PDS	%R for Cd low due to MI	none - MS/MSD passes
		-2 SD	%D for Cd,Pb above limit due to MI	flagged per NFG
		all	sx received at 9.0 C	none - cooling not req'd per method
600-52867-1	6010B	all	sx received at 9.0 C	none - cooling not req'd per method
		-10 MS/D	%R for Pb above limit due to MI, LCS passes	flagged per NFG
		-1 MD	RPD for Cd, Pb above limit due to nonhomogen nature	flagged per NFG
		-1 SD	%D for Pb above limit due to MI	flagged per NFG

Data Validation Checklist: Metals

Client Name: PBW	Project Number/ Manager: 1755/Eric Pastor
Site Name: Exide	QC Level: IV
Laboratory: TestAmerica (Houston)	Laboratory Job No: 600-52584-1, 600-52864-1, 600-52867-1
Reviewer: Taryn Scholz	Date Checked: 5/8/12
Parameters: As/Cd/Pb - SPLP and Total	Methods: SW1312&3010A/ SW3050B/ SW6010B

%PERFORMED/ ITEM		YES	NO	N/A	CRITERIA
	Method blank data included in Lab Package?	x			
	Criteria met? (< MDL, ≥ -RL)		x		
100	Criteria met for field blanks? (< MDL)			x	
	QC check samples/LCS data included in lab package?	x			
	All project COCs or TAs included?	x			
100	%R criteria met? (individual and overall)	x			method (75-125%)
	Matrix spike data included in lab package?	x			
100	%R criteria met? (individual and overall)		x		method (75-125%)
	Sample duplicate data included in lab package?	x			
100	RPD criteria met?		x		method (20%), NFG (+/-RL if either ≤5RL)
100	Field dup RPD criteria met? (individual, mean, and overall)			x	20% aq, 35% solid (+/-2RL aq, +/-3RL sol if either ≤5RL)
	Instrument Tune for ICP-MS included in lab package?			x	
NA	Instrument Tune method criteria met? (±5 RSD, ±0.1 amu)			x	
	Initial calibration documentation included in lab package?	x			
	All target analytes included?	x			
	blank/1 std (ICP), blank/ 5 stds (Hg)	x			
100	Corr coeff (r) criteria met? (≥0.995)			x	
	Calibration verification data included in lab package?	x			
	ICB/CCB criteria met? (<MDL, ≥-RL)	x			
	ICV %R criteria met? (ICP 90-110%, Hg 80-120%)	x			
	CCV %R criteria met? (ICP 90-110%, Hg 80-120%)	x			
100	LLCCV %R criteria met? (70-130%)	x			reported for instrument TJA1 but not Thermo6500 - not req'd by method so no further action
	Interference check sample data included (ICP/MS only)?	x			
100	%R criteria met? (80-120%)	x			
	Dilution test data included?	x			
100	Results within 10% original? (if >50xMDL)		x		
	Post digestion spike included?	x			
100	%R criteria met?		x		method (75-125%)
	Internal standard data included in lab package?			x	
NA	Intensities within limits? (min 30-120% of calib std)			x	
10	Analyte quantitation/RLs correct?	x			
	QC parameters calculated correctly?			x	

COMMENTS

SPLP: West (ext fluid #2) pH = 5+/-0.05 (yes)
100 g, 2 L fluid (yes)
18 +/- 2 hrs extraction (yes)
23 +/- 2 C (yes)

Total vs Dissolved - NA

ATTACHMENT B

SUPPLEMENTAL LABORATORY SUBMISSIONS

TESTAMERICA HOUSTON

~~TCLP~~ and Non-Routine Extraction-Non-Volatiles Only

Date: 03-27-12 SPLP

Analyst: NR

Batch #: 75838

Extraction Fluid #1 ID: N/A pH: N/A

Filter Lot #: 903800)

Temp during rotation: Min: 21 Max: 24

Extraction Fluid #2 ID: SP 844664 pH: 5.02

1N HCL ID: N/A

Rotation Time Started/Finished: 3/27 8:45 / 3/28 10:46

Group Number	52584-1	52584-2	LB				
Sample ID	830317	830318	SPLP				
Description	dark brown soil	dark brown soil	SPLP Wet Solution pH 5				
% Solids (If <100% see next page)	100%	100%	0%				
Was Particle Size Reduction Needed?	Circle One Yes / [✓ No]	Circle One Yes / [✓ No]	Circle One Yes / [✓ No]	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Sample Wt. & Vol. of DI used for pH (5g/96.5mLs)	N/A	N/A	N/A				
Initial pH of subsample (After 5 min of stirring)							
Is pH <5? If Yes-Use E.F.#1, If No Continue	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Amount of 1N HCL added to Sample (3.5mL)							
Final pH Reading (After 10 min. @ 50°C and cooled to room temperature)							
Is pH <5? If Yes-Use E.F.#1, If No-Use E.F.#2	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Extraction Fluid Used	Circle One #1 / [✓ #2]	Circle One #1 / [✓ #2]	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2
Amount of Sample Solid Phase Used for Extraction (100g)	100	100	N/A				
Volume of Extraction Fluid Needed (Sample Wt x 20)	2000	2000	2000				
Final pH of extract	8.21	6.15	5.09				
Tests in Method Chain	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other______	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other______	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other______	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other______	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other______	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other______	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other______
Comments on back of page?							

TESTAMERICA HOUSTON

SPLP ~~TCLP~~ and Non-Routine Extraction-Non-Volatiles Only

Date: 04-03-12

Analyst: Np

Batch #: 76425

Extraction Fluid #1 ID: NA pH: NA

Extraction Fluid #2 ID: 844166 pH: 5.02

Filter Lot #: 9035 001

1N HCL ID: NA

Temp during rotation: Min: 21 Max: 24

Rotation Time Started/Finished: 4/3 18:10 / 4/4 10:10

Group Number	57864-1	57864-3	57864-4	SPLP / LB			
Sample ID	835428	835430	835431				
Description	brown soil	brown soil	brown soil	SPLP West fluid PH5			
% Solids (If <100% see next page)	100%	100%	100%	0%			
Was Particle Size Reduction Needed?	Circle One Yes / [✓ No]	Circle One Yes / [✓ No]	Circle One Yes / [✓ No]	Circle One Yes / [✓ No]	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Sample Wt. & Vol. of DI used for pH (5g/96.5mLs)	NA	NA	NA	NA			
Initial pH of subsample (After 5 min of stirring)							
Is pH <5? If Yes-Use E.F.#1, If No Continue	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Amount of 1N HCL added to Sample (3.5mL)							
Final pH Reading (After 10 min. @ 50°C and cooled to room temperature)							
Is pH <5? If Yes-Use E.F.#1, If No-Use E.F.#2	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Extraction Fluid Used	Circle One #1 / [✓ #2]	Circle One #1 / [✓ #2]	Circle One #1 / [✓ #2]	Circle One #1 / [✓ #2]	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2
Amount of Sample Solid Phase Used for Extraction (100g)	100	100	100	0			
Volume of Extraction Fluid Needed (Sample Wt x 20)	2000						
Final pH of extract							
Tests in Method Chain	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other____	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other____	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other____	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other____	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other____	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other____	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other____
Comments on back of page?							

TESTAMERICA HOUSTON

~~TCLP~~ and Non-Routine Extraction-Non-Volatiles Only

Date: 04-10-12

SPLP

Analyst: HR

Batch #: 76904

Extraction Fluid #1 ID: NA pH: NA

Extraction Fluid #2 ID: 844468 pH: 5.01

Filter Lot #: 9035001

1N HCL ID: NA

Temp during rotation: Min: 21 Max: 24

Rotation Time Started/Finished: 4/10/12 17:00P / 4/11/12 9:00 A

Group Number	52574-10	52864-5	LB				
Sample ID	830086	835432					
Description	Med brown soil	dark brown soil	SPLP West fluid pH 5				
% Solids (If <100% see next page)	100%	100%	0%				
Was Particle Size Reduction Needed?	Circle One Yes / [✓ No]	Circle One Yes / [✓ No]	Circle One Yes / [✓ No]	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Sample Wt. & Vol. of DI used for pH (5g/96.5mLs)	NA	NA	NA				
Initial pH of subsample (After 5 min of stirring)							
Is pH <5? If Yes-Use E.F.#1, If No Continue	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Amount of 1N HCL added to Sample (3.5mL)							
Final pH Reading (After 10 min. @ 50°C and cooled to room temperature)							
Is pH <5? If Yes-Use E.F.#1, If No-Use E.F.#2	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Extraction Fluid Used	Circle One #1 / [✓ #2]	Circle One #1 / [✓ #2]	Circle One #1 / [✓ #2]	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2
Amount of Sample Solid Phase Used for Extraction (100g)	100g.	100g.	0				
Volume of Extraction Fluid Needed (Sample Wt x 20)	2000						
Final pH of extract							
Tests in Method Chain	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other 1312mw	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other 1312mw	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other 1312mw	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other
Comments on back of page?							

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

TestAmerica Job ID: 600-72907-1
Client Project/Site: Exide Recycling Center, Frisco TX Projec

For:
Pastor, Behling & Wheeler LLC
2201 Double Creek Dr
Suite 4004
Round Rock, Texas 78664

Attn: Mr. Tim Nickels

Authorized for release by:
5/17/2013 4:32:44 PM
Cathy Upton, Data Delivery Analyst
(713)690-4444
cathy.upton@testamericainc.com

Designee for

Sachin Kudchadkar, Project Manager II
sachin.kudchadkar@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

TestAmerica Houston
TRRP Data Package Cover Page

Job Number: 600-72907-1
Project Name/Number: Exide Recycling Center, Frisco TX Project

This Data Package consists of:

This signature page, the laboratory review checklist, and the following Reportable Data:

- ☒ R1 Field Chain-of-Custody Form
- ☒ R2 Sample Identification Cross-reference;
- ☒ R3 Test Reports (Analytical Data Sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC Chapter 5
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☒ R4 Surrogate Recovery Data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☒ R5 Test Reports/Summary Forms for Blank Samples;
- ☒ R6 Test Reports/Summary Forms for Laboratory Control Samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - d) The laboratory's LCS QC limits
- ☒ R7 Test Reports for Matrix Spike/Matrix Spike Duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked sample,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☒ R8 Laboratory analytical duplicates (if applicable) recovery and precision, including:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☒ R9 List of method quantitation limit (MQL) and detectability check sample results for each analyte for each method and matrix;
- ☒ R10 Other problems or anomalies

The exception report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under Texas laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm, to the best of my knowledge, that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton		05/17/2013
Name (printed)	Signature	Date

Data Delivery Analyst
Official Title (printed)

Appendix A (cont’d): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 05/14/13
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-72907
Reviewer Name: TWR	Prep Batch Number(s): 600-105843(W), 105922, 105993(S)- ICP

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-custody (C-O-C)					
R1	OI	Did samples meet the laboratory’s standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory’s capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				1
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

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Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 05/14/13
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-72907
Reviewer Name: TWR	Prep Batch Number(s): 600-105843(W), 105922, 105993(S)- ICP

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?			X		
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?			X		
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports

Laboratory Name: TestAmerica-Houston	LRC Date: 05/14/13
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-72907
Reviewer Name: TWR	Prep Batch Number(s): 600-105843(W), 105922, 105993(S)- ICP

ER #[1]	DESCRIPTION
1	The lead SDL was elevated in sample 600-72907-4 in order to bring the concentration within the linear range of the instrument.

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

Detection Check Standard

Matrix:	Soil
Method:	6010B
Preparation:	3050
Date Analyzed:	3/29/2013
Date Prepared:	3/28/2013
Instrument:	Thermo 6500
TALS Batches:	102868, 102784p
Prep/Reagent Factor =	50
Units:	mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.299654	0.5	0.98	25
Antimony	0.231553	0.45	0.485	2.5
Arsenic	0.217923	0.5	0.465	1
Barium	0.011322	0.03	0.095	1
Beryllium	0.014513	0.02	0.025	0.25
Boron	0.385535	0.6	0.74	20
Cadmium	0.025642	0.05	0.055	0.25
Calcium	0.86399	1.5	2.825	100
Chromium	0.050606	0.1	0.075	0.5
Cobalt	0.067622	0.1	0.115	0.5
Copper	0.173703	0.5	0.455	0.5
Iron	2.534007	4	3.86	20
Lead	0.104832	0.2	0.22	0.5
Selenium	0.258884	0.5	0.535	2
Manganese	0.038111	0.05	0.045	1.5
Molybdenum	0.136448	0.35	0.32	0.5
Nickel	0.116599	0.15	0.135	1
Silver	0.118848	0.2	0.205	0.5
Sodium	0.885548	2.4	2.08	100
Strontium	0.00252	0.005	0.995	0.25
Thallium	0.276988	0.7	0.595	1.5
Tin	0.08729	0.15	0.155	1
Titanium	0.014529	0.03	0.025	0.5
Vanadium	0.079068	0.15	0.175	0.5
Zinc	0.108432	0.2	0.33	1.5

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Detection Check Standard

Matrix: Water
Method: 200.7/6010
Preparation: 200.7P/3010
Date Analyzed: 3/29/2013
Date Prepared: 3/28/2013
Instrument: Thermo 6500
TALs Batches: 102868, 102755p
Units: mg/L

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.006	0.02	0.0177	0.5
Antimony	0.0063	0.01	0.0105	0.05
Arsenic	0.0033	0.01	0.0077	0.01
Barium	0.0022	0.005	0.0026	0.02
Beryllium	0.00134	0.002	0.0042	0.005
Boron	0.0077	0.02	0.0193	0.2
Cadmium	0.00073	0.001	0.001	0.005
Calcium	0.022	0.05	0.0583	1
Chromium	0.0016	0.002	0.0037	0.01
Cobalt	0.00063	0.001	0.0012	0.01
Copper	0.0014	0.002	0.0012	0.01
Iron	0.087	0.1	0.1011	0.4
Lithium	0.0024	0.005	0.0043	0.2
Lead	0.0029	0.005	0.005	0.01
Selenium	0.0042	0.01	0.0083	0.04
Manganese	0.00084	0.002	0.002	0.01
Molybdenum	0.0027	0.005	0.0048	0.01
Nickel	0.00179	0.005	0.0043	0.01
Silver	0.0012	0.0025	0.0024	0.01
Sodium	0.02	0.05	0.0465	1
Strontium	0.0005	0.001	0.001	0.005
Thallium	0.0078	0.02	0.0184	0.03
Tin	0.0028	0.005	0.0049	0.01
Titanium	0.0011	0.002	0.0023	0.01
Vanadium	0.0017	0.002	0.0048	0.01
Zinc	0.0022	0.005	0.0065	0.01

Case Narrative

Client: Pastor, Behling & Wheeler LLC
TestAmerica Job ID: 600-72907-1
Project/Site: Exide Recycling Center, Frisco TX Projec

Job ID: 600-72907-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-72907-1

Comments

No additional comments.

Receipt

The samples were received on 5/10/2013 8:34 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 7.8º C.

Method Summary

Client: Pastor, Behling & Wheeler LLC TestAmerica Job ID: 600-72907-1
Project/Site: Exide Recycling Center, Frisco TX Projec

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

Protocol References:

EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Pastor, Behling & Wheeler LLC
TestAmerica Job ID: 600-72907-1
Project/Site: Exide Recycling Center, Frisco TX Projec

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-72907-1	2013-BG-12 (0-2)	Solid	05/09/13 08:35	05/10/13 08:34
600-72907-2	2013-BG-11 (0-2)	Solid	05/09/13 08:50	05/10/13 08:34
600-72907-3	2013-BG-13 (0-2)	Solid	05/09/13 09:05	05/10/13 08:34
600-72907-4	2013-BG-Equip Blank	Water	05/09/13 09:10	05/10/13 08:34

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Client Sample ID: 2013-BG-12 (0-2) Lab Sample ID: 600-72907-1

Date Collected: 05/09/13 08:35 **Matrix: Solid**

Date Received: 05/10/13 08:34 **Percent Solids: 69.1**

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**27.5**		0.696	0.146	mg/Kg	☼	05/10/13 17:37	05/13/13 23:37	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**31**		1.0	1.0	%			05/10/13 14:34	1
Percent Solids	**69**		1.0	1.0	%			05/10/13 14:34	1

Client Sample ID: 2013-BG-11 (0-2) Lab Sample ID: 600-72907-2

Date Collected: 05/09/13 08:50 **Matrix: Solid**

Date Received: 05/10/13 08:34 **Percent Solids: 87.3**

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**20.6**		0.573	0.120	mg/Kg	☼	05/10/13 17:37	05/13/13 23:47	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**13**		1.0	1.0	%			05/10/13 14:34	1
Percent Solids	**87**		1.0	1.0	%			05/10/13 14:34	1

Client Sample ID: 2013-BG-13 (0-2) Lab Sample ID: 600-72907-3

Date Collected: 05/09/13 09:05 **Matrix: Solid**

Date Received: 05/10/13 08:34 **Percent Solids: 68.8**

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**18.9**		0.726	0.152	mg/Kg	☼	05/13/13 13:37	05/13/13 17:52	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**31**		1.0	1.0	%			05/10/13 14:34	1
Percent Solids	**69**		1.0	1.0	%			05/10/13 14:34	1

Client Sample ID: 2013-BG-Equip Blank Lab Sample ID: 600-72907-4

Date Collected: 05/09/13 09:10 **Matrix: Water**

Date Received: 05/10/13 08:34

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.145	U	0.500	0.145	mg/L		05/10/13 08:27	05/13/13 12:06	50

Definitions/Glossary

Qualifiers

Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-105843/1-A
Matrix: Water
Analysis Batch: 105971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105843

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00290	U	0.0100	0.00290	mg/L		05/10/13 08:27	05/13/13 11:07	1

Lab Sample ID: LCS 600-105843/2-A
Matrix: Water
Analysis Batch: 105971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105843

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead			1.00	0.9682		mg/L		97	80 - 120		

Lab Sample ID: MB 600-105922/1-A
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105922

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.105	U	0.500	0.105	mg/Kg		05/10/13 17:37	05/13/13 23:02	1

Lab Sample ID: LCSSRM 600-105922/2-A
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105922

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead			76.9	81.54		mg/Kg		106.0	81.3 - 118.7		

Lab Sample ID: 600-72907-1 MS
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: 2013-BG-12 (0-2)
Prep Type: Total/NA
Prep Batch: 105922

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead	27.5		67.0	103.4		mg/Kg	☼	113	75 - 125		

Lab Sample ID: 600-72907-1 MSD
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: 2013-BG-12 (0-2)
Prep Type: Total/NA
Prep Batch: 105922

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	27.5		68.9	93.14		mg/Kg	☼	95	75 - 125	10	20

Lab Sample ID: 600-72907-1 DU
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: 2013-BG-12 (0-2)
Prep Type: Total/NA
Prep Batch: 105922

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Lead	27.5			25.55		mg/Kg	☼			7	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 600-105993/1-A
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105993

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.105	U	0.500	0.105	mg/Kg		05/13/13 13:37	05/13/13 17:47	1

Lab Sample ID: LCSSRM 600-105993/2-A
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105993

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead			76.9	74.18		mg/Kg		96.5	81.3 - 118.7		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Unadjusted Detection Limits

Method: 6010B - Metals (ICP)

Analyte	MQL	MDL	Units	Method
Lead	0.500	0.105	mg/Kg	6010B
Lead	0.0100	0.00290	mg/L	6010B

General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

QC Association Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Metals

Prep Batch: 105843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-4	2013-BG-Equip Blank	Total/NA	Water	3010A	
LCS 600-105843/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 600-105843/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 105922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-1	2013-BG-12 (0-2)	Total/NA	Solid	3050B	
600-72907-1 DU	2013-BG-12 (0-2)	Total/NA	Solid	3050B	
600-72907-1 MS	2013-BG-12 (0-2)	Total/NA	Solid	3050B	
600-72907-1 MSD	2013-BG-12 (0-2)	Total/NA	Solid	3050B	
600-72907-2	2013-BG-11 (0-2)	Total/NA	Solid	3050B	
LCSSRM 600-105922/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-105922/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 105971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-4	2013-BG-Equip Blank	Total/NA	Water	6010B	105843
LCS 600-105843/2-A	Lab Control Sample	Total/NA	Water	6010B	105843
MB 600-105843/1-A	Method Blank	Total/NA	Water	6010B	105843

Prep Batch: 105993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-3	2013-BG-13 (0-2)	Total/NA	Solid	3050B	
LCSSRM 600-105993/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-105993/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 106003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-1	2013-BG-12 (0-2)	Total/NA	Solid	6010B	105922
600-72907-1 DU	2013-BG-12 (0-2)	Total/NA	Solid	6010B	105922
600-72907-1 MS	2013-BG-12 (0-2)	Total/NA	Solid	6010B	105922
600-72907-1 MSD	2013-BG-12 (0-2)	Total/NA	Solid	6010B	105922
600-72907-2	2013-BG-11 (0-2)	Total/NA	Solid	6010B	105922
600-72907-3	2013-BG-13 (0-2)	Total/NA	Solid	6010B	105993
LCSSRM 600-105922/2-A	Lab Control Sample	Total/NA	Solid	6010B	105922
LCSSRM 600-105993/2-A	Lab Control Sample	Total/NA	Solid	6010B	105993
MB 600-105922/1-A	Method Blank	Total/NA	Solid	6010B	105922
MB 600-105993/1-A	Method Blank	Total/NA	Solid	6010B	105993

General Chemistry

Analysis Batch: 105891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-1	2013-BG-12 (0-2)	Total/NA	Solid	Moisture	
600-72907-2	2013-BG-11 (0-2)	Total/NA	Solid	Moisture	
600-72907-3	2013-BG-13 (0-2)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Client Sample ID: 2013-BG-12 (0-2)

Lab Sample ID: 600-72907-1

Date Collected: 05/09/13 08:35
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 69.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			105922	05/10/13 17:37	NER	TAL HOU
Total/NA	Analysis	6010B		1	106003	05/13/13 23:37	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	105891	05/10/13 14:34	AS	TAL HOU

Client Sample ID: 2013-BG-11 (0-2)

Lab Sample ID: 600-72907-2

Date Collected: 05/09/13 08:50
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			105922	05/10/13 17:37	NER	TAL HOU
Total/NA	Analysis	6010B		1	106003	05/13/13 23:47	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	105891	05/10/13 14:34	AS	TAL HOU

Client Sample ID: 2013-BG-13 (0-2)

Lab Sample ID: 600-72907-3

Date Collected: 05/09/13 09:05
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 68.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			105993	05/13/13 13:37	NER	TAL HOU
Total/NA	Analysis	6010B		1	106003	05/13/13 17:52	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	105891	05/10/13 14:34	AS	TAL HOU

Client Sample ID: 2013-BG-Equip Blank

Lab Sample ID: 600-72907-4

Date Collected: 05/09/13 09:10
Matrix: Water
Date Received: 05/10/13 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			105843	05/10/13 08:27	NER	TAL HOU
Total/NA	Analysis	6010B		50	105971	05/13/13 12:06	DCL	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Certification Summary

Client: Pastor, Behling & Wheeler LLC
TestAmerica Job ID: 600-72907-1
Project/Site: Exide Recycling Center, Frisco TX Projec

Laboratory: TestAmerica Houston

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0759	08-04-12 *
Louisiana	NELAP	6	01967	06-30-13
Oklahoma	State Program	6	9503	08-31-13
Texas	NELAP	6	T104704223-10-6-TX	10-31-13
USDA	Federal		P330-08-00217	04-01-14
Utah	NELAP	8	GULF	10-31-13

* Expired certification is currently pending renewal and is considered valid.

Chain of Custody Record

TAL-4124 (1007)

Temperature on Receipt ________

Drinking Water? Yes ☐ No ☒

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client: PBW LLC

Project Manager: Tim Nickels, Will Viene

Date: 5-9-13

Chain of Custody Number: 205013

Address: 2201 Double Creek Dr, 4004

Telephone Number (Area Code)/Fax Number: 512-

Lab Number:

Page 1 of 1

City: Round Rock

State: TX

Zip Code: 78664

Site Contact:

Lab Contact:

Project Name and Location (State): Background Sampling - Former Op. Plant

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.: 1755

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

600-72907 Chain of Custody

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH		Lead
2013-BG-12(0-2)	5-9-13	8:35				X		X							X
2013-BG-11 (0-2)	|	8:50				|		X							|
2013-BG-13(0-2)	|	9:05				|		X							|
2013-BG-Equip Blank	|	9:10		X						X					|

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☒ Archive For 6 Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☒ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ________

QC Requirements (Specify): TRRP-13

	Date	Time		Date	Time
1. Relinquished By	5/9/13	1415	1. Received By: McCrae	5/9/13	1415
2. Relinquished By: McClure	5/9/13	1700	2. Received By		
3. Relinquished By			3. Received By	05/10/13	0834

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Pastor, Behling & Wheeler LLC

Job Number: 600-72907-1

Login Number: 72907

List Source: TestAmerica Houston

List Number: 1

Creator: Pulumbarit, Josh

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	7.8
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.	True	

Data Usability Summary
Exide Recycling Center
May 9, 2013 Soil Sampling Event
TestAmerica Laboratories DATA PACKAGE 600-72907-1

Pastor, Behling & Wheeler, LLC reviewed one data package from TestAmerica Laboratories in Houston, Texas for the analysis of the soil samples collected May 9, 2013 from the EPA-approved background study area in Frisco, Texas. Data were reviewed for conformance to the requirements of the guidance document, *Review and Reporting of COC Concentration Data* (RG-366/TRRP-13) and adherence to project objectives. At the time the laboratory data were generated for the project, TestAmerica Laboratories was NELAC-accredited under the Texas Laboratory Accreditation Program for the matrices, analytes and methods of analysis requested on the chain-of-custody documentation.

Intended Use of Data: To provide current data on concentrations of lead in soil.

Analyses requested included:

- Method SW6010B – Metals (ICP)

Data were reviewed and validated as described in *Review and Reporting of COC Concentration Data*, (RG-366/TRRP-13) and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals and field data were examined:

- the reportable data,
- case narratives, and
- the field notes with respect to field instrument calibrations, filtering procedures, sampling procedures preservation procedures prior to shipping the samples to the laboratory.

The results of supporting quality control (QC) analyses were summarized in the Laboratory Review Checklists (LRCs), Exception Reports, and case narrative, all of which were included in this review.

Introduction

Three (3) soil samples were collected and analyzed for lead. Table 1 lists the sample identifications cross-referenced to the laboratory identifications.

Project Objectives

Project QA/QC objectives were established as the TRRP-13 recommended control limits:

- For organic analytes: percent recoveries between 60% and 140%, relative percent differences (RPD) within 40%, and
- For inorganic analytes: percent recoveries between 70% and 130%, RPD within 30%.

DATA REVIEW / VALIDATION RESULTS

Analytical Results

Soil analytical results for lead are reported corrected for moisture content. None of the sample data were qualified.

Preservation and Holding Times

Samples were evaluated for agreement with the chain-of-custody (COC). Samples were received in appropriate containers in good condition. Paperwork was filled out properly. Sample receipt temperatures were within the acceptance criteria. Samples were preserved in the field as specified in SW-846 Table 2-40(B). Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-40(B).

Calibrations

The LRC indicates the initial calibration and continuing calibration data met SW-846 method requirements for metals.

Blanks

Lead was reported as non-detect (ND) in the equipment blank submitted with the soil samples to the laboratory. The laboratory method blank was within project control limits.

Laboratory Control Samples

Laboratory control sample (LCS) recoveries were within the project control limits for lead.

Matrix Spike/Matrix Spike Duplicates

MS/MSD precision and accuracy results were within the project-defined QC acceptance criteria for lead.

Laboratory Certification

At the time the laboratory data were generated for this project, the laboratory was NELAC accredited under the Texas Laboratory Accreditation Program (TLAP) for the matrices, methods and parameters of analysis requested on the chain-of-custody.

Field Precision

Field duplicate samples were not collected.

Field Procedures

Samples were collected using documented SOPs.

SUMMARY

The analytical data are usable for the purpose of determining current lead concentrations in the soil at the affected property.

Table 1. Cross-Reference Field Sample Identifications and Laboratory Identifications

Field Identification	Laboratory Identification
2013-BG-12 (0-2)	600-72907-1
2013-BG-11 (0-2)	600-72907-2
2013-BG-13 (0-2)	600-72907-3
2013-BG-Equip Blank	600-72907-4

Prepared by: Kate McCarthy, PG Date: May 21, 2013

Attachment 2
Pages from Gibbons (1994)

STATISTICAL METHODS FOR GROUNDWATER MONITORING

Robert D. Gibbons
University of Illinois at Chicago

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allowable, the costly verification stage would not be required. This two-stage procedure is quite similar to the prediction limit approach described by Davis and McNichols (1987).

4.2 NORMAL TOLERANCE LIMITS

Assume that we have available estimates $\bar{x}$ and s of the mean and standard deviation based on n background observations with degrees of freedom $f = n - 1$ from a normal distribution. We require the factor K from the two-sided interval

$$\bar{x} \pm Ks \tag{4.1}$$

which leads to the statement, "At least a proportion P of the normal population is between $\bar{x} - Ks$ and $\bar{x} + Ks$ with confidence $1 - \alpha$." Wald and Wolfowitz (1946) showed that K can be approximated by

$$K \sim ru \tag{4.2}$$

where r is a function of n and P and is determined from the normal distribution

$$\frac{1}{\sqrt{2\pi}} \int_{(1/\sqrt{n})-r}^{(1/\sqrt{n})+r} \exp\left(\frac{-x^2}{2}\right) dx = P \tag{4.3}$$

and u is a function of f and α and is defined as the $(1 - \alpha)100\%$ of the chi-square distribution as

$$u = \sqrt{\frac{f}{\chi^2_{\alpha,f}}} \tag{4.4}$$

By selecting a coverage probability P, (4.3) may be solved for r (since n is known), and by selecting a confidence level P, (4.4) may be solved for u (since $f = n - 1$ is known). Two-sided values of K are provided in Table 4.1 for $n = 4$ to ∞, 95% confidence and 95% and 99% coverage.

For one-sided tolerance limits $\bar{x} + Ks$, we require the factor K which leads to the statement, "At least a proportion P of the normal population is less than $\bar{x} + Ks$ with confidence $1 - \alpha$." Owen (1962) determines K by

$$\Pr\left\{\left(\text{noncentral } t \text{ with } \delta = z\sqrt{n}\right) \leq K\sqrt{n}\right\} = 1 - \alpha \tag{4.5}$$

where δ is the noncentrality parameter of the noncentral t-distribution with

TABLE 4.1 Factors (K) for Constructing Two-Sided Normal Tolerance Limits ($\bar{x} \pm Ks$) for 95% Confidence and 95% and 99% Coverage

n	95% Coverage	99% Coverage
4	6.370	8.299
5	5.079	6.634
6	4.414	5.775
7	4.007	5.248
8	3.732	4.891
9	3.532	4.631
10	3.379	4.433
11	3.259	4.277
12	3.169	4.150
13	3.081	4.044
14	3.012	3.955
15	2.954	3.878
16	2.903	3.812
17	2.858	3.754
18	2.819	3.702
19	2.784	3.656
20	2.752	3.615
21	2.723	3.577
22	2.697	3.543
23	2.673	3.512
24	2.651	3.483
25	2.631	3.457
30	2.549	3.350
35	2.490	3.272
40	2.445	3.212
50	2.379	3.126
60	2.333	3.066
80	2.272	2.986
100	2.233	2.934
500	2.070	2.721
∞	1.960	2.576

$f = n - 1$ degrees of freedom, and z is defined by

$$\frac{1}{\sqrt{2\pi}} \int_{-\infty}^{z} \exp\left(\frac{-x^2}{2}\right) dx = P \qquad (4.6)$$

One-sided values of K are provided in Table 4.2 for $n = 4$ to ∞, 95% confidence and 95% and 99% coverage.

To illustrate the differences between tolerance and prediction limits, Figure 4.1 displays power curves for a 95% confidence normal prediction

d
ice

rage

(4.6)

= 4 to ∞, 95%

rediction limits,
rmal prediction

TABLE 4.2 Factors (K) for Constructing One-Sided Normal Tolerance Limits ($\bar{x} + Ks$) for 95% Confidence and 95% and 99% Coverage

n	95% Coverage	99% Coverage
4	5.144	7.042
5	4.210	5.749
6	3.711	5.065
7	3.401	4.643
8	3.188	4.355
9	3.032	4.144
10	2.911	3.981
11	2.815	3.852
12	2.736	3.747
13	2.670	3.659
14	2.614	3.585
15	2.566	3.520
16	2.523	3.463
17	2.486	3.414
18	2.453	3.370
19	2.423	3.331
20	2.396	3.295
21	2.371	3.262
22	2.350	3.233
23	2.329	3.206
24	2.309	3.181
25	2.292	3.158
30	2.220	3.064
35	2.166	2.994
40	2.126	2.941
50	2.065	2.863
60	2.022	2.807
80	1.965	2.733
100	1.927	2.684
500	1.763	2.475
∞	1.645	2.326

limit for the next $k = 100$ measurements based on a previous sample of $n = 20$, and a corresponding 95% confidence 95% coverage normal tolerance limit and 95% confidence 99% coverage normal tolerance limit. Inspection of Figure 4.1 reveals that the probability of failing at least one of the 100 comparisons by chance alone is much greater for the tolerance limits which have expected failure rates of 1% and 5%, respectively, versus the prediction limit that is designed to include 100% of the next 100 measurements with 95% confidence. Use of these two alternative limits for groundwater detection monitoring is anything but a "matter of personal preference."

Attachment 3
ProUCL Outlier Test Output

Arsenic Outlier Test

	Outlier Tests for Selected Variables
User Selected Options	
From File	WorkSheet.wst
Full Precision	OFF
Test for Suspected Outliers with Dixon test	1
Test for Suspected Outliers with Rosner test	1

Dixon's Outlier Test for C0

Number of data = 10
10% critical value: 0.409
5% critical value: 0.477
1% critical value: 0.597

1. Data Value 14.8 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.435

For 10% significance level, 14.8 is an outlier.
For 5% significance level, 14.8 is not an outlier.
For 1% significance level, 14.8 is not an outlier.

2. Data Value 9.29 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.136

For 10% significance level, 9.29 is not an outlier.
For 5% significance level, 9.29 is not an outlier.
For 1% significance level, 9.29 is not an outlier.

Lead Outlier Test 1

	Outlier Tests for Selected Variables
User Selected Options	
From File	WorkSheet.wst
Full Precision	OFF
Test for Suspected Outliers with Dixon test	1
Test for Suspected Outliers with Rosner test	1

Dixon's Outlier Test for C0

Number of data = 11
10% critical value: 0.517
5% critical value: 0.576
1% critical value: 0.679

1. Data Value 27.5 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.476

For 10% significance level, 27.5 is not an outlier.
For 5% significance level, 27.5 is not an outlier.
For 1% significance level, 27.5 is not an outlier.

2. Data Value 11.5 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.136

For 10% significance level, 11.5 is not an outlier.
For 5% significance level, 11.5 is not an outlier.
For 1% significance level, 11.5 is not an outlier.

Lead Outlier Test 2

	Outlier Tests for Selected Variables
User Selected Options	
From File	WorkSheet.wst
Full Precision	OFF
Test for Suspected Outliers with Dixon test	1
Test for Suspected Outliers with Rosner test	1

Dixon's Outlier Test for C0

Number of data = 12
10% critical value: 0.49
5% critical value: 0.546
1% critical value: 0.642

1. Data Value 67.6 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.799

For 10% significance level, 67.6 is an outlier.
For 5% significance level, 67.6 is an outlier.
For 1% significance level, 67.6 is an outlier.

2. Data Value 11.5 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.106

For 10% significance level, 11.5 is not an outlier.
For 5% significance level, 11.5 is not an outlier.
For 1% significance level, 11.5 is not an outlier.

APPENDIX 8
Determination of Representative Arsenic Concentrations in the M Tract Area

Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

As part of the investigation activities conducted at the Undeveloped Buffer Property, test pits were excavated in the northwest portion of the Site (M Tract Area) to evaluate whether Site soils were potentially impacted by the adjacent drainage ditch. Four test pits were excavated in this area (in addition to numerous shallow grid sample locations). Arsenic concentrations at two test pit locations (TP-10 and TP-11), from a depth of one-foot below ground surface, exceeded the arsenic assessment level (24 mg/kg). Arsenic data from adjacent grid sample locations were also obtained to evaluate the distribution of arsenic in the area. At one grid sample location, DE-6, the arsenic concentration exceeded the assessment level. Based on the initial data and knowledge of the Site history, an established source of the arsenic was not apparent and the distribution of arsenic did not appear to follow an obvious concentration gradient indicating an anthropogenic source (see Table 4D.10 and Figure 4A.12).

Based on the distribution of arsenic in the area, a decision was made to determine representative arsenic concentrations for discrete, 1/8th acre exposure areas. In accordance with 30 Texas Administration Code (TAC) Rule §350.51(l), PBW used a multiple sample approach to calculate representative concentrations of arsenic in soil at each of the test pit areas, and one grid sample location, where arsenic assessment level exceedances were observed in individual soil samples.

Methods

TAC Rule §350.51(l), relating to the calculation of statistically representative concentrations of chemicals of concern (COC) at an affected property, states the following:

> (l) The executive director may approve the use of statistical or geostatistical methods to determine representative concentrations of COCs at the affected property or within areas representative of site-specific background conditions as long as the following conditions are satisfied.
>
>> (1)The person shall ensure that all assumptions for the selected statistical or geostatistical method are met or critically examined and explained if the assumptions cannot be met (e.g., random sampling design, normal or log-normal distribution, etc.). Judgmental samples may be used, as long as it can be demonstrated that the resulting estimated representative concentration is not biased low.
>>
>> (2)An appropriate number of samples for the statistical method shall be used. If site-specific background is determined using the upper confidence limit or similar statistical method, then a minimum of eight samples shall be used. If the person uses an arithmetic

average to determine the background concentration, then a minimum of five samples shall be used.

> (3)The soil exposure area for existing residential yards or platted residential properties shall not exceed 1/8th acre or the size of the front or back yard of the affected residential lot, unless it is demonstrated that a larger area, not to exceed 1/2 acre, is appropriate based upon the activity patterns of residents at a specific affected property.

Based on these guidelines, at least ten samples were collected within 1/8th acre study areas that encompassed each of the test pit and grid sample locations where exceedances of the assessment level were detected in one or more individual soil samples (see Figure 4A.12). The 95 percent UCL of the arithmetic mean for each 1/8-acre study area was calculated in *PRO UCL* using the Student's *t*-statistic, as recommended by the United States Environmental Protection Agency guidance document, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (EPA, 2009). The distribution of the data sets was evaluated using EPA's *PRO UCL* statistical software package (EPA, 2010). The data sets for DE-6 and TP-11 were normally distributed. The data set for TP-10 contained an outlier (29.9 mg/kg), however, the outlier was included in the data set to avoid biasing the data low. Inclusion of the outlier results in a skewed data set for the TP-10 study area. Pro UCL recommended two UCLs: 1) 95% Student's-t UCL of 17.56 mg/kg or 2) 95% Modified-t UCL of 17.79 mg/kg. The UCL of 17.79 mg/kg is modified for skewness and is the UCL proposed to represent this data set.

Results and Conclusions

A summary of the data sets and calculated representative values is provided on Table A8.1. Results of the outlier tests, normal distribution tests and UCL calculations are provided in Tables A8.2 through A8.4. The UCLs for the test pit samples TP-10 and TP-11 (17.79 mg/kg and 21.23 mg/kg, respectively) are less than or equal to the arsenic RAL of 24 mg/kg and the UCL for grid sample DE-6 area (24.35 mg/kg) is essentially equal to the arsenic assessment level.

Based on TAC Rule §350.51(l), the UCLs for the test pit and grid sample areas can be used as representative arsenic concentrations in soil. Therefore, the arsenic assessment level is not exceeded at the M Tract area.

TABLE A8.1
REPRESENTATIVE ARSENIC CONCENTRATION SUMMARY
Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

DE-6 Study Area

Sample ID	Sample Depth (feet)	Arsenic (mg/kg)
DE-6	0 - 0.25	24.1
DE-6A	0 -0.5	23.9
DE-6B	0 -0.5	22.9
DE-6C	0 -0.5	20
DE-6D	0 -0.5	21.9
DE-6E	0 -0.5	26.2
DE-6F	0 -0.5	24.3
DE-6G	0 -0.5	22.7
DE-6H	0 -0.5	23.7
DE-6I	0 -0.5	24.2

Statistics		
Minimum	20	mg/kg
Maximum	26.2	mg/kg
Mean	23.39	mg/kg
Medium	23.8	mg/kg
Std, Deviation	1.656	
95% UCL	24.35	mg/kg

TP-10 Study Area

Sample ID	Sample Depth (feet)	Arsenic (mg/kg)
TP-10	1	29.9
TP-10	1-2	16
TP-10A	0 - 0.5	11.3
TP-10B	0 - 0.5	12
TP-10C	0 - 0.5	13.8
TP-10D	0 - 0.5	12.2
TP-10E	0 - 0.5	12.4
TP-10F	0 - 0.5	14
TP-10G	0 - 0.5	12.1
TP-10H	0 - 0.5	15.6
TP-10I	0 - 0.5	12.2

Statistics		
Minimum	11.3	mg/kg
Maximum	29.9	mg/kg
Mean	14.68	mg/kg
Medium	12.4	mg/kg
Std, Deviation	5.275	
95% UCL	17.79	mg/kg

TP-11 Study Area

Sample ID	Sample Depth (feet)	Arsenic (mg/kg)
TP-11	1	24.5
TP-11	1-2	14.7
TP-11A	0 - 0.5	19.1
TP-11B	0 - 0.5	21.7
TP-11C	0 - 0.5	23.2
TP-11D	0 - 0.5	17.2
TP-11E	0 - 0.5	19.1
TP-11F	0 - 0.5	18.2
TP-11G	0 - 0.5	22.2
TP-11H	0 - 0.5	18.8
DE-5	0 - 0.25	17

Statistics		
Minimum	14.7	mg/kg
Maximum	24.5	mg/kg
Mean	19.61	mg/kg
Medium	19.4	mg/kg
Std, Deviation	2.963	
95% UCL	21.23	mg/kg

TABLE A8.2
UPPER CONFIDENCE LIMIT RESULTS
GRID SAMPLE DE-6

Normal UCL Statistics for Full Data Sets

User Selected Options	
From File	DE-6.wst
Full Precision	OFF
Confidence Coefficient	95%

As

Number of Valid Observations	10
Number of Distinct Observations	10
Minimum	20
Maximum	26.2
Mean	23.39
Median	23.8
SD	1.656
Variance	2.741
Std. Error of Mean	0.524
Coefficient of Variation	0.0708
Skewness	-0.573
Shapiro Wilk Test Statistic	0.943
5% Shapiro Wilk Critical Value	0.842
Data appear Normal at 5% Significance Level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	24.35
Potential UCL to Use	
Student's-t UCL	24.35

TABLE A8.3
UPPER CONFIDENCE LIMIT RESULTS
TEST PIT SAMPLE TP-10

General UCL Statistics for Full Data Sets

User Selected Options			
From File	WorkSheet.wst		
Full Precision	OFF		
Confidence Coefficient	0.95		
Number of Bootstrap Operations	2000		

C0

General Statistics			
Number of Valid Observations	11	Number of Distinct Observations	10
Raw Statistics		Log-transformed Statistics	
Minimum	11.3	Minimum of Log Data	2.425
Maximum	29.9	Maximum of Log Data	3.398
Mean	14.68	Mean of log Data	2.646
Median	12.4	SD of log Data	0.274
SD	5.275		
Std. Error of Mean	1.59		
Coefficient of Variation	0.359		
Skewness	2.839		
Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.598	Shapiro Wilk Test Statistic	0.704
Shapiro Wilk Critical Value	0.85	Shapiro Wilk Critical Value	0.85
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	17.56	95% H-UCL	17.28
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	19.86
95% Adjusted-CLT UCL (Chen-1995)	18.75	97.5% Chebyshev (MVUE) UCL	22.15
95% Modified-t UCL (Johnson-1978)	17.79	99% Chebyshev (MVUE) UCL	26.63
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	9.113	Data do not follow a Discernable Distribution (0.05)	
Theta Star	1.611		
MLE of Mean	14.68		
MLE of Standard Deviation	4.863		
nu star	200.5		
Approximate Chi Square Value (.05)	168.7	Nonparametric Statistics	
Adjusted Level of Significance	0.0278	95% CLT UCL	17.3
Adjusted Chi Square Value	164	95% Jackknife UCL	17.56
		95% Standard Bootstrap UCL	17.05
Anderson-Darling Test Statistic	1.443	95% Bootstrap-t UCL	23.11
Anderson-Darling 5% Critical Value	0.729	95% Hall's Bootstrap UCL	26.58
Kolmogorov-Smirnov Test Statistic	0.256	95% Percentile Bootstrap UCL	17.54
Kolmogorov-Smirnov 5% Critical Value	0.255	95% BCA Bootstrap UCL	18.88
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	21.61
		97.5% Chebyshev(Mean, Sd) UCL	24.61
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	30.51
95% Approximate Gamma UCL	17.45		
95% Adjusted Gamma UCL	17.95		
Potential UCL to Use		Use 95% Student's-t UCL	17.56
		or 95% Modified-t UCL	17.79

TABLE A8.4
UPPER CONFIDENCE LIMIT RESULTS
TEST PIT SAMPLE TP-11

Normal UCL Statistics for Full Data Sets

User Selected Options	
From File	TP-11.wst
Full Precision	OFF
Confidence Coefficient	95%

As

Number of Valid Observations	11
Number of Distinct Observations	10
Minimum	14.7
Maximum	24.5
Mean	19.61
Median	19.1
SD	2.963
Variance	8.777
Std. Error of Mean	0.893
Coefficient of Variation	0.151
Skewness	0.17
Shapiro Wilk Test Statistic	0.963
5% Shapiro Wilk Critical Value	0.85
Data appear Normal at 5% Significance Level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	21.23
Potential UCL to Use	
Student's-t UCL	21.23

APPENDIX 9
DEVELOPMENT OF NON-DEFAULT RBELS AND PCLS

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

Tier 2 PCL Development

APPENDIX 9
Development of Non-Default RBELs and PCLs

Affected Property Assessment Report

Exide Undeveloped Buffer Property VCP Investigation
Frisco, Texas

Tier 2 Soil PCL Development

In accordance with TRRP Rule §350.75(b)(1), Tier 2 $^{GW}Soil_{Ing}$ PCLs were developed for various compounds using site-specific data and TRRP Tier 2 $^{GW}Soil_{Ing}$ PCL equations. The TRRP Tier 2 $^{GW}Soil_{Ing}$ PCL calculations for these COCs are presented in Table A9.1. Site-specific pH soil sample results were used to determine soil-water partition coefficient (Kd) values for calculating Tier 2 PCLs in accordance with 30 TAC §350.73(f)(1). Ten soil samples were evaluated for pH; the results are presented in Table 4E. The average pH value for soils was 7.5, with corresponding Kd values being 30 L/kg for arsenic and 1830 L/kg for lead (30 TAC 350.73(e)(1)(A) for lead in clayey soils and 30 TAC 350.73(f)(1)(C) for other metals).

The results of the Tier 2 PCL development are presented on the attached table.

TABLE A9.1
TIER 2 RESIDENTIAL PCL DEVELOPMENT
Exide Technologies Undeveloped Buffer Property

EQUATIONS		SOURCE
Ksw =	$\frac{Pb}{(Kd * Pb + nw + na * H')}$	Figure 30TAC350.75(b)(1)
$^{GW}Soil$ =	$\frac{^{GW}GW * LDF * L2}{Ksw * L1}$	Figure 30TAC350.75(b)(1)
Organics Kd=	$10^{\text{Log Koc}} * foc$	Figure 30TAC350.75(b)(1)

PARAMETER DESCRIPTIONS	TRRP DEFAULT	VALUES USED	SOURCE
^{GW}GW = Residential Tier 1 PCL in groundwater (mg/L)			TRRP Table of Residential PCLs for groundwater
$^{GW}Soil$ = groundwater protective soil concentration (mg/kg)			calculated below
Kd = soil water partition coefficient			Chemical specific. Calculated from Site-specific foc and TRRP default for Koc values (organics)
Koc = organic carbon partition coefficent			TRRP default, chemical specific
foc = soil organic carbon fraction	0.006		TRRP default
Pb = dry soil bulk density	1.67		TRRP default
n = total soil porosity	0.37		TRRP default
na = air filled soil porosity	0.21		TRRP default
L1 = thickness of impacted soil zone	site-specific	1	Surface soil impacts at the site are typically limited to the upper 12" of soil.
L2 = distance from top of impacted soil zone to groundwater	site-specific	3.49	Site-specific, highest water elevation observed during groundwater gauging events
nw = volumetric water content of vadose zone soils (cm3-water/cm3-soil)	0.16		TRRP default
H' = dimensionless Henry's Law Constant			TRRP default
LDF = Lateral/leachate dilution factor	10	10	30 acre source area TRRP default
pH = soil pH		7.5	Average value from soil borings advanced across Site (see Table 4E)
Soil Type		Clay	Site investigation activities

TIER 2 RESIDENTIAL RESULTS SUMMARY

Compounds	$^{GW}GW_{Ing}$ mg/L	soil type	pH	Log Koc	foc	*Kd* *L/kg*	Pb kg/L	n	na	nw	H'	*L1*	*L2*	*LDF*	Ksw	**Tier 2 $^{GW}Soil_{Ing}$ PCL (mg/Kg)**
Arsenic	1.0E-02	Clay	7.5	0	0.006	3.00E+01	1.67	0.37	0.21	0.16	NA	1	3.49	10	3.32E-02	**1.05E+01**
Cadmium	5.0E-03	Clay	7.5	0	0.006	5.90E+02	1.67	0.37	0.21	0.16	NA	1	3.49	10	1.69E-03	**1.03E+02**
Copper	1.3E+00	Clay	7.5	0	0.006	3.98E+01	1.67	0.37	0.21	0.16	NA	1	3.49	10	2.51E-02	**1.81E+03**
Lead	1.5E-02	Clay	7.5	0	0.006	1.83E+03	1.67	0.37	0.21	0.16	NA	1	3.49	10	5.46E-04	**9.58E+02**
Mercury	2.0E-03	Clay	7.5	0	0.006	1.60E+02	1.67	0.37	0.21	0.16	4.74E-01	1	3.49	10	6.24E-03	**1.12E+01**
Methylene Chloride	5.00E-03	Clay	7.5	1.07	0.006	7.05E-02	1.67	0.37	0.21	0.16	9.10E-02	1	3.49	10	5.63E+00	**3.10E-02**
2,4-Dinitrophenol	4.89E-02	Clay	7.5	-2	0.006	6.00E-05	1.67	0.37	0.21	0.16	2.01E-07	1	3.49	10	1.04E+01	**1.64E-01**
2,4-Dinitrotoluene	1.34E-03	Clay	7.5	1.71	0.006	3.08E-01	1.67	0.37	0.21	0.16	3.60E-05	1	3.49	10	2.48E+00	**1.89E-02**
2,6-Dinitrotoluene	1.34E-03	Clay	7.5	1.62	0.006	2.50E-01	1.67	0.37	0.21	0.16	3.11E-05	1	3.49	10	2.89E+00	**1.62E-02**
2-Nitroaniline	7.33E-03	Clay	7.5	1.43	0.006	1.61E-01	1.67	0.37	0.21	0.16	2.08E-05	1	3.49	10	3.89E+00	**6.58E-02**
3,3'-Dichlorobenzidine	2.03E-03	Clay	7.5	2.86	0.006	4.35E+00	1.67	0.37	0.21	0.16	8.65E-07	1	3.49	10	2.25E-01	**3.14E-01**
3-Nitroaniline	7.33E-03	Clay	7.5	1.60	0.006	2.36E-01	1.67	0.37	0.21	0.16	2.31E-07	1	3.49	10	3.01E+00	**8.50E-02**
4,6-Dinitro-2-methylphenol	2.44E-03	Clay	7.5	-1.5	0.006	1.90E-04	1.67	0.37	0.21	0.16	1.07E-07	1	3.49	10	1.04E+01	**8.19E-03**
4-Chloroaniline	4.56E-03	Clay	7.5	1.82	0.006	3.96E-01	1.67	0.37	0.21	0.16	4.86E-05	1	3.49	10	2.03E+00	**7.84E-02**
4-Chlorophenyl phenyl ether	6.08E-05	Clay	7.5	4.12	0.006	7.86E+01	1.67	0.37	0.21	0.16	1.30E-02	1	3.49	10	1.27E-02	**1.67E-01**
4-Nitroaniline	4.56E-02	Clay	7.5	1.05	0.006	6.75E-02	1.67	0.37	0.21	0.16	3.33E-08	1	3.49	10	6.12E+00	**2.60E-01**
4-Nitrophenol	4.89E-02	Clay	7.5	0.5	0.006	1.90E-02	1.67	0.37	0.21	0.16	3.24E-08	1	3.49	10	8.71E+00	**1.96E-01**
Benzidine	3.97E-06	Clay	7.5	1.32	0.006	1.25E-01	1.67	0.37	0.21	0.16	1.62E-09	1	3.49	10	4.52E+00	**3.06E-05**
bis (2-Chloroisopropyl) ether	1.30E-02	Clay	7.5	2.5	0.006	1.90E+00	1.67	0.37	0.21	0.16	4.16E-03	1	3.49	10	5.02E-01	**9.07E-01**
Bis(2-chloroethoxy)methane	8.30E-04	Clay	7.5	2.487	0.006	1.84E+00	1.67	0.37	0.21	0.16	1.25E-03	1	3.49	10	5.17E-01	**5.60E-02**
Bis(2-chloroethyl)ether	8.30E-04	Clay	7.5	1.190	0.006	9.29E-02	1.67	0.37	0.21	0.16	8.90E-04	1	3.49	10	5.30E+00	**5.47E-03**
N-Nitrosodimethylamine	1.79E-05	Clay	7.5	0.556	0.006	2.16E-02	1.67	0.37	0.21	0.16	2.16E-05	1	3.49	10	8.52E+00	**7.33E-05**
N-Nitrosodi-n-propylamine	1.30E-04	Clay	7.5	1.295	0.006	1.18E-01	1.67	0.37	0.21	0.16	9.35E-05	1	3.49	10	4.67E+00	**9.74E-04**
Pentachlorophenol	1.00E-03	Clay	7.5	2.613	0.006	2.46E+00	1.67	0.37	0.21	0.16	1.16E-05	1	3.49	10	3.91E-01	**8.92E-02**
MCPA	1.22E-02	Clay	7.5	-1.501	0.006	1.89E-04	1.67	0.37	0.21	0.16	1.18E-07	1	3.49	10	1.04E+01	**4.09E-02**
Mecoprop	2.44E-02	Clay	7.5	-1.761	0.006	1.04E-04	1.67	0.37	0.21	0.16	1.00E-06	1	3.49	10	1.04E+01	**8.18E-02**

APPENDIX 10
LABORATORY DATA PACKAGES AND DATA USABILITY SUMMARY

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

600-48830
600-48997
1203670
1203697
1203719
1203765
1203828
1205359
1205392
1205433
1205456
600-70262
600-70373
600-70422
600-70491
600-70421
600-70254
600-70497
600-71531
600-70120
600-71692
600-71753
600-72124
600-72228
600-72908
600-72851
600-73242
600-73543
600-85108
600-85736

APPENDIX 12
WASTE CHARACTERIZATION AND DISPOSITION DOCUMENTATION

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

WMI 1334602

GENERATOR

Name Exide Technologies
Address PO Box 250
Frisco TX 75034
Phone No. 972 335-2121

Generating Location Exide Technologies
7471 South 5th St; Frisco, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
00323022	961946TX	VCP Investigative Derived Waste Class 2 Soils	19	D

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

LAUREL A. JOHNSON
AUTHORIZED AGENT'S NAME (PRINT)
6-19-13
DATE
SIGNATURE

TRANSPORTER

Transporter's Name Remediation Services, Inc
Address 2735 S. 10th Street
Independence, KS 67301

Phone No. (620)331-1200
Driver's name BRYAN MECOM
Vehicle No. 129

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

6-19-13
SHIPMENT DATE
Bryan Mecom
DRIVER'S SIGNATURE
6-19-13
DELIVERY DATE
Bryan Mecom
DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S Railroad Street
Lewisville TX 75067
Permit No. 1025-B
Phone No. (972)459-1213
Time 207pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

Troy Lune
NAME (PRINT)
6/19/13
DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

DFW RDF
1600 South Railroad Street
Lewisville, TX, 75067
Ph: (972) 315-5421

Original
Ticket# 1274368

Customer Name REMEDIATIONSERVICES REMEDIATI
Ticket Date 06/19/2013
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code 00323022
Manifest 1334602
Destination
PO

Carrier RSI INDEPENDE
Vehicle# 109
Container
Driver
Check#
Billing # 0001625
Gen EPA ID 30516
Grid

Volume 14.0

Profile 961946TX (VCP INVESTIGATIVE DERIVED WASTE CLASS 2 SOILS)
Generator 158-EXIDETECHNOLOGIES Exide Technologies

	Time	Scale	Operator	Inbound		
					Gross	32160 lb*
In	06/19/2013 14:09:20	In Scale 1	lturner		Tare	24760 lb*
Out	06/19/2013 14:09:20		lturner		Net	7400 lb
			* Manual Weight		Tons	3.70

Comments DISCREPANCY LOAD TRUCK PULLED TO STAGGING AERA REASON FOR MANUAL WEIGHT

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	C2 Soil-Each-Soil	100	19	Each				
2	FUEL-Fuel Surcharg	100		%				
3	EVF-P-Standard Env	100		%				

3079288

I certify that the wastes I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive wastes or substances, or other non-allowable waste. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility.

Total Tax
Total Ticket

ignature

403WMNT

25-Apr-2013

Vanessa Coleman
Exide Technologies
7471 South Fifth Street
Frisco, TX 75034

Tel: (972) 335-2121
Fax:

Re: VCP Drums Work Order: **1304856**

Dear Vanessa,

ALS Environmental received 1 sample on 23-Apr-2013 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 12.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Bernadette Fini

Electronically approved by: Jumoke M. Lawal

Bernadette A. Fini
Project Manager

NELAP ACCREDITED
TNI
LABORATORY

Certificate No: TX: T104704231-12-10

ALS Environmental

Date: 25-Apr-13

Client: Exide Technologies
Project: VCP Drums
Work Order: **1304856**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1304856-01	VCP IDW001	Soil		4/20/2013 11:40	4/23/2013 09:15	☐

ALS Environmental *Date: 25-Apr-13*

Client: Exide Technologies
Project: VCP Drums
Work Order: 1304856

Case Narrative

No Exceptions

ALS Environmental

Date: *25-Apr-13*

Client: Exide Technologies
Project: VCP Drums
Sample ID: VCP IDW001
Collection Date: 4/20/2013 11:40 AM

Work Order: 1304856
Lab ID: 1304856-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP METALS			Method: **SW1311/6020**		Leachate: SW1311 / 4/24/13 Prep: SW3010A / 4/24/13		Analyst: **JCJ**
Cadmium	U		0.00800	0.0200	mg/L	10	4/25/2013 13:02
Lead	**0.0181**	J	**0.00700**	**0.0500**	**mg/L**	10	4/25/2013 13:02
PH - SOIL - SW9045D			Method: **SW9045B**				Analyst: **TAL**
pH	**7.85**		**0.10**	**0.100**	**pH Units**	1	4/25/2013

Note: See Qualifiers Page for a list of qualifiers and their explanation.

AR Page 1 of 1

Client: Exide Technologies
Work Order: 1304856
Project: VCP Drums

QC BATCH REPORT

Batch ID: **69484** Instrument ID **ICPMS04** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-042313-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:32 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193316** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	U	0.020								
Lead	U	0.050								

MBLK Sample ID: **MBLKW4-042413-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:37 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193317** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	U	0.020								
Lead	U	0.050								

LCS Sample ID: **MLCSW4-042413-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:42 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193318** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	0.4715	0.020	0.5	0	94.3	80-120	0			
Lead	0.4819	0.050	0.5	0	96.4	80-120	0			

MS Sample ID: **1304841-02BMS** Units: **mg/L** Analysis Date: **4/25/2013 02:32 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193328** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	0.4838	0.020	0.5	0.006098	95.5	75-125	0			
Lead	0.6796	0.050	0.5	0.1909	97.7	75-125	0			

MSD Sample ID: **1304841-02BMSD** Units: **mg/L** Analysis Date: **4/25/2013 02:37 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193329** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	0.4991	0.020	0.5	0.006098	98.6	75-125	0.4838	3.12	20	
Lead	0.7159	0.050	0.5	0.1909	105	75-125	0.6796	5.21	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **69484** Instrument ID **ICPMS04** Method: **SW1311/6020**

DUP Sample ID: **1304841-02BDUP** Units: **mg/L** Analysis Date: **4/25/2013 02:22 AM**

Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193326** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	U	0.020	0	0	0	0-0	0.006098	0	25	
Lead	0.1905	0.050	0	0	0	0-0	0.1909	0.201	25	

The following samples were analyzed in this batch: 1304856-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Exide Technologies
Work Order: 1304856
Project: VCP Drums

QC BATCH REPORT

Batch ID: **R146377** Instrument ID **WetChem** Method: **SW9045B** **(Dissolve)**

LCS Sample ID: **LCS-W1120425-R146377** Units: **pH Units** Analysis Date: **4/25/2013**

Client ID: Run ID: **WETCHEM_130425C** SeqNo: **3194296** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.01	0.10	6	0	100	90-110	0			

DUP Sample ID: **1304855-01ADUP** Units: **pH Units** Analysis Date: **4/25/2013**

Client ID: Run ID: **WETCHEM_130425C** SeqNo: **3194306** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.61	0.10	0	0	0	0-0	7.56	0.659	20	

The following samples were analyzed in this batch: 1304856-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Exide Technologies
Project: VCP Drums
WorkOrder: **1304856**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
mg/L	Milligrams per Liter
pH Units	

Semi-Volatiles / Metals Extraction Log

Logbook #28802

Analysts: Si

Batch ID 69469-69470

SOP # : TCLP-001 or SPLP-001

Vessel Number	Work Order Number	Sample weight, grams	% Solids	Vol. of Extract. Fluid, mls	pH Sx and H_20	pH Sx HCl / H_20	pH Ext. Fluid	Ext. Fluid ID.	pH After Tumble	Comments (TCLP or SPLP)
GV	MBLKT1042313	—	–	2000	—	—	4.94	7073407	—	TCLP
PV	1304778-01A	100.0	–	2000	9.51	2.26	4.91	7073408	6.48	
GV	1304785-01A	10.26	30.35	205.2	8.83	1.89	↓	↓	8.37	
PV	1304831-01A	100.0	–	2000	9.12	1.81			5.02	
PV	1304834-01A	100.0	–	2000	9.78	1.67			4.99	
PV	1304841-02B	100.0	–	2000	7.51	1.75			5.54	
PV	1304855-01A	100.0	–	2000	8.81	1.99			5.36	
PV	1304870-08A	100.0	–	2000	5.78	1.83			5.53	
↓	-08AMS	↓	–	↓	5.78	1.83			5.53	
GV	MBLKT2042313	—	–	2000	—	—	2.93	7073406	—	
PV	1304856-01A	100.0	–	2000	9.25	5.82	↓	↓	5.94	
PV	1304857-01A	100.0	–	2000	9.28	5.98			6.05	
↓	-01AMS	↓	–	↓	9.28	5.98			6.05	
	1304828-01A								13.70	
	1304828-02A								13.66	
	1304828-03A								7.35	
	1304834-01A		SX filter	on	this	day			8.71	
	1304841-01D								6.57	
	-01DMS								6.57	

Balance ID: TCLP 02

pH Meter ID TCLP PH 1

Therm. ID: TCLP #1

1*N* HCl Tracking ID: 386021007

Date/Time In: 04/23/13 4:30pm

Date/Time Out: 04/24/13 8:30am

Date/Time Filter/Initials: 04/24/13 9:40 am

Filter Lot# 400027

MIN Temp, °C: 22.0°C

Room Temp Limits: 21-25 °C

TCLP Tumbler IDs: 3

Delivery Date/Time/Initials:

MAX Temp, °C: 23.0°C

Rev Accept. Range: 56.5 - 64 sec

sec / 30 Revolution: 60s 04/23/13

ALS Environmental

Sample Receipt Checklist

Client Name: **EXIDE TECHNOLOGIES**

Date/Time Received: **23-Apr-13 09:15**

Work Order: **1304856**

Received by: **JBA**

Checklist completed by Robert D. Harris (eSignature) 23-Apr-13 (Date)

Reviewed by: Bernadette A. Fini (eSignature) 23-Apr-13 (Date)

Matrices: soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	

Temperature(s)/Thermometer(s): 21.2c/21.2c c/u IR1

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 4/23/13 10:50

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by: -

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

ALS Environmental

Chain of Custody Form

Page ____ of ______

COC ID: 41093

☐ Cinci[illegible]OH +1 [illegible]336

☐ Eve[illegible] +1 42[illegible]2600

☐ Fort Collins, CO +1 970 490 1511

1304856

EXIDE TECHNOLOGIES: Exide Technologies

Project: VCP Drums

ALS Project Manager:

Customer Information		**Project Information**		**Parameter/Method Request for Analysis**	
Purchase Order	[redacted]	Project Name		A	TCLP METALS Pb + Cd
Work Order	VCP DRUMS	Project Number		B	HOLD REMAINDER
Company Name	RSI	Bill To Company	EXIDE TECHNOLOGIES	C	
Send Report To	GRANT SHERWOOD	Invoice Attn.	VANESSA COLEMAN	D	
Address	P.O. 587	Address	7471 S. 5th ST	E	
				F	
City/State/Zip	INDEPENDENCE, KS 67301	City/State/Zip	FRISCO, TX 75034	G	
Phone	620·331·1200	Phone	972·335·2121	H	
Fax	620·331·6216	Fax		I	
e-Mail Address	GSHERWOOD@RSI-KS.COM	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	VCP IDW 001	4·20·13	11:40	SOIL	N/A	1	X	X									
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign JOHNNY GILLMAN

Shipment Method:

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☒ 2 Wk Days ☐ 24 Hour ☐ Other ________

Results Due Date: 4·25·13

Relinquished by: J. GILLMAN	Date: 4·22·13	Time: 19:00	Received by: 4/23/13 0915	Notes:
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

QC Package: (Check Box Below)

- ☒ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- Other: ________

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

1304856

MUR1

FedEx Express Package US Airbill

FedEx Tracking Number 8013 8013 2712

Form ID No. 0215

From

Date 04·22·13 [redacted]

Sender's Name JOHNNY GILLMAN Phone 620 252-9912

Company RST

Address 7471 S 5TH ST.

Dept./Floor/Suite/Room

City FRISCO State TX ZIP 75034

2 Your Internal Billing Reference

3 To

Recipient's Name CLIENT SERVICES Phone 281 530-5656

Company ALS LABORATORY GROUP

Address 10450 STANCLIFF RD STE 210

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

☐ HOLD Weekday
FedEx location address REQUIRED. NOT available for FedEx First Overnight.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

☐ HOLD Saturday
FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

City HOUSTON State TX ZIP 77099-4338

0455550776

8013 8013 2712

4 Express Package Service *To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs.
For packages over 150 lbs., use the FedEx Express Freight US Airbill.

Next Business Day

☐ FedEx First Overnight
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Priority Overnight
Next business morning. Friday shipments will be* delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Standard Overnight
Next business afternoon.*
Saturday Delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day A.M.
Second business morning.*
Saturday Delivery NOT available.

☐ FedEx 2Day
Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver
Third business day.*
Saturday Delivery NOT available.

5 Packaging **Declared value limit $500.*

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required
Package may be left without obtaining a signature for delivery.

☐ Direct Signature
Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature
If no one is available at recipient's *address, someone at a neighboring* address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ *Dry Ice* Dry Ice, 9, UN 1845 ______ x ______ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment ***Bill to:***

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip. Acct. No. ☐

☐ Sender Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

[redacted]

Total Packages Total Weight [redacted] Credit Card Auth.

______ ______ lbs. ______

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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21-May-2013

Vanessa Coleman
Exide Technologies
7471 South Fifth Street
Frisco, TX 75034

Tel: (972) 335-2121
Fax:

Re: Exide Decon/Demo 21252 Work Order: **1305642**

Dear Vanessa,

ALS Environmental received 7 samples on 02-Apr-2013 through 23-Apr-2013 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 44.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Bernadette Fini

Electronically approved by: Jumoke M. Lawal

Bernadette A. Fini
Project Manager

NELAP ACCREDITED TNI LABORATORY

Certificate No: TX: T104704231-12-10

ALS Environmental

Date: 21-May-13

Client: Exide Technologies
Project: Exide Decon/Demo 21252
Work Order: **1305642**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
~~1305642-01~~	~~Rock/Soil Stockpile~~	~~Solid~~		~~3/30/2013 13:15~~	~~4/2/2013 09:10~~	☐
~~1305642-02~~	~~Blast Feed Room Fibreglass~~	~~Solid~~		~~4/9/2013 13:20~~	~~4/10/2013 09:15~~	☐
~~1305642-03~~	~~Refining Office Floor~~	~~Solid~~		~~4/16/2013 14:25~~	~~4/17/2013 09:10~~	☐
~~1305642-04~~	~~Boneyard Sand/Gravel~~	~~Solid~~		~~4/16/2013 10:05~~	~~4/17/2013 09:10~~	☐
~~1305642-05~~	~~Plant IDW001~~	~~Solid~~		~~4/19/2013 15:30~~	~~4/23/2013 09:15~~	☐
1305642-06	VCP IDW001	Solid		4/20/2013 11:40	4/23/2013 09:15	☐
~~1305642-07~~	~~LF IDW001~~	~~Solid~~		~~4/19/2013 15:54~~	~~4/23/2013 09:15~~	☐

ALS Environmental

Date: 22-May-13

Client: Exide Technologies
Project: Exide Decon/Demo 21252
Work Order: 1305642

Case Narrative

Per client request on April 15, 2013, sample listed below were re-logged for TCLP Metals analysis originally logged in under the following work order numbers:

1304321-02 Rock/Soil Stockpile
1304374-02 Blast Feed Room Fiberglass
1304648-03 Refining Office Floor
1304648-04 Boneyard Sand/Gravel
1304855-01 Plant IDW
1304856-01 VCP IDW
1304857-01 LF IDW

The first four samples listed above were outside method holding time for TCLP Mercury and will be resampled and resubmitted for analysis.

Batch 69484, TCLP Metals Method 1311/6020, Sample 1304841-02: MS/MSD and DUP is for an unrelated sample.

ALS Environmental

Date: *21-May-13*

Client: Exide Technologies
Project: Exide Decon/Demo 21252
Sample ID: VCP IDW001
Collection Date: 4/20/2013 11:40 AM

Work Order: 1305642
Lab ID: 1305642-06
Matrix: SOLID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			Method: **SW7470**		Leachate: SW1311 / 4/24/13 Prep: SW7470 / 5/16/13		Analyst: **OFO**
Mercury	U		0.0000420	0.000200	mg/L	1	5/16/2013 15:48
TCLP METALS			Method: **SW1311/6020**		Leachate: SW1311 / 4/24/13 Prep: SW3010A / 4/24/13		Analyst: **KCC**
Arsenic	U		0.0100	0.0500	mg/L	10	5/15/2013 14:48
Barium	**0.764**		**0.00900**	**0.0500**	**mg/L**	10	5/15/2013 14:48
Chromium	U		0.0100	0.0500	mg/L	10	5/15/2013 14:48
Selenium	U		0.0100	0.0500	mg/L	10	5/15/2013 14:48
Silver	U		0.00800	0.0500	mg/L	10	5/15/2013 14:48
TCLP MISCELLANEOUS METALS			Method: **SW1311/6020**		Leachate: SW1311 / 4/24/13 Prep: SW3010A / 4/24/13		Analyst: **KCC**
Antimony	U		0.00800	0.0500	mg/L	10	5/15/2013 14:48
Beryllium	U		0.00700	0.0200	mg/L	10	5/15/2013 14:48
Nickel	U		0.0100	0.0500	mg/L	10	5/15/2013 14:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **69484** Instrument ID **ICPMS04** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-042313-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:32 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193316** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.050								
Barium	0.01202	0.050								J
Chromium	U	0.050								
Selenium	0.01086	0.050								J
Silver	U	0.050								

MBLK Sample ID: **MBLKW4-042413-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:37 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193317** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.050								
Barium	U	0.050								
Chromium	U	0.050								
Selenium	U	0.050								
Silver	U	0.050								

MBLK Sample ID: **MBLKT1-042313-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:32 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193355** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.050								
Beryllium	U	0.020								
Nickel	0.0241	0.050								J

MBLK Sample ID: **MBLKW4-042413-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:37 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193356** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.050								
Beryllium	U	0.020								
Nickel	0.02238	0.050								J

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **69484** Instrument ID **ICPMS04** Method: **SW1311/6020**

LCS Sample ID: **MLCSW4-042413-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:42 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193318** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4809	0.050	0.5	0	96.2	80-120	0			
Barium	0.4902	0.050	0.5	0	98	80-120	0			
Chromium	0.4942	0.050	0.5	0	98.8	80-120	0			
Selenium	0.4913	0.050	0.5	0	98.3	80-120	0			
Silver	0.5283	0.050	0.5	0	106	80-120	0			

LCS Sample ID: **MLCSW4-042413-69484** Units: **mg/L** Analysis Date: **4/25/2013 01:42 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193357** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.4984	0.050	0.5	0	99.7	80-120	0			
Beryllium	0.4452	0.020	0.5	0	89	80-120	0			
Nickel	0.5137	0.050	0.5	0	103	80-120	0			

MS Sample ID: **1304841-02BMS** Units: **mg/L** Analysis Date: **4/25/2013 02:32 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193328** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5654	0.050	0.5	0.07456	98.2	75-125	0			
Barium	2.992	0.050	0.5	2.419	115	75-125	0			O
Chromium	0.5002	0.050	0.5	0.03081	93.9	75-125	0			
Selenium	0.5145	0.050	0.5	0.00619	102	75-125	0			
Silver	0.4585	0.050	0.5	0.000102	91.7	75-125	0			

MS Sample ID: **1304841-02BMS** Units: **mg/L** Analysis Date: **4/25/2013 02:32 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193367** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.4955	0.050	0.5	0.007323	97.6	75-125	0			
Beryllium	0.6457	0.020	0.5	0.001056	129	75-125	0			S
Nickel	0.5025	0.050	0.5	0.02827	94.8	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Exide Technologies
Work Order: 1305642
Project: Exide Decon/Demo 21252

QC BATCH REPORT

Batch ID: **69484** Instrument ID **ICPMS04** Method: **SW1311/6020**

MSD Sample ID: **1304841-02BMSD** Units: **mg/L** Analysis Date: **4/25/2013 02:37 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193329** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5464	0.050	0.5	0.07456	94.4	75-125	0.5654	3.42	20	
Barium	3.101	0.050	0.5	2.419	137	75-125	2.992	3.59	20	SO
Chromium	0.4916	0.050	0.5	0.03081	92.2	75-125	0.5002	1.72	20	
Selenium	0.5161	0.050	0.5	0.00619	102	75-125	0.5145	0.298	20	
Silver	0.4112	0.050	0.5	0.000102	82.2	75-125	0.4585	10.9	20	

MSD Sample ID: **1304841-02BMSD** Units: **mg/L** Analysis Date: **4/25/2013 02:37 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193368** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.4818	0.050	0.5	0.007323	94.9	75-125	0.4955	2.8	25	
Beryllium	0.642	0.020	0.5	0.001056	128	75-125	0.6457	0.579	25	S
Nickel	0.5006	0.050	0.5	0.02827	94.5	75-125	0.5025	0.379	25	

DUP Sample ID: **1304841-02BDUP** Units: **mg/L** Analysis Date: **4/25/2013 02:22 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193326** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.07531	0.050	0	0	0	0-0	0.07456	1	25	
Barium	2.481	0.050	0	0	0	0-0	2.419	2.55	25	
Chromium	0.03052	0.050	0	0	0	0-0	0.03081	0	25	J
Selenium	U	0.050	0	0	0	0-0	0.00619	0	25	
Silver	U	0.050	0	0	0	0-0	0.000102	0	25	

DUP Sample ID: **1304841-02BDUP** Units: **mg/L** Analysis Date: **4/25/2013 02:22 AM**
Client ID: Run ID: **ICPMS04_130424A** SeqNo: **3193365** Prep Date: **4/24/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.050	0	0	0	0-0	0.007323	0	25	
Beryllium	U	0.020	0	0	0	0-0	0.001056	0	25	
Nickel	0.03424	0.050	0	0	0	0-0	0.02827	0	25	J

The following samples were analyzed in this batch: 1305642-05A 1305642-06A 1305642-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **70046** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-051613-70046** Units: **mg/L** Analysis Date: **5/16/2013 03:18 PM**
Client ID: Run ID: **MERCURY_130516A** SeqNo: **3218419** Prep Date: **5/16/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020								

MBLK Sample ID: **GBLKT1-051513-70046** Units: **mg/L** Analysis Date: **5/16/2013 03:32 PM**
Client ID: Run ID: **MERCURY_130516A** SeqNo: **3218425** Prep Date: **5/16/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020	0	0	0	0-0	0			

LCS Sample ID: **GLCSW2-051613-70046** Units: **mg/L** Analysis Date: **5/16/2013 03:20 PM**
Client ID: Run ID: **MERCURY_130516A** SeqNo: **3218420** Prep Date: **5/16/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00528	0.00020	0.005	0	106	80-120	0			

MS Sample ID: **1305643-01AMS** Units: **mg/L** Analysis Date: **5/16/2013 03:28 PM**
Client ID: Run ID: **MERCURY_130516A** SeqNo: **3218423** Prep Date: **5/16/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00483	0.00020	0.005	0.000004	96.5	75-125	0			

MSD Sample ID: **1305643-01AMSD** Units: **mg/L** Analysis Date: **5/16/2013 03:30 PM**
Client ID: Run ID: **MERCURY_130516A** SeqNo: **3218424** Prep Date: **5/16/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00487	0.00020	0.005	0.000004	97.3	75-125	0.00483	0.825	20	

DUP Sample ID: **1305643-01ADUP** Units: **mg/L** Analysis Date: **5/16/2013 03:24 PM**
Client ID: Run ID: **MERCURY_130516A** SeqNo: **3218422** Prep Date: **5/16/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020	0	0	0	0-0	0.000004	0	20	

The following samples were analyzed in this batch:

1305642-01A	1305642-02A	1305642-03A
1305642-04A	1305642-05A	1305642-06A
1305642-07A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Exide Technologies
Project: Exide Decon/Demo 21252
WorkOrder: **1305642**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
mg/L	Milligrams per Liter

Sample Receipt Checklist

Client Name: CENTERPOINT ENERGY HOUST

Date/Time Received: 09-May-13 08:20

Work Order: 1305374

Received by: PS

Checklist completed by Paresh M. Giga (eSignature) 09-May-13 (Date)

Reviewed by: Kristin M Brown (eSignature) 10-May-13 (Date)

Matrices: Soil

Carrier name: ALS.HS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s): 2.6c/2.6c C/U IR1

Cooler(s)/Kit(s): 4566

Date/Time sample(s) sent to storage: 5/9/13 10:55

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by: -

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

Sample Receipt Checklist

Client Name: **EXIDE TECHNOLOGIES** Date/Time Received: **17-Apr-13 09:10**

Work Order: **1304648** Received by: **PMG**

Checklist completed by Paresh M. Giga (eSignature) 17-Apr-13 (Date) Reviewed by: Bernadette A. Fini (eSignature) 17-Apr-13 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	

Temperature(s)/Thermometer(s): 21.7c/21.7c C/U IR1
Cooler(s)/Kit(s): 4740
Date/Time sample(s) sent to storage: 4/17/13 10:19

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by: -

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

Sample Receipt Checklist

Client Name: **EXIDE TECHNOLOGIES**

Date/Time Received: **23-Apr-13 09:15**

Work Order: **1304855**

Received by: **JBA**

Checklist completed by Robert D. Harris (eSignature) 23-Apr-13 (Date)

Reviewed by: Bernadette A. Fini (eSignature) 23-Apr-13 (Date)

Matrices: soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	

Temperature(s)/Thermometer(s): 21.2c/21.2c c/u IR1

Cooler(s)/Kit(s): 5147

Date/Time sample(s) sent to storage: 4/23/13 10:45

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by: -

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

Sample Receipt Checklist

Client Name: **EXIDE TECHNOLOGIES**
Date/Time Received: **23-Apr-13 09:15**
Work Order: **1304856**
Received by: **JBA**

Checklist completed by Robert D. Harris (eSignature) 23-Apr-13 (Date)
Reviewed by: Bernadette A. Fini (eSignature) 23-Apr-13 (Date)

Matrices: soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	

Temperature(s)/Thermometer(s): 21.2c/21.2c c/u IR1
Cooler(s)/Kit(s):
Date/Time sample(s) sent to storage: 4/23/13 10:50

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by: -

Login Notes:

Client Contacted:
Date Contacted:
Person Contacted:

Contacted By:
Regarding:

Comments:

CorrectiveAction:

ALS Environmental

Sample Receipt Checklist

Client Name: **EXIDE TECHNOLOGIES**

Date/Time Received: **23-Apr-13 09:15**

Work Order: **1304857**

Received by: **JBA**

Checklist completed by Robert D. Harris 23-Apr-13
eSignature Date

Reviewed by: Bernadette A. Fini 23-Apr-13
eSignature Date

Matrices: soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	

Temperature(s)/Thermometer(s): 21.2c/21.2c c/u IR1
Cooler(s)/Kit(s):
Date/Time sample(s) sent to storage: 4/23/13 10:55

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by: -

Login Notes:

Client Contacted:
Date Contacted:
Person Contacted:

Contacted By:
Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

Sample Receipt Checklist

Client Name: **EXIDE TECHNOLOGIES**

Date/Time Received: **02-Apr-13 09:10**

Work Order: **1304051**

Received by: **RDH**

Checklist completed by Johnnie B. Allen 02-Apr-13
eSignature Date

Reviewed by: Bernadette A. Fini 22-May-13
eSignature Date

Matrices: soil/solid/sediment
Carrier name: FedEx Priority Overnight

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s): 21.2 C/uc IR 1
Cooler(s)/Kit(s): 4757
Date/Time sample(s) sent to storage: 4/2/13 15:03

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by: -

Login Notes:

Client Contacted:
Date Contacted:
Person Contacted:

Contacted By:
Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

Chain of Custody Form

Page ____ of ____

COC ID: 40910

☐ Cincinnati, +1 513 73
☐ Everett, WA +1 425 35
☐ Fort Collins +1 970 49

1305642

EXIDE TECHNOLOGIES: Exide Technologies

Project: Exide Decon/Demo 21252

ALS Project Manager:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	21252	Project Name	Exide Technologies	A	TCLP Lead & Cadmium
Work Order		Project Number	21252	B	Total Lead & Cadmium
Company Name	RSI	Bill To Company	RSI	C	Hold Remaining Sample for Possible Add. Analysis
Send Report To	Normal Distribution	Invoice Attn.	ø Shelli Trotter	D	
Address		Address	PO Box 587	E	
				F	
City/State/Zip		City/State/Zip	Independence KS 67301	G	
Phone		Phone		H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Refinery Office Debris	3-30-13	13:05	Debris	N/A	1	X		X	3 Day TA							
2	Five Building Composite	3-30-13	13:10	Soil	N/A	1		X	x	Normal TA							
3	Rock / Soil Stockpile	3-30-13	13:15	Rock/Soil	N/A	1		X	x	Normal TA							
4	Asphalt Stockpile	3-30-13	13:20	Asphalt	N/A	1		X	x	Normal TA							
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ______
See Above

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Johnny Gilman	4-3-12	8:45		

Relinquished by:	Date:	Time:	Received by (Laboratory):

Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

QC Package: (Check Box Below)
☐ Level II: Standard QC
☐ Level III: Std QC + Raw Data
☐ Level IV: SW846 CLP-Like
Other: ______

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

Chain of Custody

1. ☒ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY ____________
DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 3-30-13 Purchase Order No. 21252

4. Quote No.

3. Company Name Remediation Services, Inc.

ALS Project Manager Paul Pope

Address PO Box 587
Independence, KS 67301

5. Sample Collection

Person to Contact: Grant Sherwood

Sampling Site: Exide Frisco

Telephone (620) 331-1200

Industrial Process: Decontamination and Demo

Fax Telephone (620) 331-6216

Date of Collection 3-30-13

E-mail Address gsherwood@rsi-ks.com

Time Collected 13:15

Date of Shipment 3-30-13

Billing Address (if different from above)

Send Results to: gsherwood@rsi-ks.com, jrgillman@rsi-ks.com, vanessa.coleman@na.exide.com, droth@rsi-ks.com

Send Invoice to : strotter@rsi-ks.com

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	Refining Office Debris	Debris	8 oz	NIOSH 7303 - Lead and Cadmium	
	Fire Building Composite	Soil	8 oz	NIOSH 7303 - Lead and Cadmium	
	Rock/Soil Stockpile	Soil/Rock	8 oz	NIOSH 7303 - Lead and Cadmium	
	Asphalt Stockpile	Asphalt	8 oz	NIOSH 7303 - Lead and Cadmium	

EX-DEMO = Project (Exide-Demolition)
YYMMDD = Sampling date (e.g., 11/01/2012 = 121101)
LOC = Sample Location (e.g. UW = Upwind, DW = Downwind)
XXX = E-BAM Monitor Sample Association – Last 3 digits of Serial Number,
QQ = Optional QA sample flag (TB = trip blank, FB = field blank, SC = duplicate)

Comments Rock/Soil and Asphalt stockpiles located North of Oxide building

Hold all samples for possible additional samples

Possible Contamination and/or Chemical Hazards: Lead and cadmium

7. Chain of Custody (Optional)

Relinquished by Johnny Gillman Date/Time 03-30-13 18:0

Received by Date/Time

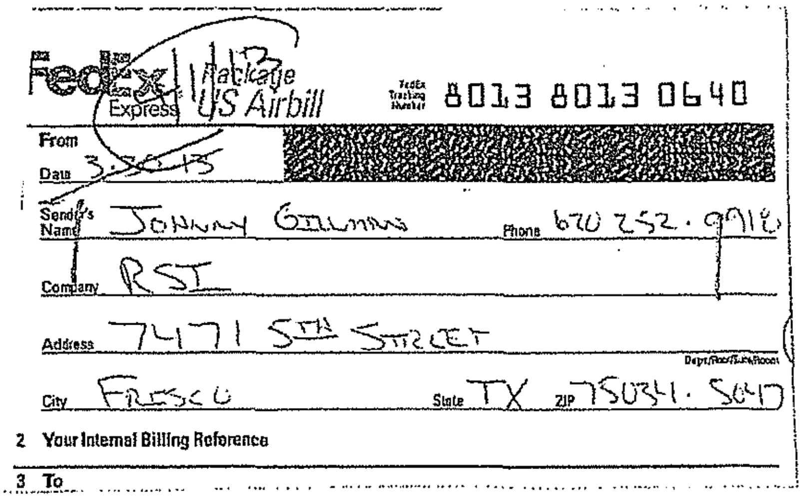
Relinquished by Date/Time

Received by Date/Time 4/2/13 871

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-26

ALS Laboratory Group

1304321
EXIDE TECHNOLOGIES: Exide Technologies
Project: Exide Decon/Demo 21252



FedEx Express 4/1/13 Package US Airbill

FedEx Tracking Number 8013 8013 0640

From

Date 3.30.13

Sender's Name JOHNNY GILLMAN Phone 620 252 · 9918

Company RSI

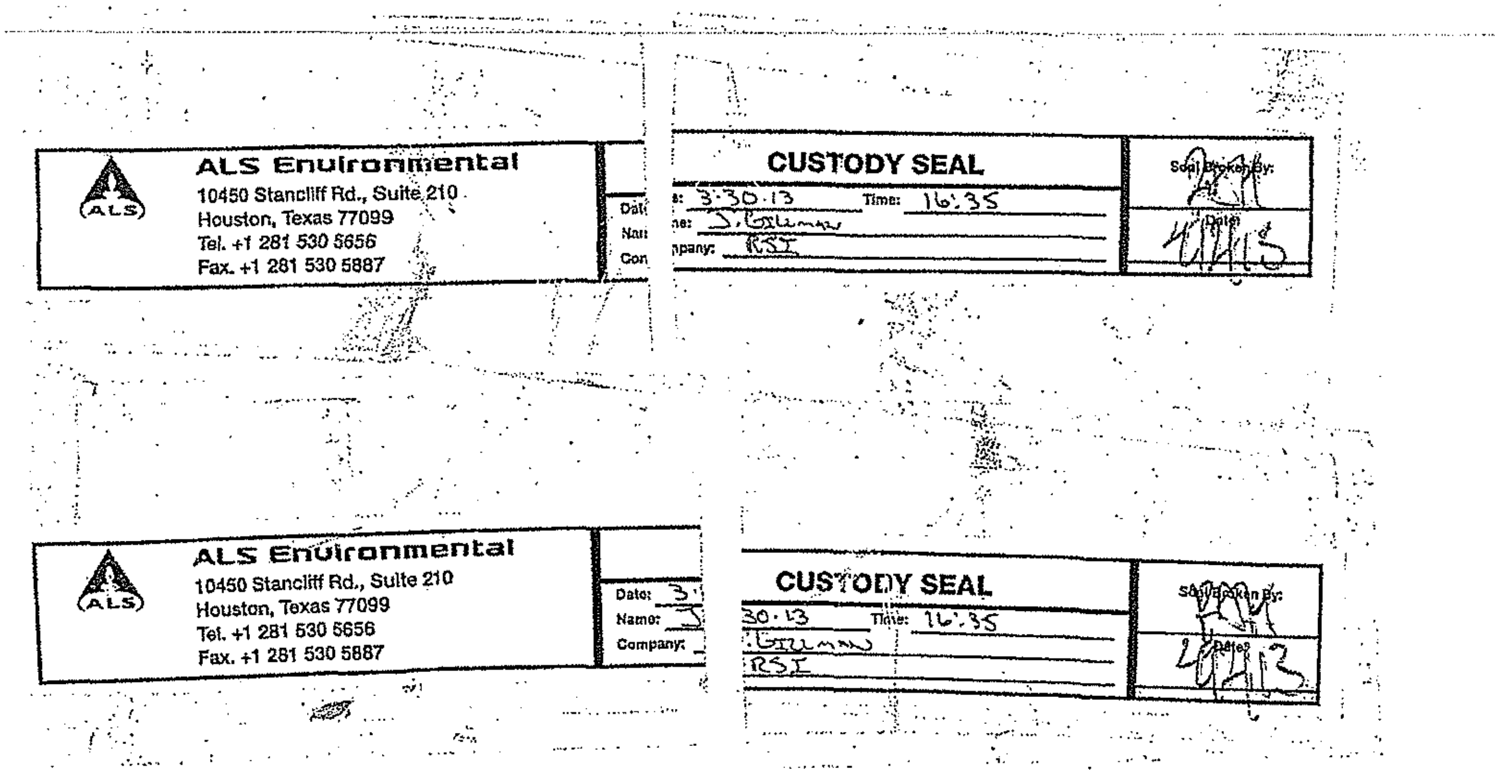
Address 7471 5TH STREET

Dept/Floor/Suite/Room

City FRISCO State TX ZIP 75034 · 5047

2 Your Internal Billing Reference

3 To



ALS Environmental

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

ALS

Date:
Name:
Company:

CUSTODY SEAL

Date: 3.30.13 Time: 16:35
Name: J. Gillman
Company: RSI

Seal Broken By:

Date: 4/1/13

ALS Environmental

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

ALS

Date: 3
Name: J
Company:

CUSTODY SEAL

Date: 3.30.13 Time: 16:35
Name: J. Gillman
Company: RSI

Seal Broken By:

Date: 4/1/13

ALS Environmental

Chain of Custody Form

Page _____ of _______

COC ID: 38719

☐ Cl +
☐ Ev +
☐ Fe +

1304374
EXIDE TECHNOLOGIES: Exide Technologies
Project: Exide 20252

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	20267	Project Name	Exide
Work Order		Project Number	20252
Company Name	RSI / Exide	Bill To Company	RSI
Send Report To	Normal	Invoice Attn.	Shelli Trotter
Address		Address	
City/State/Zip	Independence KS	City/State/Zip	
Phone	620-331-1200	Phone	
Fax		Fax	
e-Mail Address		e-Mail Address	

A	TCLP Lead & Cadmium
B	Rush T.A.
C	Normal T.A.
D	
E	
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Slag Treatment Building FG	4-9-13	12:42	Solid	NA	1	X	X									
2	Blast Feed Room Fiberglass	4-9-13	1:20	Solid	NA	1	X		X								
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time: See Above ☐ Other __________
☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
	4-9-13	2:05	Fed Ex	
Relinquished by:	Date: 4/10/13	Time: 09:15	Received by (Laboratory): BN ALS	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)
☐ Level II: Standard QC
☐ Level III: Std QC + Raw Data
☐ Level IV: SW846 CLP-Like
Other: ____________

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

☐ **ALS Laboratory Group**
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

ALS Project Manager:

1304855

EXIDE TECHNOLOGIES: Exide Technologies

Project: Plant Drums

Customer Information		**Project Information**	
Purchase Order		Project Name	
Work Order	PLANT DRUMS	Project Number	
Company Name	RSI	Bill To Company	EXIDE TECHNOLOGIES
Send Report To	GRANT SHERWOOD	Invoice Attn	VANESSA COLEMAN
Address	P.O. BOX 587	Address	7471 S. 5TH ST.
City/State/Zip	INDEPENDENCE KS 67301	City/State/Zip	FRISCO, TX 75034
Phone	620·331·1200	Phone	972·335·2121
Fax	620·331·6216	Fax	
e-Mail Address	GSHERWOOD@RSE-KS.COM	e-Mail Address	

A	TCLP METALS PB+CD
B	HOLD REMAINDER
C	
D	
E	
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PLANT YC IDN001	4·19·13	15:30	SOIL	N/A	1	X	X									
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign JOHNNY GILLMAN

Shipment Method

Required Turnaround Time: (Check Box) ☐ Other ________
☐ STD 10 Wk Days ☐ 5 Wk Days ☒ 2 Wk Days ☐ 24 Hour

Results Due Date: 4·25·13

Relinquished by: Johnny Gillman	Date: 4.22.13	Time: 19:00	Received by: 4/2[illegible]/13 09[illegible]
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp

QC Package: (Check One Box Below)
☑ Level II Std QC
☐ Level III Std QC/Raw Date
☐ Level IV SW846/CLP
☐ Other ____________
☐ TRRP Checklist
☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

FedEx Express Package US Airbill

FedEx Tracking Number 8013 8013 2712

04·22·13 [redacted]

r's Johnny Gillmann Phone 620 252·9918

any RST

oss 7471 S. 5th St.

Dept/Floor/Suite/Room

Frisco State TX ZIP 75034

r Internal Billing Reference

ipient's ne CLIENT SERVICES Phone 281 530-5656

npany ALS LABORATORY GROUP

dress 10450 STANCLIFF RD STE 210

cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

dress

this line for the HOLD location address or for continuation of your shipping address.

☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

ty HOUSTON State TX ZIP 77099-4338

0455550776

8013 8013 2712

MUR 1

Form ID No. 0215

Recipient's Copy

4 Express Package Service *To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the FedEx Express Freight US Airbill.

Next Business Day

- ☐ ~~FedEx First Overnight Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.~~
- ☐ FedEx Priority Overnight Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☒ FedEx Standard Overnight Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. Second business morning.* Saturday Delivery NOT available.
- ☐ FedEx 2Day Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver Third business day.* Saturday Delivery NOT available.

5 Packaging *Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required Package may be left without obtaining a signature for delivery.

☐ Direct Signature Someone at recipient's address may sign for delivery. Fee applies.

☐ Indirect Signature If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ______ x ______ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☑ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Obtain recip. Acct. No. ☐

[redacted]

Total Packages ______ Total Weight ______ lbs. Credit Card Auth. ______

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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ALS Environmental

Chain of Custody Form

Page 1 of 1

COC ID: 41301

☐ Ci +1
☐ Ev +1
☐ Fo +1

1304648

EXIDE TECHNOLOGIES: Exide Technologies

Project: Decon Demo 21252

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	21252	Project Name	Decon Demo
Work Order		Project Number	21252
Company Name	Exide Technologies	Bill To Company	RSI
Send Report To	Vanessa Coleman	Invoice Attn.	Shelli Trotter
Address	7471 S. Fifth St.	Address	PO Box 587
City/State/Zip	Frisco TX	City/State/Zip	Independence KS 67301
Phone	972-335-2121	Phone	620-331-1200
Fax		Fax	
e-Mail Address		e-Mail Address	

Parameter/Method Request for Analysis

A	TCLP Lead and Cadmium
B	Hold
C	
D	
E	
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Battery Breaker MCC Room	4-16-13	2:43		NA	1	x	x									
2	Refining Control Room	4-16-13	2:35		}	1	x	x									
3	Refining Office Floor	4-16-13	2:25		}	1	x	x									
4	Boneyard Sand / Gravel	4-16-13	10:05		}	1	x	x									
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Bryan Mecon

Shipment Method: Fed Ex

Required Turnaround Time: ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ______

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Bryan Mecon	4-16-13	1458	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	4-16-13	15:05	4.17.13. 0910.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Concrete Blocks from Buildings described above.

Cooler Temp.

QC Package: (Check Box Below)
☐ Level II: Standard QC
☐ Level III: Std QC + Raw Data
☐ Level IV: SW846 CLP-Like
☐ Other: ______

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

#4740.

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

4740.

CUSTODY SEAL

Date: 4-16-13 Time: 15:05
Name: Grant Sherwood
Company: RST

Seal Broken By:
Date: 4-17-13

---

a 4-16-13 FedEx Tracking Number 801056311577

der's ne Grant Sherwood Phone 620 331-1200

Company RST

Address 2735 S. 10th Street Dept/Floor/Suite/Room

Independence State KS ZIP 67301

ır Internal Billing Reference 21252

ALS Environmental

Chain of Custody Form

Page ____ of ______

COC ID: 41093

☐ Cincin[illegible] OH
+1 [illegible] 336

☐ Eve[illegible]
+1 4[illegible] 2600

☐ Fort Collins, CO
+1 970 490 1511

1304856

EXIDE TECHNOLOGIES: Exide Technologies

Project: VCP Drums

ALS Project Manager:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	[redacted]	Project Name		A	TCLP METALS Pb + Cd
Work Order	VCP DRUMS	Project Number		B	HOLD REMAINDER
Company Name	RSI	Bill To Company	EXIDE TECHNOLOGIES	C	
Send Report To	GRANT SHERWOOD	Invoice Attn.	VANESSA COLEMAN	D	
Address	P.O. 587	Address	7471 S. 5TH ST.	E	
				F	
City/State/Zip	INDEPENDENCE, KS 67301	City/State/Zip	FRISCO, TX 75034	G	
Phone	620·331·1200	Phone	972·335·2121	H	
Fax	620·331·6216	Fax		I	
e-Mail Address	GSHERWOOD@RSI-KS.COM	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	VCP IDW 001	4·20·13	11:40	SOIL	N/A	1	X	X									
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: JOHNNY GILLMAN

Shipment Method:

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☒ 2 Wk Days ☐ 24 Hour ☐ Other ________

Results Due Date: 4·25·13

Relinquished by:	Date:	Time:	Received by:	Notes:
J. GILLMAN	4·22·13	19:00	4/23/13 0916	
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

X	Level II: Standard QC
	Level III: Std QC + Raw Data
	Level IV: SW846 CLP-Like
	Other: ____________

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

1304856

MUR1

FedEx Express Package US Airbill

FedEx Tracking Number 8013 8013 2712

Form ID No. 0215

From
Date 04·22·13 [redacted]
Sender's Name JOHNNY GILMAN Phone 620 252-9916
Company RST
Address 7471 S 5TH ST. Dept/Floor/Suite/Room
City FRISCO State TX ZIP 75034

2 Your Internal Billing Reference

3 To
Recipient's Name CLIENT SERVICES Phone 281 530-5656
Company ALS LABORATORY GROUP
Address 10450 STANCLIFF RD STE 210
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room
☐ *HOLD Weekday* FedEx location address REQUIRED. NOT available for FedEx First Overnight.
Address
Use this line for the HOLD location address or for continuation of your shipping address.
☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
City HOUSTON State TX ZIP 77099-4338

0455550776

8013 8013 2712

4 Express Package Service *To most locations. **Packages up to 150 lbs.**
NOTE: Service order has changed. Please select carefully. *For packages over 150 lbs., use the FedEx Express Freight US Airbill.*

Next Business Day
☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☒ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days
☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging *Declared value limit $500.
☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options
☐ SATURDAY Delivery — *NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.*
☐ No Signature Required — Package may be left without obtaining a signature for delivery.
☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?
One box must be checked.
☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ *Dry Ice* Dry Ice, 9, UN 1845 ____ x ____ kg
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.
☐ Cargo Aircraft Only

7 Payment *Bill to:*
Enter FedEx Acct. No. or Credit Card No. below.
☐ Sender Acct. No. in Section 1 will be billed. ☑ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check ☐ Obtain Recip. Acct. No.
[redacted]

Total Packages ____ Total Weight ____ lbs. [redacted] Credit Card Auth. ____

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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1304857

EXIDE TECHNOLOGIES: Exide Technologies

Project: Landfill Drums

ALS Environmental

Chain of Custody Form

Page ____ of ______

COC ID: 38724

☐ Cincinnati, OH +1 513 733 5336
☐ Everett, WA +1 425 356 2600
☐ Fort Collins, CO +1 970 490 1511

ALS Project Manager:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name		A	TCLP Metals Pb+Cd
Work Order	Landfill Drums	Project Number		B	Hold Remainder
Company Name	RST	Bill To Company	Exide Technologies	C	
Send Report To	Grant Sherwood	Invoice Attn.	Vanessa Coleman	D	
Address	P.O. Box 587	Address	7471 S. 5th St.	E	
				F	
City/State/Zip	Independence, KS 67301	City/State/Zip	Frisco, TX 75034	G	
Phone	620.331.1200	Phone	972.335.2121	H	
Fax	620.331.6216	Fax		I	
e-Mail Address	GSherwood@RST-KS.com	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LF ID10C01	4.19.13	15:54	Soil	N/A	1	X	X									
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Johnny Gellman

Shipment Method:

Required Turnaround Time: ☐ Other ______ ☐ STD 10 Wk Days ☐ 5 Wk Days ☒ 2 Wk Days ☐ 24 Hour

Results Due Date: 4.25.13

Relinquished by:	Date:	Time:	Received by:	Notes:
Johnny Gellman	4.22.13	19:00	4/23/13 0905	
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler Temp:
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

QC Package: (Check Box Below)

X	Level II: Standard QC
	Level III: Std QC + Raw Data
	Level IV: SW846 CLP-Like
	Other: ________

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

dEx Express® Package US Airbill

FedEx Tracking Number 8013 8013 2712

04·22·13 [redacted]

rs Name JOHNNY GILLMAN Phone 620 252 9916

any RST

ess 7471 S. 5TH St.

Dept./Floor/Suite/Room

FRISCO State TX ZIP 75034

r Internal Billing Reference

ipient's Name CLIENT SERVICES Phone 281 530-5656

npany ALS LABORATORY GROUP

dress 10450 STANCLIFF RD STE 210

cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

☐ HOLD Weekday
FedEx location address REQUIRED. NOT available for FedEx First Overnight.

dress

this line for the HOLD location address or for continuation of your shipping address.

☐ HOLD Saturday
FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

y HOUSTON State TX ZIP 77099-4338

0455550776

8013 8013 2712

MUR1

Form ID No. 0215 Recipient's Copy

4 Express Package Service

* To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs.
For packages over 150 lbs., use the FedEx Express Freight US Airbill.

Next Business Day

☐ ~~FedEx First Overnight~~
~~Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.~~

☐ FedEx Priority Overnight
Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Standard Overnight
Next business afternoon.*
Saturday Delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day A.M.
Second business morning.*
Saturday Delivery NOT available.

☐ FedEx 2Day
Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver
Third business day.*
Saturday Delivery NOT available.

5 Packaging

* Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required
Package may be left without obtaining a signature for delivery.

☐ Direct Signature
Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip. Acct. No. ☐

☐ Sender Acct. No. in Section 1 will be billed.
☑ Recipient
☐ Third Party
☐ Credit Card
☐ Cash/Check

[redacted]

Total Packages ____ Total Weight ____ lbs. [redacted] Credit Card Auth. ____

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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APPENDIX 13
PHOTOGRAPHIC DOCUMENTATION

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

Appendix 13
Photographic Documentation

Photo 1 Southwest area, typical of open field areas where majority of grid sampling was conducted.

Photo 2 Former Eagan Way/South 5th Street.

Appendix 13
Photographic Documentation

Photo 3 Old barn remaining on south portion of Site, near former Eagan Way/South 5th Street.

Photo 4 Cistern on southern portion of Site.

Appendix 13
Photographic Documentation

Photo 5 Excavation of cistern for sample collection

Photo 6 Collection of deep samples in ditches along former Eagan Way/South 5th Street.

Appendix 13
Photographic Documentation

Photo 7 Sample location within former Eagan Way/South 5th Street.

Photo 8 Sample collection near former Circuit Fab facility.

Photo 9 Excavation to confirm reported spring.

Photo 10 Test pit advanced in fill/debris area in Tract G.

Photo 11 Test pit advanced in fill/debris area in Tract G.

Photo 12 Test pit advanced in fill/debris area in Tract G.

Photo 13 Test pit advanced in fill/debris area in Tract G.

Photo 14 Black plastic chip observed in test pit advanced in fill/debris area in Tract G.

Photo 15 Test pit advanced in ditch area south of Crystallizer Road.

Photo 16 Test pit advanced in berm area on eastern perimter of Site.

Photo 17 Test pit advanced in berm area on eastern perimter of Site.

Photo 18 Material from test pit advanced in land disturbed area adjacent to former Eagan Way/South 5th Street (test pits 14, 15, 16).

Photo 19 Material from test pit advanced in former gravel pit area.

Photo 20 Material excvated from test pit advanced in M Tract area (test pit 10).

APPENDIX 16
REFERENCE LIST

AFFECTED PROPERTY ASSESSMENT REPORT

Exide Technologies Undeveloped Buffer Property
Frisco, Texas

APPENDIX 16
REFERENCES

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Exide Technologies Undeveloped Buffer Property
Frisco, Texas

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Frisco, Texas

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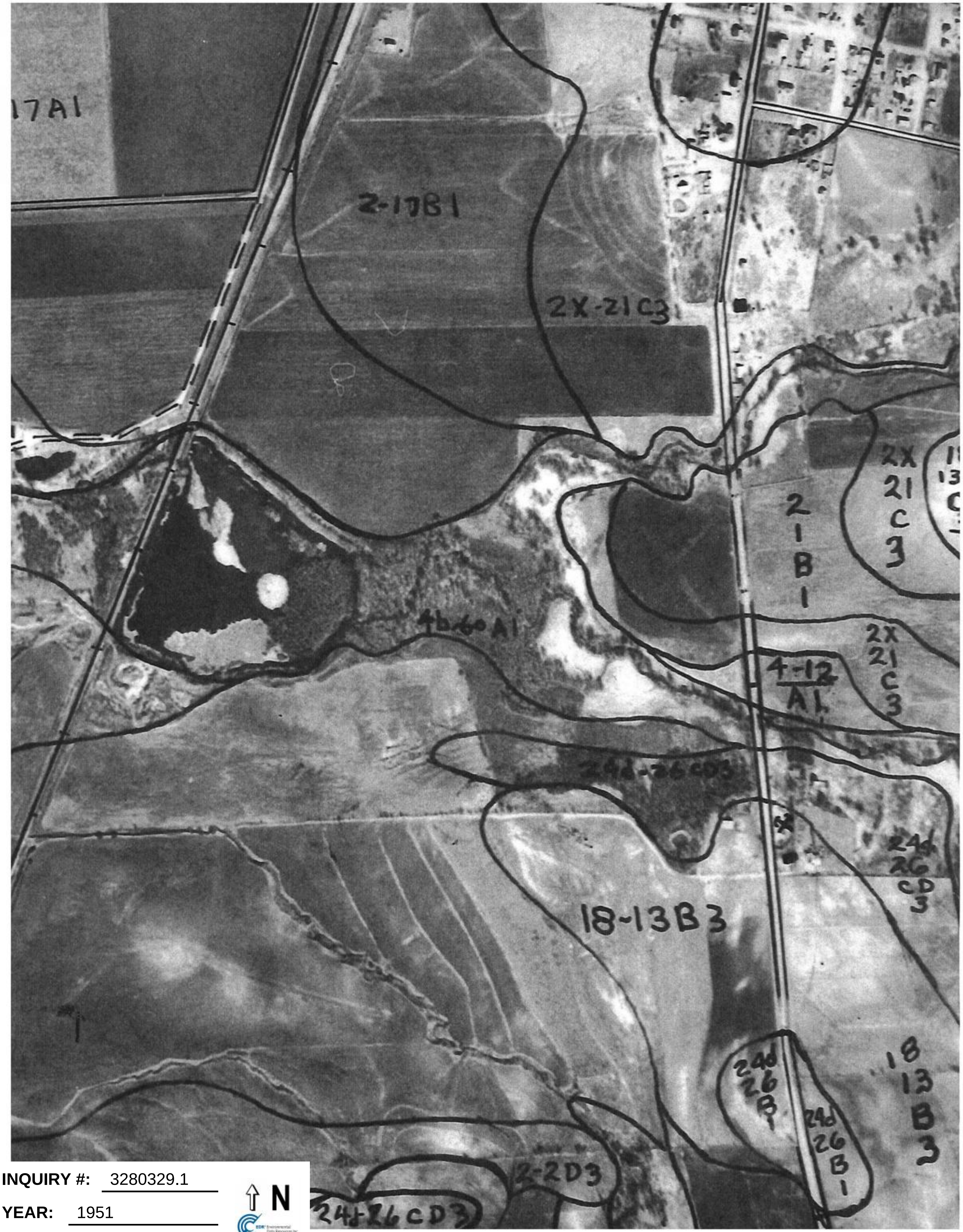
APPENDIX 17
HISTORICAL AERIAL PHOTOGRAPHS

AFFECTED PROPERTY ASSESSMENT REPORT

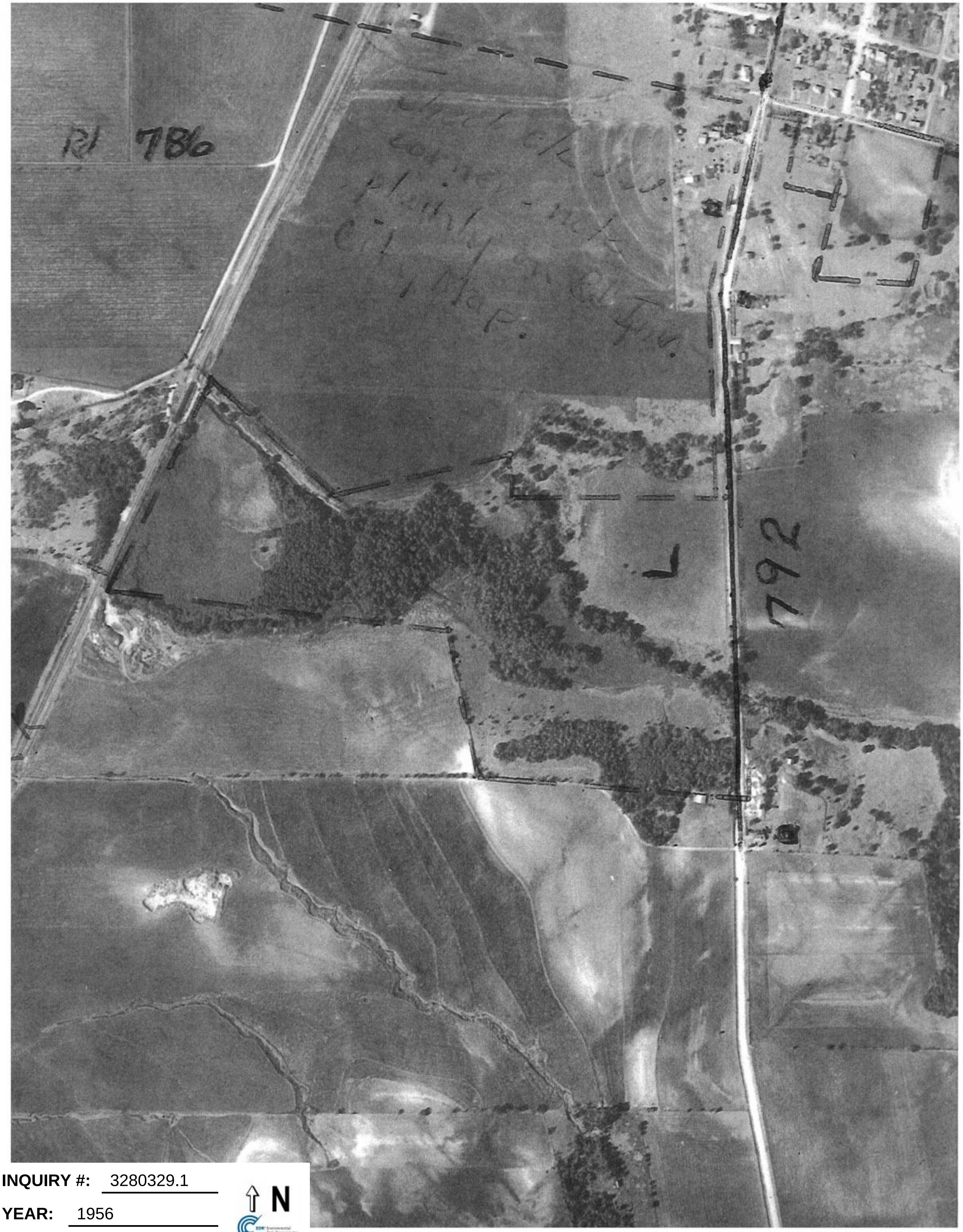
Exide Technologies Undeveloped Buffer Property
Frisco, Texas



INQUIRY #: 3280329.1

YEAR: 1951

= 500'



INQUIRY #: 3280329.1

YEAR: 1956

= 500'

INQUIRY #: 3280329.1

YEAR: 1968

= 500'

N

INQUIRY #: 3280329.1

YEAR: 1972

= 500'

INQUIRY #: 3280329.1

YEAR: 1984

INQUIRY #: 3280329.1

YEAR: 1995

INQUIRY #: 3280329.1

YEAR: 2004

= 500'

N

EDR Environmental Data Resources Inc

INQUIRY #: 3280329.1

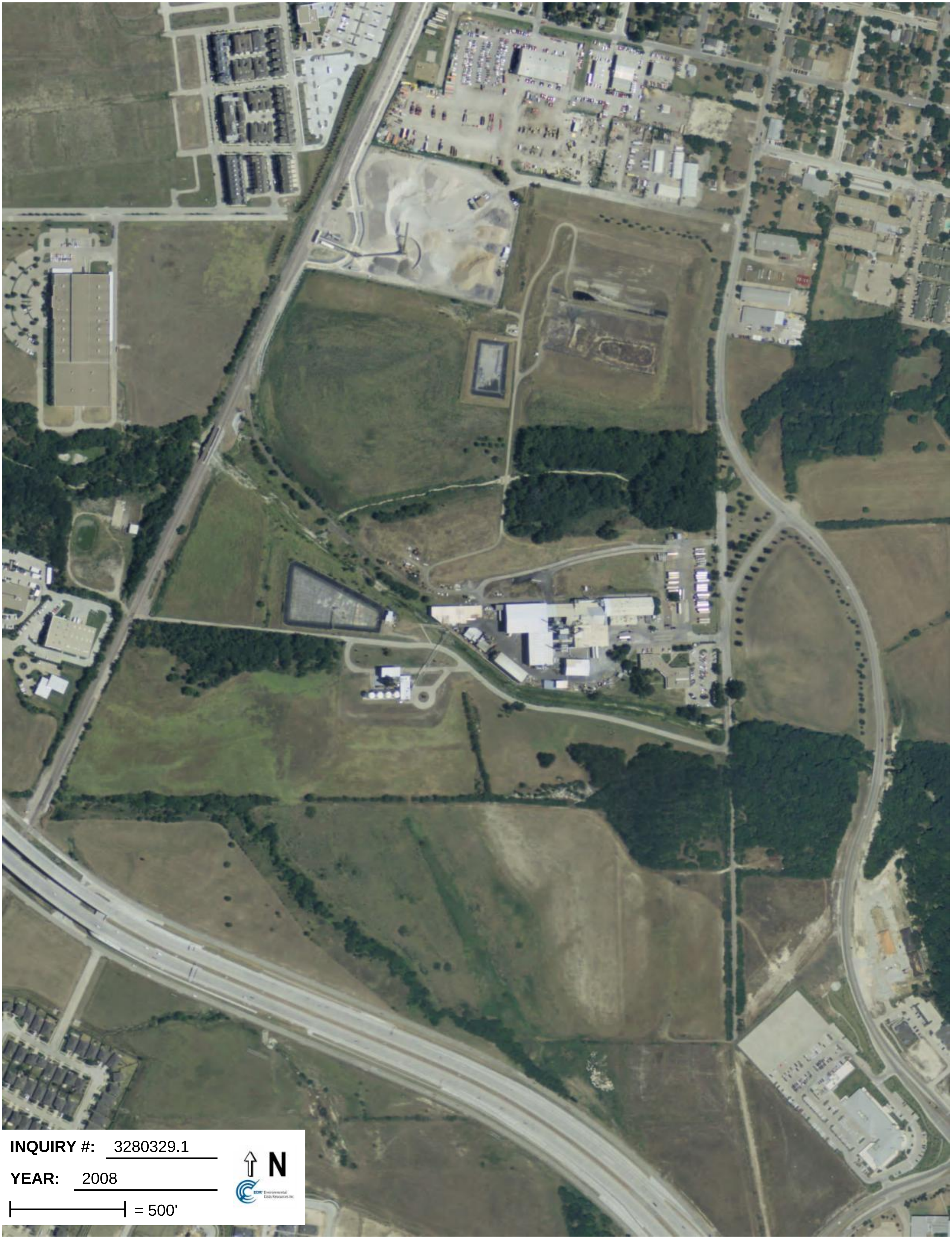
YEAR: 2005

= 500'

INQUIRY #: 3280329.1

YEAR: 2006

= 500'



INQUIRY #: 3280329.1

YEAR: 2008

= 500'