COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

AFFECTED PROPERTY ASSESSMENT REPORT

GRAND PARK - PARTIAL RESPONSE ACTION AREA 1 (PRAA 1)
7275 DALLAS PARKWAY, FRISCO, TEXAS
VCP #2592

24 JUNE 2014

Prepared for:

City of Frisco
6101 Frisco Square Boulevard
Frisco, Texas

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Cover Page

Program ID No. (Primary): VCP #2592 Report date: 24 June 2014
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.: 2592 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: Grand Park – Partial Response Action Area (PRAA 1)
Street no. 7275 Pre dir: East Street name: Dallas Parkway Street type: Parkway Post dir:
City: Frisco County: Collin and Denton County Code 43 and 61 Zip 75034
Nearest street intersection and location description: Subject property is situated in the northeast corner of the planned Grand Park development and is bound to the north by Cotton Gin Road and to the east by a Dallas Parkway (Dallas North Tollway) access road.

Latitude: Degrees - North 33° 08' 40.70"
Longitude: Degrees - West 96° 50' 30.39"

Contact Person for On-Site Property Information and Acknowledgment

Company Name or Person: City of Frisco
Contact Name: Mr. Mack Borchardt Title: Special Assistant to the City Manager
Mailing Address: 6101 Frisco Square Boulevard
City: Frisco State: TX Zip: 75034 Phone: (972) 292-5000
Email: MBorchardt@friscotexas.gov Fax: (972) 292-5122
Person is: ✓ property owner ___ property manager ___ potential purchaser ___ tenant ___ operator
Note: The City of Frisco is the property owner. Mr. Borchardt is the City's coordinator for this site.

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): Mack Borchardt Date: 6-24-14

Consultant Contact Person

Consultant Company Name: Cook-Joyce, Inc.
Contact Person: Wade Wheatley, P.E. Title: Vice President
Mailing Address: 812 West 11th Street
City: Austin State: TX Zip: 78701
Phone: (512) 474-9097 Fax: None E-mail address wade.wheatley@cook-joyce.com

Professional Signatures and Seals

Professional Geoscientists

Kevin Lonseth, P.G.	10330	5/31/2015
Professional Geoscientist	Geoscientist License number	Expiration date
Signature	Date	
512/474-9097	None	kevin.lonseth@cook-joyce.com
Telephone number	FAX number	E-mail

Richard Varnell, P.G.	4992	12/31/2014
Professional Geoscientist	Geoscientist License number	Expiration date
Signature	Date	
512/474-9097	None	richard.varnell@cook-joyce.com
Telephone number	FAX number	E-mail

Professional Engineer

Wade Wheatley, P.E.	76710	6/30/2014
Professional Engineer	P.E. License number	Expiration date
Signature	Date	
512/474-9097	None	wade.wheatley@cook-joyce.com
Telephone number	FAX number	E-mail

Seals, as applicable:

STATE OF TEXAS
WADE M. WHEATLEY
76710
REGISTERED
PROFESSIONAL ENGINEER

STATE OF TEXAS
RICHARD D. VARNELL
GEOLOGY
No. 4992
LICENSED
PROFESSIONAL GEOSCIENTIST
6/2

STATE OF TEXAS
KEVIN LONSETH
GEOLOGY
10330
LICENSED
PROFESSIONAL GEOSCIENTIST
6-24-14

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		✓		✓			✓
Groundwater		✓		✓			✓
Sediment		✓		✓			✓
Surface Water		✓		✓			✓

Is there, or has there been, an affected or potentially affected water well? ____Yes ✓ No

If yes, what is the well used for?_____

Actual land use: On-site: ___Res ✓ C/I Off-site affected property: ___Res ✓ C/I ___N/A

Land use for critical PCL determination: On-site: ✓ Res ___C/I Off-site affected property: ___Res ___C/I ✓ N/A

Did the affected property pass the Tier 1 ecological exclusion criteria checklist? ✓ Yes _____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	Surface alluvium (groundwater not encountered)	>17'	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		✓				✓	✓			NA	No Affected Property
	Subsurface			✓			✓			✓	---	---
Groundwater				✓			✓			✓	---	---
Sediment				✓			✓			✓	---	---
Surface Water				✓			✓			✓	---	---

NAPL Occurrence Matrix

	NAPL Occurrence		Description
NAPL in vadose zone	✓	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	✓	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	✓	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	✓	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		✓				✓			✓	---
	Subsurface			✓			✓			✓	---
Groundwater				✓			✓			✓	---
Sediment				✓			✓*			✓	---
Surface Water				✓			✓			✓	---

***Sediment impacts will be addressed in the APAR generated for the overall Grand Park site.**

NAPL Triggers

NAPL Response Action Triggers		Description of Triggers
✓	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

The ~26-acre Partial Response Action Area (PRAA 1) portion of the Grand Park property (VCP #2592) is located in the northeast corner of the Grand Park site at the intersection of Cotton Gin Road and an access road for the Dallas North Tollway. PRAA 1 (the subject property) is currently a wheat field that has historically been used for farming or ranchland. The City of Frisco (Frisco) owns the approximately 320 acres of contiguous property that make up the Grand Park site. The City currently plans to develop the Grand Park site into park lands, retail, and residential properties. PRAA 1 will be the initial property developed. The Grand Park site is located to the south of Cotton Gin Road, to the west of Dallas North Tollway and a BNSF Railway, to the north of Stonebrook Parkway, and to the east of Legacy Drive. Based on sediment sampling of Stewart Creek, it appears that Stewart Creek sediment within Grand Park has been impacted by past operations at the upstream former Exide Battery Recycling Facility (Exide). In addition, historic stack emissions from Exide may have impacted surface soils within the Grand Park site. These known and potential impacts will be assessed as part of the affected property assessment for the larger Grand Park property.

The affected property assessment consisted of a focused investigation of the surface soils at the PRAA 1 site. The purpose of the assessment was to determine if contaminants of concern (COCs) were present in PRAA 1 surface soils and if so, to fully delineate the vertical and lateral extent of contamination. Based on the assessment findings, no COCs exceed residential assessment levels. The site layout and assessment sampling locations are depicted on Figures 1A and 1B, respectively. A groundwater monitoring well was installed at the PRAA 1 site (GP-MW-3). The well was set at 17 feet below ground surface (bgs). As of June 3, 2014, the well was dry. However, all COCs have been delineated vertically in surface soils to MQLs or background prior to encountering groundwater.

COCs in surface soils at the PRAA 1 site are below residential assessment levels. Therefore, the site is not an affected property and there are no affected or potentially affected receptors.

NAPL Discussion

No evidence of NAPL was observed during the investigation activities.

Response Actions and Recommendations

Based on the affected property assessment results, no response actions are required for the PRAA 1 portion of the Grand Park site. There were no listed or characteristically hazardous wastes that were identified at the site. The results of the affected property assessment reveal the property is protective of ecological receptors and that COCs in surface soils across the site are less than residential assessment levels that are protective of human health and the environment.

A no further action letter is requested for the PRAA 1 portion of the Grand Park property.

Figure A - Affected Property Map

Not applicable. No affected property or PCLE zone. All COC concentrations in site soils are less than residential assessment levels.

CHRONOLOGY

Unknown	City of Frisco acquires PRAA 1 property located in the northeast corner of the planned Grand Park development, located to the south of Cotton Gin Road and to the west of Dallas North Parkway.
28 January 2014	CJI submits a revised Affected Property Assessment Workplan for the Grand Park site which includes the PRAA 1 property. The original workplan was submitted in October 2013.
April 2014 – June 2014	CJI conducts assessment sampling of PRAA 1 area surface soils to determine COC concentrations to obtain the necessary data needed to complete an affected property assessment.
24 June 2014	The City of Frisco submits Affected Property Assessment Report.

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	
Statistics	
Calculated site-specific background concentrations	
Used alternate statistical methods to determine proxy values for non-detected results (§350.51(n))	
Calculated representative concentrations (§350.79(2)) for remedy decision	
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	Appendix 9
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	Appendix 9
Calculated Tier 3 PCL	
Groundwater Issues	
Conducted aquifer test, classified Class 3 groundwater, or determined non-groundwater bearing unit (saturated soil)	

[1] Prior approval by Executive Director is required.

Section 1 Property Information

Section 1.1 Physical Location

Property Location and Land Use

Facility Name:	Partial Response Action Area 1 (PRAA 1) within Grand Park
Address/Location:	Grand Park is located at 7275 Dallas Parkway in Frisco, Texas. It is bounded by Cotton Gin Road to the north, the North Dallas Tollway and a BNSF Railway to the east, Stonebrook Parkway to the south, and Legacy Drive to the west. The county line crosses the site north to south on the eastern side. The western portion of the site is located in Denton County, while the eastern portion is located in Collin County.
Property Owner:	The City of Frisco
Property Size:	~26 acres (PRAA 1 portion of Grand Park site)
General Land Use:	The general land use of the subject property is cultivated land used for wheat farming. The adjacent property south, southwest, and west mostly consist of unused pasture or heavily wooded floodplain located along Stewart Creek. Stewart Creek passes northeast to southwest directly south of the subject property.

Topography

Based on CJI's review of the USGS 7.5-minute *Frisco, Texas* topographic map (1981), the subject property ranges in elevation from approximately 615 feet to 625 feet above mean sea level. The topography around the site is relatively flat with a gentle slope to the south/southwest toward Stewart Creek. Based on site observations and review of topographic maps, the direction of surface water runoff on the subject property is generally towards the closest portion of Stewart Creek. Stewart Creek drains into Lake Lewisville, approximately 4 miles to the southwest of the subject property. Information provided on the Texas Water Development Board (TWDB) on-line geographic information system indicates the site is located within the Trinity River Basin (specifically the Elm Fork of the Trinity River).

A review of the Flood Insurance Rate Maps for Collin County (FEMA, 2009) and Denton County (FEMA, 2011) indicate the PRAA 1 portion of the Grand Park site is not located within the 100-year floodplain.

Weather

Frisco is located in a humid subtropical region. There are no known recent weather conditions or seasonal variations that would have significantly affected COC transport.

Section 1.2 Affected Property and Sources of Release

History and Operations

The subject property is currently cultivated land (growing wheat). It has been cultivated with maize and hay in the recent past. The PRAA 1 site appears to have been farmed since at least the early 1940s. As such, residual herbicides and pesticides impacts were assessed during the PRAA 1 investigation. The Grand Park site (which includes PRAA 1) was enrolled in the VCP to investigate known impacts to Stewart Creek and potential, airborne deposits of lead particulate to upland areas near the former Exide facility.

Manufacturing operations at Exide's Frisco facility began in approximately 1964 when the property was initially developed as a lead oxide manufacturing facility. Battery recycling operations began at the facility around 1969 and continued until the facility ceased operations in November 2012. The Exide facility is constructed over the former channel of Stewart Creek and a tributary to the north. Currently, Stewart Creek is adjacent to the southern side of the facility, and the northern tributary of Stewart Creek is located immediately to the north of the facility. Two structures, a stormwater retention pond and the facility's wastewater treatment plant, are located across Stewart Creek from the facility and connected by piping that crosses the creek.

The facility recycled large batteries (such as auto and marine batteries) by breaking them in a water bath. Plastic and rubber "chips" from the broken battery casings floated to the surface of the water where they were collected for disposal. Liquid from the batteries mixed with the water, and would eventually be treated either in the facility's wastewater treatment plant or nearby at a publically owned treatment works (POTWs), such as the City of Frisco's adjacent Stewart Creek Wastewater Treatment Plant. This Wastewater Treatment Plant is in the process of being closed under the State supervised Voluntary Cleanup Program (VCP) to remediate contaminants that originated from the Exide operations. Metal from the batteries sank to the bottom of the bath, where it was collected. The metal was then re-smelted to recover lead and smaller amounts of other valuable metals.

The waste streams produced at the Exide facility have resulted in widespread contamination of the Exide property and surrounding areas, and multiple state and federal environmental enforcement actions have been taken at the facility. Sections of Stewart Creek have previously been dredged to remove slag and/or lead contaminated sediment - initially in 1986 and again in 1999. Lead contaminated sediment has been reported in or adjacent to Stewart Creek downstream of the Exide facility on the Grand Park property.

Sampling has also shown that shallow soil contamination from airborne deposition of lead particulate also extends over approximately 24 acres of Exide "buffer property" that surrounds the Exide facility (in this context the "buffer property" includes land in the "J-Parcel" being purchased by the City of Frisco and land surrounding Exide's former operating plant). Most of this soil contamination is less than 1 foot deep. Due to the Grand Park property's close proximity to the Exide facility and the Exide "buffer property", shallow soil contamination from airborne deposition of lead is a potential contaminant source for the subject property.

Project Overview

As described above, shallow soil contamination from airborne deposition of lead is a potential contaminant source for the subject property. The affected property assessment was performed to determine if any COCs exceed residential assessment levels.

Prior Sampling Activities

Prior sampling has not occurred on the subject property (PRAA 1). Prior sampling has occurred within Stewart Creek on the Grand Park site. Extensive sediment sampling is currently underway within Stewart Creek on the Grand Park site.

Completed Response Actions

No response actions have been completed within the Grand Park site or, more specifically, within PRAA 1.

Section 1.3 Geology/Hydrogeology

Geology

CJI reviewed the Bureau of Economic Geology's *Geologic Atlas of Texas, Sherman Sheet* (1967, revised 1991) to determine the geologic formation(s) that outcrop across the subject property. The Site is mapped in "Qu" (surficial sands, clays, silts, and gravels). The Eagle Ford Shale underlies these deposits. The Atlas further defines these deposits or formations as:

- Surficial deposits undivided (Qu): Sand, clay, silt, and gravel.
- Eagle Ford Formation (Kef): A 300 to 400 foot thick shale formation that dips to the east. The Eagle Ford Shale is medium to dark gray in color. The shale is selenitic, bituminous, and commonly contains calcareous concretions and septaria. Thin, platy beds of sandstone and sandy limestone occur in the middle and upper parts of the Eagle Ford. Finally, the shale contains marine megafossils.

Hydrogeology

The site is positioned over the subcrop of a minor aquifer (the Woodbine) and a major aquifer (the Trinity). The Woodbine is the shallower of the two aquifers. It underlies the Eagle Ford Shale. The upper surface of the Woodbine is approximately 425 feet below ground surface (bgs) in the vicinity of the subject property. The Trinity Aquifer is separated from the Woodbine by the Washita and Fredricksburg Limestones. Its upper surface is reportedly ~1400 feet bgs in the vicinity of the subject property.

A monitoring well was installed at the PRAA 1 site and was completed to a depth of 17 feet below ground surface (screened from 7 to 17 feet). This well was dry when last gauged on 6/3/2014. Monitoring wells installed within the Grand Park site (screened in the shallow alluvium) contain groundwater at depths of approximately 15' below ground surface.

Table 1A – Sources of Release
(NOT APPLICABLE)

Table 1B – Potential Off-Site Sources

Table 1B. Potential Off-Site Sources

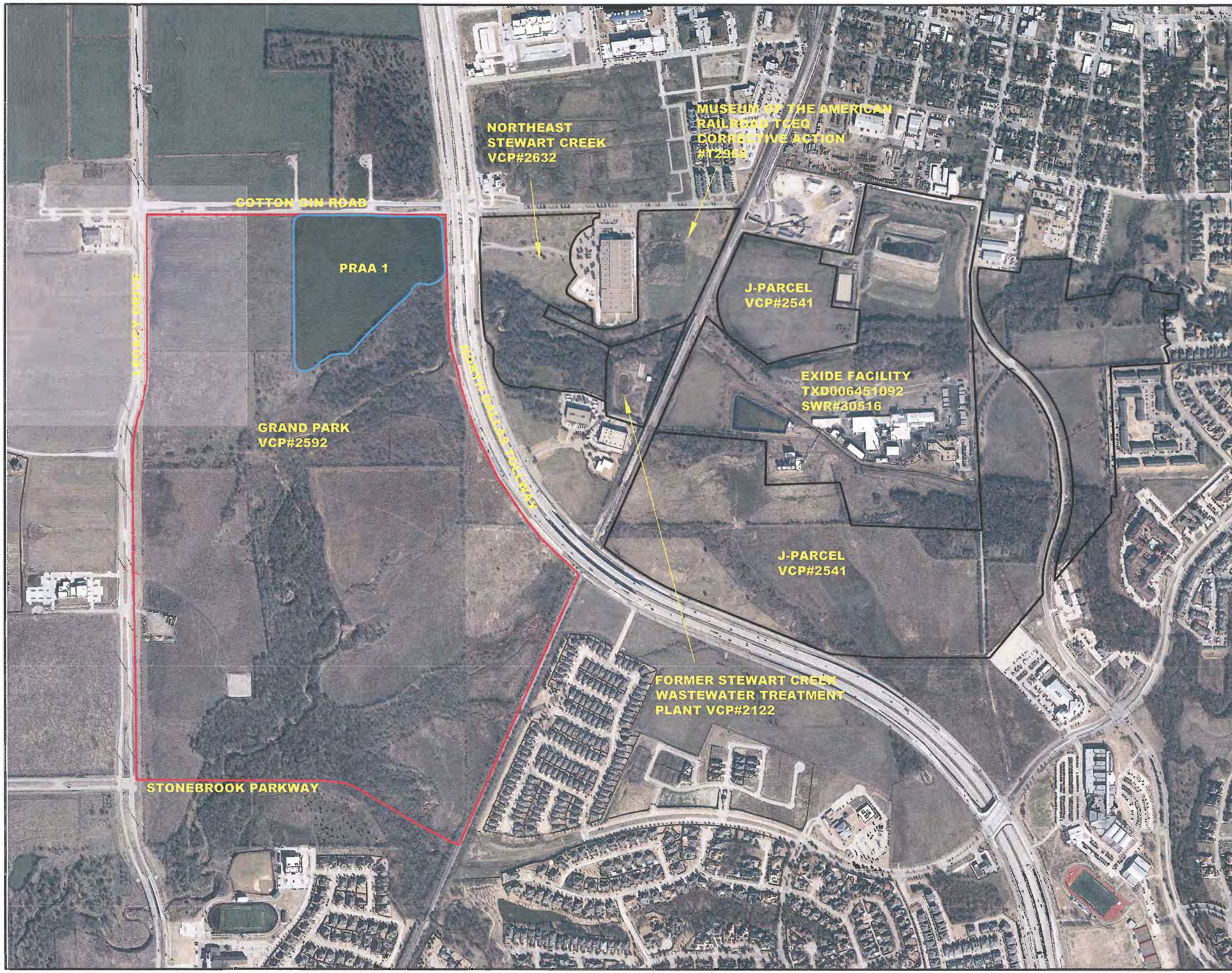
Affected property name/number	Off-site facility/ site name	Physical address	Regulatory ID number	Type of operation/ business	Years of operation (if known)	COCs
Grand Park/VCP #2592	Former Exide Recycling Facility	7471 5th St. Frisco, TX 75034	TCEQ SWR #30516	Battery Recycling Facility	~43	Metals

Figure 1A - On-Site Property Map

Figure 1B - Affected Property Map

Figure 1C - Regional Geologic Map

Figure 1D - Regional Geologic Cross Section(s)



800 400 0 800

(SCALE IN FEET)

LEGEND

- GRAND PARK VCP BOUNDARY
- PRAA 1
- NEAR BY TCEQ REGULATED SITES

AERIAL SOURCE:
NORTH CENTRAL TEXAS COUNCIL
OF GOVERNMENTS (NCTCOG); 2011

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
ON-SITE PROPERTY MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046037
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-27-2014			FIGURE NO. 1A
PURPOSE: APAR			

S:\CAD\City of Frisco\13046\13046037 Fig 1A.dwg, 6/13/2014 8:33:59 AM

N

200 100 0 200

(SCALE IN FEET)

LEGEND

SAMPLES COLLECTED

MONITORING WELL

REV.	DATE	DESCRIPTION	DR BY	APP BY

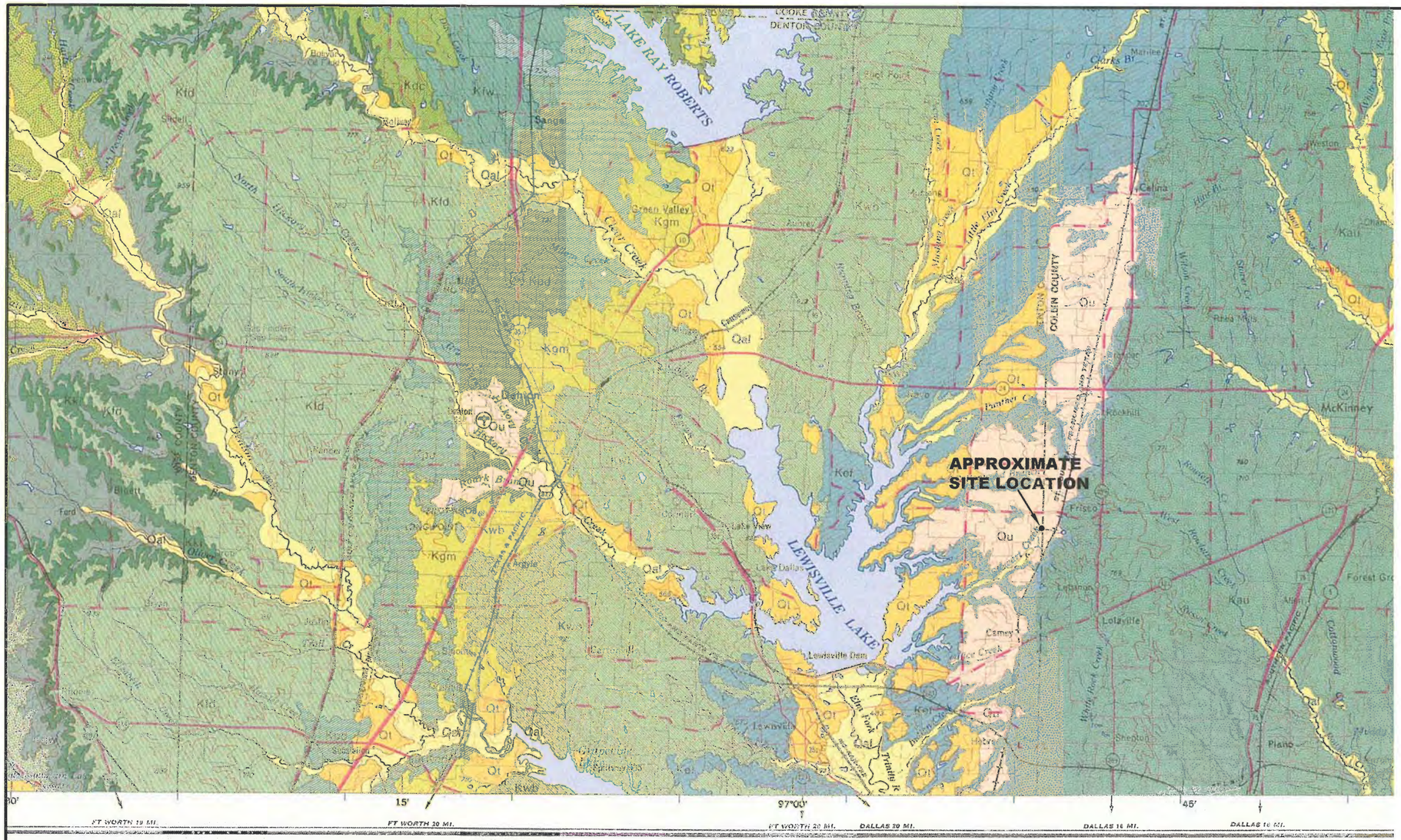
COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
AFFECTED PROPERTY MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046039
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-28-2014			FIGURE NO.
PURPOSE: PURPOSE:			1B

S:\CAD\City of Frisco\13046\13046039 Fig 1B.dwg, 6/13/2014 8:37:37 AM



EXPLANATION

Pleistocene Holocene — TERTIARY QUATERNARY

Qal, Qns, Qs, Qu, Or

Alluvium, Qal, windblown deposits, Qds and Qs, fluviatile terrace deposits, Qt, and surficial deposits undivided, Qu

Paleocene

Ky — Kincaid Formation

Kg, Kns, Kna — Kemp Clay, Kke, Nacatoch Sand, Kns, and Navarro Group (undivided,) Kna

Upper Cretaceous

Kns — Neylandville Marl

Kmb — Marlbrook Marl

Kpg — Pecan Gap Chalk

Kwc — Wolfe City Sand

Kg — Ozan Formation

Kau, Kgc, Kr, Kbr, Kbl, Kbn, Ker — Austin Group, Kau, Roxton Limestone, Kr, Gober Chalk, Kg, Brownstown Marl, Kbr, Blossom Sand, Kbl, Bonham Marl Kbn, and Ector Chalk, Ker

Kef — Eagle Ford Formation

Kwl, Kwr, Kwd — Woodbine Formation, Kwb, and Templeton, Kwt, Lewisville, Kwl, Red Branch, Kwr, and Dexter, Kwd, Members of the Woodbine Formation

CRETACEOUS

Scale 1:250,000

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 25 30 Kilometers

5 0 5 10 Nautical Miles

CONTOUR INTERVAL 50 FEET

TRANSVERSE MERCATOR PROJECTION

1991 MAGNETIC DECLINATION FOR THE CENTER OF THE SHEET IS 5° 59'00". MEAN ANNUAL CHANGE IS 5'40" WESTWARD.

LOCATION MAP

GEOLOGIC ATLAS OF TEXAS, SHERMAN SHEET

WALTER SCOTT ADKINS MEMORIAL EDITION

REVISED 1991

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT: GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE: REGIONAL GEOLOGIC MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	KLL		CJI NO. 13046040
APP BY	APP		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-28-2014			FIGURE NO.
PURPOSE: APAR			1C

S:\CAD\City of Frisco\13046\13046040 Fig 1C.dwg, 6/13/2014 8:38:42 AM

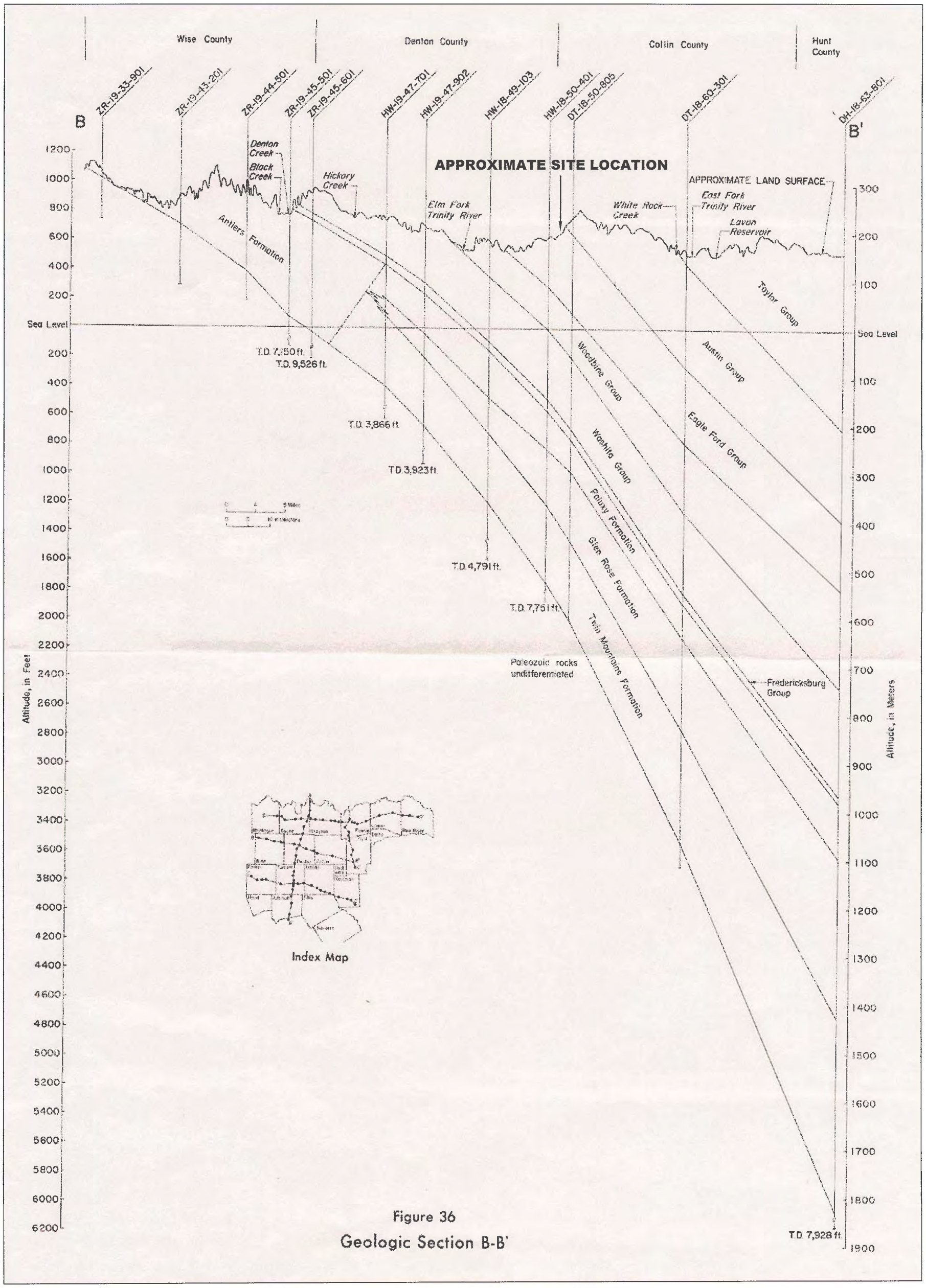


Figure 36
Geologic Section B-B'

MAP SOURCE:
TEXAS WATER DEVELOPMENT BOARD REPORT #269
(NORDSTROM, 1982)

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT: GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE: REGIONAL GEOLOGIC CROSS SECTION

DES BY		
DR BY	SDB	
CHK BY	CHK	
APP BY	APP	
DATE ISSUED: 05-28-2014		
PURPOSE: APAR		

SCALE: SEE BAR SCALE
PROJECT NO. 13046.01
CJI NO. 13046038
SHEET 1 OF 1 SHEETS
FIGURE NO. 1D

S:\CAD\City of Frisco\13046\13046038 Fig 1D.dwg, 6/13/2014 8:36:18 AM

Section 2 Exposure Pathways and Groundwater Resource Classification

Section 2.1 Source(s) of Potable Water for On-Site Property and Affected Off-Site Properties

COCs in soils assessed at the PRAA 1 site were below residential assessment levels, therefore, potable water supply for on-site and off-site properties are not at risk.

PRAA 1 and other portions of the Grand Park site would receive potable water from the City of Frisco. Potable water is supplied to the City of Frisco and surrounding area by the North Texas Municipal Water District (NTMWD). Based on a City of Frisco 2013 Water Quality Report, the City has a "Superior" water supplier rating, exceeding all State and Federal water quality requirements. NTMWD supplies water to approximately 1.6 million people in seven counties. Five surface water supply sources make up the NTMWD reservoir system that supplies drinking water. Their primary water supply source is Lavon Lake with additional sources including Jim Chapman Lake, Lake Texoma, Lake Tawakoni, and the East Fork Raw Water Supply Project. All properties located within 500 feet of the site would be connected to the City of Frisco public water supply.

Section 2.2 Field Receptor Survey

CJI personnel have visually observed properties within 500 feet of PRAA 1's site perimeter on various dates in an effort to located potentially sensitive receptors such as schools, hospitals, residences, child care centers, nursing homes, recreational areas, agricultural areas, and ecological receptors. On December 30, 2013, Mr. Richard Varnell surveyed the areas to the south of PRAA 1 and on June 3, 2014, Mr. Kevin Lonseth and Mr. Kevin Ashley focused their observations on areas to the north of the site. A site vicinity map is provided as Figure 2A. Photographs taken during the dates specified above are provided as Figure 2B. No schools, hospitals, residences, child care centers, nursing homes, or recreational areas were identified within 500 feet of the subject site. The PRAA 1 property is currently farmed and farmed land is located across Cotton Gin Road within 500 feet of the site. Stewart Creek, a perennial stream, is located approximately 480 feet at its closest point to PRAA 1. No public or private wells were identified within 500 feet of the subject property, but the well located beyond 500 feet on Grand Park property to the southwest of PRAA 1 was located and photographed. Stewart Creek is the only potential receptor with 500 feet of the site, however, COCs in soils assessed at the PRAA 1 site are below residential assessment levels and are an unlikely source for the existing contaminants in the impacted creek.

Section 2.3 Records Survey

Banks Environmental Data provided a water well search extending ½ mile out from the boundary of the Grand Park property. One water well was identified within the Grand Park site (well #1), and four were located within the ½ mile buffer. No wells were identified within the PRAA 1 portion of Grand Park. Two of the wells were within ½ mile of PRAA 1 (wells #1 and #4).

The well identified within the Grand Park site is associated with an old, dilapidated farmhouse complex located on the west side of Stewart Creek in the north-central portion of the property.

COCs in soils assessed at the PRAA 1 site were below residential assessment levels, therefore, water wells in the vicinity are not at environmental risk from the site.

Section 2.4 Receptor Survey Results

The land use surrounding the PRAA 1 portion of the Grand Park site is mostly undeveloped. Other farmland is in close proximity to the site (across Cotton Gin Road to the north), and one commercial establishment is found within the 500 foot survey radius (a 7-11 convenience store located at the northeast corner of Cotton Gin Road and Dallas North Tollway). The only potential receptor within 500 feet of the site is Stewart Creek. Stewart Creek is approximately 480 feet away from PRAA 1 at its closest point.

As previously discussed, potable water for the subject property and the surrounding area would be provided by the City of Frisco. One water well (well #1 on Figures 2A and 2C) was identified during site reconnaissance activities. Well #1 is outside of the PRAA 1 500 foot radius. Well #4, which is depicted across Cotton Gin Road to the north/northwest from PRAA 1, was not located during the receptor survey. Coordinates provided for well #4 show it to be outside of the 500 foot survey radius.

COCs in soils assessed at the PRAA 1 site are below residential assessment levels and are an unlikely source for the existing contaminants in the impacted creek.

Section 2.5 Groundwater Resource Classification

The PRAA 1 site groundwater is classified as Class 2 based on low groundwater yields from monitoring wells located on the undeveloped buffer property surrounding the Exide facility. Based on the Exide Technologies Undeveloped Buffer Property APAR, some site wells were completed in clayey gravels that produce some groundwater, while other found no groundwater at all. The PRAA 1 site is within ½ mile of the Exide buffer property.

Section 2.6 Exposure Pathways

There are no known immediate threats of exposure or actual exposure at the site. COCs assessed in the top 3 inches of soil at the PRAA 1 site were detected below residential assessment levels. COCs have been vertically delineated to MQLs or background levels within the top foot of surface soils.

Complete or reasonably anticipated to be complete exposure pathways are shown in Table 2C. Since COCs have been delineated vertically to MQLs or background in surface soil, potential exposure pathways in subsurface soil are not evaluated. Groundwater ingestion or inhalation is not a complete exposure pathway since COCs have been delineated vertically to MQLs or background in surface soils prior to reaching groundwater. However, the soil to groundwater exposure pathway is still included as a potential exposure pathway. A monitoring well was installed at the PRAA 1 site but as of June 3, 2014 remains dry.

Surface water and sediment are not complete exposure pathways and were not evaluated. Stewart Creek is located approximately 480 feet to the south of the south of the PRAA 1 boundary, and is the only surface water located within ½ mile of the site. Contaminant impacts from PRAA 1 to the creek should be negligible due to site COCs being below residential assessment levels and the 480-foot distance to the creek. Stewart Creek is known to contain sediment impacted from the upstream Exide facility. Extensive sediment sampling is currently underway in Stewart Creek on the Grand Park site. Additional sampling of Stewart Creek sediment and surface water will occur during future Grand Park site assessment activities.

Table 2A – Water Well Summary

Table 2B – Affected Water Well Summary (NOT APPLICABLE)

Table 2C – Complete or Reasonably Anticipated to Be Complete Exposure Pathways

Table 2A. Water Well Summary

Map ID	Well #	Approximate Distance from Site[1]	Aquifer Name	Use	Status	Depth Drilled	Owner	Notes
1	18-50-7A	~900’	Unknown	Domestic	Unknown	450’	Leo Wollenreich	Within Grand Park on property owned by the City of Frisco
2	WIID348444	~4700’	Paluxy	Stock	Unknown	1600’	Starwood HOA	None
3	WIID24984	~4000’	Unknown	Irrigation	Unknown	675	Legacy Christian Academy	None
4	18-50-7G	~1070’	Unknown	Domestic	Unknown	33	B.F. Phillips	Well shown in wheat field to the north/northwest of site.
5	18-50-7H	~5250’	Unknown	Domestic	Unknown	36	B.F. Phillips	Well shown in middle of Cheyenne Village neighborhood.

Notes:
1. Approximate distance from PRAA 1 portion of the Grand Park site.

Table 2C. Complete or Reasonably Anticipated to be Complete Exposure Pathways

Exposure pathway	Surface soil[1]	Subsurface soil[2]	Groundwater	Surface water/ sediment
${}^{Tot}Soil_{Comb}$[3]	■	NA	NA	NA
${}^{Air}Soil_{Inh\text{-}V}$	NA	NA		
${}^{GW}Soil_{Ing}$ or ${}^{GW}Soil_{Class3}$	■	NA		
${}^{GW}GW_{Ing}$ or ${}^{GW}GW_{Class3}$	NA	NA	□	
${}^{Air}GW_{Inh\text{-}V}$			□	
${}^{SW}GW$			□	
${}^{Sed}GW$			□	
${}^{SW}SW$ or ${}^{Sed}Sed$			NA	□
Other (specify)[4]	□	□	□	□

[1] Residential: soils from 0-15 feet deep, or to bedrock or groundwater-bearing unit if shallower.
Commercial/industrial: soils from 0-5 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: ${}^{Air}Soil_{Inh\text{-}VP} + {}^{Soil}Soil_{Ing} + {}^{Soil}Soil_{Derm} + {}^{Veg}Soil_{Ing}$
Commercial/industrial: ${}^{Air}Soil_{Inh\text{-}VP} + {}^{Soil}Soil_{Ing} + {}^{Soil}Soil_{Derm}$

[4] If other exposure pathways are identified here, include those pathways in the derivation of assessment levels and evaluation of critical PCLs.

Figure 2A - Potential Receptors Map

Figure 2B - Field Survey Photographs

Figure 2C - Water Well Map

N

1000 500 0 1000

(SCALE IN FEET)

LEGEND

PRAA 1 BOUNDARY

PRAA 1 500 FOOT RADIUS

GRAND PARK VCP BOUNDARY

WATER WELL

AERIAL SOURCE:
GOOGLE EARTH PRO
10–18–2013

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512–474–9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F–883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
POTENTIAL RECEPTORS MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13042.01
CHK BY	KA		CJI NO. 13042005
APP BY	WW		SHEET 1 OF 1 SHEETS
DATE ISSUED: 06–04–2014			FIGURE NO. 2A
PURPOSE: APAR			

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FIGURE 2B - FIELD SURVEY PHOTOGRAPHS
GRAND PARK PRAA 1
FRISCO, TEXAS

Photo 1 – This photo was taken from just north of Cotton Gin Road and north of the site looking to the west. A wheat field is visible on the north side of the road, while undeveloped Grand Park land is seen to the south. A fire station can be seen in the distance (on Legacy Drive).

Photo 2 – This photo was taken from just north of Cotton Gin Road and north of the site looking to the east. A wheat field is visible with undeveloped property beyond that. Dallas North Parkway can be seen in the distance, just to the east of the PRAA 1 site.

FIGURE 2B - FIELD SURVEY PHOTOGRAPHS
GRAND PARK PRAA 1
FRISCO, TEXAS

Photo 3 – This is a closer view of the fire station located at the intersection of Cotton Gin Road and Legacy Drive (just over ¼ mile from the PRAA 1 site).

Photo 4 – This photo was taken from the north side of Cotton Gin Road looking to the south/southwest. This shows Cotton Gin Road with a portion of the undeveloped Grand Park property that is adjacent to west of the PRAA 1 site.

FIGURE 2B - FIELD SURVEY PHOTOGRAPHS
GRAND PARK PRAA 1
FRISCO, TEXAS

Photo 5 – This photo was taken from Cotton Gin Road just east of the Dallas North Tollway. Looking north, the 7-11 convenience store and access road to the tollway can be seen.

Photo 6 – This photo was taken Cotton Gin Road just east of the Dallas North Tollway. Looking south, the access road to the tollway can be seen, as well as the western most portion of the Sci-tech Discovery Center and Frisco Art Gallery property.

FIGURE 2B - FIELD SURVEY PHOTOGRAPHS
GRAND PARK PRAA 1
FRISCO, TEXAS

Photo 7 – This photo was taken from southwest corner of the PRAA 1 site looking onto adjacent undeveloped Grand Park property.

Photo 8 – View of Grand Park property to the south of the PRAA 1 site.

FIGURE 2B - FIELD SURVEY PHOTOGRAPHS
GRAND PARK PRAA 1
FRISCO, TEXAS

Photo 9 – This photo was taken from southeast corner of the PRAA 1 site looking north along the Dallas North Tollway access road.

Photo 10 – View of looking south along the Dallas North Tollway access road towards Stewart Creek.

FIGURE 2B - FIELD SURVEY PHOTOGRAPHS
GRAND PARK PRAA 1
FRISCO, TEXAS

Photo 11 – This is a photo of well #1 located on the Grand Park property to the southwest of PRAA 1.

.

800 400 0 800

(SCALE IN FEET)

LEGEND

GRAND PARK VCP BOUNDARY

PRAA 1

WATER WELL

AERIAL SOURCE:
NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG); 2011

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
WATER WELL MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046041
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-28-2014			FIGURE NO. 2C
PURPOSE: APAR			

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Attachment 2A - Tier 1 Ecological Exclusion Criteria Checklist

Attachment 2B - Tier 1 Ecological Exclusion Criteria Supporting Documentation

Attachment 2A Tier 1 Exclusion Criteria Checklist

PART I. Affected Property Identification and Background Information

1) Provide a description of the specific area of the response action and the nature of the release. Include estimated acreage of the affected property and the facility property, and a description of the type of facility and/or operation associated with the affected property. Also describe the location of the affected property with respect to the facility property boundaries and public roadways.

The subject property (PRAA 1) is farmed land (currently a wheat field) owned by the City of Frisco that is located on the southwest corner of Cotton Gin Road and the North Dallas Tollway in Frisco, Texas. The site is bound to the north by Cotton Gin Road, to the east by the North Dallas Tollway (access road), and to the south and west by undeveloped (Grand Park) City owned property. The City of Frisco acquired the subject property, along with adjacent properties to the west and south, for the planned Grand Park development (park land, residential, and retail properties).

The PRAA 1 site appears to have been farmed of and on since the early 1940s. As such, the potential for residual herbicides and pesticides impacts were assessed during the PRAA 1 investigation. The Grand Park site (which includes PRAA 1) was enrolled in the VCP to investigate known impacts to Stewart Creek and potential, airborne deposits of lead particulate to the upland areas of the property.

Surface soils in PRAA 1 were assessed to determine if site development could proceed in a manner protective of human health and the environment, while also meeting the applicable regulatory requirements. Results show that no surface soils exceed residential assessment levels.

Attach available USGS topographic maps and/or aerial or other affected property photographs to this form to depict the affected property and surrounding area. Indicate attachments:

____ Topo map X Aerial photo ____ Other (specify) _____

(See APAR Fig 1B)

2) Identify environmental media known or suspected to contain chemicals of concern (COCs) at the present time. Check all that apply:

Known/Suspected COC Location		Based on sampling data?	
X	Soil <5 ft below ground surface	X Yes	____ No
____	Soil >5 ft below ground surface	____ Yes	____ No
____	Groundwater	____ Yes	____ No
____	Surface Water/Sediments	____ Yes	____ No

Explain (previously submitted information may be referenced):

Assessment sampling has confirmed that COCs in surface soils at the site are below residential assessment levels.

3) Provide the information below for the nearest surface water body which has become or has the potential to become impacted from migrating COCs via surface water runoff, air deposition, groundwater seepage, etc. Exclude wastewater treatment facilities and stormwater conveyances/impoundments authorized by permit. Also exclude conveyances, decorative ponds, and those portions of process facilities that are:

a. Not in contact with surface waters in the State or other surface waters which are ultimately in contact with surface waters in the State; and
b. Not consistently or routinely utilized as valuable habitat for natural communities including birds, mammals, reptiles, etc.

The nearest surface water body is ~480 feet from the affected property and is named:
Stewart Creek

The water body is best described as a:

X freshwater stream:

_X_ perennial (has water all year)
____ intermittent (dries up completely for at least 1 week a year)
____ intermittent with perennial pools
____ freshwater swamp/marsh/wetland
____ saltwater or brackish marsh/swamp/wetland
____ reservoir, lake, or pond; approximate surface acres _____
____ drainage ditch
____ tidal stream ____ bay ____ estuary
____ other; specify

Is the water body listed as a State classified segment in Appendix C of the current Texas Surface Water Quality Standards; §§307.1 - 307.10?
____ Yes Segment # _____ Use Classification: _____
_X_ No

If the water body is not a State classified segment, identify the first downstream classified segment.
Name: Lewisville Lake
Segment #: 0823
Use Classification: Contact Recreation Use, General Use, Fish Consumption, Public Water Supply Use

As necessary, provide further description of surface waters in the vicinity of the affected property:

Lewisville Lake is approximately 4 miles downstream of the PRAA 1 site. Previous sampling within Stewart Creek on the Grand Park property has shown that stream sediments are impacted with arsenic, lead and cadmium. Extensive sampling of stream sediment within Grand Park is currently underway by both Exide and City of Frisco representatives. Additional sampling of Stewart Creek sediment and surface waters is planned with the remaining Grand Park affected property assessment.

PART II. Exclusion Criteria and Supportive Information

Subpart A. Surface Water/Sediment Exposure

1) Regarding the affected property where a response action is being pursued under the TRRP, have COCs migrated and resulted in a release or imminent threat of release to either surface waters or to their associated sediments via surface water runoff, air deposition, groundwater seepage, etc.? Exclude wastewater treatment facilities and stormwater conveyances/impoundments authorized by permit. Also exclude conveyances, decorative ponds, and those portions of process facilities which are:

a. Not in contact with surface waters in the State or other surface waters which are ultimately in contact with surface waters in the State; and

b. Not consistently or routinely utilized as valuable habitat for natural communities including birds, mammals, reptiles, etc.

____ Yes _X_ No

Explain:

The nearest surface water, Stewart Creek, is located ~480 feet to the south/southwest of the PRAA 1 site. Assessment sample results showed that COCs in the surface soils across the site are less than residential assessment levels. A response action is not required for the PRAA 1 site.

If the answer is yes to Subpart A above, the affected property does not meet the exclusion criteria. However, complete the remainder of Part II to determine if there is a complete and/or significant soil

exposure pathway, then complete PART III - Qualitative Summary and Certification. If the answer is No, go to Subpart B.

Subpart B. Affected Property Setting

In answering "Yes" to the following question, it is understood that the affected property is not attractive to wildlife or livestock, including threatened or endangered species (i.e., the affected property does not serve as valuable habitat, foraging area, or refuge for ecological communities). (May require consultation with wildlife management agencies.)

1) Is the affected property wholly contained within contiguous land characterized by: pavement, buildings, landscaped area, functioning cap, roadways, equipment storage area, manufacturing or process area, other surface cover or structure, or otherwise disturbed ground?

____ Yes X No

Explain:

The PRAA 1 site is currently used for farming (wheat field). Roadways contain the property to the north and east, but undeveloped Grand Park property is located adjacent to the south and west.

If the answer to Subpart B above is Yes, the affected property meets the exclusion criteria, assuming the answer to Subpart A was No. Skip Subparts C and D and complete PART III - Qualitative Summary and Certification. If the answer to Subpart B above is No, go to Subpart C.

Subpart C. Soil Exposure

1) Are COCs which are in the soil of the affected property solely below the first 5 feet beneath ground surface **or** does the affected property have a physical barrier present to prevent exposure of receptors to COCs in surface soil?

____ Yes X No

Explain:

Surface soils were assessed to investigate potential, airborne deposits of lead particulate. COCs were assessed in the top foot of site soils. 258 surface soil samples were collected and no COCs exceeded residential assessment levels.

If the answer to Subpart C above is Yes, the affected property meets the exclusion criteria, assuming the answer to Subpart A was No. Skip Subpart D and complete PART III - Qualitative Summary and Certification. If the answer to Subpart C above is No, proceed to Subpart D.

Subpart D. *De Minimus* Land Area

In answering "Yes" to the question below, it is understood that all of the following conditions apply:

- The affected property is not known to serve as habitat, foraging area, or refuge to threatened/endangered or otherwise protected species. (Will likely require consultation with wildlife management agencies.)
- Similar but unimpacted habitat exists within a half-mile radius.
- The affected property is not known to be located within one-quarter mile of sensitive environmental areas (e.g., rookeries, wildlife management areas, preserves). (Will likely require consultation with wildlife management agencies.)

such that the affected property will become larger than one acre.

1) Using human health protective concentration levels as a basis to determine the extent of the COCs, does the affected property consist of one acre or less and does it meet all of the conditions above?

X Yes ____ No

Explain how conditions are met/not met:

Based on human health protective concentration levels, there is no affected property at the PRAA 1 site. The property has been used as farmland since the 1940s. It is unlikely that the site would serve as habitat, foraging area, or refuge to threatened/endangered or otherwise protected species as it is adjacent to an expressway and within the rapidly developing City of Frisco. The site is unimpacted based on human health PCLs, and, there is similar habitat (other cultivated fields) within a half-mile radius of the site. Sensitive environmental areas are not known to be located within one-quarter mile of the PRAA 1 site. Stewart Creek is located ~480 feet from the site, however, creek sediments within the Grand Park site are known to be impacted with lead and cadmium from the upstream Exide facility. COCs associated with the PRAA 1 site were detected below residential assessment levels and are an unlikely source for any stream sediment contamination.

If the answer to Subpart D above is Yes, then no further ecological evaluation is needed at this affected property, assuming the answer to Subpart A was No. Complete PART III - Qualitative Summary and Certification. If the answer to Subpart D above is No, proceed to Tier 2 or 3 or comparable ERA.

PART III. Qualitative Summary and Certification (complete in all cases.)

Attach a brief statement (not to exceed 1 page) summarizing the information you have provided in this form. This summary should include sufficient information to verify that the affected property meets or does not meet the exclusion criteria. The person should make the initial decision regarding the need for further ecological evaluation (i.e., Tier 2 or 3) based upon the results of this checklist. After review, TCEQ will make a final determination on the need for further assessment. **Note that the person has the continuing obligation to re-enter the ERA process if changing circumstances result in the affected property not meeting the Tier 1 exclusion criteria.**

Completed by	Kevin Lonseth, P.G.	(Typed/Printed Name)
	CJI Project Staff	(Title)
	6/24/2014	(Date)

I believe that the information submitted is true, accurate, and complete, to the best of my knowledge.

Mack Borchardt	(Typed/Printed Name of Person)
Special Assistant to the City Manager	(Title of Person)
Mack Borchardt	(Signature of Person)
6/24/2014	(Date Signed)

Attachment 2B Tier 1 Exclusion Supporting Documentation

The ~26-acre Partial Response Action Area (PRAA 1) within the Grand Park property (VCP #2592) is located in the northeast corner of the Grand Park site at the intersection of Cotton Gin Road and an access road for the Dallas North Tollway. PRAA 1 (the subject property) is currently a wheat field that has been farmed off and on since the 1940s. The City of Frisco (Frisco) owns the approximately 320 acres of contiguous property that make up the Grand Park site. The City currently plans to develop the Grand Park site into park lands, retail, and residential properties. The Grand Park site is located to the south of Cotton Gin Road, to the west of Dallas North Tollway and a BNSF Railway, to the north of Stonebrook Parkway, and to the east of Legacy Drive. Based on sediment sampling of Stewart Creek, it appears that Stewart Creek sediment within Grand Park has been impacted by past operations at the upstream former Exide Battery Recycling Facility (Exide). In addition, historic stack emissions from Exide may have impacted surface soils within the Grand Park site.

The affected property assessment consisted of a focused investigation of the surface soils at the PRAA 1 site. The purpose of the assessment was to determine if contaminants of concern (COCs) were present in surface soils and if so, to fully delineate the vertical and lateral extent of contamination. Based on the assessment findings, no COCs exceeded residential assessment levels.

The subject property meets the ecological exclusion criteria for the following reasons:

1. Assessment sampling confirmed that COCs in surface soils across the site are below residential assessment levels. COCs in surface soils were vertically delineated to MQLs or background in the top foot of surface soils.

2. The nearest surface water body, Stewart Creek, is located about 480 feet south of the site. Previous sampling has shown that sediments in Stewart Creek have been impacted by past operations at the upstream former Exide Battery Recycling Facility (Exide). Extensive sediment sampling of Stewart Creek within the Grand Park property is currently underway by Exide and City of Frisco representatives. Additional soil sampling will occur in upland areas between PRAA 1 and Stewart Creek during future phases of the Grand Park affected property assessment.

3. Soil benchmarks were reviewed in TCEQ's *Conducting Ecological Risk Assessments at Remediation Sites in Texas* (RG-263, Revised Draft January 2014). Of the 258 surface soil samples collected, only 3 arsenic values exceeded the recommended soil benchmark for plants (18 mg/Kg). These 3 samples were well below the earthworm benchmark of 60 mg/Kg. The 95% upper confidence limit for arsenic was calculated using the initial 236 surface soil samples collected at the PRAA 1 site. An upper limit value of 10.31 mg/Kg was calculated, which is well below the plant benchmark and the site specific arsenic background value of 15.9 mg/Kg. 95% upper confidence limit calculations are included within this attachment.

4. The site is currently a wheat field that has been farmed since the 1940s. Although not considered "broken ground", the field is near an expressway and the rapidly developing City of Frisco and would not be considered more attractive to wildlife, including threatened or endangered species, than the immediately surrounding area. In addition, no animals were observed in PRAA 1 during the field activities performed there.

	A	B	C	D	E	F	G	H	I	J	K	L
1						UCL Statistics for Uncensored Full Data Sets						
2												
3				User Selected Options								
4				Date/Time of Computation		6/2/2014 2:31:31 PM						
5				From File		WorkSheet.xls						
6				Full Precision		OFF						
7				Confidence Coefficient		95%						
8				Number of Bootstrap Operations		2000						
9												
10												
11	C0											
12												
13						General Statistics						
14					Total Number of Observations	236			Number of Distinct Observations		164	
15									Number of Missing Observations		0	
16					Minimum	5.14			Mean		9.981	
17					Maximum	20.2			Median		9.455	
18					SD	3.046			Std. Error of Mean		0.198	
19					Coefficient of Variation	0.305			Skewness		0.888	
20												
21						Normal GOF Test						
22					Shapiro Wilk Test Statistic	0.911			Shapiro Wilk GOF Test			
23					5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level			
24					Lilliefors Test Statistic	0.124			Lilliefors GOF Test			
25					5% Lilliefors Critical Value	0.0577			Data Not Normal at 5% Significance Level			
26						Data Not Normal at 5% Significance Level						
27												
28						Assuming Normal Distribution						
29					95% Normal UCL				95% UCLs (Adjusted for Skewness)			
30					95% Student's-t UCL	10.31			95% Adjusted-CLT UCL (Chen-1995)		10.32	
31									95% Modified-t UCL (Johnson-1978)		10.31	
32												
33						Gamma GOF Test						
34					A-D Test Statistic	3.02			Anderson-Darling Gamma GOF Test			
35					5% A-D Critical Value	0.752			Data Not Gamma Distributed at 5% Significance Level			
36					K-S Test Statistic	0.113			Kolmogrov-Smirnoff Gamma GOF Test			
37					5% K-S Critical Value	0.0594			Data Not Gamma Distributed at 5% Significance Level			
38						Data Not Gamma Distributed at 5% Significance Level						
39												
40						Gamma Statistics						
41					k hat (MLE)	11.78			k star (bias corrected MLE)		11.63	
42					Theta hat (MLE)	0.847			Theta star (bias corrected MLE)		0.858	
43					nu hat (MLE)	5559			nu star (bias corrected)		5490	
44					MLE Mean (bias corrected)	9.981			MLE Sd (bias corrected)		2.927	
45									Approximate Chi Square Value (0.05)		5318	
46					Adjusted Level of Significance	0.049			Adjusted Chi Square Value		5317	
47												
48						Assuming Gamma Distribution						
49					95% Approximate Gamma UCL (use when n>=50))	10.3			95% Adjusted Gamma UCL (use when n<50)		10.3	
50												
51						Lognormal GOF Test						
52					Shapiro Wilk Test Statistic	0.95			Shapiro Wilk Lognormal GOF Test			

	A	B	C	D	E	F	G	H	I	J	K	L
53					5% Shapiro Wilk P Value	3.1892E-8		Data Not Lognormal at 5% Significance Level				
54					Lilliefors Test Statistic	0.104		**Lilliefors Lognormal GOF Test**				
55					5% Lilliefors Critical Value	0.0577		Data Not Lognormal at 5% Significance Level				
56					**Data Not Lognormal at 5% Significance Level**							
57												
58					**Lognormal Statistics**							
59					Minimum of Logged Data	1.637				Mean of logged Data		2.258
60					Maximum of Logged Data	3.006				SD of logged Data		0.29
61												
62					**Assuming Lognormal Distribution**							
63					95% H-UCL	10.3				90% Chebyshev (MVUE) UCL		10.54
64					95% Chebyshev (MVUE) UCL	10.81				97.5% Chebyshev (MVUE) UCL		11.17
65					99% Chebyshev (MVUE) UCL	11.88						
66												
67					**Nonparametric Distribution Free UCL Statistics**							
68					**Data do not follow a Discernible Distribution (0.05)**							
69												
70					**Nonparametric Distribution Free UCLs**							
71					95% CLT UCL	10.31				95% Jackknife UCL		10.31
72					95% Standard Bootstrap UCL	10.31				95% Bootstrap-t UCL		10.32
73					95% Hall's Bootstrap UCL	10.34				95% Percentile Bootstrap UCL		10.32
74					95% BCA Bootstrap UCL	10.3						
75					90% Chebyshev(Mean, Sd) UCL	10.58				95% Chebyshev(Mean, Sd) UCL		10.85
76					97.5% Chebyshev(Mean, Sd) UCL	11.22				99% Chebyshev(Mean, Sd) UCL		11.95
77												
78					**Suggested UCL to Use**							
79					95% Student's-t UCL	10.31				or 95% Modified-t UCL		10.31
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

Section 3 Assessment Strategy

Section 3.1 General Assessment Issues

Environmental Media Assessed

Surface soils were the only environmental media assessed. As described in Section 4.2, the results of the assessment samples revealed that contaminants within PRAA 1 site surface soils were below residential assessment levels and were vertically delineated to MQLs or background. As such, subsurface soils and groundwater were not assessed. Additionally, sediment and surface water were not assessed during this initial assessment of the Grand Park site. Stewart Creek flows through the Grand Park site, and is located approximately 480 feet to the south of PRAA 1. Extensive sampling of Stewart Creek sediment within the Grand Park site are currently being conducted by Exide and City of Frisco representatives. Stewart Creek sediment and creek surface water will be addressed further during future phases of the Grand Park property assessment.

Target COCs

The target COCs and associated laboratory methods consisted of the following: heavy metals (arsenic, cadmium, lead, and selenium) by EPA 6020; herbicides by EPA 8151A; and pesticides by EPA 8081A. The contaminants of concern were selected based on potential contamination from particulate deposition from airborne emissions originating at the former Exide facility. Herbicides and pesticides were also evaluated based on the PRAA 1 property's farming history.

Background

Background sampling was not conducted during the PRAA 1 property assessment.

Background soil samples have been collected from the Grand Park property by Pastor, Behling & Wheeler, LLC (PBW). PBW collected the samples on behalf of their client, Exide Technologies. The purpose of the background samples was to determine representative background concentrations for arsenic, cadmium, and lead in surface soil in the area. The sample locations were reportedly requested by and were agreed to by the United States Environmental Protection Agency (EPA).

A Background Report[1] documenting their sample collection procedures, sample results, statistical evaluation, and conclusions is provided in Appendix I of the Grand Park Phase I ESA[2] submitted to the TCEQ on January 16, 2014 and incorporated herein by reference. The general location where these samples were collected is provided on Figure 4 of the Phase I ESA and on Figure 1 of the PBW report. Specific background sample locations are provided on Figure 2 of the PBW Report.

[1] *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*, by Pastor, Behling & Wheeler, LLC, dated 30 May 2013.
[2] *Phase I Environmental Site Assessment, Grand Park, 7275 Dallas Parkway, Frisco, Texas, VCP #2592, CN600245526*, by Cook-Joyce, Inc, dated 16 January 2014.

As documented in the Background Report, PBW collected 10 soil samples near Stewart Creek on the southern portion of the subject property on 29 March 2012. Based on a verbal request by the TCEQ, PBW collected 3 more soil samples from the same area on 9 May 2013. The TCEQ presumably requested additional sampling because 2 of the 10 samples in the initial data set were statistical outliers that represent likely contamination. The analytical data from those samples is summarized in the following table.

Sample ID	Sample Depth (feet below ground surface)	Concentration (milligrams per Kilogram [mg/Kg])		
		Arsenic	Cadmium	Lead
2012-BG-1	0-2	11.2	< 0.0313 UJ	13.2 J
2012-BG-2	0-2	9.29	< 0.0287 UJ	13 J
2012-BG-3	0-2	11.6	< 0.0301 UJ	11.5 J
2012-BG-4	0-2	10.8	< 0.0315 UJ	15.7 J
2012-BG-5	0-2	14.8	< 0.031 UJ	13.5 J
2012-BG-6	0-2	10.0	< 0.0314 UJ	14.3 J
2012-BG-7	0-2	9.74	< 0.031 UJ	14.1 J
2012-BG-8	0-2	9.83	0.122 J	24 J
2012-BG-9	0-2	12.6	8.09 J	*302 J*
2012-BG-10	0-2	11.0	< 0.615 UJ	*67.6 J*
2012-BG-11	0-2	Not Analyzed	Not Analyzed	20.6
2012-BG-12	0-2	Not Analyzed	Not Analyzed	27.5
2012-BG-13	0-2	Not Analyzed	Not Analyzed	18.9
Background Mean		11.1	Not Calculated	16.9
Standard Deviation		1.64	Not Calculated	5.16
K-Value		2.911	--	2.815
Upper Tolerance Limit		15.9	Not Calculated	31.5

Notes: Values presented in *italic* type were excluded from statistical analyses because they were statistically identified as outliers.

Data Qualifiers: J = estimated concentration; UJ – compound not detected at the indicated detection limit, estimated value.

Background values not calculated for cadmium because most of the data were non-detect.

The lead concentrations reported in the highlighted samples, 2012-BG-9 and 2012-BG-10, were considered outliers and were excluded from the statistical evaluation. CJI considers the highlighted lead and cadmium concentrations reported above to be indicative of surface soil contamination.

As shown in the table above, PBW used the arsenic and lead data to calculate upper tolerance limits (UTLs). The UTLs represent background levels for arsenic and lead in surface soil of 15.9 mg/Kg and 31.5 mg/Kg, respectively. Those values were reported to the TCEQ in the FOP APAR (the Background Report is provided in Appendix 8 of that document). CJI assumes that the TCEQ has approved the Background Report and calculations, since they did not comment on them in their 8 October 2013[1] or 19 November 2013[1] letters regarding the FOP APAR. The

[1] Letter from Mr. Gary Beyer (TCEQ) to Mr. Matt Love (Exide), *Comments to the Affected Property Assessment Report (APAR) and the Tier 2 Screening Level Ecological Risk Assessment (SLERA) for the Former Operating*

19 November 2013 letter is a conditional approval of the FOP APAR. Based on the TCEQ's apparent concurrence, and since those samples were collected on-site, CJI has concluded that those values are appropriate for use in the Grand Park VCP investigation.

Section 3.2 Assessment Strategy

General Assessment Approach

The soil assessment was conducted by superimposing a sampling grid across the PRAA 1 property and collecting samples within that grid. Each surface soil sample was collected from the top few inches of soil. This sample depth was selected because airborne emissions from the former Exide facility would have resulted in shallow soil contamination. A total of 236 surface soil samples were collected over the approximately 26-acre PRAA 1 site to assess potential releases and to determine the lateral extent of any contamination in soils. An additional 22 samples were collected from 0.5-1' below ground surface to complete vertical delineation to MQLs or background levels.

Although below residential assessment levels, vertical delineation for arsenic and lead was performed in areas exceeding background levels. Vertical delineation for cadmium was also performed at two locations where surface concentration were estimated above MQLs. Additional samples collected for arsenic and lead were all below background values. Additional samples analyzed for cadmium were below laboratory MQLs. Vertical delineation samples were collected using a Geoprobe rig or a pre-cleaned stainless steel sampling shovel.

A deeper boring was installed at sample location 5J-e using a Geoprobe rig. During boring advancement, soil cores were screened for the presence of organic vapors using a Photo-Ionization Detector (PID). The PID showed no evidence of contamination. The boring was lithologically logged using the Unified Soil Classification System (USCS). A monitoring well was installed in this boring (GP-MW-3). This well was screened from 7 to 17 feet below ground surface to intercept sand stringers encountered between 8.5 and 10 feet below ground surface. The well is currently dry. The boring log including well completion information for GP-MW-3 is provided in Appendix 2.

Sample collection, handling, and laboratory analysis were conducted in accordance with TCEQ technical guidance. Soil samples were collected using pre-cleaned and/or decontaminated equipment. Samples were immediately placed into laboratory supplied sampling jars and then transferred to a cooled container pending delivery to the laboratory. Samples were delivered to the laboratory within 48 hours after sample collection using strict chain-of-custody procedures. The samples were analyzed for target metals (arsenic, cadmium, lead, and selenium), herbicides, and pesticides. Ten samples were also analyzed for pH.

Plant, dated July 9, 2013, Request for a Revised APAR, Exide Recycling Facility, 7471 5th Street, Frisco, TX 75034-5047, dated 8 October 2013.

[1] Letter from Mr. Gary Beyer (TCEQ) to Mr. Matt Love (Exide), *Conditional Approval of Response to TCEQ and EPA Comments on Affected Property Assessment Report (APAR) and Tier 2 Screening Level Ecological Risk Assessment for the Former Operating Plant, dated October 29, 2013, Exide Recycling Facility, 7471 5th Street, Frisco, TX 75034-5047,* dated 19 November 2013.

Sampling Approach

A grid system established on 1-acre centers was selected as the most appropriate sampling approach since the particulate deposition from Exide emissions were not isolated to specific areas of the PRAA 1 site, but instead could be present across the entire site. The particulate deposition would be isolated to the top few inches of the surface soil. Nine surface soil samples were collected within each full 1-acre grid space.

Surface Water and Sediment Assessment

No surface water or sediment sampling was performed. Stewart Creek is approximate 480 feet away from PRAA 1 at its closest point. Extensive sampling of Stewart Creek sediment within the Grand Park site is currently underway by Exide and City of Frisco representatives. Surface water sampling and additional sediment sampling of Stewart Creek within the Grand Park property will be performed during future Grand Park assessment activities.

Miscellaneous

No miscellaneous sampling was performed.

Utilities

Utility location through Texas 811 and the City of Frisco was initiated prior to any sample collection activities (Geoprobe borings) deeper than 18 inches. The City of Frisco identified sewer and water lines that cross the PRAA 1 site. Atmos Energy identified a gas line that runs across the northern portion of the PRAA 1 site. Due to surface soils at the site being unaffected, utilities at the site are not threatened, affected, or able to serve a migration pathway.

Assessment Methods

Each surface soil sample was collected from the top few inches of soil (0 to 3 inches below ground surface) since the potential contamination is from particulate deposition from airborne emissions from the former Exide facility. Samples were collected by hand using disposable sampling trowels. The coordinates of each surface soil sample was determined using a GPS unit and recorded in a logbook. A stake was used to mark each sample location. One duplicate sample per 20 soil samples was collected for QA/QC purposes.

Deeper samples were collected from 0.5 to 1’ and 1’ to 1.5’ for vertical delineation to background.

Collected soil samples were placed into a laboratory supplied jar that was appropriately labeled, and a chain of custody was initiated in the field at the time of sampling. All of the samples were thermally preserved after collection by placing the sample jars in an insulated chest with ice. The samples were kept at approximately 4°C in the field and during transport to the laboratory. A temperature blank was present in each of the ice chests to ensure laboratory personnel could check the temperature. Samples were delivered to the laboratory within 48 hours after sample collection using strict chain-of-custody procedures. Sample collection, handing, and laboratory analyses were conducted in accordance with EPA and TCEQ technical guidance.

A minimal amount of investigation derived wastes were generated during PRAA 1 assessment activities. These wastes included soil cuttings from monitoring well GP-MW-3 boring installation and minor volumes of decontamination rinsate water. These wastes will be appropriately disposed of during future Grand Park assessment activities.

Data Quality

All of the target compounds were analyzed using EPA approved methods. These methods have been evaluated by EPA and approved for use in complying with RCRA regulations. These methods are standard industry methods that achieve low MQLs and are appropriate for use on projects implemented under the Texas Risk Reduction Program. All sample results were reported on a dry weight basis.

Table 3A - Underground Utilities

Table 3A. Underground Utilities

Utility type	Construction material	Backfill material	Approx. depth (ft)	Utility company name	Potential migration pathway?		Affected?	
					Yes	No	Yes	No
Existing Storm Sewer	Unknown	Soil	Unknown	City of Frisco		X		X
Existing Water Line	Unknown	Soil	Unknown	City of Frisco		X		X
Existing Gas Line	Unknown	Soil	Unknown	Atmos		X		X

Figure 3A – Site Utilities Map

200 100 0 200

(SCALE IN FEET)

LEGEND

- SEWER LINE
- WATER LINE
- STORM SEWER
- GAS LINE

NOTE: GENERAL LOCATIONS TAKEN FROM MAPS PROVIDED BY THE CITY OF FRISCO AND ATMOS ENERGY.

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
SITE UTILITIES MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046043
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 06-12-2014			FIGURE NO. 3A
PURPOSE: APAR			

S:\CAD\City of Frisco\13046\13046043 Fig 3A.dwg, 6/13/2014 8:42:10 AM

Section 4 Soil Assessment

Section 4.1 Derivation of Assessment Levels

Exposure pathways considered for determination of the assessment levels for surface soils were: (1) protection of groundwater from soil leachate; and (2) combined ingestion, dermal contact, and inhalation of volatiles/particulates, and ingestion of vegetables. The assessment levels for surface soils were selected as the lowest Tier 1 residential PCLs for the identified exposure pathways. As described in Section 2.6, ecological receptors should not be threatened by this site.

The assessment levels for some of the target COCs were based on Tier 2 soil-to-groundwater PCLs. Tier 2 soil-to-groundwater PCLs were calculated for arsenic, cadmium, and lead. The Tier 2 PCL calculations are provided in Appendix 9 and were performed to consider the sorptive redistribution of contaminants from leachate into the underlying unaffected soils. As a conservative measure, all of the Tier 1 default parameters for a 30-acre source area and residential land use were used in the calculations, with exception of L1 and L2 input values. The basis for the site-specific L1 and L2 input values are provided below.

- L1 value: Airborne emission (particulate deposition) from the Exide facility is expected to be found it top few inches of site soils. Therefore, as a conservative measure, L1, which is the total thickness of affected media, has been assigned a value of 0.5 feet.

- Arsenic L2 value: As described in Section 1.3, a dry well was installed at the PRAA 1 site. The total depth of this well was 17 feet bgs. Therefore, as a conservative measure, L2, which is the depth from the top of the affected soils to groundwater, has been assigned a value of 17 feet for arsenic.

- Cadmium and Lead L2 value: For cadmium and lead, an L2 value of 0.5 feet was used, assuming soil contaminated with these metals is in direct contact with groundwater at the site.

Section 4.2 Nature and Extent of COCs and NAPL in Soil

Soil sampling was conducted to determine the nature and extent of any COCs at the site. The maximum concentrations of COCs in PRAA 1 surface soils are summarized in Table 4A. The analytical results for the assessment samples are provided in Table 4D. The data usability summary and laboratory reports are provided in Appendix 10.

No NAPL was observed at the site during the affected property assessment activities.

Vertical Delineation Samples

After surface soil sample data was evaluated, additional samples were collected from 22 locations where concentrations of arsenic, lead, or cadmium were detected above either MQLs (potentially) or background values. Soil samples were collected from 0.5’ to 1’ deep, with some

deeper samples collected from 1' to 1.5' or 1.5' to 2' below ground surface. Arsenic, lead, and cadmium concentrations from the 0.5' to 1' deep samples were all detected below either MQLs or background levels. Based on the vertical delineation sample results target COCs in site soils are less than both residential assessment levels and have been delineated to the higher of their MQLs or background in the top foot of surface soils.

Lateral Delineation Samples

Soil samples were collected surface soils to determine if COCs exceeded residential assessment levels. All of the collected soil samples were generally comprised of dark brown clay with minor amounts silts or sands. 236 samples were collected from the upper three inches of soils at the site and analyzed for the target COCs. All target compounds in these soil samples met their residential assessment levels.

Groundwater Assessment

All target COCs in surface soils across the PRAA 1 site were delineated to levels below MQLs or background. A groundwater assessment is not warranted at this site. In addition, groundwater was not encountered in monitoring well GP-MW-3.

Table 4A - Surface Soil Residential Assessment Levels for Human Health Exposure Pathways

Table 4B - Surface Soil Residential Assessment Levels with Ecological Components (NOT APPLICABLE)

Table 4C - Subsurface Soil Residential Assessment Levels (NOT APPLICABLE)

Table 4D – Soil Data Summary

Table 4E Soil Geochemical / Geotechnical Data Summary (NOT APPLICABLE)

Table 4A. Surface Soil Residential Assessment Levels for Human Health Exposure Pathways

COC[1]	Source area size (acres)	$^{Tot}Soil_{Comb}$ PCL (mg/kg)	^{GW}Soil PCL		MQL (mg/kg)	Back-ground (mg/kg)	Maximum concentration			
			(mg/kg)	Tier			Sample ID	Sample depth	Sample date	Conc (mg/kg)
Arsenic	<30	**24**	102.3	2	1	15.9	2M-f	0-3”	4/3/14	20.2
Cadmium	<30	52	**20**	2	1	NA	1M-g	0-3”	4/3/14	1.17 J
Lead	<30	**250**	274.5	2	1	31.5	1L-f	0-3”	4/3/14	35.4
Selenium	<30	310	**1.1**	1	1	0.3	3J-g	0-3”	4/8/14	0.904 J
DDD (4,4’-DDD)	<30	14	**6.5**	1	0.005	NA	4L-a	0-3”	4/3/14	0.0022 J
DDE (4,4’-DDE)	<30	10	**5.9**	1	0.005	NA	6I-f	0-3”	4/9/14	0.0030 J

1. Includes all COCs that were detected in assessment samples.
2. The lead assessment level (250 mg/Kg) represents half of the of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

NA – Not Applicable; background value not established.
J – Laboratory estimate value between SQL and MQL.

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	1H-a	1H-b	1H-c	1H-c (0.5-1')	1H-d	1H-e	1H-f	1H-g	1H-h	1H-i	1I-a	1I-b	1I-c
Sample Collection Date				4/3/2014	4/3/2014	4/3/2014	5/5/2014	4/4/2014	4/4/2014	4/4/2014	4/4/2014	4/4/2014	4/4/2014	4/3/2014	4/3/2014	4/3/2014
Laboratory ID Number				14-04-0416 1	14-04-0416 2	14-04-0416 3	14-05-0445 1	14-04-0419 1	14-04-0419 4	14-04-0419 7	14-04-0419 2	14-04-0419 5	14-04-0419 8	14-04-0416 4	14-04-0416 5	14-04-0416 6
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	9.84	15.1	16.4	12.9	7	8.8	14	6.77	9.04	9.86	15.4	15	17
Cadmium	20 (Note 3)	1	---	0.55 J	0.705 J	0.758 J	NA	0.656 J	0.546 J	0.656 J	0.608 J	0.765 J	0.726 J	0.799 J	0.737 J	0.823 J
Lead	250 (Note 4)	1	31.5	16.8	23	27.3	NA	16.5	20.5	29.2	18.9	25.2	28.7	27.6	27	29.5
Selenium	1.1 (Note 1)	1	0.3	0.39 J	0.501 J	0.399 J	NA	0.645 J	0.602 J	0.664 J	0.711 J	0.623 J	0.524 J	0.47 J	0.348 J	0.413 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<1.8	<1.8 UJL	<1.8	NA	<2.1 UJL	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<1.9 UJL	<1.8	<1.9
4,4'-DDE	5900 (Note 1)	5	---	<1.7	<1.7 UJL	<1.7	NA	<2.0 UJL	<2.0 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL	<1.8 UJL	<1.7	<1.8
4,4'-DDT	5400 (Note 1)	5	---	<1.9	<1.9 UJL	<1.9	NA	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.0 UJL	<1.9	<2.0
Aldrin	50 (Note 1)	5	---	<1.8	<1.8 UJL	<1.8	NA	<2.1 UJL	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<1.9 UJL	<1.8	<1.9
Alpha-BHC	4.0 (Note 1)	5.0	---	<1.8	<1.8 UJL	<1.9	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.3 UJL	<2.2 UJL	<1.9 UJL	<1.8	<1.9
Beta-BHC	14 (Note 1)	5	---	<1.5	<1.5 UJL	<1.5	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.6 UJL	<1.5	<1.6
Chlordane	4800 (Note 1)	50	---	<18	<18 UJL	<19	NA	<22 UJL	<22 UJL	<23 UJL	<22 UJL	<23 UJL	<22 UJL	<20 UJL	<18	<19
Delta-BHC	87 (Note 1)	5	---	<1.4	<1.4 UJL	<1.5	NA	<1.7 UJL	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.5 UJL	<1.4	<1.5
Dieldrin	24 (Note 1)	5	---	<1.8	<1.9 UJL	<1.9	NA	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.0 UJL	<1.8	<2.0
Endosulfan I	15000 (Note 1)	5	---	<1.5	<1.5 UJL	<1.5	NA	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.6 UJL	<1.5	<1.6
Endosulfan II	46000 (Note 1)	5	---	<1.6	<1.6 UJL	<1.6	NA	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.8 UJL	<1.9 UJL	<1.9 UJL	<1.7 UJL	<1.6	<1.7
Endosulfan Sulfate	380000 (Note 1)	5	---	<1.9	<1.9 UJL	<1.9	NA	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.4 UJL	<2.3 UJL	<2.0 UJL	<1.9	<2.0
Endrin	380 (Note 1)	5	---	<2.0	<2.0 UJL	<2.1	NA	<2.4 UJL	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.2 UJL	<2.0	<2.1
Endrin Aldehyde	19000 (Note 1)	5	---	<1.4 UJL	<1.4 UJL	<1.4 UJL	NA	<1.6 UJL	<1.6 UJL	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.5 UJL	<1.4 UJL	<1.5 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<1.9	<1.9 UJL	<2.0	NA	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.1 UJL	<1.9	<2.1
Heptachlor	94 (Note 1)	5	---	<1.8	<1.8 UJL	<1.8	NA	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<1.9 UJL	<1.8	<1.9
Heptachlor Epoxide	29 (Note 1)	5	---	<2.0	<2.0 UJL	<2.0	NA	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.1 UJL	<2.0	<2.1
Methoxychlor	62000 (Note 1)	5	---	<1.8	<1.8 UJL	<1.9	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.3 UJL	<2.2 UJL	<2.0 UJL	<1.8	<1.9
Toxaphene	1200 (Note 1)	100	---	<35	<36 UJL	<36	NA	<43 UJL	<42 UJL	<44 UJL	<42 UJL	<44 UJL	<44 UJL	<38 UJL	<36	<38
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.3	<1.3	<1.3	NA	<1.5 UJL	<1.5 UJL	<1.6 UJL	<1.5 UJL	<1.6 UJL	<1.6 UJL	<1.4	<1.3	<1.3
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<2.6	<2.6	<2.7	NA	<3.2 UJL	<3.1 UJL	<3.2 UJL	<3.1 UJL	<3.2 UJL	<3.2 UJL	<2.8	<2.6	<2.8
2,4-D	1300 (Note 1)	100	---	<16	<16	<16	NA	<19 UJL	<19 UJL	<19 UJL	<19 UJL	<20 UJL	<20 UJL	<17	<16	<17
2,4-DB	190 (Note 1)	100	---	<18	<18	<18	NA	<22 UJL	<21 UJL	<22 UJL	<21 UJL	<22 UJL	<22 UJL	<19	<18	<19
Dalapon	290 (Note 1)	250	---	<82	<81	<84	NA	<99 UJL	<98 UJL	<99 UJL	<96 UJL	<100 UJL	<100 UJL	<88	<82	<86
Dicamba	730 (Note 1)	10	---	<1.4	<1.4	<1.4	NA	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.5	<1.4	<1.5
Dichlorprop	230 (Note 1)	100	---	<19	<19	<19	NA	<23 UJL	<22 UJL	<23 UJL	<22 UJL	<23 UJL	<23 UJL	<20	<19	<20
Dinoseb	180 (Note 1)	50	---	<5.7 UJL	<5.7 UJL	<5.9 UJL	NA	<6.9 UJL	<6.8 UJL	<6.9 UJL	<6.7 UJL	<7.0 UJL	<7.0 UJL	<6.1 UJL	<5.7 UJL	<6.0 UJL
MCPA	12 (Note 1)	10000	---	<2300	<2300	<2400	NA	<2800	<2800	<2800	<2700	<2800	<2800	<2500	<2300	<2400
MCPP	23 (Note 1)	10000	---	<3500	<3500	<3700	NA	<4300 UJL	<4200 UJL	<4300 UJL	<4100 UJL	<4300 UJL	<4300 UJL	<3800	<3500	<3700

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	1I-c (0.5-1')	1I-d	1I-e	1I-f	1I-g	1I-h	1I-i	1J-a	1J-a (0.5-1')	1J-b	1J-b (0.5-1')	1J-c	1J-d
Sample Collection Date				5/5/2014	4/4/2014	4/4/2014	4/4/2014	4/4/2014	4/4/2014	4/4/2014	4/3/2014	5/5/2014	4/3/2014	5/5/2014	4/3/2014	4/4/2014
Laboratory ID Number				14-05-0445 3	14-04-0419 10	14-04-0419 13	14-04-0420 1	14-04-0419 11	14-04-0419 14	14-04-0420 2	14-04-0416 7	14-05-0445 5	14-04-0416 8	14-05-0445 7	14-04-0416 9	14-04-0420 4
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	8.52	13.3	12.6	12.2	11.5	12.1	11.9	16.5	4.61	16.9	7.84	9.71	14.1
Cadmium	20 (Note 3)	1	---	NA	0.817 J	0.882 J	0.851 J	0.742 J	0.799 J	0.816 J	0.775 J	NA	0.738 J	NA	0.753 J	0.75 J
Lead	250 (Note 4)	1	31.5	NA	28.4	29.8	30.4	27.8	29.2	29.5	26.8	NA	26.2	NA	25.3	30.9
Selenium	1.1 (Note 1)	1	0.3	NA	0.564 J	0.496 J	0.617 J	0.592 J	0.736 J	0.574 J	0.413 J	NA	<0.306	NA	0.444 J	0.79 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	NA	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.8	NA	<1.8 UJL	NA	<1.8	<2.2 UJL
4,4'-DDE	5900 (Note 1)	5	---	NA	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL	<1.7	NA	<1.7 UJL	NA	<1.7	<2.1 UJL
4,4'-DDT	5400 (Note 1)	5	---	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<1.9	NA	<1.9 UJL	NA	<1.9	<2.3 UJL
Aldrin	50 (Note 1)	5	---	NA	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.8	NA	<1.8 UJL	NA	<1.8	<2.2 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.9	NA	<1.9 UJL	NA	<1.8	<2.3 UJL
Beta-BHC	14 (Note 1)	5	---	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.5	NA	<1.5 UJL	NA	<1.5	<1.8 UJL
Chlordane	4800 (Note 1)	50	---	NA	<23 UJL	<23 UJL	<22 UJL	<22 UJL	<22 UJL	<23 UJL	<19	NA	<19 UJL	NA	<18	<23 UJL
Delta-BHC	87 (Note 1)	5	---	NA	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.5	NA	<1.5 UJL	NA	<1.4	<1.8 UJL
Dieldrin	24 (Note 1)	5	---	NA	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<1.9	NA	<1.9 UJL	NA	<1.8	<2.3 UJL
Endosulfan I	15000 (Note 1)	5	---	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.5	NA	<1.5 UJL	NA	<1.5	<1.8 UJL
Endosulfan II	46000 (Note 1)	5	---	NA	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.6	NA	<1.6 UJL	NA	<1.6	<2.0 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<1.9	NA	<2.0 UJL	NA	<1.9	<2.4 UJL
Endrin	380 (Note 1)	5	---	NA	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.1	NA	<2.1 UJL	NA	<2.0	<2.5 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	NA	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.4 UJL	NA	<1.4 UJL	NA	<1.4 UJL	<1.7 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	NA	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.0	NA	<2.0 UJL	NA	<1.9	<2.4 UJL
Heptachlor	94 (Note 1)	5	---	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.8	NA	<1.9 UJL	NA	<1.8	<2.2 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	NA	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.5 UJL	<2.0	NA	<2.1 UJL	NA	<2.0	<2.5 UJL
Methoxychlor	62000 (Note 1)	5	---	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.9	NA	<1.9 UJL	NA	<1.8	<2.3 UJL
Toxaphene	1200 (Note 1)	100	---	NA	<44 UJL	<44 UJL	<43 UJL	<43 UJL	<43 UJL	<44 UJL	<36	NA	<37 UJL	NA	<35	<44 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	NA	<1.6 UJL	<1.6 UJL	<1.6	<1.6 UJL	<1.5 UJL	<1.6	<1.3	NA	<1.3	NA	<1.3	<1.6
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	NA	<3.2 UJL	<3.3 UJL	<3.2	<3.3 UJL	<3.2 UJL	<3.2	<2.7	NA	<2.7	NA	<2.6	<3.3
2,4-D	1300 (Note 1)	100	---	NA	<20 UJL	<20 UJL	<19	<20 UJL	<19 UJL	<19	<16	NA	<17	NA	<16	<20
2,4-DB	190 (Note 1)	100	---	NA	<22 UJL	<22 UJL	<22	<22 UJL	<22 UJL	<22	<18	NA	<18	NA	<18	<22
Dalapon	290 (Note 1)	250	---	NA	<100 UJL	<100 UJL	<99	<100 UJL	<99 UJL	<99	<84	NA	<84	NA	<82	<100
Dicamba	730 (Note 1)	10	---	NA	<1.7 UJL	<1.7 UJL	<1.7	<1.7 UJL	<1.7 UJL	<1.7	<1.4	NA	<1.4	NA	<1.4	<1.7
Dichlorprop	230 (Note 1)	100	---	NA	<23 UJL	<23 UJL	<23	<23 UJL	<23 UJL	<23	<19	NA	<19	NA	<19	<23
Dinoseb	180 (Note 1)	50	---	NA	<7.0 UJL	<7.1 UJL	<6.9 UJL	<7.1 UJL	<6.9 UJL	<6.9 UJL	<5.9 UJL	NA	<5.9 UJL	NA	<5.7 UJL	<7.1 UJL
MCPA	12 (Note 1)	10000	---	NA	<2800	<2800	<2800	<2900	<2800	<2800	<2400	NA	<2400	NA	<2300	<2900
MCPP	23 (Note 1)	10000	---	NA	<4400 UJL	<4400 UJL	<4300	<4400 UJL	<4300 UJL	<4300	<3600	NA	<3700	NA	<3500	<4400

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	1J-e	1J-e (0.5-1')	1J-f	1J-g	1J-h	1J-h (0.5-1')	1J-i	1K-a	1K-b	1K-c	1K-d	1K-e	1K-f
Sample Collection Date				4/4/2014	5/5/2014	4/4/2014	4/4/2014	4/4/2014	5/5/2014	4/4/2014	4/3/2014	4/3/2014	4/3/2014	4/7/2014	4/7/2014	4/7/2014
Laboratory ID Number				14-04-0420 7	14-05-0445 9	14-04-0420 11	14-04-0420 5	14-04-0420 8	14-05-0445 11	14-04-0420 12	14-04-0416 10	14-04-0416 11	14-04-0416 12	14-04-0598 1	14-04-0598 4	14-04-0598 7
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	17.3	5.18	9.51	14.3	16.3	5.56	9.7	8.04	7.96	7.47	8.64	8.75	9.41
Cadmium	20 (Note 3)	1	---	0.813 J	NA	0.786 J	0.822 J	0.777 J	NA	0.798 J	0.692 J	0.772 J	0.748 J	0.746 J	0.775 J	0.91 J
Lead	250 (Note 4)	1	31.5	34.4	11.8	32.9	31.7	30.1	NA	30.6	21.4	22.8	21.1	30.7	33.5	33.5
Selenium	1.1 (Note 1)	1	0.3	0.548 J	NA	0.483 J	0.497 J	0.637 J	NA	0.414 J	0.389 J	0.355 J	0.498 J	0.722 J	0.709 J	0.51 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.2 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<1.8	<1.8	<1.8 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
4,4'-DDE	5900 (Note 1)	5	---	<2.1 UJL	NA	<2.0 UJL	<2.0 UJL	<2.1 UJL	NA	<2.0 UJL	<1.7	<1.7	<1.7 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.4 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<1.9	<1.9	<1.9 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL
Aldrin	50 (Note 1)	5	---	<2.2 UJL	NA	<2.2 UJL	<2.1 UJL	<2.2 UJL	NA	<2.1 UJL	<1.8	<1.8	<1.8 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<1.8	<1.8	<1.8 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL
Beta-BHC	14 (Note 1)	5	---	<1.9 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.5	<1.5	<1.5 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL
Chlordane	4800 (Note 1)	50	---	<23 UJL	NA	<22 UJL	<22 UJL	<23 UJL	NA	<22 UJL	<18	<18	<19 UJL	<23 UJL	<23 UJL	<23 UJL
Delta-BHC	87 (Note 1)	5	---	<1.8 UJL	NA	<1.7 UJL	<1.7 UJL	<1.8 UJL	NA	<1.7 UJL	<1.4	<1.4	<1.5 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Dieldrin	24 (Note 1)	5	---	<2.3 UJL	NA	<2.3 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<1.9	<1.8	<1.9 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.9 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.5	<1.5	<1.5 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL
Endosulfan II	46000 (Note 1)	5	---	<2.0 UJL	NA	<1.9 UJL	<1.9 UJL	<1.9 UJL	NA	<1.9 UJL	<1.6	<1.6	<1.6 UJL	<2.0 UJL	<1.9 UJL	<2.0 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.4 UJL	NA	<2.3 UJL	<2.3 UJL	<2.4 UJL	NA	<2.3 UJL	<1.9	<1.9	<1.9 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL
Endrin	380 (Note 1)	5	---	<2.5 UJL	NA	<2.5 UJL	<2.4 UJL	<2.5 UJL	NA	<2.4 UJL	<2.0	<2.0	<2.0 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.7 UJL	NA	<1.7 UJL	<1.7 UJL	<1.7 UJL	NA	<1.7 UJL	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.5 UJL	NA	<2.4 UJL	<2.4 UJL	<2.4 UJL	NA	<2.4 UJL	<2.0	<1.9	<2.0 UJL	<2.4 UJL	<2.4 UJL	<2.5 UJL
Heptachlor	94 (Note 1)	5	---	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<1.8	<1.8	<1.8 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.5 UJL	NA	<2.4 UJL	<2.4 UJL	<2.5 UJL	NA	<2.4 UJL	<2.0	<2.0	<2.0 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<1.8	<1.8	<1.8 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL
Toxaphene	1200 (Note 1)	100	---	<45 UJL	NA	<43 UJL	<43 UJL	<44 UJL	NA	<43 UJL	<36	<36	<36 UJL	<44 UJL	<44 UJL	<45 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.6	NA	<1.6	<1.6	<1.6	NA	<1.6	<1.3	<1.3	<1.3	<1.6	<1.6	<1.6
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.3	NA	<3.2	<3.2	<3.3	NA	<3.2	<2.7	<2.6	<2.7	<3.3	<3.3	<3.3
2,4-D	1300 (Note 1)	100	---	<20	NA	<20	<20	<20	NA	<20	<16	<16	<16	<20	<20	<20
2,4-DB	190 (Note 1)	100	---	<22	NA	<22	<22	<22	NA	<22	<18	<18	<18	<22	<22	<22
Dalapon	290 (Note 1)	250	---	<100	NA	<100	<100	<100	NA	<100	<82	<82	<83	<100	<100	<100
Dicamba	730 (Note 1)	10	---	<1.8	NA	<1.7	<1.7	<1.7	NA	<1.7	<1.4	<1.4	<1.4	<1.7	<1.7	<1.7
Dichlorprop	230 (Note 1)	100	---	<24	NA	<23	<23	<24	NA	<23	<19	<19	<19	<23	<23	<23
Dinoseb	180 (Note 1)	50	---	<7.2 UJL	NA	<7.0 UJL	<7.0 UJL	<7.1 UJL	NA	<7.0 UJL	<5.8 UJL	<5.7 UJL	<5.8 UJL	<7.1 UJL	<7.1 UJL	<7.1 UJL
MCPA	12 (Note 1)	10000	---	<2900	NA	<2800	<2800	<2900	NA	<2800	<2300	<2300	<2400	<2900	<2900	<2900
MCPP	23 (Note 1)	10000	---	<4400	NA	<4400	<4300	<4400	NA	<4300	<3600	<3500	<3600	<4400	<4400	<4400

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	1K-g	1K-h	1K-h (0.5-1')	1K-i	1L-a	1L-b	1L-c	1L-d	1L-e	1L-f	1L-g	1L-h	1L-h (0.5-1')
Sample Collection Date				4/7/2014	4/7/2014	6/3/2014	4/7/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	6/3/2014
Laboratory ID Number				14-04-0598 2	14-04-0598 5	14-06-0342 9	14-04-0598 8	14-04-0416 13	14-04-0416 14	14-04-0416 15	14-04-0418 15	14-04-0418 7	14-04-0418 6	14-04-0418 16	14-04-0418 8	14-06-0342 7
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	9.04	8.29	NA	9.06	6.37	6.13	7.09	6.5	7.27	7.12	6.81	6.48	NA
Cadmium	20 (Note 3)	1	---	0.779 J	0.814 J	NA	0.805 J	0.813 J	0.766 J	0.852 J	0.937 J	0.969 J	0.975 J	0.863 J	0.896 J	NA
Lead	250 (Note 4)	1	31.5	31.2	33.1	20.5	32	24.4	25.2	21.5	35	34.1	35.4	34.1	35.3	21.1
Selenium	1.1 (Note 1)	1	0.3	0.717 J	0.601 J	NA	0.38 J	0.376 J	0.355 J	0.374 J	0.553 J	0.449 J	0.54 J	0.743 J	0.581 J	NA
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<1.8	<1.8	<1.8	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	NA
4,4'-DDE	5900 (Note 1)	5	---	<2.1 UJL	<2.1 UJL	NA	<2.1 UJL	<1.7	<1.7	<1.7	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA
4,4'-DDT	5400 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<1.9	<1.9	<1.9	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	NA
Aldrin	50 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<1.8	<1.8	<1.8	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.8 UJL	<1.8 UJL	NA
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<1.9	<1.9	<1.8	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	NA
Beta-BHC	14 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	NA	<1.9 UJL	<1.5	<1.5	<1.5	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.5 UJL	<1.5 UJL	NA
Chlordane	4800 (Note 1)	50	---	<23 UJL	<23 UJL	NA	<23 UJL	<19	<19	<18	<19 UJL	<19 UJL	<20 UJL	<19 UJL	<19 UJL	NA
Delta-BHC	87 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.5	<1.5	<1.4	<1.5 UJL	<1.5 UJL	<1.5 UJL	<1.5 UJL	<1.5 UJL	NA
Dieldrin	24 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<1.9	<1.9	<1.9	<2.0 UJL	<2.0 UJL	<2.0 UJL	<1.9 UJL	<1.9 UJL	NA
Endosulfan I	15000 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.5	<1.5	<1.5	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.5 UJL	<1.5 UJL	NA
Endosulfan II	46000 (Note 1)	5	---	<2.0 UJL	<1.9 UJL	NA	<2.0 UJL	<1.6	<1.6	<1.6	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.6 UJL	<1.6 UJL	NA
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.4 UJL	<2.3 UJL	NA	<2.4 UJL	<1.9	<1.9	<1.9	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	NA
Endrin	380 (Note 1)	5	---	<2.5 UJL	<2.5 UJL	NA	<2.5 UJL	<2.1	<2.1	<2.0	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	NA
Endrin Aldehyde	19000 (Note 1)	5	---	<1.7 UJL	<1.7 UJL	NA	<1.7 UJL	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.5 UJL	<1.5 UJL	<1.4 UJL	<1.4 UJL	NA
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.4 UJL	<2.4 UJL	NA	<2.4 UJL	<2.0	<2.0	<1.9	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.0 UJL	NA
Heptachlor	94 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	NA	<2.3 UJL	<1.8	<1.9	<1.8	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	NA
Heptachlor Epoxide	29 (Note 1)	5	---	<2.5 UJL	<2.5 UJL	NA	<2.5 UJL	<2.0	<2.0	<2.0	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	NA
Methoxychlor	62000 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<1.9	<1.9	<1.8	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	NA
Toxaphene	1200 (Note 1)	100	---	<44 UJL	<44 UJL	NA	<44 UJL	<36	<37	<36	<38 UJL	<38 UJL	<38 UJL	<37 UJL	<37 UJL	NA
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.6	<1.6	NA	<1.6	<1.3	<1.3	<1.3	<1.4	<1.4	<1.4	<1.3	<1.3	NA
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.3	<3.2	NA	<3.3	<2.7	<2.7	<2.7	<2.8	<2.8	<2.8	<2.7	<2.8	NA
2,4-D	1300 (Note 1)	100	---	<20	<20	NA	<20	<16	<16	<16	<17	<17	<17	<17	<17	NA
2,4-DB	190 (Note 1)	100	---	<22	<22	NA	<22	<18	<18	<18	<19	<19	<19	<19	<19	NA
Dalapon	290 (Note 1)	250	---	<100	<100	NA	<100	<84	<83	<82	<87	<88	<87	<85	<86	NA
Dicamba	730 (Note 1)	10	---	<1.7	<1.7	NA	<1.7	<1.4	<1.4	<1.4	<1.5	<1.5	<1.5	<1.4	<1.5	NA
Dichlorprop	230 (Note 1)	100	---	<23	<23	NA	<23	<19	<19	<19	<20	<20	<20	<20	<20	NA
Dinoseb	180 (Note 1)	50	---	<7.1 UJL	<7.0 UJL	NA	<7.1 UJL	<5.9 UJL	<5.8 UJL	<5.8 UJL	<6.1 UJL	<6.1 UJL	<6.1 UJL	<5.9 UJL	<6.0 UJL	NA
MCPA	12 (Note 1)	10000	---	<2900	<2800	NA	<2900	<2400	<2400	<2300	<2400	<2500	<2500	<2400	<2400	NA
MCPP	23 (Note 1)	10000	---	<4400	<4300	NA	<4400	<3600	<3600	<3600	<3800	<3800	<3800	<3700	<3700	NA

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	1L-i	1M-a	1M-b	1M-c & 1M-c R	1M-d	1M-e	1M-f	1M-g	1M-h	1M-h (0.5-1')	1M-i	2H-a	2H-b
Sample Collection Date				4/3/2014	4/3/2014	4/3/2014	4/3/14 & 4/14/14	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	6/3/2014	4/3/2014	4/4/2014	4/4/2014
Laboratory ID Number				14-04-0418 5	14-04-0416 16	14-04-0416 17	14-04-0416 18	14-04-0417 13	14-04-0417 12	14-04-0416 19	14-04-0417 14	14-04-0417 11	14-06-0342 3	14-04-0416 20	14-04-0419 3	14-04-0419 6
							14-04-1160 1									
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	8.8	7.41	7.38	7.04	6.77	6.99	7.37	7.42	7.29	NA	7.89	5.14	8.01
Cadmium	20 (Note 3)	1	---	1.03 J	0.726 J	0.772 J	0.848 J	1.09 J	0.988 J	0.785 J	1.17 J	1.03 J	0.934 J	0.755 J	0.622 J	0.656 J
Lead	250 (Note 4)	1	31.5	33	16.2	16.6	17.7	33.1	31.1	20.9	34.6	33.8	31.3	23.1	16.1	22.9
Selenium	1.1 (Note 1)	1	0.3	0.37 J	0.344 J	<0.299	0.556 J	0.591 J	0.559 J	0.415 J	0.476 J	0.548 J	NA	0.416 J	0.549 J	0.595 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<1.8 UJL	<1.8	<1.8	<1.8	<1.9 UJL	<1.9	<1.8	<1.9 UJL	<1.9 UJL	NA	<1.8	<2.1 UJL	<2.1 UJL
4,4'-DDE	5900 (Note 1)	5	---	<1.7 UJL	<1.7	<1.7	<1.7	<1.8 UJL	<1.8	<1.7	<1.8 UJL	<1.8 UJL	NA	<1.7	<2.0 UJL	<2.0 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.0 UJL	<1.9	<1.9	<1.9	<2.0 UJL	<2.0	<1.9	<2.0 UJL	<2.0 UJL	NA	<1.9	<2.2 UJL	<2.2 UJL
Aldrin	50 (Note 1)	5	---	<1.8 UJL	<1.8	<1.8	<1.7	<1.9 UJL	<1.9	<1.8	<1.8 UJL	<1.9 UJL	NA	<1.8	<2.1 UJL	<2.1 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<1.9 UJL	<1.8	<1.8	<1.8	<2.0 UJL	<1.9	<1.9	<1.9 UJL	<2.0 UJL	NA	<1.8	<2.1 UJL	<2.2 UJL
Beta-BHC	14 (Note 1)	5	---	<1.5 UJL	<1.5	<1.5	<1.5	<1.6 UJL	<1.6	<1.5	<1.6 UJL	<1.6 UJL	NA	<1.5	<1.7 UJL	<1.8 UJL
Chlordane	4800 (Note 1)	50	---	<19 UJL	<18	<19	<18	<20 UJL	<19	<19	<19 UJL	<20 UJL	NA	<18	<21 UJL	<22 UJL
Delta-BHC	87 (Note 1)	5	---	<1.5 UJL	<1.4	<1.5	<1.4	<1.5 UJL	<1.5	<1.5	<1.5 UJL	<1.6 UJL	NA	<1.4	<1.7 UJL	<1.7 UJL
Dieldrin	24 (Note 1)	5	---	<1.9 UJL	<1.9	<1.9	<1.8	<2.0 UJL	<2.0	<1.9	<1.9 UJL	<2.0 UJL	NA	<1.9	<2.2 UJL	<2.2 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.5 UJL	<1.5	<1.5	<1.5	<1.6 UJL	<1.6	<1.5	<1.5 UJL	<1.6 UJL	NA	<1.5	<1.7 UJL	<1.7 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.6 UJL	<1.6	<1.6	<1.6	<1.7 UJL	<1.7	<1.6	<1.6 UJL	<1.7 UJL	NA	<1.6	<1.8 UJL	<1.9 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.0 UJL	<1.9	<1.9	<1.9	<2.0 UJL	<2.0	<1.9	<2.0 UJL	<2.1 UJL	NA	<1.9	<2.2 UJL	<2.2 UJL
Endrin	380 (Note 1)	5	---	<2.1 UJL	<2.0	<2.0	<2.0	<2.2 UJL	<2.1	<2.1	<2.1 UJL	<2.2 UJL	NA	<2.0	<2.3 UJL	<2.4 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.5 UJL	<1.4	<1.4 UJL	<1.4 UJL	<1.5 UJL	NA	<1.4 UJL	<1.6 UJL	<1.6 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.0 UJL	<1.9	<2.0	<1.9	<2.1 UJL	<2.0	<2.0	<2.0 UJL	<2.1 UJL	NA	<1.9	<2.3 UJL	<2.3 UJL
Heptachlor	94 (Note 1)	5	---	<1.9 UJL	<1.8	<1.8	<1.8	<1.9 UJL	<1.9	<1.8	<1.9 UJL	<2.0 UJL	NA	<1.8	<2.1 UJL	<2.1 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.1 UJL	<2.0	<2.0	<2.0	<2.1 UJL	<2.1	<2.0	<2.1 UJL	<2.2 UJL	NA	<2.0	<2.3 UJL	<2.4 UJL
Methoxychlor	62000 (Note 1)	5	---	<1.9 UJL	<1.8	<1.8	<1.8	<2.0 UJL	<1.9	<1.9	<1.9 UJL	<2.0 UJL	NA	<1.8	<2.1 UJL	<2.2 UJL
Toxaphene	1200 (Note 1)	100	---	<37 UJL	<36	<36	<35	<38 UJL	<38	<36	<37 UJL	<39 UJL	NA	<36	<42 UJL	<42 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.3	<1.3	<1.3	<1.3	<1.4	<1.3	<1.3	<1.3	<1.4	NA	<1.3	<1.5 UJL	<1.5 UJL
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<2.8	<2.6	<2.6	<2.6	<2.8	<2.8	<2.7	<2.8	<2.8	NA	<2.7	<3.1 UJL	<3.1 UJL
2,4-D	1300 (Note 1)	100	---	<17	<16	<16	<16	<17	<17	<16	<17	<17	NA	<16	<19 UJL	<19 UJL
2,4-DB	190 (Note 1)	100	---	<19	<18	<18	<18	<19	<19	<18	<19	<19	NA	<18	<21 UJL	<21 UJL
Dalapon	290 (Note 1)	250	---	<86	<82	<82	<80	<88	<86	<83	<85	<88	NA	<83	<96 UJL	<97 UJL
Dicamba	730 (Note 1)	10	---	<1.5	<1.4	<1.4	<1.4	<1.5	<1.5	<1.4	<1.5	<1.5	NA	<1.4	<1.6 UJL	<1.7 UJL
Dichlorprop	230 (Note 1)	100	---	<20	<19	<19	<18	<20	<20	<19	<20	<20	NA	<19	<22 UJL	<22 UJL
Dinoseb	180 (Note 1)	50	---	<6.0 UJL	<5.7 UJL	<5.7 UJL	<5.6 UJL	<6.2 UJL	<6.0 UJL	<5.8 UJL	<6.0 UJL	<6.1 UJL	NA	<5.8 UJL	<6.7 UJL	<6.8 UJL
MCPA	12 (Note 1)	10000	---	<2400	<2300	<2300	<2300	<2500	<2400	<2300	<2400	<2500	NA	<2300	<2700	<2700
MCPP	23 (Note 1)	10000	---	<3700	<3500	<3600	<3500	<3800	<3700	<3600	<3700	<3800	NA	<3600	<4200 UJL	<4200 UJL

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Inh}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL		MQL	Back-ground	2H-c		2H-d		2H-e		2H-f		2H-g		2H-h		2H-i		2I-a		2I-b		2I-c		2I-d		2I-e		2I-f	
Sample Collection Date					4/4/2014		4/7/2014		4/7/2014		4/7/2014		4/7/2014		4/7/2014		4/7/2014		4/4/2014		4/4/2014		4/4/2014		4/7/2014		4/7/2014		4/7/2014	
Laboratory ID Number					14-04-0419 9		14-04-0598 10		14-04-0598 11		14-04-0598 12		14-04-0598 16		14-04-0598 17		14-04-0598 18		14-04-0419 12		14-04-0419 15		14-04-0420 3		14-04-0598 13		14-04-0598 14		14-04-0598 15	
METALS (mg/kg)																														
Arsenic	24	(Note 2)	1	15.9	9.33		5.95		6.91		10.4		6.38		9.69		9.58		13.9		10.9		11.8		11.7		11		11	
Cadmium	20	(Note 3)	1	---	0.716	J	0.545	J	0.697	J	0.703	J	0.527	J	0.762	J	0.667	J	0.812	J	0.758	J	0.748	J	0.668	J	0.803	J	0.782	J
Lead	250	(Note 4)	1	31.5	28.1		15.9		19.3		28.6		17.5		19.2		30.3		27.4		26.2		29.6		26.7		27.8		29.8	
Selenium	1.1	(Note 1)	1	0.3	0.838	J	0.601	J	0.566	J	0.75	J	0.502	J	0.596	J	0.539	J	0.616	J	0.645	J	0.712	J	0.601	J	0.666	J	0.707	J
PESTICIDES (ug/kg)																														
4,4'-DDD	6500	(Note 1)	5	---	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL
4,4'-DDE	5900	(Note 1)	5	---	<2.1	UJL	<1.9	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL
4,4'-DDT	5400	(Note 1)	5	---	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL
Aldrin	50	(Note 1)	5	---	<2.2	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL
Alpha-BHC	4.0	(Note 1)	5.0	---	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL
Beta-BHC	14	(Note 1)	5	---	<1.8	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.9	UJL	<1.9	UJL
Chlordane	4800	(Note 1)	50	---	<23	UJL	<21	UJL	<22	UJL	<22	UJL	<22	UJL	<22	UJL	<23	UJL	<22	UJL	<22	UJL	<23	UJL	<23	UJL	<23	UJL	<23	UJL
Delta-BHC	87	(Note 1)	5	---	<1.8	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL
Dieldrin	24	(Note 1)	5	---	<2.3	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL
Endosulfan I	15000	(Note 1)	5	---	<1.8	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.9	UJL	<1.8	UJL
Endosulfan II	46000	(Note 1)	5	---	<1.9	UJL	<1.8	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<2.0	UJL	<2.0	UJL
Endosulfan Sulfate	380000	(Note 1)	5	---	<2.3	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL
Endrin	380	(Note 1)	5	---	<2.5	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.5	UJL	<2.5	UJL	<2.4	UJL	<2.5	UJL	<2.5	UJL	<2.5	UJL	<2.5	UJL
Endrin Aldehyde	19000	(Note 1)	5	---	<1.7	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.7	UJL	<1.7	UJL	<1.6	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL
Gamma-BHC	4.6	(Note 1)	5.0	---	<2.4	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.5	UJL	<2.4	UJL
Heptachlor	94	(Note 1)	5	---	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL
Heptachlor Epoxide	29	(Note 1)	5	---	<2.5	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.5	UJL	<2.4	UJL	<2.4	UJL	<2.5	UJL	<2.5	UJL	<2.5	UJL	<2.5	UJL
Methoxychlor	62000	(Note 1)	5	---	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL
Toxaphene	1200	(Note 1)	100	---	<44	UJL	<41	UJL	<42	UJL	<43	UJL	<43	UJL	<42	UJL	<44	UJL	<44	UJL	<43	UJL	<44	UJL	<44	UJL	<45	UJL	<45	UJL
HERBICIDES (ug/kg)																														
2,4,5-T	490	(Note 1)	10	---	<1.5	UJL	<1.5		<1.5		<1.5		<1.5		<1.5		<1.6		<1.6	UJL	<1.5	UJL	<1.6		<1.6		<1.6		<1.6	
2,4,5-TP (Silvex)	2600	(Note 1)	10	---	<3.2	UJL	<3.1		<3.1		<3.2		<3.1		<3.1		<3.3		<3.2	UJL	<3.2	UJL	<3.3		<3.2		<3.4		<3.3	
2,4-D	1300	(Note 1)	100	---	<19	UJL	<19		<19		<19		<19		<19		<20		<20	UJL	<19	UJL	<20		<20		<20		<20	
2,4-DB	190	(Note 1)	100	---	<22	UJL	<21		<21		<22		<21		<21		<22		<22	UJL	<21	UJL	<22		<22		<23		<22	
Dalapon	290	(Note 1)	250	---	<99	UJL	<96		<97		<99		<97		<97		<100		<100	UJL	<98	UJL	<100		<100		<100		<100	
Dicamba	730	(Note 1)	10	---	<1.7	UJL	<1.6		<1.7		<1.7		<1.7		<1.7		<1.7		<1.7	UJL	<1.7	UJL	<1.7		<1.7		<1.8		<1.8	
Dichlorprop	230	(Note 1)	100	---	<23	UJL	<22		<22		<23		<22		<22		<23		<23	UJL	<23	UJL	<23		<23		<24		<24	
Dinoseb	180	(Note 1)	50	---	<6.9	UJL	<6.7	UJL	<6.8	UJL	<6.9	UJL	<6.8	UJL	<6.8	UJL	<7.1	UJL	<7.0	UJL	<6.9	UJL	<7.1	UJL	<7.0	UJL	<7.3	UJL	<7.2	UJL
MCPA	12	(Note 1)	10000	---	<2800		<2700		<2700		<2800		<2800		<2700		<2900		<2800		<2800		<2800		<2800		<2900		<2900	
MCPP	23	(Note 1)	10000	---	<4300	UJL	<4100		<4200		<4300		<4200		<4200		<4400		<4300	UJL	<4300	UJL	<4400		<4300		<4500		<4400	

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	2I-g	2I-g (0.5-1')	2I-h	2I-i	2J-a	2J-b	2J-b (0.5-1')	2J-c	2J-d	2J-e	2J-f	2J-g	2J-h
Sample Collection Date				4/7/2014	5/5/2014	4/7/2014	4/7/2014	4/4/2014	4/4/2014	5/5/2014	4/4/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014
Laboratory ID Number				14-04-0598 19	14-05-0445 15	14-04-0598 20	14-04-0598 21	14-04-0420 6	14-04-0420 9	14-05-0445 13	14-04-0420 13	14-04-0599 1	14-04-0599 2	14-04-0599 3	14-04-0599 12	14-04-0599 11
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	18.9	5.23	11.4	11.6	12.7	17.2	5.18	10.3	11.9	15.9	9.56	10.7	14.9
Cadmium	20 (Note 3)	1	---	0.785 J	NA	0.76 J	0.74 J	0.766 J	0.807 J	NA	0.864 J	0.737 J	0.787 J	0.816 J	0.727 J	0.691 J
Lead	250 (Note 4)	1	31.5	31	NA	30.1	32.3	29.6	31.9	10.6	31.2	27.9	28.1	29.3	28.1	28.9
Selenium	1.1 (Note 1)	1	0.3	0.737 J	NA	0.695 J	0.492 J	0.44 J	0.626 J	NA	0.777 J	0.74 J	0.634 J	0.631 J	0.628 J	0.58 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.2 UJL	NA	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	NA	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL
4,4'-DDE	5900 (Note 1)	5	---	<2.1 UJL	NA	<2.0 UJL	<2.1 UJL	<2.0 UJL	<2.0 UJL	NA	<2.0 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.4 UJL	NA	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	NA	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Aldrin	50 (Note 1)	5	---	<2.2 UJL	NA	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	NA	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL
Beta-BHC	14 (Note 1)	5	---	<1.9 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL	<1.8 UJL
Chlordane	4800 (Note 1)	50	---	<23 UJL	NA	<22 UJL	<23 UJL	<22 UJL	<22 UJL	NA	<22 UJL	<23 UJL	<22 UJL	<23 UJL	<23 UJL	<22 UJL
Delta-BHC	87 (Note 1)	5	---	<1.8 UJL	NA	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	NA	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL
Dieldrin	24 (Note 1)	5	---	<2.3 UJL	NA	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.9 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Endosulfan II	46000 (Note 1)	5	---	<2.0 UJL	NA	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	NA	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<2.0 UJL	<1.9 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.4 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL
Endrin	380 (Note 1)	5	---	<2.5 UJL	NA	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	NA	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.7 UJL	NA	<1.7 UJL	<1.7 UJL	<1.6 UJL	<1.7 UJL	NA	<1.7 UJL	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.4 UJL	NA	<2.3 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL	NA	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL
Heptachlor	94 (Note 1)	5	---	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.5 UJL	NA	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.4 UJL	NA	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.3 UJL	NA	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL
Toxaphene	1200 (Note 1)	100	---	<45 UJL	NA	<43 UJL	<44 UJL	<43 UJL	<43 UJL	NA	<43 UJL	<44 UJL	<42 UJL	<44 UJL	<44 UJL	<43 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.6	NA	<1.6	<1.6	<1.5	<1.6	NA	<1.6	<1.6	<1.5	<1.6	<1.6	<1.5
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.3	NA	<3.2	<3.3	<3.2	<3.2	NA	<3.2	<3.2	<3.1	<3.2	<3.3	<3.2
2,4-D	1300 (Note 1)	100	---	<20	NA	<20	<20	<19	<20	NA	<20	<20	<19	<20	<20	<19
2,4-DB	190 (Note 1)	100	---	<22	NA	<22	<22	<21	<22	NA	<22	<22	<21	<22	<22	<22
Dalapon	290 (Note 1)	250	---	<100	NA	<100	<100	<98	<100	NA	<100	<100	<97 UJL	<100 UJL	<100 UJL	<99 UJL
Dicamba	730 (Note 1)	10	---	<1.7	NA	<1.7	<1.7	<1.7	<1.7	NA	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Dichlorprop	230 (Note 1)	100	---	<23	NA	<23	<23	<22	<23	NA	<23	<23	<22	<23	<23	<23
Dinoseb	180 (Note 1)	50	---	<7.1 UJL	NA	<7.0 UJL	<7.1 UJL	<6.8 UJL	<7.0 UJL	NA	<7.0 UJL	<7.0 UJL	<6.8 UJL	<7.0 UJL	<7.1 UJL	<6.9 UJL
MCPA	12 (Note 1)	10000	---	<2900	NA	<2800	<2900	<2800	<2800	NA	<2800	<2800	<2700	<2800	<2900	<2800
MCPP	23 (Note 1)	10000	---	<4400	NA	<4300	<4400	<4200	<4300	NA	<4300	<4400	<4200	<4300	<4400	<4300

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	2J-i	2K-a	2K-b	2K-c	2K-d	2K-e	2K-f	2K-g	2K-h	2K-i	2L-a	2L-b	2L-c
Sample Collection Date				4/8/2014	4/7/2014	4/7/2014	4/7/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/3/2014	4/3/2014	4/3/2014
Laboratory ID Number				14-04-0599 10	14-04-0598 3	14-04-0598 6	14-04-0598 9	14-04-0599 4	14-04-0599 5	14-04-0599 6	14-04-0599 9	14-04-0599 8	14-04-0599 7	14-04-0418 17	14-04-0418 9	14-04-0418 4
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	8.04	9.04	8.33	8.23	8.36	7.91	7.73	8.13	14.7	8.21	7.24	6.53	7.08
Cadmium	20 (Note 3)	1	---	0.773 J	0.779 J	0.856 J	0.832 J	0.876 J	0.844 J	0.781 J	0.776 J	1.02 J	0.768 J	0.859 J	0.912 J	1.05 J
Lead	250 (Note 4)	1	31.5	28.3	31.2	31.9	32.1	28.8	30.6	29.4	28.4	27.3	31.5	32.7	34.6	33.8
Selenium	1.1 (Note 1)	1	0.3	0.777 J	0.558 J	0.704 J	0.693 J	0.713 J	0.719 J	0.517 J	0.742 J	0.71 J	0.598 J	0.482 J	0.471 J	0.656 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.8 UJL	<1.9	<1.9 UJL
4,4'-DDE	5900 (Note 1)	5	---	<2.1 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL	<2.0 UJL	<1.7 UJL	<1.8	<1.8 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL	<1.9 UJL	<2.0	<2.0 UJL
Aldrin	50 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.1 UJL	<1.8 UJL	<1.9 UJL	<1.9 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<1.8 UJL	<1.9	<2.0 UJL
Beta-BHC	14 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL	<1.8 UJL	<1.5 UJL	<1.6	<1.6 UJL
Chlordane	4800 (Note 1)	50	---	<22 UJL	<22 UJL	<23 UJL	<22 UJL	<23 UJL	<23 UJL	<23 UJL	<22 UJL	<23 UJL	<22 UJL	<19 UJL	<19	<20 UJL
Delta-BHC	87 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.5 UJL	<1.5	<1.6 UJL
Dieldrin	24 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<1.9 UJL	<2.0	<2.0 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL	<1.8 UJL	<1.5 UJL	<1.6	<1.6 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.9 UJL	<1.9 UJL	<2.0 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<2.0 UJL	<1.9 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL	<1.9 UJL	<2.0	<2.1 UJL
Endrin	380 (Note 1)	5	---	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.6 UJL	<2.4 UJL	<2.0 UJL	<2.1	<2.2 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.4 UJL	<1.4 UJL	<1.5 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.0 UJL	<2.1	<2.1 UJL
Heptachlor	94 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<1.8 UJL	<1.9	<2.0 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.4 UJL	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.0 UJL	<2.1	<2.2 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<1.8 UJL	<1.9 UJL	<2.0 UJL
Toxaphene	1200 (Note 1)	100	---	<43 UJL	<43 UJL	<44 UJL	<44 UJL	<44 UJL	<44 UJL	<44 UJL	<43 UJL	<45 UJL	<43 UJL	<36 UJL	<38	<38 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.3	<1.4	<1.4
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.2	<3.2	<3.3	<3.3	<3.3	<3.2	<3.2	<3.2	<3.3	<3.2	<2.7	<2.8	<2.9
2,4-D	1300 (Note 1)	100	---	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<16	<17	<17
2,4-DB	190 (Note 1)	100	---	<22	<22	<22	<22	<22	<22	<22	<22	<22	<22	<18	<19	<19
Dalapon	290 (Note 1)	250	---	<100 UJL	<100	<100	<100	<100 UJL	<100 UJL	<100 UJL	<100 UJL	<100 UJL	<100 UJL	<84	<87	<89
Dicamba	730 (Note 1)	10	---	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.8	<1.7	<1.4	<1.5	<1.5
Dichlorprop	230 (Note 1)	100	---	<23	<23	<23	<23	<23	<23	<23	<23	<24	<23	<19	<20	<20
Dinoseb	180 (Note 1)	50	---	<7.0 UJL	<7.0 UJL	<7.1 UJL	<7.0 UJL	<7.1 UJL	<7.0 UJL	<7.0 UJL	<7.0 UJL	<7.2 UJL	<7.0 UJL	<5.8 UJL	<6.1 UJL	<6.2 UJL
MCPA	12 (Note 1)	10000	---	<2800	<2800	<2900	<2800	<2900	<2800	<2800	<2800	<2900	<2800	<2400	<2400	<2500
MCPP	23 (Note 1)	10000	---	<4300	<4400	<4400	<4400	<4400	<4400	<4400	<4300	<4500	<4300	<3600	<3800	<3900

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	2L-d	2L-e	2L-e (0.5-1')	2L-f	2L-g	2L-h	2L-i	2M-a	2M-b	2M-c	2M-d	2M-e	2M-e (0.5-1')
Sample Collection Date				4/3/2014	4/3/2014	6/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	6/3/2014
Laboratory ID Number				14-04-0418 18	14-04-0418 10	14-06-0342 6	14-04-0418 3	14-04-0418 19	14-04-0418 11	14-04-0418 1	14-04-0417 15	14-04-0417 10	14-04-0417 1	14-04-0417 16	14-04-0417 9	14-06-0342 1
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	6.78	6.76	NA	6.28	11.3	6.82	5.99	6.71	6.59	9.15	6.58	6.57	NA
Cadmium	20 (Note 3)	1	---	0.71 J	0.858 J	NA	0.833 J	0.815 J	0.831 J	0.887 J	0.992 J	1.06 J	0.824 J	0.913 J	1.03 J	0.808 J
Lead	250 (Note 4)	1	31.5	28.7	33.8	26.3	30.4	31.2	32.7	33	33.5	32.9	19.6	31.3	32.8	26.7
Selenium	1.1 (Note 1)	1	0.3	0.503 J	0.388 J	NA	0.434 J	0.477 J	0.612 J	0.534 J	0.608 J	0.57 J	0.609 J	0.48 J	0.437 J	NA
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<1.7	<1.9 UJL	NA	<1.9 UJL	<1.8	<1.9 UJL	<1.9	<1.9	<1.9 UJL	<1.8	<1.9 UJL	<1.9 UJL	NA
4,4'-DDE	5900 (Note 1)	5	---	<1.6	<1.8 UJL	NA	<1.8 UJL	<1.7	<1.8 UJL	<1.8	<1.8	<1.8 UJL	<1.7	<1.8 UJL	<1.8 UJL	NA
4,4'-DDT	5400 (Note 1)	5	---	<1.8	<2.0 UJL	NA	<2.0 UJL	<1.9	<2.0 UJL	<2.0	<2.0	<2.0 UJL	<1.9	<2.0 UJL	<2.0 UJL	NA
Aldrin	50 (Note 1)	5	---	<1.6 UJL	<1.9 UJL	NA	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL	<1.9	<1.9 UJL	<1.8	<1.8 UJL	<1.9 UJL	NA
Alpha-BHC	4.0 (Note 1)	5.0	---	<1.7	<1.9 UJL	NA	<1.9 UJL	<1.8	<1.9 UJL	<1.9	<1.9	<1.9 UJL	<1.8	<1.9 UJL	<1.9 UJL	NA
Beta-BHC	14 (Note 1)	5	---	<1.4	<1.6 UJL	NA	<1.6 UJL	<1.5	<1.6 UJL	<1.6	<1.6	<1.6 UJL	<1.5	<1.5 UJL	<1.6 UJL	NA
Chlordane	4800 (Note 1)	50	---	<17	<19 UJL	NA	<19 UJL	<19	<19 UJL	<19	<19	<20 UJL	<19	<19 UJL	<19 UJL	NA
Delta-BHC	87 (Note 1)	5	---	<1.3	<1.5 UJL	NA	<1.5 UJL	<1.5	<1.5 UJL	<1.5	<1.5	<1.5 UJL	<1.5	<1.5 UJL	<1.5 UJL	NA
Dieldrin	24 (Note 1)	5	---	<1.7	<2.0 UJL	NA	<2.0 UJL	<1.9	<1.9 UJL	<1.9	<2.0	<2.0 UJL	<1.9	<1.9 UJL	<2.0 UJL	NA
Endosulfan I	15000 (Note 1)	5	---	<1.4	<1.6 UJL	NA	<1.6 UJL	<1.5	<1.5 UJL	<1.5	<1.6	<1.6 UJL	<1.5	<1.5 UJL	<1.6 UJL	NA
Endosulfan II	46000 (Note 1)	5	---	<1.5 UJL	<1.7 UJL	NA	<1.7 UJL	<1.6 UJL	<1.6 UJL	<1.7 UJL	<1.7	<1.7 UJL	<1.6	<1.6 UJL	<1.7 UJL	NA
Endosulfan Sulfate	380000 (Note 1)	5	---	<1.8	<2.0 UJL	NA	<2.0 UJL	<1.9	<2.0 UJL	<2.0	<2.0	<2.0 UJL	<1.9	<2.0 UJL	<2.0 UJL	NA
Endrin	380 (Note 1)	5	---	<1.9	<2.1 UJL	NA	<2.1 UJL	<2.0	<2.1 UJL	<2.1	<2.1	<2.1 UJL	<2.0	<2.1 UJL	<2.1 UJL	NA
Endrin Aldehyde	19000 (Note 1)	5	---	<1.3 UJL	<1.4 UJL	NA	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.4	<1.5 UJL	<1.4	<1.4 UJL	<1.4 UJL	NA
Gamma-BHC	4.6 (Note 1)	5.0	---	<1.8	<2.1 UJL	NA	<2.1 UJL	<2.0	<2.0 UJL	<2.0	<2.0	<2.1 UJL	<2.0	<2.0 UJL	<2.0 UJL	NA
Heptachlor	94 (Note 1)	5	---	<1.7	<1.9 UJL	NA	<1.9 UJL	<1.8	<1.9 UJL	<1.9	<1.9	<1.9 UJL	<1.8	<1.9 UJL	<1.9 UJL	NA
Heptachlor Epoxide	29 (Note 1)	5	---	<1.9	<2.1 UJL	NA	<2.1 UJL	<2.0	<2.1 UJL	<2.1	<2.1	<2.1 UJL	<2.0	<2.1 UJL	<2.1 UJL	NA
Methoxychlor	62000 (Note 1)	5	---	<1.7 UJL	<1.9 UJL	NA	<1.9 UJL	<1.8 UJL	<1.9 UJL	<1.9 UJL	<1.9	<1.9 UJL	<1.8	<1.9 UJL	<1.9 UJL	NA
Toxaphene	1200 (Note 1)	100	---	<33	<38 UJL	NA	<38 UJL	<36	<37 UJL	<37	<37	<38 UJL	<36	<37 UJL	<37 UJL	NA
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.2	<1.3	NA	<1.3	<1.3	<1.3	<1.3	<1.3	<1.4	<1.3	<1.3	<1.4	NA
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<2.5	<2.8	NA	<2.8	<2.7	<2.7	<2.8	<2.8	<2.8	<2.6	<2.8	<2.8	NA
2,4-D	1300 (Note 1)	100	---	<15	<17	NA	<17	<16	<17	<17	<17	<17	<16	<17	<17	NA
2,4-DB	190 (Note 1)	100	---	<17	<19	NA	<19	<18	<19	<19	<19	<19	<18	<19	<19	NA
Dalapon	290 (Note 1)	250	---	<76	<86	NA	<86	<83	<85	<85	<86	<87	<82	<86	<86	NA
Dicamba	730 (Note 1)	10	---	<1.3	<1.5	NA	<1.5	<1.4	<1.4	<1.5	<1.5	<1.5	<1.4	<1.5	<1.5	NA
Dichlorprop	230 (Note 1)	100	---	<18	<20	NA	<20	<19	<20	<20	<20	<20	<19	<20	<20	NA
Dinoseb	180 (Note 1)	50	---	<5.3 UJL	<6.0 UJL	NA	<6.0 UJL	<5.8 UJL	<5.9 UJL	<6.0 UJL	<6.0 UJL	<6.1 UJL	<5.7 UJL	<6.0 UJL	<6.0 UJL	NA
MCPA	12 (Note 1)	10000	---	<2200	<2400	NA	<2400	<2400	<2400	<2400	<2400	<2500	<2300	<2400	<2400	NA
MCPP	23 (Note 1)	10000	---	<3300	<3700	NA	<3700	<3600	<3700	<3700	<3700	<3800	<3600	<3700	<3700	NA

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	2M-f	2M-f (0.5-1')	2M-g	2M-h	2M-i	3H-a	3H-b	3H-c	3H-d	3H-e	3H-f	3H-g	3H-h
Sample Collection Date				4/3/2014	5/5/2014	4/3/2014	4/3/2014	4/3/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014
Laboratory ID Number				14-04-0417 3	14-05-0445 17	14-04-0417 17	14-04-0417 8	14-04-0417 4	14-04-0596 6	14-04-0596 5	14-04-0596 4	14-04-0596 7	14-04-0596 8	14-04-0596 9	14-04-0597 6	14-04-0597 5
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	20.2	6.45	6.59	6.84	10.1	7.54	11.2	9.45	6.31	8.14	8.74	14.7	8.03
Cadmium	20 (Note 3)	1	---	0.783 J	NA	0.944 J	0.999 J	0.835 J	0.588 J	0.614 J	0.732 J	0.519 J	0.594 J	0.655 J	0.551 J	0.53 J
Lead	250 (Note 4)	1	31.5	18.3	NA	32.4	31.6	18.9	17.3	21.1	29.3	16.1	20	27.5	17.7	19.1
Selenium	1.1 (Note 1)	1	0.3	0.659 J	NA	0.592 J	0.628 J	0.73 J	0.538 J	0.627 J	0.802 J	0.598 J	0.547 J	0.578 J	0.595 J	0.684 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<1.7	NA	<1.9 UJL	<1.9 UJL	<1.7	<2.1 UJL	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.1 UJL
4,4'-DDE	5900 (Note 1)	5	---	<1.6	NA	<1.8 UJL	<1.8 UJL	<1.7	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.1 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL
4,4'-DDT	5400 (Note 1)	5	---	<1.8	NA	<2.0 UJL	<2.0 UJL	<1.9	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL
Aldrin	50 (Note 1)	5	---	<1.7	NA	<1.8 UJL	<1.9 UJL	<1.7	<2.1 UJL	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.1 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<1.8	NA	<1.9 UJL	<1.9 UJL	<1.8	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.3 UJL	<2.2 UJL	<2.1 UJL	<2.1 UJL
Beta-BHC	14 (Note 1)	5	---	<1.5	NA	<1.6 UJL	<1.6 UJL	<1.5	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL
Chlordane	4800 (Note 1)	50	---	<18	NA	<19 UJL	<19 UJL	<18	<22 UJL	<22 UJL	<22 UJL	<22 UJL	<23 UJL	<22 UJL	<21 UJL	<22 UJL
Delta-BHC	87 (Note 1)	5	---	<1.4	NA	<1.5 UJL	<1.5 UJL	<1.4	<1.7 UJL	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Dieldrin	24 (Note 1)	5	---	<1.8	NA	<1.9 UJL	<2.0 UJL	<1.8	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.4	NA	<1.5 UJL	<1.6 UJL	<1.4	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.7 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.5	NA	<1.6 UJL	<1.7 UJL	<1.5	<1.8 UJL	<1.9 UJL	<1.9 UJL	<1.8 UJL	<2.0 UJL	<1.9 UJL	<1.8 UJL	<1.9 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<1.9	NA	<2.0 UJL	<2.0 UJL	<1.9	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.4 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL
Endrin	380 (Note 1)	5	---	<2.0	NA	<2.1 UJL	<2.1 UJL	<2.0	<2.4 UJL	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.3	NA	<1.4 UJL	<1.4 UJL	<1.4	<1.6 UJL	<1.6 UJL	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.6 UJL	<1.6 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<1.9	NA	<2.0 UJL	<2.1 UJL	<1.9	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.3 UJL
Heptachlor	94 (Note 1)	5	---	<1.8	NA	<1.9 UJL	<1.9 UJL	<1.8	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.1 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.0	NA	<2.1 UJL	<2.1 UJL	<2.0	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.5 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL
Methoxychlor	62000 (Note 1)	5	---	<1.8	NA	<1.9 UJL	<1.9 UJL	<1.8	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.3 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL
Toxaphene	1200 (Note 1)	100	---	<35	NA	<37 UJL	<38 UJL	<35	<42 UJL	<43 UJL	<43 UJL	<42 UJL	<44 UJL	<43 UJL	<42 UJL	<42 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.3	NA	<1.3	<1.4	<1.3	<1.5	<1.5	<1.6	<1.5	<1.6	<1.6	<1.5	<1.5
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<2.6	NA	<2.8	<2.8	<2.6	<3.1	<3.1	<3.2	<3.1	<3.3	<3.3	<3.1	<3.1
2,4-D	1300 (Note 1)	100	---	<16	NA	<17	<17	<16	<19	<19	<20	<19	<20	<20	<19	<19
2,4-DB	190 (Note 1)	100	---	<18	NA	<19	<19	<18	<21	<21	<22	<21	<22	<22	<21	<21
Dalapon	290 (Note 1)	250	---	<81	NA	<86	<86	<81	<96	<98	<100	<96	<100	<100	<96	<97
Dicamba	730 (Note 1)	10	---	<1.4	NA	<1.5	<1.5	<1.4	<1.6	<1.7	<1.7	<1.6	<1.7	<1.7	<1.6	<1.7
Dichlorprop	230 (Note 1)	100	---	<19	NA	<20	<20	<19	<22	<22	<23	<22	<23	<23	<22	<22
Dinoseb	180 (Note 1)	50	---	<5.6 UJL	NA	<6.0 UJL	<6.0 UJL	<5.6 UJL	<6.7 UJL	<6.8 UJL	<7.0 UJL	<6.7 UJL	<7.1 UJL	<7.0 UJL	<6.7 UJL	<6.8 UJL
MCPA	12 (Note 1)	10000	---	<2300	NA	<2400	<2400	<2300	<2700	<2800	<2800	<2700	<2900	<2800	<2700	<2700
MCPP	23 (Note 1)	10000	---	<3500	NA	<3700	<3700	<3500	<4200	<4200	<4300	<4200	<4400	<4400	<4200	<4200

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL		MQL	Back-ground	3H-i		3I-a		3I-a (0.5-1')		3I-b		3I-c		3I-c (0.5-1')		3I-d		3I-e		3I-f		3I-g		3I-h		3I-i		3J-a	
Sample Collection Date					4/8/2014		4/8/2014		5/5/2014		4/8/2014		4/8/2014		6/3/2014		4/8/2014		4/8/2014		4/8/2014		4/8/2014		4/8/2014		4/8/2014		4/8/2014	
Laboratory ID Number					14-04-0597	4	14-04-0596	3	14-05-0445	19	14-04-0596	2	14-04-0596	1	14-06-0342	11	14-04-0596	10	14-04-0596	11	14-04-0596	12	14-04-0597	3	14-04-0597	2	14-04-0597	1	14-04-0599	13
METALS (mg/kg)																														
Arsenic	24	(Note 2)	1	15.9	10.9		16.5		5.50		11.1		11.4		NA		13.4		12.7		10.3		14		11.5		10.7		11.1	
Cadmium	20	(Note 3)	1	---	0.875	J	0.82	J	NA		0.849	J	0.79	J	NA		0.885	J	0.804	J	0.729	J	0.981	J	0.777	J	0.836	J	0.738	J
Lead	250	(Note 4)	1	31.5	26.4		29.4		NA		29.4		32		30.3		30.1		33.1		30		26.1		29.8		29.8		28.9	
Selenium	1.1	(Note 1)	1	0.3	0.636	J	0.48	J	NA		0.661	J	0.856	J	NA		0.726	J	0.538	J	0.483	J	0.867	J	0.661	J	0.746	J	0.602	J
PESTICIDES (ug/kg)																														
4,4'-DDD	6500	(Note 1)	5	---	<2.2	UJL	<2.2	UJL	NA		<2.2	UJL	<2.2	UJL	NA		<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL
4,4'-DDE	5900	(Note 1)	5	---	<2.1	UJL	<2.1	UJL	NA		<2.1	UJL	<2.1	UJL	NA		<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.0	UJL
4,4'-DDT	5400	(Note 1)	5	---	<2.3	UJL	<2.3	UJL	NA		<2.3	UJL	<2.3	UJL	NA		<2.3	UJL	<2.4	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL
Aldrin	50	(Note 1)	5	---	<2.2	UJL	<2.2	UJL	NA		<2.2	UJL	<2.2	UJL	NA		<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL
Alpha-BHC	4.0	(Note 1)	5.0	---	<2.2	UJL	<2.3	UJL	NA		<2.3	UJL	<2.3	UJL	NA		<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.2	UJL
Beta-BHC	14	(Note 1)	5	---	<1.8	UJL	<1.8	UJL	NA		<1.8	UJL	<1.8	UJL	NA		<1.8	UJL	<1.9	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.9	UJL	<1.8	UJL
Chlordane	4800	(Note 1)	50	---	<23	UJL	<23	UJL	NA		<23	UJL	<23	UJL	NA		<23	UJL	<23	UJL	<22	UJL	<22	UJL	<23	UJL	<23	UJL	<22	UJL
Delta-BHC	87	(Note 1)	5	---	<1.8	UJL	<1.8	UJL	NA		<1.8	UJL	<1.8	UJL	NA		<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL
Dieldrin	24	(Note 1)	5	---	<2.3	UJL	<2.3	UJL	NA		<2.3	UJL	<2.3	UJL	NA		<2.3	UJL	<2.4	UJL	<2.3	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL
Endosulfan I	15000	(Note 1)	5	---	<1.8	UJL	<1.8	UJL	NA		<1.8	UJL	<1.8	UJL	NA		<1.8	UJL	<1.9	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL
Endosulfan II	46000	(Note 1)	5	---	<1.9	UJL	<2.0	UJL	NA		<1.9	UJL	<1.9	UJL	NA		<1.9	UJL	<2.0	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<2.0	UJL	<1.9	UJL
Endosulfan Sulfate	380000	(Note 1)	5	---	<2.3	UJL	<2.4	UJL	NA		<2.3	UJL	<2.4	UJL	NA		<2.3	UJL	<2.4	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.3	UJL
Endrin	380	(Note 1)	5	---	<2.5	UJL	<2.5	UJL	NA		<2.5	UJL	<2.5	UJL	NA		<2.5	UJL	<2.6	UJL	<2.5	UJL	<2.4	UJL	<2.5	UJL	<2.5	UJL	<2.5	UJL
Endrin Aldehyde	19000	(Note 1)	5	---	<1.7	UJL	<1.7	UJL	NA		<1.7	UJL	<1.7	UJL	NA		<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL
Gamma-BHC	4.6	(Note 1)	5.0	---	<2.4	UJL	<2.4	UJL	NA		<2.4	UJL	<2.4	UJL	NA		<2.4	UJL	<2.5	UJL	<2.4	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL
Heptachlor	94	(Note 1)	5	---	<2.2	UJL	<2.2	UJL	NA		<2.2	UJL	<2.2	UJL	NA		<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.2	UJL
Heptachlor Epoxide	29	(Note 1)	5	---	<2.5	UJL	<2.5	UJL	NA		<2.5	UJL	<2.5	UJL	NA		<2.5	UJL	<2.5	UJL	<2.4	UJL	<2.4	UJL	<2.5	UJL	<2.5	UJL	<2.4	UJL
Methoxychlor	62000	(Note 1)	5	---	<2.2	UJL	<2.3	UJL	NA		<2.3	UJL	<2.3	UJL	NA		<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.2	UJL
Toxaphene	1200	(Note 1)	100	---	<44	UJL	<44	UJL	NA		<44	UJL	<44	UJL	NA		<44	UJL	<45	UJL	<43	UJL	<43	UJL	<44	UJL	<44	UJL	<43	UJL
HERBICIDES (ug/kg)																														
2,4,5-T	490	(Note 1)	10	---	<1.6		<1.6		NA		<1.6		<1.6		NA		<1.6		<1.6		<1.6		<1.6		<1.6		<1.6		<1.6	
2,4,5-TP (Silvex)	2600	(Note 1)	10	---	<3.3		<3.3		NA		<3.3		<3.3		NA		<3.3		<3.4		<3.2		<3.2		<3.3		<3.3		<3.2	
2,4-D	1300	(Note 1)	100	---	<20		<20		NA		<20		<20		NA		<20		<20		<20		<19		<20		<20		<20	
2,4-DB	190	(Note 1)	100	---	<22		<22		NA		<22		<22		NA		<22		<23		<22		<22		<22		<22		<22	
Dalapon	290	(Note 1)	250	---	<100		<100		NA		<100		<100		NA		<100		<100		<100		<99		<100		<100		<100	UJL
Dicamba	730	(Note 1)	10	---	<1.7		<1.7		NA		<1.7		<1.7		NA		<1.7		<1.8		<1.7		<1.7		<1.7		<1.7		<1.7	
Dichlorprop	230	(Note 1)	100	---	<23		<23		NA		<23		<23		NA		<23		<24		<23		<23		<23		<23		<23	
Dinoseb	180	(Note 1)	50	---	<7.0	UJL	<7.1	UJL	NA		<7.1	UJL	<7.1	UJL	NA		<7.1	UJL	<7.3	UJL	<7.0	UJL	<6.9	UJL	<7.1	UJL	<7.1	UJL	<7.0	UJL
MCPA	12	(Note 1)	10000	---	<2800		<2900		NA		<2900		<2900		NA		<2800		<2900		<2800		<2800		<2900		<2900		<2800	
MCPP	23	(Note 1)	10000	---	<4400		<4400		NA		<4400		<4400		NA		<4400		<4500		<4400		<4300		<4400		<4400		<4300	

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	3J-b	3J-b (0.5-1')	3J-c	3J-d	3J-e	3J-f	3J-g	3J-h	3J-i	3K-a	3K-b	3K-c	3K-d
Sample Collection Date				4/8/2014	5/5/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014
Laboratory ID Number				14-04-0599 14	14-05-0445 21	14-04-0599 15	14-04-0599 24	14-04-0599 23	14-04-0599 22	14-04-0596 13	14-04-0596 14	14-04-0596 15	14-04-0599 16	14-04-0599 17	14-04-0599 18	14-04-0599 21
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	16.2	5.19	9.46	11.3	13.5	8.22	10.3	14.9	9.05	8.22	7.9	8.21	7.69
Cadmium	20 (Note 3)	1	---	0.811 J	NA	0.815 J	0.769 J	0.769 J	0.759 J	0.803 J	0.831 J	0.811 J	0.773 J	0.745 J	0.852 J	0.8 J
Lead	250 (Note 4)	1	31.5	30.6	NA	30.5	28.8	27.4	27.6	28.3	28.2	29.1	28.3	29.1	31.1	28.9
Selenium	1.1 (Note 1)	1	0.3	0.561 J	NA	<0.375	0.446 J	0.73 J	0.609 J	0.904 J	0.747 J	0.642 J	0.485 J	0.492 J	0.624 J	0.45 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.2 UJL	NA	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
4,4'-DDE	5900 (Note 1)	5	---	<2.1 UJL	NA	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.3 UJL	NA	<2.4 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL
Aldrin	50 (Note 1)	5	---	<2.2 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.2 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Beta-BHC	14 (Note 1)	5	---	<1.8 UJL	NA	<1.9 UJL	<1.8 UJL	<1.9 UJL	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL	<1.8 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL
Chlordane	4800 (Note 1)	50	---	<23 UJL	NA	<23 UJL	<23 UJL	<23 UJL	<23 UJL	<23 UJL	<23 UJL	<23 UJL	<23 UJL	<23 UJL	<23 UJL	<23 UJL
Delta-BHC	87 (Note 1)	5	---	<1.8 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Dieldrin	24 (Note 1)	5	---	<2.3 UJL	NA	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.8 UJL	NA	<1.9 UJL	<1.8 UJL	<1.9 UJL	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.9 UJL	NA	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<1.9 UJL	<1.9 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.3 UJL	NA	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL
Endrin	380 (Note 1)	5	---	<2.5 UJL	NA	<2.6 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.6 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.7 UJL	NA	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.4 UJL	NA	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.4 UJL	<2.5 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.5 UJL
Heptachlor	94 (Note 1)	5	---	<2.2 UJL	NA	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.5 UJL	NA	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.3 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Toxaphene	1200 (Note 1)	100	---	<44 UJL	NA	<45 UJL	<44 UJL	<45 UJL	<45 UJL	<44 UJL	<44 UJL	<45 UJL	<44 UJL	<44 UJL	<44 UJL	<45 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.6	NA	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.3	NA	<3.3	<3.3	<3.3	<3.3	<3.2	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
2,4-D	1300 (Note 1)	100	---	<20	NA	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
2,4-DB	190 (Note 1)	100	---	<22	NA	<23	<22	<22	<23	<22	<22	<23	<22	<22	<22	<23
Dalapon	290 (Note 1)	250	---	<100 UJL	NA	<100 UJL	<100	<100	<100	<100	<100	<100	<100 UJL	<100 UJL	<100 UJL	<100
Dicamba	730 (Note 1)	10	---	<1.7	NA	<1.8	<1.7	<1.8	<1.8	<1.7	<1.7	<1.8	<1.7	<1.8	<1.7	<1.8
Dichlorprop	230 (Note 1)	100	---	<23	NA	<24	<23	<24	<24	<23	<23	<24	<23	<24	<23	<24
Dinoseb	180 (Note 1)	50	---	<7.1 UJL	NA	<7.2 UJL	<7.1 UJL	<7.2 UJL	<7.2 UJL	<7.0 UJL	<7.1 UJL	<7.2 UJL	<7.1 UJL	<7.2 UJL	<7.1 UJL	<7.2 UJL
MCPA	12 (Note 1)	10000	---	<2900	NA	<2900	<2900	<2900	<2900	<2800	<2900	<2900	<2900	<2900	<2900	<2900
MCPP	23 (Note 1)	10000	---	<4400	NA	<4500	<4400	<4500	<4500	<4400	<4400	<4500	<4400	<4500	<4400	<4500

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	3K-e	3K-f	3K-g	3K-h	3K-i	3L-a	3L-a (0.5-1')	3L-b	3L-c	3L-d	3L-e	3L-f	3L-g
Sample Collection Date				4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/8/2014	4/3/2014	6/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014
Laboratory ID Number				14-04-0599 20	14-04-0599 19	14-04-0596 16	14-04-0596 17	14-04-0596 18	14-04-0418 20	14-06-0342 5	14-04-0418 12	14-04-0417 21	14-04-0418 21	14-04-0418 13	14-04-0417 20	14-04-0418 22
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	7.45	7.3	8.18	7.62	6.87	7.81	NA	12	6.37	6.79	6.69	6.62	6.88
Cadmium	20 (Note 3)	1	---	0.856 J	0.779 J	0.89 J	0.883 J	0.826 J	0.836 J	NA	0.774 J	0.801 J	0.749 J	0.793 J	0.793 J	0.844 J
Lead	250 (Note 4)	1	31.5	30.7	28.7	29.8	29.9	26	32.3	24.7	23.8	26.6	24	29.9	22.7	30.6
Selenium	1.1 (Note 1)	1	0.3	0.601 J	0.601 J	0.733 J	0.618 J	0.752 J	0.513 J	NA	0.484 J	0.578 J	0.394 J	0.5 J	0.559 J	0.426 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<1.8	NA	<1.8	<1.8 UJL	<1.8 UJL	<1.8	<1.8	<1.8 UJL
4,4'-DDE	5900 (Note 1)	5	---	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<1.7	NA	<1.7	<1.7 UJL	<1.7 UJL	<1.7	<1.7	<1.7 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.0	NA	<1.9	<1.9 UJL	<1.9 UJL	<1.9	<1.9	<1.9 UJL
Aldrin	50 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<1.8 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8	<1.8 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<1.9	NA	<1.8	<1.8 UJL	<1.9 UJL	<1.9	<1.9	<1.8
Beta-BHC	14 (Note 1)	5	---	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.5	NA	<1.5	<1.5 UJL	<1.5 UJL	<1.5	<1.5	<1.5
Chlordane	4800 (Note 1)	50	---	<23 UJL	<23 UJL	<23 UJL	<23 UJL	<22 UJL	<19	NA	<18	<19 UJL	<19 UJL	<19	<19	<19
Delta-BHC	87 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL	<1.5	NA	<1.4	<1.5 UJL	<1.5 UJL	<1.5	<1.5	<1.5
Dieldrin	24 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<1.9	NA	<1.9	<1.9 UJL	<1.9 UJL	<1.9	<1.9	<1.9
Endosulfan I	15000 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.5	NA	<1.5	<1.5 UJL	<1.5 UJL	<1.5	<1.5	<1.5
Endosulfan II	46000 (Note 1)	5	---	<2.0 UJL	<2.0 UJL	<1.9 UJL	<2.0 UJL	<1.9 UJL	<1.6 UJL	NA	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.6	<1.6
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL	<2.0	NA	<1.9	<1.9 UJL	<1.9 UJL	<1.9	<1.9	<1.9
Endrin	380 (Note 1)	5	---	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.1	NA	<2.0	<2.0 UJL	<2.1 UJL	<2.1	<2.1	<2.0 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.4 UJL	NA	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.4 UJL	<1.4	<1.4
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.0	NA	<2.0	<2.0 UJL	<2.0 UJL	<2.0	<2.0	<2.0
Heptachlor	94 (Note 1)	5	---	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.9	NA	<1.8	<1.8 UJL	<1.9 UJL	<1.9	<1.9	<1.8 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.1 UJL	NA	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0	<2.0 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<1.9	NA	<1.8	<1.8 UJL	<1.9 UJL	<1.9	<1.9	<1.8 UJL
Toxaphene	1200 (Note 1)	100	---	<44 UJL	<44 UJL	<44 UJL	<44 UJL	<43 UJL	<37 UJL	NA	<36 UJL	<36 UJL	<36 UJL	<37 UJL	<37	<36
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.6	<1.6	<1.6	<1.6	<1.5	<1.3	NA	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.3	<3.3	<3.2	<3.3	<3.2	<2.8	NA	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7
2,4-D	1300 (Note 1)	100	---	<20	<20	<20	<20	<19	<17	NA	<16	<16	<17	<17	<16	<16
2,4-DB	190 (Note 1)	100	---	<22	<22	<22	<22	<21	<19	NA	<18	<18	<18	<19	<18	<18
Dalapon	290 (Note 1)	250	---	<100 UJL	<100 UJL	<100	<100	<98	<85	NA	<83	<83	<84	<85	<84	<83
Dicamba	730 (Note 1)	10	---	<1.7	<1.7	<1.7	<1.7	<1.7	<1.5	NA	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Dichlorprop	230 (Note 1)	100	---	<23	<23	<23	<23	<23	<20	NA	<19	<19	<19	<19	<19	<19
Dinoseb	180 (Note 1)	50	---	<7.1 UJL	<7.1 UJL	<7.0 UJL	<7.1 UJL	<6.9 UJL	<6.0 UJL	NA	<5.8 UJL	<5.8 UJL	<5.9 UJL	<5.9 UJL	<5.8 UJL	<5.8 UJL
MCPA	12 (Note 1)	10000	---	<2900	<2900	<2800	<2900	<2800	<2400	NA	<2300	<2300	<2400	<2400	<2400	<2300
MCPP	23 (Note 1)	10000	---	<4400	<4400	<4400	<4400	<4300	<3700	NA	<3600	<3600	<3700	<3700	<3600	<3600

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	3L-h	3M-a	3M-b	3M-c	3M-d	3M-e	4H-a	4H-b	4H-c	4H-d	4H-e	4H-f	4H-g
Sample Collection Date				4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/3/2014	4/8/2014	4/8/2014	4/8/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014
Laboratory ID Number				14-04-0418 14	14-04-0417 18	14-04-0417 7	14-04-0417 5	14-04-0417 19	14-04-0417 6	14-04-0597 7	14-04-0597 8	14-04-0597 9	14-04-0816 12	14-04-0816 11	14-04-0816 10	14-04-0816 13
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	6.57	6.91	7.47	8.02	7.05	7.35	8.06	8.75	10	7.65	8.58	9.49	8.04
Cadmium	20 (Note 3)	1	---	0.72 J	0.844 J	0.932 J	0.809 J	0.821 J	0.892 J	0.539 J	0.563 J	0.679 J	0.529 J	0.574 J	0.587 J	0.51 J
Lead	250 (Note 4)	1	31.5	21.8	26.1	27.1	21.1	24.5	27.3	16.6	18	25.4	16.3	17.8	23.9	16.1
Selenium	1.1 (Note 1)	1	0.3	0.498 J	0.573 J	0.558 J	0.53 J	0.554 J	0.548 J	0.545 J	0.429 J	0.616 J	0.575 J	0.442 J	<0.348	<0.346
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<1.8	<1.8	<1.8 UJL	<1.8	<1.8	<1.8	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL
4,4'-DDE	5900 (Note 1)	5	---	<1.7	<1.7	<1.7 UJL	<1.7	<1.7	<1.7	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<1.9 UJL	<2.0 UJL	<2.0 UJL
4,4'-DDT	5400 (Note 1)	5	---	<1.9	<1.9	<1.9 UJL	<1.9	<1.9	<1.9	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL
Aldrin	50 (Note 1)	5	---	<1.8 UJL	<1.8	<1.8 UJL	<1.8	<1.8	<1.8	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<1.8	<1.8	<1.9 UJL	<1.8	<1.8	<1.8	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL
Beta-BHC	14 (Note 1)	5	---	<1.5	<1.5	<1.5 UJL	<1.5	<1.5	<1.5	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Chlordane	4800 (Note 1)	50	---	<18	<19	<19 UJL	<18	<19	<18	<21 UJL	<22 UJL	<22 UJL	<22 UJL	<20 UJL	<21 UJL	<21 UJL
Delta-BHC	87 (Note 1)	5	---	<1.4	<1.5	<1.5 UJL	<1.4	<1.5	<1.4	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL
Dieldrin	24 (Note 1)	5	---	<1.8	<1.9	<1.9 UJL	<1.8	<1.9	<1.9	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.5	<1.5	<1.5 UJL	<1.5	<1.5	<1.5	<1.7 UJL	<1.8 UJL	<1.7 UJL	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.6 UJL	<1.6	<1.6 UJL	<1.6	<1.6	<1.6	<1.8 UJL	<1.9 UJL	<1.8 UJL	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<1.9	<1.9	<2.0 UJL	<1.9	<1.9	<1.9	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL
Endrin	380 (Note 1)	5	---	<2.0	<2.0	<2.1 UJL	<2.0	<2.0	<2.0	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.2 UJL	<2.3 UJL	<2.4 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.4 UJL	<1.4	<1.4 UJL	<1.4	<1.4	<1.4	<1.6 UJL	<1.7 UJL	<1.6 UJL	<1.6 UJL	<1.5 UJL	<1.6 UJL	<1.6 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<1.9	<2.0	<2.0 UJL	<1.9	<2.0	<2.0	<2.3 UJL	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL
Heptachlor	94 (Note 1)	5	---	<1.8	<1.8	<1.9 UJL	<1.8	<1.8	<1.8	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.0 UJL	<2.0	<2.1 UJL	<2.0	<2.0	<2.0	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL
Methoxychlor	62000 (Note 1)	5	---	<1.8	<1.9	<1.9 UJL	<1.8	<1.8	<1.8	<2.1 UJL	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL
Toxaphene	1200 (Note 1)	100	---	<36 UJL	<36	<37 UJL	<35	<36	<36	<41 UJL	<43 UJL	<42 UJL	<42 UJL	<40 UJL	<42 UJL	<42 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.5	<1.5	<1.5	<1.5	<1.4	<1.5	<1.5
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<2.6	<2.7	<2.7	<2.6	<2.7	<2.6	<3.1	<3.2	<3.1	<3.1	<3.0	<3.1	<3.1
2,4-D	1300 (Note 1)	100	---	<16	<16	<17	<16	<16	<16	<19	<19	<19	<19	<18	<19	<19
2,4-DB	190 (Note 1)	100	---	<18	<18	<19	<18	<18	<18	<21	<22	<21	<21	<20	<21	<21
Dalapon	290 (Note 1)	250	---	<82	<83	<85	<80	<82	<82	<96	<99	<97	<97	<92	<95	<95
Dicamba	730 (Note 1)	10	---	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.6	<1.7	<1.7	<1.7	<1.6	<1.6	<1.6
Dichlorprop	230 (Note 1)	100	---	<19	<19	<20	<18	<19	<19	<22	<23	<22	<22	<21	<22	<22
Dinoseb	180 (Note 1)	50	---	<5.7 UJL	<5.8 UJL	<5.9 UJL	<5.6 UJL	<5.8 UJL	<5.7 UJL	<6.7 UJL	<6.9 UJL	<6.8 UJL	<6.8 UJL	<6.4 UJL	<6.7 UJL	<6.6 UJL
MCPA	12 (Note 1)	10000	---	<2300	<2400	<2400	<2300	<2300	<2300	<2700	<2800	<2700	<2700	<2600	<2700	<2700
MCPP	23 (Note 1)	10000	---	<3500	<3600	<3700	<3500	<3600	<3500	<4200	<4300	<4200	<4200	<4000	<4100	<4100

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	4H-h	4H-i	4I-a	4I-b	4I-c	4I-d	4I-e	4I-e (0.5-1')	4I-f	4I-g	4I-h	4I-i	4J-a
Sample Collection Date				4/9/2014	4/9/2014	4/8/2014	4/8/2014	4/8/2014	4/9/2014	4/9/2014	6/3/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/8/2014
Laboratory ID Number				14-04-0816 14	14-04-0816 15	14-04-0597 10	14-04-0597 11	14-04-0597 12	14-04-0816 9	14-04-0816 8	14-06-0342 12	14-04-0816 7	14-04-0816 16	14-04-0816 17	14-04-0816 18	14-04-0596 24
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	7.47	10.9	13.8	11.7	11.5	13.1	12.3	NA	11.4	12.6	11.9	11.3	12.5
Cadmium	20 (Note 3)	1	---	0.526 J	0.622 J	0.901 J	0.793 J	0.847 J	0.681 J	0.812 J	NA	0.822 J	0.66 J	0.716 J	0.812 J	0.953 J
Lead	250 (Note 4)	1	31.5	17	26.5	28.7	28.1	29.6	30.3	32.5	20.7	31.6	30.9	31.3	29.7	31.2
Selenium	1.1 (Note 1)	1	0.3	0.5 J	0.562 J	0.61 J	0.695 J	0.508 J	0.662 J	0.547 J	NA	0.421 J	0.594 J	0.58 J	0.386 J	0.842 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.0 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
4,4'-DDE	5900 (Note 1)	5	---	<1.9 UJL	<2.0 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL	NA	2.3 JL	<2.0 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.1 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Aldrin	50 (Note 1)	5	---	<2.0 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Beta-BHC	14 (Note 1)	5	---	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.9 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Chlordane	4800 (Note 1)	50	---	<21 UJL	<22 UJL	<22 UJL	<23 UJL	<23 UJL	<22 UJL	<23 UJL	NA	<23 UJL	<22 UJL	<22 UJL	<22 UJL	<23 UJL
Delta-BHC	87 (Note 1)	5	---	<1.6 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Dieldrin	24 (Note 1)	5	---	<2.1 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.7 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.8 UJL	<1.9 UJL	<1.9 UJL	<2.0 UJL	<2.0 UJL	<1.9 UJL	<2.0 UJL	NA	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.1 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.3 UJL	<2.4 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Endrin	380 (Note 1)	5	---	<2.3 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL	NA	<2.5 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.5 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.5 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	NA	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.2 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	NA	<2.4 UJL	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL
Heptachlor	94 (Note 1)	5	---	<2.0 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.3 UJL	<2.4 UJL	<2.4 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.5 UJL	NA	<2.5 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.5 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Toxaphene	1200 (Note 1)	100	---	<40 UJL	<43 UJL	<43 UJL	<44 UJL	<44 UJL	<43 UJL	<45 UJL	NA	<44 UJL	<43 UJL	<43 UJL	<44 UJL	<44 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.5	<1.5	<1.6	<1.6	<1.6	<1.5	<1.6	NA	<1.6	<1.5	<1.6	<1.6	<1.6
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.0	<3.2	<3.2	<3.3	<3.3	<3.2	<3.3	NA	<3.3	<3.2	<3.2	<3.2	<3.2
2,4-D	1300 (Note 1)	100	---	<18	<19	<20	<20	<20	<19	<20	NA	<20	<19	<20	<20	<20
2,4-DB	190 (Note 1)	100	---	<20	<22	<22	<22	<22	<22	<22	NA	<22	<22	<22	<22	<22
Dalapon	290 (Note 1)	250	---	<93	<98	<100	<100	<100	<99	<100	NA	<100	<99	<100	<100	<100
Dicamba	730 (Note 1)	10	---	<1.6	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	NA	<1.7	<1.7	<1.7	<1.7	<1.7
Dichlorprop	230 (Note 1)	100	---	<21	<23	<23	<23	<23	<23	<23	NA	<23	<23	<23	<23	<23
Dinoseb	180 (Note 1)	50	---	<6.5 UJL	<6.9 UJL	<7.0 UJL	<7.1 UJL	<7.1 UJL	<6.9 UJL	<7.1 UJL	NA	<7.1 UJL	<6.9 UJL	<7.0 UJL	<7.0 UJL	<7.0 UJL
MCPA	12 (Note 1)	10000	---	<2600	<2800	<2800	<2900	<2900	<2800	<2900	NA	<2900	<2800	<2800	<2800	<2800
MCPP	23 (Note 1)	10000	---	<4000	<4300	<4300	<4400	<4400	<4300	<4400	NA	<4400	<4300	<4400	<4300	<4400

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	4J-b	4J-c	4J-d	4J-e	4J-e (0.5-1')	4J-f	4J-g	4J-h	4J-h (0.5-1')	4J-i	4K-a	4K-b	4K-c
Sample Collection Date				4/8/2014	4/8/2014	4/9/2014	4/9/2014	5/5/2014	4/9/2014	4/9/2014	4/9/2014	5/5/2014	4/9/2014	4/8/2014	4/8/2014	4/8/2014
Laboratory ID Number				14-04-0596 23	14-04-0596 22	14-04-0816 6	14-04-0816 5	14-05-0445 23	14-04-0816 4	14-04-0816 19	14-04-0816 20	14-05-0445 25	14-04-0816 21	14-04-0596 21	14-04-0596 20	14-04-0596 19
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	15.1	8.13	12.5	16.6	7.65	11.6	12.5	16.5	6.39	14	8.19	7.88	6.32
Cadmium	20 (Note 3)	1	---	0.858 J	0.84 J	0.871 J	0.847 J	NA	0.854 J	0.828 J	0.775 J	NA	0.808 J	0.923 J	0.878 J	0.828 J
Lead	250 (Note 4)	1	31.5	30.6	29.2	30.1	30.8	NA	31.6	31.2	29.5	NA	30.9	30.9	25.9	28.8
Selenium	1.1 (Note 1)	1	0.3	0.729 J	0.558 J	0.536 J	0.63 J	NA	0.645 J	0.572 J	0.495 J	NA	0.482 J	0.587 J	0.512 J	0.586 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.1 UJL	<2.2 UJL	<2.2 UJL	NA	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
4,4'-DDE	5900 (Note 1)	5	---	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	NA	<2.0 UJL	<2.1 UJL	<2.1 UJL	NA	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Aldrin	50 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	NA	<2.1 UJL	<2.2 UJL	<2.2 UJL	NA	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL
Beta-BHC	14 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL
Chlordane	4800 (Note 1)	50	---	<23 UJL	<23 UJL	<22 UJL	<22 UJL	NA	<22 UJL	<23 UJL	<23 UJL	NA	<22 UJL	<22 UJL	<22 UJL	<21 UJL
Delta-BHC	87 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.7 UJL	NA	<1.7 UJL	<1.8 UJL	<1.8 UJL	NA	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Dieldrin	24 (Note 1)	5	---	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.2 UJL	NA	<2.2 UJL	<2.3 UJL	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.8 UJL	<1.8 UJL	NA	<1.8 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.9 UJL	<2.0 UJL	<1.9 UJL	<1.9 UJL	NA	<1.9 UJL	<1.9 UJL	<1.9 UJL	NA	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.8 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.3 UJL	<2.4 UJL	<2.3 UJL	<2.3 UJL	NA	<2.3 UJL	<2.3 UJL	<2.4 UJL	NA	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Endrin	380 (Note 1)	5	---	<2.5 UJL	<2.5 UJL	<2.5 UJL	<2.4 UJL	NA	<2.4 UJL	<2.5 UJL	<2.5 UJL	NA	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.3 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	NA	<1.7 UJL	<1.7 UJL	<1.7 UJL	NA	<1.7 UJL	<1.6 UJL	<1.6 UJL	<1.6 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.4 UJL	NA	<2.3 UJL	<2.4 UJL	<2.4 UJL	NA	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Heptachlor	94 (Note 1)	5	---	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.5 UJL	<2.5 UJL	<2.4 UJL	<2.4 UJL	NA	<2.4 UJL	<2.5 UJL	<2.5 UJL	NA	<2.4 UJL	<2.4 UJL	<2.4 UJL	<2.3 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.2 UJL	<2.3 UJL	<2.2 UJL	<2.2 UJL	NA	<2.2 UJL	<2.2 UJL	<2.3 UJL	NA	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL
Toxaphene	1200 (Note 1)	100	---	<44 UJL	<44 UJL	<44 UJL	<43 UJL	NA	<43 UJL	<44 UJL	<44 UJL	NA	<43 UJL	<42 UJL	<42 UJL	<41 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.6	<1.6	<1.6	<1.6	NA	<1.5	<1.6	<1.6	NA	<1.5	<1.5	<1.5	<1.5
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.2	<3.3	<3.2	<3.2	NA	<3.2	<3.2	<3.2	NA	<3.2	<3.2	<3.2	<3.1
2,4-D	1300 (Note 1)	100	---	<20	<20	<20	<19	NA	<19	<20	<20	NA	<19	<19	<19	<19
2,4-DB	190 (Note 1)	100	---	<22	<22	<22	<22	NA	<22	<22	<22	NA	<22	<22	<21	<21
Dalapon	290 (Note 1)	250	---	<100	<100	<100	<99	NA	<99	<100	<100	NA	<98	<98	<98	<96
Dicamba	730 (Note 1)	10	---	<1.7	<1.7	<1.7	<1.7	NA	<1.7	<1.7	<1.7	NA	<1.7	<1.7	<1.7	<1.6
Dichlorprop	230 (Note 1)	100	---	<23	<23	<23	<23	NA	<23	<23	<23	NA	<23	<23	<22	<22
Dinoseb	180 (Note 1)	50	---	<7.0 UJL	<7.1 UJL	<7.0 UJL	<6.9 UJL	NA	<6.9 UJL	<7.0 UJL	<7.0 UJL	NA	<6.9 UJL	<6.9 UJL	<6.8 UJL	<6.7 UJL
MCPA	12 (Note 1)	10000	---	<2800	<2900	<2800	<2800	NA	<2800	<2800	<2800	NA	<2800	<2800	<2800	<2700
MCPP	23 (Note 1)	10000	---	<4400	<4400	<4300	<4300	NA	<4300	<4300	<4300	NA	<4300	<4300	<4200	<4100

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	4K-d	4K-e	4K-f	4K-g	4K-h	4L-a	5H-a	5H-b	5H-c	5H-d	5H-e	5H-f	5H-g
Sample Collection Date				4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/3/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014
Laboratory ID Number				14-04-0816 3	14-04-0816 2	14-04-0816 1	14-04-0816 22	14-04-0816 23	14-04-0418 24	14-04-0814 9	14-04-0814 8	14-04-0814 7	14-04-0814 10	14-04-0814 11	14-04-0814 12	14-04-0815 2
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	10.5	7.27	7.15	8.1	7.91	7.04	6.34	7.82	9.98	6.83	6.29	8.68	6.83
Cadmium	20 (Note 3)	1	---	0.831 J	0.813 J	0.782 J	0.778 J	0.766 J	0.816 J	0.518 J	0.537 J	0.602 J	0.554 J	0.519 J	0.557 J	0.545 J
Lead	250 (Note 4)	1	31.5	31	27.4	29	24.9	28.9	27.7	14.8	17.5	25.2	16.6	15.7	19.8	23.3
Selenium	1.1 (Note 1)	1	0.3	0.707 J	0.546 J	0.517 J	0.592 J	0.515 J	0.646 J	0.537 J	0.665 J	0.528 J	0.636 J	0.657 J	0.6 J	0.583 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.1 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	2.2 JL	<2.0 UJL	<2.0	<2.1 UJL	<2.0 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL
4,4'-DDE	5900 (Note 1)	5	---	<2.0 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.7 UJL	<1.9 UJL	<1.9	<2.0 UJL	<1.9 UJL	<1.9 UJL	<2.0 UJL	<1.9 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.3 UJL	<2.1 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<1.9 UJL	<2.1 UJL	<2.1	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Aldrin	50 (Note 1)	5	---	<2.1 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<1.7 UJL	<2.0 UJL	<2.0	<2.1 UJL	<2.0 UJL	<2.0 UJL	<2.1 UJL	<2.0 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<1.8 UJL	<2.1 UJL	<2.1	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
Beta-BHC	14 (Note 1)	5	---	<1.8 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.5 UJL	<1.7 UJL	<1.7	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Chlordane	4800 (Note 1)	50	---	<22 UJL	<21 UJL	<21 UJL	<21 UJL	<21 UJL	<18 UJL	<21 UJL	<21	<22 UJL	<21 UJL	<21 UJL	<22 UJL	<21 UJL
Delta-BHC	87 (Note 1)	5	---	<1.7 UJL	<1.6 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.4 UJL	<1.6 UJL	<1.6	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Dieldrin	24 (Note 1)	5	---	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<1.8 UJL	<2.1 UJL	<2.1	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.2 UJL	<2.1 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.8 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.5 UJL	<1.7 UJL	<1.7	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.5 UJL	<1.8 UJL	<1.8	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.3 UJL	<2.1 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.9 UJL	<2.2 UJL	<2.1	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Endrin	380 (Note 1)	5	---	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.0 UJL	<2.3 UJL	<2.3	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.7 UJL	<1.5 UJL	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.4 UJL	<1.6 UJL	<1.5	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.6 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<1.9 UJL	<2.2 UJL	<2.2	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.3 UJL	<2.2 UJL
Heptachlor	94 (Note 1)	5	---	<2.2 UJL	<2.0 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<1.8 UJL	<2.1 UJL	<2.0	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.0 UJL	<2.3 UJL	<2.3	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.4 UJL	<2.3 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<1.8 UJL	<2.1 UJL	<2.1	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
Toxaphene	1200 (Note 1)	100	---	<43 UJL	<40 UJL	<40 UJL	<41 UJL	<41 UJL	<35 UJL	<40 UJL	<40	<42 UJL	<41 UJL	<41 UJL	<42 UJL	<41 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.5	<1.5	<1.5	<1.5	<1.5	<1.3	<1.5	<1.4	<1.5	<1.5	<1.5	<1.5	<1.5
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.2	<3.0	<3.0	<3.1	<3.0	<2.6	<3.0	<3.0	<3.1	<3.0	<3.1	<3.1	<3.1
2,4-D	1300 (Note 1)	100	---	<19	<18	<18	<19	<18	<16	<18	<18	<19	<18	<19	<19	<19
2,4-DB	190 (Note 1)	100	---	<22	<20	<20	<21	<21	<18	<20	<20	<21	<20	<21	<21	<21
Dalapon	290 (Note 1)	250	---	<98	<94	<93	<95	<94	<81	<93	<92	<96	<94	<95	<95	<95
Dicamba	730 (Note 1)	10	---	<1.7	<1.6	<1.6	<1.6	<1.6	<1.4	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
Dichlorprop	230 (Note 1)	100	---	<23	<21	<21	<22	<22	<19	<21	<21	<22	<21	<22	<22	<22
Dinoseb	180 (Note 1)	50	---	<6.9 UJL	<6.5 UJL	<6.5 UJL	<6.6 UJL	<6.6 UJL	<5.6 UJL	<6.5 UJL	<6.4 UJL	<6.7 UJL	<6.5 UJL	<6.6 UJL	<6.6 UJL	<6.6 UJL
MCPA	12 (Note 1)	10000	---	<2800	<2600	<2600	<2700	<2700	<2300	<2600	<2600	<2700	<2600	<2700	<2700	<2700
MCPP	23 (Note 1)	10000	---	<4300	<4100	<4000	<4100	<4100	<3500	<4000	<4000	<4100	<4100	<4100	<4100	<4100

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL		MQL	Back-ground	5H-h		5H-i		5I-a		5I-b		5I-c		5I-d		5I-e		5I-f		5I-g		5I-h		5I-i		5J-a		5J-b	
Sample Collection Date					4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014	
Laboratory ID Number					14-04-0815	1	14-04-0814	24	14-04-0814	6	14-04-0814	5	14-04-0814	4	14-04-0814	13	14-04-0814	14	14-04-0814	15	14-04-0814	23	14-04-0814	22	14-04-0814	21	14-04-0814	3	14-04-0814	2
METALS (mg/kg)																														
Arsenic	24	(Note 2)	1	15.9	7.21		10.3		12.3		11.8		10.7		11.9		10.7		11.4		10.5		9.78		10.3		12		15.1	
Cadmium	20	(Note 3)	1	---	0.533	J	0.589	J	0.767	J	0.831	J	0.847	J	0.64	J	0.738	J	0.855	J	0.642	J	0.667	J	0.777	J	0.903	J	0.857	J
Lead	250	(Note 4)	1	31.5	19.3		26.1		27.7		28.3		27		24		24.9		25.9		24.9		21.7		24.2		27.9		25.3	
Selenium	1.1	(Note 1)	1	0.3	0.538	J	0.59	J	0.499	J	0.799	J	0.733	J	0.7	J	0.659	J	0.631	J	0.702	J	0.691	J	0.64	J	0.687	J	0.714	J
PESTICIDES (ug/kg)																														
4,4'-DDD	6500	(Note 1)	5	---	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL
4,4'-DDE	5900	(Note 1)	5	---	<1.9	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.1	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.1	UJL	<2.0	UJL
4,4'-DDT	5400	(Note 1)	5	---	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL
Aldrin	50	(Note 1)	5	---	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.1	UJL
Alpha-BHC	4.0	(Note 1)	5.0	---	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL
Beta-BHC	14	(Note 1)	5	---	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL
Chlordane	4800	(Note 1)	50	---	<21	UJL	<22	UJL	<22	UJL	<22	UJL	<22	UJL	<22	UJL	<22	UJL	<23	UJL	<21	UJL	<21	UJL	<22	UJL	<23	UJL	<22	UJL
Delta-BHC	87	(Note 1)	5	---	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.7	UJL
Dieldrin	24	(Note 1)	5	---	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.2	UJL
Endosulfan I	15000	(Note 1)	5	---	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL
Endosulfan II	46000	(Note 1)	5	---	<1.8	UJL	<1.8	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.8	UJL	<1.8	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL
Endosulfan Sulfate	380000	(Note 1)	5	---	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL
Endrin	380	(Note 1)	5	---	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.5	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.5	UJL	<2.4	UJL
Endrin Aldehyde	19000	(Note 1)	5	---	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.7	UJL	<1.7	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.7	UJL	<1.7	UJL
Gamma-BHC	4.6	(Note 1)	5.0	---	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL
Heptachlor	94	(Note 1)	5	---	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL
Heptachlor Epoxide	29	(Note 1)	5	---	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.4	UJL	<2.5	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.5	UJL	<2.4	UJL
Methoxychlor	62000	(Note 1)	5	---	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL
Toxaphene	1200	(Note 1)	100	---	<41	UJL	<42	UJL	<43	UJL	<43	UJL	<43	UJL	<42	UJL	<43	UJL	<44	UJL	<42	UJL	<42	UJL	<42	UJL	<44	UJL	<43	UJL
HERBICIDES (ug/kg)																														
2,4,5-T	490	(Note 1)	10	---	<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.6		<1.5		<1.5		<1.5		<1.6		<1.5	
2,4,5-TP (Silvex)	2600	(Note 1)	10	---	<3.0		<3.1		<3.2		<3.2		<3.1		<3.1		<3.2		<3.2		<3.1		<3.1		<3.1		<3.2		<3.2	
2,4-D	1300	(Note 1)	100	---	<19		<19		<19		<19		<19		<19		<19		<19		<19		<19		<19		<19		<19	
2,4-DB	190	(Note 1)	100	---	<21		<21		<21		<22		<21		<21		<22		<22		<21		<21		<21		<22		<21	
Dalapon	290	(Note 1)	250	---	<94		<95		<98		<99		<97		<97		<99		<99		<95		<96		<97		<99		<98	
Dicamba	730	(Note 1)	10	---	<1.6		<1.6		<1.7		<1.7		<1.7		<1.7		<1.7		<1.7		<1.6		<1.6		<1.7		<1.7		<1.7	
Dichlorprop	230	(Note 1)	100	---	<22		<22		<23		<23		<22		<22		<23		<23		<22		<22		<22		<23		<22	
Dinoseb	180	(Note 1)	50	---	<6.6	UJL	<6.7	UJL	<6.8	UJL	<6.9	UJL	<6.8	UJL	<6.8	UJL	<6.9	UJL	<6.9	UJL	<6.7	UJL	<6.7	UJL	<6.8	UJL	<6.9	UJL	<6.8	UJL
MCPA	12	(Note 1)	10000	---	<2700		<2700		<2800		<2800		<2700		<2700		<2800		<2800		<2700		<2700		<2700		<2800		<2800	
MCPP	23	(Note 1)	10000	---	<4100		<4100		<4300		<4300		<4200		<4200		<4300		<4300		<4100		<4200		<4200		<4300		<4200	

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL	MQL	Back-ground	5J-c	5J-d	5J-e	5J-e (0.5-1')	5J-f	5J-g	5J-h	5K-a	6H-a	6H-b	6H-c	6H-d	6H-e
Sample Collection Date				4/9/2014	4/9/2014	4/9/2014	5/5/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014	4/9/2014
Laboratory ID Number				14-04-0814 1	14-04-0814 16	14-04-0814 17	14-05-0445 27	14-04-0814 18	14-04-0814 20	14-04-0814 19	14-04-0816 24	14-04-0815 3	14-04-0815 4	14-04-0815 5	14-04-0815 15	14-04-0815 14
METALS (mg/kg)																
Arsenic	24 (Note 2)	1	15.9	14.5	11	19	7.02	9.02	10.8	14	11.1	12.3	7.89	8.81	7.63	7.8
Cadmium	20 (Note 3)	1	---	0.881 J	0.896 J	0.886 J	NA	0.747 J	0.839 J	0.814 J	0.829 J	0.716 J	0.507 J	0.573 J	0.599 J	0.519 J
Lead	250 (Note 4)	1	31.5	26.1	24.5	23.6	NA	18.8	24.8	23.9	27	25.7	22.1	24.9	23.1	21.3
Selenium	1.1 (Note 1)	1	0.3	0.709 J	0.634 J	0.541 J	NA	0.473 J	0.7 J	0.592 J	0.592 J	0.684 J	0.477 J	0.576 J	0.504 J	0.714 J
PESTICIDES (ug/kg)																
4,4'-DDD	6500 (Note 1)	5	---	<2.1 UJL	<2.1 UJL	<2.1 UJL	NA	<2.0 UJL	<2.1 UJL	<2.1	<2.1 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL
4,4'-DDE	5900 (Note 1)	5	---	<2.0 UJL	<2.0 UJL	<2.0 UJL	NA	<1.9 UJL	<2.0 UJL	2 J	<2.0 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL	<1.9 UJL
4,4'-DDT	5400 (Note 1)	5	---	<2.2 UJL	<2.3 UJL	<2.2 UJL	NA	<2.1 UJL	<2.3 UJL	<2.2	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.1 UJL	<2.1 UJL
Aldrin	50 (Note 1)	5	---	<2.1 UJL	<2.1 UJL	<2.1 UJL	NA	<2.0 UJL	<2.1 UJL	<2.1	<2.1 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL	<2.0 UJL
Alpha-BHC	4.0 (Note 1)	5.0	---	<2.1 UJL	<2.2 UJL	<2.1 UJL	NA	<2.1 UJL	<2.2 UJL	<2.1	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
Beta-BHC	14 (Note 1)	5	---	<1.7 UJL	<1.8 UJL	<1.8 UJL	NA	<1.7 UJL	<1.8 UJL	<1.7	<1.8 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Chlordane	4800 (Note 1)	50	---	<21 UJL	<22 UJL	<22 UJL	NA	<21 UJL	<22 UJL	<21	<22 UJL	<21 UJL	<21 UJL	<21 UJL	<21 UJL	<21 UJL
Delta-BHC	87 (Note 1)	5	---	<1.7 UJL	<1.7 UJL	<1.7 UJL	NA	<1.6 UJL	<1.7 UJL	<1.7	<1.7 UJL	<1.6 UJL	<1.7 UJL	<1.7 UJL	<1.6 UJL	<1.6 UJL
Dieldrin	24 (Note 1)	5	---	<2.2 UJL	<2.2 UJL	<2.2 UJL	NA	<2.1 UJL	<2.2 UJL	<2.1	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
Endosulfan I	15000 (Note 1)	5	---	<1.7 UJL	<1.8 UJL	<1.7 UJL	NA	<1.7 UJL	<1.8 UJL	<1.7	<1.8 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL	<1.7 UJL
Endosulfan II	46000 (Note 1)	5	---	<1.8 UJL	<1.9 UJL	<1.9 UJL	NA	<1.8 UJL	<1.9 UJL	<1.8	<1.9 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL	<1.8 UJL
Endosulfan Sulfate	380000 (Note 1)	5	---	<2.2 UJL	<2.3 UJL	<2.2 UJL	NA	<2.2 UJL	<2.3 UJL	<2.2	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Endrin	380 (Note 1)	5	---	<2.3 UJL	<2.4 UJL	<2.4 UJL	NA	<2.3 UJL	<2.4 UJL	<2.3	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Endrin Aldehyde	19000 (Note 1)	5	---	<1.6 UJL	<1.6 UJL	<1.6 UJL	NA	<1.6 UJL	<1.7 UJL	<1.6	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.6 UJL	<1.6 UJL
Gamma-BHC	4.6 (Note 1)	5.0	---	<2.3 UJL	<2.3 UJL	<2.3 UJL	NA	<2.2 UJL	<2.3 UJL	<2.3	<2.3 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL	<2.2 UJL
Heptachlor	94 (Note 1)	5	---	<2.1 UJL	<2.2 UJL	<2.1 UJL	NA	<2.1 UJL	<2.2 UJL	<2.1	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.0 UJL	<2.1 UJL
Heptachlor Epoxide	29 (Note 1)	5	---	<2.3 UJL	<2.4 UJL	<2.4 UJL	NA	<2.3 UJL	<2.4 UJL	<2.3	<2.4 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL	<2.3 UJL
Methoxychlor	62000 (Note 1)	5	---	<2.1 UJL	<2.2 UJL	<2.2 UJL	NA	<2.1 UJL	<2.2 UJL	<2.1	<2.2 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL	<2.1 UJL
Toxaphene	1200 (Note 1)	100	---	<42 UJL	<43 UJL	<42 UJL	NA	<41 UJL	<43 UJL	<41	<42 UJL	<41 UJL	<41 UJL	<41 UJL	<40 UJL	<41 UJL
HERBICIDES (ug/kg)																
2,4,5-T	490 (Note 1)	10	---	<1.5	<1.5	<1.5	NA	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2,4,5-TP (Silvex)	2600 (Note 1)	10	---	<3.1	<3.1	<3.1	NA	<3.0	<3.2	<3.1	<3.1	<3.0	<3.0	<3.0	<3.0	<3.0
2,4-D	1300 (Note 1)	100	---	<19	<19	<19	NA	<18	<19	<19	<19	<18	<18	<18	<18	<18
2,4-DB	190 (Note 1)	100	---	<21	<21	<21	NA	<21	<22	<21	<21	<20	<21	<21	<20	<20
Dalapon	290 (Note 1)	250	---	<96	<97	<96	NA	<94	<99	<95	<97	<93	<94	<94	<93	<94
Dicamba	730 (Note 1)	10	---	<1.6	<1.7	<1.6	NA	<1.6	<1.7	<1.6	<1.7	<1.6	<1.6	<1.6	<1.6	<1.6
Dichlorprop	230 (Note 1)	100	---	<22	<22	<22	NA	<22	<23	<22	<22	<21	<22	<22	<21	<22
Dinoseb	180 (Note 1)	50	---	<6.7 UJL	<6.8 UJL	<6.7 UJL	NA	<6.6 UJL	<6.9 UJL	<6.6 UJL	<6.8 UJL	<6.5 UJL	<6.6 UJL	<6.6 UJL	<6.5 UJL	<6.5 UJL
MCPA	12 (Note 1)	10000	---	<2700	<2700	<2700	NA	<2600	<2800	<2700	<2700	<2600	<2700	<2700	<2600	<2600
MCPP	23 (Note 1)	10000	---	<4200	<4200	<4200	NA	<4100	<4300	<4100	<4200	<4000	<4100	<4100	<4000	<4100

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-acre source area).
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

TABLE 4D

PRAA 1 SURFACE SOIL DATA SUMMARY
GRAND PARK - FRISCO, TEXAS

Constituent	Critical PCL		MQL	Back-ground	6H-f		6H-g		6H-h		6H-i		6I-a		6I-b		6I-c		6I-d		6I-e		6I-f		6J-a	
Sample Collection Date					4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014		4/9/2014	
Laboratory ID Number					14-04-0815	13	14-04-0815	16	14-04-0815	17	14-04-0815	18	14-04-0815	6	14-04-0815	7	14-04-0815	8	14-04-0815	12	14-04-0815	11	14-04-0815	10	14-04-0815	9
METALS (mg/kg)																										
Arsenic	24	(Note 2)	1	15.9	9.8		6.64		10.7		9.69		10.8		10.4		10.9		9.88		12.6		10.9		11.2	
Cadmium	20	(Note 3)	1	---	0.578	J	0.506	J	0.602	J	0.59	J	0.617	J	0.705	J	0.817	J	0.631	J	0.7	J	0.813	J	0.826	J
Lead	250	(Note 4)	1	31.5	24.9		19.1		21.6		23.1		25.9		26.8		29.7		25		26.3		24.3		27.9	
Selenium	1.1	(Note 1)	1	0.3	0.709	J	0.591	J	0.56	J	0.51	J	0.532	J	0.618	J	0.678	J	0.573	J	0.591	J	0.661	J	0.622	J
PESTICIDES (ug/kg)																										
4,4'-DDD	6500	(Note 1)	5	---	<2.1	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.0	UJL	<2.1	UJL
4,4'-DDE	5900	(Note 1)	5	---	2.1	JL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<1.9	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	3	J	<2.0	UJL
4,4'-DDT	5400	(Note 1)	5	---	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL
Aldrin	50	(Note 1)	5	---	<2.1	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.0	UJL	<2.1	UJL
Alpha-BHC	4.0	(Note 1)	5.0	---	<2.1	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL
Beta-BHC	14	(Note 1)	5	---	<1.7	UJL	<1.6	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.8	UJL
Chlordane	4800	(Note 1)	50	---	<21	UJL	<20	UJL	<21	UJL	<21	UJL	<21	UJL	<22	UJL	<22	UJL	<21	UJL	<21	UJL	<21	UJL	<22	UJL
Delta-BHC	87	(Note 1)	5	---	<1.7	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL
Dieldrin	24	(Note 1)	5	---	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.2	UJL
Endosulfan I	15000	(Note 1)	5	---	<1.7	UJL	<1.6	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.8	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL	<1.7	UJL
Endosulfan II	46000	(Note 1)	5	---	<1.8	UJL	<1.7	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.9	UJL	<1.9	UJL	<1.8	UJL	<1.8	UJL	<1.8	UJL	<1.9	UJL
Endosulfan Sulfate	380000	(Note 1)	5	---	<2.2	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL
Endrin	380	(Note 1)	5	---	<2.3	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL
Endrin Aldehyde	19000	(Note 1)	5	---	<1.6	UJL	<1.5	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL	<1.6	UJL
Gamma-BHC	4.6	(Note 1)	5.0	---	<2.3	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.2	UJL	<2.3	UJL
Heptachlor	94	(Note 1)	5	---	<2.1	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL
Heptachlor Epoxide	29	(Note 1)	5	---	<2.3	UJL	<2.2	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL	<2.4	UJL	<2.3	UJL	<2.3	UJL	<2.3	UJL	<2.4	UJL
Methoxychlor	62000	(Note 1)	5	---	<2.1	UJL	<2.0	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL	<2.2	UJL	<2.1	UJL	<2.1	UJL	<2.1	UJL	<2.2	UJL
Toxaphene	1200	(Note 1)	100	---	<41	UJL	<40	UJL	<41	UJL	<41	UJL	<41	UJL	<42	UJL	<43	UJL	<41	UJL	<41	UJL	<41	UJL	<42	UJL
HERBICIDES (ug/kg)																										
2,4,5-T	490	(Note 1)	10	---	<1.5		<1.4		<1.5		<1.5		<1.5		<1.5		<1.6		<1.5		<1.5		<1.5		<1.5	
2,4,5-TP (Silvex)	2600	(Note 1)	10	---	<3.1		<2.9		<3.0		<3.0		<3.1		<3.1		<3.2		<3.1		<3.1		<3.1		<3.1	
2,4-D	1300	(Note 1)	100	---	<19		<18		<18		<18		<19		<19		<19		<19		<19		<19		<19	
2,4-DB	190	(Note 1)	100	---	<21		<20		<20		<20		<21		<21		<22		<21		<21		<21		<21	
Dalapon	290	(Note 1)	250	---	<96		<91		<94		<93		<95		<96		<99		<96		<96		<95		<97	
Dicamba	730	(Note 1)	10	---	<1.6		<1.6		<1.6		<1.6		<1.6		<1.6		<1.7		<1.6		<1.6		<1.6		<1.7	
Dichlorprop	230	(Note 1)	100	---	<22		<21		<22		<21		<22		<22		<23		<22		<22		<22		<22	
Dinoseb	180	(Note 1)	50	---	<6.7	UJL	<6.4	UJL	<6.5	UJL	<6.5	UJL	<6.6	UJL	<6.7	UJL	<6.9	UJL	<6.7	UJL	<6.7	UJL	<6.6	UJL	<6.8	UJL
MCPA	12	(Note 1)	10000	---	<2700		<2600		<2600		<2600		<2700		<2700		<2800		<2700		<2700		<2700		<2700	
MCPP	23	(Note 1)	10000	---	<4200		<4000		<4100		<4000		<4100		<4200		<4300		<4100		<4200		<4100		<4200	

Notes:
1. Critical Residential PCLs are based on TCEQs June 29, 2012 Tier 1 PCL Table for a residential site (0.5 to 30-
2. 24 mg/Kg is the human contact PCL for arsenic. It is used here based on a Tier 2 PCL calculated for the soil to groundwater PCL that exceeds 24 mg/Kg.
3. Tier 2 Residential $^{GW}Soil_{Inn}$ PCL for 30 acre source area.
4. 250 mg/Kg represents half of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

Shaded values exceed the critical PCL.
<x = Non-detect results presented as less than the Sample Quantitation Limit.
J = Estimated concentration
NA - Not analyzed

Surface Soil COC Concentration Maps

Figure 4A-1 Arsenic Concentrations in Surface Soils

Figure 4A-2 Cadmium Concentrations in Surface Soils

Figure 4A-3 Lead Concentrations in Surface Soils

Figure 4A-4 Selenium Concentrations in Surface Soils

Figure 4A-5 Herbicides and Pesticides Concentrations in Surface Soils

Figure 4B - Subsurface Soil COC Concentration Maps
(NOT APPLICABLE)

Figure 4C - Cross Sections
(NOT APPLICABLE)

LEGEND

× SURFACE SOIL SAMPLE

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
ARSENIC CONCENTRATIONS
IN SURFACE SOIL

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046021
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-30-2014			FIGURE NO.
PURPOSE: APAR			4A-1

S:\CAD\City of Frisco\13046\13046021 Fig 4A-1.dwg, 6/13/2014 8:28:56 AM

200 100 0 200
(SCALE IN FEET)

LEGEND

× SURFACE SOIL SAMPLE

ALL DETECTED CONCENTRATIONS ARE ESTIMATED ("J-FLAGGED")

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
CADMIUM CONCENTRATIONS IN SURFACE SOIL

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046022
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-30-2014			FIGURE NO. 4A-2
PURPOSE: APAR			

S:\CAD\City of Frisco\13046\13046022 Fig 4A-2.dwg, 6/13/2014 8:30:00 AM

200 100 0 200
(SCALE IN FEET)

LEGEND

× SURFACE SOIL SAMPLE

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
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AUSTIN, TEXAS 78701
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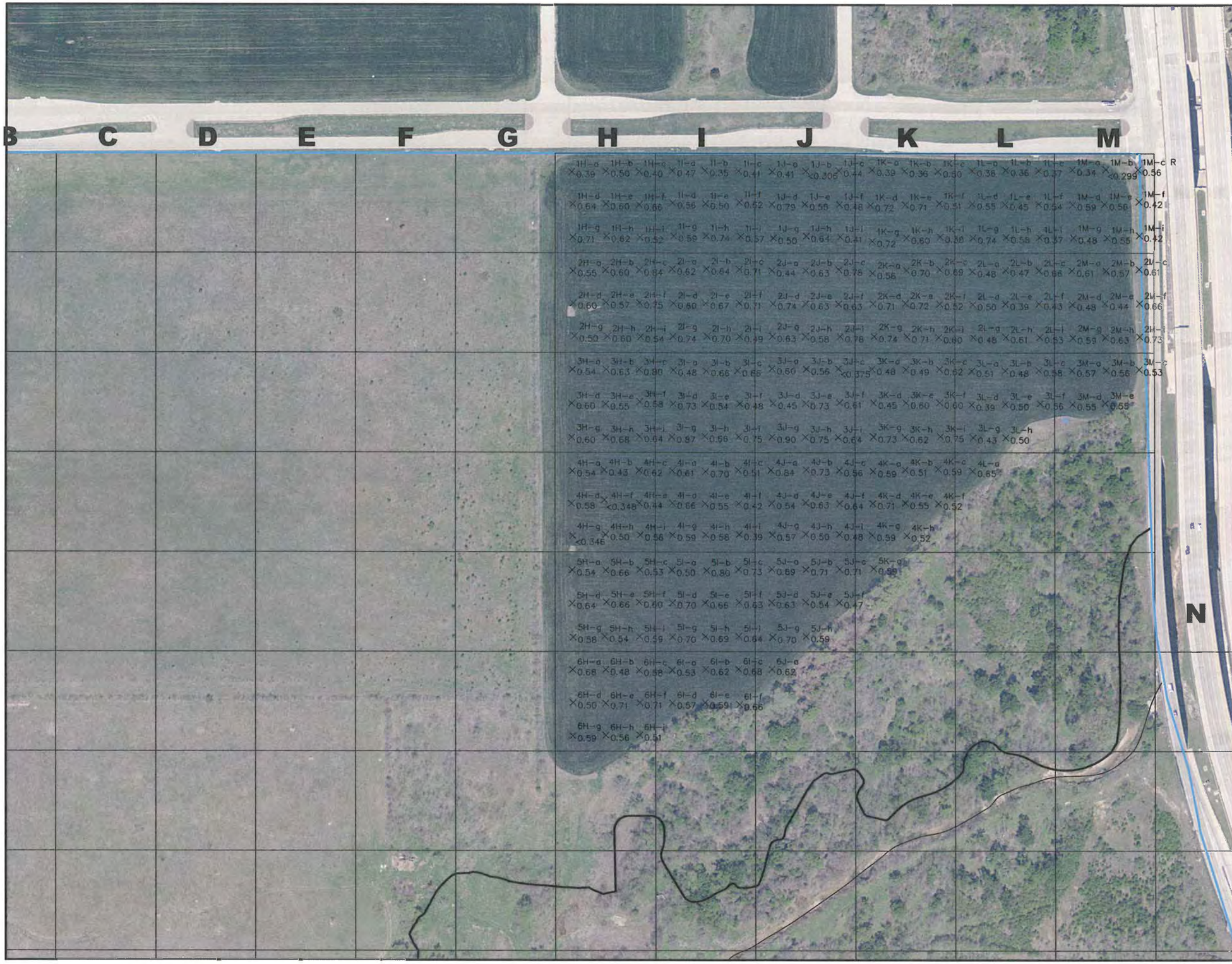
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
LEAD CONCENTRATIONS
IN SURFACE SOIL

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046023
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-30-2014			FIGURE NO. 4A-3
PURPOSE: APAR			

S:\CAD\City of Frisco\13046\13046023 Fig 4A-3.dwg, 6/13/2014 8:31:06 AM



200 100 0 200
(SCALE IN FEET)

LEGEND

× SURFACE SOIL SAMPLE

ALL DETECTED CONCENTRATIONS ARE ESTIMATED ("J-FLAGGED")

REV.	DATE	DESCRIPTION	DR BY	APP BY

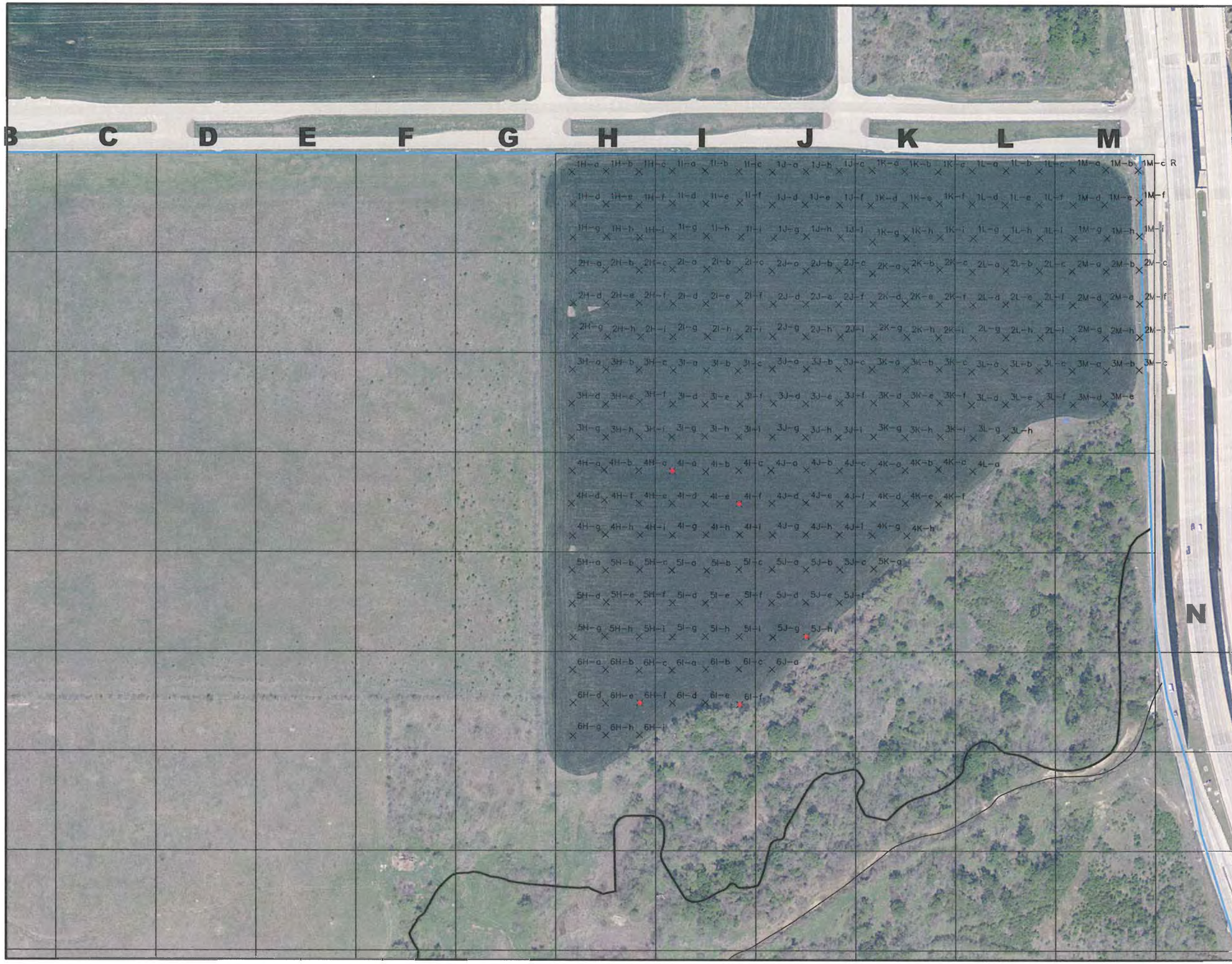
COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
SELENIUM CONCENTRATIONS IN SURFACE SOIL

DES BY		SCALE: SEE BAR SCALE
DR BY	SDB	PROJECT NO. 13046.01
CHK BY	RDV	CJI NO. 13046024
APP BY	RDV	SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-30-2014		FIGURE NO. 4A-4
PURPOSE: APAR		

S:\CAD\City of Frisco\13046\13046024 Fig 4A-4.dwg, 6/13/2014 8:32:08 AM



N

200 100 0 200

(SCALE IN FEET)

LEGEND

× SURFACE SOIL SAMPLE

ALL CONCENTRATIONS NON-DETECT EXCEPT

4,4'-DDD ESTIMATED AT
2.2 J ug/Kg at 4I-a

4,4'-DDE ESTIMATED AT
2.0 J ug/Kg at 5J-h
2.1 J ug/Kg at 6h-f
2.3 J ug/Kg at 4I-f
3.0 J ug/Kg at 6I-f

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK PRAA 1
FRISCO, TEXAS

SHEET TITLE:
HERBICIDES AND PESTICIDES CONCENTRATIONS IN SURFACE SOIL

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046024
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 06-12-2014			FIGURE NO. 4A-5
PURPOSE: APAR			

S:\CAD\City of Frisco\13046\13046044 Fig 4A-5.dwg, 6/13/2014 8:48:25 AM

Section 11 Soil Critical PCL Development

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

Tier 2 and 3 Development

Tier 2 soil-to-groundwater PCLs were calculated for arsenic, cadmium, and lead using the TRRP Tier 2 Soil-to-Groundwater PCL equation. The calculations were performed to consider the sorptive redistribution of contaminants from leachate into underlying unaffected soils. As a conservative measure, all of the Tier 1 default parameters for a 30-acre source area and residential land use were used in the calculations, with exception of L1 and L2. L1 is the thickness of the affected soils. L2 is the depth from the top of the affected soils to the groundwater table.

As described in Section 1.3, the depth to the upper groundwater-bearing unit beneath the site is deeper than 17 feet bgs based on GP-MW-3 being a dry well. As a conservative measure, L2 has been assigned a value of 17 feet (for the arsenic calculation). For cadmium and lead, an L2 value of 0.5 feet was used, assuming soil contaminated with these metals is in direct contact with groundwater at the site

Based on findings of the affected property assessment, the maximum depth of affected soils at the site should be less than 1 feet bgs. Therefore, L1 has been assigned a value of 0.5 feet.

The Tier 2 soil-to-groundwater PCLs calculations are provided in Appendix 9.

Non-Default Affected Property Parameters

Not Applicable.

Section 11.2 Soil PCL Adjustments

Soil PCL adjustments were not performed and aesthetics were not considered during this project.

Section 11.3 Soil Critical PCLs

Critical PCLs were developed in surface soils for each COC that was detected at the site. The critical PCL for each COC in surface soil was selected as the lower of: (1) the applicable Tier 1 or Tier 2 soil-to-groundwater PCL; and (2) the Tier 1 PCL for combined ingestion, dermal contact, and inhalation of volatiles/particulates, and ingestion of vegetables. The critical PCLs were based on residential land use and a 30-acre source area. As described in Section 2.6, ecological receptors are not expected to be threatened by this site.

Table 11A - Surface Soil Critical PCLs (On-Site/Off-Site)

Table 11B - Subsurface Soil Critical PCLs (On-Site/Off-Site) – NOT APPLICABLE

Table 11A. Surface Soil Critical PCLs

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

On-Site Surface Soil Critical PCLs

Land use for purpose of critical PCL development: √ Residential ___ Commercial/industrial

COC[4]	$^{Tot}Soil_{Comb}$ PCL			$^{GW}Soil$[1] PCL			Ecological PCL		MQL (mg/kg)	Back-ground (mg/kg)	$^{SW}Soil$[2] (mg/kg)	$^{Sed}Soil$[2] (mg/kg)	Conc (mg/kg)		Remedy or NFA
	(mg/kg)	Tier	Source area size (acres)	(mg/kg)	Tier	Source area size (acres)	0-0.5 ft. (mg/kg)	0.5-5 ft. (mg/kg)					Max	Rep[3]	
Arsenic	**24**	1	<30	102.3	2	<30	NA	NA	1	15.9	NA	NA	20.2	NA	NFA
Cadmium	52	1	<30	**20**	2	<30	NA	NA	1	NA	NA	NA	1.17 J	NA	NFA
Lead	**250[5]**	1	<30	274.5	2	<30	NA	NA	1	31.5	NA	NA	35.4	NA	NFA
Selenium	310	1	<30	**1.1**	1	<30	NA	NA	1	0.3	NA	NA	0.904 J	NA	NFA
DDD (4,4'-DDD)	14	1	<30	**6.5**	1	<30	NA	NA	0.005	NA	NA	NA	0.0022 J	NA	NFA
DDE (4,4'-DDE)	10	1	<30	**5.9**	1	<30	NA	NA	0.005	NA	NA	NA	0.0030 J	NA	NFA

1. $^{GW}Soil$ includes $^{GW}Soil_{Ing}$, $^{GW}Soil_{Class3}$, $^{Air}GW\text{-}Soil_{Inh\text{-}V}$, and $^{GW}Soil$ for secondary MCLs, as applicable.
2. Refer to *Determining PCLs for Surface Water and Sediment* (RG-366/TRRP-24) to determine if a PCL is required to be developed for this pathway.
3. Provide justifications and calculations for use of representative concentrations in Appendix 8.
4. Includes all COCs that were detected in the release determination and assessment samples.
5. The lead assessment level (250 mg/Kg) represents half of the of the TotSoilComb PCL. It is based on 1) an agreement between the City of Frisco and Exide; and 2) a Tier 2 PCL that exceeds this value.

NA – Not Applicable.
NC – Not Calculated.
J – Estimated Value between the SQL and MQL.
D – Diluted due to targets detected over the highest point on the calibration curve, or due to matrix interference. The result is from a diluted sample.

Figure 11A - Surface Soil PCLE Zone Maps
(NOT APPLICABLE)

Figure 11B - Subsurface Soil PCLE Zone Maps
(NOT APPLICABLE)

Figure 11C – Cross Sections of the PCLE Zone
(NOT APPLICABLE)

Section 13 Notifications

Section 13.1 Notification of Actual or Probable Exposure

No notifications were required for actual or probable exposure.

Section 13.2 Other Notifications

Based on the findings of the affected property assessment, off-site properties would not be affected by the PRAA 1 portion of the Grand Park property.

Table 13A. Notification Summary
NOT APPLICABLE

Figure 13A - Notification Map

(NOT APPLICABLE)

APPENDICES

APPENDIX 2

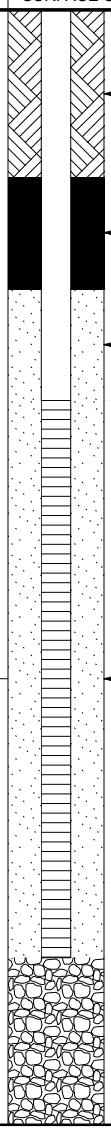
BORING LOGS

PROJECT: **Grand Park**	BORING/WELL ID: **5J-e / GP-MW-3**
LOCATION: **PRAA-1**	
DATE: **5/5/14**	GROUND ELEVATION: **ft** NORTHING:
DRILLING COMPANY: **Sunbelt**	TOC ELEVATION: **ft** EASTING:
DRILLING EQUIPMENT: **Geoprobe**	TOTAL DEPTH: **20 ft**
DRILLING METHOD: **HSA**	LOGGED BY: **R. Varnell**

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION
0					(CL) CLAY, loamy, dry, brown.
	SS		PID = 0		
					Similar to above (STA), increased sand, moist, darker.
5					
	SS		PID = 0		
					STA, sandy CLAY, lighter color.
					STA, with sand stringer.
10	SS		PID = 0		STA, sand stringer from 9.5' to 10'.
					12.0
					(CH) CLAY, calcareous, moist, tan/gray.
					STA, progressively harder with depth.
	SS		PID = 0		
15					
	SS		PID = 0		
20					20.0

WELL DIAGRAM

SURFACE COMPLETION:



Bottom of borehole at 20.0 feet.

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

This boring log should not be used separately from the original report.

PROJECT NO. 13046

CJI LOG WITH WELL - GINT STD US LAB.GDT - 6/24/14 10:21 - S:\BORING LOGS\PROJECT NAME\FRISCO\GRAND PARK.GPJ

APPENDIX 5

WATER WELL RECORDS

Prepared for:

COOK-JOYCE, INC.-AUSTIN
812 West Eleventh Street
Austin, TX 78701-2000

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report

Grand Park

7275 Dallas Parkway

Frisco, Texas 75034

Collin/Denton County

ES-110821

Wednesday, May 28, 2014

Banks Environmental Data, Inc. - 1601 Rio Grande, Ste. 500 - Austin, TX 78701 - 800.531.5255 P - 512.478.1433 F
www.banksenvdata.com

Table of Contents *Grand Park*

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Maps	
Summary Map - 0.5 Mile Buffer	**4**
Topographic Overlay Map - 0.5 Mile Buffer	**5**
Current Imagery Overlay Map - 0.5 Mile Buffer	**6**
Water Well Details	**7**
Database Definitions and Sources	**17**
Disclaimer	**18**

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www.banksenvdata.com

Geographic Summary *Grand Park*

Location
Collin/Denton County, Texas
Target location is 0.537 square miles and has a 3.04 mile perimeter

Coordinates	
Longitude & Latitude in Degrees Minutes Seconds	NA
Longitude & Latitude in Decimal Degrees	NA
X and Y in UTM	NA

Elevation
NA

Zip Codes Searched	
Search Distance	**Zip Codes (historical zip codes included)**
Target Property	75034, 75033
0.5 miles	75034, 75033

Topos Searched	
Search Distance	**Topo Name**
Target Property	Frisco (1982)
0.5 miles	Hebron (1982), Frisco (1982)

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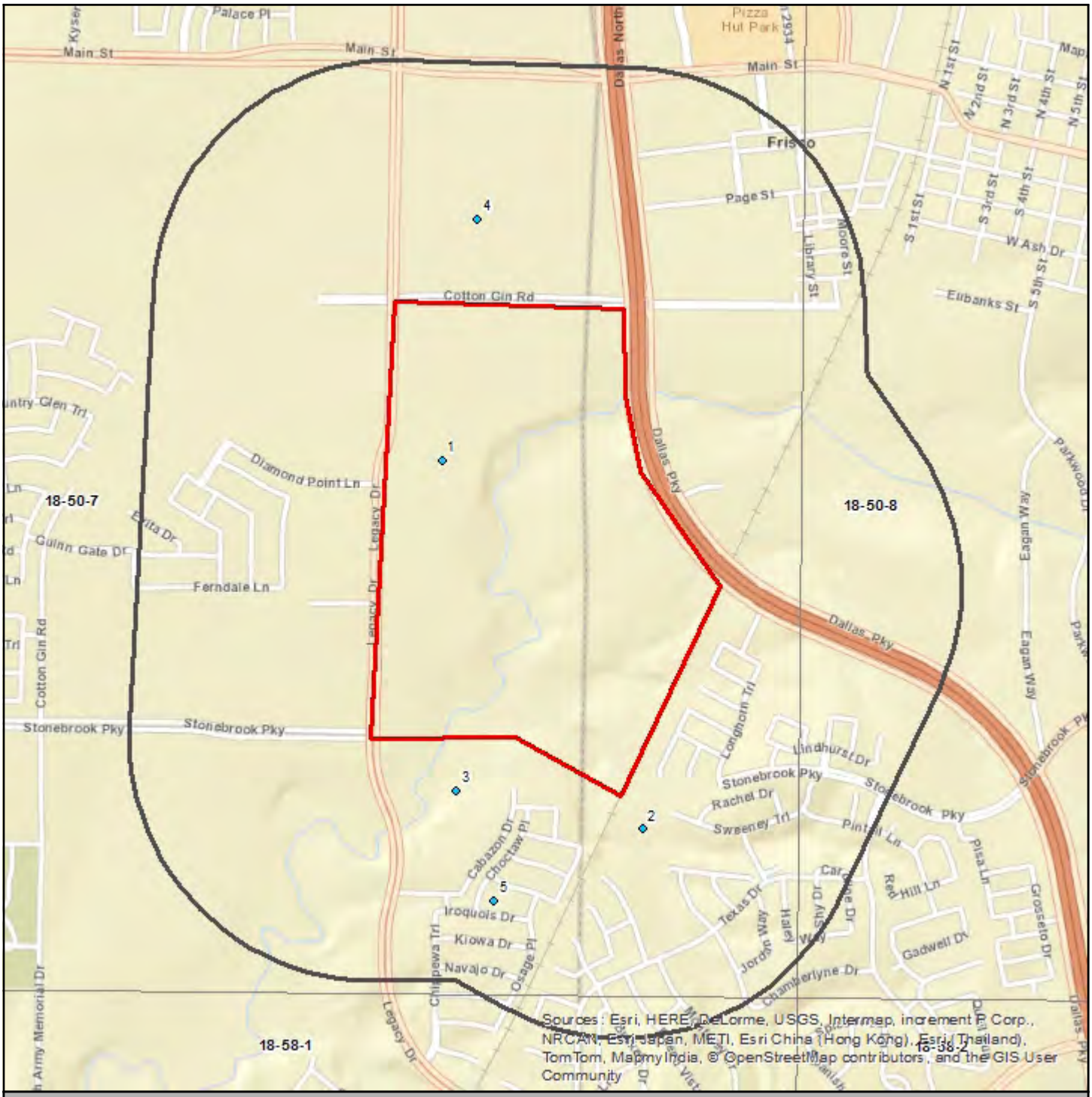
Summary Map - 0.5 Mile Buffer

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP



Grand Park

- Well
- Well Cluster
- Target Property
- Search Buffer
- Texas Quad Index

1 : 19,000

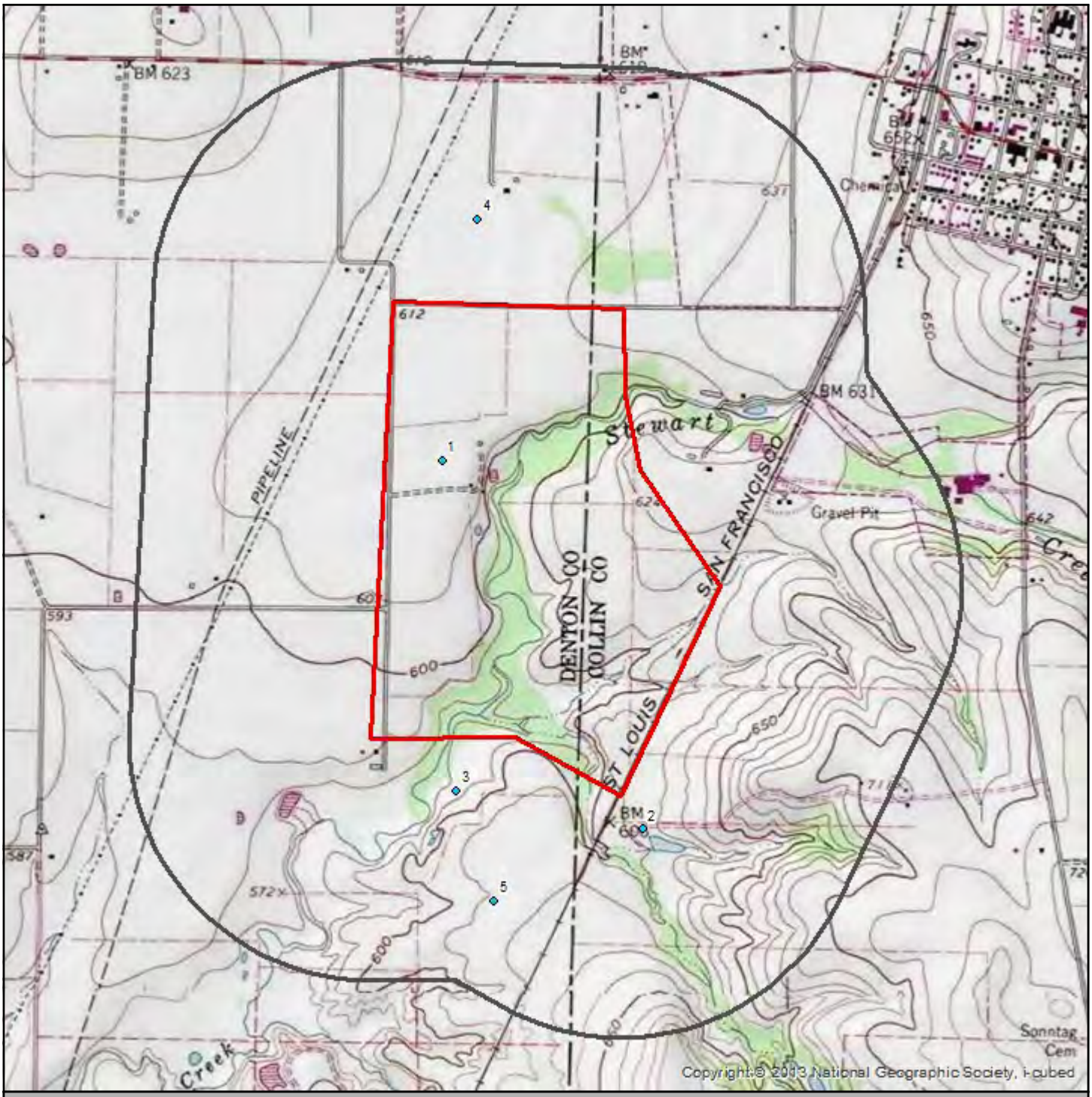
1 inch = 0.300 miles
1 inch = 1583 feet
1 centimeter = 0.190 kilometers
1 centimeter = 190 meters

N

Lambert Conformal Conic Projection
1983 North American Datum
First Standard Parallel: 33 0' 00" North
Second Standard Parallel: 45 0' 00" North
Central Meridian: 96 0' 00" West
Latitude of Origin: 39 0' 00" North

Banks Environmental Data, Inc. - 1601 Rio Grande, Ste. 500 - Austin, TX 78701 - 800.531.5255 P - 512.478.1433 F
www.banksenvdata.com

Topographic Overlay Map - 0.5 Mile Buffer



Grand Park

Well

Well Cluster

Target Property

Search Buffer

Target Property Quad Name(s)
Frisco (1982)

1 : 19,000
1 inch = 0.300 miles
1 inch = 1583 feet

Lambert Conformal Conic Projection
1983 North American Datum
First Standard Parallel: 33 0' 00" North
Second Standard Parallel: 45 0' 00" North
Central Meridian: 96 0' 00" West
Latitude of Origin: 39 0' 00" North

N

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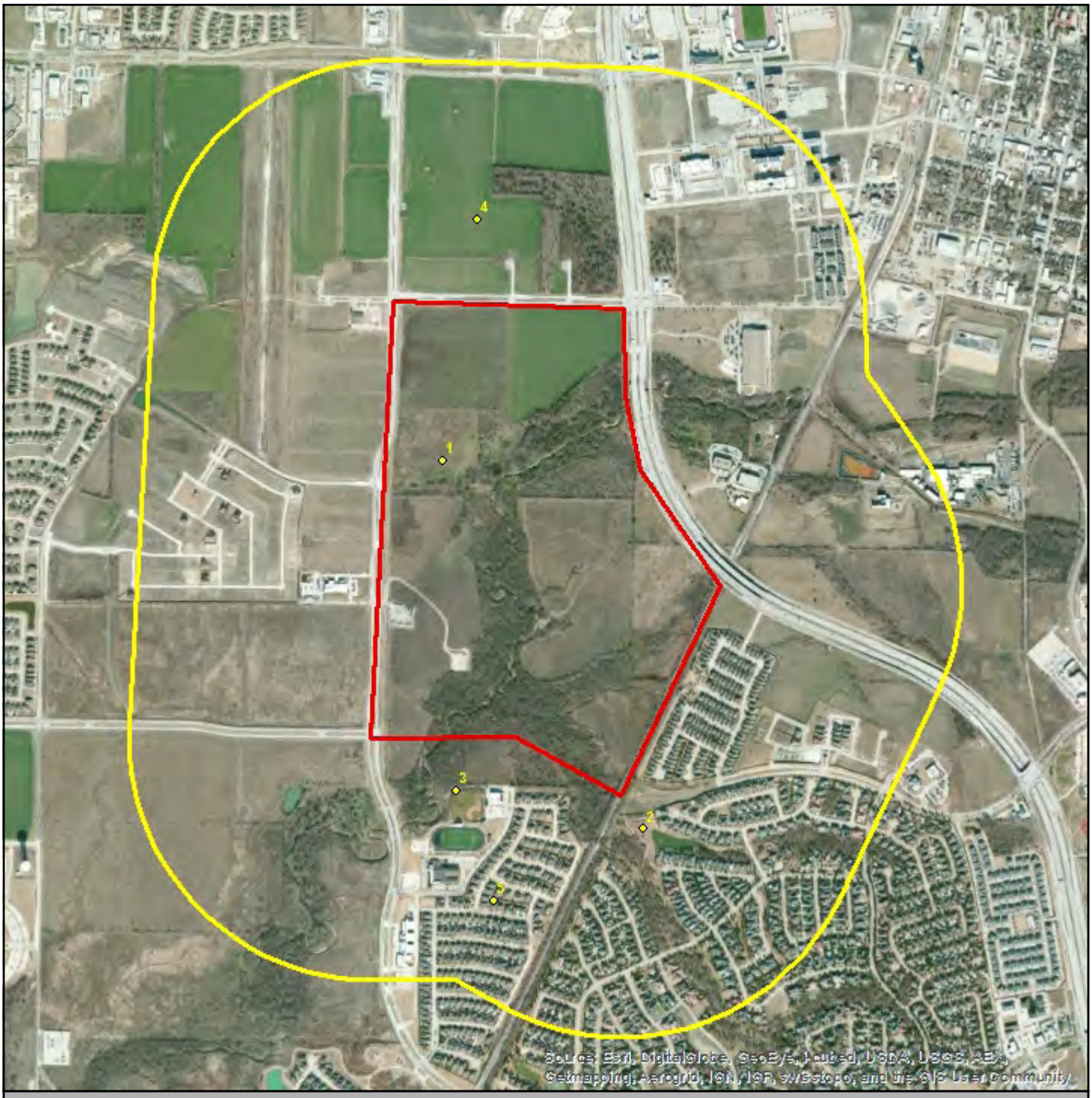
Current Imagery Overlay Map - 0.5 Mile Buffer

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP



Grand Park

Well

Well Cluster

Target Property

Search Buffer

1 : 19,000

1 inch = 0.300 miles
1 inch = 1583 feet
1 centimeter = 0.190 kilometers
1 centimeter = 190 meters

N

Lambert Conformal Conic Projection
1983 North American Datum
First Standard Parallel: 33 0' 00" North
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Latitude of Origin: 39 0' 00" North

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Water Well Details *Grand Park*

Map ID	Source ID	Dataset	Owner of Well	Type of Well	Depth Drilled	Completion Date	Longitude	Latitude	Elevation	Driller's Logs
1	18-50-7A	TX TCEQ HIST	Leo Wollenreich	Domestic	450	03/20/1967	-96.84617	33.141019	613 ft	View
2	WIID348444	TX TWDB WIID	Starwood HOA	Stock	1600	9/10/2013	-96.838888	33.129999	613 ft	View
3	WIID24984	TX TWDB WIID	Legacy Christian Academy	Irrigation	675	8/12/2003	-96.845555	33.13111	587 ft	View
4	18-50-7G	TX TCEQ HIST	B.F. Phillips	Domestic	33	08/17/1981	-96.844989	33.148287	614 ft	View
5	18-50-7H	TX TCEQ HIST	B.F. Phillips	Domestic	36	08/19/1981	-96.844179	33.127816	612 ft	View

Well Summary

Water Well Dataset	# of Wells
TX TCEQ HIST	3
TX TWDB WIID	2
Total Count	**5**

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www.banksenvdata.com

GW 7

Send original copy by certified mail to the Texas Water Development Board P. O. Box 12386 Austin, Texas 78711

State of Texas

WATER WELL REPORT

For TWDB use only
Well No. 18-30-7A
Located on map 403
Received: 67
Form GW 8
Form GW 9

1) OWNER:
Person having well drilled Leo Wollenreich (Name) Address Frisco, Texas (Street or RFD) (City) (State)

Landowner Same (Name) Address (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County Denton Labor League Abstract No. C. Rogers Survey 1094

NW¼ NE¼ SW¼ SE¼ of Section Block No. Survey C. Rogers
(Circle as many as are known)

miles in 1½ Miles SW (NE., SW., etc.) direction from Frisco (Town)

NORTH

Sketch map of well location with distances from adjacent section or survey lines, and to landmarks, roads, and creeks.

3) TYPE OF WORK (Check):
New Well ☒ Deepening ☐
Reconditioning ☐ Plugging ☐

4) PROPOSED USE (Check):
Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

5) TYPE OF WELL (Check):
Rotary ☐ Driven ☐ Dug ☐
Cable ☒ Jetted ☐ Bored ☐

6) WELL LOG:
Diameter of hole 6 in. Depth drilled 450 ft. Depth of completed well 450 ft. Date drilled 3-20-67

All measurements made from ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material	From (ft.)	To (ft.)	Description and color of formation material
0	10	Black Top Soil			
10	35	Yellow Clay			
35	425	Blue Shale			
425	450	Water Sand			

side if necessary)

03805001

7) COMPLETION (Check):
Straight wall ☐ Gravel packed ☒ Other
Under reamed ☐ Open hole ☐

land surface Date 3-20-67
per square inch Date

9) CASING:
Type: old ☐ New ☒ Steel ☒ Plastic ☐ Other ☐
Cemented from ft. to ft.

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Gage
7in	0	52	24lb.
4in	52	425	9½lb.

10) SCREEN:
Type
Perforated ☐ Slotted ☐

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Slot size

11) WELL TESTS:
Was a pump test made? ☐ Yes ☒ No If yes by whom?

Yield: gpm with ft. drawdown after hrs
Bailer test gpm with ft. drawdown after hrs
Artesian flow gpm Date
Temperature of water
Was a chemical analysis made? ☐ Yes ☐ No
Did any strata contain undesirable water? ☐ Yes ☐ No
Type of water? depth of strata

12) PUMP DATA:
Manufacturer's Name Aermotor
Type Rod H.P. 1
Designed pumping rate 180 gpm ☐ gph ☒
Type power unit Electrid
Depth to bowls, cylinder, jet, etc., 350 ft. below land surface.

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 Claud Boyd (Type or Print) Water Well Drillers Registration No. 481

Address Box # 344 (Street or RFD) Frisco (City) Texas (State)

(Signed) Claud Boyd (Water Well Driller) Boyd Drilling Co. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

STATE OF TEXAS WELL REPORT for Tracking #348444

Owner:	**Starwood HOA**	Owner Well #:	**Sweeney #1**
Address:	**West End of Sweeney Trail** **Frisco , TX 75035**	Grid #:	**18-50-7**
Well Location:	**West End of Sweeney Trail by lake** **Frisco , TX 75035**	Latitude:	**33° 07' 48" N**
Well County:	**Collin**	Longitude:	**096° 50' 20" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Stock**

Drilling Date:	Started: **8/5/2013** Completed: **9/10/2013**
Diameter of Hole:	Diameter: **12 in From Surface To 1280 ft** Diameter: **7.875 in From 1280 ft To 1600 ft**
Drilling Method:	**Mud Rotary**
Borehole Completion:	Gravel Packed From: **1270 ft to 1600 ft** Gravel Pack Size: **8/16**
Annular Seal Data:	1st Interval: **From 0 ft to 1272 ft with class A cement (#sacks and material)** 2nd Interval: **No Data** 3rd Interval: **No Data** Method Used: **positive displacement** Cemented By: **Baker-Hughes** 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:	**Submersible** Depth to pump bowl: **1100 ft**
Well Tests:	**No Data**

Water Quality:	Type of Water: **Paluxy** Depth of Strata: **1305 ft.** 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:	**Earth Tech** **145 Rose Lane** **Frisco , TX 75034**
Driller License Number:	**56064**
Licensed Well Driller Signature:	**Tom Gasmann**
Registered Driller Apprentice Signature:	**Eric Trujillo**
Apprentice Registration Number:	**58331**
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 **#348444**) 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	**5**	**topsoil black/brown**
5	**18**	**yellow clay**
18	**465**	**gray shale**
465	**480**	**sand**
480	**590**	**gray shale**
590	**610**	**sand**
610	**705**	**shale w.sand stks**
705	**760**	**sand**
760	**1040**	**shale w. limestone stks**
1040	**1210**	**limestone**
1210	**1242**	**very dark black shale**
1242	**1305**	**limestone**
1305	**1325**	**shale w. sandy stks**
1325	**1360**	**sand**
1360	**1392**	**shale w. sand stks**
1392	**1432**	**sand**
1432	**1454**	**shale**
1454	**1585**	**sand**
1585	**1600**	**shale**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To		
8	**N**	**Steel**	**0**	**1272**	
4	**N**	**Steel**	**1242**	**1305**	
4	**N**	**SSWW screen**	**1305**	**1347**	**.020**
4	**N**	**Steel**	**1347**	**1389**	
4	**N**	**SSWW screen**	**1389**	**1432**	**.020**
4	**N**	**Steel**	**1432**	**1453**	
4	**N**	**SSWW screen**	**1453**	**1600**	**.020**

STATE OF TEXAS WELL REPORT for Tracking #24984

Owner:	**Legacy Christian Academy**	Owner Well #:	**1**
Address:	**5000 Academy Dr.** **Frisco , TX 75034**	Grid #:	**18-50-7**
Well Location:	**Same as above** **TX**	Latitude:	**33° 07' 52" N**
Well County:	**Denton**	Longitude:	**096° 50' 44" W**
Elevation:	**No Data**	GPS Brand Used:	**Garmin- E-Trex**
Type of Work:	**New Well**	Proposed Use:	**Irrigation**

Drilling Date:	Started: **7/28/2003** Completed: **8/12/2003**
Diameter of Hole:	Diameter: **10.75 in From Surface To 675 ft**
Drilling Method:	**Air Rotary**
Borehole Completion:	Gravel Packed From: **575 ft to 675 ft** Gravel Pack Size:
Annular Seal Data:	1st Interval: **From 0 ft to 20 ft with 15 (#sacks and material)** 2nd Interval: **From 450 ft to 480 ft with 15 (#sacks and material)** 3rd Interval: **No Data** Method Used: **tremie pressure** Cemented By: **driller** Distance to Septic Field or other Concentrated Contamination: **none ft** 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: **300 ft. below land surface on 8/12/2003** Artesian flow: **No Data**
Packers:	**none**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**Turbine** Depth to pump bowl: **570 ft**
Well Tests:	**Pump** Yield: **160 GPM with 150 ft drawdown after 2 hours**

Water Quality:	Type of Water: **fresh** Depth of Strata: **625 ft.** Chemical Analysis Made: **Yes** 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:	**Lonestar Underground Inc.** **680 CR 77** **Prosper , TX 75078**
Driller License Number:	**54840**
Licensed Well Driller Signature:	**Dale Chepulis**
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 **#24984**) 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	**12**	**Black top soil**
12	**415**	**Gray shale**
415	**450**	**Sand**
450	**625**	**Shale w/ sand stks.**
625	**675**	**Sand**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
6	**N**	**Steel**	**0 615**
6	**N**	**Steel screen**	**615 675 .03**

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. 18-50-7G
Located on map Yes
Received: RLW

1) OWNER B.F. Phillips (Name) Address Rt. 2 (Street or RFD) Frisco (City) Texas (State) 75034 (Zip)

2) LOCATION OF WELL:
County Denton 8 miles in N.E. (N.E., S.W., etc.) direction from Lewisville (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: #7
Date drilled 8-17-81

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
36	Surface	33

7) BOREHOLE COMPLETION: ☒ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other ____
If Gravel Packed give interval . . . from ____ ft. to ____ ft.

From (ft.)	To (ft.)	Description and color of formation material
0	9	Top soil
9	15	Clay
15	20	Sand & Gravel
20	21	Gravel
21	33	Blue shale

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.) From	Setting (ft.) To	Gage Casing Screen
36	N	Concrete	0	33	N/A

CEMENTING DATA
Cemented from N/A ft. to ____ ft.
Method used ____
Cemented by ____ (Company or Individual)

9) WATER LEVEL:
Static level 20 ft. below land surface Date 8-17-81
Artesian flow ____ gpm. Date ____

10) PACKERS: Type Depth
N/A

11) TYPE PUMP:
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other N/A
Depth to pump bowls, cylinder, jet, etc., ____ ft.

12) WELL TESTS:
☐ Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☒ Estimated
Yield: 10 gpm with — ft. drawdown after — hrs.

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

SEP 03 1982

02882001

(Use reverse side if necessary)

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 Gregory A. Shutkufski (Type or Print) Water Well Drillers Registration No. 2111

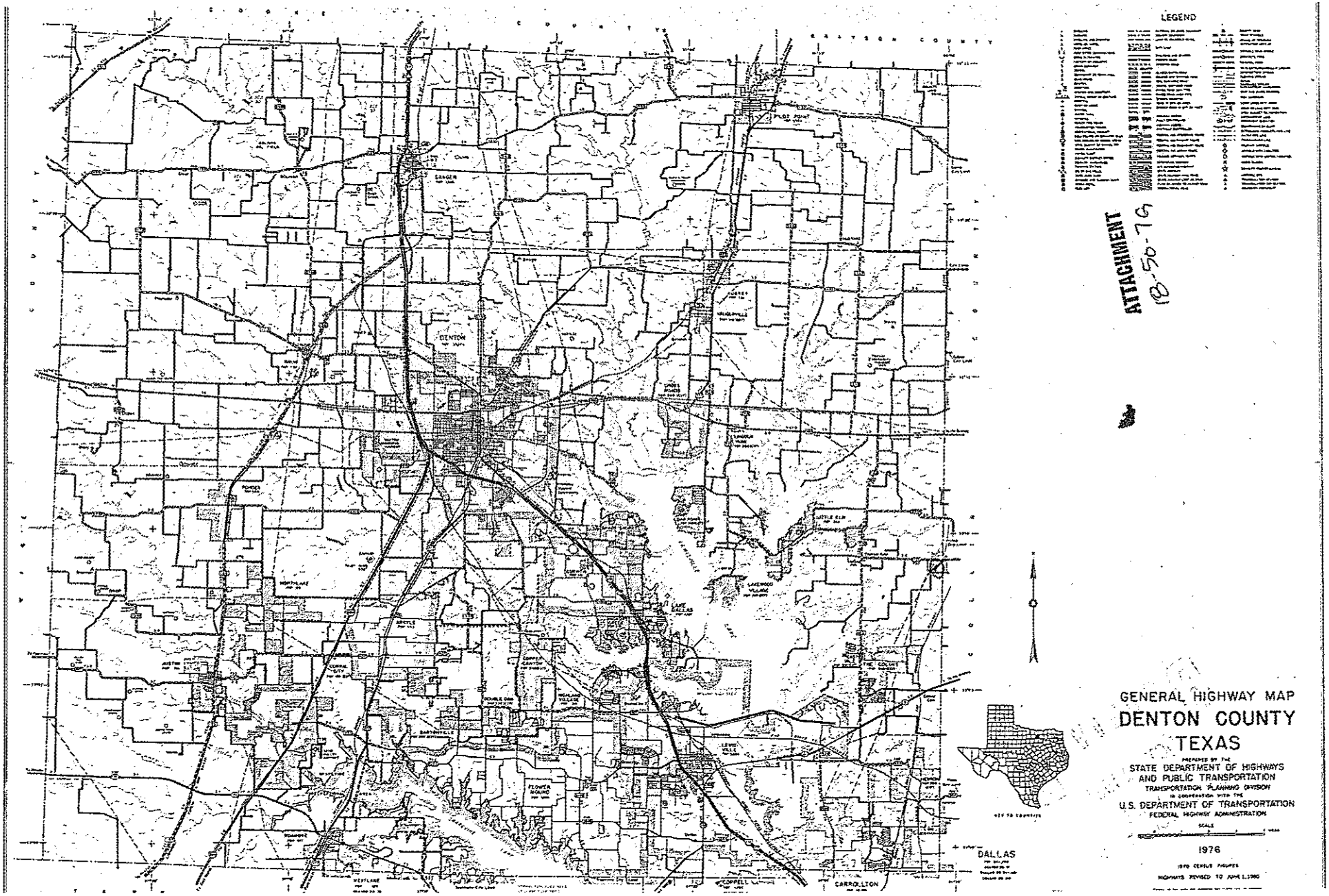
ADDRESS 438 W. Mockingbird Ln. (Street or RFD) Dallas (City) TX (State) 75247 (Zip)

(Signed) Gregory A. Shutkufski (Water Well Driller) Southwest Waterwells, Incorporated (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



ATTACHMENT
18-50-76

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. 18-50-7H
Located on map YES
Received: BLW

1) OWNER B.F. Phillips (Name) Address Rt. 2 (Street or RFD) Frisco (City) Texas (State) 75034 (Zip)

2) LOCATION OF WELL:
County Denton 8 miles in N.E. (N.E., S.W., etc.) direction from Lewisville (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: #8
Date drilled 8-19-81

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
36	Surface	36

From (ft.)	To (ft.)	Description and color of formation material
0	10	Top soil
10	15	Clay
15	20	Sand
20	25	Gravel
25	36	Blue shale

7) BOREHOLE COMPLETION: ☒ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from _____ ft. to _____ ft.

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.) From	Setting (ft.) To	Gage Casing Screen
36	N	Concrete	0	36	N/A

CEMENTING DATA
Cemented from N/A ft. to _____ ft.
Method used _____
Cemented by _____ (Company or Individual)

RECEIVED
SEP 03 1982
CR/TWDB

9) WATER LEVEL:
Static level 22 ft. below land surface Date 8-19-81
Artesian flow _____ gpm. Date _____

10) PACKERS: Type N/A Depth

02881001

☐ Jet ☐ Submersible ☐ Cylinder
A
Depth to pump bowls, cylinder, jet, etc., _____ ft.

(Use reverse side if necessary)

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: 10 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.

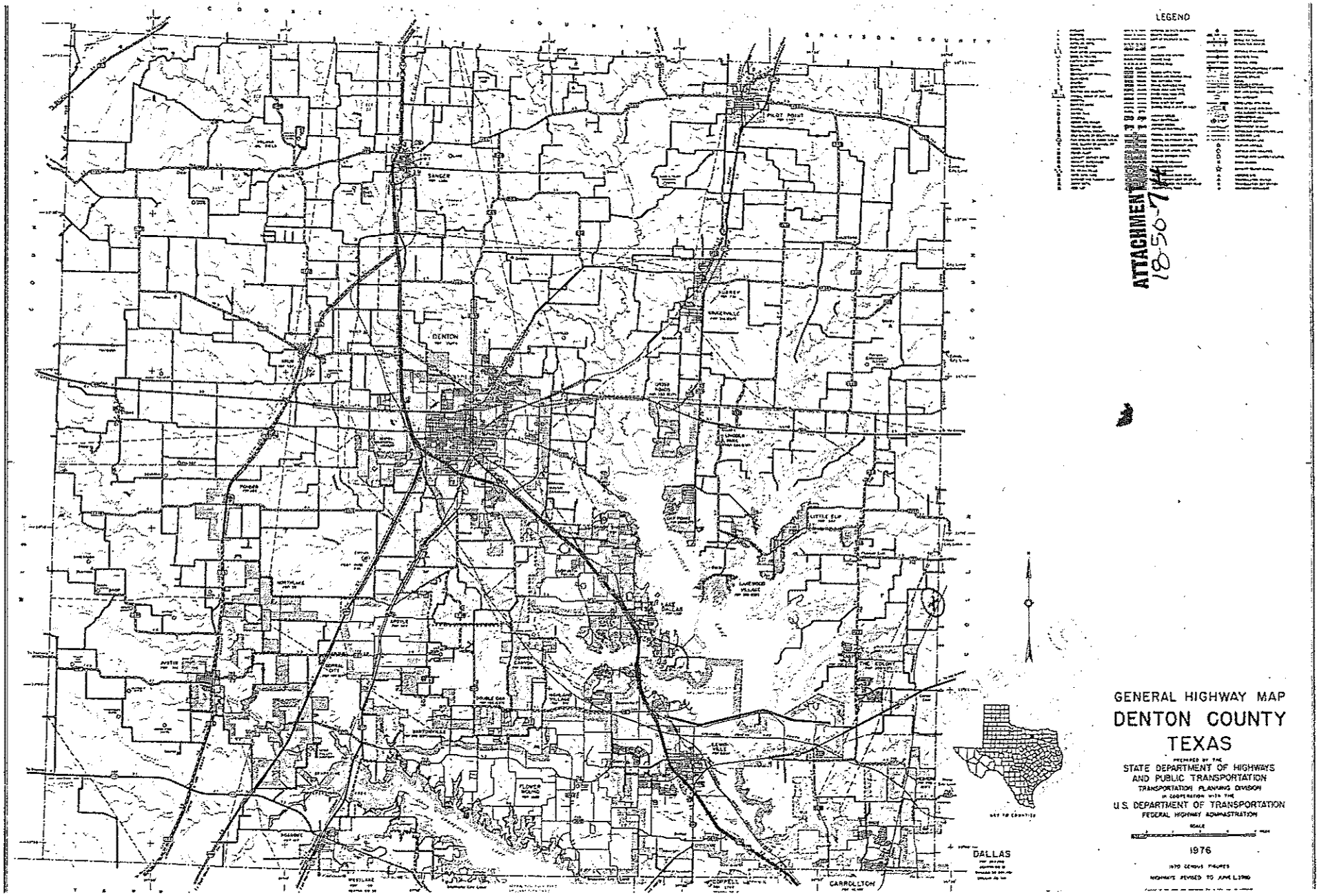
NAME Gregory A. Shutkufski (Type or Print) Water Well Drillers Registration No. 2111

ADDRESS 438 W. Mockingbird Ln. (Street or RFD) Dallas (City) TX (State) 75247 (Zip)

(Signed) Gregory A. Shutkufski (Water Well Driller) Southwest Waterwells, Incorporated (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


LEGEND
GENERAL HIGHWAY MAP
DENTON COUNTY
TEXAS
PREPARED BY THE
STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
SCALE
1976
1970 CENSUS FIGURES
HIGHWAYS REVISED TO JUNE 1, 1976
DENTON
SANGER
PILOT POINT
DALLAS
CARROLLTON
ATTACHMENT
18-56-74

Dataset Descriptions and Sources *Grand Park*

Dataset	Source	Dataset Description	Update Schedule	Data Requested	Data Obtained	Data Updated	Source Updated
TX HGSD - Texas HGSD	Harris Galveston Subsidence District/Fort Bend Subsidence District	This dataset contains all groundwater well records compiled by Harris Galveston Subsidence District/Fort Bend Subsidence District.	Quarterly	03/24/2014	03/24/2014	04/06/2013	03/24/2014
TX TCEQ HIST - Texas TCEQ Historical	Texas Commission on Environmental Quality	This dataset contains all historical water well records searched from the TCEQ Public Water Well Viewer. Banks Environmental Data plots each well record based on location information found on the log.	As requested	N/A	N/A	N/A	N/A
TX TCEQ PWS - Texas TCEQ PWS	Texas Commission on Environmental Quality	This dataset contains a collection of records from Texas Water Districts, Public Drinking Water Systems and Water and Sewer Utilities who submit information to the TCEQ.	Quarterly	03/05/2014	03/12/2014	04/06/2014	03/12/2014
TX TWDB GW - Texas TWDB Groundwater Database	Texas Water Development Board	This dataset contains water well records contained within Texas Water Development Board Groundwater Database.	Quarterly	04/03/2014	04/03/2014	04/06/2014	03/04/2014
TX TWDB WIID - Texas TWDB Submitted Drillers' Logs	Texas Water Development Board	This dataset contains water well records from the Texas Water Development Board Submitted Driller's Reports Database.	Quarterly	04/03/2014	04/03/2014	04/06/2014	04/02/2014
WW USGS - USGS Water Wells	U.S. Geological Survey	This dataset contains groundwater well records from the U.S. Geological Survey.	Quarterly	04/04/2014	04/04/2014	04/06/2014	04/04/2014

Banks Environmental Data, Inc. - 1601 Rio Grande, Ste. 500 - Austin, TX 78701 - 800.531.5255 P - 512.478.1433 F
www.banksenvdata.com

Disclaimer *Grand Park*

The Banks Environmental Data Water Well Report was prepared from existing state water well databases and/or additional file data/records research conducted at the state agency and the U.S. Geological Survey. Banks Environmental Data has performed a thorough and diligent search of all groundwater well information provided and recorded. All mapped locations are based on information obtained from the source. 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 possibly be traced to the appropriate regulatory authority or the actual driller. It may be possible that some water well schedules and logs have never been submitted to the regulatory authority by the water driller and, thus, may explain the possible unaccountability of privately drilled wells. It is uncertain if the above listing provides 100% of the existing wells within the area of review. Therefore, Banks Environmental Data cannot fully guarantee the accuracy of the data or well location(s) of those maps and records maintained by the regulatory authorities.

Banks Environmental Data, Inc. - 1601 Rio Grande, Ste. 500 - Austin, TX 78701 - 800.531.5255 P - 512.478.1433 F
www.banksenvdata.com

APPENDIX 6

MONITOR WELL RECORDS

STATE OF TEXAS WELL REPORT for Tracking #366955

Owner:	**City of Frisco**	Owner Well #:	**5J-E**
Address:	**6101 Frisco Square Blvd Frisco , TX 75034**	Grid #:	**18-50-7**
Well Location:	**SW Cotton Gin Rd & Dallas N Tollway Frisco , TX 75034**	Latitude:	**33° 08' 47" N**
Well County:	**Denton**	Longitude:	**096° 50' 27" W**
Elevation:	**622 ft.**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **5/5/2014** Completed: **5/5/2014**
Diameter of Hole:	Diameter: **6.25 in From Surface To 17 ft**
Drilling Method:	Other: **Flight Augers**
Borehole Completion:	Other: **16/30 Sand Pack**
Annular Seal Data:	1st Interval: **From 0 ft to 3 ft with 1 Concrete (#sacks and material)** 2nd Interval: **From 3 ft to 5 ft with 1 Bentonite (#sacks and material)** 3rd Interval: **From 5 ft to 17 ft with 3 Sand (#sacks and material)** Method Used: **Gravity** Cemented By: **Juan R. Alcala** 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 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:	**59430**
Licensed Well Driller Signature:	**Juan R. Alcala**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**DE14123**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#366955**) 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	**9'**	**Brown Clay**
9	**17'**	**Gray/Brown Clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	**New**	**PVC Riser 0-7' SCH 40**	
2"	**New**	**Screen 7-17' 0.010 Slot**	

APPENDIX 9

DEVELOPMENT OF
TIER 2 SOIL-TO-GROUNDWATER PCLs

Surface and Subsurface Soil - ^{GW}Soil

Tier 2 Evaluation

Specify media to which tables apply X Surface soil ____ Subsurface soil

Specify if table is for on-site or off-site property X On-site ____ Off-site
Off-site land use(s) for purpose of PCL development[1]: ____ Residential ____ Commercial/industrial

	Soil bulk density ρ_b (g/cm^3)	Volumetric water content θ_{ws} (cm^3/cm^3)	Volumetric air content θ_{as} (cm^3/cm^3)	Fraction organic carbon foc (g/g)	Groundwater Darcy velocity U_{gw} (cm/year)	Aquifer thickness b_{gw} (m)	Ground-water gradient i (m/m)	Hydraulic conductivity K (m/day)	Average annual precipitation P (cm/yr)	Net infiltration rate I_f (cm/yr)	Saturated hydraulic conductivity of vadose zone soils K_{vs} (cm/s)
Tier 1 defaults	1.67	0.16	0.21	0.002	NA	NA	NA	NA	NA	NA	NA
Tier 2 values	1.67	0.16	0.21	0.002	NA	NA	NA	NA	NA	NA	NA

COC	Critical GW PCL (from Table 12A)[3]		Affected soil thickness L_1 (cm)	Depth from top of affected soil to gw table L_2 (cm)	Source area width parallel to gw flow W_s (m)	GW mixing zone thickness δ_{gw} (m)	Soil-leachate partition factor K_{sw} (mg/L/mg/kg)	Lateral dilution factor LDF	^{GW}Soil PCL (mg/kg)
	(mg/L)	pathway[2]							
Arsenic	0.01	$^{GW}GW_{Ing}$	15.24 (0.5 ft)	518.16 (17 ft)	NA	NA	0.033227218	10	102.33
Cadmium	0.005	$^{GW}GW_{Ing}$	15.24 (0.5 ft)	15.24 (0.5 ft)	NA	NA	0.002499401	10	20
Lead	0.015	$^{GW}GW_{Ing}$	15.24 (0.5 ft)	15.24 (0.5 ft)	NA	NA	0.000546419	10	274.51

[1] Repeat the table if needed for different off-site land uses.
[2] Specify the pathway for the critical groundwater PCL ($^{GW}GW_{Ing}$, $^{GW}GW_{Class3}$, $^{Air}GW_{Inh-V}$, ecological PCL (eco), ^{SW}GW, etc.)
NA – Not Applicable
[3] Groundwater was not assessed. COCs in surface soils were vertically delineated to MQLs or background levels and no groundwater was encountered in monitoring well GP-MW-3.

TABLE C-1

CALCULATION OF TIER 2 $^{GW}SOIL_{ING}$ PCL FOR ARSENIC
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Tier 2 Formulas (From 30 TAC §350.75(b)(1).):

$$^{GW}Soil = \frac{(GWPCL \cdot LDF)}{K_{sw}} \cdot \frac{L_2}{L_1}$$

$$K_{sw}\left[\frac{(\text{mg/L} - \text{H}_2\text{O})}{(\text{mg/kg} - \text{soil})}\right] = \frac{\rho_b}{\theta_{ws} + K_d \rho_b + H'\theta_{as}}$$

DATA INPUTS			
Item	**Value**	**Unit**	**Source**
Sample Depth (in feet bgs)	0	Feet bgs	Site-Specific
L_1 - Thickness of Impacted Strata	0.5	Feet bgs	Site-Specific
Depth to GWBU	17	Feet bgs	Based on 17 foot deep, dry monitoring well (GP-MW-3; on 5/6/2014)
L_2 - Distance from top of impacted strata to groundwater	17	Feet bgs	Based on 17 foot deep, dry monitoring well (GP-MW-3; on 5/6/2014)
Conversion from feet to centimeters	30.48	cm/ft	
$^{GW}GW_{Ing}$ - Residential PCL for Arsenic in Class 1 or 2 Groundwater	0.01	mg/L	From TRRP Tier 1 PCL Table June 29, 2012.
LDF - Lateral Dilution Factor	10	unitless	Tier 1 default value from TAC Figure §350.75(b)(1), §350.75(c) and (d). Conservatively assumes 30-acre source area.
ρ_b - Soil bulk density	1.67	g/cm^3	Tier 1 Default provided in 30 TAC §350.75
θ_{as} - Volumetric air content of vadose zone soils	0.21	cm^3-a / cm^3 -s	Tier 1 Default provided in 30 TAC §350.75
θ_{ws} - Volumetric water content of vadose zone soils	0.16	cm^3-w / cm^3 -s	Tier 1 Default provided in 30 TAC §350.75
K_d - Soil water partition coefficient	30.00	L/kg	Tier 2 Default provided in 30 TAC §350.73(e)(1)(C) for soils with a pH of 7.4*.
H' - Henry's Law Constant	0	unitless	Tier 1 Default provided in 30 TAC §350.73(e)
K_{sw} - Soil-Leachate partition factor for COC	0.033227218	kg/L	Calculated Using Formula Provided Above

Tier 2 $^{GW}Soil_{Ing}$ PCL for Arsenic at the Site = 102.33 mg/Kg

Notes: bgs: below ground surface
mg/L: miligrams per liter
mg/Kg: miligrams per kilogram
L/Kg: liters per kilogram
KG/L: kilograms per liter
L_1 = The thickness of the impacted soil in centimeters.
L_2 = The depth from the top of the affected soil to the groundwater table.
* = 7.4 Is the average pH of 10 soil samples collected from PRAA 1.

TABLE C-2

CALCULATION OF TIER 2 $^{GW}SOIL_{ING}$ PCL FOR CADMIUM
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Tier 2 Formulas (From 30 TAC §350.75(b)(1).):

$$^{GW}Soil = \frac{(GWPCL \cdot LDF)}{K_{sw}} \cdot \frac{L_2}{L_1}$$

$$K_{sw}\left[\frac{(\text{mg/L} - \text{H}_2\text{O})}{(\text{mg/kg} - \text{soil})}\right] = \frac{\rho_b}{\theta_{ws} + K_d \rho_b + H'\theta_{as}}$$

DATA INPUTS			
Item	**Value**	**Unit**	**Source**
Sample Depth (in feet bgs)	0	Feet bgs	Site-Specific
L_1 - Thickness of Impacted Strata	0.5	Feet bgs	Site-Specific
Depth to GWBU	0.5	Feet bgs	Assumes cadmium contaminated soil in direct contact with groundwater.
L_2 - Distance from top of impacted strata to groundwater	0.5	Feet bgs	Assumes cadmium contaminated soil in direct contact with groundwater.
Conversion from feet to centimeters	30.48	cm/ft	
$^{GW}GW_{Ing}$ - Residential PCL for Cadmium in Class 1 or 2 Groundwater	0.005	mg/L	From TRRP Tier 1 PCL Table June 29, 2012.
LDF - Lateral Dilution Factor	10	unitless	Tier 1 default value from TAC Figure §350.75(b)(1), §350.75(c) and (d). Conservatively assumes 30-acre source area.
ρ_b - Soil bulk density	1.67	g/cm^3	Tier 1 Default provided in 30 TAC §350.75
θ_{as} - Volumetric air content of vadose zone soils	0.21	cm^3-a / cm^3 -s	Tier 1 Default provided in 30 TAC §350.75
θ_{ws} - Volumetric water content of vadose zone soils	0.16	cm^3-w / cm^3 -s	Tier 1 Default provided in 30 TAC §350.75
K_d - Soil water partition coefficient	400.00	L/kg	Tier 2 Default provided in 30 TAC §350.73(e)(1)(C) for soils with a pH of 7.4.
H' - Henry's Law Constant	0	unitless	Tier 1 Default provided in 30 TAC §350.73(e)
K_{sw} - Soil-Leachate partition factor for COC	0.002499401	kg/L	Calculated Using Formula Provided Above

Tier 2 $^{GW}Soil_{Ing}$ PCL for Cadmium at the Site = 20.00 mg/Kg

Notes: bgs: below ground surface
mg/L: miligrams per liter
mg/Kg: miligrams per kilogram
L/Kg: liters per kilogram
KG/L: kilograms per liter
L_1 = The thickness of the impacted soil in centimeters.
L_2 = The depth from the top of the affected soil to the groundwater table.
* = 7.4 Is the average pH of 10 soil samples collected from PRAA 1.

TABLE C-3
CALCULATION OF TIER 2 $^{GW}SOIL_{ING}$ PCL FOR LEAD
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Tier 2 Formulas (From 30 TAC §350.75(b)(1).):

$$^{GW}Soil = \frac{(GWPCL \cdot LDF)}{K_{sw}} \cdot \frac{L_2}{L_1}$$

$$K_{sw}\left[\frac{(\text{mg/L} - \text{H}_2\text{O})}{(\text{mg/kg} - \text{soil})}\right] = \frac{\rho_b}{\theta_{ws} + K_d \rho_b + H'\theta_{as}}$$

DATA INPUTS			
Item	**Value**	**Unit**	**Source**
Sample Depth (in feet bgs)	0	Feet bgs	Site-Specific
L_1 - Thickness of Impacted Strata	0.5	Feet bgs	Site-Specific
Depth to GWBU	0.5	Feet bgs	Assumes lead contaminated soil in direct contact with groundwater.
L_2 - Distance from top of impacted strata to groundwater	0.5	Feet bgs	Assumes lead contaminated soil in direct contact with groundwater.
Conversion from feet to centimeters	30.48	cm/ft	
$^{GW}GW_{Ing}$ - Residential PCL for Lead in Class 1 or 2 Groundwater	0.015	mg/L	From TRRP Tier 1 PCL Table June 29, 2012.
LDF - Lateral Dilution Factor	10	unitless	Tier 1 default value from TAC Figure §350.75(b)(1), §350.75(c) and (d). Conservatively assumes 30-acre source area.
ρ_b - Soil bulk density	1.67	g/cm^3	Tier 1 Default provided in 30 TAC §350.75
θ_{as} - Volumetric air content of vadose zone soils	0.21	cm^3-a / cm^3 -s	Tier 1 Default provided in 30 TAC §350.75
θ_{ws} - Volumetric water content of vadose zone soils	0.16	cm^3-w / cm^3 -s	Tier 1 Default provided in 30 TAC §350.75
K_d - Soil water partition coefficient	1830.00	L/kg	Tier 2 Default of 1830 for clayey soils with pH between 5.0 and 9.0* as provided by TCEQ in 30 TAC §350.73(e)(1)(A).
H' - Henry's Law Constant	0	unitless	Tier 1 Default provided in 30 TAC §350.73(e)
K_{sw} - Soil-Leachate partition factor for COC	0.000546419	kg/L	Calculated Using Formula Provided Above

Tier 2 $^{GW}Soil_{Ing}$ PCL for Lead at the Site = 274.51 mg/Kg

Notes: bgs: below ground surface
mg/L: miligrams per liter
mg/Kg: miligrams per kilogram
L/Kg: liters per kilogram
KG/L: kilograms per liter
L_1 = The thickness of the impacted soil in centimeters.
L_2 = The depth from the top of the affected soil to the groundwater table.
* = 7.4 Is the average pH of 10 soil samples collected from PRAA 1.

TABLE C-4
pH VALUES FOR 10 SAMPLES OBTAINED FROM PRAA 1
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Sample ID	Laboratory ID		Date Collected	pH
2M-e 0.5-1'	14-06-0342	1	6/3/2014	6.85
1M-h 0.5-1'	14-06-0342	3	6/3/2014	7.09
3L-a 0.5-1'	14-06-0342	5	6/3/2014	7.41
2L-e 0.5-1'	14-06-0342	6	6/3/2014	7.39
1L-h 0.5-1'	14-06-0342	7	6/3/2014	7.42
1J-e 0.5-1'	14-06-0342	8	6/3/2014	7.39
1K-h 0.5-1'	14-06-0342	9	6/3/2014	7.47
2J-b 0.5-1'	14-06-0342	10	6/3/2014	7.55
3I-c 0.5-1'	14-06-0342	11	6/3/2014	7.62
4I-e 0.5-1'	14-06-0342	12	6/3/2014	7.59
			Average:	**7.378**

APPENDIX 10

LABORATORY DATA PACKAGES
AND
DATA USABILITY SUMMARY

APPENDIX 13

PHOTOGRAPHIC DOCUMENTATION

SITE PHOTOGRAPHS
GRAND PARK PRAA 1
FRISCO, TEXAS

Photo 1 – View of PRAA 1 wheat field sampling activities in the southeastern corner of the site. The Dallas North Tollway can be seen adjacent to the site to the east/northeast.

Photo 2 – Surface soil collection in the PRAA 1 wheat field.

Photo 3 – Logging a surface soil location with Trimble in the PRAA 1 wheat field.

Photo 4 – Photograph showing a plugged Geoprobe boring where deeper soils samples were collected.

Photo 5 – View of newly installed monitoring well GP-MW-3 in the PRAA 1 wheat field.

Photo 6 – View of PRAA 1 property from Cotton Gin Road. The PRAA 1 portion of Grand Park ends at the tree line (looking south).

Photo 7 – View from Cotton Gin Road of PRAA 1 site with Dallas North Tollway in the distance.

Photo 8 – View of western edge of PRAA 1 property from Cotton Gin Road.

APPENDIX 14

STANDARD OPERATING PROCEDURES

PARTIAL RESPONSE ACTION AREA 1 INVESTIGATION PROCEDURES

The PRAA 1 site investigation activities were conducted per the Grand Park APA Workplan approved by the TCEQ on 28 March 2014.

Sample Collection Procedures

CJI used the following sample collection procedures while performing the PRAA 1 field work:

- CJI used AutoCAD™ to derive northings and eastings for each of the previously proposed sample locations in PRAA 1.

- Those locations were loaded into two survey-grade Trimble "GeoXH" 6000 series GPS units. These GPS units were used to locate each sample location in the field.

- Once the general location for each sample was located, CJI placed the GPS unit on the ground next to the sample location and collected a minimum of 60 independent GPS measurements. Those measurements were post processed and provide each sample location with a minimum accuracy of ±1 meter.

- While one member in each 2-person sampling crew was collecting the GPS measurements, the second would don new disposable, nitrile gloves and collect a sample of surface soil using a single use, disposable plastic sampling trowel. The maximum depth of each sample was approximately 3 inches deep. Once each laboratory supplied sample jar was filled, it was closed, labeled, placed in a sealed ziplock bag, and then placed in an ice-filled cooler. After the sample was collected, a stake labeled with the sample name was driven into the ground to mark the location.

- Vertical delineation samples were collected using either a Geoprobe rig or a pre-cleaned stainless steel shovel. Where shovel samples were collected, the decontaminated shovel was used to dig to an appropriate depth and then disposable plastic sampling trowels was utilized to collected soil samples. Using new, disposable nitrile gloves, laboratory supplied sample jars were filled, closed, labeled, placed in a sealed ziplock bag, and then placed in an ice-filled cooler. After these samples were collected, the labeled stake was re-driven into the ground to keep the marked location.

- The samples were kept on ice and maintained under chain-of-custody (COC) procedures. Once full, sample coolers were shipped to the analytical laboratory for analysis.