Texas Commission on Environmental Quality

Remediation Division Correspondence Identification Form

SITE & PROGRAM AREA IDENTIFICATION

SITE LOCATION				REMEDIATION DIVISION PROGRAM AND FACILITY IDENTIFICATION	
Site Name:	**Grand Park Site**			Is This Site Being Managed Under A State Lead Contract? ☐ Yes ☑ No	
Address 1:	**7275 Dallas Parkway**			Program Area:	**VOLUNTARY CLEANUP PROGRAM**
Address 2:				Mail Code:	**MC-221**
City: **Frisco**		State:	**Texas**	Is This A New Site To This Program Area? ☐ Yes ☑ No	
Zip Code:	**75034**	County:	**Collin**	**VCP No.:**	
TCEQ Region:	**Region 4 - Dallas/Fort Worth**			**--Leave This Field Blank--**	**--Leave This Field Blank--**

DOCUMENT(S) IDENTIFICATION

	PHASE OF REMEDIATION	DOCUMENT NAME
1.	**MISCELLANEOUS**	**TECHNICAL WORKPLAN NOT OTHERWISE SPECIFIED (NOS)**
2.	**ASSESSMENT**	**AFFECTED PROPERTY ASSESSMENT REPORT (APAR)**
3.		
4.		
5.		

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TCEQ INTERNAL USE ONLY

Document No.	TCEQ Database Term	Document No.	TCEQ Database Term
1.	**TECHNICAL WORKPLAN**	4.	
2.	**APAR**	5.	
3.			

COOK-JOYCE INC.
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TEXAS REGISTERED ENGINEERING FIRM F-883

27 June 2014 Via Hand Delivery

Ms. Joanna Manning, Project Manager (MC-127)
Texas Commission on Environmental Quality (TCEQ)
VCP / Corrective Action Section
P.O. Box 13087
Austin, TX 78711-3087

Re: Transmittal Letter for PRAA 1 APAR and Grand Park Workplan, Grand Park, 7275 Dallas Parkway, Frisco, Texas, VCP #2592

Dear Ms. Manning:

Cook-Joyce, Inc. (CJI) has prepared this response on behalf of its clients, the City of Frisco and Russell & Rodriguez. This letter serves as a transmittal letter for a Revised Affected Property Assessment (APA) Workplan for the Grand Park VCP Site (Site). CJI revised the Workplan to incorporate the TCEQ's comments from our 21 March 2014 meeting. An Affected Property Assessment Report (APAR) for Partial Response Action Area (PRAA) 1 is also attached to this transmittal.

Per our previous discussions the Grand Park VCP applicants request an expedited review for the PRAA 1 APAR. The expedited review is necessary to facilitate a potential real estate transaction for that portion of the Site. In addition, the Grand Park VCP applicants also request an expedited review of the APA Workplan.

Please contact the undersigned with questions or comments. We can be reached at 512/474-9097 or by email at wade.wheatley@cook-joyce.com or richard.varnell@cook.joyce.com.

Sincerely,

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Mack Borchardt, City of Frisco
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COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
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TEXAS REGISTERED ENGINEERING FIRM F-883

REVISED
AFFECTED PROPERTY ASSESSMENT WORKPLAN
FOR
GRAND PARK, 7275 DALLAS PARKWAY, FRISCO, TEXAS
VCP #2592

OCTOBER 2013
REVISED JANUARY 2014
REVISED JUNE 2014

Prepared for:

City of Frisco
6101 Frisco Square Boulevard
Frisco, Texas

And

Texas Commission on Environmental Quality
VCP / Corrective Action Section
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Richard Varnell
6/24/14

RUSSELL & RODRIGUEZ\FINAL\12061.01\
R140624_REVISED APA WORKPLAN

CERTIFIED HUB & WBE

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1.0 INTRODUCTION

This Workplan has been prepared by Cook-Joyce, Inc. (CJI) to describe procedures to be used in implementing an affected property assessment for the City of Frisco's ~320-acre Grand Park development located between Cotton Gin Road, Legacy Drive, Stonebrook Parkway, and Dallas North Tollway in Frisco, Texas. Based on sediment sampling of Stewart Creek conducted by Southwest Geoscience[1] (SWG), it appears that Stewart Creek sediment in 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 Grand Park. The location of the Grand Park site (Site) and the Exide facility are shown on Figure 1.

The field investigation and data evaluation activities described in this Workplan have been developed to fulfill the affected property assessment requirements contained in the TCEQ's Texas Risk Reduction Program (TRRP) rules at 30 TAC Chapter 350, Subchapter C. The primary intent of the affected property assessment is to collect the necessary information to determine the nature and extent of impacted soils or sediments at the Site and to identify any areas of impacted soils or sediments that may require a response action, in accordance with TRRP requirements.

[1] Southwest Geoscience was purchased by Apex TITAN, Inc. in April 2014. However, the name Southwest Geoscience has been retained in this document because all of their previous submittals were done under that name.

2.0 BACKGROUND INFORMATION

2.1 DESCRIPTION OF GRAND PARK

The Site consists of approximately 320 acres of contiguous property which is bound by Cotton Gin Road to the north, the North Dallas Tollway to the east, Stonebrook Parkway to the south, and Legacy Drive to the west. The Site contains mostly undeveloped land and one cultivated field (in the northwest corner of the property). A farmhouse and associated barns/sheds were observed in the central portion of the Site in historical aerial photographs. Remnants of some of these structures remain.

A current conceptual site plan that depicts the City's future development plans for Grand Park is provided to the right. Two lakes will be constructed on Stewart Creek and will serve as a focal point for the development. Currently, the City of Frisco plans to redevelop the Site with a city park (Grand Park) to the south and east of Stewart Creek and the lakes. The area to the north and west of Stewart Creek and the lakes is planned to be "mixed development".

The "mixed development" area is expected to mostly be retail development, but it may also contain apartments or condominiums.

2.2 DESCRIPTION OF EXIDE BATTERY RECYLING FACILITY

Lead oxide manufacturing operations at Exide began in 1964 under previous ownership. Battery recycling operations began at Exide around 1969 and continued until operations ceased in November 2012 in accordance with a Settlement Agreement with the City of Frisco. Exide's plant infrastructure was 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 former plant buildings, and the northern tributary of Stewart Creek is located immediately to the north of the former plant buildings and two closed landfills. Other structures were located across Stewart Creek from the former plant buildings and were connected by piping that crosses the creek. While most of the plant buildings have been demolished, some structures remain on the property.

Exide 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 was treated in the facility's wastewater treatment plant. 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 recycling process produced several waste streams, including slag, battery chips, dust control water, and airborne particulate (most of which was captured in baghouses).

2.3 CONTAMINATION SOURCE

The waste streams produced at Exide have resulted in widespread contamination of the Exide property and surrounding areas. Exide has been subject to multiple state and federal environmental enforcement actions. 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 Exide on the Site and other property.

Previous sampling has shown that shallow soil contamination from airborne deposition of lead particulate also extends over at least 20 acres of Exide property. Most of this soil contamination is less than 1 foot deep. Due to the Site's close proximity to the Exide facility and the Exide "buffer property" (also known as the J-Parcel), shallow soil contamination from airborne

deposition of arsenic, lead, cadmium, and selenium is also a potential contaminant source for the Site.

2.4 CONTAMINANTS OF CONCERN

The contaminants of concern (COCs) are contaminants that have previously been identified during Exide site investigation activities. COCs also include potential contaminants that were identified in the Phase I Environmental Site Assessment (ESA)[2] that was prepared for the Site. Grand Park COCs include:

- Target metals (arsenic, cadmium, lead, and selenium);
- Herbicides and pesticides from on-site farming activities;
- Total Petroleum Hydrocarbons (TPH) from historic and current petroleum use;
- Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) from recent petroleum use;
- Polycyclic Aromatic Hydrocarbons (PAHs) from recent diesel fuel use at an on-Site concrete crusher; and
- Resource Conservation and Recovery Act (RCRA) 8 metals in select areas (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).

2.5 PRIOR INVESTIGATION AND SAMPLING

2.5.1 Stewart Creek Sediment Sample Collection from 2011 to 2013

In November 2011, SWG collected 19 sediment samples in and around Stewart Creek on the Site. The locations of the sediment samples are shown on Figure 2 of this document and on Figure 2 of SWG's Limited Site Investigation - Sediment Sampling of Stewart Creek report (provided in Appendix J of the Grand Park Phase I ESA and incorporated herein by reference). These sediment samples were collected from the ground surface and were submitted for laboratory analysis of arsenic, selenium, cadmium, lead, and sulfate. The analytical results are summarized in Table 1 of this Workplan.

In March and April of 2013, SWG conducted a walking survey of Stewart Creek between Dallas North Tollway and Stonebrook Parkway on the Site. SWG identified numerous areas containing

[2] *Phase I Environmental Site Assessment, Grand Park, 7275 Dallas Parkway, Frisco, Texas, VCP #2592, CN600245526*, by Cook-Joyce, Inc., dated January 2014

battery chips and potential slag within Stewart Creek. SWG returned to the Site in June 2013 and collected additional sediment samples and samples of battery chips and potential pieces of slag that were observed in the creek. Those data are included in Table 1 and those sample locations are provided in Figure 2. SWG provided these data to the TCEQ in a 5 March 2014 Supplemental Site Investigation report[3].

2.5.2 Exide Former Operating Plant APAR

In addition to the impacts to creek sediment, shallow soil contamination from airborne deposition of lead particulate has been reported on the Exide property. The Affected Property Assessment Report prepared for a portion of the Exide property[4] (the "FOP APAR") documents some of the surficial soil impacts. The Exide property subject to the FOP APAR consists of land inside of Exide's RCRA Permit Boundary". Exide's also operates a Class 2 Landfill on the property that is outside of the RCRA Permit Boundary (all of this property is also known as the Bowtie tract).

The TCEQ responded to the FOP APAR by letter dated 8 October 2013. In their response letter, one of the items required by the TCEQ was an "interim slag and battery chip investigation and recovery plan to address slag and battery chips in and around the downstream portion of Stewart Creek." Due to this requirement, a group is currently manually removing waste materials from Stewart Creek. This group consists of TCEQ Region 4 personnel; personnel from Golder Associates and Restoration Services, Inc. (Exide consultant and remediation contractor); and a sampling team from SWG. The waste materials being removed from Stewart Creek consist of battery chips and slag. These wastes are removed from the creek, placed in sealed buckets, and transported to Exide's FOP area for storage and eventual disposal.

In addition to waste removal, Golder, the TCEQ, and SWG are collecting sediment samples from locations where waste materials are removed from in the creek. In general, Golder is collecting one sediment sample from each point where chips or slag have been removed. Golder's samples are being analyzed for total concentrations of arsenic, cadmium, and lead.

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[3] *Supplemental Site Investigation, Additional Sampling of Stewart Creek, Stewart Creek 4th Army Memorial Parkway to BNSF Railroad Bridge, Frisco, Texas*, by Southwest Geoscience, dated 5 March 2014.

[4] *Affected Property Assessment Report, Former Operating Plant, Frisco Recycling Center, Frisco, Collin County, Texas (Agreed Order Docket No. 2011-1712-IHW-E)*, by Pastor, Behling & Wheeler, LLC, dated 8 July 2013.

SWG is splitting samples with Golder. SWG's samples are being analyzed for total concentrations of arsenic, cadmium, and lead. The TCEQ also splits some samples with Golder. The TCEQ's analytical suite is unknown.

The interim removal action and sample collection effort began at the Lebanon Road bridge over Stewart Creek and progressed upstream toward Exide's FOP. SWG collected approximately 400 sediment samples from the Grand Park segment of Stewart Creek.

Some of the sediment samples were collected from a "cutoff". The cutoff connects an upstream portion of Stewart Creek with a downstream portion, bypassing an oxbow feature located near the center of Grand Park. Per SWG, it apparently only flows when Stewart Creek has a high flow volume. Battery chips were discovered in this cutoff, which has been added to Figure 3 (Stewart Creek Previous and Proposed Sample Locations).

SWG has also collected over 100 sediment samples from areas downstream of Grand Park and several hundred upstream of the Site, for a total of almost 700 sediment samples collected as of 24 June 2014. None of SWG's data has been validated to date, so none of it is provided with this Workplan. However, SWG's data will be TRRP-compliant. Once they are validated they will be utilized as part of the overall assessment of Grand Park.

2.5.3 Exide J-Parcel APAR

In addition to the FOP APAR, CJI has reviewed analytical data obtained for the adjacent Exide buffer property (also known as the J-Parcel tract) which is a VCP project (VCP #2541). The J-Parcel consists of 13 tracts of land owned by Exide that have historically served as buffer property around the FOP. The J-Parcel data was submitted to the TCEQ in a 1 April 2014 APAR[5]. The J-Parcel data indicate that at least another 13 acres of land surrounding the FOP is also contaminated with lead. Most of this soil contamination is less than 1 foot deep, and some is present in heavily wooded areas.

2.5.4 Conclusions

Several conclusions can be drawn from this information for use in future planning of affected property assessment activities:

[5] *Affected Property Assessment Report, Exide Technologies Undeveloped Buffer Property, Frisco, Collin County, Texas*, by Pastor, Behling & Wheeler, LLC, dated 1 April 2014.

- Sediment in Stewart Creek within and upgradient of Grand Park is known to have been impacted by past Exide operations.

- Waste materials (including battery chips and slag) have been found and removed from Stewart Creek upstream, within, and downstream of Grand Park.

- Data from the currently on-going Stewart Creek interim waste removal effort have not been reviewed by CJI, but will be incorporated with and submitted in addition to data obtained for the Grand Park VCP project.

- Surficial soils at the Site may have been impacted by airborne deposition of lead contaminated particulate from Exide. If surficial impacts exist, their extent is currently unknown. Therefore, it is unknown if PCLs for a source area of less than ½ acre or greater than ½ acre, but less than 30 acres, will be used during the investigation. However, as a conservative measure CJI will assume that less than 30 acre PCLs should be used at the Site unless the sample data suggests otherwise.

2.6 PHASE I ESA FINDINGS

The Grand Park Phase I ESA concluded that there are two recognized environmental conditions at the Site. They are:

- **The Former Exide Battery Recycling Facility** – As discussed above, analytical data indicates that Stewart Creek sediment in Grand Park has been contaminated by Exide. Based on this information Exide is an REC for the Site.

- **On-Site Monitoring Wells** –Two permanent monitoring wells were noted on the Site's eastern property boundary (adjacent to Dallas Parkway/Dallas North Tollway). The City of Frisco had no information related to these monitoring wells. They are considered an REC for the Site because their purpose (what they were installed to investigate) is unknown.

In addition to the two RECs, there were several other items of interest noted at the Site. They are:

- **On-Site Piezometers** – Two piezometers with no permanent surface completion were observed at the Site. One was located near the center of the Site, the second on the north side of Stewart Creek. The piezometers were reportedly installed to provide geotechnical and depth to water information in the area where future Grand Park dams will be constructed. Both piezometers are located near a sewer line that runs north-south across the Site.

- **Historic On-Site Ranch Buildings** – There are several dilapidated structures in the vicinity of a former "farmhouse complex" that is located on the Site. Based on historical aerial photographs, the complex consisted of a house and several associated outbuildings. There are broken power/telephone poles in this area. There is also reportedly a cellar that was not observed by CJI due to a nearby, active bee hive.

- **Historic On-Site Cultivation** – Available aerial photography indicates that various portions of the Site were used as farmland in the past. Based on discussions with City of Frisco personnel, cotton was a common crop that was grown in the Frisco area in the past. But no specific information was available regarding if, when, or where cotton was cultivated on the Site.

- **Debris Piles and Trash** – Debris piles were noted in several areas on the Site. Trash was noted along the Site's frontage with the Dallas North Tollway/Dallas Parkway and along Stewart Creek.

- **TBK Materials Lease Area** – TBK Materials currently leases an area of the Site and uses that area to crush, separate, and stockpile concrete. Concrete is trucked in, crushed, and then stockpiled in this area. Waste rebar was not observed in the lease area, but 3 ASTs and 3 drums were noted. The ASTs contain different grades of diesel fuel; the drums hydraulic fluid or oil. Significant staining or other evidence of a release was not observed in the lease area or adjacent to the fuel containers.

2.7 21 MARCH 2014 MEETING

A meeting between the TCEQ VCP, the City of Frisco (City), and Cook-Joyce, Inc. was held on 21 March 2014 to discuss the Revised Workplan[6] for the Affected Property Assessment at Grand Park. During the meeting:

1. The City reiterated their request that the proposed workplan be approved for the wheat field located at the northeast corner of Grand Park. The City wanted to expedite the assessment of that area because of a potential real estate transaction that could occur there. Based in part on discussions held during that meeting the TCEQ approved the Revised Workplan for Partial Response Action Area (PRAA) 1 (the wheat field) by letter dated 28 March 2014.

2. The TCEQ requested that BTEX analyses be added to the analyte list proposed for the TBK Materials concrete crushing lease area located on the southwest portion of the Site. The City has revised the workplan to include BTEX analyses in that area. The City has also proposed additional sampling be performed in that area. Previously, no grid sampling was proposed for the lease area because 1) the top few inches of surface soil there had been scraped up and formed into berms; and 2) there were large piles of crushed concrete there. However, TBK Material's lease expired in early 2014 and they have since vacated the Site. The berms are still in place, but the material piles and gravel pavement in that area have been removed. Photographs documenting the changes to that area are provided in Appendix A of this Workplan. Because the underlying ground surface is now accessible, the City proposes performing grid sampling in that area in addition to the scope of work previously proposed. The additional grid sampling and the addition of BTEX to the analyte list in this area are detailed in Section 3.3.4 of this Workplan.

[6] *Revised Affected Property Assessment Workplan for Grand Park, 7275 Dallas Parkway, Frisco, Texas VCP #2592,* Cook-Joyce, Inc., dated October 2013, revised January 2014.

3. The TCEQ requested more information regarding two features that were present in the southwest portion of the Grand Park site in 2011. Both of these square features are visible in Figure 1 of this document. Based on discussions with City personnel, the square feature to the northwest (the one adjacent to Legacy Drive) was a temporary concrete batch plant that was used, in part, to produce concrete used during the construction of Stonebrook Parkway. The square feature to the southeast (the one closest to the wooded floodplain along Stewart Creek) was an area where spoils from the construction of Stonebrook Parkway were temporarily stored. Both features were only in place for a short period of time. Neither is visible in a 4 December 2009 aerial photograph of the Site. Both are present in a 31 March 2011 aerial photograph. And both have been removed in a 4 April 2012 aerial photograph. All three aerial photographs are provided in Appendix B of this document, and all three are available on Google Earth™.

4. The TCEQ requested that areas where debris piles were noted on the Site be added to figures in this document (they previously were shown in a figure from the Grand Park Phase I ESA). Those locations have been added to as appropriate to figures in this document. Per the Phase I ESA, those locations typically consist of treated wood, roofing shingles, concrete/construction debris, and household trash. The sampling regime in the vicinity of those locations remains the same as previously proposed.

2.8 PARTIAL RESPONSE ACTION AREA 1 INVESTIGATION

As mentioned above, the TCEQ approved the APA Workplan for a portion of the Grand Park property on 28 March 2014. That area, a wheat field located at the northeast corner of Grand Park, is referred to as Partial Response Action Area 1 (PRAA 1) in the TCEQ's 28 March 2014 letter and in this document. Based on the TCEQ's approval, CJI has performed the following scope of work in PRAA 1:

- Collected 235 grid samples based on the previously proposed sample grid provided in Figure 2. Those samples were analyzed for total concentrations of 4 metals (arsenic, cadmium, lead, and selenium) by U.S. Environmental Protection Agency (EPA) Method 6020; pesticides by EPA Method 8081A; and herbicides by EPA Method 8151A. Analytical data from these samples is summarized in Table 2 of this Workplan.

- Recollected 1 of the grid samples (1M-c) for total metal analyses because the laboratory did not have sufficient sample volume to run all of the analyses in the initial sample.

- Collected an additional 24 samples (from 0.5 to 1 foot ['] deep) from locations where concentrations of arsenic and/or lead that exceed background concentrations in use at the Site were detected.

- Calculated Tier 2 Protective Concentration Levels (PCLs) for arsenic, cadmium, and lead (provided in Appendix C of this workplan). The average pH from 10 pH analyses of PRAA 1 soil samples was used in the calculations.

- Installed a monitoring well (GP-MW-3) near the southern edge of PRAA 1. The boring log for GP-MW-3 is provided in Appendix D of this workplan.

Finally, although not in PRAA 1, CJI also measured the depth to groundwater in the two piezometers on the Grand Park property and evaluated the two permanent monitoring wells discovered on-site. The findings of this investigation are discussed in Section 3.5 of this Workplan.

2.8.1 Sample Collection Procedures

CJI used the following sample collection procedures while performing the initial 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 Global Positioning System (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. The information collected at each location was based on a data dictionary provided by Mr. Mason Miller, the TCEQ's GPS Coordinator. Sample locations are provided in Table 3. In addition, the post processed GPS data was provided to Mr. Miller by email.

- 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.

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

- Deeper soil samples collected to vertically delineate metals in soil to background concentrations were either collected with a Direct Push Technology (DPT) drilling rig (a Geoprobe™) or by hand with a stainless steel shovel that was decontaminated prior to each use.

Once the initial results were obtained, CJI validated the data. A Data Usability Summary (DUS) is provided in the PRAA 1 APAR, which has been submitted concurrently with this document. Based on the conclusions provided in the DUS, the data meet TRRP standards.

2.8.2 PRAA 1 Shallow Geology

Based on the samples obtained to date in PRAA 1, the top 2 feet of soil in that area consists of clays with minor sand and silt. In addition to the surface soil sampling, CJI also installed a 20 boring at grid location 5J-e. A boring log for 5J-e is provided in Appendix D of this Workplan. At that location, clay dominant soils were encountered from the surface to an approximate depth of 8.5 feet below grade, where a series of small sand stringers were encountered. The sand stringers were present from 8.5 feet below ground surface (bgs) to 10 feet bgs. Moist clay that grew stiffer with depth was encountered beneath the sand stringers to the total depth of the boring (20 feet bgs). No indications of contamination (visual, olfactory, or elevated Photo-Ionization Detector [PID] measurements) were noted during the installation of 5J-e.

2.8.3 PRAA 1 Soil Evaluation

CJI compared the analytical data obtained during the investigation of PRAA 1 to critical residential PCLs for a 30-acre source area. A description of each PCL is provided in the following table:

ANALYTE	CRITICAL PCL (mg/Kg)	PCL DESCRIPTION
Arsenic	24	24 mg/Kg is the June 2012 Residential $^{Tot}Soil_{Comb}$ PCL for 30 acre source area. The $^{Tot}Soil_{Comb}$ is the critical PCL based on a Tier 2 PCL calculation provided in Appendix C.
Cadmium	20	Tier 2 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area (provided in Appendix C).
Lead	250	250 mg/Kg represents half of the $^{Tot}Soil_{Comb}$ 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.
Selenium	1.1	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4,4'-DDD	6.5	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4,4'-DDE	5.9	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
4,4'-DDT	5.4	June 2012 Residential $^{Tot}Soil_{Comb}$ PCL for 30 acre source area.
Aldrin	0.05	June 2012 Residential $^{Tot}Soil_{Comb}$ PCL for 30 acre source area.
Alpha-BHC	0.004	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.

ANALYTE	CRITICAL PCL (mg/Kg)	PCL DESCRIPTION
Beta-BHC	0.014	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Chlordane	4.8	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Delta-BHC	0.087	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Dieldrin	0.024	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Endosulfan I	15.0	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Endosulfan II	46.0	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Endosulfan Sulfate	380	June 2012 Residential $^{Tot}Soil_{Comb}$ PCL for 30 acre source area.
Endrin	0.38	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Endrin Aldehyde	19.0	June 2012 Residential $^{Tot}Soil_{Comb}$ PCL for 30 acre source area.
Gamma-BHC	0.0046	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Heptachlor	0.094	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Heptachlor Epoxide	0.029	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Methoxychlor	62.0	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Toxaphene	1.2	June 2012 Residential $^{Tot}Soil_{Comb}$ PCL for 30 acre source area.
2,4,5-T	0.49	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
2,4,5-TP (Silvex)	2.6	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
2,4-D	1.3	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
2,4-DB	0.19	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Dalapon	0.29	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Dicamba	0.73	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Dichlorprop	0.23	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
Dinoseb	0.18	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
MCPA	0.012	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.
MCPP	0.023	June 2012 Residential $^{GW}Soil_{Ing}$ PCL for 30 acre source area.

This is a preliminary report of the PCLs developed for this project. A thorough discussion of the PCL development, including a tier 1 ecological evaluation, has been included in the PRAA 1 APAR.

Based on our review of the data, CJI has reached the following preliminary conclusions relative to the PRAA 1 area:

1) No herbicides were reported in any of the samples from PRAA 1.

2) Estimated concentrations of two pesticides were reported in 5 soil samples. Sample 4L-a contained an estimated (J-flagged) concentration of DDD. Samples 4I-f, 5J-h, 6H-f, and 6I-f contained estimated concentrations of DDE. None of these concentrations were large enough to accurately quantify, and all are several orders of magnitude less than their respective critical, residential PCLs. All 5 of these samples were collected from the southern (downgradient) portion of the wheat field. They were not vertically delineated because none of the concentrations exceeded their respective method quantitation limits (MQLs).

3) The 4 target metals (arsenic, cadmium, lead, and selenium) are present almost ubiquitously across PRAA 1.

   a. Arsenic concentrations in the top 3 inches of soil at PRAA 1 ranged from a low of 5.14 mg/Kg to a high of 20.2 mg/Kg. Because it was initially unknown if these concentrations represented "affected property" as defined by TRRP, CJI returned to the Site and collected vertically delineating samples from each location where an arsenic concentration above the background value of 15.9 mg/Kg[7] was reported. Arsenic concentrations ranged from 4.61 mg/Kg to 12.9 mg/Kg in the samples collected from the 0.5 to 1' interval. Based on this information CJI concluded that arsenic concentrations that exceed background at the Site are delineated within the top 6 inches of soil. CJI used this depth and depth to groundwater information from GP-MW-3 (a monitoring well installed near the southern edge of the wheat field) to calculate a tier 2 PCL for arsenic. The tier 2 calculation (provided in Appendix C) results in a ${}^{GW}Soil_{Ing}$ PCL of 102.3 mg/Kg. Based on this calculation the critical residential PCL for human health at the Site is the ${}^{Tot}Soil_{Comb}$ PCL of 24 mg/Kg. None of the arsenic concentrations exceed 24 mg/Kg, therefore there is no arsenic impacted "affected property" in the PRAA 1 area.

   b. Cadmium concentrations at the Site ranged from a low of 0.505 mg/Kg to a high of 1.17 mg/Kg. All of the cadmium concentrations were estimated (J-flagged) values. None of the concentrations exceed the critical PCL for cadmium in surface soil of 20.0 mg/Kg. The 20.0 mg/Kg value represents an extremely conservative tier 2 ${}^{GW}Soil_{Ing}$ PCL calculated by CJI. The cadmium tier 2 PCL assumes soil contaminated with cadmium is in direct contact with groundwater at the Site. The Tier 2 PCL calculation is provided in Appendix C.

   c. Lead concentrations at the Site ranged from a low of 14.8 mg/Kg to a high of 35.4 mg/Kg. Although none of the concentrations exceed the critical PCL for lead in surface soil of 250 mg/Kg[8], several exceed the Site-specific background value for lead (31.5 mg/Kg). Therefore, CJI returned to the Site and collected vertically delineating samples from 10 of the locations where a lead concentration

[7] Refer to Section 4.3 of this workplan for a description of the background values that will be used for this assessment.

[8] The 250 mg/Kg value represents half of the critical ${}^{Tot}Soil_{Comb}$ PCL. It is based on 1) an agreement between the City of Frisco and Exide Technologies; and 2) an extremely conservative Tier 2 PCL calculated by CJI that assumes soil contaminated with lead is in direct contact with groundwater at the Site. The Tier 2 PCL calculation is provided in Appendix C.

above background was reported. Based on those sample results lead concentrations above background have been delineated in the top 6 inches of soil.

d. Selenium concentrations at the Site ranged from a low of “non-detect” to a high of 0.904 mg/Kg. All of the reported selenium concentrations were estimated (J-flagged) values. None of the concentrations exceed the critical PCL for selenium in surface soil of 1.1 mg/Kg. Vertical delineation of selenium was not necessary because none of the reported concentrations exceeded their respective MQL.

Based on this information, CJI has concluded that there is no “affected property” due to contaminated soil in the PRAA 1 area.

2.8.4 PRAA 1 Groundwater Evaluation

As mentioned in Section 2.8.2 of this Workplan, CJI installed a 20 foot deep boring at grid location 5J-e. That location was chosen because:

- The second highest arsenic concentration reported at the Site was discovered there.
- It is downgradient of several other locations where arsenic concentrations exceed background. It is also adjacent to one of the locations where a trace pesticide concentration was reported.
- It is located near the southern edge of the wheat field and therefore is downgradient relative to most of PRAA 1.
- Its relative proximity to Stewart Creek.

After installing the boring using the Geoprobe’s sampling rods, the water well driller (Sunbelt Industrial Services) augered down to a depth of 17 feet bgs and installed GP-MW-3 at that location. CJI requested that the drilling stop at 17 feet bgs to ensure that the well screen would extend across the sand stringers observed from 8.5 to 10’ bgs. A boring log/well construction summary is provided in Appendix D. GP-MW-3 was finished with a flush-mount completion and a 4’ by 4’ well pad.

GP-MW-3 was installed on the afternoon of 5 May 2014. CJI returned and checked GP-MW-3 for groundwater on 6 May 2014 and on 3 June 2014. The monitoring well was dry on both dates. CJI will check this monitoring well for groundwater in the future while performing other groundwater monitoring events at Grand Park.

3.0 ASSESSMENT APPROACH

An affected property assessment will be conducted to determine the nature and extent of contaminants in media at the Site. The assessment activities may require more than one field mobilization to adequately determine the extent, if any, of contamination. The investigation activities proposed for the first field mobilization are presented in Section 4.0. Subsequent field mobilizations, if required, will be based on the investigation findings from the first field mobilization.

3.1 SURFACE WATER SAMPLING IN STEWART CREEK

Surface water will be sampled where it is available in Stewart Creek. Because it is anticipated that the creek is mostly dry due to drought conditions, discrete pools of water will be sampled in accordance with TCEQ Regulatory Guidance (RG) 415[9] using the following methodology:

1) Accessible and discrete sample locations will be selected along the main segment of Stewart Creek.

2) Sampling will not occur during periods of abnormally high turbidity associated with high or flood flows in the creek.

3) At each sample location a peristaltic pump will be used to sample water originating from approximately 0.3 meters (1 foot) beneath the water surface or approximately halfway down if the standing water is less than 1 foot deep. Care will be taken to not unduly agitate the water to reduce the amount of sediment in each sample.

4) Surface water being sampled for total metals will be pumped directly into a laboratory provided sample bottle. Once sufficiently full the sample bottle will be preserved with nitric acid, capped, labeled and placed in an ice filled cooler prior to being taken or shipped to the laboratory for analysis.

5) Surface water being sampled for dissolved metals will be pumped directly through a 0.45 micro filter prior to being pumped into a laboratory provided sample bottle. Once sufficiently full the sample bottle will be capped and placed in an ice filled cooler prior to being taken or shipped to the laboratory for analysis.

Up to 20 samples of surface water will be collected and analyzed for total and dissolved concentrations of arsenic, cadmium, lead, and selenium. Surface water samples will also be analyzed for chlorinated herbicides and organochlorine pesticides. The coordinates of each surface water sample will be determined using a GPS unit and recorded in the logbook. A

[9] *Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods, RG-415*, TCEQ, Revised August 2012.

physical marker, such as flagging or a stake, will also be used to mark the sample location. One duplicate sample per 20 water samples will be collected for Quality Assurance/Quality Control (QA/QC) purposes.

3.2 SEDIMENT SAMPLING IN STEWART CREEK

There are 6 discrete segments of Stewart Creek and its tributaries within the Grand Park VCP Site. CJI proposes building on the previous assessment performed in Stewart Creek by SWG. SWG's data will be supplemented during this phase of the investigation. In general, SWG (which will perform the stream sampling in this phase of the assessment as well) will collect 1 sediment sample per each 250 linear feet of creekbed. Each area that will be sampled, its approximate length, the number of previous samples collected by SWG, and the number of additional samples that will be collected by SWG is described in the following table.

Segment	Description	Approximate Length (feet)	Previous Samples	Number of Additional Samples
Stewart Creek	Main Segment of Stewart Creek that bisects Grand Park	6400	24-2013 ~400-2014	27
Stewart Creek "Cutoff"	High flow cutoff located near center of site	200	5	2
Historic Path of Stewart Creek	A former path of Stewart Creek located north of its current path.	2200	0	9
Tributary 1	Starts near center of property and flows southwest to Stewart Creek	1000	0	4
Tributary 2	Flows southwest from east corner of site to Stewart Creek.	2900	0	13
Tributary 3	Flows northwest from southeast corner of site to Stewart Creek.	1300	0	5
Totals		15200	~430	58

Each new sediment sample collected from Stewart Creek and the Stewart Creek cutoff will be analyzed for herbicides, pesticides, and selenium (if previous analytical data for selenium does not exist). During the initial phase of work additional arsenic, cadmium, and lead analyses will not be performed in Stewart Creek due to the enormous number of data points in sediment that will be available.

However, since that data does not extend to Stewart Creek tributaries, each sediment sample collected from Stewart Creek tributaries and from the historic path of Stewart Creek will be analyzed for total concentrations of target metals (arsenic, cadmium, lead, and selenium), herbicides, and pesticides.

Delineating samples will be collected (if necessary) in an iterative process.

General sample locations are shown on Figure 3. Sample locations will be chosen from accessible portions of each creekbed. Sediment accumulation areas (such as bends in the creek) will preferentially be chosen as sample locations. Only the top 3 inches of sediment will be collected, and fine-grained sediment will be preferentially selected over coarse-grained sediment. Samples will either be collected by hand using a single-use, disposable plastic sampling trowel or, if sampling underwater, using a ponar or a similar dredge sampler. Regardless of the equipment used, reusable sampling equipment will be decontaminated prior to each use. The coordinates of each sediment sample will be determined using a GPS unit and recorded in the logbook. A physical marker, such as flagging or a stake, will also be used to mark the sample location. One duplicate sample per 20 sediment samples will be collected for QA/QC purposes.

3.3 SOIL SAMPLING IN UPLAND AREAS

The soil assessment will be conducted by superimposing a sampling grid across the Site and collecting samples within that grid. Some judgmental samples will also be collected from specific areas. Figure 4 provides a one square acre sampling grid that is superimposed over the general property boundaries and Grand Park design plans obtained from Jacobs Engineering. The design plans include the planned extent and depth of the Grand Park lakes. Due to the scale involved, elevations are not shown on the sidewalls of the lake, but they have been obtained from the plans. Jacob's current design calls for the base of the lakes to be at an approximate elevation of 577.5 feet above mean sea level.

Each surface soil sample will be 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 will be collected by hand using disposable sampling trowels or reusable plastic hand shovels that will be decontaminated prior to each use.

The coordinates of each surface soil sample will be determined using a GPS unit and recorded in the logbook. A physical marker, such as flagging or a stake, will also be used to mark each sample location. One duplicate sample per 20 soil samples will be collected for QA/QC purposes.

3.3.1 Target Metals

CJI proposes collecting samples for target metals (arsenic, cadmium, lead, and selenium) across the Site. CJI will collect at least 8 samples per acre in portions of the Site that may be sold for mixed use commercial and residential development. That portion of the Site is approximately 160 acres in size and is shaped like an upside down capital L. Based on the sample grid that has been established for the Site, this will result in approximately 1,350 initial samples being collected within that portion of the Site. Approximately 235 grid samples (excluding deeper, vertical delineation samples), have already been collected from this area from PRAA 1.

Approximately two samples per acre will be collected in the area of the Site that will be redeveloped as a park (between 160 and 170 acres in size). This will result in an initial total of approximately 350 surface soil samples in the park area. Reasons why this reduced sampling frequency is warranted are discussed in Section 3.4.

When both areas are combined, the total number of surface soil samples that will be collected during the initial sampling effort (including duplicate samples) is approximately 1,700. Figure 5 provides the proposed location for each of these samples. If resampling or further delineation is required, those activities will increase the total number of samples collected in upland areas of the Site.

3.3.2 Pesticides and Herbicides

Based on historical information obtained for the Phase I ESA, the Site has primarily been either farmland or pasture since the 1940s. Based on a 10 December 2013 discussion with the TCEQ regarding this Workplan, we understand that the TCEQ is concerned with residual herbicides and pesticides that may be present in the previously farmed portions of the Site.

The City notes that agricultural chemicals, such as herbicides, pesticides, fertilizers and defoliants, which may have been used on the Site are by TCEQ rule not considered a release or waste disposal as long as their use was in accordance with respective label instructions. Such use is considered an application and is not regulated by the TCEQ. Therefore, the City does not believe the addition of herbicide and pesticide analyses to the Revised Workplan to be a regulatory necessity.

However, to address the TCEQ's concerns the City added herbicide (EPA Method 8151A) and pesticide (Organochlorine Pesticides by EPA Method 8081A) analyses to all of the samples obtained from PRAA 1 (the agricultural field located at the Site's northeast corner). CJI's observations and historical aerial photography suggest that this area has been the most consistently farmed portion of the property since the early 1940s. As such, it represents a "worst case" scenario for the presence of herbicides and pesticides in upland areas of the Site.

CJI previously proposed using the herbicide and pesticide data from the PRAA 1 area to evaluate the need for additional herbicide and pesticide sampling elsewhere on the Grand Park property. As previously discussed, no concentrations of herbicides or pesticides were reported above their respective MQLs in the samples obtained from PRAA 1. Based on those data, CJI does not consider it necessary to perform additional analyses for herbicides or pesticides in upland portions of the Site outside of the target areas discussed below.

However, herbicides and pesticides are known to accumulate in sediment and to bioaccumulate in fish. Therefore, as discussed above CJI proposes adding herbicides and pesticides to the list of analyses that will be performed on samples of surface water and sediment obtained from Stewart Creek.

3.3.3 Former Farmhouse and Associated Buildings

Because the former farmhouse, barn, and associated buildings represent likely areas where agricultural chemicals, oil, and fuels could have been stored, CJI proposes to analyze samples obtained from that area of the Site for additional COCs.

As shown on Figure 6, CJI will collect 9 soil samples in the near vicinity of the former farmhouse, barn, and associated buildings. CJI proposes to analyze those samples for the following:

- Target metals (arsenic, cadmium, lead, and selenium) by EPA Method 6020.
- TPH analyses by Texas Method 1005. If necessary TPH concentrations will be speciated using Texas Method 1006.
- BTEX by EPA Method 8021.
- Herbicides (EPA Method 8151A) and Organochlorine Pesticides (EPA Method 8081A).

3.3.4 TBK Materials Lease Area

TBK Materials Company, a concrete crushing and construction materials business, had leased a 4-acre portion of the Site from the City of Frisco. TBK Materials formerly trucked concrete to their lease area and crushed it on-site. Once crushed, the pieces of concrete were separated by size and type and stockpiled on-site. Then those materials were sold and trucked off-site to construction projects. The TBK Materials lease area was located on the southwest side of the Site (Figure 7). It was a roughly square area that is approximately 4 acres in size. It is essentially surrounded with silt fencing. In addition to the silt fencing, berms made from topsoil that was scraped up from the surface of the lease area are located along the southern and southwestern boundaries of formerly leased area. Previously, the TBK Materials lease area had a compacted gravel entry/exit road that connected to Legacy Drive.

In December 2013 three above-ground storage tanks (ASTs) were observed in the lease area. All three of the tanks were labeled as containing various grades of diesel fuel. Two 500-gallon tanks appeared to contain off-road diesel, and a larger 10,000-gallon AST in a metal secondary containment trough contained low sulfur diesel fuel. At that time hydraulic fluid and oil were stored in 3 drums located adjacent to the 10,000 gallon AST. Staining or other indications of leakage were not observed around the drums or ASTs.

TBK Materials vacated the Site in late April 2014. As part of that process, the ASTs, drums, gravel pavement, and material piles have been removed. Currently, all that remains in the lease area is a scraped soil surface and the previously mentioned berms. Photographs documenting these changes are provided in Appendix A of this Workplan.

CJI proposes to sample the TBK Materials lease area in the following manner:

- CJI will select 3 different locations adjacent to the former location of the diesel ASTs and oil/hydraulic fluid drums to collect soil samples. Those locations will be selected based

on indications of a potential release (although no stained gravel was observed during the Phase I ESA and no stained soil was observed in those areas on 6 May 2014, CJI will reevaluate the area for stained soil, absorbent on the ground, or other indications of a release). The soil samples will be analyzed for target metals (arsenic, cadmium, lead, and selenium by EPA Method 6020), TPH (Tx Method 1005 and potentially 1006), BTEX (EPA Method 8021) and Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270.

- CJI will install 12 test pits in the berm located to the southwest and south of the lease area. One sample will be obtained from each test pit. Each of those samples will be analyzed for target metals.

- Surface water formerly drained through silt fencing from the lease area's southeast corner. CJI proposes to collect 1 surface water sample (if present) and 1 surface soil sample from that location. Both samples will be analyzed for RCRA 8 Metals[10] (using EPA Methods 6020/7470/7471), TPH, BTEX, and PAHs.

- Finally, because the area is no longer covered with gravel pavement and piles of crushed concrete, CJI proposes collecting grid samples of the exposed surface soil in the former lease area and along the former entry/exit road. Those grid samples will be analyzed for target metals.

3.3.5 Former Concrete Batch Plant

As previously mentioned, a concrete batch plant was located on-site for approximately 1 year. The batch plant was located at the northeast corner of that area. There was also a former spoils storage area and a construction trailer storage area located near the southwest corner of the Site. CJI proposes to analyze grid samples obtained from the general vicinity of the former batch plant and the construction trailer storage area for target metals, TPH, BTEX, and PAHs using previously discussed analytical methods. No additional sampling is proposed at the former spoils storage area. These sample locations are provided on Figure 8.

3.3.6 Future Lake Area

As discussed during our 10 December 2013 teleconference, we understand the TCEQ's concern relative to the lakes that will be excavated and constructed along the current path of Stewart Creek. CJI proposes to install 27 borings along the future path of the proposed lakes to assess the soil that will become the base or sidewalls of the lakes once they are developed. CJI proposes the following scope of work while installing those borings:

[10] Arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

- Based on elevations provided by Jacobs Engineering, the planned elevation of the bottom of the lakes is approximately 577.5 feet above mean sea level (amsl). Sidewalls of the lakes are relatively steep. In the event that a boring is installed to assess a sidewall of the proposed lakes, the specific sidewall elevation for that area will be determined prior to installing the boring. The planned excavation is provided on Figures 4 through 10 of this Workplan. Proposed boring locations are provided on Figure 9.

- While future planned depths within the lakes are known, the ground surface at Grand Park is not (no current topographic survey exists). Therefore, CJI will determine the base elevation of each boring location using Trimble GPS units that meet TCEQ requirements. CJI staff has been trained, and received training certificates in accordance with TCEQ Guidance, in the use of these GPS units. Finally, the GPS units will be real time corrected to aid determining an accurate elevation.

- Once the elevation at each boring location has been determined, CJI will install a boring using a Geoprobe™ or similar DPT drilling rig. CJI will log the lithology of the boring and field screen core samples. Absent other indications of contamination (such as an elevated Organic Vapor Meter [OVM] measurement), CJI will collect soil samples from the two, 2-foot intervals that most closely correspond to a sample elevation of 577.5 feet amsl or the elevation of the sidewall of the lake (depending on the location of the boring). For example, if the ground surface is 590 feet amsl, then CJI will collect soil samples from 10-12 feet bgs (578-580 feet amsl) and 12-14 feet bgs (576-578 feet amsl) for laboratory analysis.

- Both samples will be analyzed for target metals. If significant surficial contamination of other COCs is discovered, or if indicated by field screening, then additional analyses may also be performed on these samples.

3.4 MODIFIED EXPOSURE AREA FOR FUTURE GRAND PARK DEVELOPMENT

CJI proposes using a modified exposure area in the portion of Grand Park that will be redeveloped as a park. We believe a modified exposure area is justified based on the following:

<u>Current and Future Uses of the Park Area</u>

- No existing residences and no platted residential properties currently exist on that area of the Site.

- The City of Frisco will restrict the future construction of residential properties in that area through the use of a deed recorded development restriction.

- Open areas are proposed for the park. The use of the park will not be limited to a small area (such as the back yard of a home). Therefore, exposure scenarios based on chronic exposures to a contaminant in a small area are not applicable to the Site.

Contamination Pathways at Grand Park

- It is documented that Stewart Creek has been impacted by the former Exide facility.
- It is considered unlikely that significant impacts originating from the former Exide facility will be discovered in upland areas of Grand Park. This is based on the following lines of reasoning:
    - Wind direction - According to wind roses for the Dallas/Fort Worth area (http://www.tceq.texas.gov/airquality/monops/windroses.html) the subject property is crosswind from the former Exide facility (the primary emission source in the area). Airborne impacts originating from Exide are considered the primary mechanism by which surface soil could have been contaminated at Grand Park. Because the prevailing winds in the Frisco area are from the south, CJI considers it unlikely that upland portions of the subject property will be significantly impacted by airborne deposition from the former Exide facility.
    - Grand Park was not historically owned or controlled by Exide or its predecessors.

Investigation Specifics

- Extensive investigation activities and intensive sampling and delineation of potential source areas both on and off site of this area will be conducted.
- The Site-specific PCL for lead, which is considered the primary contaminant of concern at the Site, is 250 milligrams per Kilogram. This is ½ of the residential $^{Tot}Soil_{Comb}$ PCL, which is anticipated to be the critical PCL for lead at the Site. This will result in more conservative delineation and remediation efforts at Grand Park than would otherwise be necessary.
- In addition to grid sampling, targeted sampling will be performed in areas where battery chips or slag are observed by CJI field personnel.
- CJI will statistically evaluate the samples taken in the future park area. If possible, we will demonstrate that COCs (if present) are relatively homogeneous over an area larger than the residential default size in accordance with 30 TAC 350.51(l)(3).

Based on this information CJI believes that a modified exposure area and a reduced sampling frequency is warranted in the future park area within Grand Park.

Statistical Evaluation of Analytical Data from PRAA 1 Area

CJI retained ToxStrategies, Inc. to statistically evaluate the data obtained from the PRAA 1 area. A report documenting their evaluation is provided in Appendix F of this workplan. As discussed in their report, ToxStrategies' statistical evaluation documents that collecting 2

samples per acre will provide sufficient data to evaluate residential impacts in the future park area.

3.5 GROUNDWATER ASSESSMENT

As previously mentioned two permanent monitoring wells and two piezometers have been observed on the subject property. CJI has obtained boring logs and construction details for both of the piezometers. Those construction details are provided in Appendix B of the Grand Park Phase I ESA and are incorporated herein by reference. CJI has no construction details on the permanent monitoring wells.

On 5 May 2014, CJI checked the depth to water and total depth of the permanent wells. After obtaining those measurements, CJI developed both wells using a disposable bailer, and then used a downhole monitoring well camera to determine the screened interval of each well.

Based on the downhole footage, both wells are approximately 24 feet deep with 15 feet of well screen (i.e., the screened interval in both wells is approximately 9' bgs to 24' bgs). The initial depth to water in the wells was approximately 9' bgs. Based on this information, CJI plans on using these wells in this investigation. CJI proposes sampling both wells for target metals.

CJI also evaluated the drums adjacent to both of these wells. Three of the 4 drums contain a mixture of plastic and soil cuttings. These drums are in extremely poor condition. The 4th drum is in good condition and contains a liquid (almost certainly purge water from the two wells). On behalf of the City, CJI will dispose of these materials appropriately.

Likewise, CJI proposes to use the two piezometers in the investigation. Based on construction details, both piezometers are installed to depths of 40 feet below grade and have 15 feet of screen (from 25 to 40 feet bgs). Based on their boring logs, both piezometers are screened within the Eagle Ford shale that underlies the Site. Therefore, neither piezometer is screened appropriately to assess lighter than water contaminants.

However, due to the sand pack installed at both piezometers, they could be used for a qualitative evaluation of dissolved, inorganic contaminants (such as lead or cadmium). The sand pack for both piezometers extends from an approximate depth of 5 feet below grade to the total depth of both borings (from 5 to 40 feet bgs). Based on the boring log for

boring/piezometer 6, the sand pack extends across the entire stratum that is likely producing the groundwater present in that piezometer (a clayey gravel stratum located from 9 to 13 feet bgs). A similar clayey gravel stratum was not reported in boring/piezometer 8, which contained no groundwater when measured in 2012 or 2013. Piezometer 8 did, however, contain groundwater when measured on 6 May 2014.

CJI proposes converting both the piezometers to permanent monitoring wells. Then both points will be resurveyed, redeveloped (as appropriate), and then sampled for target metals.

In addition to the four wells/piezometers discussed above, CJI proposes to install monitoring wells at locations where surface soil contamination is discovered in upland portions of the Site. In the event that surface soil contamination is not discovered, then CJI will install 3 permanent monitoring wells in the locations shown on Figure 9. Each of the new wells installed by CJI at the Site will be developed, then sampled for target metals at a minimum. In the event that additional contaminants are discovered in surface soils at the Site, then those analytes will be added to the groundwater assessment.

4.0 FIELD INVESTIGATION ACTIVITIES

CJI anticipates the field activities for the affected property assessment may require at least two field mobilizations. The following presents the investigation strategy for the first field mobilization. The investigation strategy for subsequent field mobilizations will be based on information obtained from the first field mobilization. As described below, a total of 20 surface water, 35 sediment, and approximately 1,800 surface soil samples will be collected during the first field mobilization. Soil and sediment samples will be collected for laboratory analysis in an effort to determine the nature and extent of impacts. The planned locations of the sediment samples are shown on Figure 2. The planned locations of soil samples are shown on Figures 4 through 8. Default locations for the monitoring wells that will be used in the groundwater assessment are shown on Figure 9. Sampling locations may require field adjustment based on actual site conditions encountered. Actual locations of all collected samples will be determined using a GPS unit and recorded in the logbook.

4.1 ASSESSMENT SAMPLES

During the first field mobilization, approximately 1,850 surface water, groundwater, surface soil, and sediment samples will be collected at the Site. Due to the scope of this sampling effort the initial field mobilization will last several weeks. Soil and sediment samples will be collected from 0 to 3 inches at or near the locations shown on Figures 2 and 3.

Samples will be collected and handled in accordance with EPA and TCEQ technical guidance. The soil samples will be collected using pre-cleaned or decontaminated equipment. All samples will be placed in laboratory supplied, pre-cleaned jars with airtight lids, and then immediately transferred into a cooled shuttle container for delivery to the analytical laboratory. Each shuttle container will be chilled to and maintained at 4°±2° C. The temperature of the samples will be verified upon receipt by the laboratory. In accordance with TCEQ sampling guidance, the samples will be delivered or shipped to the laboratory within 2 days of sample collection.

4.2 QUALITY ASSURANCE / QUALITY CONTROL SAMPLES

Quality assurance/quality control samples will be collected to ensure data usability. QA/QC samples will consist of one duplicate sample for every 20 investigation samples collected. The analytical results for the duplicate samples will be evaluated to determine the precision of

sampling and analysis methods. Equipment and ambient blanks will also be collected when warranted.

4.3 BACKGROUND SAMPLING

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[11] documenting their sample collection procedures, sample results, statistical evaluation, and conclusions is provided in Appendix I of the Grand Park Phase I ESA 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.

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

[11] *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.

Sample ID	Sample Depth (feet below ground surface)	Concentration (milligrams per Kilogram [mg/Kg])		
		Arsenic	Cadmium	Lead
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. Specific sample coordinates are not available for the background samples. However, if those locations can be obtained CJI will attempt to confirm the presence of impacts by recollecting samples at the locations of 2012-BG-9 and 2012-BG-10.

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[12] or 19 November 2013[13] letters regarding the FOP APAR. The 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.

4.4 VERTICAL DELINEATION

Using an iterative process, CJI will return to areas with contaminant concentrations that exceed the residential assessment levels (RALs) for the site. Impacts will be delineated vertically to background or, if applicable, to the MQL. Impacts will be delineated laterally to the RAL or, if applicable, the appropriate ecological PCL or comparison standard.

If possible CJI will attempt to vertically delineate impacts to background and/or MQLs in soils prior to encountering a saturated zone. However, if this is impossible, CJI will install monitoring wells to determine if groundwater is contaminated as discussed Section 3.5 of this Workplan.

4.5 ANALYTICAL PROTOCOL

Each soil and sediment sample collected during the first field mobilization will be analyzed for total concentrations of the target metals (arsenic, cadmium, lead, and selenium). Additional analyses will also be performed on soil samples collected in specific areas of the Site (as discussed in Section 3.3). Surface water samples will be analyzed for total and dissolved concentrations of the target metals. At a minimum, groundwater samples will be analyzed for total concentrations of target metals.

The target metals and other parameters were chosen based on the contaminants previously identified during site investigation activities at the Exide facility, on potential issues identified during the Phase I ESA, and on concerns voiced by the TCEQ. Contaminants of concern are described in Section 2.4.

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

[13] 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.

Table 4 identifies the soil sample collection intervals and their associated analytical protocol. Analytical methods and sample handling requirements are summarized in Table 5.

4.6 DECONTAMINATION PROCEDURES

Sample collection equipment (trowels, shovels, etc.) will be cleaned in appropriate containers by scrubbing with a decontamination solution (distilled water with a surfactant such as Alconox™) and rinsing with distilled water prior to each use and/or reuse. Decontamination wash water, rinsate, and residues will be containerized in drums and managed as potentially-contaminated materials.

4.7 MANAGEMENT AND DISPOSAL OF INVESTIGATION DERIVED WASTE

Investigation-derived waste (IDW) will be collected and stored in one or more drums that will be temporarily stored on-site and managed as potentially-contaminated materials. In addition, CJI will evaluate the drums discovered adjacent to the permanent monitoring wells discovered on-Site.

5.0 RECEPTOR SURVEY AND GROUNDWATER CLASSIFICATION

5.1 RECEPTOR SURVEY

A receptor survey will be conducted as part of the affected property assessment. The survey will include a search for water wells within one-half mile of the affected property. In addition, a field receptor survey will be performed within 500 feet of the affected property to identify potential receptors, drainage features, ecological considerations, utilities, and other field receptor information required by TRRP.

5.2 GROUNDWATER CLASSIFICATION

CJI will classify groundwater on the subject property in accordance with TCEQ guidance and regulations.

6.0 DATA EVALUATION AND PLANNING

Upon receipt of the laboratory results, CJI will evaluate the laboratory data to determine if it meets quality assurance requirements and project and measurement objectives. CJI will evaluate the information obtained during the first field mobilization to determine if additional data collection activities will be required to fulfill the affected property assessment requirements of 30 TAC 350.

Once sufficient data has been collected and all impacts have been delineated, CJI will present that information to the TCEQ in an APAR. If applicable, a Response Action Plan (RAP) will also be submitted.

TABLES

TABLE 1 - SUMMARY OF PREVIOUS STEWART CREEK ANALYTICAL DATA
GRAND PARK, FRISCO, TEXAS

Sample I.D.	Sample Date	Data Source	Stream Segment	Depth (feet)	Total Concentrations in mg/Kg					TCLP Lead (mg/L)
					Arsenic	Cadmium	Lead	Selenium	Sulfate	
Critical Residential PCLs[1]					24[5]	20[6]	250[7]	1.1	--	--
Ecological Freshwater Second Effects Level[2]					33	4.98	128	None	--	--
Ecological Freshwater Benchmark Values for Sediment[2]					9.79	0.99	35.8	None	--	--
Soil Background Values Calculated for Exide APAR[3]					15.9	--	31.5	None	--	--
Hazardous Waste Threshold[4]					--	--	--	--	--	5
SC-SED-1	11/18/2011	SWG-SCWWTP APAR	SCWWTP	0-0.5	11.9	0.61	38.2	<1.09	39.3	NA
Slag (6-24)-1	6/24/2013	SWG-Bowtie Inv.	SCWWTP	--	118	<0.020	35200	NA	NA	23.7
Slag (6-24)-1 Base	6/24/2013	SWG-Bowtie Inv.	SCWWTP	--	16.4	0.56	17.8	NA	NA	N/A
Slag (6-24)-2	6/24/2013	SWG-Bowtie Inv.	SCWWTP	--	38.7	1.9	20600	NA	NA	37.8
Slag (6-24)-2 Base	6/24/2013	SWG-Bowtie Inv.	SCWWTP	--	279	<0.020	459	NA	NA	20.6
SC-SED-2	11/18/2011	SWG-SCWWTP APAR	SCWWTP	0-0.5	11.2	0.75	46.9	<1.15	87.8	NA
SC-SED-3	11/18/2011	SWG-SCWWTP APAR	SCWWTP	0-0.5	18.6	2.01	63.8	<1.06	85.5	NA
SC-SED-4	11/18/2011	SWG-SCWWTP APAR	SCWWTP	0-0.5	12	0.95	39.1	<1.09	69.8	NA
CS-1	9/21/2010	PBW-SCWWTP APAR	SCWWTP	--	25.2	6.96	34.6	NA	NA	NA
CS-2	9/21/2010	PBW-SCWWTP APAR	SCWWTP	--	21.8	<0.87	32.3	NA	NA	NA
CS-3	9/21/2010	PBW-SCWWTP APAR	SCWWTP	--	23.2	<1.03	175	NA	NA	NA
CS-4	9/21/2010	PBW-SCWWTP APAR	SCWWTP	--	17.8	<0.99	43.7	NA	NA	NA
CS-5	9/21/2010	PBW-SCWWTP APAR	SCWWTP	--	13	<1.00	14	NA	NA	NA
CS-8	10/27/2010	PBW-SCWWTP APAR	SCWWTP	--	26.5	2.52	NA	NA	NA	NA
SC-SED-5	11/17/2011	SWG-SCWWTP APAR	NESC	0-0.5	14.4	0.9	397	<1.20	241	NA
Chip (6-24)-5	6/24/2013	SWG-Bowtie Inv.	NESC	--	5.4	0.088 J	15.4	NA	NA	NA
Chip (6-24)-5 Base Comp	6/24/2013	SWG-Bowtie Inv.	NESC	--	8.9	0.63	76.7	NA	NA	NA
SC-SED-6	11/17/2011	SWG-SCWWTP APAR	NESC	0-0.5	16.2	1.05	307	<1.08	55	NA
SC-SED-7	11/17/2011	SWG-SCWWTP APAR	NESC	0-0.5	16.1	0.54	35.6	<1.07	60.2	NA
SC-SED-8	11/17/2011	SWG-SCWWTP APAR	NESC	0-0.5	47.2	0.96	35.2	<1.10	52.7	NA
SC-SED-9	11/17/2011	SWG-SCWWTP APAR	NESC	0-0.5	20.5	4.16	162	<1.06	43.1	NA
SC-SED-10	11/17/2011	SWG-SCWWTP APAR	NESC	0-0.5	12.3	0.72	22.5	<1.01	45	NA
SC-SED-11	11/17/2011	SWG-SCWWTP APAR	NESC	0-0.5	29.4	1.11	46.8	<1.02	38.2	NA
Chip (6-24)-4	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	3.8	0.077 J	62.1	NA	NA	NA

TABLE 1 - SUMMARY OF PREVIOUS STEWART CREEK ANALYTICAL DATA
GRAND PARK, FRISCO, TEXAS

Sample I.D.	Sample Date	Data Source	Stream Segment	Depth (feet)	Total Concentrations in mg/Kg					TCLP Lead (mg/L)
					Arsenic	Cadmium	Lead	Selenium	Sulfate	
Critical Residential PCLs[1]					24[5]	20[6]	250[7]	1.1	--	--
Ecological Freshwater Second Effects Level[2]					33	4.98	128	None	--	--
Ecological Freshwater Benchmark Values for Sediment[2]					9.79	0.99	35.8	None	--	--
Soil Background Values Calculated for Exide APAR[3]					15.9	--	31.5	None	--	--
Hazardous Waste Threshold[4]					--	--	--	--	--	5
Chip (6-24)-4 Base Comp	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	9.2	0.63	15.3	NA	NA	NA
SC-SED-12	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	11.3	0.79	56.7	<1.26	172	NA
SC-SED-13	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	31.1	0.84	33.7	<1.00	58.3	NA
SC-SED-14	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	12.7	0.79	27.7	<0.97	48.2	NA
SC-SED-15	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	12.9	1.54	35.3	<1.01	58	NA
SC-SED-16	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	14.6	1.49	59	<1.00	35.6	NA
SC-SED-17	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	18.3	1.19	43.1	<0.97	40.2	NA
SC-SED-18	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	8.1	0.43	20.5	<0.91	190	NA
SC-SED-19	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	19.5	1.47	37.6	<1.18	93	NA
SC-SED-20	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	17.4	1.07	38.5	<1.03	54.2	NA
SC-SED-21	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	18	2.19	49.5	<0.96	31	NA
SC-SED-22	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	19.2	2.01	53.2	<0.93	78.5	NA
SC-SED-23	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	16.1	3.69	34.2	<1.15	190	NA
PS (6-24)-3	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	3	0.17 J	4.4	NA	NA	NA
PS (6-24)-3 Base Comp	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	11.8	0.82	13.6	NA	NA	NA
SC-SED-24	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	32.1	2	49.5	<1.03	39.8	NA
Chip (6-24)-3 Comp	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	11.5	1.4	32.6	NA	NA	NA
Chip (6-24)-3 Base Comp	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	9.2	1.1	27.7	NA	NA	NA
Chip (6-24)-3 Wall Base	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	8.1	0.92	15.7	NA	NA	NA
Chip (6-24)-3 SED	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	10.4	0.79	39.3	NA	NA	NA
SC-SED-25	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	15.1	1.03	21.6	<1.07	45	NA
Chip (6-24)-3	6/24/2013	SWG-Bowtie Inv.	Grand Park	--	3.3	0.29	27	NA	NA	NA
SC-SED-26	11/17/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	16.5	0.87	30.1	<1.07	66.3	NA
SC-SED-27	11/17/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	14.3	1.09	31.8	<1.00	54.1	NA

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GRAND PARK, FRISCO, TEXAS

Sample I.D.	Sample Date	Data Source	Stream Segment	Depth (feet)	Total Concentrations in mg/Kg					TCLP Lead (mg/L)
					Arsenic	Cadmium	Lead	Selenium	Sulfate	
Critical Residential PCLs[1]					24[5]	20[6]	250[7]	1.1	--	--
Ecological Freshwater Second Effects Level[2]					33	4.98	128	None	--	--
Ecological Freshwater Benchmark Values for Sediment[2]					9.79	0.99	35.8	None	--	--
Soil Background Values Calculated for Exide APAR[3]					15.9	--	31.5	None	--	--
Hazardous Waste Threshold[4]					--	--	--	--	--	5
SC-SED-28	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	14.1	1.23	29	<0.96	63	NA
SC-SED-29	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	18.2	1.75	35.9	<1.00	37.2	NA
SC-SED-30	11/18/2011	SWG-SCWWTP APAR	Grand Park	0-0.5	18.5	2.41	31.3	<0.98	58.9	NA

Notes: Samples presented in order from most upstream to most downstream.

1 = Critical Residential PCLs are based TCEQ's June 29, 2012 Tier I PCL Table for a residential site (30 acre source area).

2 = Value obtained from *Update to Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas RG-263 (Revised)* , January 2006 Version

3 = Background values obtained from *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.

4 = Toxicity characteristic leaching procedure (TCLP) Regulatory level provided in 40 CFR Section 261.24.

5 = 24 mg/Kg is the ${}^{Tot}Soil_{Comb}$ PCL. It is the critical PCL for the PRAA 1 Area.

6 = 20 mg/Kg is the Tier 2 Residential ${}^{GW}Soil_{Ing}$ PCL for 30 acre source area (provided in Appendix C).

7 = 250 mg/Kg represents half of the ${}^{Tot}Soil_{Comb}$ 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.

mg/Kg = milligrams per Kilogram

mg/L = milligrams per Liter

-- = Not applicable.

NA = Not Analyzed.

TABLE 1 - SUMMARY OF PREVIOUS STEWART CREEK ANALYTICAL DATA
GRAND PARK, FRISCO, TEXAS

Sample I.D.	Sample Date	Data Source	Stream Segment	Depth (feet)	Total Concentrations in mg/Kg					TCLP Lead (mg/L)
					Arsenic	Cadmium	Lead	Selenium	Sulfate	
Critical Residential PCLs[1]					24[5]	20[6]	250[7]	1.1	--	--
Ecological Freshwater Second Effects Level[2]					33	4.98	128	None	--	--
Ecological Freshwater Benchmark Values for Sediment[2]					9.79	0.99	35.8	None	--	--
Soil Background Values Calculated for Exide APAR[3]					15.9	--	31.5	None	--	--
Hazardous Waste Threshold[4]					--	--	--	--	--	5

Data Sources: SWG-SCWWTP APAR = Data collected by Southwest Geoscience to support the Stewart Creek Wastewater Treatment Plant APAR.
SWG-Bowtie Inv. = Data collected by Southwest Geoscience to support the Former Exide Operating Plant (the "Bowtie") APAR.
PBW-SCWWTP APAR = Data collected by PBW for the Stewart Creek Wastewater Treatment Plant APAR.

Stream Segment SCWWTP = The portion of Stewart Creek within the Former Stewart Creek Wastewater Treatment Plant VCP Site.
NESC = The portion of Stewart Creek within the Northeast Stewart Creek VCP Site.
Grand Park = The portion of Stewart Creek within the Grand Park VCP Site.

Sample Nomenclature: SED - Sample names containing the term "SED" represent sediment samples.
Chip - Sample names containing the term "Chip" represent battery chip samples.
PS - Sample names containing the term "PS" represent samples of potential slag.
Base Comp - Sample names containing the term "Base Comp" represent composite sediment samples taken adjacent to and under a battery chip or potential slag.

TABLE 2

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 2

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 $^{GW}Soil_{Inn}$ 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

TABLE 2

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 2

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 $^{GW}Soil_{Inn}$ 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

TABLE 2

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 $^{GW}Soil_{ing}$ 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 2

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.
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NA - Not analyzed

TABLE 2

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 $^{GW}Soil_{Inn}$ 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.

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TABLE 2

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 2

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 UJL	<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 2

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 2

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 2

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 2

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 $^{GW}Soil_{Inn}$ 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

TABLE 2

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 $^{GW}Soil_{Inn}$ 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

TABLE 2

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 2

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 2

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 $^{GW}Soil_{Inn}$ 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

TABLE 2

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.

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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 $^{GW}Soil_{Inn}$ 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

TABLE 2

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 $^{GW}Soil_{Inh}$ 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 3 - SUMMARY OF SAMPLE LOCATIONS
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Sample ID	Date Collected	Easting	Northing	Elevation (ft amsl)
1H-a	4/3/2014	2475434.92	7103710.29	616.55
1H-b	4/3/2014	2475506.5	7103712.07	615.93
1H-c	4/3/2014	2475575.5	7103711.44	616.28
1H-d	4/4/2014	2475437.19	7103642.88	615.79
1H-e	4/4/2014	2475506.31	7103643.07	615.72
1H-f	4/4/2014	2475575.76	7103641.34	615.83
1H-g	4/4/2014	2475437.19	7103573.76	615.41
1H-h	4/4/2014	2475507.94	7103575.31	615.82
1H-i	4/4/2014	2475577.52	7103572.83	616.28
1I-a	4/3/2014	2475645.13	7103712.58	616.12
1I-b	4/3/2014	2475713.6	7103713.16	616.45
1I-c	4/3/2014	2475783.9	7103711.82	621.83
1I-d	4/4/2014	2475645.78	7103645.24	616.02
1I-e	4/4/2014	2475714.86	7103644.12	616.82
1I-f	4/4/2014	2475785.87	7103646.69	617.12
1I-g	4/4/2014	2475648.06	7103575.95	616.41
1I-h	4/4/2014	2475716.3	7103576.71	617.1
1I-i	4/4/2014	2475788.63	7103575.15	616.94
1J-a	4/3/2014	2475854.07	7103711.06	616.83
1J-b	4/3/2014	2475924.33	7103712.22	617.06
1J-c	4/3/2014	2475993.39	7103712.77	617.65
1J-d	4/4/2014	2475853.72	7103642	617.33
1J-e	4/4/2014	2475922.22	7103642.75	617.48
1J-f	4/4/2014	2475994.47	7103642.44	618.14
1J-g	4/4/2014	2475856.7	7103571.49	617.25
1J-h	4/4/2014	2475925.22	7103575.84	617.38
1J-i	4/4/2014	2475996.13	7103574.34	617.81
1K-a	4/3/2014	2476062.27	7103714.55	617.84
1K-b	4/3/2014	2476130.47	7103712.45	618.07
1K-c	4/3/2014	2476200.63	7103711.73	618.23
1K-d	4/7/2014	2476059.37	7103640.57	617.95
1K-e	4/7/2014	2476131.44	7103641.54	618.05
1K-f	4/7/2014	2476203.22	7103644.41	618.83
1K-g	4/7/2014	2476063.05	7103565.34	618.23
1K-h	4/7/2014	2476134.45	7103572.14	618.39
1K-i	4/7/2014	2476204.87	7103574.45	618.55
1L-a	4/3/2014	2476271.35	7103713.3	618.61
1L-b	4/3/2014	2476341.85	7103714.6	619.23
1L-c	4/3/2014	2476410.94	7103713.25	619.81
1L-d	4/3/2014	2476271.76	7103643.66	618.96
1L-e	4/3/2014	2476340.36	7103642.71	619.3
1L-f	4/3/2014	2476411.17	7103642.97	619.44
1L-g	4/3/2014	2476273.59	7103572.37	619.03
1L-h	4/3/2014	2476342.95	7103573.75	618.58
1L-i	4/3/2014	2476412.52	7103573.36	619.53
1M-a	4/3/2014	2476481.61	7103714.97	619.71

TABLE 3 - SUMMARY OF SAMPLE LOCATIONS
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Sample ID	Date Collected	Easting	Northing	Elevation (ft amsl)
1M-b	4/3/2014	2476551.13	7103715.81	621.02
1M-c R	4/14/2014	2476618.54	7103714.97	620.59
1M-d	4/3/2014	2476482.16	7103641.98	620.25
1M-e	4/3/2014	2476548.62	7103643.14	620.32
1M-f	4/3/2014	2476620.68	7103647.77	620.59
1M-g	4/3/2014	2476484.13	7103572.67	620.5
1M-h	4/3/2014	2476553.72	7103572.2	620.29
1M-i	4/3/2014	2476621.37	7103577.06	620.55
2H-a	4/4/2014	2475438.05	7103502.96	615.11
2H-b	4/4/2014	2475506.06	7103504.8	615.75
2H-c	4/4/2014	2475576.12	7103504.57	616.04
2H-d	4/7/2014	2475438.46	7103435.56	615.54
2H-e	4/7/2014	2475506.83	7103436.47	616.15
2H-f	4/7/2014	2475576.57	7103436.22	616.11
2H-g	4/7/2014	2475441.32	7103366.77	615.63
2H-h	4/7/2014	2475509.94	7103366.08	615.83
2H-i	4/7/2014	2475578.8	7103365.15	616.16
2I-a	4/4/2014	2475645.12	7103506.54	616.14
2I-b	4/4/2014	2475716.89	7103507.23	616.7
2I-c	4/4/2014	2475785.79	7103506.44	616.68
2I-d	4/7/2014	2475647.11	7103434.96	616.14
2I-e	4/7/2014	2475715.12	7103435.25	616.31
2I-f	4/7/2014	2475785.69	7103435.68	616.59
2I-g	4/7/2014	2475646.55	7103365.73	616.41
2I-h	4/7/2014	2475718.51	7103366.3	616.66
2I-i	4/7/2014	2475786.33	7103365.67	616.55
2J-a	4/4/2014	2475853.53	7103503.51	617.15
2J-b	4/4/2014	2475924.27	7103503.78	617.62
2J-c	4/4/2014	2475993.58	7103505.17	617.78
2J-d	4/8/2014	2475855.83	7103434.07	617.4
2J-e	4/8/2014	2475924	7103434.21	617.25
2J-f	4/8/2014	2475993.03	7103433.48	617.84
2J-g	4/8/2014	2475854.74	7103366.6	617.46
2J-h	4/8/2014	2475923.76	7103365.63	617.39
2J-i	4/8/2014	2475996.13	7103365.67	617.56
2K-a	4/7/2014	2476063.4	7103498.38	618.05
2K-b	4/7/2014	2476134.7	7103504.18	618.17
2K-c	4/7/2014	2476204.28	7103506.15	618.36
2K-d	4/8/2014	2476064.5	7103434.42	618.03
2K-e	4/8/2014	2476132.1	7103435.19	617.68
2K-f	4/8/2014	2476203.84	7103434.31	618.33
2K-g	4/8/2014	2476066.91	7103365.94	617.4
2K-h	4/8/2014	2476135.65	7103365.44	617.71
2K-i	4/8/2014	2476201.86	7103364.3	618.52
2L-a	4/3/2014	2476272.5	7103501.98	619.08
2L-b	4/3/2014	2476341.66	7103504.17	618.71

TABLE 3 - SUMMARY OF SAMPLE LOCATIONS
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Sample ID	Date Collected	Easting	Northing	Elevation (ft amsl)
2L-c	4/3/2014	2476411.6	7103503.65	619.34
2L-d	4/3/2014	2476273.03	7103432.92	618.52
2L-e	4/3/2014	2476341.26	7103433.94	618.8
2L-f	4/3/2014	2476411.45	7103434.44	619.01
2L-g	4/3/2014	2476273.95	7103364.01	618.39
2L-h	4/3/2014	2476342.13	7103364.78	618.6
2L-i	4/3/2014	2476413.27	7103364.37	618.59
2M-a	4/3/2014	2476480.53	7103503.51	620
2M-b	4/3/2014	2476552.02	7103503.39	620.32
2M-c	4/3/2014	2476620.87	7103506.27	620.61
2M-d	4/3/2014	2476481.64	7103432.8	619.14
2M-e	4/3/2014	2476549.61	7103434.55	619.99
2M-f	4/3/2014	2476621.96	7103434.99	620.01
2M-g	4/3/2014	2476482.66	7103363.13	619.17
2M-h	4/3/2014	2476550.6	7103363.7	619.6
2M-i	4/3/2014	2476621.83	7103365.18	620.2
3H-a	4/8/2014	2475436.64	7103296.9	615.63
3H-b	4/8/2014	2475507.03	7103296.58	616.06
3H-c	4/8/2014	2475575.6	7103296.44	616.33
3H-d	4/8/2014	2475435.13	7103225.8	615.44
3H-e	4/8/2014	2475505.88	7103224.39	615.67
3H-f	4/8/2014	2475576.8	7103229.2	616.26
3H-g	4/8/2014	2475435.43	7103154.66	615.55
3H-h	4/8/2014	2475506.37	7103154.89	615.91
3H-i	4/8/2014	2475576.61	7103156.32	616.24
3I-a	4/8/2014	2475647.32	7103295.47	616.7
3I-b	4/8/2014	2475716.43	7103294.4	617.12
3I-c	4/8/2014	2475782.04	7103294.23	617.24
3I-d	4/8/2014	2475646.73	7103225.04	616.46
3I-e	4/8/2014	2475713.7	7103224.46	616.59
3I-f	4/8/2014	2475786.45	7103225.21	617.3
3I-g	4/8/2014	2475644.23	7103155.21	616.72
3I-h	4/8/2014	2475713.35	7103157.12	617.32
3I-i	4/8/2014	2475784.38	7103155.89	617.22
3J-a	4/8/2014	2475853.91	7103298.62	617.12
3J-b	4/8/2014	2475925.34	7103297.83	617.41
3J-c	4/8/2014	2475992.65	7103298.47	617.52
3J-d	4/8/2014	2475856.44	7103226.35	617.48
3J-e	4/8/2014	2475923.79	7103225.48	617.57
3J-f	4/8/2014	2475994.76	7103227.62	617.97
3J-g	4/8/2014	2475854.31	7103155.55	617.11
3J-h	4/8/2014	2475923.25	7103155.16	617.53
3J-i	4/8/2014	2475991.93	7103155	617.42
3K-a	4/8/2014	2476062.4	7103297.82	617.7
3K-b	4/8/2014	2476132.97	7103297.13	618.44
3K-c	4/8/2014	2476203.29	7103297.48	618.51

TABLE 3 - SUMMARY OF SAMPLE LOCATIONS
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Sample ID	Date Collected	Easting	Northing	Elevation (ft amsl)
3K-d	4/8/2014	2476065.56	7103227.18	618.3
3K-e	4/8/2014	2476133.23	7103227.38	618.67
3K-f	4/8/2014	2476203.43	7103227.64	618.89
3K-g	4/8/2014	2476065.23	7103155.99	617.86
3K-h	4/8/2014	2476131.31	7103155.37	618.23
3K-i	4/8/2014	2476205.09	7103156.99	618.47
3L-a	4/3/2014	2476270.62	7103293.62	618.24
3L-b	4/3/2014	2476340.68	7103294.07	617.61
3L-c	4/3/2014	2476411.27	7103295.16	616.92
3L-d	4/3/2014	2476270.2	7103222.84	616.68
3L-e	4/3/2014	2476341.14	7103224.41	615.85
3L-f	4/3/2014	2476413.94	7103225.61	614.83
3L-g	4/3/2014	2476273.69	7103154.33	615.39
3L-h	4/3/2014	2476341.74	7103154.38	614.03
3M-a	4/3/2014	2476480.9	7103294.38	616.75
3M-b	4/3/2014	2476552.25	7103294.81	618.75
3M-c	4/3/2014	2476620.43	7103296.7	620.26
3M-d	4/3/2014	2476481.91	7103224.28	615.2
3M-e	4/3/2014	2476550.06	7103226.47	616.49
4H-a	4/8/2014	2475436.31	7103084.71	615.58
4H-b	4/8/2014	2475503.01	7103086.15	616
4H-c	4/8/2014	2475575.35	7103085.61	615.74
4H-d	4/9/2014	2475434.7	7103016.42	614.45
4H-e	4/9/2014	2475575.57	7103017.21	616.24
4H-f	4/9/2014	2475503.4	7103023.48	615.59
4H-g	4/9/2014	2475437.06	7102948.8	615.55
4H-h	4/9/2014	2475505.9	7102951.11	615.8
4H-i	4/9/2014	2475577.84	7102950.38	616.59
4I-a	4/8/2014	2475644.9	7103084.94	616.16
4I-b	4/8/2014	2475714.9	7103083.43	617.03
4I-c	4/8/2014	2475783.67	7103085.57	617.44
4I-d	4/9/2014	2475645.36	7103017.09	616.84
4I-e	4/9/2014	2475714.04	7103015.72	617.11
4I-f	4/9/2014	2475784.25	7103015.89	617.1
4I-g	4/9/2014	2475645.54	7102949.99	616.19
4I-h	4/9/2014	2475715.12	7102950.9	616.95
4I-i	4/9/2014	2475785.24	7102951.49	616.64
4J-a	4/8/2014	2475851.24	7103086.13	617.3
4J-b	4/8/2014	2475924.84	7103086.89	617.42
4J-c	4/8/2014	2475994.27	7103085.72	617.79
4J-d	4/9/2014	2475853.29	7103016.67	617.61
4J-e	4/9/2014	2475923.74	7103018.22	617.66
4J-f	4/9/2014	2475994.97	7103015.96	617.09
4J-g	4/9/2014	2475854.14	7102950.48	617.11
4J-h	4/9/2014	2475924.02	7102952.18	617.1
4J-i	4/9/2014	2475994.25	7102951.74	616.89

TABLE 3 - SUMMARY OF SAMPLE LOCATIONS
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Sample ID	Date Collected	Easting	Northing	Elevation (ft amsl)
4K-a	4/8/2014	2476064.58	7103083.83	617.92
4K-b	4/8/2014	2476131.68	7103086.76	617.58
4K-c	4/8/2014	2476201	7103088.31	
4K-d	4/9/2014	2476063.97	7103016.48	616.82
4K-e	4/9/2014	2476131.91	7103017.35	615.08
4K-f	4/9/2014	2476201.25	7103016.05	615.1
4K-g	4/9/2014	2476062.45	7102950.38	616.04
4K-h	4/9/2014	2476135.02	7102949	614.06
4L-a	4/3/2014	2476272.61	7103084.43	613.76
5H-a	4/9/2014	2475436.05	7102876.88	615.63
5H-b	4/9/2014	2475506.37	7102876.31	616.14
5H-c	4/9/2014	2475576.97	7102877.66	616.36
5H-d	4/9/2014	2475435.95	7102807.08	615.78
5H-e	4/9/2014	2475507.29	7102809.64	616.15
5H-f	4/9/2014	2475575.44	7102809.71	616.18
5H-g	4/9/2014	2475437.88	7102735.98	615.47
5H-h	4/9/2014	2475504.06	7102737.75	616.34
5H-i	4/9/2014	2475576.35	7102737.55	615.98
5I-a	4/9/2014	2475644.18	7102876.52	616.19
5I-b	4/9/2014	2475716.82	7102875.96	616.43
5I-c	4/9/2014	2475783.75	7102878.21	614.89
5I-d	4/9/2014	2475645.61	7102808.46	616.22
5I-e	4/9/2014	2475713.89	7102808.36	616.78
5I-f	4/9/2014	2475785.37	7102808.95	616.92
5I-g	4/9/2014	2475645.45	7102736.58	616.03
5I-h	4/9/2014	2475714.36	7102738.03	616.37
5I-i	4/9/2014	2475784.66	7102737.85	616.31
5J-a	4/9/2014	2475853.13	7102878.65	617.06
5J-b	4/9/2014	2475924.68	7102877.72	616.56
5J-c	4/9/2014	2475994.51	7102878.78	616.08
5J-d	4/9/2014	2475852.71	7102808.94	616.06
5J-e	4/9/2014	2475923.71	7102809.59	616.35
5J-f	4/9/2014	2475993.99	7102808.93	615.58
5J-g	4/9/2014	2475855.02	7102735.93	616.33
5J-h	4/9/2014	2475924.56	7102737.96	615.71
5K-a	4/9/2014	2476065.64	7102880.01	614.25
6H-a	4/9/2014	2475437.04	7102668.01	615.7
6H-b	4/9/2014	2475505.99	7102668.47	615.62
6H-c	4/9/2014	2475575.6	7102666.67	616.07
6H-d	4/9/2014	2475437.66	7102598.54	614.76
6H-e	4/9/2014	2475505.81	7102597.64	614.93
6H-f	4/9/2014	2475577.07	7102598.48	615.45
6H-g	4/9/2014	2475437.22	7102529.43	614.57
6H-h	4/9/2014	2475505.96	7102530.77	614.79
6H-i	4/9/2014	2475576.21	7102531.07	614.59
6I-a	4/9/2014	2475644.21	7102666.94	615.96

TABLE 3 - SUMMARY OF SAMPLE LOCATIONS
GRAND PARK SITE - PRAA 1, FRISCO, TEXAS

Sample ID	Date Collected	Easting	Northing	Elevation (ft amsl)
6I-b	4/9/2014	2475714.84	7102668.83	615.98
6I-c	4/9/2014	2475783.49	7102669.33	617.34
6I-d	4/9/2014	2475644.99	7102598.28	614.77
6I-e	4/9/2014	2475713.88	7102598.82	614.62
6I-f	4/9/2014	2475785.41	7102595.37	614.47
6J-a	4/9/2014	2475852.98	7102668.99	615.21

Notes: ft amsl = feel above mean sea level.
Coordinates are in Texas State Plane, NAD83

TABLE 4
GRAND PARK, FRISCO, TEXAS
SAMPLE COLLECTION INTERVALS AND ANALYTICAL PROTOCOL

Type of Sample	Sample Collection Intervals	Initial Analytical Protocol[1]	Subsequent Field Mobilization	Purpose of Sample
Surface Water	NA	Total and dissolved arsenic, cadmium, lead, and selenium	Lateral delineation where necessary.	Determine if surface water impacts are present at the site.
	NA	Total concentrations of TPH, BTEX, PAHs, & RCRA 8 Metals.	Lateral delineation where necessary.	Determine if surface water leaving an outfall at TBK Materials is impacted.
Groundwater	NA	Total arsenic, cadmium, lead, and selenium.	Lateral delineation where necessary.	Determine if groundwater impacts are present at the site.
Sediment	0-3"	Total concentrations of herbicides, pesticides, arsenic, cadmium, lead, and selenium.	Vertical and lateral delineation where necessary.	Determine if sediment impacts are present at the site.
Surface Soil	0-3"	Total arsenic, cadmium, lead, and selenium.	Vertical and lateral delineation where necessary.	Determine if soil impacts are present at the site.
	0-3"	Herbicides, Pesticides, TPH, BTEX, PAHs, & RCRA 8 Metals.	Vertical and lateral delineation where necessary.	Determine if soil impacts are present in targeted areas at the site.
Subsurface Soil	2' intervals	Total arsenic, cadmium, lead, and selenium.	Vertical and lateral delineation where necessary.	Determine if soil impacts are present at the future limits of the lakes that will be excavated at the site.

Notes: " = inches; ' = feet

TABLE 5

GRAND PARK, FRISCO, TEXAS

ANALYTICAL METHODS AND SAMPLE HANDLING REQUIREMENTS

Parameters	Analytical Method[2]	Preservation	Required Reporting Limit	Holding Time
Total and dissolved heavy metals (excluding Mercury)	EPA 200.8/6020	Cool 4 ± 2°C Water: Acidify w/ HNO_3 to pH < 2	TRRP Reporting (see note 1)	180 days
Mercury	EPA 7470/7471	Cool 4 ± 2°C Water: Acidify w/ HNO_3 to pH < 2	TRRP Reporting	28 days
Herbicides	EPA 8151 or equivalent	Cool 4 ± 2°C	TRRP Reporting	7 days for aqueous; 14 days for solids
Organochlorine Pesticides	EPA 8081 or equivalent	Cool 4 ± 2°C	TRRP Reporting	7 days for aqueous; 14 days for solids
TPH	Tx 1005/1006	Cool 4 ± 2°C	TRRP Reporting	14 days
BTEX	EPA 8260 or equivalent	Cool 4 ± 2°C	TRRP Reporting	14 days
PAHs	EPA 625/8270	Cool 4 ± 2°C	TRRP Reporting	7 days for aqueous; 14 days for solids

Notes:

(1) Reporting limits must meet TRRP Tier 1 critical PCLs for a 30-acre source area. All analytical results will be reported for concentrations that exceed the method detection limits and that meet the qualitative identification criteria recommended in the analytical method. Analytical results that are reported at concentrations between the method detection limit and method quantitation limit shall be flagged. Analytical results that are reported as undetected will be reported as undetected at the sample quantitation limit.

(2) Equivalent analytical methods may be utilized.

FIGURES

N

800 400 0 800

(SCALE IN FEET)

LEGEND

SITE BOUNDARY

NEAR BY TCEQ REGULATED SITES

FUTURE VCP SITE

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
FRISCO, TEXAS

SHEET TITLE:
SITE VICINITY MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046026
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-19-2014			FIGURE NO.
PURPOSE: PHASE I ESA			1

S:\CAD\City of Frisco\13046\13046026 Fig 1.dwg, 5/19/2014 12:43:11 PM

200 100 0 200

(SCALE IN FEET)

LEGEND

SAMPLES COLLECTED

MONITORING WELL

REV.	DATE	DESCRIPTION	DR BY	APP BY

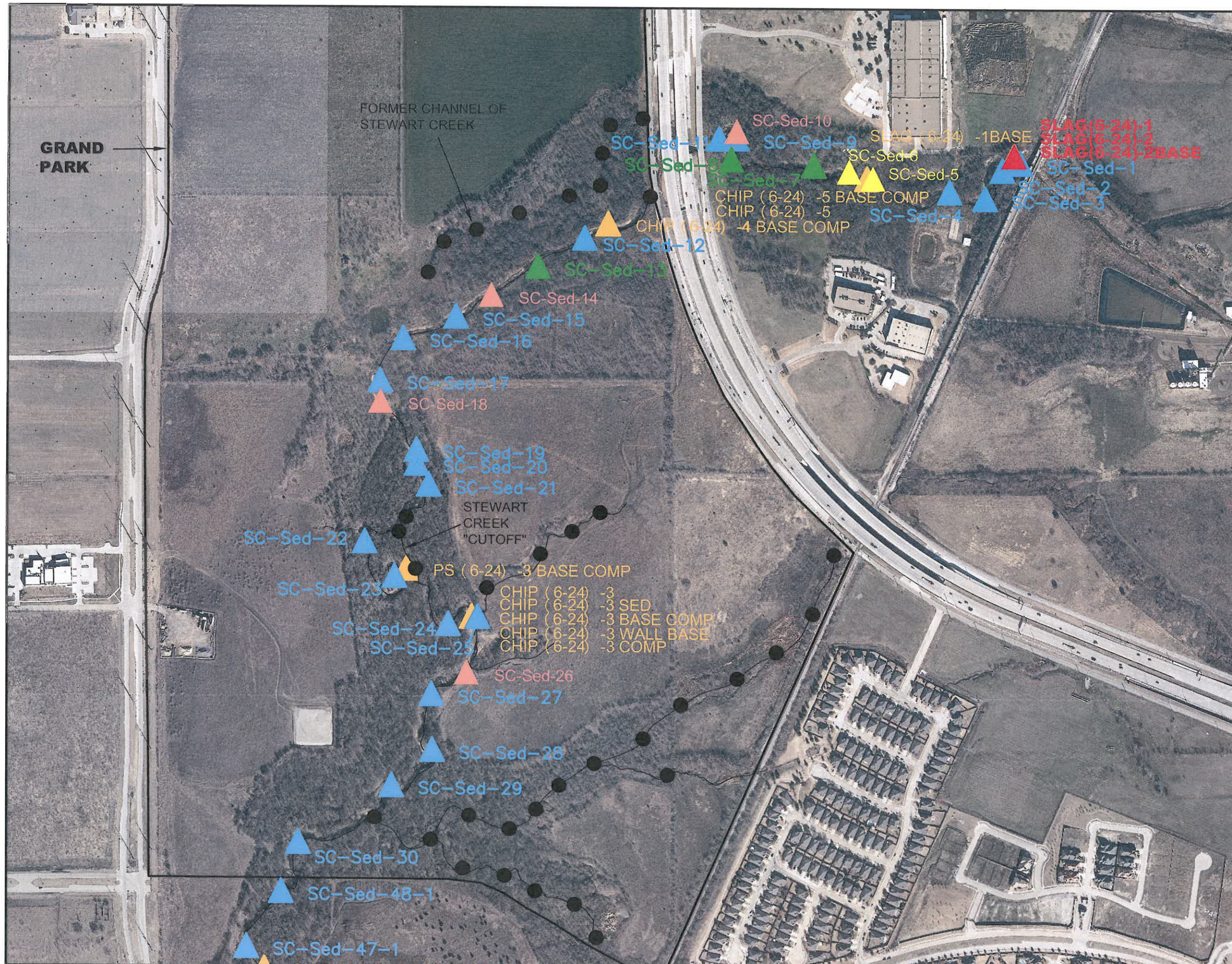
COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK
FRISCO, TEXAS

SHEET TITLE:
PRAA 1 SAMPLE LOCATION MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046027
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-19-2014			FIGURE NO. 2
PURPOSE: PURPOSE:			

S:\CAD\City of Frisco\13046\13046027 Fig 2.dwg, 5/19/2014 1:15:29 PM



N

500 0 500

(SCALE IN FEET)

LEGEND

- HAZARDOUS WASTE (LEAD = 5 mg/L TCLP)
- NON-HAZARDOUS BATTERY CHIPS OR SLAG
- LEAD CONCENTRATIONS EXCEED 250 mg/Kg
- LEAD AND/OR CADMIUM CONCENTRATION(s) EXCEED FRESHWATER SEDIMENT BENCHMARK VALUE(s) (LEAD = 35.8 mg/Kg; cadmium = .99 mg/Kg)
- LEAD CONCENTRATIONS EXCEED EXIDE BACKGROUND (31.5 mg/Kg)
- "NATURAL" (BACKGROUND) LEAD CONCENTRATIONS (<31.5 mg/Kg)
- PROPOSED SEDIMENT SAMPLE LOCATIONS

NOTES:

1. COE = US CORPS OF ENGINEERS.
2. FT AMSL = FEET ABOVE MEAN SEA LEVEL.
3. mg/Kg = MILLIGRAMS PER KILOGRAM.
4. mg/L = MILLIGRAMS PER LITER
5. TCLP = TOXICITY CHARACTERISTIC LEACHING PROCEDURE

REV.	DATE	DESCRIPTION	DR BY	APP BY

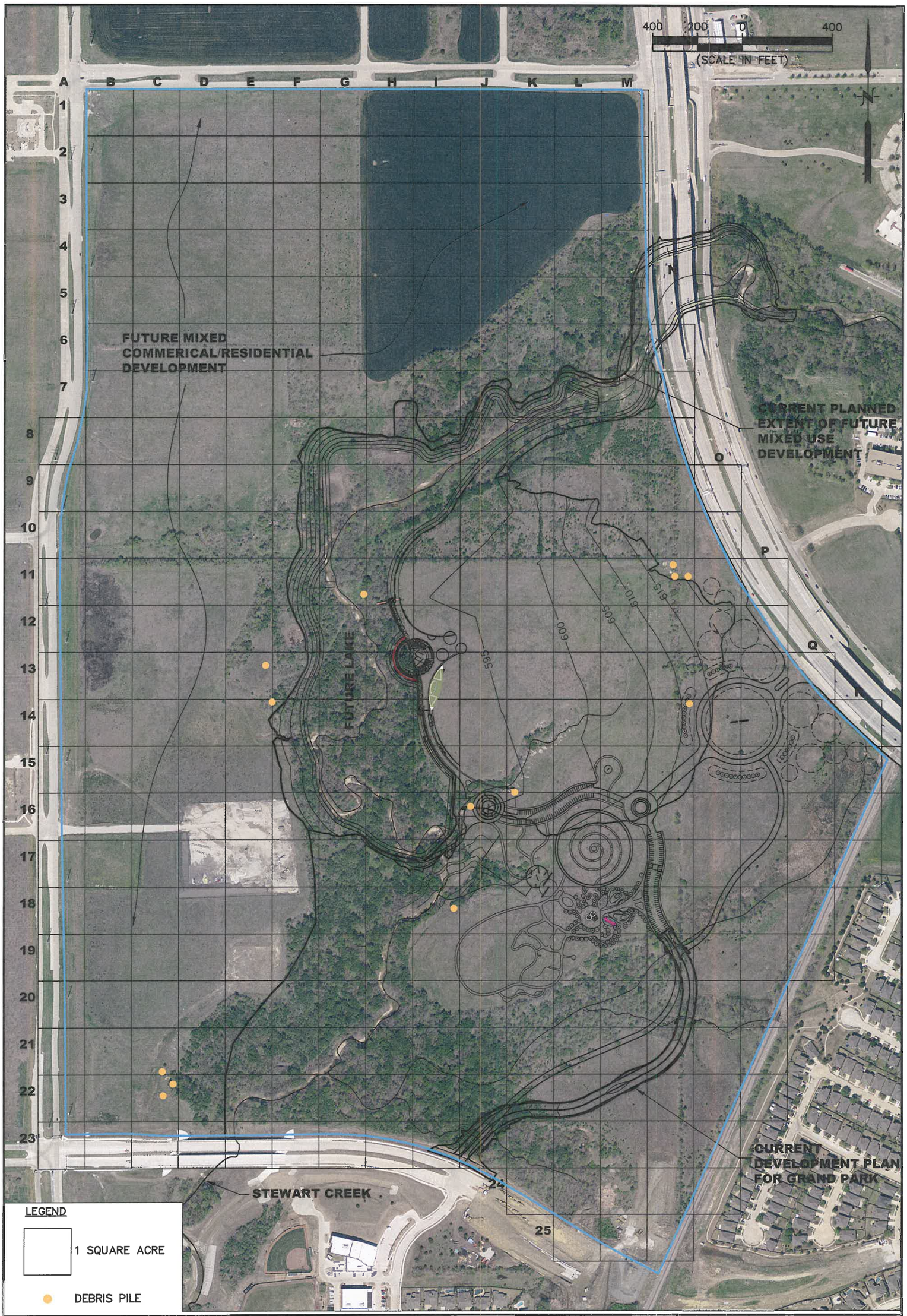
COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK
FRISCO, TEXAS

SHEET TITLE:
STEWART CREEK PREVIOUS AND PROPOSED SAMPLE LOCATIONS

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046028
APP BY	RDV		SHEETS 1 OF 1 SHEETS
DATE ISSUED: 06-11-2014			FIGURE NO. 3
PURPOSE:			

S:\CAD\City of Frisco\13046\13046028 Fig 3.dwg, 6/11/2014 4:23:47 PM



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

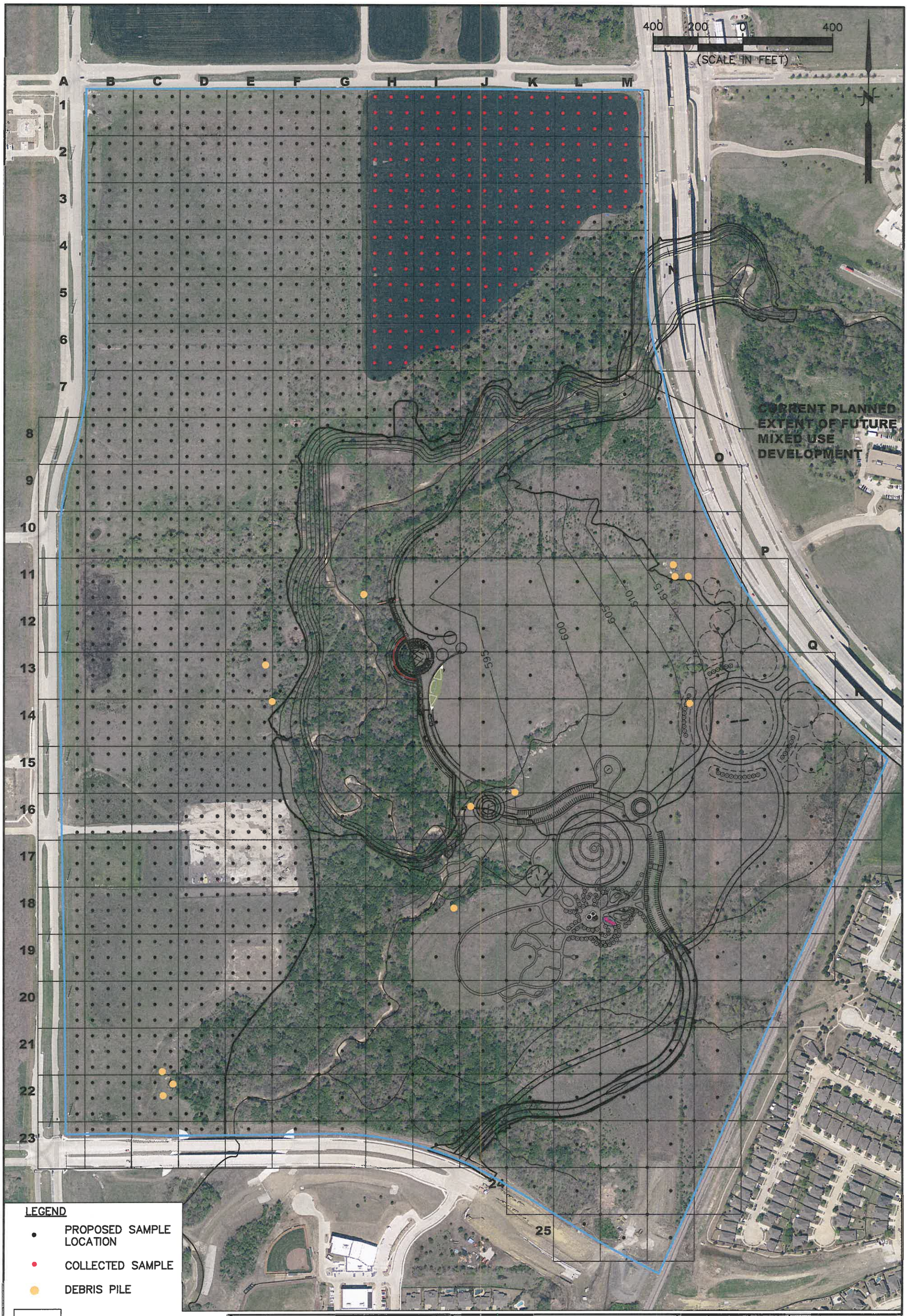
PROJECT: GRAND PARK FRISCO, TEXAS

SHEET TITLE: FUTURE DEVELOPMENT PLANS FOR GRAND PARK

DES BY		
DR BY	SDB	
CHK BY	RDV	
APP BY	RDV	
DATE ISSUED: 05-19-2014		
PURPOSE:		

SCALE: 1" = 400'
PROJECT NO. 13046.01
CJI NO. 13046029
SHEET 1 OF 1 SHEETS
FIGURE NO. 4

S:\CAD\City of Frisco\13046\13046029 Fig 4.dwg, 5/19/2014 1:42:52 PM



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ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
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PROJECT: GRAND PARK FRISCO, TEXAS

SHEET TITLE: PROPOSED UPLAND SAMPLE LOCATION PLAN – TARGET METALS

DES BY		
DR BY	SDB	
CHK BY	RDV	
APP BY	RDV	
DATE ISSUED: 05-19-2014		
PURPOSE:		

SCALE:	1" = 400'
PROJECT NO.	13046.01
CJI NO.	13046030
SHEET	1 OF 1 SHEETS
FIGURE NO.	5

S:\CAD\City of Frisco\13046\13046030 Fig 5.dwg, 5/19/2014 2:29:08 PM

REV.	DATE	DESCRIPTION	DR BY	APP BY

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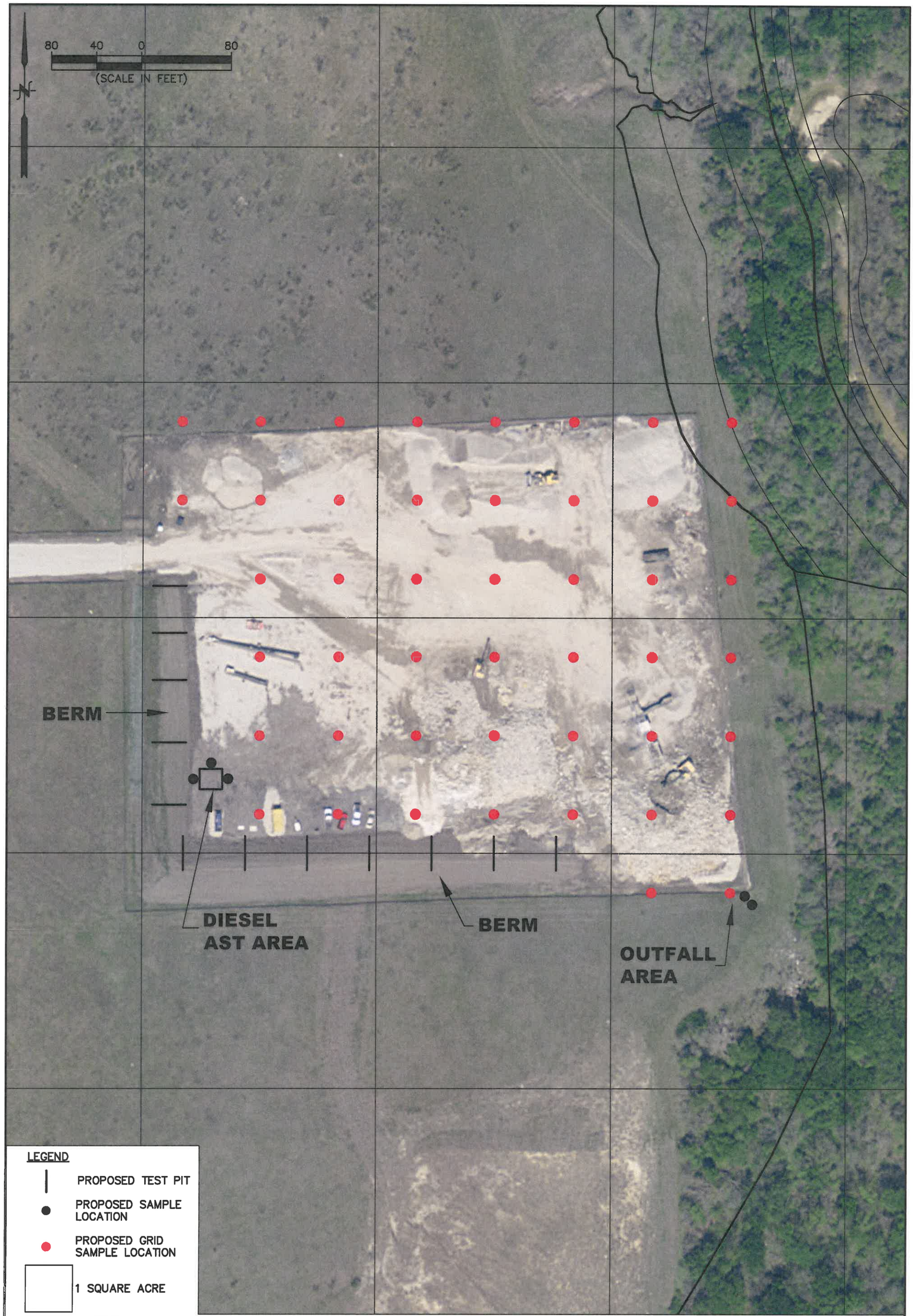
PROJECT: GRAND PARK FRISCO, TEXAS

SHEET TITLE: PROPOSED SAMPLE LOCATION PLAN FARM HOUSE AREA

DES BY		
DR BY	SDB	
CHK BY	RDV	
APP BY	RDV	
DATE ISSUED: 05-9-2014		
PURPOSE:		

SCALE:	1" = 60'
PROJECT NO.	13046.01
CJI NO.	13046031
SHEET	1 OF 1 SHEETS
FIGURE NO.	6

S:\CAD\City of Frisco\13046\13046031 Fig 6.dwg, 5/19/2014 2:33:09 PM



REV.	DATE	DESCRIPTION	DR BY	APP BY

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HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT: GRAND PARK
FRISCO, TEXAS

SHEET TITLE: PROPOSED SAMPLE LOCATION PLAN
CONCRETE CRUSHER AREA

DES BY		
DR BY	SDB	
CHK BY	RDV	
APP BY	RDV	
DATE ISSUED: 05-19-2014		
PURPOSE:		

SCALE:	1" = 80'
PROJECT NO.	13046.01
CJI NO.	13046032
SHEET	1 OF 1 SHEETS
FIGURE NO.	7

S:\CAD\City of Frisco\13046\13046032 Fig 7.dwg, 6/25/2014 3:04:06 PM

SOURCE: GOOGLE EARTH PRO

LEGEND

● SAMPLE LOCATION

N

300 150 0 300

(SCALE IN FEET)

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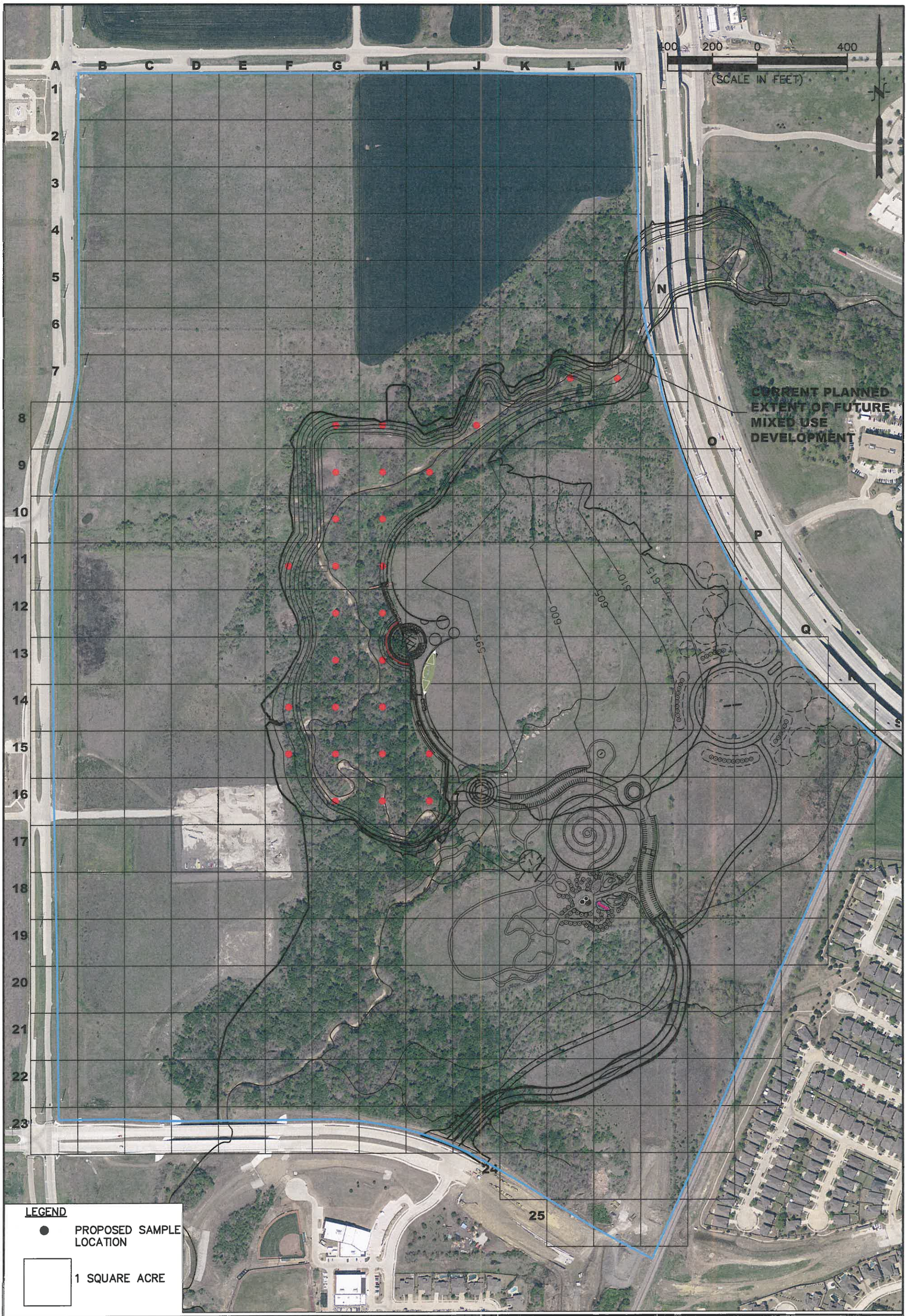
PROJECT:
GRAND PARK
FRISCO, TEXAS

SHEET TITLE:
3/31/2011 AERIAL PHOTOGRAPH

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046033
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-19-2014			FIGURE NO. 8
PURPOSE:			

S:\CAD\City of Frisco\13046\13046033 Fig 8.dwg, 5/19/2014 4:17:42 PM



REV.	DATE	DESCRIPTION	DR BY	APP BY

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TEXAS REGISTERED ENGINEERING FIRM F-883

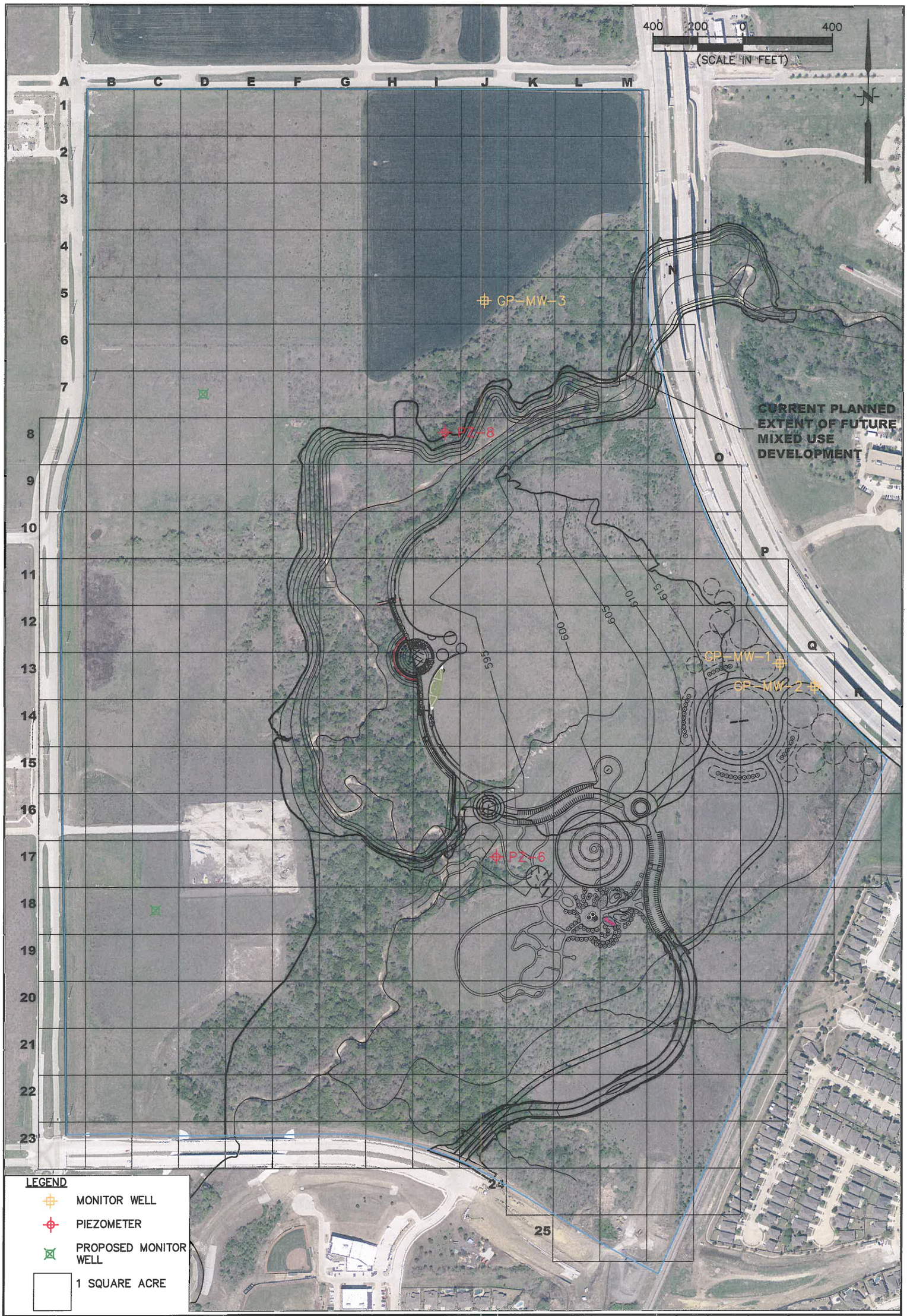
PROJECT: GRAND PARK FRISCO, TEXAS

SHEET TITLE: PROPOSED BORING LOCATION PLAN FUTURE LAKES

DES BY		
DR BY	SDB	
CHK BY	RDV	
APP BY	RDV	
DATE ISSUED: 05-19-2014		
PURPOSE:		

SCALE:	1" = 400'
PROJECT NO.	13046.01
CJI NO.	13046034
SHEET	1 OF 1 SHEETS
FIGURE NO.	9

S:\CAD\City of Frisco\13046\13046034 Fig 9.dwg, 5/19/2014 4:58:41 PM



REV.	DATE	DESCRIPTION	DR BY	APP BY

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812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
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TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT: GRAND PARK FRISCO, TEXAS

SHEET TITLE: PROPOSED MONITOR WELL LOCATION PLAN

DES BY		
DR BY	SDB	
CHK BY	RDV	
APP BY	RDV	
DATE ISSUED: 05-19-2014		
PURPOSE:		

SCALE: 1" = 400'
PROJECT NO. 13046.01
CJI NO. 13046035
SHEET 1 OF 1 SHEETS
FIGURE NO. 10

S:\CAD\City of Frisco\13046\13046035 Fig 10.dwg, 6/9/2014 4:48:33 PM

APPENDIX A
PHOTOGRAPHS DOCUMENTING CHANGES AT THE TBK MATERIALS LEASE SITE

APPENDIX A - PHOTOGRAPHS OF FORMER TBK MATERIALS LEASE AREA
GRAND PARK, FRISCO, TEXAS

Photo 1 – View looking east of the entrance road to TBK Material's former lease area.

Photo 2 – View looking east of TBK Material's former lease area.

Photo 3 – View of the berm located to the west and south of TBK Material's former lease area.

Photo 4 – View looking south of TBK Material's former fuel storage area.

APPENDIX B
AERIAL PHOTOGRAPHS SHOWING FORMER CONCRETE BATCH PLANT AND SPOILS STORAGE AREA

SOURCE: GOOGLE EARTH PRO

600 300 0 600

(SCALE IN FEET)

REV.	DATE	DESCRIPTION	DR BY	APP BY

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

PROJECT:
GRAND PARK
FRISCO, TEXAS

SHEET TITLE:
12/4/2009 AERIAL PHOTOGRAPH

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046025
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-16-2014			FIGURE NO. B-1
PURPOSE:			

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SOURCE: GOOGLE EARTH PRO

600 300 0 600

(SCALE IN FEET)

REV.	DATE	DESCRIPTION	DR BY	APP BY

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AUSTIN, TEXAS 78701
HUB & WBE CERTIFIED
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK
FRISCO, TEXAS

SHEET TITLE:
3/31/2011 AERIAL PHOTOGRAPH

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046025
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-16-2014			FIGURE NO. B-2
PURPOSE:			

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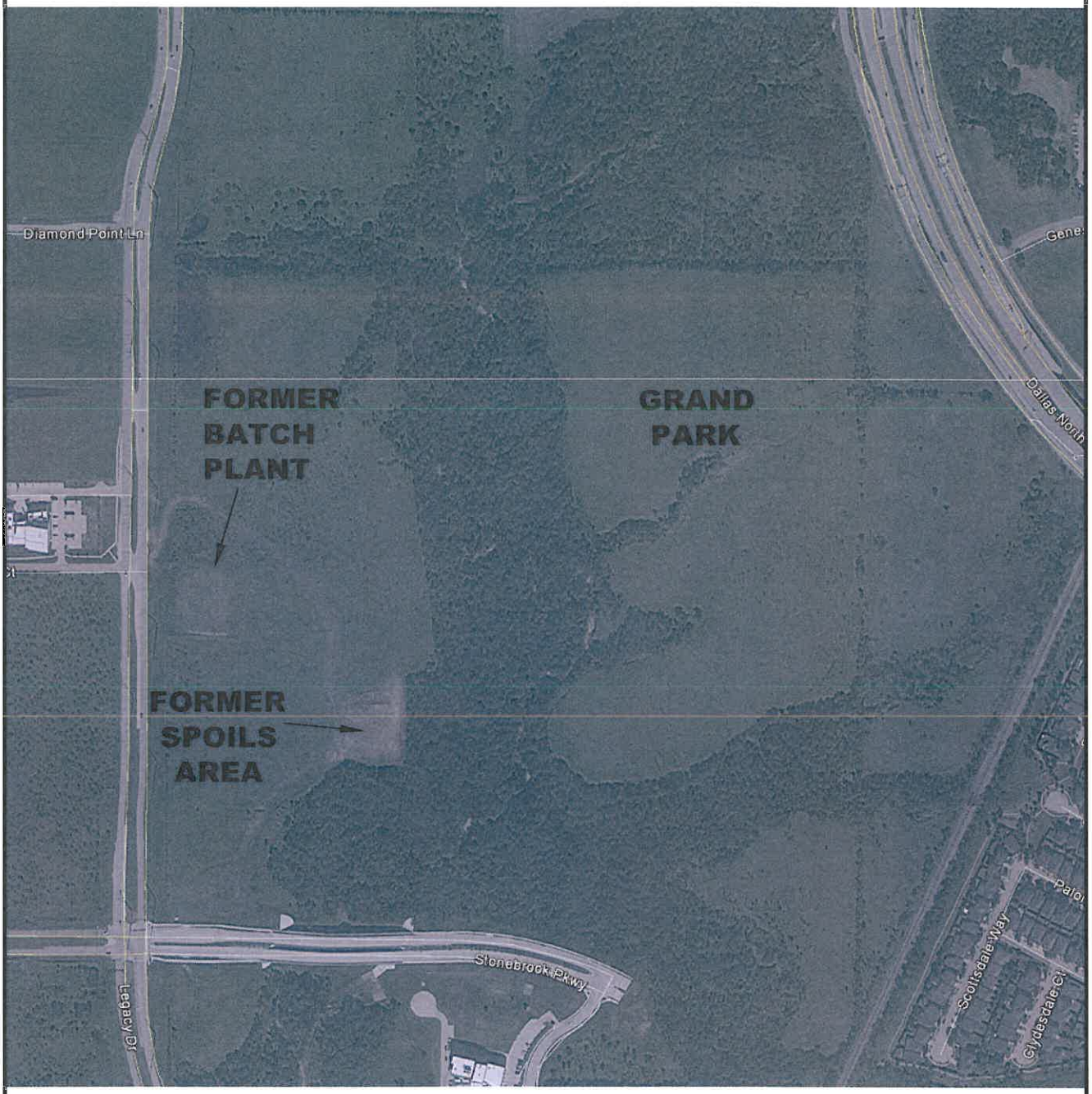

SOURCE: GOOGLE EARTH PRO

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600 300 0 600

(SCALE IN FEET)

REV.	DATE	DESCRIPTION	DR BY	APP BY

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812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
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TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK
FRISCO, TEXAS

SHEET TITLE:
4/4/2012 AERIAL PHOTOGRAPH

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046025
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-16-2014			FIGURE NO. B-3
PURPOSE:			

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SOURCE: GOOGLE EARTH PRO

600 300 0 600

(SCALE IN FEET)

REV.	DATE	DESCRIPTION	DR BY	APP BY

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ENGINEERING AND CONSULTING
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TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
GRAND PARK
FRISCO, TEXAS

SHEET TITLE:
8/2/2012 AERIAL PHOTOGRAPH

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046025
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-16-2014			FIGURE NO. B-4
PURPOSE:			

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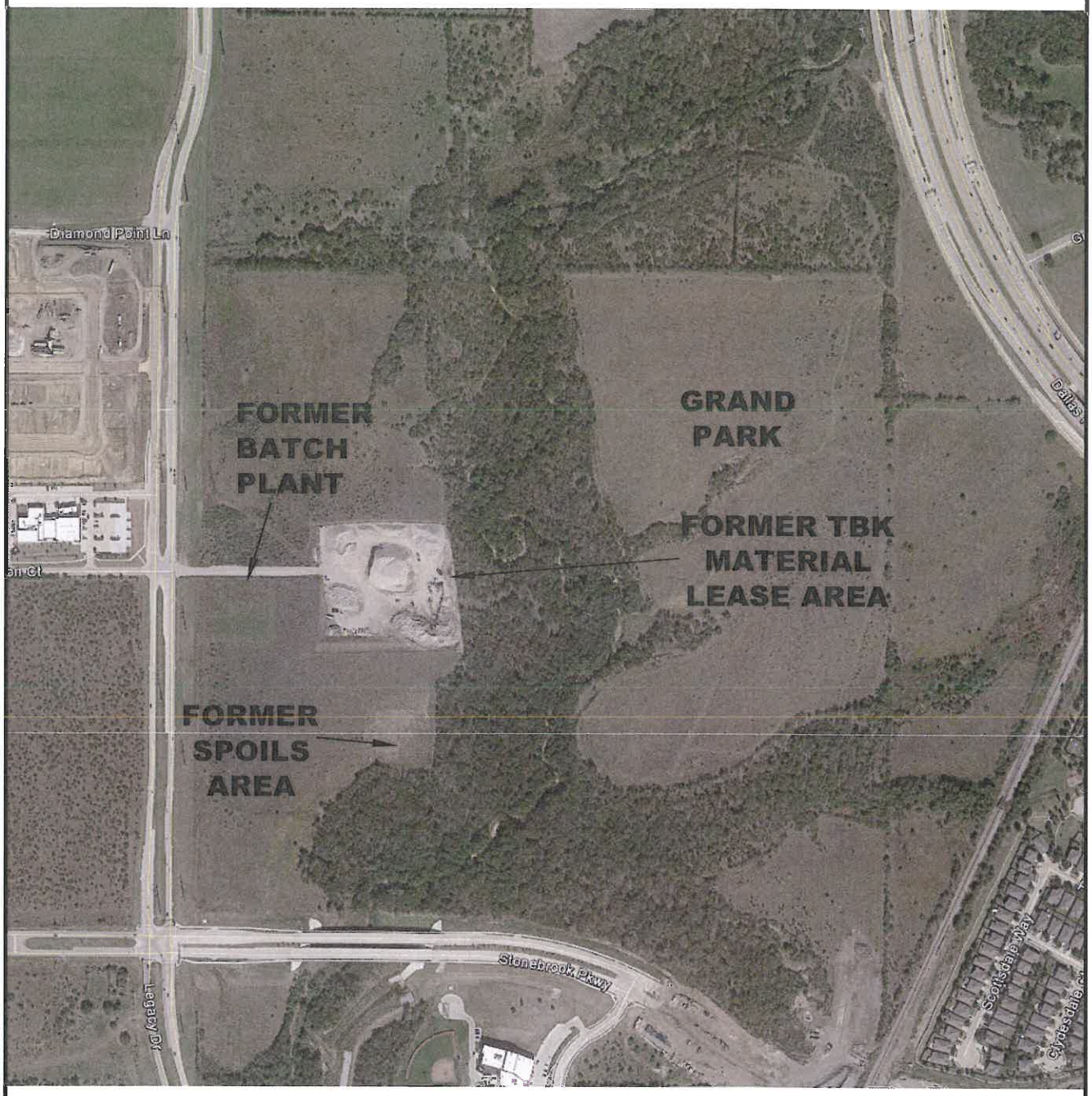

SOURCE: GOOGLE EARTH PRO

600 300 0 600

(SCALE IN FEET)

REV.	DATE	DESCRIPTION	DR BY	APP BY

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PROJECT:
GRAND PARK
FRISCO, TEXAS

SHEET TITLE:
10/18/2013 AERIAL PHOTOGRAPH

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 13046.01
CHK BY	RDV		CJI NO. 13046025
APP BY	RDV		SHEET 1 OF 1 SHEETS
DATE ISSUED: 05-16-2014			FIGURE NO. B-5
PURPOSE:			

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APPENDIX C
TIER 2 CALCULATIONS

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**

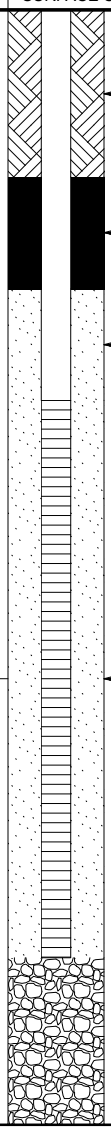
APPENDIX D
BORING LOG AND MONITOR WELL CONSTRUCTION DIAGRAM

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 E
TOXSTRATEGIES MEMORANDUM

ToxStrategies

Innovative solutions
Sound science

June 26, 2014

Mr. Kerry Russell
Russell & Rodriguez, LLP
1633 Williams Drive
Building 2, Suite 200
Georgetown, TX 78628

Sampling density analysis for Arsenic in Frisco, TX

Dear Mr. Russell:

Attached is a description of the analyses performed by ToxStrategies to estimate the impact of changing the sampling density from 8 per acre to less dense sampling regimes. Results are provided in the associated figures. If you have any questions about the analysis, please do not hesitate to contact me at (512) 791-7576, or by email at atachovsky@toxstrategies.com.

Sincerely,

J Andrew Tachovsky

J. Andrew Tachovsky, P.E.
Numerical Analysis Practice Leader

Impact of changing the sampling density for arsenic concentrations in soil

1.0 Background

ToxStrategies received a request from Cook-Joyce, Inc. (CJI) to evaluate the impact of changing the sampling density on a plot of land in Frisco, TX. Specifically, CJI sought to understand the impact of decreasing the sampling density on uncertainty in soil concentration estimates, and upper confidence interval statistics. CJI provided a dataset comprised of 236 soil samples, each with geographic location (in UTM coordinates) and arsenic concentration (in mg/kg soil), taken on an 8 samples per acre density. ToxStrategies examined the impact of decreasing sampling density using the methods described below.

2.0 Methods

ToxStrategies used Generalized Additive Models (GAMs) to assess the association between arsenic and geographic location as indicated by UTM northing and easting coordinates. Generalized Additive Models take the form expressed below in equation 1:

(Eq. 1) $$E(Y) = f(X_1, \ldots, X_p) = s_0 + s_1(X_1) + \ldots + s_p(X_p)$$

In this equation, the expected value of the outcome (Y) is represented as a smooth function of one or more input variables ($X_1, X_2 \ldots X_n$). While there are a wide range of smooth functions that can be used in GAM modeling, we utilized the implementation in the mgcv package (mixed gam computation vehicle, see Wood, 2006 and 2011) in the R statistical software environment (R Core Team, 2012). The smooth functions in the mgcv package are penalized regression splines. Penalized regression splines are non-linear functions that fit the actual data as closely as possible while minimizing the overall curvature of the fitted function. In the case of the mgcv package, the tradeoff between the fit of the function and the minimization of the curvature is determined via generalized cross validation, which approximates the well-known Akaike Information Criterion (Akaike, 1974) statistic for optimal model selection. The end result is a GAM solution consisting of a non-linear function of the input variables (geographic coordinates) that fits the actual outcome data (arsenic concentration) as closely as possible without overfitting. Such models are ideal for situations in which the modeled variable's relationship with two or more other variables (in this case northing and easting coordinates) is expected to

be of a complex non-linear form. We conducted significance tests on the GAM solution using F tests to compare the variance accounted for by the GAM solution and its number of parameters to the appropriate null model.

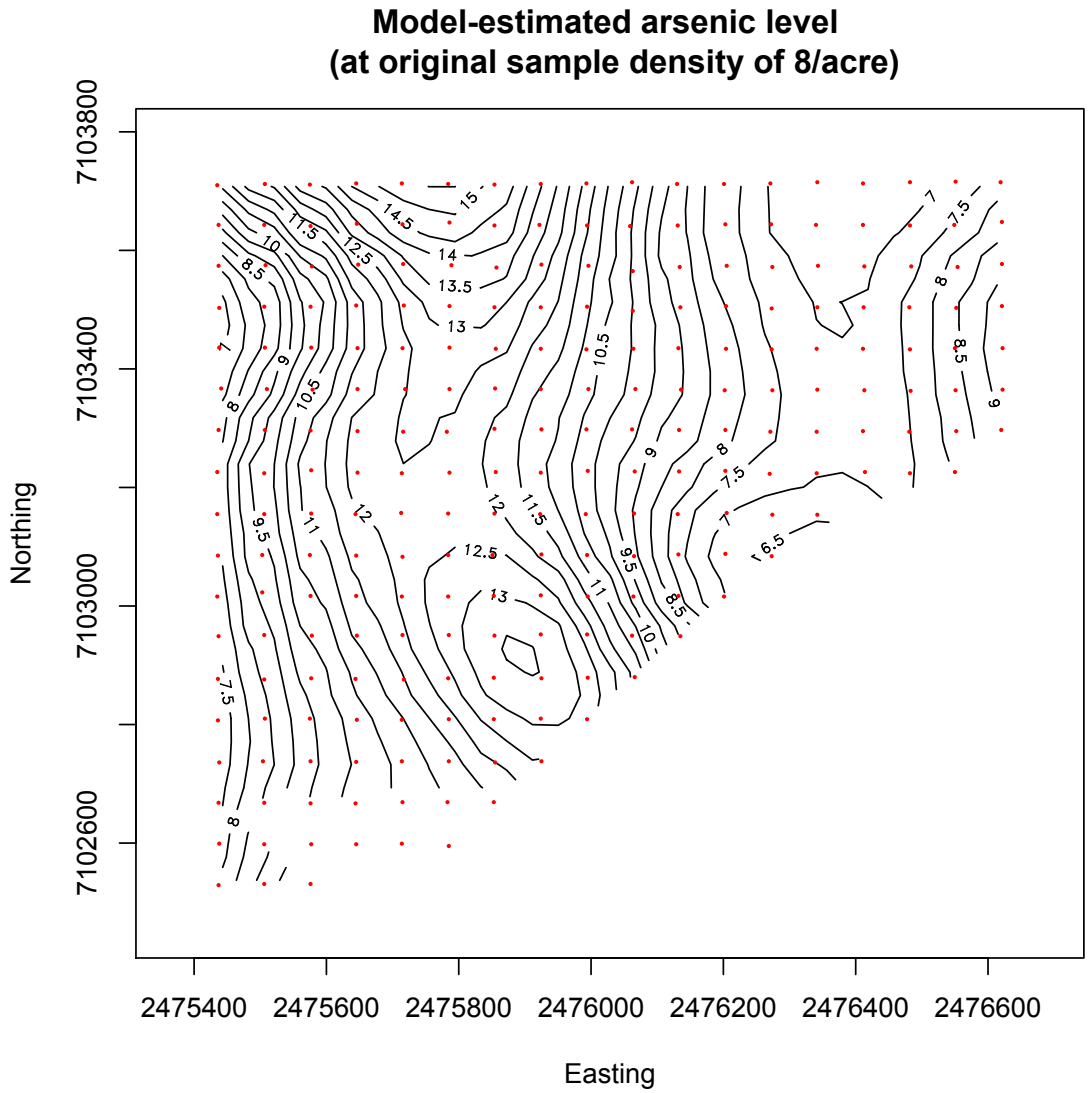
The GAM solution itself is a complex multidimensional non-linear model. To visualize the model, we used the GAM and generated model predictions at each coordinate point corresponding to an actual sample location. We then used cubic splines to interpolate the values of a surface using methods developed by Akima (1978) and implemented in the R package akima (Gebhardt, Petzoldt, and Maechler, 2013). The contour plot of those values reveals the model-estimated concentrations of arsenic at locations within the sampled area and shows the surface associated with the GAM solution.

The GAM solution developed from the original sample data can be used to generate standard errors associated with the solution surface as well as the estimated standard deviation of individual samples relative to that surface; both quantities are integral to estimating the impact of possible changes in sampling density. Commonly, a full assessment of the impact of a change in sampling density would be accomplished using simulation, a process which is both complex and time-consuming. However, if we are able to invoke two assumptions, a simplified analytic solution (i.e., not simulation-based) can be used instead. First, the predicted level of arsenic as a function of geographic location (i.e., the general shape of the solution surface) is assumed to be the same regardless of sampling density. This assumption is necessary in order to be able to estimate the impact of varying sampling densities without extensive simulation studies. This is a reasonable assumption because: a) the grid-based sampling design suggests that it is unbiased, and; b) multivariate GAM models yield unbiased prediction estimates in a wide range of circumstances. Second, across the range of sampling densities being contemplated there must be sufficient samples to estimate a surface of that complexity. As described in the Results, the solution surface is equivalent to approximately 23 degrees of freedom (df). Even at the lowest sampling density contemplated in this document (a 75% reduction or 59 samples) there are still sufficient samples to estimate a 23 df surface – although the largest contemplated reduction (75%) is at the margin of where this could reasonably be expected to hold.

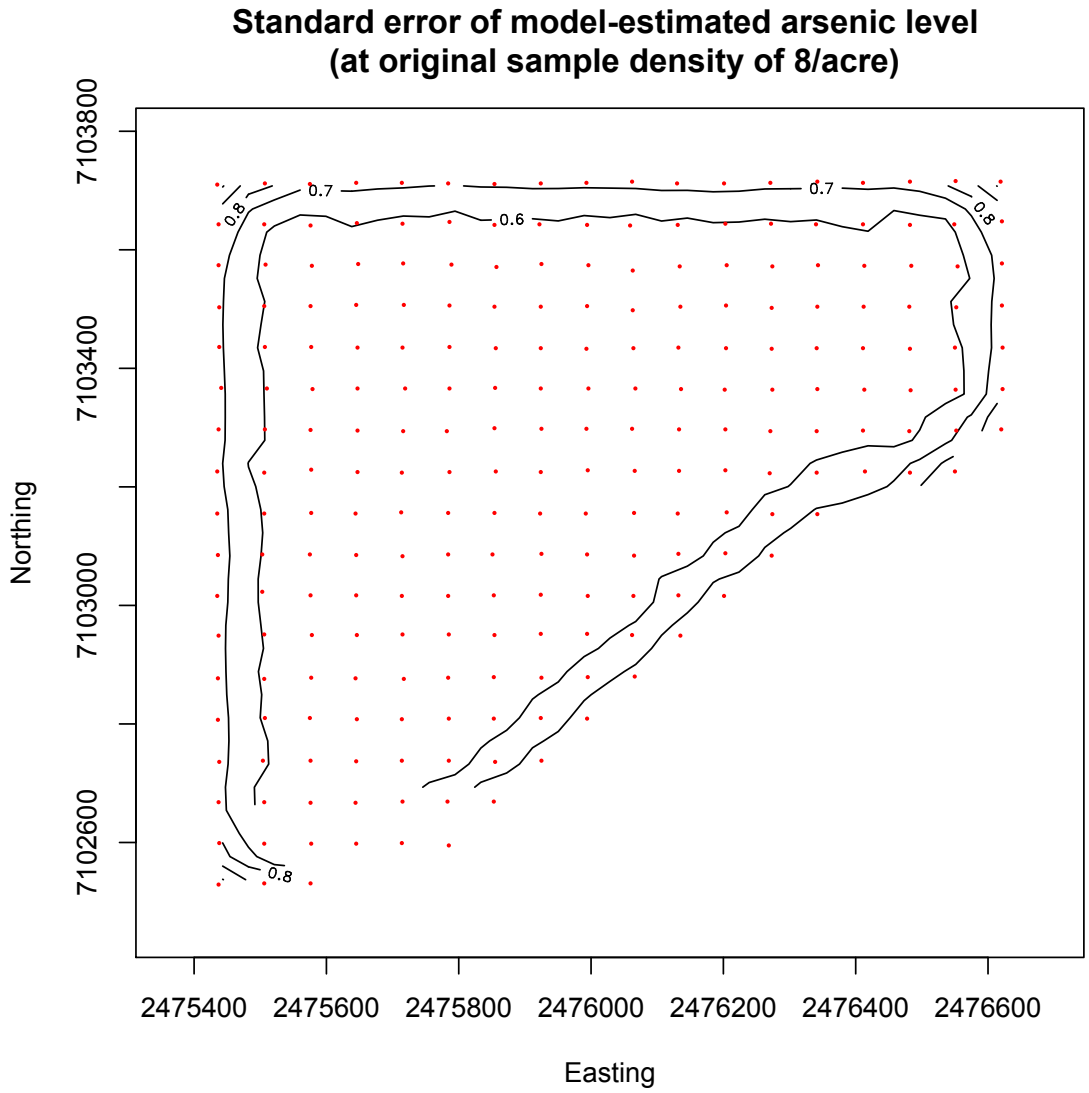
Using the assumptions described above, the impact of alternative sampling densities on standard errors and confidence boundaries are assessed. We show standard errors, the 95% upper bound on the model-estimated arsenic surface under various reduced sampling densities, and the 95% upper bound on a single sample taken at any location (which combines the uncertainty in the model-estimated arsenic surface with the uncertainty associated with sample-to-sample variation).

3.0 Results

The following series of four graphics are at the original sample density based on multivariate generalized additive models (gams). There is a statistically significant relationship between location and arsenic concentration, $F(22.09, 212.91) = 15.451$, $p < 1e\text{-}15$. The first graph shows the model-estimated arsenic level based on the 236 samples collected under the current sampling regime. The contours reflect the model-estimated levels, and the red dots are the locations of the actual samples.

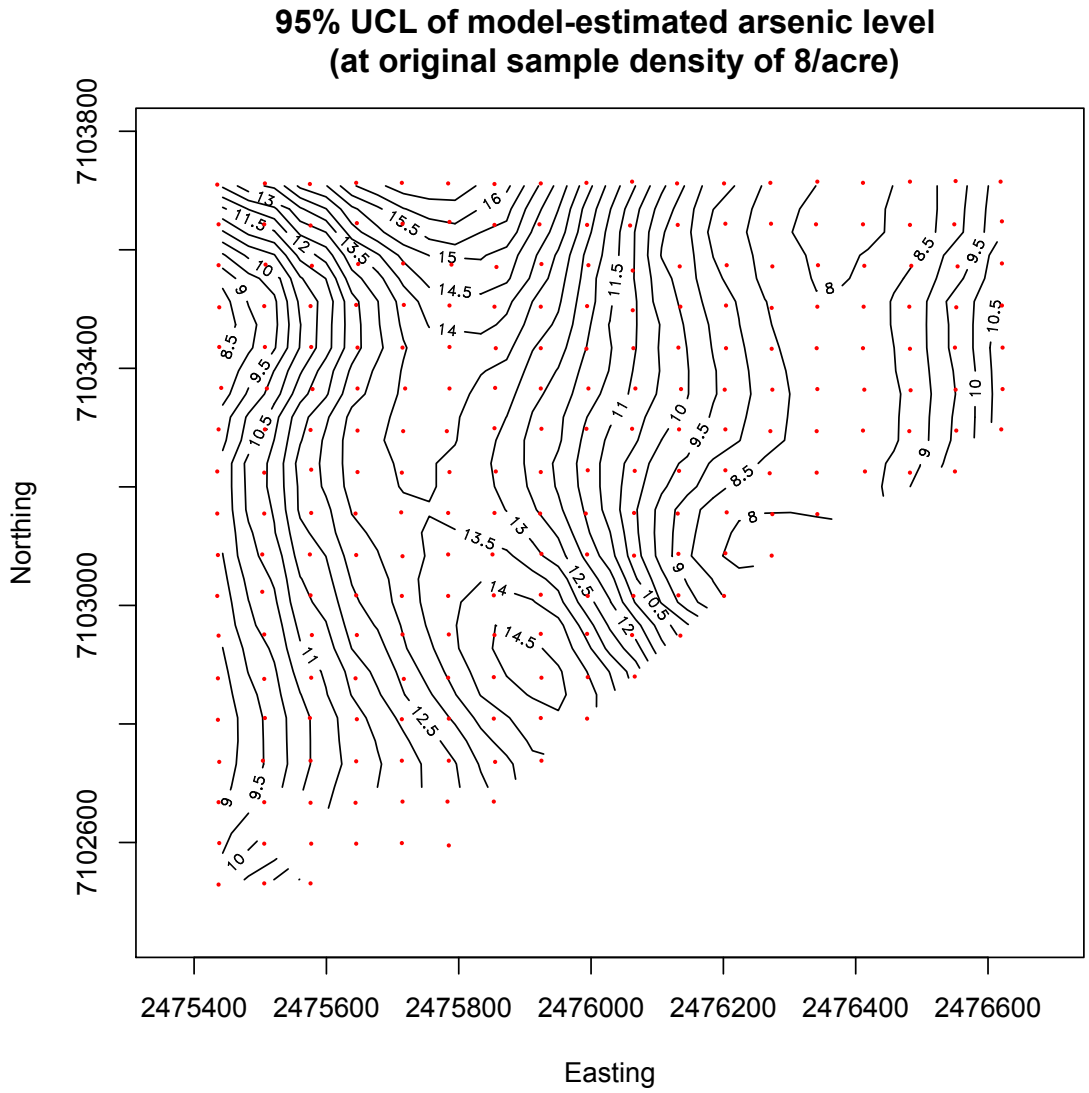


The second graph shows the standard error of those model-estimated arsenic levels under the current sampling regime.



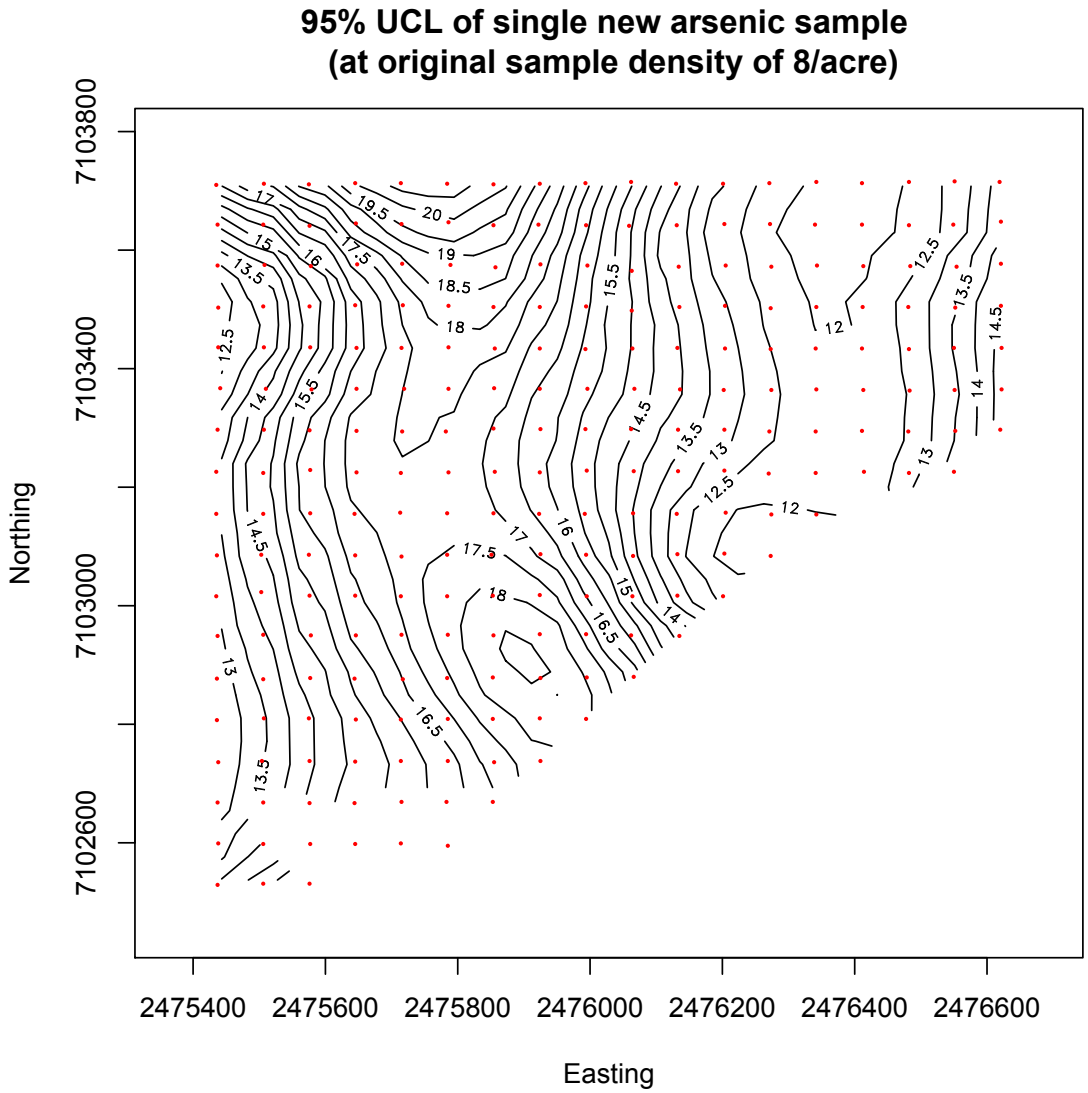
As expected, the standard error is relatively constant within the interior of the sampled region and rises near the edges.

The third graph shows the upper 95% confidence limit on the model-estimated arsenic level under the current sampling regime.

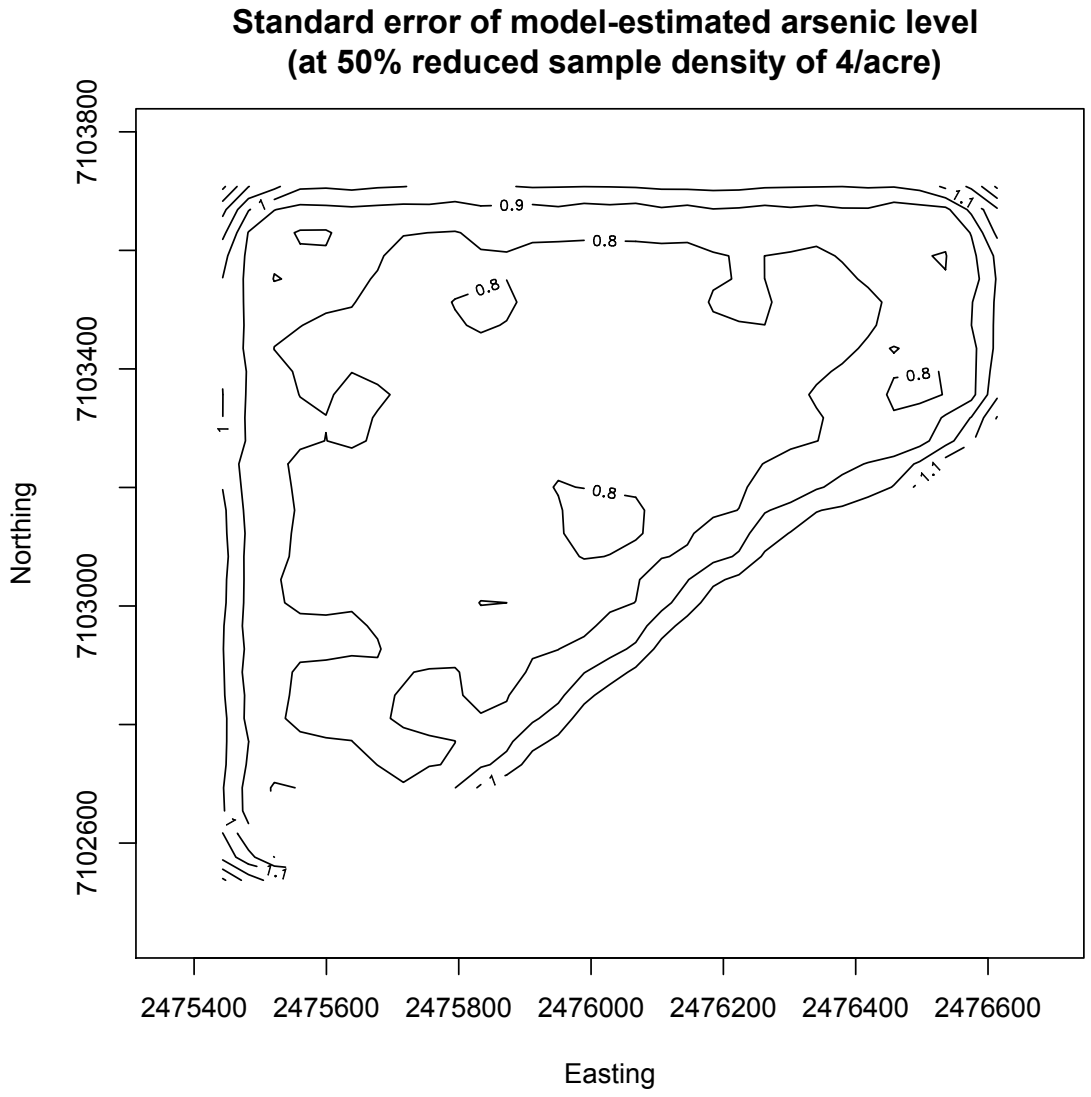


This gives the upper 95% bound of the range of arsenic estimates that would be expected to arise if the current sampling process were repeated in the same locations at the current density (a minimum of 8 samples per acre).

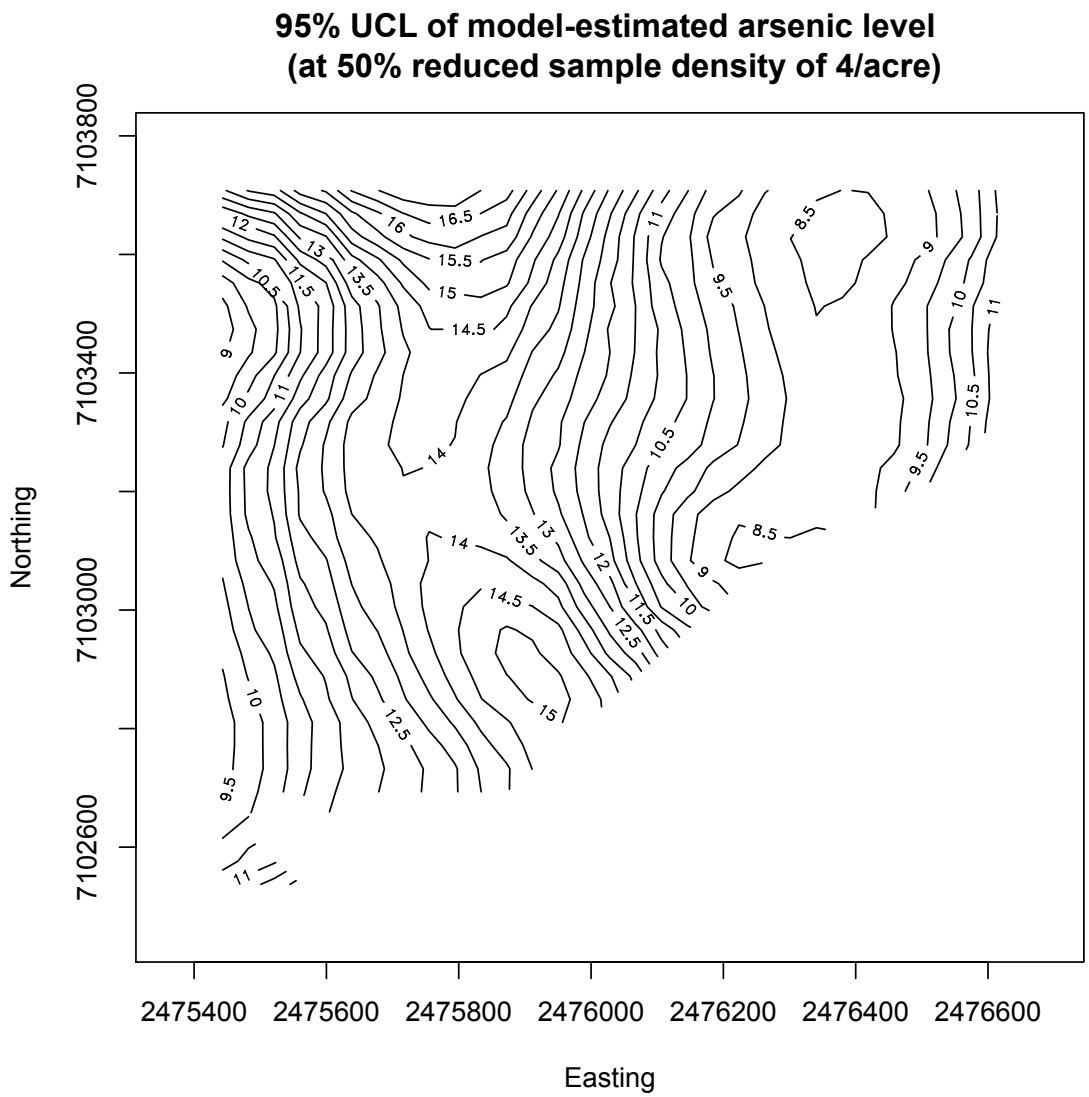
The fourth graph shows the upper 95% confidence bound on the expected value of a single new sample taken at any point in the sampled region based on findings using the current sampling density.



The next series of three graphs is the same information, but based on projections under a sampling regime using 50% less density – i.e., 4 samples per acre rather than 8. Only the last three graphs are updated. The predicted level of arsenic as a function of geographic location (i.e., the general shape of the first contour plot) is assumed to be the same regardless of sampling density. This assumption is necessary in order to be able to estimate the impact of varying sampling densities without simulation.

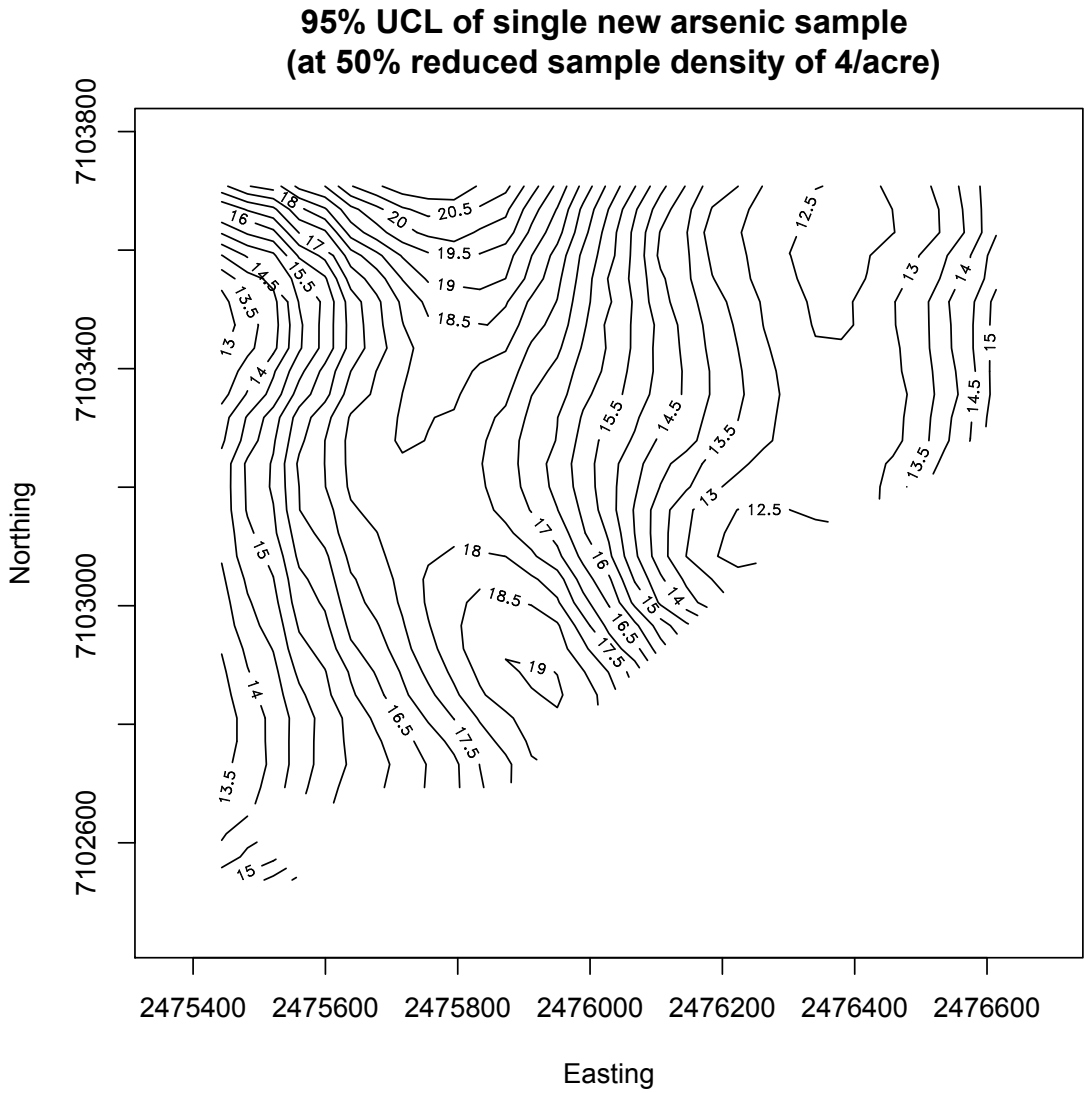


Next is a graph showing the upper 95% confidence limit on the model-estimated arsenic level under a 50% reduction in sampling density. This gives the upper 95% bound of the range of arsenic estimated concentrations that would be expected to arise if the sampling were carried out at 4 samples per acre.

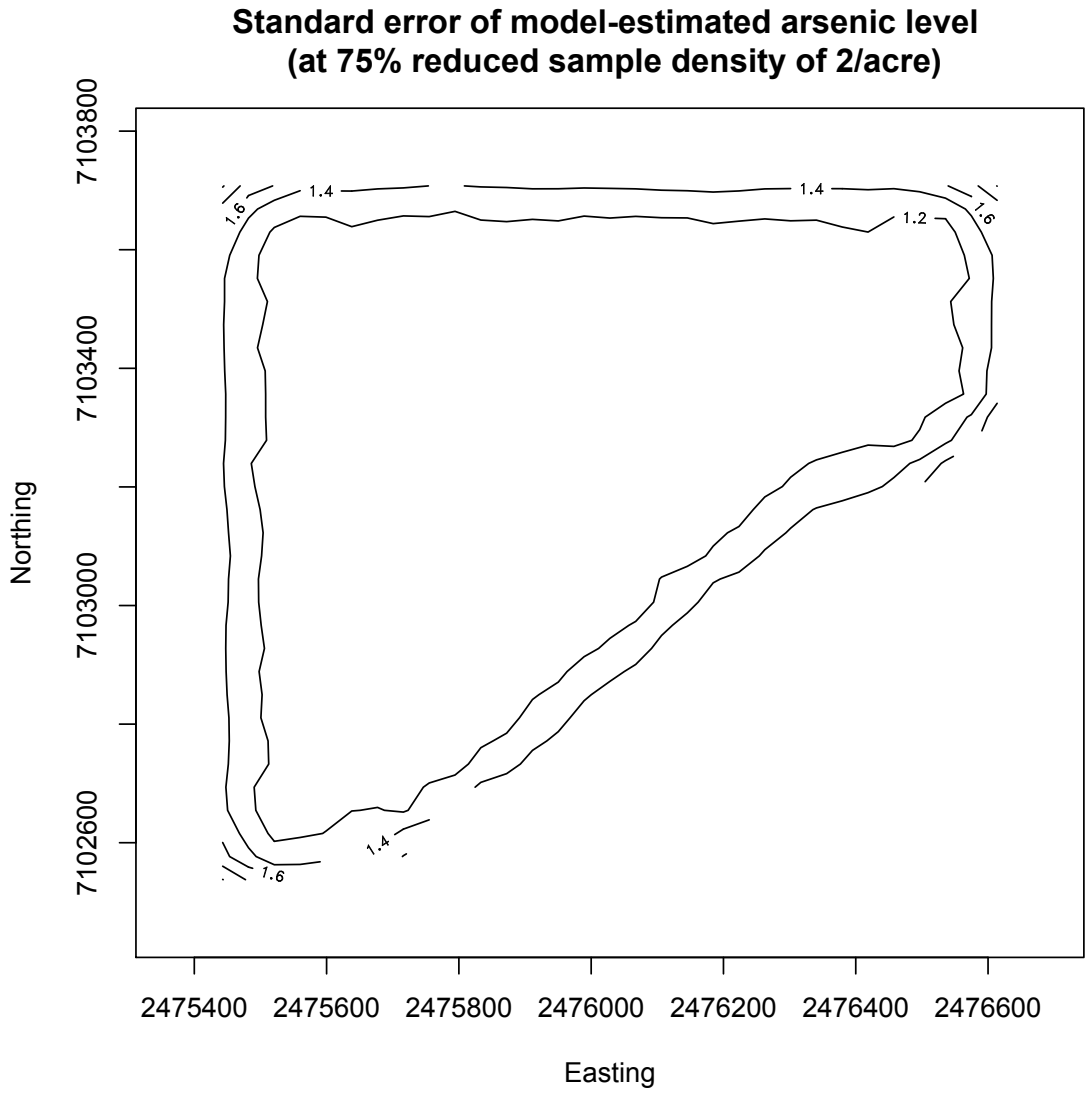


As expected, upper confidence limits rise with reduced sampling density. There is now an area >15 at the bottom end of the elevated vertical region. Other areas also show a gradual increase with lower sampling densities.

Finally, the following shows the upper 95% confidence bound on the expected value of a single new sample taken at any point in the sampled region based on a 50% reduced sampling density.

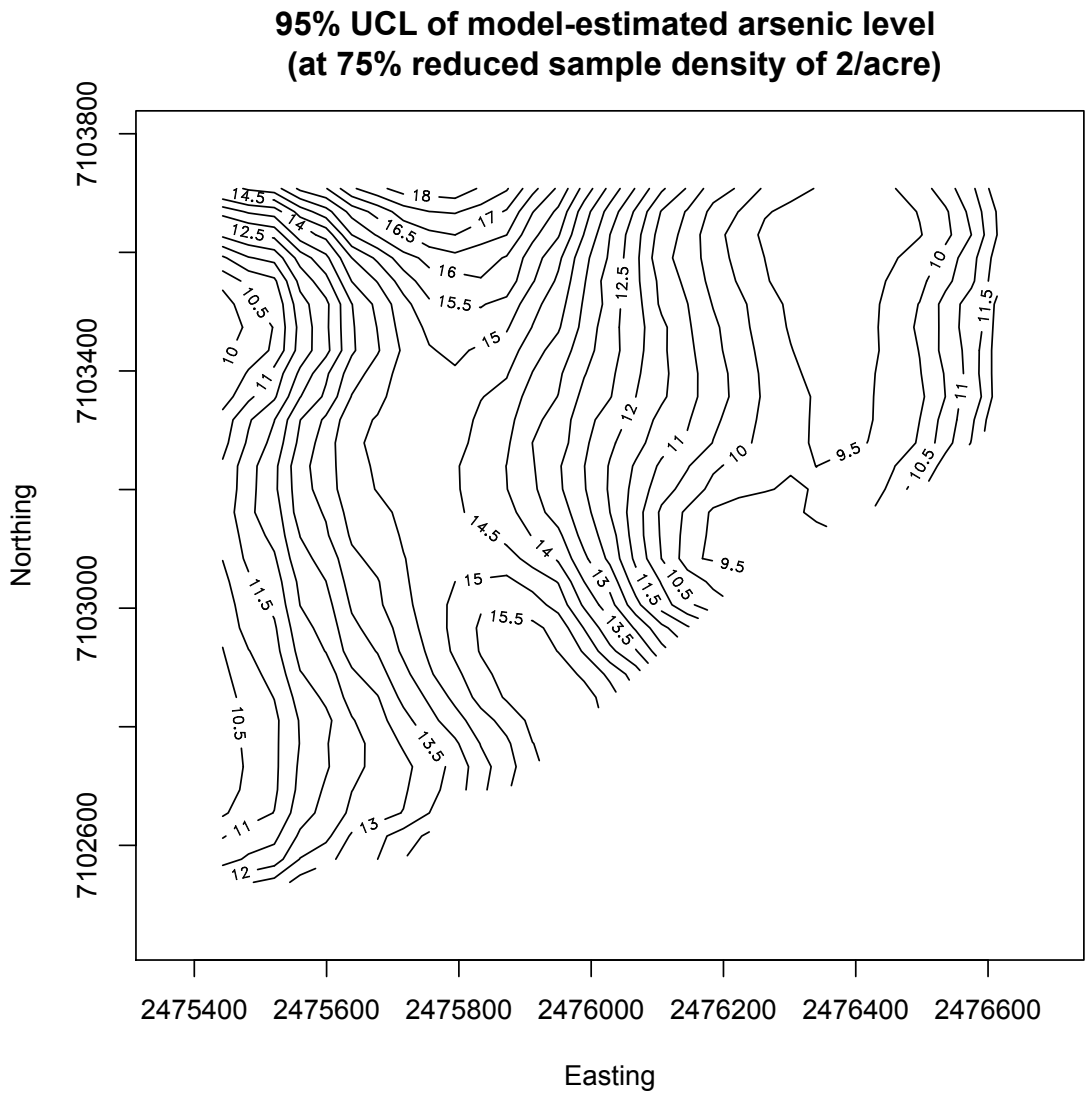


This series of three graphs shows the impact of a 75% reduction in sampling density. First, standard error:

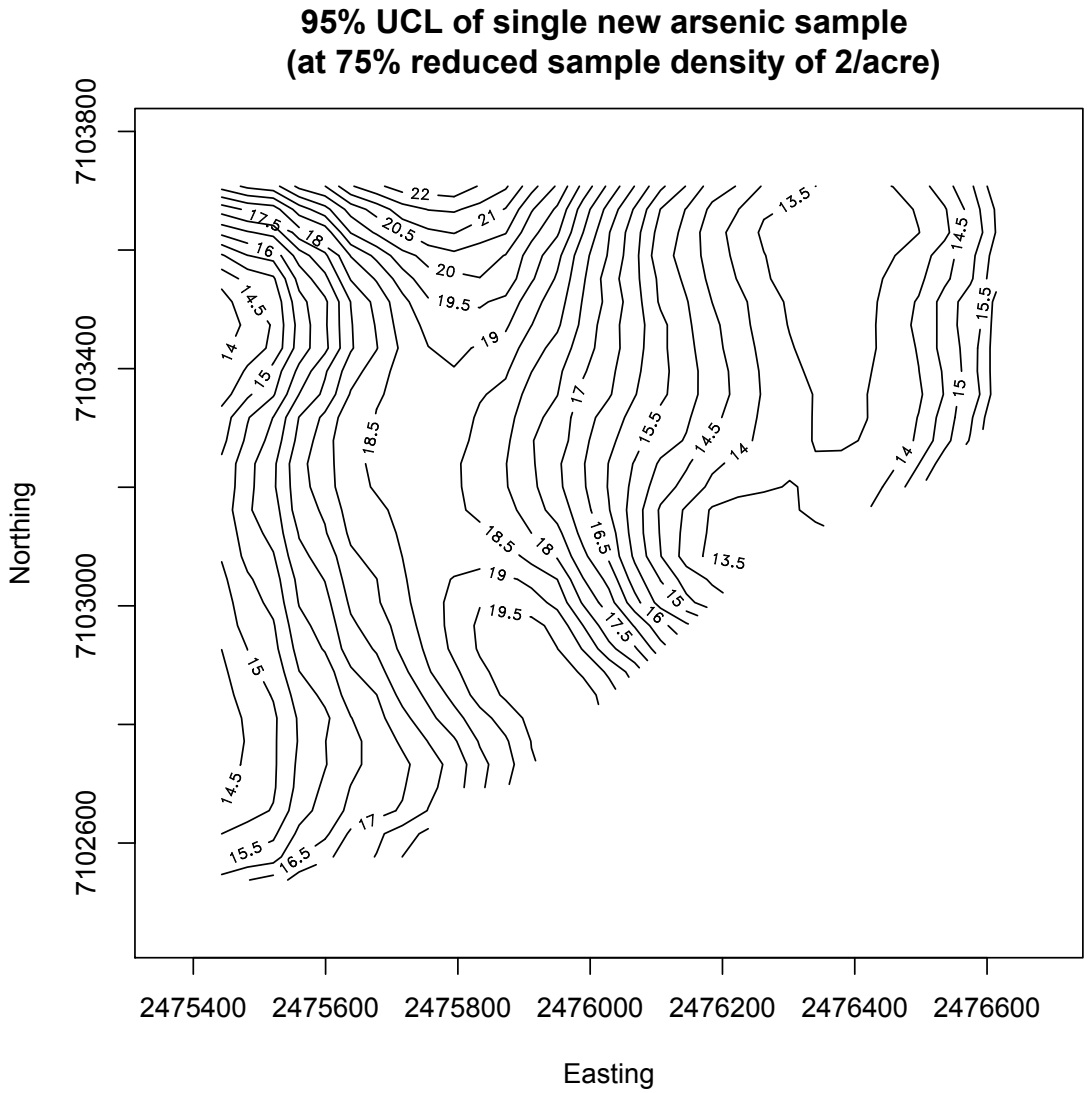


Comparing this plot with the standard error plot associated with the initial run (8 samples per acre), it is clear that the standard error has approximately doubled. This is a direct result of reducing the sampling density. In simple terms, the standard error is the standard deviation divided by the square root of sample size. If we reduce the sample size by a factor of four (keeping all else equal), the standard error will approximately double. While the formulation for standard error in GAM modeling is somewhat more complex, the same fundamental principles apply.

Next is a graph showing the upper 95% confidence limit on the model-estimated arsenic level under a 75% reduction in sampling density. This gives the upper 95% bound of the range of arsenic estimated concentrations that would be expected to arise if the sampling were carried out at 2 samples per acre.



Finally, the following shows the upper 95% confidence bound on the expected value of a single new sample taken at any point in the sampled region based on a 75% reduced sampling density.



The 75% reduction in sampling density is the largest reduction that can be reasonably contemplated given the complexity of the contour surface. As discussed in Wood (2006), Kim and Gu (2004) showed that the maximum model complexity scales approximately as n^(2/9), where n is the sample size. Based on simulation studies the authors suggest that the maximum complexity for a given n is 10*(n^(2/9)). For the model used in this analysis (23 degrees of freedom) this criterion would suggest an n of at least 43. The

next level of reduction in sampling density contemplated in our analysis (87.5% or 1 sample per acre) would result in a total n of 30, well below that criterion.

As such, the model proposed at 2 samples per acre is at the margin of where the assumption that there are sufficient samples to model a surface of this complexity could be reasonably expected to hold. With a greater than 75% reduction, the number of samples would become insufficient to model the surface adequately.

4.0 References

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