

R&R
RUSSELL & RODRIGUEZ, L.L.P.
ATTORNEYS AT LAW

1633 WILLIAMS DRIVE
BUILDING 2, SUITE 200
GEORGETOWN, TEXAS 78628

Email: kerryrussell@usa.net

PHONE (512) 930-1317
FAX (866) 929-1641
WWW.TXADMINLAW.COM

April 11, 2016

Via USPS Certified Mail, Returned Receipt Requested 7012 0470 0001 8211 0992

Mr. Richard Hyde, P.E., MC-109
Executive Director
Texas Commission on Environmental Quality
Post Office Box 13087
Austin, Texas 78711-3087



Re: Exide Technologies Investigation and Remediation; Frisco Area Activities

Dear Mr. Hyde:

The purpose of this letter is to provide you with the City of Frisco's concerns regarding Exide Technologies' ongoing investigation and remediation activities related to the Stewart Creek Remediation Area (SCRA), the RCRA permit area (FOP), and the Class 2 Landfill. While all three areas are heavily contaminated with lead (Pb) and cadmium (Cd) from past Exide recycling and waste disposal activities, the SCRA is of primary concern to the City due to current and future public use.

Based on work done to date, and Exide's continuing slow pace in addressing its Frisco area contamination, the City is concerned that Exide has made a corporate decision to invest the minimum funds necessary in Frisco to avoid criminal charges and focus on the Vernon, CA facility where criminal charges are involved. If true, this decision is contrary to the assurances Exide gave the City and the State of Texas during the recent bankruptcy proceeding.

For many months Exide has had only a skeleton crew involved in investigation and remediation activities at the Frisco site. This situation came to a head in the past week when Exide notified the City that it had unilaterally sought TCEQ staff approval to significantly deviate from the TCEQ approved work plan for the Stewart Creek Remediation Area. Exide advised the City it sought to reduce its investigation and remediation responsibilities due to corporate funding constraints and received verbal authorization from Mr. Gary Beyer to significantly deviate from the IAWP. A copy of Exide's notification to the City is included as Attachment A. Attachment B contains the original and modified Interim Action Work Plan (IAWP) as well as the City's comments. It is clear that no deviation from the IAWP should be allowed.

Additionally, on March 30, 2016 Exide filed a TPDES application for a Major Amendment to allow direct discharge of mixed wastestream contaminated stormwater into Stewart Creek. This application is in direct contravention of Exide's previous assurances to the City and TCEQ that it would install a wastewater treatment system prior to seeking such a permit. The purpose of the

treatment system would be to remove hazardous constituents from the contaminated French Drain groundwater and surface stormwater that comes in contact with hazardous slag and battery chips on the surface of the FOP. By separate letter the City is filing a formal protest of this permit application and is seeking an evidentiary hearing.

In the following paragraphs the City will detail its specific concerns in regard to each of the areas noted above. The City believes it is time for the TCEQ to put a stop to Exide's delaying actions and move to immediately protect the public and the environment from the hazardous waste in Stewart Creek.

Stewart Creek Remediation Area

The SCRA consists of the Stewart Creek bed and banks, and adjacent upland areas, downstream of the former Exide recycling facility that have been contaminated by Exide waste in the form of battery chips and furnace slag. The primary constituents of concern (COCs) are lead, cadmium, and arsenic. The multiple investigations to date have demonstrated that the contamination is extensive and will require the removal of most of the sediment in the creekbed as well as extensive upland soil removal. Attachment C contains a memorandum from a City consultant that provides an overview of the situation. Removal of "hot spots" as suggested by Exide as a substitute for complete sediment removal will not adequately remove Exide's waste from Stewart Creek. This fact has been known for at least two years and was used as the basis for remediation cost estimates by the City and the State of Texas during the bankruptcy proceeding. The City agrees with Exide that there is no need for further investigation of the SCRA. It is time to remove all of the Exide waste from the SCRA.

Attachment D is a spreadsheet demonstrating the high level of Pb and Cd contamination. The most recent investigations, and partial corrective action by Exide, once again clearly demonstrate that Stewart Creek is recontaminated with every major rainfall event due to the large volume of battery chips and slag present along the entire length of Stewart Creek from the FOP boundary to Lake Lewisville. In particular, the BNSF roadbed and adjacent areas across from the old Stewart Creek WWTP are obvious sources of chips and slag that have been observed by TCEQ staff as well as Exide and City consultants.

There is only one reliable method to fully remove the Exide contamination from the SCRA. That is to remove all sediment to bedrock and remove all visible contaminated banks and upland areas. Due to continuing public use of Stewart Creek, TCEQ should require Exide to begin immediate, complete corrective action. This corrective action should not wait on final approval of the FOP RAP. Such a complete corrective action will, at the same time, resolve the arsenic issue that is the focus of the current Site Specific Ecological Risk Assessment (SSERA) investigation.

FOP

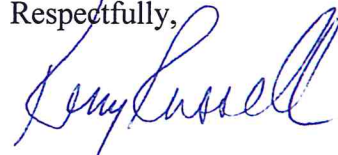
Other than the Crystallizer area, the FOP has been fully investigated. All parties know where hazardous waste was disposed and what actions are necessary for long term containment of that waste. All parties are in general agreement that the hazardous waste will be contained with a slurry wall around the FOP and a cap over the entire area. There is no technical or legal reason not to finalize a RAP for TCEQ review and approval. In its response to TCEQ staff concerns regarding the FOP APAR and conceptual RAP, Exide continues to delay the approval process by raising arguments previously rejected by TCEQ. Exide continues to resist a CAMU for the FOP when such is critical to assure complete containment of the in-situ hazardous waste and long term financial assurance.

Class 2 Landfill

Exide continues to delay full implementation of the terms of the Administrative Order requiring containment and remediation of improperly treated hazardous waste in the Class 2 Landfill. The City's observations over the past months indicate that Exide rarely has more than 2-4 people involved in the waste containment effort at the Landfill. Even the tarp cover was not fully installed until mid March 2016. Exide has apparently made no effort to recertify the Landfill liner so that J Parcel contaminated soil can be disposed in the Landfill.

In closing, the City respectfully requests that Exide be required to recertify the Class 2 Landfill liner and begin accepting J Parcel remediation waste within the next sixty (60) days. The City also requests that Exide be required to initiate full remediation of the SCRA within the same timeframe.

Respectfully,



Kerry E. Russell

Cc: ✓ Mr. George Purefoy
Mr. Mack Borchardt
Mr. Richard Abernathy
Mr. Bill Shafford
Ms. Margaret Ligarde

On Mar 31, 2016, at 12:32 PM, LOVE, Matt (Reading Equipment Center) <Matt.Love@exide.com> wrote:

Mack, Wade, and Richard,

As you know, Exide's consultant (Golder) and contractor (RSI) are currently performing Phase 2 of interim actions in Stewart Creek. Based on the effort required for Phase 1, we estimated that Phase 2 would take approximately four weeks to complete. I obtained authorization from management to perform a four week effort at the cost of approximately \$160K. At the end of this week, we'll be half way through the four weeks authorized.

Golder started Phase 2 at the U.S. Army Corps property and have been working their way upstream. Golder indicates they've worked their way up to Legacy Drive. At their current location, more battery case and slag fragments (fragments) are being encountered than anticipated (based on Phase 1) and progress has significantly slowed (due primarily to the requirement to record the locations of all fragments and collect sediment samples beneath each fragment to create approximately 100 square foot area composites). Golder indicates it would be worthwhile to perform a reconnaissance inspection of the creek upstream of this location to determine if the current location is an isolated condition or if there might be additional areas upstream with similar conditions. Golder indicates Apex is concerned about performing such an inspection as some fragments could be stepped on during such an inspection.

I'm very concerned that a significant portion of the current authorization could be squandered by performing excessive field locating of fragments and sediment sampling in small areas (where there probably has been extensive sampling already). To maximize the positive benefit of the current authorization, I've directed Golder and RSI to proceed immediately to the two stretches of the creek where field locating of fragments and sediment sampling will not be required. Once those two stretches are completed, interim actions will circle back to the remaining portions of the creek. I discussed this with Gary Beyer of the TCEQ and he believes such an approach is reasonable. Work will continue until the current authorization is expended and then additional authorizations will have to be sought. I'd also like the City to consider authorizing Golder to do some reconnaissance inspections of the creek upstream of Legacy Drive to identify any highly concentrated areas of fragments. Please let me know if you have any objection to this.

I suggested to Gary Beyer that a meeting in the very near future is appropriate to discuss the data collected to date and that needed to scope the remediation of Stewart Creek (including depth and width). Rather than such extensive work to field locate fragments and sample sediment beneath each fragment as part of interim actions, it would probably be a better investment to perform sampling targeted more toward scoping the ultimate Stewart Creek remediation. Gary thought such a meeting was a good idea. To prepare for the meeting, Golder will pull together updated facts and figures pertaining to the sampling that has been performed to date. Of course, the City would participate in this meeting.

I'm available if you want to discuss this before our next weekly call this coming Wednesday or we can discuss it then.

Matt

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 17, 2013

Mr. Matt Love, Director
Global Environmental Remediation
Exide Technologies
P.O. Box 14294
Reading, PA 19612-4294

Re: Conditional Approval of Interim Action Work Plan (IAWP), Slag and Battery Case
Fragment Removal and Disposal, dated November 7, 2013
Exide Frisco Recycling Facility, 7471 5th St., Frisco, TX 75034-5047
TCEQ SWR No. 30516
TCEQ Hazardous Waste Permit No. HW-50206
TCEQ Agreed Order Docket No. 2011-1712-IHW-E
EPA ID No. TXD006451090
Customer No. CN600129779; Regulated Entity No. RN100218643

Dear Mr. Love:

The Texas Commission on Environmental Quality (TCEQ) has reviewed the above referenced work plan, which was submitted in response to the TCEQ's October 8, 2013 letter regarding the Affected Property Assessment Report (APAR). The TCEQ conditionally approves the Interim Action Work Plan addressing slag and battery chip removal from Stewart Creek, which was received on November 7, 2013. The conditions of this approval are enclosed.

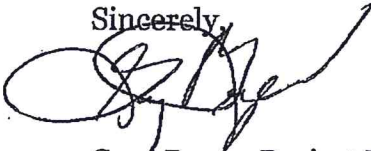
Following the completion of the removal activities, please prepare and submit an interim action report that details the activities performed under this work plan. The report should include the results of the post removal sampling, a summary of completed activities, maps, photographic logs, waste manifests, post removal sampling results, and review of QA/QC data. Please ensure that a copy of this work plan is placed on the Exide closure website within 10 days of the date of this letter.

An original and one copy of the interim action report must be submitted to the TCEQ Remediation Division at the letterhead address using Mail Code MC-127. An additional copy should be submitted to the TCEQ Region 4 Office in Dallas/Ft. Worth. The report must be submitted within 60 days of the completion of on-site activities. The facility name, location and identification number(s) in the TCEQ reference line above should be included in your response.

Mr. Matt Love
Page 2
December 17, 2013
TCEQ SWR No. 30516

Any questions concerning this letter should be directed to me at (512) 239-2361.

Sincerely,



Gary Beyer, Project Manager
VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality

Enclosure: Conditional Approval of Interim Action Work Plan, Slag and Battery Case
Fragment Removal and Disposal dated November 7, 2013

GB/DEL

cc: Mr. Eric Pastor, Pastor, Behling, & Wheeler, LLC., 2201 Double Creek Drive,
Suite 4004, Round Rock, Texas 78664
Mr. Jay A. Winters, Golder and Associates, 500 Century Plaza Drive, Suite 190,
Houston, Texas 77073
Mr. Sam Barrett, Waste Section Manager, TCEQ Region 4 Office, Dallas/Ft.
Worth
Mr. Bill Shafford, Technical Specialist, Office of Waste, TCEQ

**Conditional Approval of Interim Action Work Plan, Slag and Battery Case
Fragment Removal and Disposal dated November 7, 2013**

1. Section 1.1 of the work plan indicates that the Interim Action Area includes the stream bed of Stewart Creek as well as the associated immediate banks.

TCEQ response – Please include all areas documented to contain battery chips/slag in the “Interim Report, Visual Survey of Stewart Creek” dated May 14, 2013 in the Interim Action Area. Locations and photographs 12 and 13 of the report document battery chips beyond the stream bed and immediate bank area.

2. Section 2.1 of the work plan indicates that the “field portion of the assessment activities will not be started until access for the entire stretch of the creek is obtained.”

TCEQ response – Removal actions must begin no later than 30 days after permission is granted for access to those areas regardless of whether access to the entire Interim Action Area has been obtained. As stated in the work plan, “If no response is received, or access is denied, Golder and Exide will request assistance from TCEQ as needed.” TCEQ will assist with access if an impasse is reached with a property owner for the purpose of conducting this work.

3. Section 2.2 states that the identification process will consist of visual, on the ground observations only and will not include physical digging or intrusive investigations.

TCEQ response – Even though x-ray fluorescence (XRF) sample results may not be considered to be reliable for evaluating actual concentrations of lead in suspect samples, its use should be considered as a screening device to determine if any lead is present or absent in the suspect sample.

4. Section 2.2 states that exact locations where slag and/or battery case fragments are observed will be measured using a Trimble R8-4 Global Positioning System (GPS) hand held receiver, or equivalent device. For each identified feature, the geographic coordinates as well as visual observations at each location will be recorded.

TCEQ response – Please include a clear description of the tolerances used in all GPS work in the report documenting completion of interim actions on Stewart Creek.

5. Section 2.3 states that once a drum used for the collection of potential slag and

battery casing fragments has been filled, it will be transferred to a storage location on a paved area at the former operating plant (FOP).

TCEQ response – At the end of each day, all drums must be transferred to a designated satellite accumulation area on the FOP and secured.

6. Section 2.4 states “Soil/Sediment beneath removed slag fragments will be sampled at 10% of the locations, but only in areas where previous data is not readily available, or where previous soil/sediment samples have not been collected.”

TCEQ response – Soil or sediment samples should be collected from all locations in the Interim Action Area identified as containing slag and/or battery chips and analyzed for all chemicals of concern (COCs) unless data for a specific location is readily available. The soil sampling data should be compatible with the sampling objectives of the Affected Property Assessment for Stewart Creek. Additionally, for the data which is gathered as part of the Tier 2 SLERA in the revised APAR, please refer to the new TRRP Guidance Document titled “*Determining Representative Concentrations of Chemicals of Concern for Ecological Receptors*” (RG-366/TRRP-15eco) is now available at the following link: http://www.tceq.texas.gov/publications/rg/rg-366_trrp_15eco.html.

7. Post Removal Sampling. Section 2.4 – Each post removal sample will be collected in a small plastic bag and soil in the bag will be homogenized.

TCEQ response – Homogenization is allowed within a particular volume of soil that is required by the analytical laboratory (4 oz. sample bottle). Homogenization is not acceptable if volumes of soil larger than required by the lab are gathered, since it would be considered dilution of the sample. In addition, at least 10% of samples should have duplicate samples taken to be evaluated to ensure quality assurance requirements are met.

8. Health and Safety. Section 2.5 states “A site specific health and safety plan will be generated prior to implementation of the IAWP”.

TCEQ response – A site specific health and safety plan which takes into account the safe and proper protection of workers while handling of hazardous waste, should be provided to the TCEQ prior to IAWP implementation.

R&R
RUSSELL & RODRIGUEZ, L.L.P.
ATTORNEYS AT LAW

1633 WILLIAMS DRIVE
BUILDING 2, SUITE 200
GEORGETOWN, TEXAS 78628

PHONE (512) 930-1317
FAX (866) 929-1641
WWW.TXADMINLAW.COM

krussell@txadminlaw.com

January 9, 2014

Via Certified U.S. Mail, Return Receipt Requested # 7010 0780 0001 9016 5775

Mr. Zac Covar
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78753

Re: *Exide Interim Action Work Plan Slag and Battery Case Fragment Removal and Disposal
Exide Technologies Frisco Recycling Center, Frisco, Texas TCEQ Agreed Order Docket
No. 2011-1712-IHW-E; IHW Permit No. HW-50206; TCEQ SWR No. 30516; Customer
No. CN600129779; Regulated Entity No. RN100218643; EPA ID No. TXD006451090;
EPA Administrative Order on Consent RCRA 06-2012-0966*

Dear Mr. Covar:

The City of Frisco ("City") has reviewed the above referenced document which was submitted to TCEQ and EPA on November 7, 2013. The City has also reviewed the TCEQ approval letter dated December 17, 2013. While the City agrees that Exide must address the slag and battery chip contamination of Stewart Creek downstream of the former Exide facility, the City does have some fundamental concerns with the above referenced Work Plan. The City believes the TCEQ approval letter should be modified to address these concerns.

Of primary concern to the City is the apparent conflict between some activities suggested in the Work Plan and the current VCP projects the City has undertaken to address portions of Stewart Creek that have been impacted by Exide's wastes. There are three active VCP projects (VCP ID # 2122, VCP ID #2592, and VCP ID # 2632) and one more to be filed shortly.

VCP ID # 2122 relates to the former Stewart Creek wastewater treatment plant site immediately downstream of Exide's property. This property was contaminated by Exide wastes prior to the WWTP closure in the 1990s. The other VCP projects relate to the City's Grand Park (also known as Grand Lakes) development which is further downstream. A major portion of Stewart Creek downstream of the Exide site is covered by these VCP projects.

Based on previous discussions with you, it has been the City's understanding that TCEQ is providing overall management review of all of these projects to assure coordination between the various TCEQ staff sections involved. Based on Mr. Beyer's December 17 approval letter, it does not appear such coordination is actually taking place since Exide's Work Plan clearly does not address the situation in as comprehensive a manner as that proposed in the City's VCP applications. Mr. Beyer's approval letter also appears to be in conflict with the December 17, 2013 TCEQ VCP staff directive for additional work on the Stewart Creek WWTP VCP project to address Exide's historic contamination of Stewart Creek. Given the number of TCEQ staff members involved in the various Exide related projects, the City agrees that executive level TCEQ management of the overall Exide situation is required to assure coordination of the various investigation and remediation projects.

Based on the City's initial investigation of Stewart Creek for contamination from Exide's wastes, the segments of the stream impacted above background include City property, private property, and USACE property. Data from that investigation has been previously provided to TCEQ. The data was also provided to Exide prior to its submittal of the above referenced document. The City's VCP applications provide the type of comprehensive work plan protocols that should be required for proper investigation and remediation of Stewart Creek. The City believes that those portions of Stewart Creek outside of the City's control should be investigated and remediated by Exide under the same protocols.

The City notes initially that Exide's proposed Work Plan does not reference any regulatory guidance to support the proposal. In contrast the City previous investigations have generally followed applicable TCEQ guidance, such as the *Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods* (RG-415), revised August 2012. The City believes that Exide should be required to follow this and other applicable TCEQ guidance in its investigation of Stewart Creek.

Generally, Exide is proposing to conduct a visual inspection of the streambed, take limited surface samples, and remove any slag or battery chips found. The slag and battery chips are Exide waste (whether pre or post-RCRA) that was improperly disposed. This includes slag and battery chips that were disposed without regulatory authorization even though the waste came from a RCRA permitted facility. Both that waste and associated contaminated media must be removed regardless of the time it may have been disposed in Stewart Creek.

Given the documented history of slag and battery chip contamination of Stewart Creek by Exide, the Work Plan protocol is not sufficient to identify and remove all of the contamination. A systematic, comprehensive sediment sampling protocol should be implemented. This protocol should include: (1) minimum distance between samples; (2) preferential collection of fine grained sediment rather than sand/gravel; and (3) testing for all contaminants of concern that could have originated from the Exide site.

Following identification of all contaminated areas, complete removal of contaminated sediment to appropriate ecological PCLs is required to satisfy public concern since the Grand Lake project will include much of this area. Simply removing the slag and battery chips will not remove the residual sediment contamination.

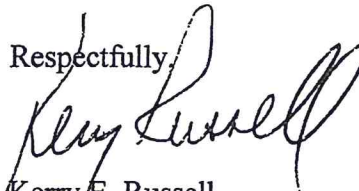
After remediation is completed by the City and Exide, Exide should be required to evaluate the Stewart Creek drainage area every six months for a minimum period of five (5) years. This time frame should be extended if subsequent recontamination of Stewart Creek is discovered. Given Exide's current bankruptcy situation, Exide should also be required to post financial assurance during the same timeframe to cover the monitoring costs and any subsequent remediation that might be required.

The City is incorporating into its Grand Lake project sedimentation basins upstream of the public access areas of the park to assure no future contamination from the Exide site reaches public areas. This is a necessary preventative measure given the current uncertainty regarding final closure requirements for the Exide site.

The City will continue to work in cooperation with Exide to assure Stewart Creek is properly investigated and remediated. To that end the City has authorized Exide to access City controlled property for investigation activities and has assisted Exide with similar private property access. However, the City will insist on control of all remediation activities on City property to assure removal of all Exide related contamination to appropriate levels is achieved.

The City appreciates TCEQ's continued assistance in this regard. If you, or your staff, have any questions in regard to this submittal, please do not hesitate to call Mack Borchardt at 972-292-5127 or me at 512-633-6467.

Respectfully,



Kerry E. Russell

Cc: Bret Wade, TCEQ
Sunita Singhi, USEPA
Tim MacAllister, USACE
George Purefoy, City of Frisco
Mack Borchardt, City of Frisco
Dan Pearson, Hillco Partners
Wade Wheatley, Cook Joyce, Inc.
Rusty Simpson, Southwest Geoscience
Bruce Cole, Exide
Matt Love, Exide

From: Gary Beyer [<mailto:gary.beyer@tceq.texas.gov>]

Sent: Monday, May 05, 2014 5:31 PM

To: aileen.hooks@bakerbotts.com; LOVE, Matt (Reading Equipment Center); Dorothy Lewis; Faeth-Boyd, Anne (Anne.Faeth-Boyd@golder.com)

Cc: Merrie Smith; Maria Lebron; Margaret Ligarde; Bill Shafford; Sam Barrett; Dorothy Lewis

Subject: Changes to Interim Action Work Plan

This email clarifies the statement in Item 6 of TCEQ's December 17, 2013 letter, which provided that "soil or sediment samples should be collected from all locations". Pursuant to this clarification, soil or sediment samples should be collected from each location where isolated battery chips or slag are present. In locations where large areas or clusters of battery chips/slag are present, one sample per grid in 10 foot square grid pattern (five foot radius) should be collected. Samples locations should be biased to identify the most impacted areas within each cluster.

Please contact me if you have any questions. Thanks.

Gary Beyer, Project Manager

Direct Line: 512/239-2361

Texas Commission on Environmental Quality

Remediation Division, Mail Code - 127

12100 Park 35 Circle

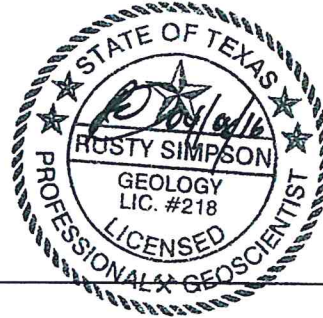
Austin, Texas 78753

gary.beyer@tceq.texas.gov





TO: KERRY E. RUSSELL, RUSSELL AND RODRIGUEZ, LLP
FROM: RUSTY L. SIMPSON, C.P.G., P.G., APEX TITAN, INC.
SUBJECT: OBSERVATIONS REGARDING EXIDE ACTIVITIES IN THE STEWART CREEK
REMEDATION AREA
DATE: APRIL 8, 2016
CC: MACK BORCHARDT, CITY OF FRISCO
WADE WHEATLEY, P.E., COOK-JOYCE, INC.
RICHARD D. VARNELL, P.G., COOK-JOYCE, INC.
FILE



I. BACKGROUND

Summarized in this section in chronological order are environmental surveys and investigations that Apex TITAN, Inc. (formerly known as Southwest Geoscience) has conducted in Stewart Creek in Frisco, Texas. In addition, a summary of relevant correspondence, reports and activities conducted in the creek by other consultants is included.

September-October
2010:

Exide consultant Pastor, Behling and Wheeler (PBW) collected six sediment samples as part of an Affected Property Assessment Report (APAR) for the former Stewart Creek Waste Water Treatment Plant (FSCWWTP) VCP site #2122 (CS-1 through CS-8). These are located in sediment in Stewart Creek near the FSCWWTP. Elevated metals concentrations are detected in creek sediments in this event.

March 27, 2013:

Southwest Geoscience (now known as Apex TITAN, Inc.) Limited Site Investigation – Sediment Sampling of Stewart Creek Report. Included collection and analysis of thirty (30) sediment samples from the Burlington Northern Santa Fe (BNSF) Railroad Bridge to Stonebrook Parkway. Battery chips and potential slag were observed.

May 14, 2013:

Southwest Geoscience Interim Report: Visual Survey of Stewart Creek – Included visual observations and photographs of the survey from 4th Army Memorial to the BNSF Railroad Bridge. Report included photographs and maps of battery chips and potential slag locations. The report excluded a portion of private property west of Legacy Drive and north of a high voltage power line. The excluded area report was submitted under separate cover.

November 7, 2013:

Interim Action Work Plan (IAWP) – Slag and Battery Case Fragment Removal and Disposal prepared by Golder and Associates, Inc. (Golder) and sent to TCEQ

December 13, 2013:	TCEQ issues Conditional Approval of Interim Action Work Plan (IAWP), Slag and Battery Case Fragment Removal and Disposal
January 9, 2014:	City of Frisco (Russell & Rodriguez, LLP) response to IAWP and TCEQ Approval letter sent to TCEQ.
January 15-16, 2014:	Preliminary survey with Golder and Benchmark Ecological Services, Inc. for pre-IAWP implementation and ecological assessment.
January 2014	Five (5) surface water samples and twenty-five (25) sediment samples collected by Golder downstream of the FOP.
March/April, 2014	Eight (8) additional surface water samples were collected by Golder from the creek channel and tributaries from the southern portion of Grand Park to the U.S. Army Corps of Engineers (USACE) property. Twenty-eight (28) sediment samples were collected by Golder downstream of the FOP.
March 5, 2014:	Supplemental Site Investigation – Additional Sediment Sampling of Stewart Creek – 4 th Army Memorial to BNSF Railroad Bridge Report prepared by Southwest Geoscience. The report excluded a portion of private property west of Legacy Drive and north of a high voltage power line. The excluded area report was submitted under separate cover. The overall investigation included thirty-three (33) sediment sampling locations, six (6) chip, three (3) potential slag, and two (2) slag sample locations. Grain size analysis and surface water pH data were collected as well as sediment depths from multiple transects.
May 5, 2014:	Gary Beyer email clarifying TCEQ's December 13, 2013 letter allowing composite sampling of chip cluster areas.
May 9, 2014:	Golder Technical Memorandum RE: Supplemental Transportation and Handling Plan
May 12, 2014:	Apex Letter Report of May 8, 2014 Field Activities – Report details the loss of a bucket of wastes collected from Stewart Creek by Exide consultants in transport to the FOP.
May 5, 2014 to June 6, 2014:	First Interim Action Field Activities. Apex accompanied Exide consultants from the Lebanon Road Bridge to the BNSF Bridge. Apex collected 729 split sediment samples during this Interim Action Activity. Exide consultants also collected twelve (12) sediment samples within the creek in the FOP area and upstream of the FOP.
August 22, 2014:	Interim Action Report: Slag and Battery Case Fragment Removal and Disposal report prepared by Golder
November 3-4, 2014:	Apex conducted an investigation within Stewart Creek, associated tributaries, a cutoff creek and former creek area in support of the Voluntary Cleanup Program assessment for Grand Park (VCP 2592).

Sixty (60) sediment or soil (former creek channel) samples and seventeen (17) surface water samples were collected.

- October 5, 2015: Golder Request to Modify IAWP – Designates two areas requiring sediment remediation and requests that they be exempt from sampling during the second Interim Action field effort.
- December 16, 2015: TCEQ Approval of the Request to Modify the IAWP to exclude two areas from sampling.
- March-April 2, 2016: Second Interim Action Field Activities - Apex accompanied Exide consultants in Stewart Creek beginning at Lebanon Road. As of March 31, 2016, a total of 408 sediment samples had been collected in this event, with five (5) samples collected south of Lebanon Road.

II. PROJECT STATUS

The Apex field team was informed on Thursday, March 31, 2016 at the end of field activities that the process approved in Golder's *Request to Modify Interim Action Work Plan, Exide Frisco Recycling Center – Frisco, Texas* letter to TCEQ, dated October 5, 2016 (hereinafter, the "Revised Interim Action Work Plan") would be modified. Work would cease moving in a downstream to upstream direction (as specified in TCEQ guidance), and field teams would proceed to the areas designated as "exempt from sampling" on April 1-2, 2016. The locations of Area 1 and Area 2 are depicted in Figure 1 and Figure 2 of the Revised Interim Action Work Plan. Visible battery case fragments and slag were removed; however, field locations of these materials were not collected and sediment sampling was not conducted, in accordance with the Revised Interim Action Work Plan.

The first area (Area 1) is a segment of Stewart Creek located in the central portion of Grand Park. During field activities on April 1, 2016, a total of 469 battery chips were collected in this area. In addition to the battery chips collected from this area, three (3) pieces of slag were collected in the northern portion of the segment. These slag locations were recorded with GPS equipment by Apex. It should be noted that the first occurrence of potential slag material was observed in sediment approximately 3,200 feet east of F.M. 423 in June 2013. The material observed in 2013 was not confirmed as slag; however, the slag material collected recently in Area 1 was similar in shape and density to the occurrence of confirmed slag material encountered between the BNSF bridge and the Dallas North Tollway during the 2014 Interim Action activities (from the BNSF Bridge to approximately 1,150 linear feet west of the BNSF Bridge).

The second area (Area 2) is the segment of Stewart Creek located between the Dallas North Tollway and the BNSF Railroad bridge adjacent to the FOP. On April 2, 2016 a total of eighteen (18) battery chips were collected in this area. In addition to the battery chips collected from this area, thirty-four (34) pieces of slag were collected. These slag locations were also recorded by Apex with GPS equipment. It should be noted that the first two slag pieces collected in Area 2 were collected in the approximate location of the first occurrence of confirmed slag during the 2014 Interim Action activities. Representative photographs were obtained of the slag collected from these areas and are included with these comments.

In summary, a total of 1,318 sediment samples, seventeen (17) surface water samples and thirty-nine (39) waste samples (battery chips, potential slag or slag) have been collected and analyzed from Stewart Creek since 2010.

III. COMMENTS

Based on Exide's recent cessation of field efforts in Stewart Creek, Apex has the following comments:

COMMENT 1: By proceeding in areas upstream of potential sample locations, Exide will not be following the protocols outlined in the *Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods* (RG-415), revised August 2012. Procedures outlined in this manual include processing an investigation in a downstream to upstream direction to avoid impairment of the downstream samples by disturbing sediment in an upstream location. By skipping segments, proceeding upstream to locations for reconnaissance or sampling, then returning to downstream locations, there is a risk of impact to downstream sample integrity.

COMMENT 2: Based on indications from the Golder field team following the collection of visible chips and slag in the areas noted as "exempt from sampling", work is not anticipated to resume this week with chip removal and sediment sampling as indicated in Exide's email received March 31, 2016. Subsequent to completing the scope of work for Area 1 and Area 2, outlined in the Revised Interim Action Work Plan, work in Stewart Creek ceased as of April 2, 2016 until further notice.

COMMENT 3: The observations by field teams that are described in the Exide summary email received March 31, 2016 regarding the number of visible battery chips noted in this 2016 assessment are critical to understanding the dynamic nature of the creek. In each sampling event, Apex teams have noted physical changes in the creek over time. Deposition and erosion are ongoing, as well as the frequency and visibility of the battery chips and slag. By comparison, in the 2014 Interim Action, the number of sediment samples was 122 at the point where activities ceased on March 31, 2016. At this same point during the current 2016 event, 403 samples had been collected, which indicates that a significant increase in the number of visible battery chips has been observed during the current Interim Action event as compared to the previous Interim Action event in 2014 and 2013 investigations. Based on the dynamic nature of the creek and observations (previous and current) related to the presence and distribution of visible battery chips and slag within the creek, Exide's premise that areas previously sampled currently contain the same metals concentrations and distribution in sediment as in the prior sampling events is not a scientifically valid assumption. A review and evaluation of the updated sediment samples collected in this 2016 event would be needed, at a minimum, to further evaluate current creek conditions based on the field team observations.

COMMENT 4: Based on the dynamic physical conditions observed in the creek over the period of time referenced in the chronological summary, and the variability of the occurrence of visible battery chips and slag, it is Apex's opinion that prior sampling results are not representative of current conditions. Based on the amount of rainfall experienced in this region in 2015 (subsequent to the initial 2014 Interim Action activities), sediment previously containing elevated metals has likely been mobilized and redeposited over time. Also, battery chips and slag material that were previously buried in sand and gravel bars have likely been remobilized and redeposited further downstream (see Comment 6). In past efforts, a correlation of higher metals results with a larger volume of battery chips has been observed and without sampling these new areas where chips have accumulated, an accurate assessment of current creek conditions is not possible.

Exide's Interim Action activities were limited to the removal of "exposed slag and battery case fragments from the ground surface in the Interim Action Area" and did not address "as-generated" wastes present below the surface. Additionally, it should be noted that the initial Interim Action activities did not include the portion of Stewart Creek owned by the City of Frisco downstream of

the Lebanon Road Bridge or the segment further downstream owned by the USACE to Lewisville Lake. In the second Interim Action in 2016, Exide's team did access portions of these downstream areas, but access was limited due to flooding.

COMMENT 5: Battery chips imbedded within the native clay banks of the creek have been noted above the observed water level during Interim Action activities. Although isolated observations of chips in these locations were noted in prior events, Apex field team members have identified a significant number of chips in and on the native clay banks above the sand and gravel deposits within the creek channel during the 2016 effort. This observation should be considered in future remediation area designs and implementation to ensure removal of wastes from the creek and bed areas extends horizontally an adequate distance to remove these embedded battery chips.

COMMENT 6: Slag with a similar physical appearance to pieces found near the BNSF railroad bridge area were observed on April 1, 2016 within Grand Park in the area designated "exempt from sampling" in the Revised Interim Action Workplan dated October 5, 2015. The visible presence of slag in Area 1 indicates "as-generated" wastes have likely been remobilized and redeposited further downstream since the 2014 Interim Action activities.

It should be noted that potential slag was also noted downstream of Area 1 and documented in SWG's Supplemental Site Investigation, Additional Sampling of Stewart Creek report, dated March 5, 2014. Although the presence of slag was not confirmed downstream of Area 1, arsenic, cadmium and lead concentrations above the TRRP Ecological Benchmarks for sediment were detected in a composite sediment sample collected beneath potential slag in the vicinity of the Legacy Drive bridge (PS-(6-21)-1 Base Comp).

As a result of this modified effort, Exide team members did not collect GPS coordinates or collect sediment samples in the vicinity of these identified "as-generated" wastes. This modification results in a data gap for the characterization of the potentially affected sediment in this area. In addition, the occurrence of slag with these physical similarities to the slag identified near the FOP at this distance downstream of the FOP indicates an ongoing release of these wastes to the creek and a need for control measures to prevent further impacts downstream.

The BNSF right of way located in the area of the bridge has yet to be accessed by Exide to remediate "as-generated" wastes and collect sediment samples. This area is a source of the battery chips and slag that are continuing to mobilize into the downstream areas of Stewart Creek. Access to this area should be obtained to remove wastes and prevent further downstream impacts.

It should also be noted that although TCEQ suggested the use of an XRF device to identify potential slag during these Interim Action activities, Exide team members have not utilized an XRF device during any of the slag removal activities. Use of the XRF device could be beneficial in identifying slag during these removal activities.

Apex utilized a XRF device as a screening tool during the initial Interim Action in an effort to provide additional information regarding the composition of metals in suspected "as-generated" waste materials observed in Stewart Creek. Based on the XRF results, the first slag sample encountered downstream of the FOP was identified at sample location 2014-IASED-528, approximately 1,150 linear feet west of the BNSF Bridge. Distribution of the slag materials appeared to become more concentrated as the field team traversed upstream with the highest concentrations of slag material observed near the BNSF Railroad right-of-way. Access to the BNSF right-of-way was restricted; therefore, the presence of additional waste material in and

along the banks of Stewart Creek could not be observed, and as-generated wastes were not removed from these areas.

Based on the XRF results, the visual and physical characteristics established for the identification of slag material in the IAWP did not appear effective. Additionally, slag was difficult to identify in areas with vegetation, debris and under water. Although the XRF was utilized to further refine the field identification process and care was taken to collect slag material to the extent practicable, it is likely that a significant amount slag material remains in Stewart Creek in the vicinity and downstream of the BNSF Bridge. Additionally, Exide's Interim Action activities were limited to the removal of "exposed slag and battery case fragments from the ground surface in the Interim Action Area" and did not address as-generated wastes present below the surface.

COMMENT 7: Although Apex field teams did not enter the area of the creek owned by the USACE during the 2016 Interim Action efforts, it should be noted that Exide field teams were not able to evaluate a large portion of the creek between the Lebanon Road Bridge and FM 423 due to the flood stage of Lewisville Lake. This represents a data gap in the evaluation of the presence of potential chips and slag in this area, as well as lack of updated sediment sampling information for comparison to earlier events.

COMMENT 8: Visible battery chips have been documented in upland areas near the creek including the FOP, the Undeveloped Buffer Property, the FSCWWTP on the creek bank areas, the Museum of the American Railroad Site (outside of the geotextile fabric covering) and the Greenbelt area along Stewart Creek near the new WWTP. It is Apex's opinion that until the sources of the mobile chips have been removed from upland areas, an effective assessment of creek conditions and a determination of the complete extent of remediation areas based on sediment concentrations and the presence of chips and slag within the creek cannot be ascertained, since these conditions will change with each rainfall event.

The Conditional Approval Letter for the Interim Action Work plan issued by TCEQ on November 17, 2013 indicated the following:

"Please include all areas documented to contain battery chips/slag in the "Interim Report, Visual Survey of Stewart Creek" dated May 14, 2013 in the Interim Action Area. Locations and photographs 12 and 13 of the report document battery chips beyond the stream bed and immediate bank area."

During the implementation of the Interim Action activities, Apex field teams have not observed the Exide consultants attempt to evaluate this area as noted by the TCEQ. This is the Greenbelt area east and southeast of the new WWTP.

During 2014 Interim Action activities at the FSCWWTP, Exide and Golder personnel re-evaluated the extent of waste removal within the creek. Based on a conversation with Golder field personnel and TCEQ personnel present during the field activities, TCEQ understood that waste would be removed from "bank-to-bank" up to level ground. A short time later, Gary Beyer (TCEQ Central Office) contacted the TCEQ field representative and informed them that waste removal activities within the segment traversing the FSCWWTP would be limited to the creek and immediate banks for the remainder of the Interim Action effort. Waste removal for the remaining portions of Stewart Creek in the vicinity of the FSCWWTP would be conducted under a separate Response Action Plan (RAP) for the FSCWWTP. The segment was later included, and is being managed, as part of the Exide FOP facility.

COMMENT 9: It is Apex's opinion that the current method of battery chip and slag removal by hand is ineffective and inefficient based on the variability and frequency of occurrence of the battery chips within the creek, and the continuing source of battery chips from upland areas including but not limited to the FOP. This is evidenced by the increased distribution of battery chips and slag observed in downstream areas in the 2016 field activities. All information collected in the downstream portions of Stewart Creek, including the presence of wastes in deeper sediment deposits, should be considered in the preparation and implementation of a Response Action Plan (RAP). A more extensive and comprehensive program should be undertaken to remediate existing battery chips and slag within the banks of the creek, to address upland areas contributing to the presence of chips, and to install engineering controls designed to prevent or deter future downstream migration of battery chips.

COMMENT 10: Apex compared the arsenic, cadmium, and lead concentrations detected in the split sediment samples collected during the Interim Action oversight activities to the midpoint between the ecological benchmark for sediment and the second effects level for sediment. The midpoint concentration represents the Texas Risk Reduction Program (TRRP) Critical Protective Concentration Level (PCL). Additionally, Apex compared the concentrations detected in the split sediment samples to the TCEQ TRRP human health sediment PCL.

The arsenic concentrations detected in the split sediment samples submitted by Apex during the Interim Action Oversight activities ranged from 4.0 mg/Kg to 2,760 mg/Kg, cadmium concentrations ranged from a j-value concentration of 0.39(j) mg/Kg to 96.2 mg/Kg and lead concentrations ranged from 4.7 mg/Kg to 141,000 mg/Kg. The highest arsenic, cadmium and lead concentrations were detected in the split sediment sample also collected south of the Museum of the American Railroad facility near the BNSF Railroad Bridge (2014-IASED-638R).

A review of interim action sediment analytical results from the initial Interim Action and historical sampling events in Stewart Creek indicate human health sediment PCL exceedances exist in multiple areas in Stewart Creek. Exide should comply with notification requirements specified 30 TAC §350.55, including potential signage for publically accessible areas.

TABLE 1B
CHIP, POTENTIAL SLAG, SLAG AND OTHER ANALYTICAL RESULTS
Stewart Creek East and West of the Dallas North Tollway
Frisco, Texas

Sample I.D.	Sample Date	Depth (feet)	Arsenic (mg/Kg)	Cadmium (mg/Kg)	Lead (mg/Kg)	Total Organic Carbon mg/Kg	Selenium (mg/Kg)	Sulfate (mg/Kg)
TRRP Ecological Benchmarks for Sediment			9.79	0.99	35.8	NE	NE	NE
TCEQ Second Effects Levels for Sediment			33	4.98	128	NE	NE	NE
TRRP Human Health Sediment Protective Concentration Levels			110	1,100	500	NE	2,700	NE
Chip (6-20)-2	06/20/13	--	14.4	0.26	19.1	N/A	N/A	N/A
Chip (6-20)-2 Base	06/20/13	--	10.6	0.62	8.2	N/A	N/A	N/A
Chip (6-21)-1	06/21/13	--	8.3	0.086(j)	180	N/A	N/A	N/A
Chip (6-21)-1 Base Comp	06/21/13	--	17.7	0.87	13.3	N/A	N/A	N/A
Chip (6-21)-2	06/21/13	--	10.5	0.24	3.8	N/A	N/A	N/A
Chip (6-21)-2 Base Comp	06/21/13	--	12.3	0.54	9.5	N/A	N/A	N/A
Chip (6-24)-3	06/24/13	--	3.3	0.29	27.0	N/A	N/A	N/A
Chip (6-24)-3 Comp	06/24/13	--	11.5	1.4	32.6	N/A	N/A	N/A
Chip (6-24)-3 Base Comp	06/24/13	--	9.2	1.1	27.7	N/A	N/A	N/A
Chip (6-24)-3 Wall Base	06/24/13	--	8.1	0.92	15.7	N/A	N/A	N/A
Chip (6-24)-3 SED	06/24/13	--	10.4	0.79	39.3	N/A	N/A	N/A
Chip (6-24)-4	06/24/13	--	3.8	0.077(j)	62.1	N/A	N/A	N/A
Chip (6-24)-4 Base Comp	06/24/13	--	9.2	0.63	15.3	N/A	N/A	N/A
Chip (6-24)-5	06/24/13	--	5.4	0.088(j)	15.4	N/A	N/A	N/A
Chip (6-24)-5 Base Comp	06/24/13	--	8.9	0.63	76.7	N/A	N/A	N/A
PS-(6-21)-1	06/21/13	--	6.0	<0.12	6.0	N/A	N/A	N/A
PS-(6-21)-1 Base Comp	06/21/13	--	25.2	4.2	89.0	N/A	N/A	N/A
PS-(6-21)-2	06/21/13	--	7.2	0.59	9.7	N/A	N/A	N/A
PS-(6-21)-2 Base Comp	06/21/13	--	44.6	0.52	9.7	N/A	N/A	N/A
PS (6-24)-3	06/24/13	--	3.0	0.17(j)	4.4	N/A	N/A	N/A
PS (6-24)-3 Base Comp	06/24/13	--	11.8	0.82	13.6	N/A	N/A	N/A
Slag (6-24)-1	06/24/13	--	118	<0.019	35,200	N/A	N/A	N/A
Slag (6-24)-1 Base	06/24/13	--	16.4	0.56	17.8	N/A	N/A	N/A
Slag (6-24)-2	06/24/13	--	38.7	1.9	20,600	N/A	N/A	N/A
Slag (6-24)-2 Base	06/24/13	--	279	<0.040	459	N/A	N/A	N/A

mg/Kg - milligrams/Kilogram

Samples collected from sediments and soils directly beneath or adjacent to Chip, Slag, or Potential Slag from Table 1A are presented in *ITALICS*

Base denotes sample was collected discretely directly beneath the Chip, Slag, or Potential Slag

Comp denotes the sample was collected as a composite from beneath the Chip, Slag, or Potential Slag, or contained multiple chips

SED denotes the sample was collected discretely from sediment beneath the base at the water interface

Wall denotes the sample was collected discretely further down the feature beneath the base but above the SED sample

(j) - Denotes an estimated value between the laboratory sample detection limit (SDL) and the laboratory method detection limit (MDL).

Shading indicates a concentration above the TRRP Ecological Benchmark for Sediment

Bold and shading indicates a concentration above the TCEQ Second Effects Level

Bold and shading indicates a concentration above the TCEQ Human Health Sediment PCLs

Benchmarks obtained from the TCEQ guidance document *Update to Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas RG-263 (Revised)*, dated January 2006.

< - Not detected above laboratory SDL.

N/A - Not Applicable

NE - Not Established

TABLE 1C
TCLP ANALYTICAL RESULTS
Stewart Creek East and West of the Dallas North Tollway
Frisco, Texas

Sample I.D.	Sample Date	Depth (feet)	Total Arsenic (mg/Kg)	Total Lead (mg/Kg)	TCLP Arsenic (mg/L)	TCLP Lead (mg/L)
TCLP Maximum Contaminant Concentration (40 CFR Part 261)					5.0	5.0
TCLP Class 1 Non-hazardous Waste Criteria (30TAC 335)					1.8	1.5
Chip (6-20)-2	06/20/13	—	14.4	19.1	N/A	N/A
<i>Chip (6-20)-2 Base</i>	06/20/13	—	10.6	8.2	N/A	N/A
Chip (6-21)-1	06/21/13	—	8.3	180	N/A	4.1
<i>Chip (6-21)-1 Base Comp</i>	06/21/13	—	17.7	13.3	N/A	N/A
Chip (6-21)-2	06/21/13	—	10.5	3.8	N/A	N/A
<i>Chip (6-21)-2 Base Comp</i>	06/21/13	—	12.3	9.5	N/A	N/A
Chip (6-24)-3	06/24/13	—	3.3	27.0	N/A	N/A
<i>Chip (6-24)-3 Comp</i>	06/24/13	—	11.5	32.6	N/A	N/A
<i>Chip (6-24)-3 Base Comp</i>	06/24/13	—	9.2	27.7	N/A	N/A
<i>Chip (6-24)-3 Wall Base</i>	06/24/13	—	8.1	15.7	N/A	N/A
<i>Chip (6-24)-3 SED</i>	06/24/13	—	10.4	39.3	N/A	N/A
Chip (6-24)-4	06/24/13	—	3.8	62.1	N/A	N/A
<i>Chip (6-24)-4 Base Comp</i>	06/24/13	—	9.2	15.3	N/A	N/A
Chip (6-24)-5	06/24/13	—	5.4	15.4	N/A	N/A
<i>Chip (6-24)-5 Base Comp</i>	06/24/13	—	8.9	76.7	N/A	N/A
PS-(6-21)-1	06/21/13	—	6.0	6.0	N/A	N/A
<i>PS-(6-21)-1 Base Comp</i>	06/21/13	—	25.2	89.0	N/A	N/A
PS-(6-21)-2	06/21/13	—	7.2	9.7	N/A	N/A
<i>PS-(6-21)-2 Base Comp</i>	06/21/13	—	44.6	9.7	N/A	N/A
PS (6-24)-3	06/24/13	—	3.0	4.4	N/A	N/A
<i>PS (6-24)-3 Base Comp</i>	06/24/13	—	11.8	13.6	N/A	N/A
Slag (6-24)-1	06/24/13	—	118	35,200	0.084	23.7
<i>Slag (6-24)-1 Base</i>	06/24/13	—	16.4	17.8	N/A	N/A
Slag (6-24)-2	06/24/13	—	38.7	20,600	<0.020	37.8
<i>Slag (6-24)-2 Base</i>	06/24/13	—	279	459	0.084	20.6

mg/Kg - milligrams/Kilogram

mg/L - milligrams/Liter

Samples collected from sediments and soils directly beneath or adjacent to Chip, Slag, or Potential Slag from Table 1A are presented in *ITALICS*

Base denotes sample was collected discretely directly beneath the Chip, Slag, or Potential Slag

Comp denotes the sample was collected as a composite from beneath the Chip, Slag, or Potential Slag, or contained multiple chips

SED denotes the sample was collected discretely from sediment beneath the base at the water interface

Wall denotes the sample was collected discretely further down the feature beneath the base but above the SED sample

(j) - Denotes an estimated value between the laboratory sample detection limit (SDL) and the laboratory method detection limit (MDL).

Bold and shading indicates a concentration above the TCLP Maximum Contaminant Concentration

Bold and shading indicates a concentration above the TCEQ Class 1 Non-hazardous waste criteria

< - Not detected above laboratory SDL.

N/A - Not Applicable

NE - Not Established