TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 25, 2014

Mr. George Purefoy, City Manager
City of Frisco
6101 Frisco Square Boulevard, 5th Floor
Frisco, Texas, 75034

Re: Comments to *Affected Property Assessment Report*, dated April 1, 2014, Undeveloped Buffer Property (UBP) Surrounding Exide Technologies Frisco Recycling Center, 7471 South 5th Street, Frisco, Collin County, Texas; Voluntary Cleanup Program (VCP) No. 2541; Customer No. CN600129787; Regulated Entity No. RN106583511

Dear Mr. Purefoy:

The VCP of the Texas Commission on Environmental Quality (TCEQ) has reviewed the above referenced APAR, dated April 1, 2014. The APAR documents the investigation conducted at the UBP surrounding the Exide Technologies Frisco Recycling Center former operating plant (FOP). Based on our review, the TCEQ cannot approve the APAR at this time. A list of the comments regarding the APAR is enclosed. Please prepare a written response to each comment, referencing the assigned TCEQ comment number.

An original and one copy of the written response to these comments must be submitted to the TCEQ Remediation Division at the letterhead address using mail code MC-221. Your response must be received within 60 days of the date of this letter.

Please call me at (512) 239-2361 if you need additional information or wish to discuss these comments or the due date. Thank you for your cooperation in this matter.

Sincerely,

Gary Beyer, Project Manager
VCP-CA Section
Remediation Division

GB/mdh

Enclosure

cc: Mr. Sam Barrett, TCEQ Region 4 Office, Dallas/Ft. Worth

Mr. Matthew A. Love, Director, Global Environmental Remediation, Exide Technologies, 3000 Montrose Avenue, Reading, PA 19605

Mr. Bruce A. Cole, Executive Vice President, Strategy and Business Development, Exide Technologies, 13000 Deerfield Parkway, Building 200, Milton, GA 30004

Mr. James L. Gandy, Frisco Economic Development Corporation, 6801 Gaylord Parkway, Suite 400, Frisco, TX 75034

Mr. Wade Wheatley, Cook-Joyce Inc. 812 West 11th, Austin, TX 78701-2000

Mr. Tim Nichols, PB&W, LLC, 2201 Double Creek Drive, Suite 4004, Round Rock, Texas 78664

Enclosure
Comments to Affected Property Assessment Report, dated April 1, 2014
Voluntary Cleanup Program (VCP) No. 2541

1. **Page ix. Conclusions and Recommendations – Assessment Results.** The report indicates that areas containing battery chips/slag were identified during the investigation, but that areas containing battery chips/slag that were not otherwise targeted for excavation were not delineated in the APAR. Please note that all media containing uncontrolled waste must be addressed in assessment and remediation of the site. Please provide revised Protective Concentration Level Exceedance (PCLE) zone maps that include all areas containing waste materials. If the extent of the waste and/or associated contaminated media has not been fully delineated by existing samples, then additional samples should be collected and documented in a supplement to the APAR. The supplement report should include maps depicting the location of the waste materials, and the concentration of contamination in surrounding soils.

2. **Page xi. Response Actions and Recommendations and Section 5, Groundwater Assessment.** The referenced sections of the report recommend that two additional quarterly groundwater monitoring events be conducted at wells VCP-MW-9 for an exceedance of arsenic and VCP-MW-10 for an exceedance of MTBE. As discussed in Section 5.2, please provide the TCEQ with the results of the two quarterly groundwater monitoring events no later than 90 days after collection of the samples has been completed.

3. **Page 4-1, Section 4.1, Derivation of Assessment Levels Subsurface Soil.** The referenced section of the report states that the PCL for the $^{GW}Soil_{Ing}$ pathway for cadmium is 116 mg/kg. However, the Appendix 9 Tier 2 Residential Results Summary table shows the $^{GW}Soil_{Ing}$ PCL for cadmium is 103 mg/kg. In the next paragraph, the report states that the PCL for the $^{GW}Soil_{Ing}$ pathway for lead is 1,079 mg/kg. However, the Appendix 9 Tier 2 Residential Results Summary table shows the $^{GW}Soil_{Ing}$ PCL for lead is 958 mg/kg. Please explain these discrepancies and provide a revised section of the APAR with consistent PCLs.

4. **Page 4-5, Section 4.2.3, Test Pit Investigation** – The level of arsenic present in Test Pits TP-10, TP-11, and DE-6 was established using a representative concentration approach in accordance with 30 Texas Administrative Code (TAC) §350.51.(l) as allowed by approval of the executive director. The PCL for the $^{GW}Soil_{Ing}$ pathway of 29.9 mg/kg was determined by using a Tier 3 Synthetic Process Leaching Procedure. The PCL value for the $^{Tot}Soil_{Comb}$ for arsenic at a Tier 1 Residential level is 24 mg/kg, and was selected as

the critical PCL since it is the lower of the two values. The TCEQ approves of this approach. However, 30 TAC §350.51.(l)(5) states "The presence of hot spots with respect to ecological risk shall be determined on a site-specific basis." The potential ecological risk posed by soils from two of these areas (TP-10 and 11) which are adjacent to a drainage ditch which flows into Stewart Creek should be examined. Additionally, the lateral extent of contamination must be defined to the TRRP RAL of 24.2 mg/kg.

5. **Page 4-3, Section 4.2.2, Former Eagan Way/South 5th Street Sampling Results.** The second sentence of the first paragraph states that "The source of these lead concentrations is not known." Please note that a Certificate of Completion cannot be issued for the UBP until this assessment and any necessary remediation have been addressed.
6. **Page 4-4, second paragraph.** The report states that "The results of the TCLP analysis are presented in Table 4D.11." However, the column title for column 5 is "SPLP Lead". Please clarify whether column 4 is total lead or TCLP lead and submit a revised version of this table.
7. **Figure 4C. 2, Cross Section A-A1.** The cross section depicting the configuration of the sand/gravel layer documented in LMW-1 should be inferred (dashed lines) across to VCP MW-3, since there was no recovery in that monitoring well from the 7.6 foot to 10 foot interval. Typically, no recovery occurs when the sample contains saturated and unconsolidated gravel and/or sand and the sample falls out of the sampling device. Therefore, this interval should be marked with dashed lines on the cross section and not automatically assumed to be clay. Please incorporate this change into revised cross sections.
8. **Section 6.0, Surface Water Assessment and Critical PCL Development.** This section states that "The evaluation of surface water within the creek in this area is included within the overall evaluation of Stewart Creek provided in the revised APAR for the FOP." Please note that a Certificate of Completion cannot be issued for the UBP until this assessment and any necessary remediation have been addressed.
9. **Section 7.0, Sediment Assessment and Critical PCL Development.** Similar to comment 8 above, regarding Surface Water Assessment, this section states "The evaluation of the sediments within the creek in this area is included within the overall evaluation of Stewart Creek provided in the revised APAR for the FOP." Please note that a Certificate of Completion cannot be issued for the UBP until this assessment and any necessary remediation have been conducted.

Comments to Section 9 – Terrestrial Screening Level Ecological Risk Assessment

General Comment:

It is acknowledged that the groundwater-to-surface water pathway will likely be addressed in future Exide documents (e.g., FOP APAR). However, this APAR does mention that this pathway is complete for Stewart Creek and the North Tributary. Monitoring wells MW-3 and MW-4 were located to evaluate "potential impacts associated with Stewart Creek". These wells (and any others that qualify) should evaluate the groundwater-to-surface water pathway according to the process described in TRRP-24 (*Determining PCLs for Surface Water and Sediment*; TCEQ, 2007). If the TRRP Tier 1 Residential Groundwater PCLs that were used to compare to well concentrations are at or below the chronic aquatic life values for Stewart Creek and no exceedances were observed, then a statement to that effect should be made.

TERRESTRIAL SLERA
General Comments:

1. A good effort was made to justify the absence of protected species. However, the SLERA acknowledges the potential presence of the Timber/Canebrake rattlesnake.

   Lead and cadmium hazard quotients (HQs) based on no observed adverse effect level toxicity reference values are greater than 1 for the Red fox in the less conservative exposure analysis using existing site data. The fox was modeled with a diet consisting of 100% small mammals, similar to the diet of the rattlesnake. The home range of the rattlesnake is much smaller than that of the fox, resulting in even greater exposure. If the fox was used as a surrogate for the protected rattlesnake, even without the standard practice of using an uncertainty factor to account for across-class extrapolation, the calculated HQs indicate unacceptable risk. Therefore, it is recommended that presence or absence of the rattlesnake be verified.

   The preferred method for determining the presence or absence of a protected species on an affected property is by providing supporting documentation from a wildlife management agency. It is strongly recommended that the Texas Parks and Wildlife Department (TPWD) be consulted for a biological opinion. This consultation can be initiated by contacting the TPWD's Wildlife Habitat Assessment Program at:
   http://www.tpwd.state.tx.us/huntwild/wild/wildlife_diversity/habitat_assessme

nt/ . Project review requests can also be submitted electronically to WHAB@tpwd.texas.gov .

2. As described in TRRP-15eco (*Determining Representative Concentrations of Chemicals of Concern for Ecological Receptors*; TCEQ, 2013), the determination and evaluation of hot spots in the ecological habitat area is now necessary in a Tier 2 or Tier 3 ERA. The purpose of a hot-spot evaluation is to identify any risks to wildlife receptors that would not be identified and mitigated through the standard risk evaluation, which is based on averaging chemical of concern (COC) concentrations (i.e., using a 95 percent UCL as the exposure point concentration) across larger areas. A hot-spot evaluation for the small-ranging American robin and Least shrew should be conducted according to the process discussed in TRRP-15eco.

   In addition, the hot-spot analysis should be presented in the uncertainty analysis. If it is determined that a hot-spot evaluation is not warranted, a short justification or rationale should be presented.

3. Some of the specific comments appearing below identify the use of incorrect inputs in the exposure calculations. Accordingly, these inputs will need to be corrected and the calculations rerun before any concurrence on their results can be provided.

Specific Comments:

1. Table 2: The source of the ecological soil benchmarks for selenium, silver, and copper is unknown, but it does not appear to be sourced from TCEQ (2014) as stated. In particular for selenium, the TCEQ (2014) benchmark is 0.52 mg/Kg. All samples analyzed for this COC exceed the benchmark and suggest that the detection limits may need to be adjusted. In addition, the associated text on page 8 that states all detections of selenium are below the soil benchmark needs to be revised.
2. Table 8: The "Soil to Bird UF" for cadmium is incorrect and should be 1.51 E-03. Any exposure calculations using the incorrect value should be rerun.
3. Tables C-1-7 and C-1-8: The "Small Mammal Conc" and "Small Bird Conc" values appear to be incorrect, as these are many times the 95% UCL concentrations. These hazard quotient calculations should be revised and rerun.

4. Tables C-1-10 – C-1-12: The "Small Mammal Conc" values appear to be incorrect, as these are many times the 95% UCL concentrations. These hazard quotient calculations should be revised and rerun.
5. Tables C-2-7, C-2-8, and C-2-10: The "Small Mammal Conc" values appear to be incorrect, as these are many times the 95% UCL concentrations. These hazard quotient calculations should be revised and rerun. In addition, the "Small Bird Conc" value in Table C-2-7 should be verified.

References:

TCEQ. 2007. Determining PCLs for Surface Water and Sediment. (RG-366/TRRP-24 Revised, December 2007).
http://www.tceq.state.tx.us/remediation/trrp/guidance.html

TCEQ. 2013. Determining Representative Concentrations of Chemicals of Concern for Ecological Receptors. (RG-366/TRRP-15eco, November 2013).
http://www.tceq.state.tx.us/remediation/trrp/guidance.html

TCEQ. 2014. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas (RG-263 Draft, January 2014).
http://www.tceq.state.tx.us/remediation/eco/eco.html