



DEPARTMENT OF THE ARMY
CAMP STANLEY STORAGE ACTIVITY, RRAD
25800 RALPH FAIR ROAD, BOERNE, TX 78015-4800

12 August 2004

U-156-04

Mr. Sonny Rayos
Texas Commission on Environmental Quality
Industrial and Hazardous Waste Section
PO Box 13087 (MC-127)
Austin, TX 78711-3087

Subject: Response to Request for Additional Information on AOC-55,
Camp Stanley Storage Activity, Boerne, Texas
TCEQ Industrial Solid Waste Registration #69026
EPA Identification Number TX2210020739

Dear Mr. Rayos:

The Camp Stanley Storage Activity (CSSA), Red River Army Depot, Tank-Automotive and Armaments Command, Army Materiel Command, U.S. Army is providing this response to your letter dated July 8, 2004.

Your July 8, 2004 letter forwarded request for additional information, and a list of comments or deficiencies. CSSA is responding to your letter to cover each of the comment(s) in order to provide responses for closure of AOC-55 under Risk reduction Standard No. 1.

1. Test trenches for waste characterization indicated that the presence of incinerator ash. The report stated that a waste incinerator existed and operated in the general location of AOC-55. The report did not specify whether the ash materials were analyzed for constituents of concern. In addition, the report did not specifically address the special handling and disposal of incinerator ash/ashes, other than the information that 34,020 cubic yards were removed and disposed of at WMI Covel Garden Landfill facility. Please provide the above requested information. Please note that incinerator ash is a waste and not contaminated media or media and therefore, could be subject to applicable industrial solid waste regulations or hazardous waste regulations after generation.

CSSA determined the potential contaminants of concern by analytical results of an initial six (6) samples collected in situ from test trenches excavated as shown on Figure AOC55-6 of the closure report. The samples were analyzed for total concentrations of eleven metals, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). From the totals analysis, the contaminants of concern were identified and toxicity characteristic leaching procedure (TCLP) data was generated for proper waste characterization. The ash was noted as visible; however, it was not separable from the soil media. There were no discernible layers of ash that could be separated from the surrounding soil matrix. Based on the mixture of soil, ash, and general refuse waste encountered at the site, it appears that the material was reworked on several occasions during the

landfill's operation in the 1930s and 1940s. Thus, the sampling, which was performed, provided appropriate characterization for the entire matrix which included a mixture of ash, general refuse, and soil (see photographs in Appendix B.)

CSSA is not classified as an industrial facility; therefore, industrial solid waste classification, reporting, etc., are not applicable to any non-hazardous waste generated at the facility. As shown by waste characterization sample results, the material removed from AOC-55 was not characteristically hazardous per 40 Code of Federal Regulation (CFR) 261 Subpart C. The attached figure, which shows aerial photos of the site between 1934 and 1966, shows that the site was used in the 1930s and 1940s. Therefore, the waste was not identified as a listed hazardous waste, identified in 40 CFR 261 Subpart D, because the waste was believed to be originally generated prior to the enactment of the Resource Conservation and Recovery Act in 1980.

2. A total of 699 OE scrap and 20 UXO items were recovered from AOC-55. Please provided how these materials were managed, provide the respective disposal methods and where disposed.

CSSA recycled all of the metal debris encountered at the site during the removal actions, including the O/E scrap items. The O/E items were cut to ensure that they did not contain any explosive material and sent to Monterrey Products Company Inc. for recycling as scrap metal. The 20 potential UXO items were relinquished to Fort Sam Houston for proper disposition through the U.S. Army EOD program.

3. The report states on Page 2-11, third paragraph: "To compare the total-based VOC, SVOCs, and metals results to the TCLP-based waste criteria, a screening value of 20 times the TCLP waste criteria was applied to the total results to identify areas where the TCLP waste criteria may be exceeded." The 20X is a poor determinant of leaching potential of a contaminant; it has to do more with soil textural class, the cation exchange capacity, presence of organic matter, to name a few. The 20X is reliable only when the total concentration is less than the TCLP compliance concentration. Please refrain from using this criterion.

While CSSA recognizes that leaching potential from soil media can be affected by soil textural class, the cation exchange capacity, and other factors, the 20-times calculation represents the maximum possible concentration. The TCLP Method (USEPA SW-846 Method 1311) indicates for wastes that are 100% solid, the maximum theoretical leachate concentration can be calculated by dividing the total concentration of the constituent by 20. The dilution factor of 20 reflects the liquid to solid ratio dictated by the extraction procedure. The value calculated using the 20x rule represents the worst-case scenario, assuming both 100% solids and that 100% of the constituent present is leached into the extract. For materials with no liquid fraction (100% solids), the TCLP leaches 100 grams of sample with 2,000 grams of leaching solution, providing a maximum of 20 times dilution of constituents in the sample. Therefore, a waste material

containing less than 20 times the maximum contaminant level (MCL) identified in 30 TAC 335 subchapter R or 40 CFR 261.24 Table 1 for any given constituent cannot exhibit the toxicity characteristics for that constituent: Even if 100% of the constituent in the waste material leaches out, the 20 times dilution of the extraction fluid would lower the concentration of the constituent below the MCL. Thus, the 20 times screening evaluation of the totals results is conservative, and therefore appropriate as a screening value.

4. AOC-55 area landfill was assumed to have been in operation between 1920 and 1950 based on aerial photographs and on dates found on bottles and plates recovered from the landfill. Please provide "readable" copies or originals of the aerial photos to the TCEQ.

CSSA has provided as an attachment to this copies of the aerial photographs on file depicting the area around AOC-55.

5. The report indicated exceedances of lead and zinc in confirmation samples. For statistical evaluation, Upper Confidence Limit was calculated using the Shapiro-Wilke Test using ProUCL developed by the U.S.EPA. Based on a 95% H-UCL for lead and 95% UCL for zinc, the report concluded the attainment of Risk reduction Standard No.1. In 30 Texas Administrative Code Section 335.553(d)(3), it states that other statistical methods appropriate for the distribution of the data may be used but is, however, subject to the approval by executive director. The TCEQ request that Camp Stanley follow the requirement of the stated regulation. Please submit for approval the statistical methodology used. In addition, please submit all pertinent raw data used in the statistical analysis in order for the TCEQ to validate Camp Stanley's statistical evaluation and conclusion.

CSSA has provided the statistical evaluation of the closure data collected for attainment of Risk Reduction Standard 1 closure. The statistical evaluation was conducted in accordance with 30 TAC 335.553(d)(2) requirements for determining the 95% Upper Confidence Limit. The Shapiro-Wilk Test was used to test each data set for normality. Many statistical procedures, including the UCL calculation, are based on a normal or lognormal distribution assumption. Therefore, these distributions must be tested prior to calculating the UCL. In the case at AOC-55, zinc results were normally distributed and lead results were lognormally distributed, as shown by the Shapiro-Wilk Test W statistic.

The zinc UCL was calculated using the formula provided in 30 TAC 335.553(d)(2), which is also known as the Student's t UCL.

According to the ProUCL User's Guide, "The program ProUCL has been developed to test normality or lognormality of the data distribution, and to compute a conservative and stable UCL of the population mean." The program recommends use of the more conservative H-UCL for lognormally distributed data, rather than the Student's t UCL. Therefore, this calculation was made for the AOC-55 lead data, resulting in an H-UCL of 55.79 mg/kg. Calculation of the TCEQ recommended Student's t UCL for lead results in a less conservative

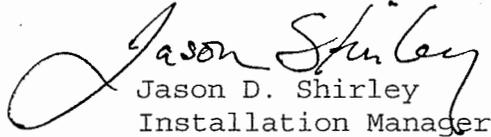
and lower value of 44.7 mg/kg. Both of these results are well below the CSSA background value of 84.5 mg/kg.

6. The statistical evaluation portion of the report will be review by a specialist. The results of the subject specialist's review will be submitted to the attention of Camp Stanley's under separate TCEQ letter.

CSSA intends to continue to use the ProUCL software for statistical evaluations for closures of other sites. The software and User's Guide is available on the U.S. EPA website at <http://www.epa.gov/esd/tsc/download.htm>.

If you have any questions regarding this information, please feel free to contact me at (210) 295-7416 or Mr. Rod Hudson at (210) 221-2373.

Sincerely,


Jason D. Shirley
Installation Manager

Attachments

cc: Mr. Greg Lyssy
EPA Region 6

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Mr. Stan Citron
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