

APPENDIX C

EVALUATION OF DATA QUALITY OBJECTIVES ATTAINMENT

Activity	Objectives	Action	Objective Attained?	Recommendations
Objective 1: Meet TCEQ Requirements for Site Closure				
Attainment of Risk Reduction Standard Number 1: Closure/Remediation to Background				
Attainment of Risk Reduction Standard 1	Remove all hazardous and non-hazardous waste and waste residues and contaminated design and operating system components such as liners, leachate collection systems, and dikes from the unit or area of the unauthorized discharge. For remediation of media that have become contaminated by releases from a waste management unit or by other unauthorized discharge of hazardous or non-hazardous waste, the contaminated media must be removed or decontaminated to cleanup levels specified in this section (30 TAC 335.554(b) and (c)).	A geophysical survey was conducted to determine if there is evidence of buried waste at the site. Survey indicated one anomaly related to past waste management activities. This anomaly proved to be a trench of household trash. Ten surface soil samples were collected. Five analytes (cadmium, chromium, copper, lead and zinc) were detected above RRS1 criteria.	No.	Further soil sampling is recommended to determine the aerial and vertical extent of contamination.

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Attainment of Risk Reduction Standard 1	Determine compliance with RRS1 closure requirements by comparing to background as represented by results of analyses of samples taken from media that are unaffected by waste management or industrial activities. If the practical quantitation limit (PQL) is+ greater than background, then the PQL rather than background shall be used as the cleanup level provided that the person satisfactorily demonstrates to the executive director that lower levels of quantitation of a contaminant are not possible (30 TAC 335.554(d)).	Contaminant concentrations were compared to draft revised background levels (Parsons ES, May 2001) or RLs, which are equivalent to PQLs.	No. Five analytes, cadmium, chromium, copper, lead, zinc, had reported concentrations, which exceeded background metals levels or RLs.	See above.
	Attainment of cleanup levels shall be demonstrated by collection and analysis of samples from the media of concern (30 TAC 335.554(e)).	Surface soil samples were collected at the site and analyzed for contaminants of potential concern, including metals, explosives and VOCs.	No. See above.	See above.

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Objective 2: Meet Requirements of 3008(h) Order for RFI				
RFI Workplan Requirements				
Field Sampling (Detailed listing of methods and procedures are provided in project plans which are incorporated by reference).	Conduct field sampling in accordance with procedures defined in the project work plan, SAP, QAPP, and HSP.	All sampling was conducted in accordance with the procedures described in the project plans.	Yes.	NA
Facility Investigation				
Characterization of Environmental Setting - Hydrogeology (B.3.A.1)	Evaluate hydrogeologic conditions at the site.	Not included in this phase of the RFI at AOC 50. Groundwater of the Trinity Aquifer is being addressed through the Groundwater Investigation.	NA	NA
Characterization of Environmental Setting- Soils (B.3.A.2)	Characterize soils in accordance with USCS soil classification system (B.3.A.2(a)).	Soil types at the site are based on the SCS Bexar County Soil Survey (USDA, 1991) and are described in Section 1.2.1.	Yes.	NA
	Determine soil pH (B.3.A.2(e)).	The pH of each of the soil types evaluated as part of the background metals concentration study was determined through laboratory analysis. According to those analyses, the pH of Krum Complex soils is 7.87.	Yes.	NA
	Determine moisture content (B.3.A.2(g)).	The moisture content of each sample was analyzed and reported in the laboratory package.	Yes.	NA

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Characterization of Environmental Setting – Surface Water and Sediment (B.3.A.3)	Characterize marshes, creeks, wetland areas, or ditches at the site.	No marshes, creeks, wetland areas, or ditches are present at the site. An intermittent creek borders the site to the east. Direction of runoff flow has been evaluated in Section 1.2.1.	Yes.	NA
Source Characterization (B.3.B)	Identify the source area (B.3.B.1).	A description of the potential source area is provided in Section 1.1.2.2.	Sampling at the site was biased toward areas most suspected of contamination. Five analytes, cadmium, chromium, copper, lead, and zinc exceeded closure criteria.	Further soil sampling is recommended to determine the aerial and vertical extent of contamination. If no evidence of waste is found, close the site under RRS1.
	Identify the location of the unit/disposal area (B.3.B.2(a)).	The boundaries were initially marked from aerial photographs, and confirmed by field investigations that indicated the site was larger than previously estimated.	Yes. Although the accuracy of the boundary survey of the site is estimated to have an approximate error of 25 feet, this accuracy is sufficient for closure under RRS1.	NA
	Identify the type of unit/disposal area (B.3.B.2(b)).	Possible waste disposal piles were identified at AOC 50 during investigation of a neighboring site (SWMU B-29).	Yes. The area was determined to be a disposal area for metallic wheel abrader waste. The geophysical anomaly was found to be a household waste trench.	NA
	Identify design features (B.3.A.2(c)).	All available information regarding the design of the disposal site is provided in Section 1.1.	All investigation evidence indicates that the site was used for the disposal of wheel abrader waste.	NA
	Identification of past and present operating practices, period of operation, age of unit/disposal area, and method used to close the unit/disposal area (B.3.B.2(d), (e), (f), and (h)).	All known information regarding these items is provided in Section 1.1.2.1. This information is from records review, interviews, aerial photo review, and visual observations.	Yes. To the extent possible with data available.	NA
	Determine general physical conditions of the site (B.3.B.2(g))	The general physical condition of the site was determined during the field investigation. This information is presented in Section 1.1.2.3.	Yes.	NA

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Source Characterization (B.3.B) (continued)	Identify waste characteristics, including type of waste placed in the unit, physical and chemical characteristics of the wastes, and migration and dispersal characteristics of the waste (B.3.B.3).	Records regarding historic waste disposal practices at CSSA are very limited. All known information, derived from the Environmental Assessment (if appropriate for your site), records review, interviews, and visual observations at the site is provided in Section 1.3.	Yes. To the extent possible with the data available.	NA
Contamination Characterization – Groundwater (B.3.C.1)	Characterize the vertical and horizontal extent of groundwater contamination.	Not included in this phase of the RFI at the AOC 50 area. Groundwater of the Trinity Aquifer is being addressed through the Groundwater Investigation.	NA	NA
Contamination Characterization – Soil (B.3.C.2)	Determine vertical and horizontal extent of contamination (B.3.C.2(a)).	Surface soil samples were collected to determine horizontal extent of contamination, if any. Subsurface soils were not collected	No.	Further soil sampling is recommended to determine the aerial and vertical extent of contamination. If no evidence of waste is found, close the site under RRS1.
	Describe soil properties (B.3.C.2(c)).	See “Characterization of Environmental Setting – Soils” above.	NA	NA
	Identify the direction of contaminant movement (B.3.C.2(d)).	Cadmium, chromium, copper, lead and zinc were the only analytes that exceeded closure criteria. Direction of contaminant movement was not determined as part of this investigation.	NA	NA
	Extrapolate future contaminant movement (B.3.C.2(e)).	Cadmium, chromium, copper, lead and zinc were the only analytes that exceeded closure criteria. Direction of contaminant movement was not determined as part of this investigation.	NA	NA

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	Implement a soil boring investigation to determine the extent of soil contamination. Soil gas monitoring will be performed during drilling of all borings. Laboratory analysis of borings for contaminants of potential concern will be performed on soils at depths where either visual contamination is evident, or soil gas concentrations indicate contamination. All boreholes shall be properly abandoned.	A soil boring investigation was not part of the original Interim Measures scope of work. The objective of the investigation was to remove visible waste and sample surface soils for potential contamination. Surface sampling indicates elevated levels of metals at the surface. A soil boring program is necessary to define the vertical extent of metals downward migration. Soil boring data will define the vertical and aerial extent, and provide estimations of the amount of soil that will require removal.	No	Install 15 shallow soil borings to no more than 10 feet below grade. Bedrock is expected to occur within 5 feet of the surface over most of the site. At each location, a surface sample, a mid-depth sample, and a total depth sample should be collected and analyzed for target inorganic compounds. The size and depth of the pending excavation will be estimated based on this data.
	Prepare a map of all areas included in the investigation (B.3.C.2(i)).	Figures included in this report show all areas included in the investigation.	Yes.	NA
	All reporting limits should be below regulatory criteria.	RLs were approved by TCEQ on October 5, 1999. RLs are considered RRS1 standards for all analytes except metals.	Yes.	NA
	Perform all analyses in accordance with the AFCEE QAPP.	All analyses were performed in accordance with the AFCEE QAPP and approved variances.	Yes.	NA
		All data flagged with "U," "F," "M," and "J" are considered usable for site characterization purposes.	Yes.	NA

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Contaminant Characterization – Sediment and Surface Water (B.3.C.3)	Conduct a surface water and sediment investigation to characterize contamination resulting from releases at the Facility.	AOC 50 is located 50 feet east of an intermittent creek. This creek only contains water during and shortly after heavy precipitation. Therefore, surface water was not sampled as part of the AOC 50 investigation. Sediment samples were not collected as part of the AOC 50 RFI.	NA	NA
Potential Receptors (B.3.D).	Collect the information necessary to describe the human populations and environmental systems that are susceptible to contaminant exposure from the Facility.	Information regarding receptors is provided in the Risk Assessment Technical Approach Document (Volume 1-6). In addition, the Well Research Report identifies private groundwater users within 0.25-mile and public water suppliers within 0.5-mile of CSSA	Yes.	NA