

**APPENDIX C
EVALUATION OF DATA QUALITY OBJECTIVES ATTAINMENT**

Activity	Objectives	Action	Objective Attained?	Recommendations
Objective 1: Meet TNRCC 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 nonhazardous 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 nonhazardous 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 determined there is no buried waste at the site besides the waste that was deposited in the site embankment. The waste that was present in the embankment has been excavated and disposed. Confirmation sampling confirmed all waste and waste residue is removed from the site.	Yes.	Site closure under RRS1.
	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)).	Confirmation soil sampling shows metals and fluoranthene below RRS1.	Yes.	Site closure under RRS1.

APPENDIX C (CONTINUED)

Activity	Objectives	Action	Objective Attained?	Recommendations
Attainment of Risk Reduction Standard 1 (cont.)	Attainment of cleanup levels shall be demonstrated by collection and analysis of samples from the media of concern (30 TAC 335.554(e)).	Samples were collected at the site and analyzed for contaminants of potential concern, including metals and fluoranthene. All sample results were below RRS1.	Yes.	Site closure under RRS1.
Objective 2: Meet Requirements of 3008(h) Order for RFI				
RFI Workplan Requirements				
Field Sampling (<i>Detailed listing of methods and procedures are provided in project plans which are incorporated by reference.</i>)	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.	Shallow groundwater was not encountered during field activities. 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 1.3.1.	Yes.	NA
	Identify soil profile, including ASTM classification of soils; directional relative permeability; bulk density; particle size distribution; infiltration (field test); storage capacity; mineral content; and soil conductivity (B.3.A.2(b), (c), (d), (f), (h), (i), (j), (k))	Soil types at the site are based on the SCS Bexar County Soil Survey (USDA, 1991) and are described in Section 1.3.1.	Yes.	NA

APPENDIX C (CONTINUED)

Activity	Objectives	Action	Objective Attained?	Recommendations
Characterization of Environmental Setting- Soils (B.3.A.2) (cont.)	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 Brackett and Krum Complex soils are 7.85 and 7.87, respectively.	Yes.	NA
	Determine moisture content (B.3.A.2(g)).	The moisture content of each sample was analyzed. Moisture content values are provided in the analytical data packages.	Yes.	NA
Characterization of Environmental Setting – Surface Water and Sediment (B.3.A.3)	Characterize marshes, creeks, wetland areas, or ditches at the site.	The central portion of the site, which is a former quarry, does not drain and therefore retains water. Depths of up to two feet were noted during the 1996 site investigation.	Yes.	NA
Source Characterization (B.3.B)	Identify the source area (B.3.B.1).	A description of the source area is provided in Section 1.2. The source area consists of waste that was disposed in the embankment area at SWMU B-12.	Yes.	NA
	Identify the location of the unit/disposal area (B.3.B.2(a)).	The boundary of the site was reviewed during preparation of this report and adjusted, if necessary, based on observations made during the field investigation.	Yes.	NA
	Identify the type of unit/disposal area (B.3.B.2(b)).	The type of unit/disposal area was identified in the visual observation of waste in the field.	Yes. We know the type of disposal at most sites based on records review, interviews with base personnel, and aerial photo review.	NA
Source Characterization (B.3.B) (cont.)	Identify design features (B.3.A.2(c)).	Information regarding design features was obtained during the Environmental Assessment (ES, 1993) and through visual observation during the field investigation.	Yes.	NA

APPENDIX C (CONTINUED)

Activity	Objectives	Action	Objective Attained?	Recommendations
	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 1.2.	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 1.2.	Yes.	NA
	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 (Parsons ES, 1993), records review, interviews, and visual observations at the site is provided in Section 1.2.	Yes.	NA
Contamination Characterization – Groundwater (B.3.C.1)	Characterize the vertical and horizontal extent of groundwater contamination.	Shallow groundwater was not encountered during field activities. 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)).	Four soil borings were advanced on the western side of the SWMU and three samples were collected from each boring. SVOCs and metals were detected in quantities above their respective RLs and background levels.	Yes. All waste and waste residue was removed from the site soil unit. Confirmation sampling ensured that all waste and waste residue was removed.	NA
	Describe soil properties (B.3.C.2(c)).	See “Characterization of Environmental Setting – Soils” above.	Yes.	NA
Contamination Characterization – Soil (B.3.C.2) (cont.)	Identify the direction of contaminant movement (B.3.C.2(d)).	No actions taken. Since no groundwater was encountered, only soil migration pathways are considered.	No.	NA
	Extrapolate future contaminant movement (B.3.C.2(e)).	No actions taken. See above.	NA	NA

APPENDIX C (CONTINUED)

Activity	Objectives	Action	Objective Attained?	Recommendations
	<p>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.</p>	<p>Four soil borings were drilled and sampled. A PID was used during drilling to monitor soil gas vapors. Samples collected from each boring were analyzed by a laboratory and each borehole was properly abandoned.</p>	<p>Yes.</p>	<p>NA</p>
	<p>Prepare a map of all areas included in the investigation (B.3.C.2(i)).</p>	<p>Figures included in this report show all areas included in the investigation.</p>	<p>Yes.</p>	<p>NA</p>
	<p>All reporting limits should be below regulatory criteria.</p>	<p>RLs were approved by TNRCC on October 5, 1999. RLs are considered RRS1 standards for all analytes except metals. Metals were compared to the second revised background levels (Parsons, February 2002) as approved by the TNRCC.</p>	<p>Yes.</p>	<p>NA</p>
	<p>Perform all analyses in accordance with the AFCEE QAPP.</p>	<p>All analyses were performed in accordance with the AFCEE QAPP and approved variances.</p>	<p>Yes.</p>	<p>NA</p>
		<p>All data flagged with “U,” “F,” “M,” and “J” are considered usable for site characterization purposes.</p>	<p>Yes.</p>	<p>NA</p>

APPENDIX C (CONTINUED)

Activity	Objectives	Action	Objective Attained?	Recommendations
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	<p>SWMU B-12 is located approximately 1,000 feet from the Salado Creek floodplain. In the vicinity of CSSA, Salado Creek only contains water during and shortly after heavy precipitation. Therefore, surface water was not sampled as part of the SWMU B-12 investigation. Sampling of sediments in association with the SWMU B-12 investigation is not warranted due to the very limited amount of contamination detected at SWMU B-12.</p> <p>Although, during the 1996 investigation there was standing water covering much of the site, for the past several years, standing water has not been observed there, presumably due to long-term drought conditions.</p>	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. Potential receptors are discussed in Section 1.3.5 of this Report.	Yes.	NA