Appendix A

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				
	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)).	Characterization of contamination was conducted during this investigation. No waste or waste residue was removed.	No	Surface soil excavation to a depth of 1 foot bgs.

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	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 PQL is greater than background, then the PQL rather than background shall be used as the cleanup level, provided 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 revised background levels (Parsons, 2002) or PQLs (AFCEE RLs).	No. Several results significantly exceeded background.	Surface soil excavation to a depth of 1 foot bgs. The excavation area should encompass all previous sampling locations.
	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, namely metals.	No. Contamination above background was detected.	Confirmation samples will be collected subsequent to the surface soil excavation activities.
Objective 2: Meet Requirements of 3008(h) Order for RFI				
B.2. Task II: RFI Workplan Requirements				
Field Sampling.	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

ACTIVITY	OBJECTIVES	ACTION	OBJECTIVE ATTAINED?	RECOMMENDATIONS
Task III: Facility Investigation				
Characterization of Environmental Setting - Hydrogeology (B.3.A.1)	Evaluate hydrogeologic conditions at the site.	Install monitoring wells if shallow groundwater is encountered at the site. Shallow groundwater was not encountered during surface soil sampling at the site. 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 (NRCS, 1991) and are described in Section 1.2.1 of the SWMU Building 43 RFI report (Parsons, 2002).	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 SWMU BLDG-43 are based on the SCS Bexar County Soil Survey (USDA, 1991) and are described in Section 1.2.1 of the SWMU Building 43 RFI report (Parsons, 2002).	No	NA

ACTIVITY	OBJECTIVES	ACTION	OBJECTIVE ATTAINED?	RECOMMENDATIONS
	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 Tarrant Association soils is 7.94.	Yes	NA
	Determine moisture content (B.3.A.2(g)).	The moisture content of each sample was determined during laboratory analysis.	Yes	NA
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. Direction of runoff flow has been evaluated to be to the south.	Yes	NA
Source Characterization (B.3.B)	Identify the source area (B.3.B.1).	A description of the source area is provided in Sections 1.1.2 of the SWMU Building 43 RFI report (Parsons, 2002).	Surface soil contamination was detected, and samples collected showed evidence that metals concentrations are decreasing with depth.	NA

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	Identify the location of the unit/disposal area (B.3.B.2(a)).	In 1999, points along the boundary of each site were surveyed with a Rockwell Plugger GPS unit (estimated accuracy of ±25 feet). The measurement points were identified by the CSSA Environmental Coordinator. 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 Environmental Assessment and by aerial photo review, visual observation of waste management activities n the field and records review.	Yes. The type of disposal was verified based on records review, interviews with base personnel, and aerial photo review and field observations.	NA

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	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. All available information regarding the design of the disposal site is provided in Section 1.1.2 of the SWMU Building 43 RFI report (Parsons, 2002).	Yes	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 of the SWMU Building 43 RFI Report (Parsons, 2002). This information is from the Environmental Assessment, records review, interviews, aerial photo review, and visual observations.	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 1.1.2.1 of the SWMU Building 43 RFI Report (Parsons, 2002).	Yes	NA

ACTIVITY	OBJECTIVES	ACTION	OBJECTIVE ATTAINED?	RECOMMENDATIONS
	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, records review, interviews, and visual observations at the site is provided in Section 1.1.2 of the SWMU Building 43 RFI Report (Parsons, 2002).	Yes	NA
Contamination Characterization – Groundwater (B.3.C.1)	Characterize the vertical and horizontal extent of groundwater contamination.	Shallow groundwater was not encountered during sampling at the site. 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)).	Collected ten surface soil samples at the site to determine the horizontal extent of contamination. Descriptions of the sampling activities and other field activities are provided in Section 2.	No. Horizontal extent of surface soil contamination has not been determined.	Surface soil excavation to a depth of 1 foot bgs is recommended. The excavation area should encompass all previous sampling locations.

ACTIVITY	OBJECTIVES	ACTION	OBJECTIVE ATTAINED?	RECOMMENDATIONS
	Describe contaminant and soil properties with the contaminant source area, including contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation, and other factors that might affect contaminant migration and transformation (B.3.C.2(b)).	See Characterization of Environmental Setting- Soils (B.3.A.2), above.	Yes	NA
	Describe soil properties (B.3.C.2(c)).	See "Characterization of Environmental Setting – Soils" above.	Yes	NA
	Identify the direction of contaminant movement (B.3.C.2(d)).	No actions taken.	NA	NA
	Extrapolate future contaminant movement (B.3.C.2(e)).	No actions taken.	NA	NA
	Implement a surface soil investigation to determine the extent of soil contamination. Laboratory analysis of samples for contaminants of potential concern will be performed.	Collected ten surface soil samples at the site. Sampling activities are outlined in Section 2.1.	Yes	NA

ACTIVITY	OBJECTIVES	ACTION	OBJECTIVE ATTAINED?	RECOMMENDATIONS
	Prepare a map of all areas included in the investigation (B.3.C.2(i)).	Provided appropriate figures of the site. Figures of the site and locations of soil borings are provided in Figures Bldg43-1 through Bldg43-4 in the SWMU Building 43 RFI Report (Parsons, 2002) and Figure Bldg43-8 in this addendum.	Yes	NA
	All reporting limits should be below regulatory criteria.	RLs were approved by TNRCC 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. "M" flagged data are considered usable because the matrix interference is minimal and does not significantly affect the sample results.	NA
Potential Receptors (B.3.D).	Identify potential receptors.	Potential receptors are identified in Section 1.2.5 of the SWMU Building 43 RFI Report (Parsons, 2002).	Yes	NA