

## APPENDIX D

### EVALUATION OF DATA QUALITY OBJECTIVES ATTAINMENT

| Activity   | Objectives  | Action   | Objective Attained?   | Recommendations   |
|--|---|--|---|---|
| <b>Objective 1: Meet TNRCC Requirements for Site Closure</b>                             |   |  |   |   |
| <b>Attainment of Risk Reduction Standard Number 1: Closure/Remediation to Background</b> |   |  |   |   |
|  | 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)). | Geophysical survey was conducted to determine if there is evidence of buried waste at the site. Survey revealed four anomalies that may be indicative of past waste management activities. Subsurface and surface soil samples were detected. Mercury, zinc, barium and nickel were detected above RRS1 level. | No. Since there is evidence that waste may be buried at the site, this objective has not been attained. | Excavate in areas of the geophysical anomalies. Remove and/or remediate any buried waste and contaminated soil encountered. |

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|          | <p>Determine compliance with RRS1 closure requirements by comparing 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)).</p> | <p>Contaminant concentrations were compared to revised background levels (Parsons, February 2002) or RLs, which are equivalent to PQLs.</p> | <p>No. Six analytes, zinc, mercury, barium, cadmium, nickel, and copper had reported concentrations which exceeded background metals levels or RLs.</p> | <p>Excavate in areas of the geophysical anomalies. Remove and/or remediate any buried waste and contaminated soil encountered.</p> |
|          | <p>Attainment of cleanup levels shall be demonstrated by collection and analysis of samples from the media of concern (30 TAC 335.554(e)).</p>  | <p>Surface soil samples were collected at the site and analyzed for contaminants of potential concern, including metals and explosives.</p> | <p>No.</p>  | <p>Additional excavation of buried waste is recommended.</p>   |

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| <b>Objective 2: Meet Requirements of 3008(h) Order for RFI</b>  |  |  |                     |                 |
| <b>RFI Workplan Requirements</b>  |  |  |                     |                 |
| Field Sampling<br>(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              |
| <b>Facility Investigation</b>   |  |  |                     |                 |
| 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 42.<br>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 Trinity and Frio soils is 7.90.        | Yes.                | NA              |
|   | Determine moisture content (B.3.A.2(g)).   | The moisture content of each sample was analyzed and reported in the laboratory data package.  | 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, wetland areas, or ditches are present at the site. The nearest surface water feature is Salado Creek which lies on the western border of AOC 42. Direction of runoff flow has been evaluated in Section 1.2.1. | Yes.                | NA              |

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| 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.   | Yes. Sampling at the site was biased toward areas most suspected of contamination.  | Additional excavation is recommended, as the vertical extent of the contamination has not yet been delineated. |
|                                 | 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.   | 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)).  | A possible waste disposal area was identified at AOC 42.   | Four anomalies were discovered during the geophysical survey. The anomalies are possible disposal trenches due to their geophysical signatures.                         | 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.  | 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. 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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|  | 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 42 area.<br>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 and subsurface soil samples were collected to determine horizontal and vertical extent of contamination, if any.   | No   | Additional delineation and removal of buried waste is needed. |
|  | 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)). | Samples collected at AOC 42 exceeded closure criteria. See Section 1.2 for description of soil properties.   | Yes  | NA  |
|  | Describe soil properties (B.3.C.2(c)).  | See “Characterization of Environmental Setting – Soils” above.   | NA   | NA  |

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|          | Identify the direction of contaminant movement (B.3.C.2(d)).   | Samples collected at AOC 42 exceeded closure criteria.   | No                  | Additional delineation and possible excavation recommended.  |
|          | Extrapolate future contaminant movement (B.3.C.2(e)).  | No samples collected at AOC 42 exceeded closure criteria.  | No                  | NA   |
|          | 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 conducted at AOC 42.   | No                  | Additional delineation of soils to identify the vertical and horizontal extent of contamination is needed. |
|          | 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 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   |

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|   |   | All data flagged with “U,” “F,” “M,” and “J” are considered usable for site characterization purposes. No data was flagged with an “R.”   | Yes.                | NA              |
| 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.                                     | The nearest surface water feature is Salado Creek which lies on the western border of AOC 42. Salado Creek is intermittent and continues southeast through Camp Bullis and eventually joins the San Antonio River. This creek only contains water during and shortly after heavy precipitation. Therefore, surface water was not sampled as part of the AOC 42 investigation. Sampling of sediments in association with the AOC 42 investigation is not warranted because contamination was not detected at the site. | 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).  | Yes.                | NA              |