

**Table 4-11
Data Quality Assessment Summary**

DQO Step	Project Objective Description	Assessment
1. State the Problem	The objective of the RI sampling and analysis program was to: (1) characterize the nature and spatial extent of organic and inorganic chemical contamination in sediment, and surface water, (2) support evaluation of human health and ecological risk assessments, and (3) support feasibility study data needs.	Sampling was performed to access the problem statement and the results will be discussed in future sections.
2. Identify the Decision	<p>Were analytical requirements met?</p> <p>Were the vertical and horizontal extent for all areas impacted delineated?</p> <p>Do highly impacted sediment areas exceed TCLP limits?</p> <p>Did surface water results yield definitive occurrence trends?</p>	<p>Data was validated in accordance with National Functional Guidelines and evaluated (PARCC parameters) to make sure that project DQOs were met. Analytical requirements were met.</p> <p>Surface sediment, cores and multi-level surface water samples were collected throughout the areas of concern to delineate extent of contamination. Impacted areas were delineated within the Calcasieu Estuary.</p> <p>Samples were collected and analyzed for TCLP in areas of interest in support of remedial alternative analysis. Impacted areas did not exceed TCLP limits.</p> <p>Surface water samples were collected to delineate extent, if any, of contamination.</p>
3. Identify the Inputs to the Decision	<p>Determine the vertical and lateral extent of COPCs present above screening levels in sediment.</p> <p>Characterize the absence and or presence of contaminants in surface water.</p> <p>Perform sediment chemical testing on a broad spatial and concentration distribution to support logistic regression modeling of sediment chemistry.</p>	<p>Historical data was used to determine COPCs of interest and compared to screening levels to develop analytical program. Surface samples and cores (10 cm - 30cm) were collected vertically and horizontally to determine spatial distribution of contaminants. Vertical extent was delineated in areas above screening levels.</p> <p>Evaluation of the surface water data indicates that significant impact of the surface water has not occurred.</p> <p>Sediment samples were collected from over 700 locations within the estuary. Although not performed, sampling would support logistic regression modeling.</p>

**Table 4-11 (cont.)
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4. Define the Boundaries of the Study	The data populations needed for decision-making for this study include the chemical concentrations (including both detected and non-detected values) for all the media sampled and analyzed.	Samples were collected from within the boundaries of the study area.
5. Develop a Decision Rule	The parameters of interest are the concentrations and locations of constituents identified in the separate media that pose potential significant adverse risk. Measured concentrations are the true values of the constituents at a specific location and may be used on an individual or cumulative compound basis. The screening levels include sediment ERMs, wildlife benchmark criteria and human health. Table 5-2 in the Phase II SAP (CDM 2000) summarizes the screening values for human health fish and shellfish consumption, ecological sediment ERMs, and wildlife benchmark values. Analytical quantitation limits are provided on Table 5-2 in the Phase II SAP (CDM 2000) for comparison.	Benchmarks and comparison indices were used to determine most appropriate analytical protocols and detection limits for COPCs.
6. Specify Tolerable Limits on Decision Errors	The closer the reported concentration is to the action level, the higher the probability that an incorrect decision will be made and, therefore, there is a "gray region" surrounding the action level. Remediation goals should have a confidence and precision in fair agreement with chemical concentrations used in the risk assessment.	This "gray region" will be addressed in coordination with the risk managers and feasibility study engineers.
7. Optimize the Design for Obtaining Data	Identifies a resource-efficient data collection design for generating data that are expected to satisfy the DQOs. The data collection design or sampling program is described in detail in Section 3.0.	The SAP provided procedures for sampling and analysis to satisfy DQOs for the project and was provided by EPA. Deviations from the SAP discussed earlier did not affect the quality of the data.