TABLE 4-1
Data Quality Objectives for Area 3 Contaminant Source Identification (Remedial Investigation Subtask 2)
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Step 1 – Define Basis of Evaluation

Overall Goal	Justification
Identify the COPCs in Area 3 groundwater. Includes the assessment of Key COPCs which identifies regional contamination within Area 3.	– To understand the nature of groundwater contamination in Area 3.
Identify sources of regional groundwater contamination in Area 3.	– Source(s) of regional groundwater contamination in Area 3 may include ongoing releases to the environment. – Mitigating sources of groundwater contamination will minimize future impacts. – Identification of historic and current sources of contamination supports development of the contamination migration conceptual site model by identifying potential contaminant migration pathways. Table 5-1 presents the DQOs for Subtask 3.

Step 2 – Identify Potential Evaluation Results

Potential Result	Consequences of Incorrect Results	Basis for Potential Incorrect Result	Methods for Avoiding an Incorrect Result
Identify historic sources of regional groundwater contamination in Area 3.	– Overlooking a source of contamination may lead to further contamination of groundwater. – Misidentifying a facility as an historic source of contamination may waste resources.	Use of unreliable or inadequate data for critical decision making.	Ensure sufficient confidence in data used to support decision making. Identify and quantify (as feasible) limitations in data set. Complete Step 7 (Optimize the Design).
Identify current sources of regional groundwater contamination.	Mischaracterizing a current source of contamination may waste resources.	Use of unreliable or inadequate data for critical decision making.	Ensure sufficient confidence in data used to support decision making. Identify and quantify (as feasible) limitations in data set. Complete Step 7 (Optimize the Design).
Additional data collection required to identify sources of regional groundwater contamination in Area 3.	Incorrectly identifying data collection needs may waste resources.	Use of unreliable or inadequate data for critical decision making. Collection of unnecessary data.	Ensure sufficient confidence in data used to support decision making. Identify and quantify (as feasible) limitations in data set. Complete Step 7 (Optimize the Design).

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Step 3 – Define Evaluation Boundaries

Boundaries for Consideration	Justification for Consideration
See Step 3 in Table 3-1 for information on the geographic boundaries of Area 3.	See Step 3 in Table 3-1.
See Step 3 in Table 3-1 for information on the geographic boundaries of areas adjacent to Area 3.	See Step 3 in Table 3-1.
Land Use Limitations: Activities focused on areas with predominantly industrial or commercial land use (historic and present).	Contaminant sources most likely located in areas zoned for commercial or industrial land use.
COPC Use Limitations: Facilities with a history of use and/or release of the COPCs within Area 3.	Facilities with historic use or release of COPCs are the most likely contributors to regional groundwater contamination within Area 3.
Additional Limitations: Activities focused on facilities with attributes typical of contaminant sources, including: • Type of operations at the facility. • Number of employees at the facility. • Length of time the facility was in operation at one location.	Facilities ranked based on the three criteria (listed in order of priority). Highest rankings (indicating a likely source) applied to facilities whose operations were consistent with common use of COPCs, facilities with at least 25 employees, and facilities operating for five years or more.

Step 4 –Identify Areas Outside of the RI Evaluation Boundaries

Excluded Areas	Justification for Exclusion
See Step 4 in Table 3-1 for information on the geographic boundaries of areas adjacent to Area 3.	See Step 4 in Table 3-1.
COPC Use Limitations: Facilities without a history of use and release of the COPCs within Area 3.	Facilities without historic use or release of COPCs are unlikely contributors to the groundwater contamination within Area 3.

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Step 5 – Identify Data Needs and Uses

Data Need	Data Use(s)	RI Report Reference(s)
Evaluation criteria for screening groundwater environmental data: – Federal drinking water standards (MCLs). – California drinking water standards (MCLs and NLs). – California Toxics Rule for Aquatic Life Protection maximum for hexavalent chromium.	Identify Key COPCs.	Section 4.2.1. Table 4-5.
Groundwater data from production wells.	– Identify Key COPCs. – Develop a preliminary assessment of the nature and general distribution of contamination.	Section 4.3.
Groundwater data from EPA monitoring wells.	– Identify potential locations of contaminant sources. – Assess the nature and general distribution of contamination.	Section 4.3. Figures 4-1 through 4-7. Tables 4-7 and 4-8.
Groundwater data from facility monitoring wells.	– Identify potential locations of contaminant sources. – Assess the nature and general distribution of contamination.	Section 4.3. Figures 4-1 through 4-7. Tables 4-7 and 4-8.
Existing information: – Facility information from federal, State, and local agency files.	Review of existing agency data enabled EPA to: – Develop a list of potential sources of regional groundwater contamination. – Eliminate from further investigation facilities considered to be unlikely sources of regional groundwater contamination.	None.
Drive-by surveys.	Eliminate from further investigation facilities with no on-site chemical storage or use and duplicate or defunct facilities.	None.

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Step 5 – Identify Data Needs and Uses, continued

Data Need	Data Use(s)	RI Report Reference(s)
Pre-inspection/CUQs: Completed and returned CUQs.	Information provided in the CUQs identified facilities that store COPCs and used to prioritize facilities for inspection.	None.
Information requests: Responses to information requests [pursuant to CERCLA Section 104(e)].	Information requests [pursuant to CERCLA Section 104(e)] sent to facilities considered potential sources of regional groundwater contamination in Area 3. Requested information includes: – Corporate identity. – History of storage and use of COPCs. – History of disposal of hazardous substances. – Identification of hazardous substances in waste streams. – Summary of past remediation activities at the facility.	None.
Facility inspections.	Inspections performed at the facilities considered potential sources of regional groundwater contamination to: – Confirm the accuracy of the information submitted in the CUQs. – Observe chemical storage, use, and disposal practices at each facility. Need for further investigation at each facility based on: – Type and amount of chemicals used. – Type and condition of chemical storage. – Method of chemical conveyance. – Onsite waste storage, treatment, and disposal practices at the facility.	None.
Subsurface investigations.	Subsurface investigations consist of testing soil, soil gas, and/or groundwater to characterize the nature and extent of contamination at the facility.	None.

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Step 6 – Evaluate Data Usability

Data Type	Data Generation and Reliability	Assessment Performed
Existing information: Facility information from federal, State, and local agency files.	– Data obtained from historical property records and searches. – Reliability varies depending on the detail of the records and the legibility of the documents.	Obtained information compared for consistency with data collected from drive-by surveys, CUQs, responses to information requests [pursuant to CERCLA Section 104(e)], and facility inspections.
Drive-by surveys.	– Data obtained by the State and EPA from recent site observations. – Reliability based on the ability to accurately locate a facility.	Information obtained compared for consistency with existing information, CUQs, responses to information requests [pursuant to CERCLA Section 104(e)], and facility inspections.
Pre-inspection/CUQs: Completed and returned CUQs.	– Data generated for the State by the responsible party. – Reliability varies depending on the accuracy and completeness of the response.	Obtained information compared for consistency with data obtained from other sources.
Information requests: Responses to information requests [pursuant to CERCLA Section 104(e)].	– Data generated for EPA by the responsible party. – Reliability varies depending on the accuracy and completeness of the response.	Obtained information compared for consistency with data obtained from other sources.
Facility inspections.	– Data obtained by the State from recent site observations of known and usable quality.	Obtained information compared for consistency with data obtained from other sources.
Subsurface investigations.	– Data generated for the State by the responsible party. – Split groundwater samples[1] intermittently collected by the State to evaluate the quality of the groundwater data provided by facilities.	Appendix C presents an evaluation of split groundwater sample[1] data as part of the secondary data assessment and evaluation.

Step 7 – Optimize the Design

Actions	Methods for Optimizing the Design
Complete the identification of contaminant sources as part of the feasibility study.	Identify additional potential sources of Key COPCs in groundwater. Refer to Table 8-1 for the assessment of the next steps.

[1]Groundwater samples collected by the facility or facility representative and split into two volumes for analysis by two separate laboratories.

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