**USEPA**
**REGION 4 SUPERFUND & EMERGENCY MANAGEMENT DIVISON**
**QAPP CHECKLIST/POTENTIALLY RESPONSIBLE PARTY (PRP) PROJECT**

QAPP Title (including Site Name):
Site Location (City, ST):
Organization submitting the QAPP:
QAPP Date:
Receipt Date:
Review Date:
Designated Approving Official (DAO):
EPA Remedial Project Manager or On-Scene Coordinator:

Topic covered in accordance with requirements: □ Yes □ No

□Yes - Indicates that the topic/element was covered in sufficient detail to meet EPA's requirements as specified in this checklist.

□ No - Indicates that the topic/element covered in the QAPP does not provide sufficient detail to meet EPA's requirements or the topic is entirely missing from the document.

| Element | Meets Requirements? |
|---|---|
| **A-1. Title and Approval Page** | |
| Title of QAPP | □ Yes □ No |
| Organization's Name: Name of the PRP and name of the PRP consultant submitting the QAPP. | □ Yes □ No |
| Dated Signature of Project Manager: Both the PRP organization's Project Manager and EPA's corresponding RPM or OSC. | □ Yes □ No |
| Date and Signature of Quality Assurance Manager's approval for the PRP organization and space provided for Date and Signature of EPA Designated Approving Official. | □ Yes □ No |
| Other Signatures as Needed: | □ Yes □ No |
| **A-2. Table of Contents: Including Tables,** | □ Yes □ No |

| | |
|---|---|
| **Figures and Appendices** | |
| **A-3. Distribution List: Including Addresses of all entities or agencies requiring copies of the QAPP** | □ Yes □ No |
| **A-4. Project - Task Organization** | |
| Identifies key project personnel, specifies technical disciplines, details their roles/responsibilities and details the chain of command | □ Yes □ No |
| Organization chart provided: Depicts lines of authority, independence (of QA manager), and reporting responsibilities. Org- chart also contains entries for all agencies, contractors and individuals responsible for performing QAPP preparation, sample collection, laboratory analysis, data verification, review and validation, data quality assessment; and project oversight responsibilities. | □ Yes □ No |
| **A-5. Problem Definition/Background**. | |
| Clearly states the particular environmental problem to be solved, decision to be made, or outcome to be achieved. Include sufficient background information to provide a historical, scientific, and regulatory perspective for this particular project.<br><br>Systematic planning is required and the seven-step DQO process is EPA's preferred process. A response that meets requirements will also address **DQO Step 1. State the Problem. Define the problem that necessitates the study; identify the planning team, examine budget, schedule.** See EPA QA/G-4. | □ Yes □ No |
| Provides historical and background information concerning prior environmental investigations or assessments performed at | □ Yes □ No |

| | |
|---|---|
| the site. Discusses the data collected from these prior investigations and identifies any additional information that may be contained in computer databases (secondary data), etc. | |
| **A-6 Project/Task Description** | |
| Provides a summary of all work to be performed, products to be produced, and the schedule for implementation. Lists the actual measurements to be made: Including in-situ field measurements, fixed laboratory measurements, or any other type of information collected as part of the project. | □ Yes □ No |
| Cites applicable regulatory standards or criteria such as action levels or screening levels - ARARs (incl. MCLs), PRGs, RSLs, RALs, etc. | □ Yes □ No |
| Identifies all instruments/equipment needed to conduct project and identifies all key study personnel (field technicians, chemists, risk assessors, engineers, project managers, quality assurance managers, etc.) | □ Yes □ No |
| Provides work schedule for all tasks including report preparation, response to comments, etc. | □ Yes □ No |
| Identifies all required reports, records, data reports, quality assurance reports/documents | □ Yes □ No |
| Identifies all electronic data deliverables (EDDs) that will be submitted for the project and the required fields for each EDD, using the Region 4 Format for EQuIS Data Processor (EDP). | □ Yes □ No |
| **A-7. Data and Field Quality Objectives and Criteria for All On-Site and Off-Site Measurement Data** | |
| Provides the qualitative and quantitative data quality objectives for all aspects of the project. Must provide clearly delineated project objectives such as determining the | □ Yes □ No |

| | |
|---|---|
| presence/absence of potential contaminants, nature and extent of contamination, determining whether human health is affected. Must provide a list of decisions and alternative actions (remediation, removal, further assessments, no further action, etc.).<br><br>Systematic planning is required and the seven-step DQO process is EPA's preferred process. A response that meets requirements will also address **DQO Step 2. Identify the Goal of the Study. State how environmental data will be used in meeting objectives and solving the problem, identify study questions, define alternative outcomes.** See EPA QA/G-4. | |
| Using the sources cited in A-6 above, provides actual numerical criteria on an analyte by analyte basis. If applicable, discusses where levels cited will not be analytically achievable. | □ Yes □ No |
| Identifies critical contaminants/analytes of concern along with their respective reporting level requirements (for chemical parameters). Reference the laboratory SOPs for method and instrument QC and, where more stringent criteria are needed for the project, identify the modifications needed to the laboratory's SOP.<br><br>Systematic planning is required and the seven-step DQO process is EPA's preferred process. A response that meets requirements will also address **DQO Step 3. Identify Information Inputs. Identify data & information needed to answer study questions.** See EPA QA/G-4. | □ Yes □ No |
| Provides design of the sampling/collection network. Provides an extensive discussion regarding the rationale for the sampling design. | □ Yes □ No |

| | |
|---|---|
| Systematic planning is required and the seven-step DQO process is EPA's preferred process. A response that meets requirements will also address **Step 4. Define the Boundaries of the Study Specify the target population & characteristics of interest, define spatial & temporal limits, scale of inference.** See EPA QA/G-4. | |
| Provides a discussion regarding the rationale and relevance of the analyses planned. Identifies the statistical parameter that will be used to compare the data to the numerical criteria (maximum detection, mean, 95% UCL of the mean, by each individual result, etc.)<br><br>Systematic planning is required and the seven-step DQO process is EPA's preferred process. A response that meets requirements will also address **Step 5. Develop the Analytic Approach. Define the parameter of interest, specify the type of inference, and develop the logic for drawing conclusions from findings.** See EPA QA/G-4. | □ Yes □ No |
| Derives the performance or acceptance criteria that the collected data will need to achieve in order to minimize the possibility of either making erroneous conclusions or failing to keep uncertainty in estimates to within acceptable levels. Identifies whether the project has a decision-making problem requiring statistical hypothesis testing (DQO Step 6A) or an estimation problem (DQO Step 6B). For a decision-making problem, specifies probability limits for false rejection and false acceptance decision errors. For estimation problems, specifies performance metrics and acceptable levels of uncertainty.<br><br>Systematic planning is required and the seven-step DQO process is EPA's preferred process. A response that meets requirements | □ Yes □ No |

| | |
|---|---|
| will also address **DQO Step 6. Specify Performance or Acceptance Criteria. Step 6A - Specify probability limits for false rejection and false acceptance decision errors *or* Step 6B - Develop performance criteria for new data being collected or acceptable criteria for existing data being considered for use.**<br>See also EPA QA/G-4. | |
| Identifies whether the project will use a probability-based sampling design or a judgmental sampling design. Summarizes the selecting sampling design and specifies key assumptions supporting the selected sampling design.<br><br>Systematic planning is required and the seven-step DQO process is EPA's preferred process. A response that meets requirements will also address **DQO Step 7. Develop the Plan for Obtaining Data Select the resource-effective sampling and analysis plan that meets the performance criteria.**<br>See also EPA QA/G-4.<br><br>NOTE: The details of DQO Step 7 will be addressed in B. | □ Yes □ No |
| **A-8. Special Training Requirements and Special Certifications** | |
| Identifies how training needs are determined and lists all training requirements for the project. Specifies whether certain professionals require a license or certification to perform duties as required by federal or state laws. | □ Yes □ No |
| Identifies where training records will be maintained for this project | □ Yes □ No |
| **A-9. Documentation and Records** | |
| Provides a comprehensive list of the | □ Yes □ No |

| | |
|---|---|
| documents and records required for this project (including raw data, field logs, audit reports, QA reports, progress or status reports, analytical data reports, data validation reports/data quality assessments reports.) | |
| Specifies the turnaround time for laboratory data deliverables (both hardcopy and electronic formats). | □ Yes □ No |
| Provides hardcopy data package content requirements for analytical deliverables according to the stages guidance EPA-540-R-08-005. | □ Yes □ No |
| Provides electronic data deliverable requirements for analytical deliverables and field documentation according to the Region 4 Format for EQuIS Data Processor (EDP). | □ Yes □ No |
| Provides the retention time and location of study records, reports and formal documents. | □ Yes □ No |
| **B-1. Sampling Process Design** | |
| Provides a summary table with type and number of samples required for collection such as surface, subsurface, or groundwater. Provides number and type of field quality control samples. Identifies each sample type using matrix codes and descriptions found in the Region 4 Reference Values for EQuIS. Identifies which sample(s) will be designated for laboratory QC use (matrix spike, matrix spike duplicate, and laboratory duplicate) and whether/how much additional volume is needed. | □ Yes □ No |
| Provides maps or diagrams with sample locations/collection locations and provides table with frequency of sampling events. | □ Yes □ No |
| Provides the samples slated for collection in the sample table by Station ID and Sample ID. Uses existing Station IDs where available | □ Yes □ No |

| | |
|---|---|
| in EQuIS for the planned location (matched by latitude/longitude). | |
| Provides detail or reference on target analytes included in each analysis and whether Tentatively Identified Compounds are to be reported, where applicable. Where different reporting levels are available for an analysis type, distinguishes options by analysis name. | □ Yes □ No |
| Provides a table identifying the analyses of interest for each collected sample. If selecting analysis type where different reporting level options are available, considers the expected contamination level of each sample in addition to the criteria selected in A6 and A7. Table includes the analytical method number, sample container requirements, sample preservation requirements, sample volume requirements and holding time criteria. | □ Yes □ No |
| **B-2. Sampling Method Requirements** | |
| Provides the required field sample collection procedures, protocols and methods | □ Yes □ No |
| Provides a list of sampling/collection equipment (including make and model of equipment). | □ Yes □ No |
| Identifies on-site support facilities that are available to field staff, if any. | □ Yes □ No |
| Identifies key study personnel in charge of or overseeing sampling/collection activities | □ Yes □ No |
| Describes equipment decontamination procedures and requirements. Discusses whether sampling equipment is dedicated or non-dedicated. | □ Yes □ No |
| Provides table listing sample container certification/acceptance requirements and preparation requirements for these containers (if provided by laboratory, clearly states | □ Yes □ No |

| | |
|---|---|
| such). | |
| **B-3. Sample Handling and Custody Requirements** | |
| Provides a detailed description of the procedures for post sample handling (once the sample has been collected). | □ Yes □ No |
| Provides a detailed description of the chain-of-custody procedures. Discusses how any errors on the chain-of-custody will be documented if discovered after the chain-of-custody is produced. | □ Yes □ No |
| **B-4. Analytical Method Requirements** | |
| Clearly identifies the extraction, digestion, analytical methodologies to be followed by method numbers (includes all relevant options or modifications required), identifies the required instrumentation. Provides laboratory SOPs or Quality Assurance Manual. Maintains laboratory provided documents as Confidential Business Information unless otherwise agreed with the laboratory. | □ Yes □ No |
| If applicable, provides method validation criteria for non-standard or unpublished methodologies proposed for use. | □ Yes □ No |
| Identifies individual(s) responsible for overseeing the success of the analysis and for implementing corrective actions if deemed necessary. | □ Yes □ No |
| **B-5. Quality Control Requirements** | |
| Identifies the type, number and frequency of laboratory QC along with the required statistically derived limits for each analyte (for spike samples, internal standards, surrogate spikes). | □ Yes □ No |
| Considering both field and laboratory QC, | □ Yes □ No |

| | |
|---|---|
| provides any statistical equations or other evaluation methods used to determine accuracy, precision, and comparability. Specifies the acceptance criteria for field and laboratory QC from a data usability view. | |
| **B-6. Instrument or Equipment Testing and Inspection Requirements** | |
| Provides a list of all field measurement instruments and sampling equipment. | □ Yes □ No |
| Provides the technical criteria by which the field instruments and sampling equipment are checked for acceptable performance. | □ Yes □ No |
| Describes equipment and corrective maintenance practices to ensure that on-site equipment or instruments are performing within the required specifications | □ Yes □ No |
| Identifies the availability and location of spare parts for field instruments and equipment. | □ Yes □ No |
| For fixed laboratory analyses, laboratory SOPs or QA Manual identifies the instrument or equipment testing and inspection requirements that ensure proper instrument or equipment maintenance. | □ Yes □ No |
| **B-7. Instrument Calibration and Frequency** | |
| For field measurements, identifies all field instruments requiring calibration, discusses the frequency of calibration, and identifies the calibration requirements and acceptance criteria. Identifies the type of documentation required for calibrations and instrument checks and discusses how calibrations are traced back to specific instruments for each analytical parameter. | □ Yes □ No |

| | |
|---|---|
| For fixed laboratory analyses, laboratory SOPs or QA Manual identifies the calibration requirements and acceptance criteria for each instrument requiring calibration. Identifies the type of documentation required for calibrations and instrument checks and discusses how calibrations are traced back to specific instruments for each analytical parameter. | □ Yes □ No |
| **B-8 Inspection/Acceptance Criteria and Requirements for Supplies and Consumables** | |
| Provides a comprehensive list of the field consumables and supplies required. | □ Yes □ No |
| Identifies the individual(s) responsible for checking and inspecting field consumables and supplies and the acceptance criteria for each of these items. | □ Yes □ No |
| For fixed laboratory analyses, laboratory SOPs or QA Manual provides a comprehensive list of the consumables such as, solvents, reagents, buffer solutions and other consumables or supplies required. | □ Yes □ No |
| For fixed laboratory analyses, laboratory SOPs or QA Manual identified the individual(s) responsible for checking/inspecting supplies and consumables and provides the acceptance criteria for each of these items. | □ Yes □ No |
| **B-9. Data Acquisition Requirements for Non-Direct Measurements** | |
| Identifies the type and frequency of non-direct measurement techniques for the project (for computer databases, literature searches, etc.) | □ Yes □ No |
| Clearly identifies and describes the | □ Yes □ No |

| | |
|---|---|
| limitations of such data | |
| Discusses the rationale for using this data and explains its relevance to the project | □ Yes □ No |
| Specifies how limitations in this data will be communicated to all end data users and stakeholders. | □ Yes □ No |
| **B-10. Data Management** | |
| Describes the record-keeping, archival and retrieval requirements for hard-copy and electronic information produced during the project. | □ Yes □ No |
| Provides audit checklists or other standardized forms in an appendix to the QAPP. | □ Yes □ No |
| For the organization preparing the QAPP, describes data handling equipment and procedures used to process, compile and analyze data (provides a complete list of computer hardware and software needs). Specifies whether computer databases will have restricted access or will be password protected. Discusses how the accuracy of computer databases is assured. | □ Yes □ No |
| Describes process for assuring that Region 4 Format for EQuIS Data Processor (EDP) electronic data deliverables (EDDs) are provided to EPA Region 4 and identifies individual(s) responsible for EDD submittals. | □ Yes □ No |
| **C-1. Assessments, Audits and Corrective Actions** | |
| Lists the required number, frequency and type of assessments with approximate dates and names of individual(s) responsible for performing these assessments | □ Yes □ No |
| Discusses one or more of the following types of assessments: peer reviews, technical | □ Yes □ No |

| | |
|---|---|
| audits, surveillance, management system reviews, readiness reviews, quality system audits, performance evaluations, data quality assessments. | |
| Identifies the individual(s) performing these assessments and discusses the authority and independence of these individual(s) in relation to those being assessed | □ Yes □ No |
| Provides a description of the types of corrective actions that may be instituted to resolve any issues raised during the audit | □ Yes □ No |
| Discusses where audit findings will be documented and how the audit findings will be communicated to all key project staff, state and EPA personnel responsible for the study oversight | □ Yes □ No |
| **C-2. Reports to Management**: Identifies the frequency and distribution of the following types of reports: | |
| Project Status Reports | □ Yes □ No |
| Results of Assessments or Audits | □ Yes □ No |
| Results of periodic Data Quality Assessments | □ Yes □ No |
| QA Audit Reports | □ Yes □ No |
| Identifies the individual(s) responsible for preparing, reviewing and receiving these reports - discusses the retention time for maintaining such reports | □ Yes □ No |
| **D-1 & D-2. Data Review, Verification and Validation** | |
| Identifies the guidance documents or SOPs governing the data review, verification and validation processes. Identifies the stage of validation according to EPA-540-R-08-005 and the stage is appropriate for the intended use of the data. | □ Yes □ No |

| | |
|---|---|
| Clearly discusses the criteria by which data will be accepted or rejected and provides a comprehensive list of the data flags or qualifiers that will be assigned to non-compliant data points (including the definitions for each of these flags). Includes the use of standard EPA qualifiers for the final validated data. | □ Yes □ No |
| Describes the process and provides the criteria by which the data will be assessed for its overall usability and intended purpose. | □ Yes □ No |
| Identifies the individual(s) responsible for validating the data and identifies the company or consultant for whom they work (Note: EPA recommends using an independent second or third party validator or at least a person that is unaffiliated with the laboratory performing the analyses on site samples). | □ Yes □ No |
| Identifies how problems associated with the laboratory will be documented and communicated to all end data users and stakeholders (where will the results of the data validation process be documented) | □ Yes □ No |
| **D-3. Reconciliation of the Data to the Project-Specific DQOs** | |
| Identifies the individual(s) responsible for reconciling the data to the project-specific DQOs | □ Yes □ No |
| Describes the process by which field and laboratory analytical data will be reconciled to the project-specific DQOs (especially if the data is non-compliant) | □ Yes □ No |
| Discusses how limitations in the final data set will be documented and communicated to all end data users and stakeholders. | □ Yes □ No |
| Describes the circumstances under which data would be rejected and removed from the final | □ Yes □ No |

| | |
|---|---|
| data set and addresses resolution of potential data gaps | |
| Describes the DQO reconciliation process to confirm that the useable data are adequate to make the site decision | □ Yes □ No |

**Final QAPP Disposition**:

____ *Approved, no comments*

Signature of Designated Approving Official (DAO) _____

Signature of Section Chief of the DAO _____

____ *Not Approved,* ***Address Comments, Submit Revised QAPP to the EPA Designated Approving Official***