**EPA REGION 8 CERCLA UFP QAPP DOCUMENT REVIEW CROSSWALK**

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| --- | --- | --- | --- | --- | --- |
| **QAPP/FSP/SAP for:**  *(check appropriate box)* | | **Entity** *(grantee, contract, EPA AO, EPA Program, Other)*  Click here and type Entity | | **Regulatory Authority**  **and/or**  **Funding Mechanism** | **\_\_\_ 2 CFR 1500 for** G**rantee/Cooperative Agreements**  **\_\_\_ 48 CFR 46 for Contracts**  **\_\_\_ Interagency Agreement (FFA/CERCLA)**  **\_\_\_ EPA/Court Order**  **\_\_\_ EPA Program Funding**  **\_\_\_ EPA Program Regulation** |
|  | **GRANTEE** |
|  | **CONTRACTOR** |
|  | **EPA** |
|  | **Other: Federal Facility** |
| **Document Title**  ***[Note: Title will be repeated in Header]*** | | Click here and type Title | | **Review cycle** | Click here and select and item |
| **QAPP/FSP/SAP Preparer** | |  | | **EPA Technical Reviewer** |  |
| **Period of Performance**  *(of QAPP/FSP/SAP)* | |  | | **Date Submitted for Review** | Click or tap to enter a date. |
| **EPA Project Officer**  **EPA Project Manager** | |  | | **PO Phone #**  **PM Phone #** |  |
| **QA Program Reviewer or**  **Approving Official** | |  | | **Date of Review** |  |
| ***Documents Submitted for QAPP Review* (QA Reviewer must complete)*:***  **1. QA Document(s) submitted for review:**   |  |  |  |  | | --- | --- | --- | --- | | **QA Document** | **Document Date** | **Document Stand-alone** | **Document with QAPP** | | QAPP |  | Yes / No |  | | FSP |  | Yes / No | Yes / No | | SAP |  | Yes / No | Yes / No | | SOP(s) |  |  | Yes / No |   **2. WP/SOW/TO/PP/RP Date** Click or tap to enter a date.  **WP/SOW/TO/RP Performance Period xx/xx/xxxx – xx/xx/xxxx**  **3. QA document consistent with the:**  WP/SOW/PP? Yes / No  SOW/TO for contracts? Yes / No  **4. QARF signed by R8 QAM** Yes / No / NA  **Funding Mechanism**  IA / contract / grant / NA  **Amount \_\_$xxx,xxx\_\_\_\_\_\_\_\_\_\_\_** | | | **Notes for Document Submittals:**  **1.** A QAPP written by a Grantee, EPA, or Federal Partner must include for review:  Work Plan(WP) / Statement of Work (SOW) / Program Plan (PP) / Research Proposal (RP) and funding mechanism  **2.** A QAPP written by Contractor must include for review:  **a)** Copy of Task Order Work Assignment/SOW  **b)** Reference to a hard or electronic copy of the contractor’s approved QMP  **c)**Copy of Contract SOW if no QMP has been approved  **d)** Copy of EPA/Court Order, if applicable  **e)** The QA Review must determine (with the EPA CO or PO) if a QARF was completed for the environmental data activity described in the QAPP.  **3.** **a**. Field Sampling Plan (FSP) and/or Sampling & Analyses Plan (SAP) must include theProject QAPP ***or*** must be a stand-alone QA document that contain all QAPP required elements (Project Management, Data Generation/Acquisition, Assessment and Oversight, and Data Validation and Usability).  **b**. SOPs must be submitted with a QA document that contains all QAPP required elements. | | | |

|  |
| --- |
| **Summary of Comments** *(highlight significant concerns/issues)***:**   1. Comment 2. Comment |

| **Element** | *Acceptable*  Yes */* No */* NA | **Comments:** | |
| --- | --- | --- | --- |
| **Worksheets #1 & #2: Title and Approval Page** | | | |
| **A.** Document title contains identifying information: Site/project name, Site location, Operational Unit (OU), project stage, and CERCLA phase. | Click here and select |  | |
| **B.** Includes Lead Organization (Federal Facility or PRP), Lead Organization Project Manager (name/title/signature/date), Lead Organization Quality Manager (name/title/signature/date) | Click here and select |  | |
| **C.** Includes USEPA Region 8 Remedial Project Manager/Designated Approving Official -or- Remedial Project Manager and Quality Assurance Manager (name/signature/date) Mary Goldade, EPA Region 8 Quality Assurance Manager | Click here and select |  | |
| **D.** State Regulatory Agency, if applicable (name/title/signature/date) | Click here and select |  | |
| **E.** Other stakeholders as needed, including at minimum the project manager and QA representative of the organization preparing the QAPP | Click here and select |  | |
| **F.** Plans and reports from previous investigations relevant to this project | Click here and select |  | |
| **G.** Identifies guidance used to prepare QAPP. | Click here and select |  | |
| **H.** List dates of scoping sessions. | Click here and select |  | |
| **I.** List dates and titles of QAPP documents written for previous site work, if applicable: | Click here and select |  | |
| **J.** List organizational partners (stakeholders and data users) and connection with lead organization | Click here and select |  | |
| **K.** If any required QAPP elements and required information are not applicable to the project, then circle the omitted QAPP elements and required information on the attached table. Provide an  explanation for their exclusion. | Click here and select |  | |
| **L.** Document should indicate both project specific and generic QAPPs should be reviewed annually by the lead organization’s project manager. Project-specific and generic QAPPs must be kept current and be revised, when necessary, when directed by the approval authority, or at least every 5 years. | Click here and select |  | |
| **Worksheets #3 & #5: Project Organization and QAPP Distribution** | | | |
| **A.** Organization chart provided: Depicts key personnel, lines of authority, and lines of communication among the lead agency, prime contractor, subcontractors, and regulatory agencies | Click here and select |  | |
| **B.** Documents recipients of controlled copies of the QAPP (use asterisks on chart to designate QAPP recipients) | Click here and select |  | |
| **C.** Identify reporting relationships between all organizations involved in the project, including the lead organization and all contractor and subcontractor organizations. Identify the organizations providing field sampling, on-site and off-site analysis, and data review services, including the names and telephone numbers of all project managers, project team members, and/or project contacts for each organization. | Click here and select |  | |
| **D.** Check box -  EPA Contract Laboratory Services (CLP)  Yes  No  Quality Management Plan  Yes  No  NA  QMP Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Click here and select |  | |
| **Worksheets #4, #7 & #8: Personnel Qualifications and Sign-off Sheet** | | | |
| This worksheet lists individuals’ project titles or roles; qualifications; and any specialized/non-routine training, certifications, or clearances required by the project, e.g., explosives and ordnance disposal (EOD) technician, Professional Engineer, Certified Professional Geologist, etc. | Click here and select | #4 Project Personnel Sign-off Sheet   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Project Personnel | Title | Telephone Number | Signature | Date QAPP Read |   #7 Personnel Responsibilities and Qualifications Table   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Name | Title | Organizational Affiliation | Responsibilities | Education and Experience Qualifications |   #8 Special Personnel Training Requirements Table   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Project Function | Specialized Training-Title or Description of Course | Training Provider | Training Date | Personnel/Groups receiving Training | Personnel Titles/Organizational Affiliation | Location of Training Records/Certificates | | |
| **Worksheet #6: Communication Pathways** | | | |
| 1. The communication pathways must include each step of the project (planning, sampling, analysis, and data decision)   This worksheet should be used to document specific issues (communication drivers) that will trigger the need to communicate with other project personnel or stakeholders. Its purpose is to ensure there are procedures in place for providing the appropriate notifications and generating the appropriate documentation when handling important communications, including those involving regulatory interfaces, unexpected events, emergencies, non-conformances, and stop-work orders. | Click here and select | #6 Communication Pathways   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Communication Drivers | Responsible  Entity | Name | Phone Number | Procedure (Timing,  Pathways, etc.) | | |
| 1. Communication drivers are those activities that necessitate communication between different responsible entities. These drivers can include, but are not limited to:   • Approval of amendments to the QAPP  • Initiation, notification and/or approval of real time modifications  • Notification of delays or changes to field work  • Recommendations to stop work and initiation of corrective action  • Reporting of issues related to analytical data quality, including, but not limited to, ability to meet reporting limits | Click here and select |  | |
| **Worksheet #9: Project Planning Session Summary** | | | |
| 1. Identifies all electronic data deliverables (EDDs) that will be submitted for the project and the required fields for each EDD, using the Region 8 Format for EQuIS Data Processor (EDP) | Click here and select | #9 Project Scoping Session Participants Sheet   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Date of Session:  Scoping Session Purpose: | | | | | | | Name | Title | Affiliation | Phone # | E-mail Address | Project Role | | |
| 1. Provides a worksheet for each internal and external project planning session (including phone, web-conferencing, and/or face-to-face) | Click here and select |  | |
| 1. Include a description of the project’s scoping decisions and action items | Click here and select |  | |
| 1. Include Data Needs Worksheet – Analyte, Matrix, Regulation, User, etc | Click here and select |  | |
| 1. The QAPP must document the environmental decisions that need to be made and the level of data quality needed to ensure that those decisions are based on sound scientific data. | Click here and select |  | |
| **Worksheet #10: Conceptual Site Model** | | | |
| 1. Background information/site history (may already have been presented in Executive Summary) | Click here and select |  | |
| 1. Sources of known or suspected hazardous waste | Click here and select |  | |
| 1. Known or suspected contaminants or classes of contaminants | Click here and select |  | |
| 1. Primary release mechanism, secondary contaminant migration, and fate and transport considerations | Click here and select |  | |
| 1. Potential receptors and exposure pathways, land use considerations | Click here and select |  | |
| 1. Key physical aspects of the site (e.g. site geology, hydrology, topography, climate) | Click here and select |  | |
| 1. Current interpretation of nature and extent of contamination to the extent that it will influence project-specific decision-making, data gaps and uncertainties associated with the Conceptual Site Model | Click here and select |  | |
| **Worksheet #11: Project/Data Quality Objectives** | | | |
| 1. Provides the project quality objectives or data quality objectives using a systematic planning process such as EPA’s Data Quality Objectives Process (EPA-QA/G-4, February 2006) or the U.S. Army Corps of Engineers’ Technical Project Planning Process (USACE EM 200-1-2, 29 February 2016) document | Click here and select |  | |
| 1. States the problem consistent with information contained in QAPP Worksheet #10 | Click here and select |  | |
| 1. Identifies specific study questions and defines alternative outcomes; explains how the data will be used to answer questions and choose among the stated alternatives (must be more specific than “nature and extent of contamination”) | Click here and select |  | |
| 1. Specifies the types of data that are required to fill gaps in the Conceptual Site Model; explains in specific terms how all data will be used; identifies information inputs consistent with decisions made during project scoping consistent with QAPP Worksheet #9 | Click here and select |  | |
| 1. Specifies the target (statistical) populations and characteristics of interest; defines spatial/temporal limits and the scale of inference - which (statistical) populations will be represented by which data; develops focused list of target analytes | Click here and select |  | |
| 1. Defines the parameter(s) of interest, specify the types of inference and which sample results will be used to support which decisions. Uses “if…then” statements for decision problems and/or the estimator and estimation procedure for estimation problems | Click here and select |  | |
| 1. Specifies probability limits for decision errors for projects that involve hypothesis testing and/or specifies performance (new data) or acceptance (existing data) criteria for estimations or other analytic approaches | Click here and select |  | |
| 1. Briefly explains the rationale for the sampling design; refers to subsequent worksheets for sampling design details and analysis design requirements | Click here and select |  | |
| 1. Assesses what analytical resources will meet the analytical needs (Regional laboratory, CLP, direct contract, subcontract), including any special requests or modified analysis for the Regional laboratory or CLP | Click here and select |  | |
| **Worksheet #12: Measurement Performance Criteria** | | | |
| 1. Provides a worksheet for each type of field or laboratory measurement; for analytical methods, criteria are determined for each matrix, analyte, and concentration level | Click here and select | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Sampling Procedure | Analytical Method/SOP | Data Quality Indicators DQIs | Measurement Performance Criteria | QC Sample and/or Activity used to access measurement performance | QC sample assesses error for Sampling, analytical or both |   #12 Measurement Performance Criteria Table | |
| 1. Each worksheet provides quantitative measurement performance criteria in terms of precision, bias, and sensitivity | Click here and select |  | |
| **Worksheet #13: Secondary Data Uses and Limitations** | | | |
| 1. Identifies sources of secondary data (sampling and testing data collected during previous investigations, historical data, background information, interviews, modeling data, photographs, aerial photographs, topographic maps, and published literature) | Click here and select | |  |  |  |  |  | | --- | --- | --- | --- | --- | | Secondary Data | Data Source (originating organization, report title, and date) | Data Generators (originating org., data types, data generation/collection dates) | How data will be used | Limitations on data use |   #13 Secondary Data Criteria and Limitations Table | |
| 1. Discusses the rationale for using this data and explains its relevance to the project | Click here and select |  | |
| 1. Identifies factors affecting the reliability of data and limitations on data use, including how limitations will be communicated to all end data users and stakeholders | Click here and select |  | |
| **Worksheets #14 & #16: Project Tasks & Schedule** | | | |
| Provides a summary of key on-site and off-site activities, the person or group responsible for each activity, planned start and end dates, deliverables to be produced, and deliverable due dates (may be table or Gantt Chart) | Click here and select | #14/16 Project Schedule/Timeline Table   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Activities | Organization | Anticipated date of initiation | Anticipated date of completion | Deliverable | Deliverable Due Date | | |
| **Worksheet #15: Project Action Limits and Laboratory-Specific Detection/Quantitation Limits** | | |
| 1. Provides a worksheet for each type of field or laboratory measurement; criteria are determined for each matrix, analyte, analytical method and concentration level | Click here and select | #15 Reference Limits Evaluation Table   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Analyte | CAS # | Project Action Limits | Project Quantitation Limits | Analytical Method | | Achievable Laboratory Limits | | | MDL | Method QL | MDLs | QLs | | |
| 1. If critical contaminants/analytes of concern have been identified, lists the Project Action Limit (actual numerical criteria) for each analyte and the reference upon which it is based (such as MCLs or other ARARs, risk assessment screening levels, etc.); If critical contaminants/analytes of concern have not yet been identified, provides target analytes and their screening levels for each analyte group and the reference upon which they are based. Identifies Project Quantitation Limit Goals below the Project Action Limit or screening level for the analyte; highlights the critical contaminants/analytes for project decision-making. If applicable, discusses where levels cited will not be analytically achievable or identifies the modifications needed to the laboratory’s SOP to achieve them | Click here and select |  | |
| 1. Provides laboratory-specific detection and quantitation limits for comparison to Project Quantitation Limit Goal. Laboratory provides documentation that demonstrates precision and bias at the laboratory-specific quantitation limit (at lowest calibration standard) | Click here and select |  | |
| **Worksheet #17: Sampling Design and Rationale** | | | |
| 1. Provides design of the sampling/collection network, including physical and temporal boundaries, basis for dividing the site into decision units, basis for number and placement of samples, sample location maps or diagrams, alternate locations, process for determining sample locations in the field (if applicable), and field condition contingencies | Click here and select |  | |
| 1. Provides a discussion regarding the basis for selection of probability-based designs vs. judgmental designs | Click here and select |  | |
| **Worksheet #18: Sampling Locations and Methods** | | | |
| 1. Provides a table with type and number of samples required for collection such as surface soil, subsurface soil, or groundwater, preferably by individual Sample ID and collection frequency (if applicable), though sample groups may be listed in a single row | Click here and select |  | |
| 1. Identifies each sample type using matrix codes and descriptions found in the Region 8 Reference Values for EQuIS | Click here and select |  | |
| 1. Uses existing Station IDs where available in EQuIS for the planned location (matched by latitude/longitude). | Click here and select |  | |
| 1. Provides the sample collection method for each sample or sample group and references the applicable sampling SOP | Click here and select |  | |
| 1. Referenced sampling SOPs are attached to the QAPP | Click here and select |  | |
| 1. Provides the analytes or analyte groups for each sample or sample group | Click here and select |  | |
| **Worksheets #19 & #30: Sample Containers, Preservation, and Hold Times** | | | |
| 1. Provides a worksheet for each laboratory used and lists any required accreditations/certifications for the laboratory; attaches accreditations/certifications to the QAPP | Click here and select |  | |
| 1. For each analyte/analyte group and matrix pair, provides the analytical method reference, accreditation expiration date for the laboratory for that analyte/matrix/method combination (if global expiration date, this may be in the header | Click here and select |  | |
| 1. For each analyte/analyte group, matrix, and analytical method, provides container(s) (Number, size, and type per sample), preservation requirements, preparation holding time, analytical holding time, and data package turnaround | Click here and select |  | |
| **Worksheet #20: Field QC Summary** | | | |
| For each matrix and analyte/analytical group pair, provides a summary of the number of field samples, the number and types of field QC samples to be collected, and the total number of analyses (field and field QC samples combined) | Click here and select |  | |
| **Worksheet #21: Field SOPs** | | | |
| Lists SOPs (including title, revision, date, and originating organization) containing detailed procedures for all field activities, including sample collection, sample preservation, equipment cleaning and decontamination, equipment testing, maintenance, and inspection, and sampling handling and custody and notes any project-specific options or modifications, if applicable) | Click here and select |  | |
| **Worksheet #22: Field Equipment Calibration, Maintenance, Testing, and Inspection** | | | |
| 1. Provides a list of all in-situ testing instruments and field equipment | Click here and select |  | |
| 1. Documents the procedures for calibrating, maintaining, testing, and/or inspecting all field equipment | Click here and select |  | |
| 1. Identifies the individual(s) responsible for field equipment | Click here and select |  | |
| 1. Includes frequency, acceptance criteria, and corrective action or references and attaches the relevant SOP or manufacturer’s instructions | Click here and select |  | |
| **Worksheet #23: Analytical SOPs** | | | |
| 1. List SOPs (including title, revision, and date) containing the specific sample preparation and analytical procedures to be used to perform on-site or fixed laboratory analysis for each matrix/analytical group; indicate whether the procedure produces screening or definitive data; note any project-specific options or modifications, if applicable | Click here and select |  | |
| 1. Referenced analytical SOPs are attached to the QAPP | Click here and select |  | |
| **Worksheet #24: Analytical Instrument Calibration** | | | |
| 1. Identifies all analytical instruments, whether used in the field or the laboratory | Click here and select |  | |
| 1. For each instrument, identifies the calibration procedure and title/position responsible for corrective action; references and attaches the SOP or identifies the calibration range, frequency, and acceptance criteria, and corrective action in the table; calibration process should link the calibration to a specific instrument identification number | Click here and select |  | |
| **Worksheet #25: Analytical Instrument and Equipment Maintenance, Testing, and Inspection** | | | |
| For a laboratory with a quality system that conforms to ISO 17025:2017, the laboratory’s quality manual may be referenced for this work sheet; otherwise or if project-specific modifications apply, lists each analytical instrument/equipment that requires maintenance, testing, and inspection activities, list those activities, and provides the frequency, acceptance criteria, corrective action, title/position responsible for corrective action, and reference for those activities | Click here and select |  | |
| **Worksheets #26 & #27: Sample Handling, Custody, and Disposal** | | | |
| 1. Lists all activities from sample labeling through sample disposal, indicating the organization and title/position responsible for each activity and the SOP reference | Click here and select |  | |
| 1. Referenced SOPs are attached to the QAPP | Click here and select |  | |
| 1. Example forms, sample labels, and chain-of-custody documentation are attached to the QAPP | Click here and select |  | |
| **Worksheet #28: Analytical Quality Control and Corrective Action** | | | |
| 1. Provides a separate worksheet for each analytical method/SOP, matrix, and concentration level | Click here and select | #28 QC Analytical QC and Corrective Action   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | QC  sample | Frequency/  Number | Method/ SOP QC Acceptance Limits | Corrective Action | Title/Person Responsible for Corrective Action | Project-specific MPC | | |
| 1. Identifies the type, number and frequency of QC sample collection (field) or QC sample analysis procedure (laboratory) along with the required QC statistically derived limits/ acceptance criteria for each analyte; includes corrective action and title/position responsible for corrective action | Click here and select |  | |
| **Worksheet #29: Project Documents and Records** | | | |
| 1. This worksheet should be used to record information for all documents and records that will be generated for the project. The QAPP should acknowledge the project’s records will meet the CERCLA records requirements. | Click here and select | #29 Project Documents and Records Table   |  |  |  |  | | --- | --- | --- | --- | | Record | Generation | Verification | Storage location/archival | | |
| 1. Provides a comprehensive list of the documents and records required for this project | Click here and select |  | |
| 1. Describes the generation, verification, and storage location/archival of hard-copy and electronic information produced during the project for sample collection and field records | Click here and select |  | |
| 1. Describes the generation, verification, and storage location/archival of hard-copy and electronic information produced during the project for project assessments; attaches assessment checklists or other standardized forms to the QAPP | Click here and select |  | |
| 1. Describes the generation, verification, and storage location/archival of hard-copy and electronic information produced during the project for laboratory records | Click here and select |  | |
| 1. Provides requirements for laboratory data deliverable contents consistent with the expected stages selected for data validation (see EPA 540-R-08-005) | Click here and select |  | |
| 1. Describes data handling equipment and procedures used to process, compile and analyze data; provides a complete list of computer hardware and software needs; specifies requirements such as information security controls for ensuring quality of electronic information (utility, objectivity, and integrity) | Click here and select |  | |
| 1. Provides electronic data deliverable requirements for analytical deliverables and field documentation according to the Region 8 Format for EQuIS Data Processor (EDP); describes process for assuring that Region 8 Format for EQuIS Data Processor (EDP) electronic data deliverables (EDDs) are provided to EPA Region 8 and identifies individual(s) responsible for EDD submittals | Click here and select |  | |
| **Worksheet #30: Analytical Services** |  |  | |
| Identify all laboratories or organizations that will provide analytical services for the project, including on-site screening, on-site definitive, and off-site laboratory analytical work. Group by matrix, analytical group, concentration, and sample location or ID number. If applicable, identify the subcontractor laboratories and backup laboratory or organization that will be used if the primary laboratory or organization cannot be used. | Click here and select | #30 Analytical Services Table   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Matrix | Analytical Group | Concentration Level | | Sample Location/ID # | Analytical SOP | | Data Package Turnaround Time | | Laboratory/Organization (Name and address, contact) | | | Backup Laboratory/Organization (name and address, contact) | | | | |
| **Worksheets #31, #32 & #33: Assessments and Corrective Action** | | | |
| 1. Lists the required number, frequency and type of assessments with approximate dates and title/position and organization of everyone responsible for performing these assessments | Click here and select | #31, 32, & 33 Assessments and Corrective Action   |  |  |  |  | | --- | --- | --- | --- | | Assessment Type | Responsible Party & Organization | Number/Frequency | Estimated Dates | | Assessment Deliverable | Delivered Due Date | | |
| 1. Discusses one or more of the following types of assessments: peer reviews, technical audits, surveillance, management system reviews, readiness reviews, quality system audits, performance evaluations, data quality assessments | Click here and select |  | |
| 1. Discusses the authority and independence of the individual(s) performing the assessments in relation to those being assessed | Click here and select |  | |
| 1. Discusses where assessment findings will be documented and how the assessment findings will be communicated to all key project staff, state and EPA personnel responsible for the study oversight and the deliverable due dates | Click here and select |  | |
| 1. For each assessment listed, provides the title/position and organization of the individual(s) responsible for responding to assessment findings, assessment response documentation, and timeframe for response | Click here and select |  | |
| **Worksheet #34: Data Verification and Validation Inputs** | | | |
| Identifies the planning documents (such as QAPP, contract, field SOPs, laboratory SOPs), field records, and laboratory records that will be used during data verification and validation; indicates whether each item will be used for verification (completeness), validation (conformance to specifications), or both | Click here and select | #34 Data Verification and Validation Inputs   |  |  |  |  | | --- | --- | --- | --- | | Item | Description | Verification (completeness) | Validation (conformance to specifications) | | |
| **Worksheet #35: Data Verification Procedures** | | | |
| 1. Data verification is a completeness check to confirm that all required activities were conducted, all specific records are present, and the contents of the records are complete. Documents procedures that will be used to verify project data. For each field record, references the document containing the requirements, process description, and responsible person/organization | Click here and select | #35 Data Verification Procedures   |  |  |  |  | | --- | --- | --- | --- | | Records Reviewed | Required Documents | Process Description | Responsible Person, Organization | | |
| 1. For each laboratory record, references the document containing the requirements, process description, and responsible person/organization | Click here and select |  | |
| 1. For each audit and corrective action record, references the document containing the requirements, process description, and responsible person and organization | Click here and select |  | |
| **Worksheet #36: Data Validation Procedures** | | | |
| 1. The data usability assessment is performed at the conclusion of data collection activities, using the outputs from data verification and data validation. It is the data interpretation phase, which involves a qualitative and quantitative evaluation of environmental data to determine if the project data are of the right type, quality, and quantity to support the decisions that need to be made. | Click here and select | #36 Data Validation Procedures   |  |  |  | | --- | --- | --- | | Validation Code | Validation Label | Description/Reference | | |
| 1. Documents procedures that will be used to validate project data. Data validation is an analyte and sample-specific process for evaluating compliance with contract requirements, methods/SOPs, and measurement performance criteria. Procedures should be summarized in the worksheet, including specific SOP references, if applicable | Click here and select |  | |
| 1. Referenced data validation SOPs are attached to the QAPP, if applicable | Click here and select |  | |
| 1. Validation procedures define validation stage code and define any data qualifiers to be applied by the data validator | Click here and select |  | |
| 1. Validation procedures include checklists to be used by the data validator | Click here and select |  | |
| **Worksheet #37: Data Usability Assessment** | | | |
| 1. **Usability Report**   The usability report should:  • Discuss and compare overall completeness of multiple data sets collected for the project for each matrix, analytical group, and concentration level.  • Describe the limitations on the use of project data if project-required completeness is not achieved for the overall project, or when completeness is limited to a specific sampling or laboratory group, data set or SDG, matrix, analytical group, or concentration level. | Click here and select |  | |
| 1. Identifies the individual(s) responsible for reconciling the data to the project-specific requirements | Click here and select |  | |
| 1. Describes data usability assessment process including statistics, equations, and computer algorithms to be used to analyze the data and reconcile it to project-specific requirements | Click here and select |  | |
| 1. Discusses how limitations in the final data set will be documented and communicated to all end data users and stakeholders | Click here and select |  | |
| 1. Describes the circumstances under which data would be rejected and removed from the final data set and addresses resolution of potential data gaps | Click here and select |  | |
| 1. Describes the data usability assessment process to confirm that the useable data are adequate to make the site decision | Click here and select |  | |