Fall 11-16-2021

2022 Final Butte Priority Soils Operable Unit Interim Site-Wide Surface Water Monitoring Quality Assurance Project Plan

TREC Inc., A Woodard and Curran Company

EPA REGION 8 QA DOCUMENT REVIEW CROSSWALK

QAPP/FSP/SAP for: *(check appropriate box)*		**Entity** *(grantee, contract, EPA AO, EPA Program, Other)*	**Regulatory Authority and/or Funding Mechanism**	**___ 2 CFR 1500 for Grantee/Cooperative Agreements** **___ 48 CFR 46 for Contracts** **___ Interagency Agreement (FFA, USGS,)** **___ EPA/Court Order** **___ EPA Program Funding** **___ EPA Program Regulation** **___ EPA CIO 2105**
	GRANTEE	Atlantic Richfield Company		
	CONTRACTOR			
	EPA			
	Other			
Document Title ***[Note: Title will be repeated in Header]***		2022 Final Butte Priority Soils Operable Unit Interim Site-Wide Surface Water Monitoring Quality Assurance Project Plan		
QAPP/FSP/SAP Preparer		TREC, Inc. for Atlantic Richfield Company		
Period of Performance *(of QAPP/FSP/SAP)*		**2022**	**Date Submitted for Review**	11/16/21
EPA Project Officer **EPA Project Manager**		Nikia Greene	**PO Phone #** **PM Phone #**	 (406) 457-5019
QA Program Reviewer or Approving Official			**Date of Review**	12/10/21

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 _____
WP/SOW/TO/RP Performance Period _____

3. QA document consistent with the:
WP/SOW/PP for grants? Yes / No
SOW/TO for contracts? Yes / No

4. QARF signed by R8 QAM Yes / No / NA
Funding Mechanism IA / contract / grant / NA
Amount _____

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 the Project 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 #1
2. Comment #2
3. Comment #3
4. **The** Atlantic Richfield Company **must address the comments in the Summary of Comments, as well as those identified in the Comment section(s) that includes a "Response (date)" and Resolved (date)".**

Element	Acceptable *Yes/No/NA*	Page/ Section	Comments
A. Project Management			
A1. Title and Approval Sheet			
a. Contains project title	Y	1st page	EPA: No Comment 12/10/21
b. Date and revision number line (for when needed)	Y	2nd cover page and x	EPA: No Comment 12/10/21
c. Indicates organization=s name	Y	cover and i	EPA: No Comment 12/10/21
d. Date and signature line for organization=s project manager	Y	i	EPA: No Comment 12/10/21
e. Date and signature line for organization=s QA manager	Y	i	EPA: No Comment 12/10/21
f. Other date and signatures lines, as needed	Y	i	EPA: No Comment 12/10/21
A2. Table of Contents			
a. Lists QA Project Plan information sections	Y	v-vii	EPA: No Comment 12/10/21
b. Document control information indicated	Y	v-vii	EPA: No Comment 12/10/21
A3. Distribution List			
Includes all individuals who are to receive a copy of the QA Project Plan and identifies their organization	Y	ii-iv	EPA: No Comment 12/10/21
A4. Project/Task Organization			
a. Identifies key individuals involved in all major aspects of the project, including contractors	Y	2.1	EPA: No Comment 12/10/21
b. Discusses their responsibilities	Y	2.1	EPA: No Comment 12/10/21
c. Project QA Manager position indicates independence from unit generating data	Y	2.1	EPA: No Comment 12/10/21
d. Identifies individual responsible for maintaining the official, approved QA Project Plan	Y	2.1	EPA: No Comment 12/10/21
e. Organizational chart shows lines of authority and reporting responsibilities	Y	Figure 1	EPA: No Comment 12/10/21
A5. Problem Definition/Background			

a. States decision(s) to be made, actions to be taken, or outcomes expected from the information to be obtained	Y	1.0	EPA: No Comment 12/10/21
b. Clearly explains the reason (site background or historical context) for initiating this project	Y	2.2	EPA: No Comment 12/10/21
c. Identifies regulatory information, applicable criteria, action limits, etc. necessary to the project	Y	2.4.1, Tables 2 & 3	EPA: No Comment 12/10/21
A6. Project/Task Description			
a. Summarizes work to be performed, for example, measurements to be made, data files to be obtained, etc., that support the project=s goals	Y	2.3, Table 1	EPA: No Comment 12/10/21
b. Provides work schedule indicating critical project points, e.g., start and completion dates for activities such as sampling, analysis, data or file reviews, and assessments	Y	2.3, Table 1	EPA: No Comment 12/10/21
c. Details geographical locations to be studied, including maps where possible	Y	2.4.1, Step 4, Tables 2-6, Figures 2-4	EPA: No Comment 12/10/21
d. Discusses resource and time constraints, if applicable	NA	NA	EPA: Nor applicable
A7. Quality Objectives and Criteria			
a. Identifies - performance/measurement criteria for all information to be collected and acceptance criteria for information obtained from previous studies, - including project action limits and laboratory detection limits and - range of anticipated concentrations of each parameter of interest	Y	2.4.2 Tables 10 & 11 Tables 14,14, 16	EPA: No Comment 12/10/21
b. Discusses precision	Y	2.4.2, Precision	EPA: No Comment 12/10/21
c. Addresses bias	Y	2.4.2, Accuracy/Bias	EPA: No Comment 12/10/21
d. Discusses representativeness	Y	2.4.2, Representativeness	EPA: No Comment 12/10/21
e. Identifies the need for completeness	Y	2.4.2, Completeness	EPA: No Comment 12/10/21

f. Describes the need for comparability	Y	2.4.2, Comparability	EPA: No Comment 12/10/21
g. Discusses desired method sensitivity	Y	2.4.2, Sensitivity	EPA: No Comment 12/10/21
A8. Special Training/Certifications			
a. Identifies any project personnel specialized training or certifications	Y	2.5	EPA: No Comment 12/10/21
b. Discusses how this training will be provided	Y	2.5	EPA: No Comment 12/10/21
c. Indicates personnel responsible for assuring training/certifications are satisfied	Y	2.5	EPA: No Comment 12/10/21
d. identifies where this information is documented	Y	2.5	EPA: No Comment 12/10/21
A9. Documentation and Records			
a. Identifies report format and summarizes all data report package information	Y	2.6.6 & 4.3 5.1.3, 5.1.4, Appendix G	EPA: No Comment 12/10/21
b. Lists all other project documents, records, and electronic files that will be produced	Y	2.6	EPA: No Comment 12/10/21
c. Identifies where project information should be kept and for how long	Y	2.6	EPA: No Comment 12/10/21
d. Discusses back up plans for records stored electronically	Y	2.6	EPA: No Comment 12/10/21
e. States how individuals identified in A3 will receive the most current copy of the approved QA Project Plan, identifying the individual responsible for this	Y	2.1	EPA: No Comment 12/10/21
B. Data Generation/Acquisition			
B1. Sampling Process Design (Experimental Design)			
a. Describes and justifies design strategy, indicating size of the area, volume, or time period to be represented by a sample	Y	3.1	EPA: No Comment 12/10/21
b. Details the type and total number of sample types/matrix or test runs/trials expected and needed	Y	3.1	EPA: No Comment 12/10/21
c. Indicates where samples should be taken, how sites will be identified/located	Y	3.1.2 &3.1.4, Figures 2-4, Tables 4-6,12, & 15	EPA: No Comment 12/10/21
d. Discusses what to do if sampling sites become inaccessible	Y	Final paragraph of 3.1	EPA: No Comment 12/10/21

e. Identifies project activity schedules such as each sampling event, times samples should be sent to the laboratory, etc.	Y	2.4.1, step 4, Tables 4-6 3.3.1, 3.3.2	EPA: No Comment 12/10/21
f. Specifies what information is critical and what is for informational purposes only	Y	3.1.2, 3.1.5, 3.1.6	EPA: No Comment 12/10/21
g. Identifies sources of variability and how this variability should be reconciled with project information	Y	2.4.2, 3.1.2, 3.5.3	EPA: No Comment 12/10/21
B2. Sampling Methods			
a. Identifies all sampling SOPs by number, date, and regulatory citation, indicating sampling options or modifications to be taken	Y	3.2.1, Table 17	EPA: No Comment 12/10/21
b. Indicates how each sample/matrix type should be collected	Y	3.2.2	EPA: No Comment 12/10/21
c. If in situ monitoring, indicates how instruments should be deployed and operated to avoid contamination and ensure maintenance of proper data	Y	3.2.2.2, 3.2.2.3	EPA: No Comment 12/10/21
d. If continuous monitoring, indicates averaging time and how instruments should store and maintain raw data, or data averages	Y	3.2.2.1, 3.2.2.2	EPA: No Comment 12/10/21
e. Indicates how samples are to be homogenized, composited, split, or filtered, if needed	Y	3.2.1 SOPS Table 17, Appendix A	EPA: No Comment 12/10/21
f. Indicates what sample containers and sample volumes should be used	Y	3.2.2.3, Table 19; 3.2.2.4, 3.2.2.5	EPA: No Comment 12/10/21
g. Identifies whether samples should be preserved and indicates methods that should be followed	Y	3.2.2.3, Table 19; 3.2.2.4, 3.2.2.5	EPA: No Comment 12/10/21
h. Indicates whether sampling equipment and samplers should be cleaned and/or decontaminated, identifying how this should be done and by-products disposed of	Y	3.2, 3.2.2.2, 3.2.2.3. 3.2.2.4	EPA: No Comment 12/10/21
i. Identifies any equipment and support facilities needed	Y	3.2.3	EPA: No Comment 12/10/21
j. Addresses actions to be taken when problems occur, identifying individual(s) responsible for corrective action and how this should be documented	Y	4.1	EPA: No Comment 12/10/21
B3. Sample Handling and Custody			

a. States maximum holding times allowed from sample collection to extraction and/or analysis for each sample type and, for in-situ or continuous monitoring, the maximum time before retrieval of information	Y	3.3.1, Tables 13, 14, & 16	EPA: No Comment 12/10/21
b. Identifies how samples or information should be physically handled, transported, and then received and held in the laboratory or office (including temperature upon receipt)	Y	3.3.2	EPA: No Comment 12/10/21
c. Indicates how sample or information handling and custody information should be documented, such as in field notebooks and forms, identifying individual responsible	Y	3.3.3	EPA: No Comment 12/10/21
d. Discusses system for identifying samples, for example, numbering system, sample tags and labels, and attaches forms to the plan	Y	3.3.4	EPA: No Comment 12/10/21
e. Identifies chain-of-custody procedures and includes form to track custody	Y	3.3.2, 3.3.5, Appendix E	EPA: No Comment 12/10/21
B4. Analytical Methods			
a. Identifies all analytical SOPs (field, laboratory and/or office) that should be followed by number, date, and regulatory citation, indicating options or modifications to be taken, such as sub-sampling and extraction procedures	Y	3.4, Tables 13, 14, & 16	EPA: No Comment 12/10/21
b. Identifies equipment or instrumentation needed	Y	3.4.3	EPA: No Comment 12/10/21
c. Specifies any specific method performance criteria	NA	N/A	EPA: Not applicable
d. Identifies procedures to follow when failures occur, identifying individual responsible for corrective action and appropriate documentation	Y	3.5.2, Table 11, 4.1	EPA: No Comment 12/10/21
e. Identifies sample disposal procedures	Y	3.4.4	EPA: No Comment 12/10/21
f. Specifies laboratory turnaround times needed	Y	5.1.3	EPA: No Comment 12/10/21
g. Provides method validation information and SOPs for nonstandard methods	NA	N/A	
B5. Quality Control			
a. For each type of sampling, analysis, or measurement technique, identifies QC activities which should be used, for example, blanks, spikes, duplicates, etc., and at what frequency	Y	3.5.1, 3.5.2	EPA: No Comment 12/10/21

b. Details what should be done when control limits are exceeded, and how effectiveness of control actions will be determined and documented	Y	3.5.2, Table 11	EPA: No Comment 12/10/21
c. Identifies procedures and formulas for calculating applicable QC statistics, for example, for precision, bias, outliers and missing data	Y	2.4.2, Table 10	EPA: No Comment 12/10/21
B6. Instrument/Equipment Testing, Inspection, and Maintenance			
a. Identifies field and laboratory equipment needing periodic maintenance, and the schedule for this	Y	3.6.1, 3.6.2	EPA: No Comment 12/10/21
b. Identifies testing criteria	Y	3.6.1, 3.6.2	EPA: No Comment 12/10/21
c. Notes availability and location of spare parts	Y	3.2.3	EPA: No Comment 12/10/21
d. Indicates procedures in place for inspecting equipment before usage	Y	3.6.1, 3.6.2	EPA: No Comment 12/10/21
e. Identifies individual(s) responsible for testing, inspection and maintenance	Y	3.6.1, 3.6.2	EPA: No Comment 12/10/21
f. Indicates how deficiencies found should be resolved, re-inspections performed, and effectiveness of corrective action determined and documented	Y	3.2, 3.6.1, 3.6.2, 4.1	EPA: No Comment 12/10/21
B7. Instrument/Equipment Calibration and Frequency			
a. Identifies equipment, tools, and instruments that should be calibrated and the frequency for this calibration	Y	3.7	EPA: No Comment 12/10/21
b. Describes how calibrations should be performed and documented, indicating test criteria and standards or certified equipment	Y	3.7	EPA: No Comment 12/10/21
c. Identifies how deficiencies should be resolved and documented	Y	3.7, 4.1	EPA: No Comment 12/10/21
B8. Inspection/Acceptance for Supplies and Consumables			
a. Identifies critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials	Y	3.8	EPA: No Comment 12/10/21
b. Identifies the individual(s) responsible for this	Y	3.8	EPA: No Comment 12/10/21
B9. Use of Existing Data (Non-direct Measurements)			
a. Identifies data sources, for example, computer databases or literature files, or models that should be accessed and used	NA	N/A	EPA: Not applicable

b. Describes the intended use of this information and the rationale for their selection, i.e., its relevance to project	NA	N/A	EPA: Not applicable
c. Indicates the acceptance criteria for these data sources and/or models	NA	N/A	EPA: Not applicable
d. Identifies key resources/support facilities needed	NA	N/A	EPA: Not applicable
e. Describes how limits to validity and operating conditions should be determined, for example, internal checks of the program and Beta testing	NA	N/A	EPA: Not applicable
B10. Data Management			
a. Describes data management scheme from field to final use and storage	Y	3.9	EPA: No Comment 12/10/21
b. Discusses standard record-keeping and tracking practices, and the document control system or cites other written documentation such as SOPs	Y	3.9	EPA: No Comment 12/10/21
c. Identifies data handling equipment/procedures that should be used to process, compile, analyze, and transmit data reliably and accurately	Y	3.9	EPA: No Comment 12/10/21
d. Identifies individual(s) responsible for this	Y	3.9	EPA: No Comment 12/10/21
e. Describes the process for data archival and retrieval	Y	3.9	EPA: No Comment 12/10/21
f. Describes procedures to demonstrate acceptability of hardware and software configurations	Y	N/A	EPA: Not applicable
g. Attaches checklists and forms that should be used	Y	N/A	EPA: Not applicable
C. Assessment and Oversight			
C1. Assessments and Response Actions			
a. Lists the number, frequency, and type of assessment activities that should be conducted, with the approximate dates	Y	4.0	EPA: No Comment 12/10/21
b. Identifies individual(s) responsible for conducting assessments, indicating their authority to issue stop work orders, and any other possible participants in the assessment process	Y	4.0, 4.1, 4.2	EPA: No Comment 12/10/21
c. Describes how and to whom assessment information should be reported	Y	4.0, 4.1, 4.2	EPA: No Comment 12/10/21
d. Identifies how corrective actions should be addressed and by whom, and how they should be verified and documented	Y	4.1, 4.2	EPA: No Comment 12/10/21

C2. Reports to Management			
a. Identifies what project QA status reports are needed and how frequently	Y	4.3	EPA: No Comment 12/10/21
b. Identifies who should write these reports and who should receive this information	Y	4.3	EPA: No Comment 12/10/21
D. Data Validation and Usability			
D1. Data Review, Verification, and Validation			
Describes criteria that should be used for accepting, rejecting, or qualifying project data	Y	5.2.2, Table 20	EPA: No Comment 12/10/21
D2. Verification and Validation Methods			
a. Describes process for data verification and validation, providing SOPs and indicating what data validation software should be used, if any	Y	5.1, 5.2, Appendix B	EPA: No Comment 12/10/21
b. Identifies who is responsible for verifying and validating different components of the project data/information, for example, chain-of-custody forms, receipt logs, calibration information, etc.	Y	5.1.1, 5.1.2, 5.2.2	EPA: No Comment 12/10/21
c. Identifies issue resolution process, and method and individual responsible for conveying these results to data users	Y	5.1.1, 5.1.2	EPA: No Comment 12/10/21
d. Attaches checklists, forms, and calculations	Y	Appendix H	EPA: No Comment 12/10/21
D3. Reconciliation with User Requirements			
a. Describes procedures to evaluate the uncertainty of the validated data	Y	5.2.2	EPA: No Comment 12/10/21
b. Describes how limitations on data use should be reported to the data users	Y	5.2.1, 5.2.2, 5.2.3	EPA: No Comment 12/10/21