


#### APPENDIX D: SITE-SPECIFIC DATA MANAGEMENT PLAN

The Superfund Technical Assessment and Response Team (START) should follow the planning processes described in the Regional Data Management Plan and use this template to complete a Site-Specific Data Management Plan (SDMP) for EPA review. Template instructions are provided in *italics* and can be removed as the template is completed.

U.S. EPA Region 8 Response Section Site-Specific Data Management Plan			
<b>Site Name</b>	Billings PCE	<b>SSID</b>	08ME
<b>City, State</b>	Billings, MT	<b>Response Site URL</b>	<a href="https://response.epa.gov/BillingsPCEVaporIntrusionSystems">https://response.epa.gov/BillingsPCEVaporIntrusionSystems</a>
<b>Response Type</b>	<input type="checkbox"/> OPA <input checked="" type="checkbox"/> CERCLA <input type="checkbox"/> Stafford <input type="checkbox"/> Other: [EXPLAIN] <input type="checkbox"/> ER <input type="checkbox"/> RSE <input checked="" type="checkbox"/> RV <input type="checkbox"/> TCRA <input type="checkbox"/> NTCR <input type="checkbox"/> Other: [EXPLAIN]		
Key Personnel			
Position/Role	Name	Agency/Organization	Approval Signature
On-Scene Coordinator (OSC)	Joe Payne	U.S. EPA Region 8	
On-Scene Coordinator (OSC)	Joyel Dhieux	U.S. EPA Region 8	
START Project Manager (PM)	David Berestka, P.E.	Tetra Tech	
ERRS Removal Manager (RM)	John Walters	Environmental Restoration (ER)	
Community Involvement Coordinator (CIC)	Katherine Jenkins	U.S. EPA Region 8	
START Data Manager	Suddha Graves	Tetra Tech	
SDMP Version History			
Date	Version	Author(s)	Description of Change
3/1/2023	1	Chandler Broome (Tetra Tech)	N/A
<p>The site-specific data management plan (SDMP) is implemented under the EPA Region 8 Response Section Programmatic Quality Assurance Project Plan. The SDMP addresses key data management components. Supplemental information can be found in other site documentation, such as: the sampling and analysis plan (SAP), RDMP, and contracting documentation. For programmatic documentation, please refer to <a href="https://response.epa.gov/RECORDS">Response.epa.gov/RECORDS</a>, the site-specific response website, or ask the On-Scene Coordinator (OSC) for more information. This document is considered a "living document" and maybe updated frequently.</p> <p>In the event that the OSC authors this SDMP, he or she will submit it to the Region 8 Quality Assurance (QA) Branch for review and approvals, or to a Delegated Approving Officer (DAO) that is independent from project information generation and/or collection.</p>			

## Key Links:

[https://response.epa.gov/site/site\\_profile.aspx?site\\_id=15883](https://response.epa.gov/site/site_profile.aspx?site_id=15883)

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## Project Responsibilities

Enter data management project responsibilities for all site participants, including EPA, START, and ERRS.

Responsibility	Task	Frequency	Description	Method
<b>EPA</b>	Notices	Following each mobilization event	Document Site conditions and progress for use in the development of Site Updates and sharing information with stakeholders and the public.	Response.epa.gov
<b>ERRS</b>	Vapor Abatement System (VAS) proposals	As needed (per each VAS installation)	Details system components and layout specific to each property.	Response.epa.gov
<b>START</b>	Collect data within Survey123	Daily during Site visit	Expected data streams include: <ul style="list-style-type: none"> <li>Digital manometer readings measuring VAS vacuum and induced vacuum</li> <li>Indoor Air sampling data</li> </ul>	Survey123 form
	Site Documentation (photos/videos)	Daily during Site visit	Photos and/or videos that document site conditions and progress.	Survey123/Quick Capture form
	Site Documentation (Logbook)	Daily during Site visit	Detailed logbook notes capturing site activities and observations.	Handwritten logbook notes
	Prepare VAS Operation & Maintenance (O&M) Manuals	As needed (per each VAS installation)	Compile system information, including warranties, photos, sampling results, and contact information.	Response.epa.gov
	Facilitate document upload to SEMS	As Requested	Facilitate management of Site documents using response.epa.gov and transfer of records to SEMS.	SEMS Document Management Tool

## Data Quality Objectives and Criteria

Data quality objectives (DQO's) should be identified during the systematic project planning process for the site and its data needs. These should align with the PQAPP and project SAPs. Enter the DQO information below.

Obj. #	Incident Objective	Quality Objective	Criteria	Responsibility	Output
Objective No.	Provide specific, clear, distinct, and achievable objectives.	Specify how the objective will be performed.	Provide details on how the objective will be evaluated/achieved.	Identify organization responsible for achieving the objective.	Identify the final output which will be used to achieve the incident objective
1	Install VAS at residential properties to mitigate the threat of tetrachloroethylene (PCE) vapors entering the homes from the contaminated shallow groundwater plume at the Site.	Prepare property-specific VAS proposal and complete installation according to approved proposal;	Removal response action will be performed in accordance with the approved SAP and this SDMP.	ERRS	VAS O&M Manual
		Measure vacuum on system following VAS installation;		START	Trip Report
		Document Site conditions at each property prior to, during, and following VAS installation.		START	VAS O&M Manual
2	Verify VAS installation reduces levels of contaminants of concern below project screening levels.	Perform post-installation proficiency sampling via indoor air sample collection.	Indoor air sampling results will be reviewed to verify results are below project screening levels.	START	Trip Report
3	Communicate with public and/or stakeholders.	EPA will utilize the OSC Response Website to post Notices, and upload photos and documents to provide updates to the public and/or stakeholders.	The OSC Response Website will be periodically reviewed to ensure content is posted in accordance with the Response Website & Data Team Playbook.	START/EPA	Response.epa.gov

## Data Stream Summary

The following table provides an overview of the data streams (including non-direct measurements – or secondary data) that are expected to be managed to meet the objectives identified in the previous section. Detailed data elements, valid values, and data flow diagrams for standard data streams can be found in the RDMP. Any non-direct measurement sources not already approved in the RDMP and expected to be used on the project, will be reviewed to determine acceptability based on their intended use and relevance. If new site-specific data streams are needed for the project, they should be added to the table below along with related data elements, valid values, and data flow diagrams in the applicable appendices.

Data Stream	Data Stream Used?	Responsibility	Data Collection/Entry Tool(s)	Objective
Photos	<input checked="" type="checkbox"/>	START	Quick Capture, Survey123	Document site activities and observations.
Samples, Locations, and Monitoring Data	<input checked="" type="checkbox"/>	START	Survey123	Verify effectiveness of vapor mitigation systems

Data Stream	Data Stream Used?	Responsibility	Data Collection/Entry Tool(s)	Objective
Analytical Results	<input checked="" type="checkbox"/>	START	Survey123, Scribe	Verify effectiveness of vapor mitigation systems
Field Mapping	<input checked="" type="checkbox"/>	START	Field Maps	Map site features necessary to provide a common operational picture of site conditions.
Videos	<input checked="" type="checkbox"/>	START	Camera, Upload to OSC Response Website	Document site activities and observations.
Notices	<input checked="" type="checkbox"/>	EPA	Direct entry to OSC Response Website	Provide updates to stakeholders and/or public.
Documents	<input checked="" type="checkbox"/>	EPA, START, ERRS	Upload to OSC Response Website	Share documents with stakeholders and/or public.
Logged Field Monitoring Data	<input checked="" type="checkbox"/>	START (if requested)	Data log with MultiRAE and/or AreaRAE (if requested); Digital manometer	Use digital manometer readings to verify vapor mitigation system is functioning as intended. Use MultiRAE to monitor vapor interferences
Real-Time Monitoring Data (VIPER)	<input type="checkbox"/>	--	--	--
UAV Derived Data	<input type="checkbox"/>	--	--	--

### Reporting Requirements

EPA's OSC has determined that the following data deliverables are necessary to support the project.

Reporting Deliverable	Responsibility	Deliverable Date/Update Frequency	Description
Scribe	START	As Received	Centralized location for sample information and analytical results
Notices	EPA	Following each mobilization event	Document Site conditions and progress for use in the development of Site Updates and sharing information with stakeholders and the public.
Trip Report	START	Within 5 days of task completion	Summary of field activities, observations, and results.
Photos	START	Weekly	Document site activities and observations.
VAS O&M Manual	START	Upon receipt of proficiency sampling results confirmed to be less than project screening levels	Compile system information specific to a property, including warranties, photos, sampling results, and contact information.

## SDMP APPENDIX A – DATA COLLECTION FORMS

*Enter the field data collection forms to be used for this Site. The RDMP provides information on the types of data forms available for use. These can be modified by working with the Data Managers.*

Name	Type	Intended Use	Intended Users
TBD	Survey123	Capture sampling and monitoring data for incorporation into Scribe. Also allows for capture of associated photos.	START
TBD	Quick Capture	Capture general photos which are not directly associated with a sample or monitoring record	START
TBD	Field Maps	Perform field mapping (points, polylines, polygons) and used for navigational purposes	START

## SDMP APPENDIX B – DATA REVIEW AND VERIFICATION

Activity	Objective	Data Source(s)	Action	Frequency	Responsibility
Field Data Collection Review	Make sure field teams input correct data.	Survey123/Collector	Data quality will start with development of field smart forms with pick lists, formulas, required fields, calculations, etc.  Queries will be scheduled to look for bad data (for example, duplicate, not meeting logic, missing data, bad data, etc.)	Daily	START
OSC Response Website Audit	Ensure content on OSC Response Website meets the Region 8 reporting requirements.	Response.epa.gov	Run SQL queries to audit the content of the response.epa.gov website. Email results of the audit to the data team. Data team to provide notice when the content is corrected.	As requested	START
Review/Edit Photos	Review photos, select photos to upload to OSC Response Website, and edit photo details (for example, Description, Category).	Quick Capture	User controlled application to select photos for upload to OSC Response Website.	Daily	START/EPA
Scribe Review	Review Scribe data to ensure it adheres to specifications in RDMP.	Scribe Data Auditor	Location and sample data will be imported from Survey123 to Scribe. Laboratories will provide analytical data using the approved lab result EDD and specifications. Scribe will be checked using Data Auditor prior to publishing to Scribe.Net.	Upon receipt of new data	START
Air Monitoring Data - VIPER	Ensure air monitoring data is stored/managed in an secure and approved manner.	VIPER Deployment Manager	DustTrak data will be ingested into the VIPER Deployment Manager. Data may be downloaded and run through data processing scripts to generate data summary tables.	Upon project completion	START

## SDMP APPENDIX C – DATA PROCESSING SCRIPTS

Script Name	PhotoFCImageExtractor.bat
Purpose	Extract combined QuickCapture and Survey123 images
Location	R08-GIS-2019 (Task Scheduler) at D:\Projects\<SiteName>\ExtractorScripts\PhotoFCImageExtractor.bat
Stored Procedures	N/A
Schedule	TBD. Recommended daily, every hour on the hour starting at 7:00 am to 8:00 pm, for the estimated length of the project
Description	Extracts the images (full size and thumbnail) from QuickCapture and puts them in a web enabled folder on R08-DOC, D:\Photographs\<SiteName>\.

Script Name	UpdatePhotoFCPhotoQC.sql
Purpose	Updates metadata field on photos as edited from the Photo QC/Review app
Location	R08-DB-2019 at D:\Project_Queries\<SiteName>\UpdatePhotoFCPhotoQC.sql
Stored Procedures	N/A
Schedule	Manual. TBD schedule (daily, weekly)?
Description	Script will update selected fields, using the Last_Edited_Date and UploadToWebSite_YN to only update and process photos which are selected for upload to response.epa.gov.

Script Name	PhotoFCImageExtractorEXIF.bat
Purpose	Writes metadata to images
Location	R08-GIS-2019 at D:\Projects\<SiteName>\ExtractorScripts\PhotoFCImageExtractorEXIF.bat
Stored Procedures	N/A
Schedule	Manual. Weekly.
Description	Extract the photo and write the selected fields to the EXIF metadata on the image. This will allow the required fields (Date Taken, Description, Category, etc.) necessary to upload to Response.epa.gov to auto-populate.

Script Name	UpdateMobilePhotoViewer_PhotoFC.sql
Purpose	Update the Mobile Photo Viewer with new image
Location	R08-DB-2019 manual or from a Scheduled SQL Job, depending on project requirements.
Stored Procedures	N/A
Schedule	Manual. Weekly.
Description	The process updated the Mobile Photo Viewer feature class with selected fields from the combined PhotoFC Feature and Attachment table, along with the URL to the web-enabled folder where the images are stored.

Script Name	PhotoLogOutput_PhotoFC_New_ConfigFormat.sql
Purpose	Create Excel import file used for the Photo Log Generator tool.
Location	R08-DB-2019
Stored Procedures	N/A
Schedule	Manual, or as requested by the project PM.
Description	Create a formatted Excel (xlsx) file with the correct column names and data types for use in the Photo log Generator tool to create a photo log.