



SITE-SPECIFIC DATA MANAGEMENT PLAN

The Superfund Technical Assessment and Response Team 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			
Site Name	Valley Drive Abandoned Slurry	SSID	B8D5
City, State	Kalispell, Montana	Response Site Link	https://response.epa.gov/ValleyDriveSlurry
Response Type	<input type="checkbox"/> OPA <input checked="" type="checkbox"/> CERCLA <input type="checkbox"/> Stafford <input type="checkbox"/> Other <input type="checkbox"/> ER <input checked="" type="checkbox"/> RSE <input type="checkbox"/> TCRA <input type="checkbox"/> NTCR <input type="checkbox"/> Other		
Key Personnel			
Position/Role	Name	Agency/ Organization	E-Mail
On-Scene Coordinator (OSC)	Paul Peronard	U.S. EPA Region 8	Peronard.Paul@epa.gov
On-Scene Coordinator (OSC)	Marty McComb	U.S. EPA Region 8	McComb.Martin@epa.gov
Community Involvement Coordinator	Katherine Jenkins	EPA Region 8	jenkins.katherine@epa.gov
Recon Lead (START PM)	Madison Ericson	Tetra Tech	Madison.Ericson@tetrattech.com
Data Manager (START)	Suddha Graves	Tetra Tech	Suddha.Graves@tetrattech.com
Approvals			
Approval Name	Paul Peronard	Signature	
Approval Name	Madison Ericson	Signature	
Create Date	10/03/2022	Revised Date	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 Response.epa.gov/RECORDS, 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>			

Key Links:

Site Operations Plan: https://response.epa.gov/site/doc_list.aspx?site_id=15686

Site Notices & Background: https://response.epa.gov/site/bulletins_list.aspx?site_id=15686

Table of Contents

1.	Project Responsibilities	2
2.	Data Quality Objectives and Criteria	3
3.	Data Stream Summary	3
4.	Reporting Requirements	4
5.	Revision History	4
SDMP APPENDIX A – DATA COLLECTION FORMS		5
SDMP APPENDIX B – DATA ELEMENTS AND VALID VALUES		6
1.	General Photos (Quick Capture)	6
2.	Particulate Monitoring (DustTrak)	6
3.	Haul Tracking	7
4.	GIS Site Features	7
5.	Sampling	7
6.	Analytical Results	9
7.	Notices	9
8.	Documents	10
SDMP APPENDIX C – DATA REVIEW AND VERIFICATION		11
SDMP APPENDIX D – DATA PROCESSING SCRIPTS		12

1. Project Responsibilities

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

Responsibility	Task	Frequency	Description	Method
EPA	Notices	Weekly	Document Site conditions and progress for use in the development of Site Updates and sharing information with stakeholders and the public.	Enter into Response.epa.gov
	Site Documentation (photos/videos)	Daily	Photos that document Site conditions and progress.	Mobile device
ERRS/EPA	Haul Tracking	Weekly	Document the number of <u>loads and weight</u> of waste that is hauled to the off-site disposal each day.	Mobile device
START	Waste Sampling	As Needed	Waste samples collected from the abandoned tanks and surrounding area to confirm contamination levels	Scribe
	Site Documentation (photos/videos)	As Needed	Photos and video that document Site conditions and progress.	Quick Capture
	Site Update	Weekly	Process data streams and notices to generate site updates in the form of a Story Map for distribution to stakeholders.	Embed in response.epa.gov
	Map Viewer	As Needed	GIS data required to maintain common operational picture of Site.	Response.epa.gov
	Haul Dashboard	Weekly	Summary of haul rate data and waste disposal.	Dashboard

2. 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	Empty Aboveground Storage Tanks (ASTs) on site	Excavator will be used to drain hydrocarbon waste from the ASTs into solidification pit	Hydrocarbon waste will be solidified using sawdust prior to removal from site.	ERRS	Empty ASTs
2	Removal of ASTs on site	Excavator and hand tools will be used for demolition and load out.	ASTs will be cut into small portions prior to removal from site.	ERRS	Removed ASTs
3	Transportation and Disposal (T&D) of solidified hydrocarbon waste and ASTs	All solidified hydrocarbon waste and ASTs will be transported for disposal.	Crew will line disposal bins with poly prior to loading. All bins will then be covered prior to exiting the site.	ERRS	Removal of waste and abandoned ASTs
4	Provide interactive Site Update tool to communicate site activities and progress with stakeholders and the public.	Leverage public-facing applications such as Story Map, etc. to communicate with stakeholder and the public.	Applications will be shared publicly and will be updated at a frequency which aligns with the reporting period.	START/EPA	Story Map with embedded content

3. 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. 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. Detailed data elements, valid values, and data flow diagrams can be found in SDMP Appendix B (if applicable).

Data Stream	Responsibility	Objective	Data Tool(s)
Photos	START/EPA	1, 2, 3, 4	Quick Capture, mobile device
Samples and Locations	START	3	Scribe
Analytical Data	START	3	Scribe
Notices	EPA	4	Direct entry to OSC Response Website
Documents	EPA/START	4	Upload to OSC Response Website
Haul Tracking	START	3, 4	Direct entry to Dashboard

4. Reporting Requirements

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

Update Frequency	Provider	Data Stream	Description
Daily	START/EPA	Images	Photos to document Site conditions and progress.
	START	Images	START to QC photos and upload selected photos to the OSC Response Website.
	ERRS/EPA	Haul Tracking	ERRS/EPA document the number of loads that leave the site each day. Excel spreadsheet emailed to the data team for processing.
Weekly	START	Site Update	Process data streams including notices and images to generate site updates in the form of a Story Map for distribution to stakeholders.
		Map Viewer	Maintain/Update GIS data required to maintain common operation picture
		Haul Tracking Dashboard	Maintain/Update interactive dashboard summarizing haul loads and material hauled to the off-site disposal.
	EPA	Notices	Document Site conditions and progress for use in the development of Site Updates and sharing information with stakeholders and the public.

5. Revision History

Track the revision history for this SDMP below; add rows as necessary.

Date	Version	Author(s)	Description of Change
10/03/2022	1	Madison Ericson	Initial SDMP

SDMP APPENDIX A – DATA COLLECTION FORMS

Enter the 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
R08-Valley Drive Abandoned Slurry-STARTV	Survey123	Capture sampling, monitoring, photos, and/or observation	START
Valley Drive Abandoned Slurry - Field Maps	Field Maps	Capture polyline/polygon data	START
Valley Drive Abandoned Slurry - Quick Capture Photo	Quick Capture	Capture general photos which are not directly associated with a sample or monitoring record	START
Valley Drive Abandoned Slurry – Photo Review App	Experience Builder	Select photos to upload to Response Website, and QC photo description, Category, and Tag	START

SDMP APPENDIX B – DATA ELEMENTS AND VALID VALUES

1. General Photos (Quick Capture)

Quick Capture will be used for general site observations. When photos of air monitoring or air samples are required, a Survey123 form will be used to associate the photo to the air monitoring/air sample of interest. While the photo collection application is different, both Quick Capture and Survey123 will contain the same key fields.

Key Fields	Description	Comment	Valid Values
Photographer	Name of photographer who captures the photo	Entered initially when opening Quick Capture App	
Photo Category	Category used to group photos once loaded to the OSC Response Website	Selected before each photo is taken.	Assessment, Removal, and Post-Removal. This will be automatically replaced during post-processing based on the reporting period the photo was taken on.
Photo Description	Detailed description of photo	Entered after each photo is taken	
Date/Time	Date/time the photo was taken	Captured automatically by Quick Capture App	
Latitude	Latitude (decimal degrees) of location where the photo was taken	Captured automatically by Quick Capture App	
Longitude	Longitude (decimal degrees) of location where the photo was taken	Captured automatically by Quick Capture App	

Data Flow Diagram for PHOTOS



2. Particulate Monitoring (DustTrak)

Particulate monitoring will be performed each day there are intrusive activities on the debris pile. Particulate air monitoring will be performed utilizing up to four DustTrak units which will be positioned at the perimeter of the work area to monitor fugitive dust. The DustTrak units will be connected to Viper and a Viper Deployment will be created in consultation with ERT. A local weather station will be ingested into the Viper Deployment and will be used to determine wind speed and direction. Viper alarms and connection alerts will be leveraged for this project. A data summary will include a map showing the air monitoring locations along with a data table summarizing each day's results. The data table may include the following;

Day	Instrument ID	Location ID	Number of Records	Action Level (ug/m3)	Number of Exceedances	Min Result (ug/m3)	Avg Result (ug/m3)	Max Result (ug/m3)	8-Hr TWA (ug/m3)

3. Haul Tracking

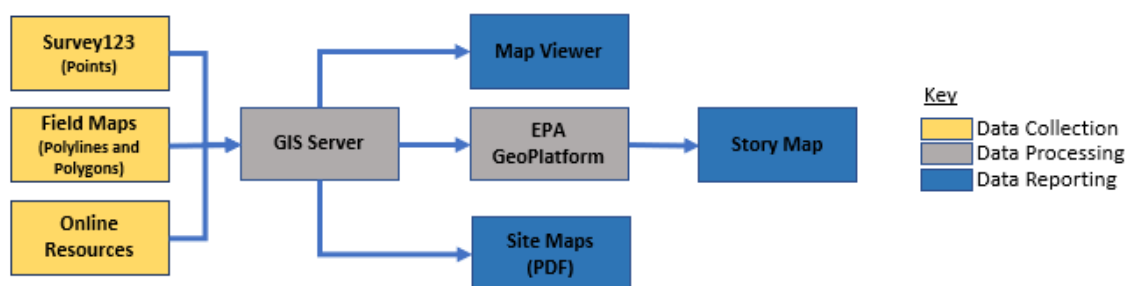
ERRS will submit daily metrics regarding the number of truck runs hauling material to the waste area as well as the types and amounts of material hauled. It is anticipated that a spreadsheet will be used to submit the daily metrics. Data quality controls will be built into the spreadsheet to minimize data transcription errors and for seamless processing.

Key Fields	Description	Comment
Date	Date of hauling operation	
Type of Material Hauled	The type of haul material	
Cumulative Volume/Weight of Haul Material	Cumulative volume/weight of haul material (per type_	

4. GIS Site Features

Site features will be collected and will be used for operational and reporting purposes. Field mapping to capture location of site features such as onsite roads, work trailers, drainage ditches, etc. will be collected using Field Maps. Parcel boundary and ownership information may be acquired from the County Assessor office.

Data Flow Diagram for GIS SITE FEATURES



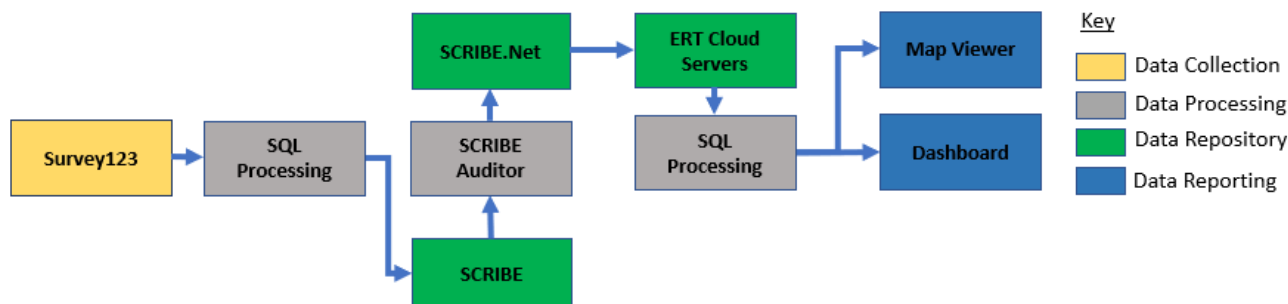
5. Sampling

Survey123 will be used to capture information about the samples. A link will be provided to allow for capability to export sample data from Survey123 in a Scribe-compatible Electronic Data Deliverable (EDD).

Key Fields	Description	Comment	Valid Values
Site Details			
Site Name	Name of Site	Defaulted to Site Name	--
Site Type	Type of Site	Defaulted to Type of Site as indicated by the PM	ER Removal
Operator Name	Name of individual operating the Survey123 form	Pick list of personnel expected to use the Survey123 form	--
Date/Time	Date/time the record was entered into Survey123	Captured automatically by Survey123	--
Location			
Feature Type	Identify what type of feature the user is capturing.	Pick list. Additional sections will be exposed based on what the user selects.	General Photo Monitoring Sampling Observation Point

Key Fields	Description	Comment	Valid Values
Location ID	Location ID used to associate the data captured at a specific location	Required when Monitoring or Sampling is selected in the Feature Type field.	--
Latitude	Latitude (decimal degrees) of location where the Survey123 record was taken	Captured automatically by Survey123	--
Longitude	Longitude (decimal degrees) of location where the Survey123 record was taken	Captured automatically by Survey123	--
Photo Collected?	Identify if a photo will be collected.	If “yes” is selected, a photo section is exposed. Photo records will be similar to the ones noted in the Quick Capture Photo table above.	Yes No
Sampling			
Event ID	Event ID used if/when loading data to Scribe	Defaulted to Mon Year – Sampling (Ex. Feb 2022 – Sampling)	--
Matrix	Sample Matrix		Surface Soil SubSurface Soil Sediment Surface Water Groundwater Waste Water Other
Sample Date Time	Date/Time Sample is collected	Defaults to current date/time the Survey123 form is being filled out. Update if needed.	--
Sample No	Sample number		--
Sampler Name	Name of Sampler	Defaults to name selected in the Operator field. Update if needed.	--
Collection	Collection method		Grab Composite
Sample Type	Used to identify type of sample.		Field Sample Duplicate Sample Co-located Sample Rinsate Blank Trip Blank Other
Sample Depth From	Top of sample depth profile		--
Sample Depth To	Bottom of sample depth profile		--
Sample Depth Units	Sample depth units		--
Activity	Used to describe site activities undertaken during sampling event (for example, Vapor Intrusion Investigation, Removal Activity, Phase II ESA, etc.)		--
Sample Comment	Used to provide important information about the sample		--

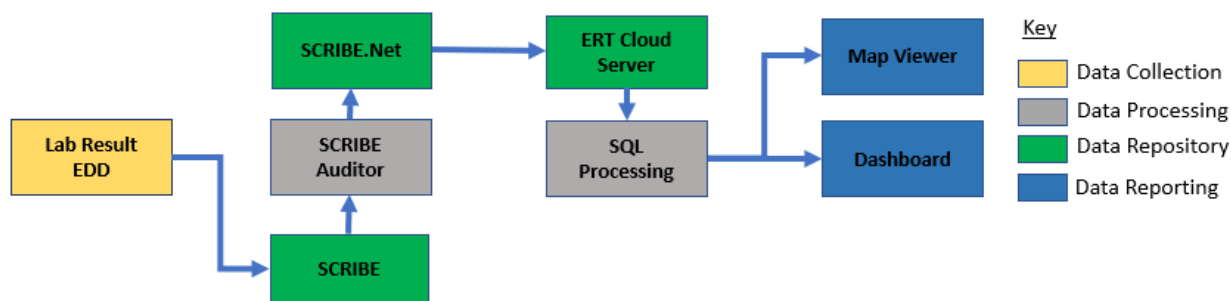
Data Flow Diagram for SAMPLES



6. Analytical Results

Analytical data will be received from the lab in a pre-approved lab result EDD format and will be uploaded to Scribe.

Data Flow Diagram for ANALYTICAL RESULTS



7. Notices

Notices will be entered into the OSC Response Website to share site updates with stakeholders and the public. The Notices will also be used for internal and external reporting purposes. The OSC and/or Community Involvement Coordinator will determine which notices, and when, are to be shared publicly.

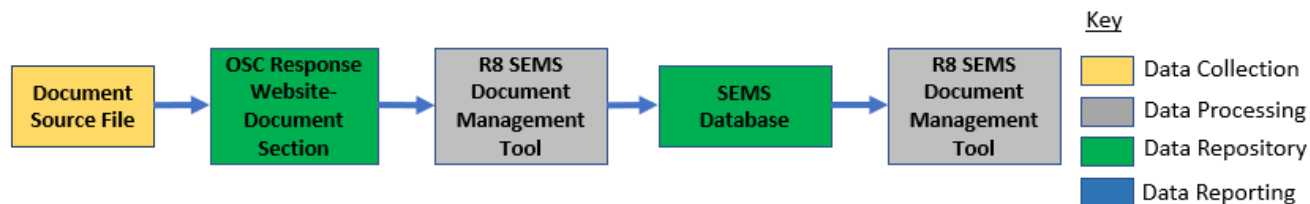
Data Flow Diagram for NOTICES



8. Documents

Documents will be uploaded to the OSC Response Website to share with stakeholders and the public. Documents will be assigned categories to allow for intuitive retrieval.

Data Flow Diagram for Documents



SDMP APPENDIX C – DATA REVIEW AND VERIFICATION

Activity	Objective	Data Source(s)	Action	Frequency	Responsibility
Field Data Collection Review	Make sure field teams input correct data.	Survey123/Field Maps	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.)	Upon data submittal	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
Photo Review/Edit	Ensure photos are good quality and descriptions are relevant and descriptive.	Survey123	Application to review/edit photos for inclusion into final reporting tool.	Upon return from field	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 Review	Review Scribe data to ensure it adheres to specifications in RDMP.
Scribe will be checked using Data Auditor prior to publishing to Scribe.Net	Upon receipt of new data	START		Scribe will be checked using Data Auditor prior to publishing to Scribe.Net	Upon receipt of new data

SDMP APPENDIX D – DATA PROCESSING SCRIPTS

Script Name	QuickCaptureImageExtractor.bat
Purpose	Extract Quick Capture Images
Location	R08-GIS-2019 (Task Scheduler)
Stored Procedures	N/A
Schedule	Manual. Upon return from field event.
Description	Extracts the images (full size and thumbnail) from QuickCapture and puts them in a web enabled folder on R08-DOC, D:\Photographs\<SiteName>\QuickCapture.

Script Name	CollectorImageExtractor.bat
Purpose	Extracts Survey123 images.
Location	R08-DB-2019
Stored Procedures	N/A
Schedule	Manual. Upon return from field event.
Description	Extracts the images (Full Size and Thumbnail) from Survey123 and puts them in a web-enabled folder (R08-DOC, D:\Photographs\<SiteName>\

Script Name	UpdateQuickCpature_for_QC.sql
Purpose	Update Photo URL Link on Quick Capture Photos
Location	R08-DB-2019 (SQL Server Agent)
Stored Procedures	N/A
Schedule	Manual. Upon return from field event.
Description	Updates selected fields in the QuickCapture table and creates the URL link to the photo.

Script Name	UpdateQuickCapturePhotoQC.sql
Purpose	Updates metadata field on photos
Location	R08-DB-2019 at D:\Project_Queries\<SiteName>\UpdateQuickCapturePhotoQC.sql
Stored Procedures	N/A
Schedule	Manual. Upon return from field event.
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	QuickCaptureImageExtractorwEXIF.bat
Purpose	Writes metadata from photos taken with Quick Capture to images
Location	R08-GIS-2019 at D:\Projects\<SiteName>\ExtractorScripts\QuickCaptureImageswEXIF.bat
Stored Procedures	N/A
Schedule	Manual. Upon return from field event.
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	CollectorImageExtractorwEXIF.bat
Purpose	Writes metadata from photos taken with Survey123 to images
Location	R08-GIS-2019 D:\Projects\<SiteName>\ExtractorScripts\CollectorImageExtractorwEXIF.bat
Stored Procedures	N/A
Schedule	No schedule. Script will be run manually upon completion of data capture.
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.sql
Purpose	Update Photo URL Link in the Mobile Photo Viewer.
Location	R08-DB-2019; D:\Project_Queries\<SiteName>
Stored Procedures	N/A
Schedule	No schedule. Script will be run manually upon completion of data capture.
Description	Updates selected fields in the Mobile Photo Viewer table and creates the URL link to the photo.