UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

OFFICE OF ENVIRONMENTAL CLEANUP
EMERGENCY RESPONSE UNIT

Site Specific Sampling Plan

Project Name: Stubblefield Salvage Yard Site ID: 10HD

Author: Jake Moersen Company: Ecology and Environment, Inc Date Completed: March 30, 2012

This Site Specific Sampling Plan (SSSP) is prepared and used in conjunction with the Quality Assurance Plan (QAP) for the Emergency Response Unit for collecting samples during this Removal Program project. The information contained herein is based on the information available at the time of preparation. As better information becomes available, this SSSP will be adjusted.

When inadequate time is available for preparing the SSSP in advance of the sampling event, a Field Sampling Form may be prepared on-site immediately prior to sampling. This full length version of the SSSP is written after the sampling event and the completed Field Sampling Form attached to it.

1. Approvals

Name, Title	Telephone, Email, Address	Signature
Jeffrey Fowlow **On-Scene Coordinator**	206-553-2751, fowlow.jeffrey@epa.gov USEPA, M/S: ECL-116, 1200 Sixth Ave. Suite 900, Seattle, WA 98101	Jeffrey Fowlow Digitally signed by Jeffrey Fowlow DN: cn=Jeffrey Fowlow, o=USEPA, ou=ECL/ERU, email=fowlow.jeffrey@epa.gov, c=US Date: 2012.05.02 11:38:14 -07'00'
Kathy Parker **ERU Quality Assurance Coordinator**	206-553-0062, parker.kathy@epa.gov USEPA , M/S: ECL-116, 1200 Sixth Ave. Suite 900, Seattle, WA 98101	Kathy Parker cn=Kathy Parker, o=USEPA, ou=OSC, email=parker.kathy@epa.gov, c=US 2012.05.02 11:32:38 -07'00'

I. Project Management and Organization

2. Personnel and Roles involved in the project:

Name	Telephone, Email, Company, Address	Project Role	Data Recipient
Jeffrey Fowlow	206-553-2751, fowlow.jeffrey@epa.gov USEPA , M/S: ECL-116, 1200 Sixth Ave. Suite 900, Seattle, WA 98101	On Scene Coordinator	Yes
Jake Moersen	206-624-9537, jmoersen@ene.com, E & E 720 Third Ave, Suite 1700, Seattle, WA 98104	Author of SSSP, START Project Manager	Yes
Kathy Parker	206 553 0062, parker.kathy@epa.gov USEPA , M/S: ECL-116, 1200 Sixth Ave. Suite 900, Seattle, WA 98101	ERU Quality Assurance Coordinator	No
Mark Woodke	206-624-9537, mwoodke@ene.com, E & E 720 Third Ave, Suite 1700 Seattle, WA 98104	START Quality Assurance Reviewer	Yes
Not Applicable		Laboratory contact	No

3. Physical Description and Site Contact Information:

Site Name	Stubblefield Salvage Yard	
Site Location	980 NW Offner Road, Walla Walla, Washington, 99362 Latitude: 46.065044° N Longitude: 118.369051° W The site location is the attached Figure 1.	
Property Size	11.3 acres (current salvage yard footprint, see Figure 2)	
Site Contact	Adena Hodgins	**Phone Number:** Not available
Nearest Residents	Immediately adjacent to site	**Direction: Southern border of site**
Primary Land Uses Surrounding the Site	Municipal (Walla Walla Wastewater Treatment Plant [WWTP]), farmland, residential. Mill Creek and Myra Road are also in the vicinity of the site.	

4. The proposed schedule of project work follows:

Activity	Estimated Start Date	Estimated Completion Date	Comments
SSSP Review/Approval	03/29/2012	04/07/2012	
Mobilize to / Demobilize from Site	04/08/2012	04/13/2012	
Sample Collection	04/10/2012	04/12/2012	
Laboratory Sample Receipt	Not applicable	Not applicable	
Laboratory Analysis	Not applicable	Not applicable	
Data Validation	Not applicable	Not applicable	

5. Historical and Background Information

Describe briefly what you know about the site that is relevant to sampling and analysis for this investigation.

The Stubblefield Salvage Yard site was a salvage/scrap yard for over 60 years until it ceased operation in 2010. Emory Stubblefield was the original owner/operator of the facility until his death in 2008 (the estate is currently represented by Adena Hodgins). The salvage yard was initially 40 acres in size but has been subdivided with parcels sold to the City of Walla Walla, the County of Walla Walla, and Myra Road Properties LLC, a real estate development site. The current property of 11.3 acres is located in the eastern section of the original site.

EPA and START visited the site three times in 2009 (May, September, and October), two times in 2010 (March and October), and once in 2011 (June).

The May 2009 site visit was a limited preliminary removal assessment to determine if sufficient contamination, or threat of contamination, existed to justify a removal action. This removal assessment established the presence of incorrectly labeled drums, open steel tanks, and other containers of hazardous substances including metals, pesticides, polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), oil, and friable chrysotile asbestos-containing material (ACM) including cement asbestos siding (CAB).

The September 2009 site visit was a removal assessment to perform soil, bulk, and subsurface sampling. The removal assessment found contamination in surface and subsurface boreholes throughout the site at concentrations that exceeded the State of Washington Model Toxics Control Act (MTCA) Unrestricted Cleanup Levels and EPA Regional Screening Levels (RSLs) for residential properties. The removal assessment identified a source area that was heavily impacted by hydrocarbons, metals, PCBs and SVOCs.

The October 2009 removal action was performed to address contamination identified during the two previous removal assessments. This removal action resulted in the disposal of a number of 55-gallon drums and their contents, ACM from the side of the shop building and from a pile of debris found at the site, and surface soil with metals contamination. The primary source area identified during the removal assessment was not addressed because ongoing release of hydraulic fluid was witnessed in the vicinity of the operational bailer machine. EPA determined that additional removal actions would not be conducted until the source area could be characterized in greater detail and the ongoing release of hydraulic fluid could be evaluated.

In March 2010 START submitted to EPA an Alternatives Evaluation report that outlined several potential removal action alternatives. During the course of preparing the Alternatives Evaluation, EPA determined that four monitoring wells should be installed to determine the impact from the source area on groundwater. The subsequent removal assessment included the installation and sampling of four monitoring wells. The October 2010 removal assessment was performed to collect groundwater samples from the four previously installed monitoring wells.

In October 2010 START mobilized to the site to collect groundwater samples from the four monitoring wells installed during the previous site visit.

In June 2011 START mobilized to the site to further characterize the horizontal and vertical extent of contamination in the main process area using direct push subsurface soil sampling technology. The field event included the collection of groundwater samples from some of the soil sampling locations in addition to groundwater samples from the four monitoring wells.

The site work addressed by this SSSP pertains to the collection of samples from approximately 50 drums containing unknown substances and approximately 13 drums containing purge water and other investigation-derived waste (IDW) water.

6. Conceptual Site Model

Example: Contaminant: Mercury
Transport Mechanism: vapor moving on air currents
Receptors: people living in the house

Contaminants: Unknowns in 50 drums and potentially metals (arsenic, cadmium, chromium, lead, mercury), PCBs, PAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and indeno(1,2,3-cd)pyrene), volatile organic compounds (VOCs), asbestos-containing materials, pesticides, and total petroleum hydrocarbons (TPHs; diesel and oil range) in the 13 IDW drums.

Transport Mechanisms: Contaminants on-site may be transported by vertical migration through soil to groundwater, and by surface runoff to surface water (Mill Creek). Contaminated soil and vapors can be a direct contact hazard both on site and off site.

Receptors: Recreational users or trespassers, residential users living near the site, site workers, terrestrial ecological receptors on site, and aquatic ecological receptors in Mill Creek.

7. Decision Statement

Examples: 1) Determine whether surface contamination exceeds the established action level;
2) Determine appropriate disposal options for contaminated materials.

The decision(s) to be made from this investigation is/are to:

1.) Determine the hazard category of the drum contents and potential disposal options.
2.) Determine if the drum contents have spilled or leaked based on visual observation.

8. Action Level

State the analyte, concentration, and units for each selected action level. Describe the rationale for choosing each action level and its source (i.e. MTCA, PRG, ATSDR, etc.) Example: The action level for total mercury in soil is 6.7 mg/kg (from Regional Screening Level residential).

Hazard Categorization Limits:
pH $\leq$ 2 or $\geq$12.5
Flashpoint <140^{0}C

II. Data Acquisition and Measurement Objectives

9. Site Diagram and Sampling Areas

A Sampling Area is an area within in which a specific action will be performed.
Examples : 1) Each drum on the site is a Sampling Area;
2) Each section of sidewalk in front of the residence is a Sampling Area;
3) Each sampling grid section is a Sampling Area.

Each drum is a sampling area.

The site diagram is the attached Figure 2.

10. The Decision Rules

These can be written as logical If…, Then.. statements. Describe how the decisions will be made and how to address results falling within the error range of the action level. Examples: 1) In the Old Furnace Sampling Area, the soil in the area around the furnace structure will be excavated until sample analysis with XRF shows no mercury concentrations in surface soil above the lower limit of the error associated with the action level, 18.4 mg/kg. 2) If the concentrations of contaminants in a SA are less than the lower limit of the error associated with the action level, then the area may be characterized as not posing an unacceptable risk to human health or the environment and may be dismissed from additional RP activities. The area may be referred to other Federal, State or Local government agencies.

The following statement(s) describe the decision rules to apply to this investigation:
If drum sample results exceed the limits listed in Section 8, the material will be categorized as hazardous and may be subjected to additional sampling and analyses and will be disposed of appropriately.
If drum sample results do not exceed the limits listed in Section 8, the material will be categorized as non-hazardous and may be subjected to additional sampling and analyses and will be disposed of appropriately.
If the soil around the drums appears to be stained due to leaks or spills, additional samples may be collected.

11. Information Needed for the Decision Rule

What information needs to be collected to make the decisions – this includes non-sampling info as well: action levels, climate history, direction of water flow, etc. Examples: Current and future on-site and off-site land use; wind direction, humidity and ambient temperature; contaminant concentrations in surface soil.

The following inputs to the decision are necessary to interpret the analytical results:
Previous contaminants found at the site.
Hazard categorization results.
Evidence of material releases from the drums to surrounding soils.

12. Sampling and Analysis

For each SA, describe:

1. *sampling pattern (random, targeted, scheme for composite)*
2. *number of samples, how many to be collected from where, and why*
3. *sample type (grab, composite)*
4. *matrix (air, water, soil)*
5. *analytes and analytical methods*
6. *name and locations of off-site laboratories, if applicable.*

An estimated 63 targeted grab drummed-material samples will be collected for hazard categorization testing following the START Standard Operating Procedure. Analyses will be performed on-site by START personnel. If more than one phase is found in a drum, additional samples may be collected for the additional phases. No fixed laboratory analyses are anticipated.

13. <u>Applicability of Data</u> (place an X in front of the data categories needed, explain with comments)

Do the decisions to be made from the data require that the analytical data be:
1) definitive data, 2) screening data (with definitive confirmation) or 3) screening data (without definitive confirmation)?

*___**A) Definitive data** is analytical data of sufficient quality for final decision-making. To produce definitive data on-site or off-site, the field or lab analysis will have passed full Quality Control (QC) requirements (continuing calibration checks, Method Detection Limit (MDL) study, field duplicate samples, field blank, matrix spikes, lab duplicate samples, and other method-specific QC such as surrogates) AND the analyst will have passed a Precision and Recovery (PAR) study AND the instrument will have a valid Performance Evaluation sample on file. This category of data is suitable for: **1) enforcement purposes, 2) determination of extent of contamination, 3) disposal, 4) RP verification or 5) cleanup confirmation.***

Comments:

*___**B) Screening data with definitive confirmation** is analytical data that may be used **to support preliminary or intermediate decision-making** until confirmed by definitive data. However, even after confirmation, this data is often not as precise as definitive data. To produce this category of data, the analyst will have passed a PAR study to determine analytical error AND 10% of the samples are split and analyzed by a method that produced definitive data with a minimum of three samples above the action level and three samples below it.*

Comments:

*_X_**C) Screening data** is analytical data which has not been confirmed by definitive data. The QC requirements are limited to an MDL study and continuing calibration checks. This data can be used for making decisions: **1) in emergencies, 2) for health and safety screening, 3) to supplement other analytical data, 4) to determine where to collect samples, 5) for waste profiling, and 6) for preliminary identification of pollutants**. This data is not of sufficient quality for final decision-making.*

Comments: Hazard categorization will produce screening data to assist in determining disposal options.

14. Special Sampling or Analysis Directions

Describe any special directions for the planned sampling and analysis such as additional quality controls or sample preparation issues. Examples: 1) XRF and Lumex for sediment will be calibrated before each day of use and checked with a second source standard. 2) A field blank will be analyzed with each calibration to confirm the concentration of non-detection. 3) A Method Detection Limit determination will be performed prior to the start of analysis so that the lower quantitation limit can be determined. 4) If particle size is too large for accurate analyses, the samples will be ground prior to analysis. If the sample contains too much moisture for accurate analyses, the sample will be decanted and air dried prior to analysis.

The START SOP for Hazard Categorization testing will be utilized.

15. Method Requirements

[Describe the restrictions to be considered in choosing an analytical method due to the need to meet specific regulations, policies, ARARs, and other analytical needs. Examples: 1) Methods must meet USEPA Drinking Water Program requirements. 2) Methods must achieve lower quantitation limits of less than 1/10 the action levels.3) Methods must be performed exactly as written without modification by the analytical laboratory.]

Hazard categorization tests will meet disposal option requirements.

16. Sample Collection Information

[Describe any activities that will be performed related to sample collection]

The applicable sample collection Standard Operating Procedures (SOPs) or methods will be followed and include:

Field Activity Logbook SOP
Sampling Equipment Decontamination SOP
Instrument SOPs: PID/FID Operation SOP
Other SOPs: START Hazard Categorization SOP

17. Optimization of Sampling Plan (Maximizing Data Quality While Minimizing Time and Cost)

[Describe what choices were made to reduce cost of sampling while meeting the needed level of data quality. Example: The XRF will be used in situ whenever possible to achieve accurate results. Reproducibility and accuracy of in situ XRF analyses will be checked by collecting, air drying, analyzing and comparing five in situ samples at the start of sampling. Where interferences are suspected, steps will be taken to eliminate the interferences by mechanisms such as drying, grinding or sieving the samples or analyzing them using the Lumex with soil attachment.]

Field screening will be performed to maximize project resources while still providing the required information.

The format for sample number identification is summarized in Table 1. Sample collection and analysis information is summarized in Table 2.

Table 1
SAMPLE CODING

Project Name: __Stubblefield Salvage Yard____________________ **Site ID:** _10HD_____

SAMPLE NUMBER [1]

Digits	**Description**	**Code (Example)**
1,2,3,4	Year and Month Code	1204 (YYMM)
5,6,7,8	Consecutive Sample Number (grouped by SA as appropriate)	0001 (First sample of SA)

SAMPLE NAME / LOCATION ID [2]
(Optional)

1,2	Sampling Area	BG – Background DR – Drum LF – Landfill MW – Monitoring Well RS – Rinsate SI – Surface Impoundment TB – Trip Blank TK – Tank WL – Wetland WP – Waste Pile
3,4	Consecutive Sample Number	01 – First sample of Sampling Area
5,6	Matrix Code	AR – Air GW – Groundwater PR – Product SB – Subsurface Soil SD – Sediment SS – Surface Soil SW – Surface Water QC – Quality Control WT – Water
7,8	Depth (Optional)	01 (feet below ground surface)

Notes:
(1) The Sample Number is a unique, 8-digit number assigned to each sample.
(2) The Sample Name or Location ID is an optional identifier that can be used to further describe each sample or sample location.

Table 2. Sampling and Analysis

Data Quality	Sampling Area	Matrix	Sampling Pattern	Sample Type	Data Quality	Number of Field Samples	Analyte or Parameter	Method Number	Action Level	Method Quant. Limit	#/type of Sample Containers per Sample	Preservative	Hold Time	Field QC
Field Screen	All Decision Areas	l Product	Random	Grab	Screening	50	Hazard Category	START SOP	Flash <140°C and/or	Flash 80°C	1 8-ounce glass jar per sample	NA	NA	3 Duplicates
		Water	Targeted	Grab	Screening	50	Hazard Category	START SOP	pH $\leq$ 2 or $\geq$12.5	pH 1 and 14		NA	NA	3 Duplicates

Note: For matrix spike and/or duplicate samples, no extra volume is required for air (unless co-located samples are collected), oil, product, or soil samples except soil VOC or NWTPH-Gx samples (triple volume). Triple volume is also required for organic water samples (double volume for inorganic).

Table 3. Common Sample Handling Information

Analysis Type	Sub Analysis	Matrix	Analytical Method	Container Type	Minimum Volume	Preservative	Temperature/ Storage	Hold Time	Source
Metals	Metals Not including Mercury or Hexachrome. Includes TAL, PP, RCRA lists)	Solid	EPA 6000 / 7000 Series	Glass Jar	200 g	n/a	None	6 months	SW-846 ch. 3
		Aqueous	EPA 6000 / 7000 Series	PTFE or HDPE	600 mL	HNO_3 to pH < 2	Not listed	6 months	SW-846 ch. 3
	Mercury	Solid	EPA 7471B	Glass Jar	200 g	n/a	≤ 6° C	28 days	SW-846 ch. 3
		Aqueous	EPA 7470A	PTFE or HDPE	400 mL	HNO_3 to pH < 2	Not listed	28 days	SW-846 ch. 3
	Hexavalent Chromium, (Hexachrome, Cr+6)	Solid	Lab-specific soil extraction modification, EPA 7196A	Glass Jar	100 g	n/a	≤ 6° C	28 days to extraction	SW-846 ch. 3
		Aqueous	EPA 218.6 (Drinking Water)	PTFE or HDPE	400 mL	n/a	≤ 6° C	24 hours	SW-846 ch. 3
	XRF	Solid (in situ; on the ground surface)	6200	none	n/a	none	none	Analyze Immediately	n/a
		Solid (ex situ)	6200	plastic bag	200 g	none	none	6 months	n/a
VOCs	VOCs / BTEX	Solid	EPA 5035 / 8260B	*	*	*	*	2 days to lab / 14 days	SW-846 ch. 4
		Aqueous	EPA 8260B	Amber Vial with Septa Lid	2 x 40 mL	HCl to pH< 2	≤ 6° C (headspace free)	14 days	SW-846 ch. 4
SVOCs	SVOCs / PAHs	Solid	EPA 8270D	Glass Jar	8 ounces	n/a	≤ 6° C	14 days	SW-846 ch. 4
		Aqueous	EPA 8270D	Amber Glass	2 x 1 L	n/a	≤ 6° C	7 days	SW-846 ch. 4
PCBs and Dioxins/Furans	PCBs	Solid	EPA 8082	Glass Jar	8 ounces	n/a	≤ 6° C	none	SW-846 ch. 4
		Aqueous	EPA 8082	Amber Glass	2 x 1 L	n/a	≤ 6° C	none	SW-846 ch. 4
	Dioxins/Furans	Solid	EPA 8280 or 8290	Glass Jar	8 ounces	n/a	≤ 6° C	none	SW-846 ch. 4
		Aqueous	EPA 8280 or 8290	Amber Glass	2 x 1 L	n/a	≤ 6° C	none	SW-846 ch. 4
Pesticides and Herbicides	Chlorinated Pesticides	Solid	EPA 8081	Glass Jar	8 ounces	n/a	≤ 6° C	14 days	SW-846 ch. 4
		Aqueous	EPA 8081	Amber Glass	2 x 1 L	n/a	≤ 6° C	7 days	SW-846 ch. 4
	Chlorinated Herbicides	Solid	EPA 8151	Glass Jar	8 ounces	n/a	≤ 6° C	14 days	SW-846 ch. 4
		Aqueous	EPA 8151	Amber Glass	2 x 1 L	n/a	≤ 6° C	7 days	SW-846 ch. 4
NWTPH	Gasoline-Range Organics	Solid	TPHs/NWTPH-Gx	Amber Glass Jar with Septa Lid	4 ounces	n/a	≤ 6° C (headspace free)	14 days	Method
		Aqueous	TPHs/NWTPH-Gx	Amber Vial with Septa Lid	2 x 40 mL	pH < 2 with HCl	≤ 6° C (headspace free)	7 days unpreserved 14 days preserved	Method
	Diesel-Range Organics	Solid	3510, 3540/3550, 8000	Glass Jar	8 ounces	n/a	≤ 6° C	14 days	Method
		Aqueous	3510, 3540/3550, 8000	Glass Amber	2 x 1 L	pH < 2 with HCl	≤ 6° C	7 days unpreserved 14 days preserved	Method
Geotechnical	Particle Size	Solid	ASTM D-422	Glass Jar or	2 x 8	none	n/a	n/a	Method

Analysis Type	Sub Analysis	Matrix	Analytical Method	Container Type	Minimum Volume	Preservative	Temperature/ Storage	Hold Time	Source
	Analysis			Plastic Bag	ounce				
Miscellaneous	pH	Solid	EPA 9045	Glass Jar	8 ounces	n/a	n/a	Analyze Immediately	SW-846 ch. 3
		Aqueous	EPA 9040	PTFE	25 mL	n/a	n/a	Analyze Immediately	SW-846 ch. 3
	Total Organic Carbon (TOC)	Solid	SW-846 9060	Glass Jar	100 mL	n/a	≤ 6° C	28 days	SW-846
		Aqueous	EPA 415.1	PTFE or HDPE	200 mL	store in dark HCL or H_2SO_4 to pH <2	≤ 6° C	7 days unpreserved 28 days preserved	Method
	Cyanide	Solid	SW-846 9013	Glass Jar	5 g	n/a	≤ 6° C	14 days	SW-846 ch. 3
		Aqueous	SW-846 9010C	PTFE or HDPE	500 mL	NaOH to pH > 12	≤ 6° C	14 days	SW-846 ch. 3
	Conductivity	Aqueous	EPA 120.1	PTFE or HDPE	100 mL	n/a	n/a	Analyze Immediately	Method
	Hardness	Aqueous	EPA 130.1	PTFE or HDPE	1 x 1 L	HNO3 to pH<2	≤ 6° C	28 days	Method
	Total Suspended Solids	Aqueous	EPA 160.2	PTFE or HDPE	100 mL	n/a	≤ 6° C	7 days	Method
	Total Dissolved Solids	Aqueous	EPA 160.1	PTFE or HDPE	100 mL	n/a	≤ 6° C	7 days	Method
	Nitrate/nitrite	Aqueous	EPA 353.2	PTFE or HDPE	1 x 250 mL	H_2SO_4 to pH <2	≤ 6° C	28 days	Method
	Nitrate	Aqueous	SW-846 9210A	PTFE or HDPE	1,000 mL	n/a	≤ 6° C	28 days	SW-846 ch. 3
	Nitrite	Aqueous	SW-846 9216	PTFE or HDPE	25 mL	n/a	≤ 6° C	48 hours	SW-846 ch. 3, Method
	Fluoride	Aqueous	SW-846 9214	PTFE or HDPE	300 mL	n/a	≤ 6° C	28 days	SW-846 ch. 3
	Chloride	Aqueous	SW-846 9250	PTFE or HDPE	50 mL	n/a	≤ 6° C	28 days	SW-846 ch. 3
	Sulfate	Aqueous	SW-846 9035	PTFE or HDPE	50 mL	n/a	≤ 6° C	28 days	SW-846 ch. 3
	Sulfide	Solid	SW-846 9215	Glass Jar	1 x 4 ounces	Fill sample surface with 2N zinc acetate until moistened.	≤ 6° C (headspace free)	7 days	SW-846 ch. 3
		Aqueous	SW-846 9031	PTFE or HDPE	100 mL	4 drops 2N zinc acetate/100 mL sample; NaOH to pH>9.	≤ 6° C (headspace free)	7 days	SW-846 ch. 3

Key:

*	= See individual methods. We typically collect 3xEnCore-type samplers and 1x40 mL VOA vial per sample, keep at ≤ 6°C with no chemical preservative, and they must be at the lab within 48 hours of collection.				
C	= Celsius	HNO_3	= nitric acid	SVOCs	= semivolatile organic compounds
Cr	= chromium	L	= liter	SW-846	= EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods
EPA	= Environmental Protection Agency	mL	= milliliter	TAL	= Target Analyte List
g	=grams	n/a	= not applicable	TPH	= total petroleum hydrocarbons
H2SO4	= sulfuric acid	NaOH	= sodium hydroxide	VOA	= Volatile Organic Analysis
HCL	= hydrochloric acid	PCBs	= polychlorinated biphenyls	VOCs	= Volatile Organic Compounds
HDPE	= high-density polyethylene	PTFE	= polytetrafluoroethylene		
Hg	= mercury	RCRA	= Resource Conservation and Recovery Act		

III. Assessment and Response

A Sample Plan Alteration Form (SPAF) will be used to describe project discrepancies (if any) that occur between planned project activities listed in the final SSSP and actual project work. The completed SPAF will be approved by the OSC and QAC and appended to the original SSSP.

A Field Sampling Form (FSF) may be used to capture the sampling and analysis scheme for emergency responses in the field and then the FSF pages can be inserted into the appropriate areas of the final SSSP.

Corrective actions will be assessed by the sampling team and others involved in the sampling and a corrective action report describing the problem, solution, and recommendations will be forwarded to the OSC and the ERU QAC.

IV. Data Validation and Usability

The sample collection data will be entered into Scribe and Scribe will be used to print lab Chains of Custody. Results of field and lab analyses will be entered into Scribe as they are received and uploaded to Scibe.net when the sampling and analysis has been completed.

18. Data Validation or Verification will be performed by:

ERU's general recommendation on validation is that a minimum of CLP-equivalent stage IIA verification and validation be performed for every SSSP involving laboratory analyses. However, stage IIB is preferred if the lab can provide it. Dioxins should be validated at CLP-equivalent stage 4.

	Data Verification and Validation Stages						
Performed by:	I	IIA	IIB	III	IV	Verification	Other:
E and E QA Reviewer						100%	
TechLaw QA Reviewer							
EPA Region 10 QA Office							
MEL staff							
Other:							