GENERIC WORK PLAN OUTLINE
AND
SITE SAFETY PLAN
FOR
POTENTIALLY RESPONSIBLE PARTIES (PRPs)

Prepared for:

U.S. Environmental Protection Agency (U.S. EPA)
Region V
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Chicago, Illinois

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GENERIC PRP WORK PLAN

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GENERIC PRP WORK PLAN

OUTLINE

1.0 BACKGROUND

1.1 Introduction

- o Identify the Potentially Responsible Parties (PRPs).
- o Identify the Administrative Order (See Appendix A).

(NOTE: this approved work plan is a fully enforceable part of the order).

- o Identify project objectives. One objective is to address the issues raised by the U.S. Environmental Protection Agency (U.S. EPA) in the Administrative Order.
- o Briefly describe the scope of work to be completed pursuant to the Administrative Order. All work conducted pursuant to the Work Plan must be consistent with the National Contingency Plan (NCP) (40 CFR Part 300).
- o Estimate the duration of the project.

1.2 Site History - a chronological overview of past events.

- o Operational History - past owner(s)/operator(s).
- o Current site owner(s) and/or operator(s).
- o Regulatory involvement, including responses, investigations, litigations, and removal or remedial projects.
  - Local - e.g. fire and police departments, county health departments.
  - State - e.g. fire marshal, state environmental agencies.
  - Federal - e.g. U.S. EPA, Department of Transportation.
- o Results of previous sampling, testing, or other surveys.

1.3 Site Description

- o Type of facility and operational status.
- o Location of site: street address if one exists; if not, identify township or portion thereof, relation to closest road intersection, county, and state. Identify site on topographic map of immediate area and provide in plan.
- o Size of site (acreage and dimensions).
- o Buildings and structures on-site. Depict building, structures, storage areas, drums, tanks, etc. on diagram(s) of site, and provide in work plan.
- o Surrounding land use (e.g. residential, agricultural, commercial, industrial).
- o Population (adjacent or near the site).
- o Proximity to environmentally sensitive areas. Depict on topographic map provided in work plan.
- o Brief description of predominant contaminants suspected.
- o Topography of site and surrounding area.
- o Surface waters on or near site.
- o Geology (soils, groundwater depth, groundwater direction).

2.0 SITE MOBILIZATION

2.1 Site Safety - The Site Safety Plan must meet the Occupational Safety & Health Administration (OSHA) requirement of 29 CFR 1910.120. A generic Site Safety Plan, which would meet OSHA requirements when completed, is included in Appendix B.

All elements required by 29 CFR 1910.120 should be thoroughly discussed in the site safety plan without referencing the work plan. These elements concern hazardous waste operations and emergency response, which include matters such as the health and safety program, site characterization and analysis, site control training, medical surveillance, engineering control work practices, and personal protective equipment (PPE) for employee protection, monitoring and decontamination. The goal is to produce a safety plan that can be separated from the work plan and circulated to persons who enter the site. Therefore, if a topic is discussed in both the safety plan and the work plan, detail the topic thoroughly in the safety plan, incorporating the same topic in the work plan by reference.

2.2 Pre-work Meeting - Provide for a pre-work meeting between the PRP, U.S. EPA On-Scene Coordinator (OSC), cleanup contractor, and other contractors to discuss the approved work plan. All participants will read and formally acknowledge the provisions of the health and safety plan before initiating on-site

work. Provisions for site security, mobilization, emergency procedures, delegation of responsibilities, and channels of communication should also be discussed in detail.

2.3 Site Security - Describe types of security (e.g., guards, fencing, etc.). State the inclusive dates that site security will be required.

2.4 Site Control Measures - Site control, including contamination zone definition and other requirements of 29 CFR 1910.120 (d) must be addressed. Provide a site map, showing the safe zone, contamination zone, decontamination stations, and entry point into the contamination zone. A personnel decontamination trailer and provisions for vehicle/equipment decontamination, if they are necessary, can also be discussed in this section. The detailed discussion of this topic should be included in the site safety plan, but should also be referenced in this section of the work plan.

2.5 Office Trailers/Decontamination Trailers - Discuss the equipment standard with each trailer (e.g. copy machine, fax machine, telephones and first aid kits). U.S. EPA oversight personnel must be provided a work space in the office trailer and access to the above listed equipment.

2.6 Site Preparation - Most site preparation activities are subject to OSHA regulations in 29 CFR 1910 and 1926 (e.g., electrical installation is regulated in 1926, Subpart K; structural repair requiring the use of ladders and scaffolding is regulated in 1926, Subpart L).

2.7 Emergency Response Contingency Plan - Emergency plans should be discussed in detail in the site safety plan. That section of the site safety plan should be incorporated by reference into the work plan. Meetings should be conducted with local emergency response authorities within the first week of mobilization.

2.8 Estimate the time required for site mobilization. Include an overall project schedule or timeline in Appendix C.

2.9 Estimate personnel and equipment needs to complete the project.

3.0 SAMPLING ACTIVITIES

If sampling is required to determine the extent of contamination, a Quality Assurance Sampling Plan (QASP) should be developed that implements the following subsections. Refer to Generic Quality Assurance Project Plan (QAPP).

3.1 Statement of objectives - e.g. determine extent of contamination, identify sources, characterize waste streams, evaluate threat to human health and the environment.

3.2 Estimate the time required for sampling, compatibility testing, laboratory analysis, and determination of the extent of contamination.

3.3 Provide a Sampling Procedures/sampling plan and sampling procedures for each medium sampled.

(Update sampling plan to be consistent with Generic QAPP & Removal QAPP).

The sampling plan should include the following:

- Maps showing sampling locations.
- Description of sample identification system.
- List of sampling equipment to be used.
- Describe waste sampling (e.g. EPA SW846 sample methods, EPA compendium for sampling of wastes).
- Discuss on-site sample screening (e.g. Photovac, X-Met, mobile laboratory, etc).
- Describe sampling procedures for each matrix (e.g., soil, liquid, sludge, water, air, contaminated wastes) that will sampled.
- Adopt sampling procedures that will ensure a representative sample.
- Include the number of field duplicates (FDSs), blanks and MS/MSD samples to be collected (e.g. 10% of samples should be duplicates and 5% MS/MSDs).
- Describe decontamination procedures for sampling equipment to avoid cross contamination.
- Describe types and numbers of sample bottles required.
- Include types and quantities of preservatives to be used.
- Describe procedures to maintain chain-of-custody of samples.

3.4 Sample Shipping - Sample shipping is subject to 49 CFR, Parts 171-179 or IATA Dangerous Goods Regulations.

3.5 Analysis

- List laboratory to perform analyses, if known.
- List target compounds to detect.
- If compatibility testing or other analysis is to be performed on-site, methods and procedures should be discussed. Include compatibility tree diagram.
- Analytical methods - The use of standard U.S. EPA methods (e.g. SW846 Methods) which will satisfy the QA2 Data Quality Objective (DQO) is required. If other than QA2 level is used, explain in detail which level has

been chosen and the rationale for that QA level (e.g. "QA1 field screening to identify areas of contamination"). Analytical methods can be discussed in detail by attaching the cleanup contractor's quality assurance/quality control specifications as an appendix. This appendix should also describe the clean-up contractor/OSC agreement regarding the laboratory to be used and the extent of data required.

4.0 REMOVAL ACTIVITIES

For each removal activity that will take place (e.g. excavating soil, removing aboveground and underground tanks, decontaminating vats, demolishing buildings), discuss:

4.1 Cleanup Criteria - (see OSC for latest guidance); examples:

- For PCBs: 40 CFR Part 761, Subpart G;
- For asbestos: 29 CFR Section 1926.58;
- For drinking water: U.S. EPA memorandum, Subject: Update to Numeric Action Levels for Contaminated Drinking Water Sites, April 11, 1991.
- For soils: refer to standards set by the Agency for Toxic Substances and Disease Registry (ATSDR).

4.2 Site Cleanup Activities - Activities must comply with all applicable regulations. Some topics to consider are provided below. Use only sections which are applicable to site.

- Buried wastes and waste migration.
- Groundwater monitoring and sampling.
- Sampling of soil, water, air, and other wastes.
- Air monitoring.
- Treatment of hazardous wastes, for example:
  - Hazardous waste recycling.
  - Stabilization/solidificat ion of hazardous wastes.
  - Waste incineration.
  - In situ treatment of contaminated soil.
  - Off-site transport and disposal.
- Cleanup of surface tanks and drums.

- o Management of hazardous waste landfill leachate.
- o Leachate plume management.
- o Dust control.
- o Decontamination of buildings, structures, and equipment.
- o Drum handling practices.
- o Subsurface soil and groundwater treatment.
- o Other treatment technologies, including:
  - bioremediation
  - in-situ vitrification (ISV)
  - solvent extraction
  - air stripping, etc.

For example, handling drums and containers is regulated in part by 29 CFR 1910.120 (j). Further technical guidance is contained in National Technical Information Service (NTIS) PB-87-110-672 "Guidance Document for Cleanup of Surface Tank and Drum Sites", and PB-86-165-362 "Drum Handling Practices at Hazardous Waste Sites". Further guidance pertaining to all of the above topics, as well as handling procedures for buried drums which are corroded and contain product, can be obtained from the Catalog of Superfund Program Directives, OSWER Directive 9200.7-01.

For each applicable section addressed, discuss:

- o Off-site and on-site treatment methods (e.g. landfilling, incineration, in situ stabilization, etc.)
- o Bulking of hazardous or non-hazardous materials.
- o Storage and disposal of decontamination rinseates, spent protective clothing, sorbent pads, and all other wastes generated during the cleanup.
- o Treatability studies. Have such studies been conducted previously, or will they be performed on-site?

4.3 Waste Disposal

- o Provide a table showing waste streams and their corresponding disposal facilities.
- o If disposal facilities have not yet been determined, disposal alternatives and decision criteria can be presented in this section.

- o CERCLA Section 121 (d) (3) requires that hazardous substances, pollutants, or contaminants transferred off-site for treatment, storage, or disposal during a CERCLA response action be transferred to a facility operating in compliance with RCRA Section 3004 and 3005, as amended, and other applicable laws or regulations.

- o U.S. EPA published a revised off-site disposal policy (40 CFR 300.440) in the Federal Register on November 29, 1988.

  All materials containing hazardous substances, pollutants, or contaminants removed, shall be disposed of or treated at a facility approved by the On-Scene Coordinator and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. Section 6901, et seq., as amended, the U.S. EPA Revised Off-site Policy, and all other applicable federal, state, and local requirements (see Administrative Order).

- o Regulations for packaging, marking, labeling, and shipping hazardous materials and wastes are promulgated by the U.S. Department of Transportation and described in 49 CFR, parts 171-179. These regulations apply to shipment and transportation by non-commercial and common carrier. The current edition of the IATA Dangerous Goods Regulations applies to shipment and transportation of hazardous materials by air carrier.

4.4 Estimate the time required for each removal activity, disposal analysis, and disposal.

5.0 SITE RESTORATION/PROJECT CLOSE-OUT ACTIVITIES

- o Discuss demobilization procedures.

- o Describe site restoration activities that will be executed, if any.

- o Discuss "post-removal site control". Post-removal site control refers to those activities that are necessary to sustain the integrity of a removal action following its conclusion (e.g. relighting gas flares, replacing filters, and collecting leachate). The work plan must identify the post-removal site control activities that will be necessary, and the party responsible (e.g. PRP or local government) for conducting those activities.

- o Discuss consistency of site restoration/closeout activities with the proposed remedial action for the site.

- o Discuss any monitoring, operations and maintenance (O & M), and long-term sampling to be conducted with regard to the site.

6.0 PROJECT MANAGEMENT

6.1 Responsibilities and functions - **NOTE:** The Site Safety Plan, at a minimum, must discuss the delegation of safety protocol enforcement and emergency responsibilities. In addition, the following contractor and subcontractor responsibilities should be discussed in the Site Work Plan and also in the Site Safety Plan, when applicable.

Identify, by name, the individuals who will be responsible for the following areas:

- Over-all project planning, including coordination of support from the cleanup contractor and its subcontractors, maintaining the project schedule, and amending the work plan as new activities arise.
- Administration of the work plan in the field, including directing on-site work, anticipating problems that will affect the project schedule, and anticipating the need for support personnel and equipment.
- Daily communication verbally or in writing, with the OSC regarding site clean-up progress and any problems encountered.
- Maintaining a site entry and exit log, and formally documenting other site activities.
- Preparing progress reports for submission to the U.S. EPA.
- Managing procurement activities, including purchase orders and subcontracts.
- PRP responsibilities - A representative for the PRP should be identified and his/her lines of communication established.

The work plan must include an organizational chart for all personnel involved in site remediation. The chart should include the PRP; U.S. EPA; U.S. EPA contractors; PRP subcontractors; laboratories; treatment, storage, & disposal facilities (TSDFs); etc.

6.2 Project Schedule - See Appendix C.

6.3 Final Report - Submit a copy of the final report to the U.S. EPA for final review and comment (see Appendix A - Administrative Order for further details).

6.4 Final Disposal Summary - include a final disposal summary, listing the types of wastes, quantities, dates shipped, manifest numbers, TSDF facility (name and address) in tabular form. Reference the disposal summary with the final report.

APPENDICES

APPENDIX A -	ADMINISTRATIVE ORDER
APPENDIX B -	SITE SAFETY PLAN
APPENDIX C -	PROJECT SCHEDULE / TIMELINE
APPENDIX D -	PRELIMINARY ANALYTICAL DATA SUMMARY (if previous data is available).
APPENDIX E -	QUALITY ASSURANCE PROJECT PLAN (QAPP)
APPENDIX * -	Cleanup contractor's standard operating procedures, such as field monitoring instrument calibration procedures and sampling procedures.
APPENDIX * -	Cleanup contractor's (or subcontractor's) analytical quality assurance/quality control package, listing analytical methods, QA/QC, laboratory personnel, etc.

APPENDIX A

ADMINISTRATIVE ORDER

APPENDIX B

SITE SAFETY PLAN

APPENDIX C

PROJECT SCHEDULE / TIMELINE FORMAT

SAMPLE FORMAT FOR PROJECT SCHEDULE PRESENTATION

SITE NAME
SITE LOCATION

MONTH/YEAR

ACTIVITY*	1234567891								0	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
REMOVAL/DISPOSAL OF LOOSE ASBESTOS				<----->			<->																	<---------->						
ENCAPSULATION OF FRIABLE ASBESTOS												<----->																		
TANK SAMPLING																														
DECONTAMINATION OF BUILDING SURFACES				<---------->						<---------->						<---------->					<->		<---------->						
REMOVAL OF BURIED TANKS												<---------->												<---------->						
REMOVAL/DISPOSAL OF CONTAMINATED DEBRIS					<---------->																<->		<----->							
ON-SITE TREATMENT OF SPENT DECONTAMINATION WATER																														
REMOVAL/DISPOSAL OF HAZARDOUS LIQUIDS AND SLUDGES					<---------->					<---------->																				
EXTENT OF CONTAMINATION STUDY				<---------->						<---------->								<---------->					<->		<---------->					
SITE MANAGEMENT				<---------->						<---------->								<---------->					<->		<---------->					

* The activities list should parallel the activities enumerated in the work plan. Included mobilization and demobilization periods.

APPENDIX D

PRELIMINARY ANALYTICAL DATA SUMMARY

APPENDIX E

QUALITY ASSURANCE PROJECT PLAN (QAPP)

(Insert QAPP here)

Quality Assurance Sampling Plan