APPENDIX D2
TRANSPORTATION PLAN

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PREFACE

This appendix includes an annotated outline that identifies potential content for a Transportation Plan. This outline is not intended to be prescriptive and should be adjusted as appropriate for the site-specific conditions.

The outline included in this appendix is for guidance only, and is applicable on a case-by-case basis. Some elements of the outline may apply to your site, while other elements may not. Additional elements than are addressed by this outline may also be needed.

INTRODUCTION

This appendix provides guidelines for the development and implementation of transportation plans for the cleanup of sites with metal-impacted soils. It is based primarily on the DTSC *Transportation Plan, Preparation Guidance for Site Remediation* (DTSC, 1994), and includes considerations for transporting metals-impacted soils.

DETERMINE IF A TRANSPORTATION PLAN IS NECESSARY

Not all soil removal actions require a formal transportation plan, and those seeking to conduct a soil removal should confer with DTSC to determine if a plan is necessary. The primary consideration in making such a determination is whether there are significant transportation-related issues. Considerations which must be evaluated in making this decision include:

- Characteristics and volume of material to be removed;
- Distance of transport;
- Contamination control;
- Community concerns;
- Sensitive environments;
- Worker safety and protection; and
- If a transportation plan is legally required (such as at abandoned sites).

DTSC will work with responsible parties to evaluate these criteria and determine whether a transportation plan is required. The evaluation will vary from site to site, and the final determination must be based on the most sensitive factors for each individual site. For instance, transportation plans may be required for small volumes of soil if there are other strong concerns (such as community concerns or worker safety). Conversely, transportation plans may not be required for large soil excavations and removals if the soil is non-hazardous, the relative hazard is low, community concerns have been addressed, and the potential for transportation-related exposures are low.

If a determination is made that a transportation plan is unnecessary, the DTSC project

manager will document this decision in the administrative record.

In the event DTSC concludes that a transportation plan will be necessary, the annotated outline included in this appendix could be used to guide its development.

RECOMMENDED RESOURCES

DTSC GUIDANCE

DTSC. 1991. Hazardous Materials Transportation Guides. www.dtsc.ca.gov/HazardousWaste/Transporters/upload/SMB_Tranportation-Plan-Guidances.pdf

DTSC. 1994. Transportation Plan, Preparation Guidance for Site Remediation. Interim Final. May. www.dtsc.ca.gov/HazardousWaste/Transporters/upload/SMB_Transportation-Plan.pdf

FEDERAL GUIDANCE

U.S. Department of Transportation (USDOT) - Hazardous Materials Transportation Guide. www.ehso.com/dotpages.htm

USDOT. National Transportation Library. Hazardous Materials Transportation Guides. ntl.bts.gov/DOCS/hmtg.html.

ANNOTATED OUTLINE FOR TRANSPORTATION PLAN

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1.0 PURPOSE AND OBJECTIVE

Instructions: Clearly and concisely state the purpose and objective of the transportation plan. This can include a short summary of the headings listed below (waste characteristics, destination, mode of transportation, route(s), traffic control and loading, record keeping, health and safety, and transportation contingency plan(s).

2.0 CHARACTERISTICS OF WASTE/MATERIAL TO BE TRANSPORTED

Instructions: Provide specific information regarding the impacted soil which is being transported offsite. This should include information on the soil source, appearance, approximate quantity (generally in cubic yards), and the nature of the contaminants present. Describe the regulatory waste classification of the soil (e.g., California Hazardous Waste, Designated Waste, RCRA Waste) and basis for the determination. Describe any local, state, or federal statues, regulations, or ordinances which apply to the transport of the material. Describe the hazards associated with the soil. If special procedures are required for handling, transportiing, or mixing of the soils based on their characteristics, these procedures should also be described. If appropriate, reference other investigation documents which describe soil characteristics and hazards.

3.0 DESTINATION OF WASTE/MATERIAL

Instructions: All metals-impacted soil must be disposed at a certified facility. The facility or facilities where the impacted soil is being transported should be identified, including the name, address, phone number, and contact persons for each facility. The methods of soil disposition (landfill, recycling, treatment, stabilization) should also be briefly described.

4.0 TRANSPORTATION MODE

Instructions: Identify the means by which the material will be transported (e.g., truck, rail), and what types of vessels, containers, and special features (dust covers) will be used to contain the material during transport. Describe each type of vehicle to be used. Indicate the volume of soil anticipated to be transported in each vehicle type. If available, identify the name of the transportation company. If the material is a hazardous waste, indicate that the transporter must possess a valid certification. Include provisions to ensure that all vehicles used for transport are properly registered, operated, and placarded in compliance with local, state, and federal regulations

5.0 ROUTE DESCRIPTION

Instructions: Describe the primary and alternate routes to be used during transport. Describe why these are the preferred routes in terms of avoiding restricted roads, peak traffic hours, hazardous road conditions, seasonal hazards, etc. Include maps which depict the entire route, and which clearly identify routine stops (e.g., weigh stations), emergency response resources, and repair facilities. Verify that access to designated routes is not restricted by the California Highway Patrol (CHP) or local agencies.

Include an estimate of the one-way time from the site to the facility. State the maximum and average number of round trips required per day, and how many vehicles will be required per day. Provide a schedule for the operation which identifies the period, days, and approximate times of the day trucks will be in operation.

Develop a notification list of emergency service organizations (e.g., fire departments, ambulance services, emergency response organizations), law enforcement agencies, and transportation authorities (e.g., Cal Trans, Public Utilities Commission) that have jurisdiction along the proposed route. Consider notifying these organizations prior to commencement of transportation activities.

6.0 TRAFFIC CONTROL AND LOADING PROCEDURES

Instructions: Discuss the procedures to be used by transportation personnel for entering and leaving the site. Describe any truck staging areas to be utilized near the site. Identify any local traffic problems or hazards. Consider such elements as rush hour traffic, school children, public transportation, etc. Identify the need for lane closures, traffic control signs, flagmen, and other traffic measures. Identify any city and/or county requirements related to traffic controls near the site.

Describe in detail (using maps and diagrams as necessary) on-site traffic and loading procedures (e.g., loading, covering, weighing, decontamination, dust control). Describe how and where each step of the loading process will be conducted. Discuss the methods that will be utilized to minimize releases of material during loading and prior to covering/sealing the container. When transporting contaminated soil, containers that do not have a permanent, fixed cover (e.g., dump truck, rail car) should be sealed with quick hardening foam, tarpaulin, or other appropriate material. Describe the methods that will be employed to seal/cover cargo containers prior to departure from the site to prevent the release of hazardous waste/substances during transport.

Certain site characteristics will have a bearing on the degree of environmental monitoring necessary to monitor for releases of materials. These factors include location, accessibility, environmental features, land use, demography, traffic patterns, public perception, hours and frequency that transportation will take place, entrance and egress control, and local routing. Describe any environmental monitoring to be conducted during loading.

All vehicles leaving the site will require inspection to ensure proper loading, covering/sealing, decontamination, placarding, and manifesting. Describe how such inspections will be conducted and documented.

7.0 RECORD KEEPING

Instructions: For each vehicle moving contamination material offsite, it will be necessary to record the date, time, weight/volume of material, type of material, trucking company, driver, and vehicle used for each trip. Discuss how such records will be created and maintained. Describe how personnel will be trained and instructed in record keeping procedures.

Identify all transportation documents, specifically those required by law to be carried with the load. State precisely where such documents will be carried. As appropriate, such documents may include: bill of lading identifying the shipment, analytical results representing the load, hazardous waste manifest, maps and complete instructions describing the route to be traveled, and special instructions including emergency procedures and contacts for the transporter.

8.0 HEALTH AND SAFETY

Instructions: Describe health and safety procedures during loading as they apply to transportation personnel. All workers should be properly trained in hazardous waste operations in accordance with 29 CFR 1910.120 and CCR Title 8 Section 5192. State the type of health and safety training that will be provided to site personnel and vehicle operators. Describe what personnel will and will not be permitted to do, based on training, during loading. Discuss how the health and safety plan will be communicated to drivers (e.g., tailgate meetings) and how the plan will be enforced.

Describe notification procedures and contingency plans for accidents and breakdowns enroute. Notification procedures should identify key personnel who will be responsible for implementing the contingency plan. Indicate that each driver should carry a copy and demonstrate an understanding of the plan. Large scale removals often involve several independent trucking companies, which will require identification of a transportation coordinator who is accessible 24 hours a day during hauling operations and has the ability to communicate with and direct activities of each driver on and off the site. The plan should also contain an organizational structure showing the chain of command for all trucking companies involved.

Include a comprehensive personnel contingency plan which outlines the steps to be taken in the event of an injury and/or exposure to contaminants. Indicate that the plan should be available to all personnel working at the site. The site safety officer should review the plan with any contractors, subcontractors, and their employees prior to commencing work on the site. Identify key personnel and their alternates who will be responsible for on-site safety and response operations.

9.0 CONTINGENCY PLAN

Instructions: Include a contingency plan for accidental off-site releases which is distributed to the emergency service organizations, law enforcement agencies, and transportation authorities with jurisdiction along the proposed route. At a minimum, include contaminant descriptions, hazard analysis, and methods for the containment and cleanup of an accidental release. Provide sufficient information to allow emergency service organizations to determine if evacuation is necessary. Indicate that all drivers should carry a copy of the transportation plan and be trained to implement provisions of the contingency plan for which they are equipped and capable.