Hazardous Substances Plan

Sacramento Municipal Utility District

Hydro License Implementation • June 2015

Upper American River Project

FERC Project No. 2101

Powering forward. Together.

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1.0 Introduction

This Hazardous Substances Plan (HSP) has been prepared according to the terms and conditions found in the Order Issuing New License for the Sacramento Municipal Utility District's (SMUD) Upper American River Project (UARP), issued by the Federal Energy Regulatory Commission (FERC)(FERC 2014). Specifically, condition 11 of the final 4(e) conditions issued by the United States Forest Service (USFS) for the UARP is in Appendix B of the new License, Condition 4-11 of the final 4(e) conditions issued by the Bureau of Land Management (BLM) is in Appendix C, and Condition 24 of the Water Quality Certification for the UARP issued by the California State Water Resources Control Board (SWRCB) is in Appendix A. The language from these conditions can be found at the end of this HSP.

The Project facilities within the Eldorado National Forest (ENF) and subject to this plan are all located within El Dorado County, California. The UARP is composed of eight developments: seven are existing developments and one is proposed. The existing developments from upstream to downstream are: 1) Loon Lake; 2) Robbs Peak; 3) Jones Fork; 4) Union Valley; 5) Jaybird; 6) Camino; and 7) Slab Creek/White Rock and the proposed development is Iowa Hill (all developments are located in El Dorado County). Together, the existing developments include 11 reservoirs that can store up to 425,000 acre-feet (ac-ft) of water, eight powerhouses that have generated an average of 1,730 gigawatt hours (GWh) of power annually since 1990, 11 transmission lines with a combined length of about 177.2 miles, about 28 miles of power tunnels/penstocks, and one, 1.9-miles long canal. Iowa Hill will be an off-stream pumped storage facility that pumps water from the existing Slab Creek reservoir to a new upper reservoir for generation through a tunnel system and powerhouse with a generation capacity of 400MW.

There are a variety of plans and procedures that SMUD prepares, implements, manages, updates and amends, as needed/required, to ensure appropriate management of hazardous substances throughout the UARP. These plans include Spill Prevention, Control and Countermeasures Plans (SPCC Plans) (included in this plan by reference because of regular updates), Hazardous Materials Business Plans (HMBPs)(Included in this plan by reference because of regular updates), waste management procedures (Appendix B), and project-specific Storm Water Pollution Prevention Plans (SWPPPs) This HSP provides context for those plans and how they integrate into SMUD's overarching plan for management of hazardous substances within the UARP. The above mentioned plans are incorporated into this HSP by reference and updated versions of these plans will be provided to the appropriate federal land administrator annually, in the case of the HMBPs or as updated, in the case of the SPCC plan. The main focus of this HSP is to provide specific information in supplement to these plans to ensure compliance with the applicable conditions for hazardous substances storage, spill prevention, and cleanup measures.

2.0 Background

The SPCC Plan, HMBPs, waste management procedure, and SWPPPs for the UARP contain, among other information, details about location of specific types and quantities of oil, hazardous substances, as well as information about spill containment and clean up equipment stored in the UARP. Copies of these plans will be provided to SWRCB. In addition, these plans contain monitoring and reporting requirements.

The SPCC Plan is prepared in accordance with 40 CFR 112 and provides information relating to the storage, use, management and monitoring requirements for all facilities in the UARP which may store or use an aggregate volume of petroleum products equal to or greater than 1,320 gallons per facility (containers or equipment containing less than 55 gallons in capacity are not counted towards this threshold). This regulation is governed by the Federal EPA who can inspect SPCC plans and covered facilities upon request. SPCC Plans are also sent to the EPA regional administrator following any petroleum release of 42 gallons two or more times or a single release of 1,000 gallons within in 12 month period. The SPCC Plan is also a requirement of the Aboveground Petroleum Storage Act (APSA) which regulates facilities storing greater than 1,320 gallons of petroleum product.

The El Dorado County Environmental Management Department is responsible for overseeing the APSA program and regulates it during HMBP facility inspections. These facility inspections are conducted every three years by the County and involve detailed inspections that cover HMBPs and SPCC Plans for the facility. The County is granted authority through the Cal EPA (and ultimately the EPA) as a certified unified program agency (CUPA) to oversee these programs and regulate these plans.

The main sections of the SPCC Plan include the following as required by 40 CFR 112:

- Plan Certification and Approval
- Facility locations and personnel contact information.
- Facility Diagrams and Descriptions.
- Oil Spill Predictions.
- Secondary Containment Descriptions.
- Inspections and Testing Procedures.
- Personnel Training.
- Facility Security.
- Containment De-watering Procedure.
- Facility Oil Transfer Procedure.

There are also eight appendices in the SPCC Plan, which contain an oil spill cleanup and contingency plan, oil storage inventory tables, facility maps and diagrams, inspection

procedures and forms, oil spill reporting templates, and Plan review and amendment logs. The SPCC Plan is updated as required by 40 CFR 112.5.

SMUD has also developed a Waste Management Procedure (See Appendix B) to outline waste (both hazardous and non-hazardous) management practices at the UARP facilities. This procedure includes information regarding hazardous waste determination, use and management of waste containers, labeling of containers, waste storage and accumulation areas, waste transportation, personnel responsibilities, inspections of waste storage areas, record keeping, and training requirements.
In addition to the SPCC Plan and Waste Management Procedure, SMUD has prepared HMBPs for all UARP Facilities storing or using hazardous substances. The HMBPs are developed in accordance with Article 1, Chapter 6.95, Division 20 of the California Health and Safety Code and contain information about the facility, including where various hazardous materials are stored; an emergency response/contingency plan; an inventory of emergency response equipment; an employee training plan; and, a Hazardous Materials Inventory Statement that inventories the type and amount of hazardous materials stored and used in the UARP. The HMBPs are updated annually on the California Environmental Reporting System (CERS) for use by the local Certified Unified Program Agency (CUPA), the Environmental Management Department of El Dorado County. Section 25503.5 of the above-referenced code defines the quantity and type of hazardous materials that are required to be reported in the chemical inventory of the HMBPs.

In general, hazardous substances required to be inventoried include liquids or solids in excess of 55 gallons or 500 pounds or gases in excess of 200 cubic feet; unless it is defined as an extremely hazardous substance (as defined by 40 CFR 355.61) in which case the reportable quantity is defined by substance. Copies of the HMBPs are kept at each facility and the Fresh Pond Facility maintains copies of all the individual HMBPs and the SPCC Plan. Any new hazardous substances brought to the facilities and subject to the inventory requirements are reported to CERS, as required.

Both the SPCC Plan and the HMBPs are updated on a periodic basis. The SPCC Plan is required to be reviewed every 5 years and updated as necessary (within 6 months of a change to the Plan). The HMBPs are updated as required and recertified annually according to the California Code of Regulations. New inventories are completed and procedures are reviewed so that these plans are current. This HSP incorporates by reference the latest versions of those plans to avoid duplication of effort and reduce the potential for errors as a result of having multiple versions of plans dealing with the hazardous materials. SMUD will provide a summary of the updates and/or the updated plans, as appropriate, to the SWRCB, BLM, and the USFS annually.

In addition, SMUD contacts the SWRCB and CVRWQCB prior to undertaking activities in the UARP to ensure the activity's conformance with any applicable Waste Discharge, National

Pollution Discharge Elimination System, or other Requirements. Conformance with these requirements supports appropriate management of hazardous substances so as to ensure protection of surface and groundwater. SMUD submits notices of intent and prepares Storm Water Pollution Prevention Plans (SWPPPs) or other applicable plans as required under these requirements.

3.0 Scope of the Plan

The main focus of this HSP is to ensure compliance with the applicable conditions of the FERC license for hazardous substances storage, spill prevention, and cleanup as a supplement to the SPCC Plan, waste management procedures, HMBPs, and other plans. This HSP provides the following:

1) A contact list for SMUD departments as well as federal, state and local officials responsible for responding to hazardous materials spills;
2) A requirement to periodically inform USFS, BLM, SWRCB, California Department of Fish and Wildlife (CDFW), and Central Valley Regional Water Quality Control Board (CVRWQCB) of the location, type, and quantity of oil and hazardous substances stored in the UARP;
3) Requirements for maintenance of a cache of spill cleanup equipment in the project area suitable to contain a spill in the UARP and to periodically inform USFS, BLM, SWRCB, CDFW, and CVRWQCB of the location of the spill cleanup equipment on USFS and BLM lands and in the non-USFS and non- BLM lands of the UARP;
4) A requirement to inform California Office of Emergency Services (OES),USFS, BLM, SWRCB, CDFW, and CVRWQCB immediately of the magnitude, nature, time, date, location, and action taken for any spill;
5) A monitoring plan that details corrective measures to be taken in the event of a spill, including a requirement for a weekly written report during construction documenting the results of weekly monitoring;

3.1 Hazardous Substances in the UARP

As stated above, the SPCC Plan covers all facilities which may store or use an aggregate volume of oil products equal to or greater than 1,320 gallons per facility (excluding containers or equipment storing less than 55 gallons). The HMBPs inventory all other hazardous materials in excess of the limits described in Section 2.0.

Table 1 lists the major facilities that store hazardous substances and facilities that store materials to contain and cleanup hazardous substances. Figure 1 is a map showing the locations of all facilities covered under this plan. Table 1 and Figure 1 will be updated as needed to reflect changes in the SPCC Plans or HMBPs and changes in where hazardous materials are stored in the UARP. Updates to Table 1 and Figure 1 will be provided to the USFS, BLM, SWRCB, CDFW, and CVRWQCB as changes occur to ensure the agencies are

informed about the location, type, and quantity of oil and hazardous substances stored in the UARP. Additionally, as stated above copies of the SPCC and HMBPs will provided to the relevant agencies above. A comprehensive list of locations where all hazardous materials and spill control materials are kept can be found in the HMBPs and the SPCCs for UARP facilities.

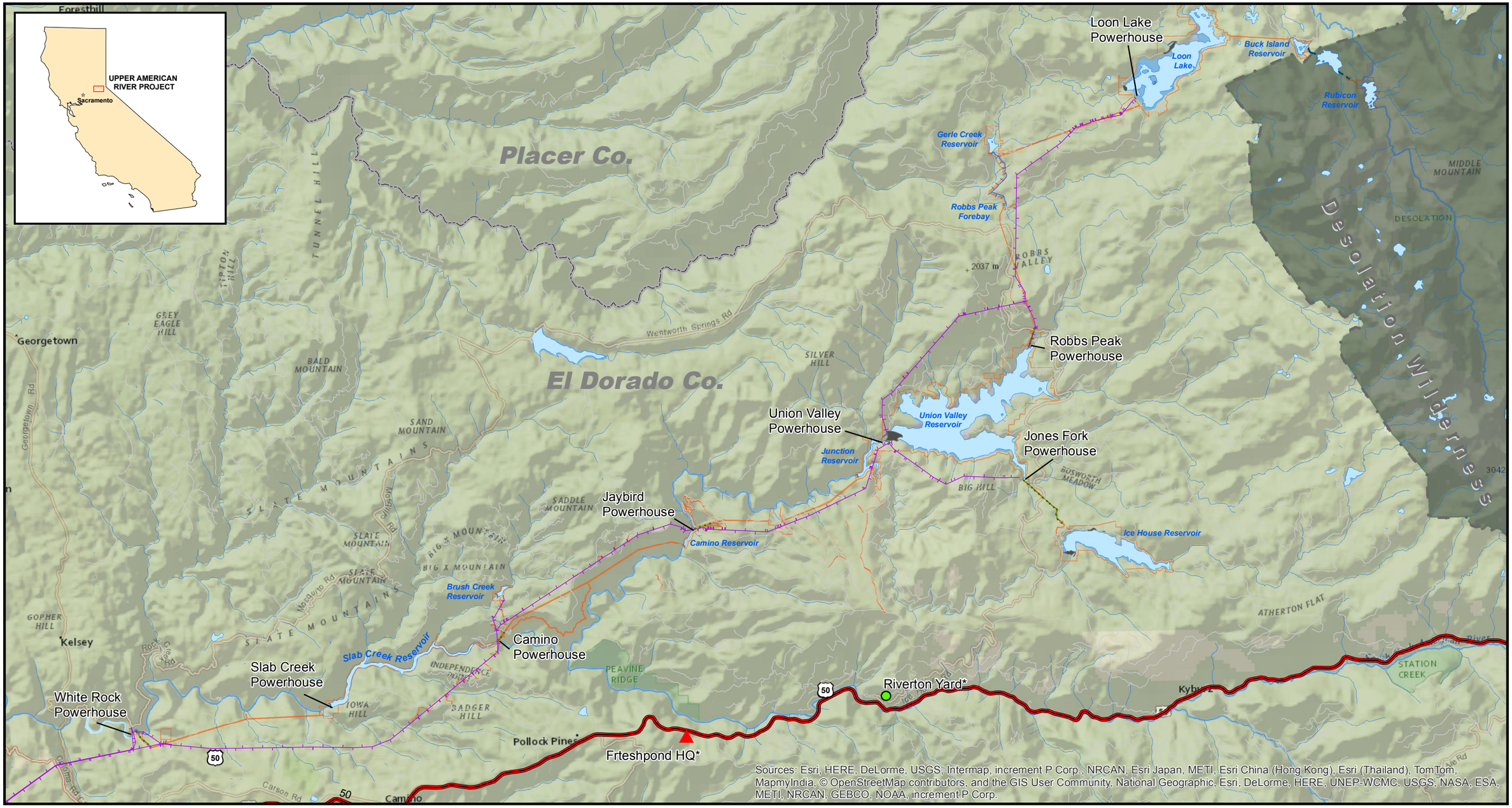

Figure 1. Facilities with Hazardous Substances

Hazardous Substances Plan

Upper American River Project - FERC No. 2101

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Map Features

- UARP FERC Boundary
- SMUD Facilites
- Transmission Line

Transportation

- US Highway 50
- Other Roads

Water Conveyance

- Canal
- Channel
- Penstock

Notes:

Riverton and Freshpond are not within the UARP FERC Boundary, but support UARP activities and are shown for reference since they are discussed in the Spill Control Containment and Countermeasures Plan.

N

1 in = 2.4 miles

1:150,000

Table 1. Summary of Facilities with Hazardous Substances and Spill Response Materials

Facility Name	Located on USFS/BLM Land	Included in UARP SPCC Plan	Included in UARP HMBP Plan	Type of Hazardous Substance	Quantity	Clean-up/ Containment Materials
Loon Lake Development						
Loon Lake Powerhouse Access Building/ Switchyard	Yes/No	Yes	Yes	Tranformer Oil, Bearing Oil, Govenor hydraulic Oil, diesel, solvent	See Table 3-5, SPCC Plan; UARP HMP	Yes
Robbs Peak Development						
Robbs Peak Powerhouse and Switchyard	Yes/No	Yes	Yes	Tranformer Oil, Bearing Oil, Govenor hydraulic Oil, diesel, solvent	See Table 3-6, SPCC Plan; UARP HMP	Yes / and extra spill tote
Jones Fork /Ice House Development						
Jones Fork Powerhouse and Switchyard	Yes/No	Yes	Yes	Tranformer Oil, Bearing Oil, Govenor hydraulic Oil, solvent	See Table 3-4, SPCC Plan; UARP HMP	Yes
Union Valley Development						
Union Valley Powerhouse & Switchyard	Yes/No	Yes	Yes	Tranformer Oil, Bearing Oil, Hydraulic Oil, Solvent	See Table 3-7, SPCC Plan; UARP HMP	Yes
Jaybird Development						
Jaybird Powerhouse and Switchyard	Yes/No	Yes	Yes	Tranformer Oil, Bearing Oil, Hydraulic Oil, Solvent	See Table 3-3, SPCC Plan; UARP HMP	Yes / and extra spill tote

Camino Development						
Camino Powerhouse and Switchyard	Yes/No	Yes	Yes	Tranformer Oil, Bearing Oil, Hydraulic Oil, Solvent	See Table 3-1, SPCC Plan; UARP HMP	Yes
Slab Creek / White Rock Development						
Slab Creek Dam and Powerhouse	Yes/No	No	Yes			
White Rock Powerhouse and Switchyard	No/No	Yes	Yes	Tranformer Oil, Bearing Oil, Hydraulic Oil, solvent	See Table 3-8, SPCC Plan; UARP HMP	Yes
Other						
Riverton Maintenance Yard	No/No	Yes	Yes	Motor Oil, Solvent, Diesel	See Table 3-9, SPCC Plan; UARP HMP	Yes
Freshpond Maintenance Facility	No/No	Yes	Yes	Tranformer Oil, Bearing Oil, Motor Oil, Hydraulic Oil, ATF, Diesel	See Table 3-10, SPCC Plan; Freshpond HMP	Yes /and extra spill tote(s)

3.2 Hazardous Substances Storage

Containers for the storage of hazardous substances will be appropriately labeled by type and with any necessary warnings, in accordance with applicable laws, codes, plans and standards, including, but not limited to, UARP waste management procedures, SMUD's Hazard Communication Program, Emergency Planning and Community Right-to-Know Act (EPCRA) and OSHA Hazard Communication Standard 29 CFR 1910.1200.

SMUD utilizes appropriate primary and secondary containment, depending on the type and quantity of substances stored.

SMUD will follow the California Code of Regulations, Title 8, §5164 as it pertains to the storage of Hazardous Substances as described below:

(a) Substances which, when mixed, react violently, or evolve toxic vapors or gases, or which in combination become hazardous by reason of toxicity, oxidizing power, flammability, explosibility, or other properties, shall be evaluated for compatibility before storing. Incompatible substances shall be separated from each other in storage by distance, or by partitions, dikes, berms, secondary containment or otherwise, so as to preclude accidental contact between them.
(b) Hazardous substances shall be stored in containers, such as those approved by the U.S. Department of Transportation (DOT), which are chemically inert to and appropriate for the type and quantity of the hazardous substance.
(c) Containers of hazardous substances shall not be stored in such locations or manner as to result in physical damage to, or deterioration of, the container. Containers shall not be stored where they are exposed to heat sufficient to rupture the containers or to cause leakage.
(d) Containers used to package a substance which gives off toxic, poisonous, corrosive, asphyxiant, suffocant, or anesthetic fumes, gases, or vapors in hazardous amounts (e.g., fuming sulfuric acid, hydrofluoric acid, nitrous oxide, chlorine, or other compressed or liquefied toxic gases) shall not be stored in locations where it could be reasonably anticipated that employees would be exposed. This requirement shall not apply to small quantities of such materials kept in closed containers, or to tank cars or trucks.

3.3 Spill Prevention

The UARP SPCC Plan contains procedures and measures for preventing spills of petroleum products. Prevention measures include regular training of employees, routine inspections of oil storage containers and oil-filled equipment, and secondary containment systems. All employees at the Freshpond office are required to review the SPCC Plan as part of their orientation. Additionally, employees who work in close proximity to hazardous substances are given more detailed training. Oil transfer procedures have been developed in the SPCC Plan to minimize the chances for a spill during maintenance activities.

3.4 Spill Response and Cleanup

Each Powerhouse contains supplies for safely responding to spills, including personal protective equipment (PPE) as well as spill containment and cleanup materials. Additional boxed spill cleanup supply totes are located at Fresh Pond (dock area), Robbs Peak Powerhouse and Jaybird Powerhouse. The UARP SPCC plan, which is included by reference to this plan, provides details about the contents and locations of spill clean-up kits found at facilities throughout the UARP. Spill containment and clean-up equipment includes absorbent material, absorbent booms and pads, plastic storage containers, waste disposal bags, gloves and other PPE, rope, barricade tape, flashlights, 55-gallon drums, shovels, brooms, pumps and fire extinguishers.

Should additional materials be needed, SMUD maintains a mobile spill response trailer at the 59th street Headquarters or East Campus Operations Center in Sacramento. SMUD also maintains a contract with an emergency response contractor, PSC Industrial Outsourcing, which are available 24 hours a day with specialized resources to assist SMUD with cleanup operations and proper disposal of contaminated materials. Appendix A of the UARP SPCC Plan contains detailed procedures for the cleanup of oil spills.

The HMBPs for each facility also contain Emergency Response/Contingency Plans that describe actions that need to be taken in the event of a spill or other emergencies involving hazardous substances. The HMBPs also contain an inventory of emergency response equipment and maps showing the locations of equipment.

In accordance with SMUD's Hazard Communication Plan, Safety Data Sheets (SDSs) are located at all facilities that store or utilize hazardous substances, so that employees or emergency responders can readily access them and evaluate health and safety hazards including safe handling and storage precautions, including incompatibilities. Employees are trained to know where to find SDSs and how to use them to ensure appropriate management of hazardous materials. The SDSs at the facilities contain information on what to do in the event of an accidental release of specific materials.

4.0 Notification and Reporting Procedures

SMUD has established detailed procedures for notification and reporting of spills of hazardous substances that comply with hazardous substance release reporting regulations (40 CFR 112 and 40 CFR 302). These procedures are located in Appendix A of the SPCC Plan and in the Emergency Response/Contingency Plans found in the HMBP for each facility. Appendix A of the SPCC plan includes detailed notification procedures that must be followed based on the type of petroleum spill. In general all petroleum spills are recorded internally using SMUD's Oil

and Hazardous Materials Discharge Report (Appendix E of SPCC Plan). SMUD also has a corporate procedure for cleanup of spills of other hazardous materials. As required by the FERC license, SMUD will notify the California OES, USFS or BLM, SWRCB, CVRWQCB and the CDFW immediately of the magnitude, nature, time, date, location and action taken for any spill.

In addition to the procedures for reporting spills, Appendix D of the SPCC Plan has inspection and record keeping procedures for UARP facilities that store and use 1,320 gallons or more of petroleum products. These recordkeeping procedures and logs provide a mechanism to help ensure that these products are properly stored and equipment is well maintained and not leaking. Appendix D of the SPCC Plan contains procedures and monitoring forms for releasing water from secondary containment structures. These procedures and forms are to ensure compliance with the National Pollutant Discharge Elimination System (NPDES), which requires that the discharge of water accumulated in secondary containment be free of visible tar, oil sheen, cloudiness, discoloration, unusual odors, and that all discharges are documented.

5.0 Monitoring Spill Cleanup

The FERC license conditions require that a monitoring plan be in place so that if a spill occurs the cleanup is documented. The monitoring plan is required to include a provision for written weekly progress reports. The following procedure will be implemented to monitor the cleanup phase of hazardous substance spills in the UARP:

1. The emergency coordinator, on-call supervisor and/or environmental management staff will assign a spill cleanup coordinator with the appropriate hazardous substances knowledge, training, and skills to document the cleanup effort.
2. The spill cleanup coordinator will monitor the site at the necessary frequency, depending upon the severity of the spill, throughout the duration of the cleanup phase.
3. The spill cleanup coordinator will ensure that monitoring data sheets are completed (included in Appendix A of this HSP) and representative photographs are taken during each monitoring visit.
4. The spill cleanup coordinator shall report to the Superintendent of Hydro Assets, the Superintendent of Hydro Generation Maintenance, and the Environmental Management Program Manager on the progress of the cleanup, making recommendations as necessary.
5. A weekly monitoring summary report will be prepared by the spill cleanup coordinator, which summarizes the information contained in the previous week's monitoring data sheets and the status of the cleanup.

6. Weekly monitoring summary reports will be submitted to the Superintendent of Hydro Assets, the Superintendent of Hydro Generation Maintenance, and the Environmental Management Program Manager. These reports, along with the data sheets will be provided to the USFS and/or BLM .
7. Management will make adjustments to cleanup process, as necessary, based on the results of the weekly monitoring summary reports.
8. A final report will be prepared at the conclusion of the cleanup and submitted to the USFS or BLM, SWRCB, CDFW and CVRWQCB. Most spills are likely to be small and the final report may be the only report documenting the cleanup.

6.0 Contacts

There are a variety of individuals responsible for managing and responding to hazardous materials spills. These individuals include SMUD, and federal, state and local officials. The following provides a list of department numbers by company or agency:

SMUD

Environmental Management on-call list in Appendix A of the SPCC Plan

Superintendent Hydro Generation Assets – (530)647-5016

National Response Center

(800) 424-8802

United States Forest Service, El Dorado National Forest

Supervisor's Office – (530) 622-5061

Bureau of Land Management, Mother Lode Field Office

(916) 941-3101

State Water Resources Control Board

Division of Water Rights, Michael Maher

Office Phone Number (916) 341-5408

California Department of Fish and Wildlife (CDFW)

Office of Spill Prevention and Response: (800) 852-7550

North Central Region Headquarters: (916) 358-2900

Central Valley Regional Water Quality Control Board (CVRWQCB)

Senior Water Resource Control, Engineer Elizabeth Lee,

(916) 464-4787

California Office of Emergency Services (Cal OES)

(800) 852-7550

Environmental Management Department of El Dorado County

(530) 621-6600

7.0 Project Specific Hazardous Substances Plan and Plan Revisions

As stated in the license condition, during planning and prior to any new construction or maintenance/repair activities not addressed in this or another existing plan approved by the SWRCB Deputy Director, the Licensee shall notify the USFS or BLM, and the SWRCB so that the USFS or BLM, and the Deputy Director can determine if an additional plan for hazardous substances storage and spill prevention and cleanup is needed. If the Deputy Director determines an additional plan or requirements are needed to address hazardous substance storage and spill prevention cleanup for new construction or maintenance/repair activities, the Licensee shall submit a plan for Deputy Director for approval, describing the measures that will be implemented.

In many cases SMUD will have prepared project-specific SWPPPs or other document(s) that addresses the storage and use of hazardous substances at a construction site. In other cases, where the project is related to maintenance/operations or the project is small enough that a SWPPP has not been prepared, SMUD will implement industry-standard Best Management Practices (BMPs). SMUD will implement the BMPs found in the Caltrans Storm Water Quality Handbook, Construction Site Best Management Practices Manual (Caltrans 2003). Section 8 of the manual deals with Waste Management and Materials Pollution Control Best Management Practices.

If the Iowa Hill pumped storage project is constructed, SMUD will prepare a project-specific plan that addresses hazardous waste use, storage and disposal at the project site. This plan will be subject to the approval of the USFS and the SWRCB.

Plan Revisions

If SMUD, USFS, CDFW, RWQCB or SWRCB collaboratively determine that revisions should be made to the plan, SMUD will make any revisions to the Plan in coordination and consultation with the listed resource agencies. Any revisions to the plan must be approved by the above-listed agencies. Any revisions shall be filed with FERC for approval prior to implementing.

Literature Cited

Caltrans 2003. Storm Water Quality Handbooks. Construction Site Best Management Practices (BMPs) Manual. Caltrans – State of California Department of Transportation. March 2003 Located at: http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm.

FERC 2014. New License for the continued operation of the Upper American River Project, No. 2101. Federal Energy Regulatory Commission, Washington, D.C.

SMUD et al. 2007. Relicensing Settlement Agreement for the Upper American River Project and Chili Bar Hydroelectric Project. Sacramento Municipal Utility District, Sacramento, CA.

Attachment 1

Condition 11 of Appendix B of the FERC license for the UARP and Condition 3-11: Hazardous Substance Plan of the Settlement Agreement state:

> *Within 1 year of license issuance or prior to undertaking activities on National Forest System lands, the licensee shall file with FERC a plan approved by FS, SWRCB, CDFG, and RWQCB for oil and hazardous substances storage and spill prevention and cleanup. In addition, during planning and prior to any new construction or maintenance not addressed in an existing plan, the licensee shall notify FS, SWRCB, CDFG, and RWQCB, and these entities shall make a determination whether a plan approved by FS for oil and hazardous substances storage and spill prevention and cleanup is needed. Any such plan shall be filed with FERC.*
>
> *At a minimum, the plan must require the licensee to (1) maintain in the project area, a cache of spill cleanup equipment suitable to contain any spill from the project; (2) to periodically inform FS, SWRCB, CDFG, and RWQCB of the location of the spill cleanup equipment on National Forest System lands and of the location, type, and quantity of oil and hazardous substances stored in the project area; and (3) to inform FS, SWRCB, CDFG, and RWQCB immediately of the magnitude, nature, time, date, location, and action taken for any spill. The plan shall include a monitoring plan that details corrective measures that will be taken if spills occur. The plan shall include a requirement for a weekly written report during construction documenting the results of the monitoring.*

Attachment 2

Condition 24 of Appendix A of the FERC License, which is the SWRCB 401 Water Quality Certificate for the UARP, provides further guidance for the Hazardous Substance Plan and states:

> *Within one year of license issuance or prior to undertaking activities on USFS lands, whichever is earliest, the Licensee shall file with the Commission a Hazardous Substances Plan, approved by USFS and the Deputy Director, for hazardous substances storage and spill prevention and cleanup. The Licensee shall provide the Deputy Director with at least 90 days to review and approve the plan prior to submittal to the Commission, if applicable. The Deputy Director may require modifications as part of the approval. The Licensee shall file the Deputy Director's approval, together with any required plan modifications, with the Commission.*
>
> *At a minimum, the Hazardous Substances Plan must require the Licensee to: (1) maintain a contact list of names and numbers for the Licensee, federal, state and local officials responsible for responding to hazardous waste spills; (2) maintain in the UARP area a cache of spill cleanup equipment suitable to contain any spill from the UARP; (3) periodically inform USFS of the location of the spill cleanup equipment on USFS lands and of the location, type, and quantity of oil and hazardous substances stored in the UARP area; and (4) immediately inform the California Emergency Management Agency, USFS, CDFW, Central Valley Water Board and the State Water Board of the magnitude, nature, time, date, location, and action taken for any spill. The Hazardous Substances Plan shall identify the potential corrective actions and monitoring that will be implemented if a spill occurs.*
>
> *In addition, during planning and prior to any new construction or maintenance/repair activities not addressed in an existing plan approved by the Deputy Director, the Licensee shall notify the USFS and the State Water Board so that the USFS and the Deputy Director can determine if an additional plan for hazardous substances storage and spill prevention and cleanup is needed. If the Deputy Director determines an additional plan or requirements are needed to address hazardous substance storage and spill prevention cleanup for new construction or maintenance/repair activities, the Licensee shall submit a plan for Deputy Director approval describing the measures that will be implemented. The Deputy Director may require modifications as part of the approval. The Licensee shall file the Deputy Director's approval, together with any required modifications, with the Commission. The Licensee shall implement the plan upon receiving all necessary regulatory approvals.*

Appendix A
Hazardous Substance Spill

Clean-up Monitoring Observations

Date:_____ Observer: _____

Location:_____

Date of Spill: _____ Type of Spill:_____

Clean-up work done by SMUD or Contractor: _____

Contaminated Soil: Y or N

Contaminated Water: Y or N

Adequate supplies onsite: Y or N

Name of Onsite Contact:_____

How much of spill remains to be cleaned?

Describe Work Being Done to Clean Spill:

Notes / Recommendations:

Photographs:

Appendix B

UARP Waste Management Procedure

1.0 PURPOSE

The purpose of this procedure is to outline waste management practices at Upper American River Project (UARP) “remote” Power Generation Plants, and Fresh Pond and Riverton waste storage sites.

2.0 SCOPE

The scope of this procedure is limited to only the UARP Facilities.

3.0 REFERENCES

3.1 California Code of Regulation, Title 22, Division 4.5, CHAPTER 11. IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

3.2 California Code of Regulation, Title 22, Division 4.5, CHAPTER 12. STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

3.3 California Code of Regulation, Title 22, Division 4.5, Chapter 15. Article 9. USE AND MANAGEMENT OF CONTAINERS

3.4 California Health & Safety Code Sections 25160-25166.5, 25121.3, 25110.0

3.5 Department of Transportation (DOT) – 49 CFR Part 172

4.0 DEFINITIONS

4.1 **Waste** – "Waste" means any discarded material of any form (for example, liquid, semi-solid, solid or gaseous) that is not excluded by section 66261.4(a) or section 66261.4(e) of California Code of Regulations or that is not excluded by California Health and Safety Code section 25143.2(b) or Health and Safety Code section 25143.2(d).

4.2 **Non-RCRA Hazardous Waste** – means all hazardous waste regulated in the State of California, other than RCRA hazardous waste. A hazardous waste is presumed to be a RCRA hazardous waste, unless it is determined pursuant to section 66261.101 of the California Code of Regulations that the hazardous waste is a non-RCRA hazardous waste.

4.3 **RCRA Hazardous Waste** – hazardous waste that exhibits the characteristic of ignitability, corrosivity, reactivity, or toxicity, or hazardous wastes form non-specific sources, specific sources, and discarded commercial chemical products, off-specification species, container residues, and spill residues thereof. (40 CFR 261.31 -261.33)

4.4 **Universal Waste** – universal wastes are hazardous wastes that are generated by a wide variety of people that contain mercury, lead, cadmium, copper and other substances hazardous to human and environmental health. Examples of these wastes are batteries, fluorescent tubes, cell phones, computers and computer monitors, electronic devices fluorescent lamps mercury waste, non-empty aerosol cans, and televisions.
(California Code of Regulations– Title 22, Chapter 11, Article 1, Section 66261.9)

4.5 **Identification Number** – means the number applied for by and assigned to all handlers of hazardous waste. A State ID number will be issued to handlers of non-RCRA hazardous waste (HW) and/or under 220 lbs. (100 kg) per calendar month of a RCRA HW. The State ID number will have a prefix of three letters followed by nine numbers. A federal ID number (EPA ID number) will be issued to handlers of 220 lbs. (100 kg) or more per calendar month of a RCRA HW and/or more than 2.2 lbs. (1 kg) per calendar month of acute HW. The federal ID number will have a prefix of

three letters followed by nine numbers. Federal facilities will have a prefix of two letters followed by ten numbers.

4.6 **Remote Site** – site operated by the generator where hazardous waste is initially collected, at which generator staff, other than security staff, is not routinely located, and that is not contiguous to a staffed site operated by the generator of the hazardous waste or that does not have access to a staffed site without the use of public roads. Generator staff who visit a remote location to perform inspection, monitoring, or maintenance actives on a periodic scheduled or random basis, less frequently than daily are not considered to be routinely located at the remote location.

4.7 **Consolidation Site** – site to which hazardous waste initially collected at a remote site that is transported to consolidation storage site operated by the generator.

5.0 RESPONSIBILITIES

5.1 Employees engaged in handling hazardous waste must do so in accordance to this procedure. The specific hazardous waste handling, shipping, and inspection related responsibilities are detailed in Section 6.7 of this procedure.

5.2 Environmental Management performs audits at all applicable UARP facilities to measure compliance of waste management program.

5.3 Environmental Management coordinates annual meetings with UARP management to review and discuss audit reports, compliance issues and corrective action status.

6.0 PROCEDURE

6.1 Hazardous Waste Determination

This procedure is for the management of waste materials only. UARP will classify hazardous materials at the point of generation or when discarded. Current wastes generated at powerhouses include oily solids, used oil, and universal waste. In addition, Fresh Pond and the Riverton Maintenance facility generate: paint related waste, metal shavings, used fuels, sand blasting grit and other RCRA and Non-RCRA hazardous wastes. For assistance with classifying new waste streams contact Environmental Management at 916.732.5335.

6.2 Use and Management of Containers

6.2.1 Containers must be in good condition (i.e. no severe rusting or apparent structural defects).

6.2.2 Containers must be compatible with hazardous waste planned for storage.

6.2.3 Containers not in use must be securely closed during waste storage and transfer.

6.2.4 Reuse of containers is permitted for storage and transport, in accordance with 49 CFR 173.28 when general packaging and receptacles used more than once are in such condition, including closure devices and cushioning materials, that they conform in all respects to the prescribed requirements of the subchapter. Before reuse, each packaging must be inspected and may not be reused unless free from incompatible residue, rupture, or other damage which reduces its structural integrity.

6.3 Labeling/Marking

Waste containers used for storage or accumulation must be marked and labeled accordingly, with the applicable hazardous waste, satellite accumulation, or universal waste label (See Attachment A).

6.3.1 The date upon which each period of accumulation begins must be clearly marked and visible for inspection on each accumulation unit. (California Code of Regulations - Section 66252.34)

6.3.2 While stored on site, each container storing hazardous waste must be labeled and clearly marked with the words, “Hazardous Waste.” (California Code of Regulations - Section 66262.34)

6.3.3 Each waste container label must contain the following information: (a) composition and physical state of the waste; (b) statement or statements that call attention to the particular hazardous properties of the waste (e.g. flammable, reactive, toxic, other); and (c) name and address of generator. (California Code of Regulations - Section 66262.34)

6.3.4 Waste containers received and stored at Fresh Pond from remote sites must be labeled with the date received.

6.3.5 Containers holding waste must be securely closed, labeled and marked at all times.

6.4 **Storage Areas (Consolidation and 90-day Storage) Fresh Pond & Riverton**

6.4.1 Place containers holding ignitable or reactive wastes at least 15 meters (50 feet) from the facility's property line.

6.4.2 Separate containers holding a hazardous waste that is incompatible with any waste or other materials transferred or stored nearby in other containers, piles, open tanks, etc.

6.4.3 Manage containers to avoid rupture or leaks.

6.4.4 All drums/containers storing liquid wastes must be placed in secondary containment.

6.4.5 Containers are inspected weekly and documented on a weekly inspection sheet.

6.5 **Waste Accumulation**

6.5.1 Fresh Pond & Riverton – These sites have both satellite and 90-day storage areas. For 90-day storage containers, the storage period begins on the first date on which any amount of hazardous waste begins to accumulate.

6.5.2 Satellite Accumulation Containers - Storage up to 1 year as satellite accumulation from initial date of generation.

6.5.3 Remote Sites (Powerhouses) – Hazardous Waste containers may be stored on-site not greater than 10 days from the date that the generator first begins to actively manage the hazardous waste. Hazardous waste stored at Powerhouses must be communicated immediately to UARP HAZMAT Coordinator so that the container(s) can be scheduled for removal within 10 days.

6.5.4 Universal Waste Containers - 1 year on-site storage from initial date of generation.

6.6 **Operations Waste Management Process - Remote Sites**

6.6.1 Containers used to collect oils and oily solids at Powerhouses are located at Fresh Pond warehouse. 5-gallon poly open top pails are used to collect small quantities of oily solids and 5-gallon poly transparent containers are used for oils and oily water. Each container must be labeled in accordance with Section 6.3 of this procedure.

6.6.2 Liquid and solid waste collected in 5 gallon containers are transported to Fresh Pond for consolidation no later than 10 days from initial generation. UARP HAZMAT coordinator must be notified anytime containers are stored at remote sites.

6.6.3 Waste transported from remote sites must be accompanied by a SMUD shipping paper (See Attachment B) if the total volume per shipment is greater than 10 pounds. Shipping papers are not required if less than 10 pounds.

6.6.4 Oil and Oily Solids from the powerhouses will be consolidated at the Fresh Pond HAZMAT facility Storage Shed.

6.6.5 Drum Consolidation Log (See Attachment C) - Each person bringing back oils or oily solids from power houses that are consolidated at Fresh Pond must complete the consolidation log which outlines volumes and date consolidated.

6.6.6 Once oils in 5 gallon containers are poured into consolidation containers remove the existing hazardous waste label and place an “empty” label onto the container. Place the date on the “empty” label.

6.6.7 Store empty containers previously containing oil in HAZMAT storage shed for future use.

6.7 **Specific Waste Handling Responsibilities**

6.7.1 Plant Operators, Building Maintenance Mechanics, Facilities Custodians, UARP HAZMAT Coordinator and other personnel involved with the generation of hazardous waste are equally responsible for managing hazardous waste generated in accordance with this procedure.

6.7.2 UARP HAZMAT Coordinator performs compliance inspections monthly at each powerhouse and weekly at Riverton and Fresh Pond. Any findings of non-compliance will be resolved immediately, documented and reported to Power Gen Asset Supervisor and Environmental Management.

6.7.3 UARP HAZMAT Coordinator schedules Hazardous Waste Pick-up or Service at Fresh Pond and Riverton every 60 days, or as needed. Request will be made by emailing SMUD HAZMAT Foreman a completed “Waste Pick Up/ Service Request Form”. See Attachment D that outlines waste inventory, empty container request, lab pack or other services provided by SMUD HAZMAT.

6.7.4 SMUD HAZMAT Foreman provides service dates for Hazardous Waste Pick-up or Service within three to five days upon receipt and review of request.

6.7.5 SMUD HAZMAT Team provides service agreed to by UARP HAZMAT Coordinator and SMUD HAZMAT Foreman.

6.8 **Shipping Papers & Transporting**

6.8.1 UARP personnel may transport hazardous waste (non-RCRA) generated at remote sites if less than 500 gallons or 2,500 pounds in any single shipment to the consolidation site (Fresh Pond).

6.8.2 Hazardous waste volumes that exceed remote site transportation limits will be managed by HAZMAT. UARP HAZMAT Coordinator will contact SMUD HAZMAT Foreman to schedule waste pickups.

6.8.3 All California Hazardous waste (Non-RCRA) transported from remote sites to Fresh Pond will be accompanied by a SMUD shipping paper. Shipments of less than 10 pounds are exempt from this requirement.

6.8.4 Waste shipments from the consolidation site (Fresh Pond) will be accompanied with a manifest and/or SMUD shipping paper.

6.9 **Record Keeping**

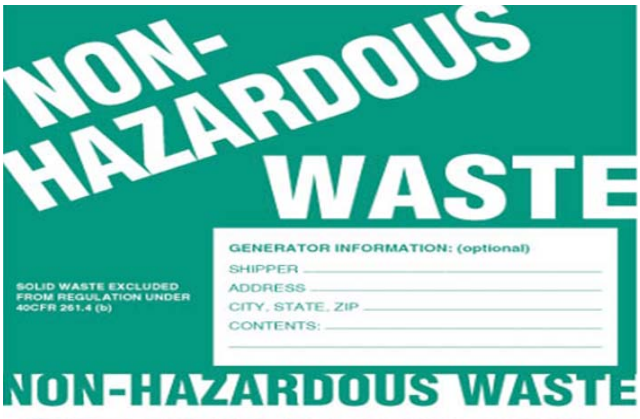
A copy of the following documents will be kept on site for three years. All records will be stored at the Fresh Pond administrative building and managed by the administrative lead.

- Manifests
- Bill of lading (shipping papers)
- Hazardous waste consolidation logs
- Waste inspection forms (weekly and monthly)
- Corrective action reports

7.0 TRAINING

All personnel handling hazardous waste at any remote site shall complete health and safety training equivalent to the training required under Section 5194 of Title 8 of the California Code of Regulations, prior to being assigned to handle hazardous waste.

ATTACHMENT A



ATTACHMENT B

EMERGENCY CONTACT:

Emergency (916) 732-5955 or SMUD /Dispatcher (916) 732- 8051

Keep completed shipping papers for hazardous materials a minimum of 375 days

SHIPPING PAPER INSTRUCTIONS

1. This shipping paper form is used by SMUD's Line Crews, Substation Crews, HAZMAT Crews, Labor Crews, remote sites, and Materials Delivery Personnel for transporting **ANY oil or oil-filled-electrical equipment**, and **for equipment/ materials 8-gallons or more, 66 pounds or more per package or a gross weight of 440 pounds, and/or cylinders greater than 220 pounds.**

2. For equipment, hazardous material, and California hazardous waste from remote sties that will be transported to 59th Street Yard or Fresh Pond; check the box "from" in section 1, add the site address in section 2, and check to in "**section 6 for Fresh Pond"** or '**section 7 for 59th street.**

3. For equipment and hazardous material transported from Fresh Pond or 59th Street; check from in "**section 6 for Fresh Pond"** or '**section 7 for 59th,** and **check to in section 1 and add the site location in section 2.**

4. Enter the transport date of the material(s)/waste in Section 3.

5. **For California Hazardous Waste transported from Power Houses classified as remote sites complete section 4. Individuals completing this section require training prior to waste management activities!**

6. Verify that the equipment, materials, or product is not leaking. Inspect equipment/materials for discharges from the lower-most drain and all outlets of vehicles/containers/equipment/products, and if necessary, ensure that fittings are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

7. Enter total quantity and volume of container for each material/waste being transported. See example in shipping paper: 2 X 55 gallon Metal Drums of oily solids weighing 100 pounds each.
(Container types: Metal = DM, Plastic and Fiber = DF, Transformers =CM, Pallets = CW, Tanker = TT)

8. Enter the corresponding weight or volume of containers being transported. For example: 80 lbs. (note: if the exact weight or volume is unknown when drums of debris are being transported from a jobsite, enter the best estimate of the weight or volume followed by est.). For transportation of electrical equipment enter the equipment description such as transformer or capacitor. Table 1 provides the shipper with estimated shipping weights.

9. Print your name on the "Printed Driver Name" and sign on the line "Driver Signature" after the Shipper's Certification statement.

10. Provide your Supervisor with a copy of the completed shipping paper.

ATTACHMENT B - UARP SHIPPING PAPER

1. From/To: SMUD	☐Camino Power House 38 47 44 N 120 37 20.2 W Pollock Pines, CA 95728	☐Jay Bird Power House 26 mi. E of Placerville, S. Fork of American River	**2. Active Management Date:**
☐Union Valley Power House 38 51 50.4N 120 26 39.8W Pollock Pines, CA 95728	☐Robbs Powerhouse 13 Miles North of Peavine and Ice House Rd, Placerville, CA	☐White Rock Power House 38 45 53.0N 120 47 15.3W Pollock Pines, CA 95728	**3. Removal Date:**
☐Loon Lake Power House 38 59 5.4N 120 14 41W Pollock Pines, CA 95728	☐Jones Forks Power House 38 51 00.5N 120 22 55.4W Pollock Pines, CA 95728	☐Slab Creek Powerhouse 38 46 20.8N 120 41 55W Pollock Pines, CA 95728	**Verification of no leaks from containers** **☐ Yes ☐ No**

EMERGENCY CONTACT: Emergency (916) 732-5955 or SMUD /Dispatcher (916) 732- 8051

4	**☐To:** **☐From:**	**☐ SMUD** Fresh Pond Facility 7540 Highway 50 Pollock Pines, CA 95726 (530) 644-2013 EPA ID: CAO 000806844	**NOTE: Internal use Only!** **1.** For use for oil and oil- filled equipment transported internally and California regulated waste from remote sites in accordance with Health & Safety code 25163.3: no more than 275 gallons or 2,500 pounds of Non-RCRA Hazardous Waste, 1,600 gallons of hazardous wastewater from the dewatering of one or more utility vaults, or up to 500 gallons of any other liquid hazardous waste in a single shipment and up to 5,000 gallons of mineral oil from a transformer, circuit breakers, or capacitors in a single shipment. or **2.** Shipping Papers for equipment, products, or chemicals greater than 8 gallons, greater than 66 pounds per unit or more than 440 pounds gross weight, and/or greater than 220 pounds per cylinder (49 CFR 173.6). **3.** Not more than 227 kilograms (500 pounds) aggregate gross weight (including the packaging) of hazardous materials. (Title 13. Motor Vehicles – Division 2. Department of the California Highway Patrol. Chapter 6. Hazardous Materials)
5.	**☐To:** **☐From:**	**☐ SMUD** ECOC 4401 Bradshaw Rd Sacramento, CA 95827 (916) 732-5622 EPA ID: CAR 000233965	

6. Containers			**7. Units**	**8. Proper DOT Shipping Name, Hazard Class, UN/NA ID Number, Packing Group**	**9. Common Name**	**10. Additional Description**
QTY	UOM	Type	Wt/Vol			
☐				Non RCRA Hazardous Waste Solids **(Oily Rags and Debris)**	Oily Solids	Rags and debris contaminated with oils containing < 5ppm PCB
☐				Non-RCRA Hazardous Waste Liquid **(Used Oil)**	Mineral, Dielectric, Hydraulic & Lube Oil <5 ppm PCB	Automotive oil/turbine oil/lube oil
☐				Non-RCRA Hazardous Waste Liquid **(Oil and Water)**	Oily Water < 5ppm PCB	
☐				Drained Electrical Equipment	Transformers, Bushings, Capacitors, OCB's	Drained equipment previously containing < 5 ppm PCB
☐				Oil Filled Electrical Equipment < 5 ppm PCB	Non-PCB equipment or oil	Equipment with new oil or oil tested less than <5 ppm PCB

Shipper's Certification: "This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and is in proper condition for transportation according to the applicable regulations of the Department of Transportation."

Printed Driver Name _____ Driver Signature _____

ATTACHMENT B

TABLE 1- ESTIMATED WASTE SHIPPING WEIGHTS

ITEM	APPROX. WEIGHT	Shipping Papers
Weight of Oil – 1 Gallon	7 Pounds	No
Weight of Capacitor – Non PCB	40 Pounds	Yes
Weight of Capacitor – PCB	100 Pounds	Yes
Weight of Transformer 25 KVA Pole Bolt	400 Pounds	Yes
Weight of Transformer 25 KVA Pole Bolt – Residual Oil	350 Pounds	Yes
Single Phase Pad Mount 75 KVA	1,100 Pounds	Yes
Single Phase Pad Mount 75 KVA – Residual Oil	800 Pounds	Yes
3-Phase Pad Mount 150 KVA	3,000 Pounds	Yes
3-Phase Pad Mount 150 KVA – Residual Oil	2,200 Pounds	Yes

If you have material/waste not included in this pre-printed form, call HAZMAT Services at Ext. 5817 to transport the material.

ATTACHMENT C

Drum Consolidation Log – Calendar Year: _____

DM #	Camino		Union V		Lone Lake		Jones Forks		White Rock		Jay Bird		Camp Far West		Robbs	
Oil	Lbs.	Date	Lbs.	Date	Lbs.	Date	Lbs.	Date	Lbs.	Date	Lbs.	Date	Lbs.	Date	Lbs.	Date
	10	9/22	50	10/22												

ATTACHMENT D

(ATTACHMENT B) SMUD - UARP Hazardous Waste Service/Pick Up Request From

Requestor	Work Order #		HAZMAT Use Only
First Name:	Last Name:	Date:	Review Date: Service Date: Completion Date:
			Comments
Department: UARP	Phone: mobile:	Email:	

Facility / Site Address	Waste Specific Location On Site	Site Characteristics/Comments	Environmental Management Use Only
Fresh Pond	90 Day Storage Area		

Waste Description	DOT Shipping Description	Container no/type	Total Quanity	Unit Wt/Vol	Profile Number/Vendo.	Comments
Oily Solids	Non-RCRA Hazardous Waste Solid (Oily Solids)	3/55 dm	750	P	CH2	
Used Oil	Non-RCRA Hazardous Waste Liquid (Used Oil)	2/55 dm	10		471-	
Oil and Water Mixture	Non-RCRA Hazardous Waste Liquid (Oil and Water)	1/55 dm	40	P	205456-1	
OIL FILTERS	Non-Hazardous Waste Solid (Oily Filters)	1/55 dm	300	P	392970	
Flammable Aerosols	UN1950, Aerosols, *flammable, (each not exceeding 1 L capacity, 2.1(Universal Waste)*	55dm	40	P	8029716	
Loose Pack Oil Base Paint	UN1263. Waste Paint Related Materials, n.o.s., 3, PG II	1/5	25	P	CH222787	
PAINTS AND THINNERS	UN1263. Waste Paint Rel Materials, n.o.s., 3, PG II	55 dm	400	P	CH220812	
Gasoline/Diesel	UN1993, Waste Flammabl 3, PG II (Diesel, Gasoline)	1/55 dm	200	P	385233-1	
Diesel & Gasoline and Water Mixtures	UN1993, WASTE FLAMMABLE LIQUI N.O.S., (DIESEL, BENZENE), 3, PG	3/55 dm	1200	P	CH215847	
ANTIFREEZE MIXTURES	Non-RCRA Hazardous Waste Liquid (Antifreeze)	1/55 dm	400	P	CH220809	
Scrap Metal Shaving	Non-RCRA Hazardous Waste Solid (Brass, Copper, Steel Shavings)	1/55 dm	250	P	392699	
Lab Pack (various)	Various	2/dm	150	P	CH167285-LP	
Sand blast Grit/lead paint debris (RCRA)	NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (CHROMIUM, LEAD), 9, PG III	1/55 DM	300	P	CH236014	
Non - Friable Asbestos	NA2212, Asbestos, n.o.s., 9, PGIII	4/55 dm	1000	P	Pending	

Notes