BEST MANAGEMENT PRACTICES PLAN

DIABLO CANYON POWER PLANT

REVISION 1

JANUARY 31, 1987

PACIFIC GAS AND ELECTRIC COMPANY

Approved: R. C. Thornberry

Name: Robert C. Thornberry

Title: Plant Manager

DIABLO CANYON POWER PLANT

BEST MANAGEMENT PRACTICES PLAN

CONTENTS

I. GENERAL REQUIREMENTS

This Best Management Practices (BMP) Plan is established for Pacific Gas and Electric Company's Diablo Canyon Power Plant (DCPP), located 8 miles northwest of Avila Beach, San Luis Obispo County, California.

A. Plant Description

DCPP is a two-unit nuclear power plant. The combined electric generating capacity of the plant is 2203 megawatts. The power plant utilizes enriched uranium in pressurized water reactors to generate steam to drive the two electrical turbine generators.

The principal structures include: two containment buildings that house the nuclear reactors; a fuel handling building for new fuel received and storage of spent fuel; the turbine-generator building; the auxiliary building, which houses the reactor auxiliary equipment and control room; and various support buildings. Appendix 1 shows the facility layout with building identification.

B. Objective

The overall objective of the BMP Plan is to control the storage, handling, use, and disposal of hazardous materials to avoid the release of significant amounts to the Pacific Ocean or Diablo Creek.

The BMP Plan covers all activities associated with the storage, handling, and treatment of hazardous materials. These activities are divided into five categories:

1. Material storage areas
2. Loading and unloading areas
3. Plant site runoff
4. In-plant transfer and material handling areas
5. Sludge and hazardous waste disposal areas

Major components in each category have been examined to determine if there is a reasonable potential for equipment failure which could result in the discharge of a significant amount of hazardous materials to receiving waters.

Where experience indicates a reasonable potential for equipment failure to result in significant amounts of hazardous pollutants reaching receiving waters, the plan includes a prediction of the direction, rate of flow and total quantity of hazardous pollutants which could be discharged.

Specific best management practices have been established to meet the objectives identified above and are addressed in the BMP Plan. Among them are procedures, plans, and guidelines. These include the following:

1. Spill Prevention Control and Countermeasure Plan (SPCC)

2. Administrative Procedure (AP) C-13S2, "Storage and Handling of Combustible Materials"

3. AP C-251, "Storage and Handling of Plant Process Chemicals"

4. Nuclear Plant Administrative Procedure (NPAP) C-10 "Housekeeping - General"

5. AP D-537 - Receipt of Materials at DCPP.

6. Chemical and Radiochemical Analysis Procedure (CAP) W-1, "Preparation of Hazardous Wastes and Hazardous Materials for Storage and Shipment"

7. CAP W-2, "Hazardous Waste Transfer and Storage"

8. Emergency Procedure (EP) M-7, "Oil Spill Isolation and Cleanup"

9. EP M-9, "Hazardous Waste Management Contingency Plan"

10. Operation Plan for Hazardous Waste Facility (Nonradioactive) Which Involves Containers and/or Tanks Only at the Diablo Canyon Power Plant, EPA ID NUMBER CAD077966349, Revision 6, September 1985

11. RCRA Hazardous Waste Part B Permit Application for Surface Impoundment at the Diablo Canyon Power Plant, November 8, 1985

12. Surveillance Test Procedure (STP) M-60, "Periodic Inspection of Aboveground Oil Tanks"

13. STP M-25A - "Leakage Test for Underground Fuel Oil Tanks."

The BMP Plan does not include control of radioactive materials or exposure to radiation because these issues are regulated by the United States Nuclear Regulatory Commission (NRC).

This BMP Plan has been reviewed by appropriate members of the Plant staff and the Plant Manager and has management support and approval for implementation.

II. SPECIFIC REQUIREMENTS

A. Review Committee

The BMP committee (also called the Hazardous Material Management Committee) is responsible for the development, maintenance, and updating of the BMP Plan. The responsibilities of the review committee include all aspects of the BMP Plan, such as identifying the hazardous materials and hazardous wastes handled at DCPP; identifying potential spill sources; evaluating current incident reporting procedures and revising them if necessary; reviewing BMP inspection and record procedures; reviewing environmental incidents, incident responses, cleanup and notification of applicable authorities, and BMP training of plant personnel.

The committee evaluates the effectiveness of the BMP Plan and make recommendations to plant management in support of BMP-related matters. The committee periodically reviews the BMP Plan to incorporate changes that will help minimize the potential for release of significant amounts of hazardous materials to the Pacific Ocean or Diablo Creek.

The review committee meets at a minimum frequency of once a quarter. The chairman has the authority to hold more frequent meetings. The membership of the committee includes representatives from the following plant departments: Chemistry and Radiation Protection (includes committee chairman), Safety and Emergency Services, Operations, Maintenance, and Regulatory Compliance. Alternate members are also designated. The BMP chairman maintains a directory of BMP committee members and alternates with their home and office phone numbers.

B. Reporting of Incidents

The procedure that addresses the reporting of incidents or occurrences of unauthorized discharges of hazardous materials to the Pacific Ocean or Diablo Creek is AP C-11 S1, "Non-Routine Notification and Reporting to the NRC and Other Governmental Agencies."

Unauthorized discharges to the Pacific Ocean or Diablo Creek are reported in accordance with the National Pollutant Discharge Elimination System (NPDES) permit. Written reports concerning discharges are reviewed by plant management and released to the appropriate governmental agency by the Plant Manager. These reports are maintained and filed by the Chemistry and Radiation Protection Department.

The Shift Foreman has the responsibility of carrying out EP M-9, "Hazardous Waste Management Contingency Plan," in the event of a major hazardous materials release to the environment. EP M-9 specifically designates who can act as a Site Emergency Coordinator and lists the home and office phone numbers of key personnel that would be needed in the event of an emergency. The plant site has an excellent communication system consisting of alarms, telephone network, and a public address system. Any hazardous materials spill can be reported immediately to the Shift Foreman.

NPAP C-12, "Identification and Resolution of Problems and Nonconformances," provides procedural guidance to determine root causes of and corrective action in response to a hazardous spill incident.

C. Risk Identification and Assessment

The NPDES permit for DCPP defines the various waste discharge points to the Pacific Ocean and Diablo Creek. Those discharge points that originate within plant facilities, along with the five yard drain and the five stormwater runoff drains, will be evaluated individually. The site drainage plan in Appendix 1, shows the locations of these discharge points.

1. Discharge 001D - Containment Building, Auxiliary Building, Radwaste and Laundry Facilities.

Liquid radioactive wastes (LRW) from reactor systems are collected, treated, and monitored in a liquid radioactive waste treatment system. This system includes storage tanks that permit radioactive decay, evaporators, activated carbon absorption filters, ion exchangers, and filters to remove radioactive matter from the liquid wastes. Solid wastes produced by these processes (solidified evaporator concentrates, ion-exchange resins, and filter media) are collected and packaged for final shipment to an approved offsite disposal site. After decay and/or treatment, individual batches of low-level liquid waste are sampled and analyzed to determine compliance with discharge limits. If in compliance, the batch is discharged through a 5-micron filter into the auxiliary salt water system (discharge 001B). Wastes from other plant systems collected in this system include boric acid, lithium hydroxide, sodium hydroxide, ammonium hydroxide, hydrazine, sodium sulfate, chemicals from laboratory drains, decontamination shower and laundry wastes, metal cleaning wastes, and a portion of the fire system flush water.

The building floor drains and sumps are designed such that spills, leakage, and unplanned releases of fluids from systems are contained within the buildings.

2. Discharge 001F - Turbine Building

Floor drainage from the turbine building, buttress areas, other non radioactive sumps, secondary systems, secondary chemistry laboratory, and reverse osmosis system backwash, as well as a portion of the firewater system flush, are collected in the turbine building sump. The sump has a high-level alarm system in the control room which alerts plant operators to abnormal conditions. In the event that the turbine building sump should overflow, the sump overflow weir would prevent oily wastewater from being discharged. Water from the turbine building sump may be pumped to the wastewater holding pond located north of Diablo Creek. The wastewater holding pond contents may be trucked offsite or pumped back to the turbine building sump for discharge. Wastewater holding and treatment (WHAT) tanks will replace the wastewater holding pond. The WHAT facility is scheduled for completion in 1987.

The following is a listing of turbine building systems and areas for handling and storage of hazardous substances.

a. Sump Treatment System

The turbine building sump effluent is treated in the oily water separator prior to discharge to the main circulating water. In the event that the oily water separator contents are unsuitable for discharge, the sump pumps can be realigned to one of the above holding facilities for subsequent treatment or disposal. The oily water separator is an air flotation design that floats oil to the top of the separator and transfers it to the Oily Water separator sludge box. The contents of the 1,800-gallon sludge box are pumped out routinely and shipped to a hazardous waste disposal site. Any overflow of the sludge box is returned to the turbine building sump.

b. Chromated Water Systems

There are two types of auxiliary cooling systems in the turbine building that contain potassium chromate and potassium hydroxide as corrosion inhibitors. One cooling system common to the auxiliary, containment, and turbine buildings, in each unit, contains approximately 65,000 gallons of chromated water. The other cooling system that services the turbine building, in each unit, contains approximately 12,000 gallons of chromated water. The systems are instrumented with level indication on their surge tanks to alert operations personnel to abnormal conditions. Leakage from these systems would be contained within the auxiliary, containment, or turbine building floor drainage systems.

c. Bulk Chemical Storage Tanks

(1) Sulfuric acid - 98% solution - two tanks (3800 gal each) - One tank is located in a diked area on the west side of Unit 1 turbine building (i.e., buttress building), and the other tank is located in a diked area of the west side of Unit 2 turbine building (i.e., buttress building). The dikes around each tank are designed to contain the entire contents of the tanks in the event of a leak. The sulfuric acid tanks are filled from delivery trucks. During the transfer, plant operations and vendor delivery personnel are continuously present. Emergency showers and eyewashes are located near the tanks and delivery points. Spill cleanup materials and equipment are located nearby. Protective clothing is maintained in an emergency gang box nearby.

(2) Sodium hydroxide - 50% solution - two tanks (3800 gal each) - One each is located next to the concentrated sulfuric acid tanks. The dike around each tank is designed to contain the entire contents of the tank in the event of a leak. The same provisions and precautions for delivery of sulfuric acid are provided for delivery of sodium hydroxide.

(3) Hydrazine-35% solution - Hydrazine is delivered in bulk 375-gallon stainless steel storage containers, which are placed in the Units 1 and 2 buttress building.

The hydrazine solution is pumped from the containers through a closed system to smaller hydrazine tanks (day tanks) where it is diluted to the proper concentration for injection into the feedwater system. An operator is always present during this transfer process. The empty hydrazine containers are returned to the supplier for refill. Emergency showers and eyewashes are located near the equipment. Protective clothing is maintained in emergency gang boxes nearby. Any hydrazine spills would drain into the buttress sump. Normally, the buttress sump is transferred to the turbine building sumps for treatment and discharge. However, in the event of a major hydrazine spill, the buttress sump pumps would be isolated and the contents removed to an approved offsite disposal site.

(4) Ammonium hydroxide-29% solution - Ammonium hydroxide is delivered in 55 gallon plastic drums, which are stored in the Units 1 and 2 buttress building. The ammonium hydroxide is pumped from its drum to a day tank where it is diluted to the proper concentration for injection into the feedwater system. The empty drums are triple rinsed and disposed of. The ammonium hydroxide transfer is a manual operation which requires the presence of operations personnel. Any spillage of ammonium hydroxide would drain into the buttress sump. The same provisions and precautions for transfer of hydrazine are provided for ammonium hydroxide.

(5) Acid and caustic day tanks - 2 tanks (650 gal each) - An acid day tank and a caustic day tank are located in the Units 1 and 2 buttress building. They contain concentrated solutions. Each pair is enclosed in a concrete diked area designed to contain the entire contents of one tank. Emergency shower and eyewash are located nearby.

d. Oil Systems

The turbine building has several different types of auxiliary oil systems, including diesel fuel oil and lubricating oils. Diesel fuel oil is used for emergency diesel generators. Lubricating oils are used in virtually all of the rotating machinery in the plant. Most pumps have their own small reservoirs of oil. The turbines have 20,000-gallon storage tanks and distribution systems. Dirty turbine lube oil cleanup and clean turbine lube oil storage are also provided. In addition to oils, the plant utilizes hydraulic fluids in the turbine electrohydraulic control system and in snubbers. These fluids are mostly phosphate based nonflammable fluids.

Oil spills throughout the turbine building are collected in floor drains and routed to the turbine building sump where the majority of the oil is removed by an oil skimmer. The water is then pumped to an oily water separator for final treatment. The SPCC Plan contains detailed descriptions.

3. Discharge 001 M - Wastewater Holding and Treatment Tanks

The contents of wastewater holding and treatment tanks will occasionally be discharged. These discharges consist of wastes from discharges 001 C, F, H, J, and K that may be routed to waste holding tanks for any necessary further treatment. Treatment may involve settling, oil removal, neutralization, or filtration. The wastewater holding and treatment tanks are scheduled for completion in 1987.

Three 125,000-gallon tanks are completely enclosed in a concrete diked area designed to contain the entire contents of one tank plus precipitation from a 24-hour, 25-year storm. Emergency shower and eyewash facilities, along with spill cleanup materials and protective clothing, will be located nearby.

4. Discharge 002 - Intake Structure Building Floor Drains

Drainage from within the cooling water intake structure, as well as a portion of the firewater system flush, will be collected in sumps and discharged inside the breakwater adjacent to the intake racks.

The circulating water pumps cooling system is located in the intake structure. The cooling system contains potassium chromate and potassium hydroxide as corrosion inhibitors and has a system volume of approximately 1200 gallons. Leakage from the circulating water pumps cooling water system is contained within the intake structure floor drain and sump system. Oil spills are likewise collected in the floor drain and sump system. Operations personnel inspect the intake structure each shift. In the event of a leak or spill, the sumps are secured and appropriate action taken.

5. Discharge 004 - Yard Storm Drain

Stormwater from the plant yard on the southeast side of the Unit 2 turbine building, the plant yard around the training and Maintenance Shop buildings, the meteorological tower area, and a small area to the west side of the west plant access road, drains down the road to the intake cove. Drainage from the new administration building and security building is also included in this path. This drainage enters a settling basin before it joins with the thermal effects laboratory saltwater discharge and enters the intake cove. A 17,000-gallon sump with a passive oil separation system is provided for containment of a spill of oil from a main Unit 2 transformer.

The maintenance shop building contains a chemistry laboratory. Sink drains from the laboratory carry chemical waste to a 2,000-gallon hazardous waste tank. The tank is located on the south side of the building and has a concrete dike secondary containment structure.

The general construction instrumentation and control shop maintains small amounts of mercury for calibration.

The hazardous materials which are stored or utilized within the plant yard area drained by discharge 004 include potassium chromate, potassium hydroxide, lubricating oils, and transformer oils. Loading and unloading activities are not expected to take place within the yard areas except removal of wastewater from the maintenance shop building hazardous waste tank. The wastewater is routinely loaded onto a vacuum truck, where the process is continuously watched by plant personnel. The wastewater is then hauled to a holding tank or transported to an approved offsite disposal site.

6. Discharge 005 - Yard Storm Drain

Stormwater from the plant yard on the Unit 2 side of the radwaste buildings and the west side of the turbine building is collected in a drainage system and routed to south cove for discharge. Drainage from the main warehouse, construction offices, parking lots, cold machine shop, thermal effects laboratory, reverse osmosis (RO) facility, fab shop, and the site hazardous waste storage facility areas is also routed to this drainage system.

The main warehouse has a hazardous material storage area with a concrete floor sloping towards the center. Sumps are positioned in the center for collection of accidental spillage.

The cold machine shop has an underground hazardous waste storage tank for collection of oily wastewater generated by steam cleaning operations. The thermal effects laboratory has a small chemistry laboratory that has a closed drainage system. The RO facility has an enclosed concrete diked area where reverse osmosis chemicals such as sodium hypochlorite and sodium bisulfite are stored and used. The site hazardous waste storage facility is a completely enclosed structure. The floor is sloped to prevent the escape of hazardous waste. Each of three 5,000-gallon storage tanks is enclosed in a large concrete dike area. An emergency shower and eyewash are located near the tanks. A spill response kit and protective clothing are also located nearby. The fab shop stores welding supplies such as argon, acetylene, hydrogen, and oxygen on a concrete slab.

The hazardous materials which are stored or utilized within the plant yard area drained by discharge 005 include boric acid, iron sulfate, sulfuric acid, sodium hydroxide, ammonium hydroxide, 35% hydrazine solution, potassium chromate, diesel fuel oil, lubricating oils, transformer oils, laboratory chemicals, and cleaning solvents. Loading and unloading of these materials also occur within the yard area drained by discharge 005. The areas where loading and unloading occur are provided with spill cleanup equipment and materials. All loading and unloading processes are continuously watched by plant personnel. Should a spill occur during offloading, it is estimated that 100 gallons per minute would be discharged into the yard storm drain, possibly totaling 3,500 gallons.

7. Discharge 006 - Storm Water Runoff

Watershed from the ocean side of the ridge to the southeast of the plant drains down the switchyard access road and is routed to the ocean at South Cove. Drainage from the south warehouse, the shooting range, and temporary parking also drain into this discharge.

The south warehouse (B) stores combustible and flammable materials such as oils and solvents along with acids, caustics, and other chemicals. The warehouse lacks sloped floors and sumps, therefore, a spill response kit is maintained in the immediate area. An eyewash station and protective clothing are also located nearby. All loading and unloading processes are continuously watched by plant personnel.

8. Discharge 007 - Storm Water Runoff

Watershed further to the south on the same ridge that drains to 006 is routed to the ocean near the southern site boundary. Drainage from the General Construction (GC) paint department, the temporary hazardous waste storage area, the batch plant, gasoline and fuel oil tanks, and the soils lab is included in discharge 007. The temporary hazardous waste storage area is a diked concrete area, enclosed by locked chain-link fence. Waste paint sludge/thinner are stored in the diked area. An eyewash station and protective clothing are maintained in the storage, area along with a spill response kit. All loading and unloading processes are continuously watched by plant or General Construction (GC) personnel. The GC paint department stores paint and paint thinner in a concrete dike area, enclosed by a locked chain link fence. Loading and unloading processes are continuously watched by plant personnel. The gasoline and fuel oil tanks are enclosed in concrete dike areas. A spill response kit is maintained in the immediate area.

9. Discharge 008 - Yard Storm Drain and Storm Water Runoff

Stormwater from the northwest side of the turbine building drains to the west plant access road flowing northerly to Diablo Creek. Watershed on the north side of Diablo Creek to the northwest of the plant drains to the west plant access road flowing southerly to Diablo Creek. This includes the area around the wastewater holding pond and the truck fill station.

The wastewater holding pond is located on the north side of Diablo Creek to the northwest of the plant. It consists of a balanced cut-and-fill earthwork structure containing a concrete-gunite basin. In 1983, a 4-inch sand/cement mixture over engineered fill was placed into the pond and contoured to provide for dewatering and sludge removal. The pond was then lined with a 36-mil reinforced chlorinated polyethylene Dynaloy liner. The wastewater holding pond is used to temporarily store wastewater that cannot be discharged or that accumulates at a more rapid rate than the plant turbine building sump discharge pathway can accommodate, or during periods of equipment shutdown. The wastewater holding pond is inspected daily for water level and weekly for the condition of the liner of the dike. The truck fill station is a concrete dike area used to house a truck filling valve and equipment. The valve is normally closed and locked.

The hazardous materials which are stored or utilized within the plant yard area drained by discharge 008 include sulfuric acid, sodium hydroxide, ammonium hydroxide, 35% hydrazine solution, potassium chromate solution, diesel fuel oil, lubricating oils, and transformer oils. Loading and unloading of some of these materials occur within the area drained by discharge 008. The areas where loading and unloading occur are provided with spill

cleanup equipment and materials. All loading and unloading processes are continuously watched by plant personnel. Should a spill occur during offloading, it is estimated that 100 gallons per minute would be discharged into the yard storm drain, possibly totaling 3,500 gallons.

10. Discharge 009 - Yard Storm Drain

Stormwater from the north and northeast side of the Unit 1 auxiliary, containment, fuel handling,and turbine buildings and the protective area hazardous waste storage facility drains to the north side of the yard and discharges to Diablo Creek. A 17,000-gallon sump with a passive oil separation system is provided for containment of a spill of oil from a main transformer. The protective area hazardous waste storage facility is a diked concrete area, enclosed by a locked chain-link fence. The storage facility contains a 3,000-gallon wastewater tank and a 2,000-gallon waste oil tank. It also has the storage capacity for forty-55-gallon drums. An eyewash station and protective clothing are maintained in the storage area, along with a spill response kit. All loading and unloading processes are continuously watched by plant personnel.

a. Bulk Chemical Storage Tanks

(1) Sulfuric acid - 98% solution - one tank (6,700 gal) - The tank is located in a diked area on the south side of the radwaste facility. The concrete dike around the tank is designed to contain the entire contents of the tank in the event of a leak. The sulfuric acid tank is filled from delivery trucks. During the transfer, plant operations and vendor delivery personnel are continuously present. Emergency shower and eyewash facilities are located nearby. During the transfer, spill cleanup materials and equipment are located nearby. Protective clothing is worn by all personnel involved in the transfer.

(2) Sodium hydroxide - 50% solution - one tank (6,700 gal) - The tank is located in a diked area next to the acid tank. The concrete dike around the tank is designed to contain the entire contents of the tank in the event of a leak. The same provisions and precautions for delivery of sulfuric acid are provided for delivery of sodium hydroxide.

The package boilers 0-1 and 0-2 maintain one 35-gallon drum of hydrazine, 35% solution each. The boiler rooms are enclosed in a concrete dike area, and spills are completely contained. An emergency shower and eyewash facilities are located nearby.

The hazardous materials that are stored or utilized within the plant yard area drained by discharge 009 include boric acid, sulfuric acid, sodium hydroxide, potassium chromate, diesel fuel oil, and transformer oil. Loading and unloading of some of these materials occur within the area drained by discharge 008. The areas where loading and unloading occur are provided with spill cleanup equipment and materials. All loadings and unloadings are continuously watched by plant personnel.

11. Discharge 010 - Storm Water Runoff

Watershed from the hillside between the plant and the reservoirs drains into a concrete culvert and is routed to the north along the hillside and empties into Diablo Creek.

Discharge 010 does not include any facilities where hazardous materials are stored, utilized, transferred, loaded, or unloaded.

12. Discharge 011 - Storm Water Runoff

Watershed on the north side of Diablo Creek drains to the north switchyard access road and is routed to Diablo Creek.

Discharge 011 does not include any facilities where hazardous materials are stored, utilized, transferred, loaded, or unloaded.

13. Discharge 012 - Storm Water Runoff

Watershed from the area between the 230 KV switchyard and the 500 KV switchyard drains to a vertical shaft leading to the Diablo Creek underground pipe as it passes under the switchyards.

Discharge 012 does not include any facilities where hazardous materials are stored, utilized, transferred, loaded, or unloaded.

14. Discharge 013 - Yard Storm Drain

Stormwater from the reservoir, makeup water treatment area, and the 230 KV switchyard collects in a drainage system and is routed to Diablo Creek. Some watershed from the hillside under the 500 KV power lines from the plant is also included in this drainage.

a. Bulk Chemical Storage Tank

(1) Sodium hydroxide - 50% solution - one tank (2,000 gal) - The tank is located inside another tank that acts as secondary containment at the clarifier facility. The sodium hydroxide tank is filled from delivery trucks. During the transfer, plant operations and vendor delivery personnel are continuously present. Protective clothing is worn by all personnel involved. Spill cleanup materials and equipment are located nearby.

(2) Sodium hyprochlorite - 12% Solution - one tank (5,000 gal) - The tank is located inside a concrete dike area at the clarifier. The dike around the tank is designed to contain the entire contents of the tank in the event of a leak. The tank is filled from delivery trucks. The same provisions and precautions for delivery of sodium hydroxide are provided for delivery of sodium hypochlorite.

The clarifier facility maintains a small warehouse for storage of up to twenty-100-pound boxes of dry hyprochlorite tablets and four-55-gallon drums of hydrochloric acid. A small laboratory is also maintained for pH testing of clarifier water. A spill response kit is maintained in the immediate area, along with an eyewash station and protective clothing. All loading and unloading processes are continuously watched by plant operations personnel.

D. Employee Training

DCPP personnel are instructed and/or receive specific on-the-job training which teaches them to perform their duties and carry out their respective job responsibilities. In addition, employees participate in a number of other general employee training programs.

PGandE has developed a Company-wide Compliance Enhancement Program to provide guidance and assistance to operational departments in achieving and maintaining environmental compliance. As a part of this program, a comprehensive hazardous waste management manual has been developed and a training program has been instituted.

Training programs covering industrial safety, first aid, fire protection, security, emergency planning, radiation protection, quality control, and other pertinent subjects are conducted for DCPP personnel to supplement their specific job-related training activities. This general training is described in AP B-2, "General Training Requirements for On-Site Personnel." AP B-51, "Industrial Safety and Fire Protection Training," provides a catalog of the industrial safety and fire protection courses at DCPP. AP B-252, "General Employee Training," contains the course contents for course number RCH70, Hazardous Material/Waste. This course provides initial and annual retraining concerning hazardous material/waste topics.

E. Inspection and Records

1. Inspection of Hazardous Material Areas

The DCPP hazardous material areas shall be inspected quarterly for general condition. AP C-251, "Storage and Handling of Hazardous Materials - Including Plant Process Chemicals," outlines the inspection schedule. The areas and components for inspection shall consist of:

a. Turbine building and buttress building

b. Auxiliary building

c. Radwaste and laundry facilities

d. Administration building

e. Maintenance shop building

f. Cold machine shop

g. RO facility

h. Thermal effects laboratory

i. Main warehouse

j. South "B" warehouse

k. Cooling water intake structure

l. Site hazardous material storage area

m. Training building

n. Fab shop

o. Batch plant

p. Soils lab

q. General Construction paint department

r. General Construction paint department sea train cargo box

s. Clarifier facility

t. Makeup water facilities

u. Package boiler O-1 and O-2

v. General Construction I&C shop

Abovegrou[redacted]oil tanks, including transform[redacted] and gasoline tanks, are inspected in accordance with STP M-60. Underground fuel oil tanks are inspected in accordance with STP M-25A.

The results of the inspection shall be reported on the DCPP Hazardous Material Quarterly Inspection Log and shall cover the following:

a. Visible signs of liquid spills

b. Visible signs of leakage

c. Evidence of deterioration

d. Tanks and dike integrity

e. Condition of stored containers

f. Labeling of all stored containers

g. Condition of spill control and safety equipment

Each quarterly inspection log shall be dated and signed by the Chemistry and Radiation Protection (CARP) personnel performing the inspection. All above-mentioned parameters shall be noted, including the time of the inspection and the notation of any unusual condition observed during the inspection. The completed Hazardous Material Quarterly Inspection Logs shall be reviewed by the Environmental Coordinator the first working day following the inspection and maintained in the CARP Department files for at least one year. Each January, the previous year's inspection logs are entered into DCPP Records Management System for permanent retention.

Whenever a problem is identified in the inspection log, an Action Request should be initiated by the Environmental Coordinator.

2. Inspection of Hazardous Waste Areas

The DCPP hazardous waste facilities shall be inspected daily for fluid levels, and weekly for general condition, by the CARP Department. The areas for inspection shall consist of:

a. Protected area hazardous waste storage facility

b. Site hazardous waste storage facility

c. Oily water separator sludge box

d. Wastewater holding pond

e. Wastewater holding and treatment facility

f. Cold machine shop underground storage tank

g. Maintenance building storage tank

The weekly inspection shall cover the following:

a. Visible signs of liquid spills inside the dike areas (areas inside the dikes shall be kept clean and dry)

b. Visible signs of leakage or areas of potential leakage

c. Evidence of deterioration

d. Tanks and dike integrity

e. Liquid level of all tanks and wastewater holding pond

f. Condition of stored waste containers

g. Labeling of all stored waste containers

h. Any other unusual conditions

i. Condition of first aid and safety equipment where appropriate

The results of these inspections shall be reported on the DCPP Hazardous Waste Facility Daily or Weekly Inspection Logs. Each Daily and Weekly Inspection Log shall be dated and signed by the CARP personnel performing the inspection. All above-mentioned parameters shall be noted, including the time of the inspection and the notation of any unusual conditions observed during the inspection.

The completed Hazardous Waste Facility Daily and Weekly Inspection Logs shall be reviewed by the Environmental Coordinator the first working day following the inspection and maintained in the CARP Department files for at least one year. Each January, the previous year's inspection logs are entered into DCPP Records Management System for permanent retention.

Whenever a problem is identified in the inspection log, an Action Request should be initiated by the Environmental Coordinator.

3. Records

Records of DCPP activities are generated and maintained in accordance with administrative procedures. The records directly associated with hazardous materials and hazardous waste include:

a. The location of all hazardous materials and hazardous waste storage areas

b. Results of all analyses and tests conducted on all hazardous waste

c. Hazardous materials and hazardous waste inventory

d. Hazardous materials and hazardous waste inspection logs

e. Copies of all Uniform Hazardous Waste Manifests

f. Wastewater holding pond operating record

4. Routine Reports

a. An annual report describing DCPP hazardous waste activities, including the wastewater holding pond, for each calendar year is submitted to the California Department of Health Services and the Regional Water Quality Control Board by March 1 of the following year. This report contains:

1) A description and the quantity of each hazardous waste received during the year

2) The EPA identification and address of each offsite treatment, storage, or disposal facility to which waste was shipped during the year

3) The method of treatment, storage, or disposal for each hazardous waste

4) The most recent closure cost estimate for the facility

b. A biennial report detailing the waste generated during the odd-numbered years is submitted to the California Department of Health Services by March 1 of the following year. This report contains:

1) The EPA identification number, name, and address of the generator

2) The calendar year covered by the report

3) The EPA identification number, name, and address for each offsite treatment, storage, or disposal facility to which waste was shipped during the year

4) The EPA identification number and name of each transporter used during the reporting year

5) A description, California hazardous waste category number, DOT hazard class, and quantity of each hazardous waste shipped offsite. This information must be listed by EPA identification number of each offsite facility to which waste was shipped.

F. Preventative Maintenance

DCPP maintains a comprehensive mechanical, electrical, instrument and controls maintenance program. It includes both preventive and corrective maintenance activities. The major elements of the preventive maintenance program are:

1. A preliminary preventive maintenance (PM) program based on service conditions and experience with comparable equipment was developed prior to fuel load of Unit 1. This program is being continually revised and updated as experience is gained with the equipment.

2. Important electrical and instrument and control systems are routinely calibrated and functionally tested in accordance with established procedures. This serves as the preventive maintenance program for most electrical and instrument control systems.

3. Instruments which are subject to mechanical wear or severe environmental exposure are routinely serviced. Routine housekeeping schedules, such as vacuum cleaning insides of control boards, are also established as appropriate.

4. Schedules are implemented for lubrication and inspection of equipment, replacement of items such as filters or strainers, and inspection or replacement of parts that have a specific lifetime, such as wear rings and bearings.

5. A master list of preventive maintenance activities is maintained to schedule and identify the scope of maintenance activities.

AP C-750, "Maintenance Department Preventive Maintenance Program," describes the PM program used at DCPP.

G. Housekeeping

1. Housekeeping at DCPP is controlled under the provisions of AP C-10, "Housekeeping - General." This procedure establishes general requirements for plant housekeeping based on Company accident prevention rules, OSHA requirements, USNRC Regulatory Guide 1.39, "Housekeeping Requirements for Water Cooled Nuclear Power Plants," and other applicable standards.

2. The plant has designated areas of the plant into four different levels of housekeeping zones with increasing restrictions on the type of activities, quality of ventilation and climate control, use of protective clothing, type and quantity of materials stored, eating and smoking, and frequency of cleaning. In addition, a stringent program of cleanliness control is implemented within the radiologically controlled areas of the plant for the control of radioactivity.

3. Additional housekeeping procedures have been issued covering the areas of storage and handling of plant process chemicals, chemistry laboratory housekeeping, storage and handling of combustible materials, and fire loss prevention.

4. Each supervisor is responsible for assuring that proper housekeeping practices are followed by persons under his/her jurisdiction, and each person is responsible for the housekeeping, cleanliness, and appearance of his/her work area in order to assure:

   a. Neat and orderly storage of chemicals

   b. Prompt removal of spillage

   c. Maintenance of dry, clean floors by sweeping or vacuum cleaning, etc.

   d. Proper walkways and pathways are maintained with no containers or drums protruding into the walkways

   e. Removal of any chemicals or oil on the ground or floor

5. The Quality Control Department performs routine surveillance of plant activities, including housekeeping. These surveillances are documented, and deficiencies are identified to plant management for corrective action. Safety and Fire Protection personnel also conduct surveillance activities that are designed to identify and correct personnel safety, fire protection, and general housekeeping concerns.

6. Plant employees receive general training that includes the plant policy on housekeeping. Plant management continues to emphasize the importance of good housekeeping practices through safety meetings, and posters and by actively identifying and resolving housekeeping concerns.

H. Material Compatibility

1. Materials of Construction

All storage tanks, containment facilities, piping systems, drums, and transfer equipment are designed and constructed to withstand maximum operating pressures and temperatures. Materials of construction are specified and selected to be compatible with system contents. Buried lines are of adequate construction, coated or galvanically protected.

2. Incompatible Materials

DCPP procedures which address the measures to take to avoid mixing incompatible materials are:

a. AP C-13S2 - "Storage and Handling of Combustible Materials"

b. AP C-202 - "Chemistry Laboratory Safety Rules"

c. AP C-250 - "Chemistry Laboratory Housekeeping"

d. AP C-251 - "Storage and Handling of Plant Process Chemicals"

3. Storage Environment

All storage or transfer facilities are clearly visible or are satisfactorily protected from vehicular traffic. Adequate surface coatings are specified to be impervious to chemical and environmental attacks on tanks, pond liners, and diked hazardous material storage areas.

I. Security

A Physical Security Plan has been developed for DCPP as required by 10 CFR 73.55. The majority of the information contained in the plan is considered to be "Safeguards Information" as defined in 10 CFR 73.2(jj) and must be protected from public disclosure in accordance with 10 CFR 73.21. This plan has been approved by the United States Nuclear Regulatory Commission and is implemented at the plant site.

The DCPP site boundary is enclosed by a five-strand barbed-wire fence, and the protected area (located within the site boundary) is enclosed by an 8-foot chain-link fence. A PGandE security force, augmented by contract security personnel, provides 24-hour security protection for the facility. Access to the plant site is through the Avila Gate entrance only. Security personnel monitor and control all activity at this gate. Advanced notification and approval must be obtained prior to entering the facility. Due to the nature of the facility, additional screening and/or training is required before access is granted to many areas within the plant site.

APPENDIX 1

SITE DRAINAGE PLAN