1.0 STORM WATER BEST MANAGEMENT PRACTICES

BMPs are implemented at Moss Landing Power Plant (MLPP) to address the potential pollutants identified in Section 4.0 of the SWPPP. The BMPs are discussed in the following sections and include non structural BMPs, such as good housekeeping procedures, including those for non-storm water discharges; preventative maintenance, including vehicle and equipment fueling, maintenance, and washing; spill response; material handling and storage; employee training; waste handling/recycling; record keeping and reporting; erosion control and site stabilization; frequent inspections; and quality assurance; as well as structural BMPs, such as overhead coverage; retention ponds; control devices; secondary containment structures; and treatment devices. BMPs will be updated as appropriate to comply with any additions or changes to General Permit requirements.

1.1 NON-STRUCTURAL BMPS (SECTION A.8.a)

Non-structural BMPs consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting storm water and authorized non–storm water discharges. They are generally considered low technology, cost-effective measures. All possible non-structural BMP options will be considered before additional structural BMPs (see Section 1.2) are implemented. The following non-structural BMPs will be implemented at MLPP.

1.1.1 Good Housekeeping (Section A.8.a.i)

At MLPP, good housekeeping is a high priority, not only for the protection of storm water, but also for safety and operational reasons. Streets and parking lots are swept monthly with a mechanical sweeper. Good housekeeping practices are dictated by MLPP's Operating Orders for combustible material and rag management; floor, stairway, platform cleanliness; aisles and exit obstructions; and material and supplies hazards and management.

Additional housekeeping items are associated with daily operator inspections and weekly SPCC inspections and routines. If any additional BMPs are necessary to prevent storm water pollution, they will be added to the SWPPP. Specific good housekeeping BMPs performed at MLPP are:

- Trash and debris are removed when found onsite during the frequent inspections.
- During cleaning of the generating units, berms are used around 55-gallon drums of cleaning agents. The yard drains located in the area of the cleaning are sealed and bermed when cleanings occur.
- Sandblasting is performed during dry, non-windy weather conditions. Records are kept of each instance, and certified sand is used that reduces the amount of dust generated.

1.1.1.1 Non-Storm Water Discharges

To prevent or reduce non–storm water discharges, the following systems and practices are implemented:

- Sanitary waste is conveyed to an on-site septic system, which is inspected weekly.
- Company vehicles and equipment are washed at the designated wash rack at the OWS or the steam cleaning station located north of the Units 6&7 machine shop. Only a Plant approved washing product with water is allowed to be used.

- Outdoor parking and storage areas are swept and not washed down.
- Water conservation practices are utilized, such as preventing irrigation runoff.
- Non-potable water line or tank flushes are collected for off-site disposal by a licensed waste disposal contractor.
- When potable water lines are repaired, flush water is analyzed by the on-site laboratory prior to its release.
- Transformer containments are provided to control potential spills or leakage of transformer oil from the main and auxiliary transformers.
- Minimal amounts of fertilizer and pesticide are applied on-site. Natural vegetation, including weeds and vegetation overgrowth in drainage swales is mowed instead of killed with herbicide. Herbicides are applied in the gravel areas of MLPP.
- Daily site inspections are conducted to detect unauthorized discharges and/or connections, broken water lines, leaks, etc.

In the event an unauthorized non–storm water discharge is discovered, the discharge will be recorded using Dynegy Form 2 and eliminated. All non-storm water discharges will be evaluated for contribution of pollutants to the storm water conveyance system. Spill response procedures will be followed.

Future contracts with MLPP pest management contractors shall include provisions requiring the use of certified applicators. Additionally, provisions will be included within contracts requiring pest management contractors to comply with all pertinent federal, state, local, and facility regulations and requirements

1.1.2 Preventive Maintenance (Section A.8.a.ii)

Recurring and preventive maintenance is managed at MLPP with a computer-based work management system that is used to track equipment maintenance schedules. This management tool minimizes the potential for equipment breakdowns and potential related releases to sumps, floors, and other areas. Additional preventive maintenance procedures that minimize potential contact of significant materials with storm water will be added to the SWPPP as needed.

1.1.2.1 Vehicle and Equipment Fueling, Maintenance, and Washing

MLPP staff will be trained regarding the proper use of the fueling areas, including spill and leak clean-up procedures. All on-road vehicles will be maintained off-site. Golf carts, all-terrain vehicles, crane, and forklifts will be parked and maintained where they are not exposures to storm water. Vehicles and/or equipment observed to be leaking fluids will be stored indoors until repairs are completed. All MLPP vehicles will be regularly inspected and maintained in accordance with manufacturer's recommendations and MLPP procedures. Leaks and drips will be routinely spot cleaned using absorbent pads or other dry absorbent materials. Company vehicles and equipment will be washed at the designated wash rack at the OWS or the steam cleaning station located north of the Units 6&7 Machine Shop.

1.1.3 Spill Response (Section A.8.a.iii)

Any spilled material, dry or liquid, will be promptly contained, collected and properly disposed of. Spill and cleanup materials are stocked at all times and stored throughout the facility. Employees will be trained on the proper use and disposal of spill and cleanup materials.

Spill containment and cleanup materials are stocked throughout the facility. Any and all materials spilled during shipping and receiving activities are immediately cleaned up and properly disposed of in consultation with the EH&S Department.

A complete description of the Spill Prevention and Response Program for potential storm water pollution source areas is presented in the MLPP SPCC Plan, in accordance with 40 CFR 112 requirements. Specific material handling procedures, storage requirements, and cleanup equipment and procedures are described in the SPCC Plan. MLPP maintains the necessary equipment, controls, and personnel training for the containment and cleanup of spills. Internal reporting procedures for spills/releases of significant materials at this facility are established.

1.1.4 Material Handling and Storage (Section A.8.a.iv)

A number of materials handling and storage practices will be employed at MLPP to minimize contact of significant materials with storm water. A comprehensive and up-to-date inventory of all hazardous and non-hazardous chemicals and other substances used will be maintained at MLPP.

Containers will be stacked and stored according to manufacturers' instructions, shelf life will be monitored, and sufficient aisle space will be provided for transfer and inspection. Containers will be stored on pallets to prevent corrosion; loading and unloading of chemicals, oil, or other such materials will take place under supervision of MLPP personnel in areas designated for these activities. All materials stored in bags, drums, containers, and stockpiles will be kept organized and properly labeled for easy identification. Oil and other petroleum products are handled in accordance with requirements of the FEP, Business Plan, and SPCC Plan.

Chemicals will be stored in the MLPP Warehouse, Hazardous Materials Building, Hazardous Waste Pad, in dedicated tanks, flammable materials lockers, or in other protected/roofed points of use on the site. Where feasible, oil or chemical containers will be stored indoors in temperature-controlled areas. Chemical and hazardous material containers will be clearly labeled with the chemical/product name, expiration date, and health hazards and the containers will be compatible with the materials stored in them. Material Safety Data Sheets (MSDSs) will be readily available in the EH&S library room or available through 3E (1-800-451-8346).

Exterior tanks are provided with secondary containment sufficient to control spills or leaks of tank contents, plus freeboard for precipitation. Exterior, unprotected exposure of chemicals to precipitation is avoided except to the extent that it is unavoidable during active use of materials or chemicals or during active delivery or disposal loading operations. Spill control and cleanup materials are available at all times at delivery and storage areas.

Loading and unloading of chemicals and petroleum products is performed where materials cannot enter the storm water conveyance system. All loading/unloading activities will be attended by the contractor and/or MLPP personnel. The loading/unloading areas and responsible personnel will be properly prepared for control of potential spills. Temporary curbs and dikes, absorbent pads and pigs, and other

appropriate means to contain possible spills will be stored in an easily accessible location near the loading area. Any and all spills will be aggressively and expeditiously cleaned.

Standard Operating Procedures were developed at MLPP for the process of accepting liquid materials delivery to prevent pollution discharge to the storm water conveyance system. The procedures will be adhered to and are described as follows:

- Liquid materials will be delivered to the facility by California Department of Transportation–certified vehicles and drivers.
- The storm water system isolation valves located near the off-loading activities will be in the closed position.
- Storm drains in the delivery area will be covered with mats and/or surrounded by a temporary berm.
- MLPP staff shall be present during all deliveries and will maintain radio contact will staff in the Energy Management Center who contact the proper authorities in the event of a spill.

Pesticide chemicals will be stored and mixed off-site by the MLPP pest management contractor.

Hazardous materials storage areas are provided with secondary containment or will be otherwise designed and managed to contain spills. Hazardous wastes are shipped from the Hazardous Waste Pad by licensed and certified transport trucks. In the event that waste is inadvertently spilled, it will be cleaned immediately and disposed of in accordance with all federal, state, and local regulations. The Hazardous Waste Storage Pad loading area is routinely inspected in accordance with the federal regulations.

1.1.5 Employee Training (Section A.8.a.v)

Employees responsible for implementing this SWPPP will receive storm water pollution prevention training. The MLPP Training Coordinator will identify training needs and provide training for operating personnel for implementation of the SWPPP, maintenance of storm water pollution controls, and the SPCC Plan. The MLPP Training Coordinator will document SWPPP-related training in employee training records. Storm water–related training will be held (1) within 6 months of employment for new hires, and (2) annually for current MLPP staff. Training will address the following topics:

- Function and membership of the SWPPP Team;
- Risk assessment for potential sources of storm water pollution;
- Sediment and erosion control features and practices;
- Preventive maintenance requirements;
- Good housekeeping and material management practices to control storm water pollution;
- Spill prevention and response procedures and responsibilities;

- Characteristics of various hazardous and non-hazardous materials or wastes expected to be present on the site;
- Site inspection practices and requirements; and
- Potential sources for non–storm water discharges to the storm water management system and relevant controls.

The MLPP pest management contractor will be required to provide applicator certification credentials prior to conducting any pesticide management at MLPP. The plant Environmental Scientist will provide site specific training to pesticide applicators as necessary to assure application efforts do not threaten storm water quality.

1.1.6 Waste Handling/Recycling (Section A.8.a.vi)

Any trash found on-site during inspections is picked up and disposed of properly. Trash and recyclable materials are collected and stored outdoors in roll-off bins at the area north of the Hazardous Materials Storage Building. The bins are inspected on a daily basis to ensure they are not at capacity. The bins are emptied by an outside contractor as needed. Universal wastes are stored indoors at various accumulation areas throughout the site and removed for recycling once accumulated.

The sanitary septic system is inspected weekly by the Operations Department to ensure there are no septic overflows and the system is fully operational.

Hazardous waste is stored at the Hazardous Waste Storage Pad until it is removed by a licensed contractor within the permitted holding time.

1.1.7 Recordkeeping and Internal Reporting (Section A.8.a.vii)

Recordkeeping will be conducted with the use of logs, forms, and reports found in Appendices B, C, D, and E of the SWPPP. The use of these is specifically addressed within Sections 2.5, 5.0, 6.0, and 7.0 of the SWPPP. All records and forms of internal reporting will be maintained at MLPP by the EH&S Department for a minimum of five years from the time of generation.

1.1.7.1 Storm Water Pollution and Spill Incident Inspection and Reporting

Any incidents that result in off-site discharges of pollutants in storm runoff from the MLPP will be documented using the applicable Industrial Storm Water Management forms and in incident report forms.

In addition, a list of any significant spills of toxic or hazardous substances on-site that create significant potential for off-site discharges will be included in Appendix D of the SWPPP. Appendix D will include documentation of any releases in excess of Clean Water Act Section 311 or CERCLA Section 102 reportable quantities (RQs) (40 CFR Part 117, 40 CFR Part 302).

1.1.8 Erosion Control and Site Stabilization (Section A.8.a.viii)

The majority of the MLPP facility is topographically flat and covered by asphalt, concrete, buildings, gravel, or vegetation, presenting low risk of erosion. Management techniques utilized at MLPP to minimize erosion and sediment transport include the following:

- Unpaved areas are stabilized with a combination of compacted base material, gravel, and vegetation.
- Operating/process areas and roads are covered by asphalt or concrete. Curbs, gutters and swales are in place to direct storm water away from unpaved areas.
- In drainage swales where water velocities are expected to be high, rock riprap is installed.
- Fiber rolls are installed on erosive slopes, such as berms or in swales, as needed.

During any major modifications to the site, an Erosion Control Plan will be prepared by a qualified individual as a part of the construction SWPPP. The construction SWPPP, in accordance with the *NPDES General Permit for Storm Water Discharges Associated with Construction Activity*, Water Quality Order 99-08-DWQ, will specify erosion control measures that will be implemented during construction to minimize soil disturbance and any potential off-site discharges of sediment.

1.1.9 Inspections (Section A.8.a.ix)

Site inspections are performed at MLPP under the direction of the SWPPP Team and/or EH&S Department to minimize the contact of significant materials with storm water discharges. Inspections are tracked and the results are retained on-site to ensure appropriate and timely response. Inspections are documented with the MLPP Industrial Storm Water Management Forms and applicable SPCC Plan inspection forms. The MLPP inspection program is described as follows:

- Non-documented routine inspections are conducted to assure integrity of structural and non-structural controls, preventive maintenance activities, vehicle management practices, and housekeeping practices.
- Monthly inspections are completed year-round pursuant to the MLPP SPCC Plan.
- Non–storm water discharges are inspected regularly year-round.
- Storm water runoff observations are performed during runoff events as identified in Section 7.0 of the SWPPP.
- Annual Comprehensive Site Compliance Evaluation inspections are conducted to verify that the SWPPP, site maps, and potential pollutant sources are accurate and BMPs are and fully implemented and effective (see Section 6.0).

A detailed inspection will be conducted in response to any reported problem involving control of runoff from the site, or quarterly, as appropriate. Results of corrective actions and general site inspections will be recorded on the Industrial Storm Water Management Forms. In addition, the SPCC Plan inspections meet the additional inspection requirements listed under the Steam Electric Generating Facilities (Sector O) of the MSGP.

The inspection form will be signed and dated by the inspecting personnel, submitted to the MLPP Environmental Scientist for review and retained on-site. Any deficiency in implementation of the SWPPP, control of potential pollutants or control of runoff will be noted on the inspection form and brought to the attention of the plant Environmental Scientist when the inspection form is submitted.

The MLPP Environmental Scientist will arrange for applicable corrective actions in consultation with the SWPPP Team, as appropriate. All corrective actions and revisions to the SWPPP will be addressed in a timely manner, but under no circumstance more than 90 days following the inspection. When corrective actions have been completed, the inspection form will be updated and signed by the MLPP Environmental Scientist or his designee to confirm correction of the problems noted.

1.1.9.1 Accumulated Storm Water Inspection and Discharge

The process for inspecting and discharging accumulated secondary containment water is as follows.

Storm water collected within secondary containment structures and sumps will be visually inspected for signs of pollution, such as cloudiness, color, odor, trash, etc. If there is reason to suspect that the water has come into contact with non-visible pollutants, samples are to be collected and analyzed for the suspected constituents. If the water is determined to be clean, it shall be discharged to grade or to the storm water conveyance system. If the water is polluted, it shall be pumped out and disposed of as process water to the OWS or treated as hazardous waste if it qualifies as such.

The Containment Structure Storm Water Release Procedures Worksheet will be completed prior to any discharge of accumulated waters. If sampling is necessary, coordination will occur with the MLPP Environmental Scientist.

1.1.10 Quality Assurance (Section A.8.a.x)

The Annual Comprehensive Site Compliance Evaluation as described in Section 6.0 of the SWPPP will be utilized to ensure that all elements of the SWPPP and Monitoring and Reporting Program are adequately conducted. In the event a component of the SWPPP or Monitoring Reporting Program is deficient or in violation of the General Permit, appropriate adjustments and revisions will be made. Revisions to the SWPPP or BMP implementation will be addressed in a timely manner, but under no circumstance more than 90 days following the inspection.

1.2 STRUCTURAL BMPS (SECTION A.8.b)

If non-structural BMPs identified in Section 1.1 are deemed ineffective, structural BMPs will be considered. Structural BMPs consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non–storm water discharges. A list of structural BMPs currently implemented at MLPP is provided below.

1.2.1 Overhead Coverage (A.8.b.1)

The majority of hazardous materials on-site are stored indoors. Additionally, storm water drainage from the roofs of buildings at MLPP (including the power generation unit buildings) is conveyed to Outfalls 001, 002, 003, and 004, through a series of gutters, swales, drains, and subsurface piping to prevent potential contact with pollutants. Some storm water is directed to the OWS prior to discharge at Outfall 002.

1.2.2 Retention Basins (A.8.b.2)

A small sediment basin exists on the south side of the site adjacent to Dolan Road, immediately before SPCC Valve 15.

Precipitation falling within an earthen bermed area located in the Middle Property is retained and eventually infiltrates or evaporates. However, during large rainfall events, storm water runoff is pumped from SPCC Valve 10 and conveyed to Outfall 003. Precipitation falling on the east side of the earthen berm is discharged to SPCC Valve 18A to Outfall 003 or SPCC Valve 18B to an earthen bermed 13-acre wetland.

1.2.3 Control Devices (A.8.b.3)

Twenty valves are present in the storm water conveyance system, including those at Outfalls 001, 003, and 004. The valves are maintained in the closed position under the facility Clearance system and are only opened for storm events after inspection. These valves can be quickly closed to isolate spills and prevent the release of pollutants off-site. Appendix E of the SWPPP provides a storm drain valve map and worksheet to be utilized by the Operations Department at the MLPP Energy Management Center to track the disposition of valves during operations.

1.2.4 Secondary Containment Structures (A.8.b.4)

Permanent secondary containment structures and/or berms have been installed at chemical storage and process areas and temporary containment structures are installed when loading and unloading activities occur. The containment structures are designed to capture materials in storage in the event of a spill or leak and to prevent storm water pollution.

Permanent berms are in place around the tunnel cleaning debris pad and also at the wash rack, adjacent to the OWS. In addition, sumps have been installed to capture spills at the Hazardous Waste Surface Impoundments, filter press, and the Hazardous Waste Storage Pad.

1.2.5 Treatment (A.8.b.5)

No storm water treatment controls have been installed due to the fact that source control BMPs are effective at MLPP.