CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

MONITORING AND REPORTING PROGRAM NO. R3-2009-0049 FOR

DYNEGY MOSS LANDING LLC
MOSS LANDING POWER PLANT, MONTEREY COUNTY

GENERAL

Dynegy Moss Landing, LLC (Discharger) shall monitor the three hazardous waste surface impoundments located at the Moss Landing Power Plant in accordance with the following.

A. GROUNDWATER MONITORING

1. The Discharger shall conduct detection groundwater monitoring to determine if waste constituents have been released from the three surface impoundments (MCWP 1, MCWP 2, and MCWP 3).

2. Groundwater shall be monitored at least quarterly.

3. Groundwater monitoring procedures and protection standards specified by the current approved Hazardous Waste Facility Permit must be implemented. Those procedures and standards are subject to change as the Hazardous Waste Facility Permit is revised and/or renewed. The procedures and standards in effect at the time of adoption of this Monitoring and Reporting Program (MRP) are specified by the "Groundwater Monitoring Plan, Hazardous Waste Part B Permit Application.. .", July 2008, Revision 12 (Ground Water Monitoring Plan), which is incorporated into the April 6, 2006 Revision 11 of the Hazardous Waste Facility Permit. Evaluation and corrective action monitoring as defined by Chapter 15 of Title 23 of the California Code of Regulations shall be conducted, as required by those regulations.

4. Available monitoring data for each constituent in each well shall be graphically represented, concentration versus time, after each sampling event. An explanation of observed variations or trends over time shall be included in the monitoring report.

5. The Discharger shall install monitoring wells as outlined in the following well construction specifications:

    a. Monitoring wells shall be constructed in a manner that maintains the integrity of the drill hole, prevents cross-contamination of saturated zones, and produces representative groundwater samples from discrete zones within the aquifer unit each well is intended to monitor.

b. For any proposed wells, Discharger shall submit a proposal describing specific drilling, sampling, and logging techniques, monitoring well construction materials and dimensions, types of sealing materials and other technical details for review approval by the Executive Officer, prior to initiating any drilling installation activities.

c. Monitoring wells shall be installed using approved drilling methods. The drill holes shall be logged during drilling under the direct supervision of a qualified professional engineer or geologist registered in California Logs of monitoring wells shall be filed with the Department of Water Resources and appropriate Monterey County agencies. All information used to construct the wells shall be submitted to the Water Board.

B. SURFACE WATER MONITORING

Regular surface water monitoring is not required. However, if an uncontrolled release (spill, leak, overtopping or any other event) of waste occurs from the regulated surface impoundments, or related appurtenances, which could degrade surface water, subject surface water must be sampled for all parameters potentially present in the waste at time(s) and location(s) most likely to detect waste constituents in subject surface water. Surface water includes Elkhorn Slough, Monterey Bay, Moss Landing Harbor, all drainage ways leading to those waters, and any other surface water body accessible to humans, fish or wildlife.

C. UNSATURATED ZONE MONITORING

Unsaturated zone monitoring is not required because the vadose zone is thin and the bottom of the impoundment liner systems incorporates a groundwater removal layer. The impoundment liner system includes two Leachate Detection, Collection, and Removal Systems and the Ground Water Detection, Collection, and Removal System.

D. IMPOUNDMENT LINER MONITORING

1. The Discharger shall visually inspect each surface impoundment and primary (upper) liner daily. The Quarterly reports shall summarize the inspections and all repairs made to the liner or impoundment system.

2. The Discharger shall determine the integrity of the primary liners for the surface impoundments annually. The inspection/test method shall not damage the liner and shall be sensitive enough to detect problems. This annual inspection must include, at a minimum, removing sufficient wastewater and sludges to allow for visually inspecting the integrity of the primary (upper) liner. The integrity of the liner systems shall be certified by a qualified professional engineer registered in California. Any damage observed during the inspection shall be repaired as soon as possible and prior to any subsequent discharge.

3. The Discharger shall prepare a report each year documenting the annual inspection and maintenance for each surface impoundment. The report shall include a detailed description and map(s) illustrating the **annual** inspection and repair procedures, and shall be submitted within 90 days of the inspection.

E. LEACHATE DETECTION, COLLECTION AND REMOVAL SYSTEM, GROUNDWATER DETECTION, COLLECTION AND REMOVAL SYSTEM MONITORING

1. The Discharger shall inspect daily the leachate detection, collection and removal systems (LCRSs) and the groundwater detection, collection and removal system (GDCRS). The results of the daily inspections shall be maintained in the "Operating Record" for the hazardous waste surface impoundments. The quarterly reports shall document the results of the inspections, which identify repairs that need to be made to the LCRSs and GDCRS and the volumes pumped from the LCRSs and GDCRS.

2. The Discharger shall implement the Response Action Plan (RAP) and the RAP Conditions as specified by Attachment 1 included as part of this Monitoring and Reporting Program.

3. Daily monitoring of the LCRSs and GDCRS leachate systems is required as follows:

    a) The liquid levels in standpipes 1, 2, and 3 must be measured and recorded. All pumpable liquids shall be pumped and the volume pumped shall be measured and recorded.
    b) Records of liquid levels and volumes of liquid removed from the standpipes shall be reviewed daily and compared to the RAP (Attachment 1) and appropriate action taken. The Water Board shall be notified within 48 hours of a determination of leakage of level 1B, or greater, from any liner system
    c) The rate of liner leakage shall be determined and recorded daily.
    d) The liquid levels in standpipes 1, 2 and 3 must be checked once per eight or twelve hour shift if the volume of liquid removed from standpipe 1 exceeds 1/2 the capacity of the lateral pipe, or if any liquid is detected in standpipes 2 or 3.

F. DISCHARGE MONITORING

The Discharger shall continuously monitor the pH of the discharge into the surface impoundments when boiler chemical cleaning wastes are being discharged to the ponds. Also, the Discharger shall obtain representative samples of boiler cleaning wastes discharged to the ponds. The representative samples of a single boiler cleaning discharge event shall be comprised of at least one composite of samples collected continuously throughout the entire discharge. The samples of boiler cleaning wastes collected from the ponds shall be analyzed for the following constituents for the determination if the wastes are restricted hazardous wastes (per Health and Safety Code Section 25122.7): pH; Arsenic; Cadmium; Chromium (VI); Lead; Mercury; Nickel; Selenium; and Thallium.

If the wastes discharged into the ponds are restricted hazardous wastes, the Discharger shall submit documentation within 90 days that the restricted wastes were handled in accordance with this MRP and the Health and Safety Code. The documentation shall include laboratory reports of chemical analyses and plant pH monitoring records.

G. REPORTING

1. The Discharger shall prepare and submit quarterly monitoring reports. The reports shall be submitted to the Water Board no later than 30 days after the end of the quarterly monitoring period. Quarterly monitoring periods end on the **last day** of each of the months of March, June, September and December and the quarterly monitoring reports are due on the **30th** days of April, July, October and January. Each report shall include the following:

a. Monitoring results data arranged in tabular and graphical form so the date, constituents, concentrations, and groundwater elevations are readily discernible. Groundwater chemical concentration trend graphs shall be submitted. The data shall be summarized in such a manner to illustrate clear compliance or noncompliance with applicable waste discharge requirements.

b. Copies of water quality analysis data sheets from the laboratory and the sample chain of custody forms.

c. Copy of sampling log (record) for each well.

d. Groundwater contour map.

e. Determinations of the velocity and direction of ground water flow beneath the three surface impoundments. Provide the velocity and direction of ground water flow during each sampling event. The quarterly report shall include a discussion of how observed groundwater flow rate and direction compare with those from previous determinations, the appearance of any trends, and any other items that may indicate a potential change in the hydrogeologic conditions beneath the site.

f. Statistical results of groundwater monitoring data analysis.

g. Leachate monitoring data including dates, volume and analysis of liquids pumped from either or both leachate collection and removal system. The results shall be presented in tabular and graphical form.

h. Sludge handling data including date and volume of sludge removed from each surface impoundment and point of disposal.

i. Report of annual visual integrity inspection of liners and/or results of annual liner visual integrity inspection/testing.

j. Report of inspections of the LCRSs and the GDCRS.

k. Report of GDCRS monitoring data including identification of pond, dates and volumes of groundwater pumped from the GDCRS. The data shall be presented in tabular form.

2. In accordance with Title 23, Division 3, Chapter 30, Articles 1 and 2, Sections 3890 through 3895 of the California Code of Regulations, monitoring reports and associated data shall also be submitted to the State Water Resources Control Board (State Water Board) GeoTracker database over the internet. Please refer to the State Water Board web page Policy Statement-Electronic Reporting Requirements: http://www.waterboards.ca.gov/ust/electronic_submittal/index.shtml

These reports are required pursuant to California Water Code (CWC) Section 13267. Pursuant to CWC Section 13268, a violation of CWC Section 13267 requirement may subject you to civil liability of up to $1,000 per day for each day in which the violation occurs.

The Water Board needs the required information in order to ensure compliance with subject Waste Discharge Requirements and Monitoring and Reporting Program. You are required to submit this information because you are responsible for the discharge of hazardous waste to the surface impoundments. The evidence supporting this requirement is included in the findings of subject WDR and elsewhere. More detailed information is available in the Water Board's public file on this matter. Any person affected by this action of the Water Board may petition the State Water Resources Control Board (State Board) to review the action in accordance with Section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Board, Office of Chief Counsel, P. O. Box 100 Sacramento, 95812 within 30 days of the date of this order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

The Executive Officer may rescind or revise this MRP at any time.

ORDERED BY: _____
Executive Officer

_____
Date

ATTACHMENTS

1. Decision Matrix for Response Action Plan.
2. Monitoring Point Map.

S:\Shared\Site Cleanup Program\REGULATED SITES\Monterey Co\Moss Landing Power Plant\Dynegy-LS-Duke\WDR TPCA Permit Renewal\final MRP R3-2009-0049.doc

RCRA Part B Permit, for Surface Impoundments

DECISION MATRIX FOR RESPONSE ACTION PLAN

SECONDARY (OR MIDDLE LEACHATE DETECTION, COLLECTION & REMOVAL SYSTEM)	PRIMARY (OR UPPERMOST) LEACHATE DETECTION, COLLECTION & REMOVAL SYSTEM			
	de minimus (**less** than or **equal** to 0.25 gallon/day)	**greater** than 0.25 gallon/day and **less** than or **equal** to 10 gallons/day	**greater** than 10 gallons/day and **less** than or **equal** to 30 gallons/day	**greater** than 30 gallons/day or **greater** than 10 gallons/shift for two consecutive shifts
de minimus (**less** than or **equal** to 0.25 gallons/day)	1A	1A	2A	2A
greater than 0.25 gallons/day and **less** than **or equal** to 10 gallons/day	?/1B	1B	2B	2B
greater than 10 gallons/day	?/2B	2B	2B	2B OR 3*

Notes:

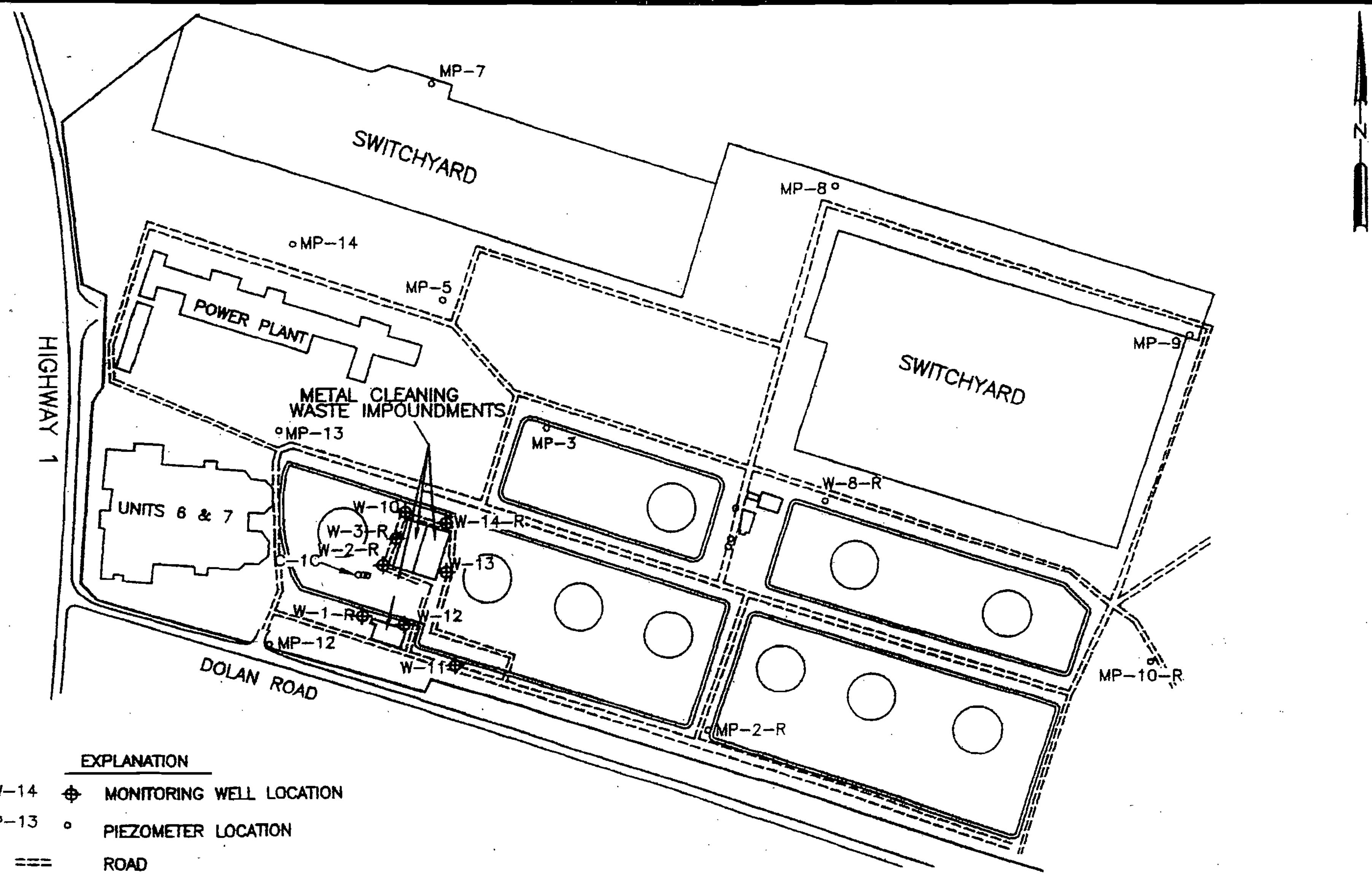
* Facility shall immediately notify agencies of this condition, providing agencies with evaluation of whether "dynamic failure" (i.e., a major failure with potential for immediate and significant release to ground water or surface water) has occurred and whether Emergency Response should be implemented.

? Facility shall immediately notify the agencies of this condition and shall provide in writing a rational explanation of how/why this unusual condition exists. Facility shall provide in writing an evaluation of the potential for unauthorized discharge from the unit. Agencies may require further action upon receipt of the explanation and evaluation.

RESPONSE ACTION PLAN (RAP) CONDITIONS

1A	1B	2A	2B	3 (Emergency Response)
Continue pH neutralization, precipitation and sedimentation treatment processes in leaking pond.	Continue pH neutralization, precipitation and sedimentation treatment processes in leaking pond.	Transfer contents of leaking pond to a non-leaking pond (if possible). Expedite pH neutralization, precipitation and sedimentation treatment processes.	Transfer contents of leaking pond to a non-leaking pond (if possible). Expedite pH neutralization, precipitation and sedimentation treatment processes.	Immediately transfer pond contents out of leaking pond. If sufficient storage capacity is not available at existing facility or if other reasons do not allow for transfer to a non-leaking pond, immediately arrange for additional storage capacity (for example, Baker Tanks may be used).
Discharge supernatant from leaking pond as usual, following treatment processes, in compliance with NPDES Permit.	Discharge supernatant from leaking pond as usual, following treatment processes, in compliance with NPDES Permit.	Discharge supernatant from leaking pond as usual, following treatment processes, in compliance with NPDES Permit.	Discharge supernatant from leaking pond as usual, following treatment processes, in compliance with NPDES Permit.	Discharge supernatant from alternate storage system as usual, following treatment processes, in compliance with NPDES Permit.
Inspect and repair primary liner at next annual inspection.	Repair all liner systems at next annual inspection.	Remove leaking pond from active service. Inspect and repair primary liner.	Remove leaking pond from active service. Repair all liner systems.	Remove leaking pond from active service. Repair all liner systems.
Prove Performanace Standard of no leakage thru all liners using flood test of primary liner before putting pond into operation.	Prove Performance Standard of no leakage thru all liners using flood test of primary liner before putting pond into operation.	Prove Performance Standard of no leakage thru all liners using flood test of primary liner before putting pond into operation.	Prove Performance Standard of no leakage thru all liners using flood test of primary liner before putting pond into operation.	Prove Performance Standard of no leakage thru all liners using flood test of primary liner before putting pond into operation.

/ N:\Consulting\CAD\DWG\792793\Samlsp01.dwg Wed, 06/Jun/01 04:18pm rballal



EXPLANATION

W-14 ⊕ MONITORING WELL LOCATION

MP-13 ∘ PIEZOMETER LOCATION

=== ROAD

Shaw Environmental, Inc.

0 400 800

SCALE IN FEET

DATE 03/2001
DWN AVK
APP JJ
REV
PROJECT NO. 792793

FIGURE 1

MOSS LANDING POWER PLANT

MONITORING WELL AND PIEZOMETER LOCATIONS