

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

**PROPOSED WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2009-0049**

For Class I Wastewater Surface Impoundments and  
for Renewal of Exemptions to the Toxic Pits Cleanup Act

FOR

**DYNEGY MOSS LANDING LLC  
MOSS LANDING FOSSIL FUELED POWER PLANT  
MONTEREY COUNTY**

The California Regional Water Quality Control Board, Central Coast Region (hereafter Water Board) finds:

- 1) Dynegy Moss Landing, LLC (hereafter Discharger) owns and operates the Moss Landing Power Plant located in the Monterey Bay area at Moss Landing adjacent to Elkhorn Slough in portions of Sections 7, 8, 17 and 18, T13S, R2E, Mount Diablo Baseline and Meridian. Moss Landing Power Plant, located in Monterey County, California, is a fossil fuel-burning steam boiler power plant with an active electrical generating capacity of 2,529 megawatts of electricity. The plant has six steam boiler generators which are divided into four units: Units 1, 2, 6 and 7. Unit 6, with a single boiler, was completed in 1967 and Unit 7, with a single boiler, was completed in 1968. Units 1 and 2, each with two heat recovery steam generators or boilers, were completed in 2002. (See Attachments 1, 2 and 3.)
- 2) Dynegy Moss Landing LLC was renamed from LSP Moss Landing, LLC on April 3, 2007. LSP Moss Landing, LLC was renamed from Duke Energy Moss Landing LLC in 2006. Duke Energy Moss Landing LLC purchased the Moss Landing Power Plant from Pacific Gas and Electric Company on July 1, 1998. (LSP Moss Landing, LLC, Duke Energy Moss Landing LLC and Pacific Gas and Electric Company are hereafter referred to individually or jointly as Previous Dischargers, or are referred to individually by name.)
- 3) In 1985, Pacific Gas and Electric Company submitted to the United States Environmental Protection Agency, Region IX (EPA) and California Department of Health Services (subject former division of Department of Health Services is now called the Department of Toxic Substances Control, DTSC) a Part B Application for four hazardous waste surface impoundments located at Moss Landing Power Plant. The four surface impoundments were Metal Cleaning Waste Ponds 1, 2 and 3 and the Oil Sludge Pond. EPA and DHS issued Hazardous Waste Facility Permits in June 1988. The permits contained operation, inspection, and waste analysis requirements, a contingency plan, closure and post-closure plans, and groundwater monitoring provisions.
- 4) On March 21, 1988, Pacific Gas and Electric Company submitted a Report of Waste Discharge (ROWD) for operation of hazardous surface impoundments at the Moss Landing Power Plant. The Water Board subsequently issued Waste Discharge Requirements (WDR) Order No. 88-80 on June 10, 1988, regulating operation of the impoundments.

- 5) In October of 2005, the Previous Dischargers submitted a revised Part B Permit application for the renewal of DTSC's Hazardous Waste Facility Permit. The permit application was for the continued operations of three hazardous waste surface impoundments: Metal Cleaning Waste Ponds 1, 2 and 3. The October 2005 Part B Permit application included a groundwater monitoring program presented in a Ground Water Monitoring Plan dated July 2004.
- 6) DTSC issued a Hazardous Waste Facility Permit, EPA ID Number CAT 08001165, effective April 6, 2006, (with an expiration date of April 6, 2016), for the three hazardous waste surface impoundments: Metal Cleaning Waste Ponds 1, 2 and 3. The current iteration of the Part B permit application (which is incorporated into the Hazardous Waste Permit) is Revision 11, dated July 2008, following Class 1 Permit modifications.
- 7) Groundwater beneath the hazardous waste surface impoundments, Metal Cleaning Waste Ponds 1, 2 and 3, is monitored pursuant to 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 Hazardous Waste Facility Permit EPA ID Number CAT 08001165.
- 8) Pacific Gas and Electric Company clean closed the Oil Sludge Pond, which was included in Waste Discharge Requirements (WDR) Order No. 88-80, by removal of all contaminated material. The Oil Sludge Pond was part of the oil-water treatment system. Pacific Gas and Electric Company submitted to the Water Board a closure certification report for the Oil Sludge Pond dated March 20, 1989, with revision 2 dated August 30, 1990. The Water Board Executive Officer approved clean closure of the Oil Sludge Pond on June 26, 1991.
- 9) The current financial assurance mechanism for operational liability, closure and postclosure care required by California Code of Regulations Title 22, Sections 66264.143, 66264.145, 66264.147, and 66270.14 is "Hazardous Waste Facility Certificate of Liability Insurance" issued by John L. Wortham and Son, L.P. Insurance on July 7, 2009. The Discharger filed current financial assurance documents with DTSC on July 13, 2009.
- 10) The Discharger operates the three on-site Class I hazardous waste surface impoundments (Metal Cleaning Waste Ponds 1, 2 and 3) for the treatment and temporary storage of wastes generated during operation of the power plant. (See Attachment 4.) The surface impoundments provide treatment of wastes prior to discharge of supernatant to surface waters pursuant to National Pollutant Discharge Elimination System (NPDES) Permit CA0006254, Order No. 00-041.
  - a) The Class I surface impoundments are described as follows: Metal Cleaning Waste Ponds 1 and 2 (MCWP 1 and MCWP 2), are adjoining surface impoundments constructed of reinforced concrete and lined with three 80-mil high density polyethylene synthetic liners with two leachate detection, collection, and removal systems (LDCRSs) and a groundwater detection, collection, and removal system (GDCRS). MCWP 1 and 2 have a combined estimated volume capacity of 1,700,000 gallons.
  - b) Metal Cleaning Waste Pond 3 (MCWP 3) is constructed of reinforced concrete and lined with three 80-mil high density polyethylene liners with two LDCRSs and one GDCRS. MCWP 3 has an estimated volume capacity of 377,000 gallons.

- 11) The hazardous waste surface impoundments identified in Finding No. 10 are subject to California Code of Regulations Title 23, Division 3, Chapter 15 and the Toxic Pits Cleanup Act of 1984 (TPCA, codified as California Health and Safety Code (HSC), Division 20, Chapter 6.5, Article 9.5, Section 25208, et. seq.), both as administered by the Water Board. The impoundments are also subject to Title 22, Division 4.5, Chapter 20 of the California Code of Regulations as administered by DTSC.
- 12) The Discharger inspects the surface impoundments daily and maintains findings in an Operating Record. Annually, after the removal of the majority of the wastes contained in the surface impoundments, the impoundments are inspected for integrity. An annual inspection report is submitted to DTSC and the Water Board.
- 13) The Discharger generates wastes during operation and maintenance of the Plant and in emergency situations. These wastes may be classified as non-hazardous, hazardous or restricted hazardous wastes pursuant to California Code of Regulations Title 22, Division 4, Chapter 30 and California Health and Safety Code Division 20, Chapter 6.5, Section 25122.7. Analyses of the wastes discharged to the surface impoundments indicate they may be hazardous wastes or restricted hazardous wastes due to high or low pH or metal concentrations. Characterization of these wastes is included in the Operating Record for the surface impoundments and in the DTSC permit application.
- 14) Pursuant to Waste Discharge Requirements Order No. R3-2004-104 and Hazardous Waste Facility Permit, EPA ID Number CAT 08001165, the wastes identified in Finding 13 above may be treated by settling, pH adjustment and metals precipitation. Following a period of settling, the supernatant from the surface impoundment(s) is tested to confirm compliance with National Pollutant Discharge Elimination System (NPDES) Permit CA0006254, Order No. 00-041. then discharged to the power plant circulating water system.
- 15) Metal precipitate sludges accumulated in the surface impoundments are removed at least annually through a permitted filter press.
- 16) Soils beneath the site are alluvial and terrace deposits of interbedded sands, silts, and clays extending to several thousand feet of depth. More detailed descriptions of the regional and site specific geology are presented in the Ground Water Monitoring Plan.
- 17) The groundwater table is approximately 20 feet below grade and approximately five feet above mean sea level (MSL) in the vicinity of the impoundments. (See Attachment 5.)
- 18) Regional groundwater flow direction in the uppermost aquifer in the vicinity of the surface impoundments is generally westerly toward Moss Landing Harbor and Monterey Bay, although in the immediate vicinity of the surface impoundments, the groundwater flow gradient is generally flat. Detailed descriptions of the regional and site specific hydrology are presented in the Ground Water Monitoring Plan.
- 19) The Discharger and Previous Discharger have been conducting groundwater monitoring since 1984. From 1984 to 1988 groundwater was monitored pursuant in part to Hazardous Waste Interim Status requirements. Groundwater was first monitored pursuant to the June 1988 Hazardous Waste Facility Permit in October 1988.

- 20) The September 8, 1994 Water Quality Control Plan, Central Coastal Basin (Basin Plan), incorporates State Water Resources Control Board (State Water Board) plans and policies by reference and contains a strategy for protecting beneficial uses of waters of the state.
- 21) Beneficial uses of groundwater in the vicinity (within 1/2 mile) of the surface impoundments include Agricultural Supply, Domestic Supply and Industrial Supply. This groundwater is a potential source of drinking water as identified in the TPCA and State Water Board Resolution No. 88-63.
- 22) TPCA is codified as California Health and Safety Code (HSC), Division 20, Chapter 6.5, Article 9.5, Section 25208, et. seq. TPCA contains prohibitions (in Sections 25208.4 (a) and 25208.4 (c)) against hazardous impoundments but allows for exemptions (in Sections 25208.4 (b) and 25208.16, respectively) to those prohibitions, provided certain findings are made.
- 23) TPCA exemptions for the subject impoundments were originally granted by WDR Order No. 87-187, adopted December 4, 1987. The exemptions were continued by subsequent orders and have been granted most recently by WDR Order No. R3-2004-104, adopted by the Water Board on October 22, 2004.
- 24) The Discharger submitted a March 18, 2009 ROWD for renewal of WDR Order No. R3-2004-104 and renewal of the TPCA exemptions granted therein. This order (WDR Order No. R3-2009-0049) rescinds WDR Order No. R3-2004-104 and renews the TPCA exemptions and operational and monitoring requirements.
- 25) In renewing the TPCA exemptions for these three surface impoundments, the Water Board makes the following findings based on the record in this matter. The Discharger's March 18, 2009 ROWD also certifies the following findings as accurate.
  - a) HSC SECTION 25208.4 (b) (2) (A):  
No hazardous waste constituents have migrated from the surface impoundments into the vadose zone or the waters of the state in concentrations that pollute the vadose zone, or pollute, or threaten to pollute, the waters of the state.
  - b) HSC SECTION 25208.4 (b) (2) (B):  
Continuing the operation of the surface impoundments does not pose a significant potential of hazardous waste constituents migrating from the surface impoundments into the vadose zone or the waters of the state, thus polluting the vadose zone, or polluting, or threatening to pollute, these waters.
  - c) HSC SECTION 25208.16 (a) (1):  
No extremely hazardous wastes are currently being discharged into the surface impoundments and either one of the following applies:
    - (1) The records of the person applying for an exemption indicate that no extremely hazardous wastes have been discharged into the surface impoundments.
    - (2) Extremely hazardous wastes are not present in the surface impoundments, in the vadose zone, or in the waters of the state.
  - d) HSC SECTION 25208.16 (a) (2):

The surface impoundment is used for the purpose of temporary storage and non-continuous batch treatment, all hazardous wastes [resulting from discharge of restricted hazardous waste] are removed after each batch treatment within 30 days of discharge [of restricted hazardous waste] into the impoundment, and the surface impoundment is visually inspected prior to each use and tested for integrity at least annually and complies with subdivision (a) of Section 25208.7. Reports of these tests are filed with the Water Board

e) HSC SECTION 25208.16 (a) (3):

The surface impoundment is in compliance with construction criteria and groundwater monitoring requirements of Section 25208.5 and a hydrogeological assessment report has been filed pursuant to Section 25208.8.

26) The Discharger is in substantial compliance with the following regulatory requirements (among others) for subject TPCA impoundments:

a) California Toxic Pits Cleanup Act

Some California Health and Safety Code Section 25208.5 requirements are paraphrased below.

- i) Liner - TPCA requires a double liner. The surface impoundments are constructed of reinforced concrete and lined with three 80-mil high density polyethylene synthetic liners.
- ii) Leachate Collection and Recovery - TPCA requires a leachate collection and recovery system. The surface impoundments are constructed with two leachate detection, collection, and removal systems.
- iii) Groundwater Monitoring - TPCA requires groundwater monitoring in accordance with the Federal Resource Conservation and Recovery Act of 1976. Groundwater is monitored in accordance with that Act. (See Attachments 6 and 7.)

b) Federal Resource Conservation and Recovery Act

- i) Liners - The Hazardous and Solid Wastes Amendment of 1984 (Amendment), Section 3004 (o), Minimum Technology Requirements, requires double liners and leachate collection and removal systems under hazardous waste surface impoundments. The Amendment provides for alternative designs. The surface impoundments are constructed of reinforced concrete and lined with three 80-mil high density polyethylene synthetic liners with two leachate detection, collection, and removal systems.
- ii) Groundwater Monitoring - Section 3004(p) of the Amendment requires groundwater monitoring of the uppermost aquifer at all hazardous waste facilities. Groundwater monitoring for the surface impoundments is conducted in accordance with the Amendment.

c) Some requirements of the indicated sections and articles of California Code of Regulations Title 23, Division 3, Chapter 15 are paraphrased below.

- i) Chapter 15, Section 2510 (b) and (c) allow engineering alternatives, which the Discharger utilizes to comply with Siting and Unsaturated Zone Monitoring requirements below, as described in Finding 27.

- ii) Article 3, Siting - Hazardous waste management units must be immediately underlain by a sufficient thickness of natural geologic materials of low permeability ( $1 \times 10^{-7}$  cm/sec) and situated at least five feet above ground water.
  - iii) Article 5, Unsaturated Zone Monitoring - Unsaturated zone monitoring is required, when feasible.
  - iv) Article 4, Liner - A double liner system is required. One liner is to include two feet of compacted clay or other impermeable material.
  - v) Leachate Collection and Removal Systems (LCRS) - An LCRS is required between liners.
  - vi) Article 5, Groundwater Monitoring - Groundwater monitoring satisfying specific conditions is required.
- 27) Because of shallow groundwater, subject impoundments potentially do not meet the Chapter 15, Section 2530 siting requirement for at least five feet of separation between an impoundment and groundwater. The Discharger utilizes an engineered alternative design approved by the Board in 1988 consisting of a groundwater detection, collection and removal system, which underlies the impoundments' two leachate detection, collection and removal systems (LCRSs), and is intended to prevent groundwater intrusion. The engineered alternative was approved because the prescriptive standard was not feasible, and the approved alternative was consistent with the performance goal of the prescriptive standard and provided equivalent water quality protection.
- 28) California Code of Regulations Title 23, Division 3, Chapter 15, Article 5, Section 2550.7 unsaturated zone monitoring is not required, as allowed therein, because the vadose zone is thin and the impoundments are underlain by the triple liquid detection, collection and removal liners described in Finding No. 27.
- 29) The following are select impoundment operation and compliance facts:
- a) The three surface impoundments are occasionally used for temporary storage and non-continuous batch treatment of restricted hazardous wastes. All restricted hazardous wastes are batch treated or removed within 30 days of discharge to the surface impoundments. This use is acceptable in the TPCA exemption under Health & Safety Code section 25208.16 as long as the restricted hazardous wastes do not contain specified concentrations of cyanide or PCBs.
  - b) The three surface impoundments are visually inspected prior to each use by routine daily inspections and are tested for integrity annually.
  - c) Primary liner leaks occur occasionally from accidental puncturing or tearing. Such leaks have been discovered, reported, repaired and tested within allowable time limits. Leaked liquids have been collected by the primary LCRS.
  - d) Liquid, believed to be rainwater and/or groundwater, based on pH and specific conductivity, is removed from the MCWP Nos. 1 and 3 groundwater detection and removal system (GDCRS) and pumped into the impoundments on a regular basis during the rain seasons.
  - e) Groundwater samples from specific monitoring wells have been re-sampled, re-analyzed and reported as required by WDR Order No R3-2004-104 and other agency hazardous waste permits. Statistically significant increases have been detected for several constituents; however, based on other data such as impoundment operational records and content chemistry, they were not attributed to pond release. Groundwater monitoring statistical analysis methodology has been reviewed and modified several times to improve performance and reliability.

- f) Groundwater from impoundment wells occasionally contains contaminants such as chromium VI; this pollutant is the subject of separate MLPP RCRA corrective actions. The absence of leachate in LCRSs for the three impoundments and the absence of a correlation between groundwater concentrations and discharges to the impoundments support conclusions that the impoundments are not sources of the chromium contaminants.
  - g) These waste discharge requirements are for an existing facility and are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Sections 15301 and 15302, Chapter 3, Title 14, of the California Code of Regulations.
- 30) The Discharger published Public Notice No. R3-2009-0049 in the Salinas Californian, a local newspaper of general circulation, on June 17, 2009. The public notice notified the public of the Water Board's intent to consider waste discharge requirements for these discharges on September 11, 2009 in San Luis Obispo, CA, and notified of the availability of the proposed order and related materials and solicited comments on same. On July 31, 2009, Water Board staff posted notice on the Water Board website and emailed notice to potentially interested parties of the revised Water Board meeting date of August 31, 2009. The Discharger and interested agencies and persons were provided an opportunity to submit written comments on this proposed order.
- 31) After consideration of all comments pertaining to the discharge, during a public hearing on August 31, 2009, this order was found consistent with the above findings.

### **TPCA EXEMPTIONS**

The Water Board HEREBY GRANTS to Dynegy Moss Landing LLC, for its Moss Landing Power Plant, Hazardous Waste Surface Impoundments (MCWP Nos. 1, 2, and 3), exemptions from the prohibitions specified by California Health and Safety Code Sections 25208.4 (a) and 25208.4 (c). The exemptions are granted pursuant to California Health and Safety Code Sections 25208.4 (b) and 25208.16, respectively.

**IT IS HERBY ORDERED THAT** Dynegy Moss Landing LLC, in order to meet the provisions contained in Division 7 of the California Water Code and Regulations adopted thereunder, and to meet applicable provisions of the Health and Safety Code, shall comply with the following at its Moss Landing Power Plant Class I surface impoundments:

#### **A. PROHIBITIONS**

- 1) The discharge (placement, disposal, or storage) of liquid extremely hazardous wastes or extremely hazardous wastes containing free liquids into surface impoundments is prohibited.
- 2) The discharge of any wastes from the surface impoundments to groundwater of the state, or to the unsaturated zone surrounding the surface impoundments is prohibited.
- 3) The discharge of any wastes from the surface impoundments to any surface waters of the state is prohibited, unless allowed pursuant to an approved National Pollutant Discharge Elimination System permit.

- 4) The discharge (placement, disposal, or storage) of any liquid hazardous wastes or hazardous wastes containing free liquids, into surface impoundments, not in compliance with construction and prescriptive requirements of Chapter 15 of Title 23 of the California Code of Regulations and Section 25208.5(a) of the Health and Safety Code (or an approved engineered alternative), is prohibited.
- 5) The discharge (placement, disposal, or storage) of any restricted hazardous wastes, produced as a result of operations and maintenance of the Power Plant, into a surface impoundment not in compliance with the construction and prescriptive requirements of Chapter 15 of Title 23 of the California Code of Regulations and Section 25208.5(a) of the Health and Safety Code, or an approved engineered alternative, is prohibited.
- 6) The discharge (placement, disposal, or storage) of any restricted hazardous wastes into the surface impoundments, other than for temporary storage and non-continuous batch treatment of wastes identified in Findings of this Order, is prohibited.
- 7) The discharge (placement, disposal, or storage) of any restricted hazardous wastes containing cyanide wastes or polychlorinated biphenyls, as specified in Section 25122.7 of the Health and Safety Code, is prohibited.
- 8) The discharge (placement, disposal or storage) of wastes as identified in the Findings of this Order outside Metal Cleaning Waste Ponds 1, 2, and 3 (MCWP 1, MCWP 2, and MCWP 3), is prohibited, with the following exceptions:
  - a) Discharge through permitted in-line sumps is allowed, and,
  - b) Waste streams permitted for NPDES and/or impoundment discharge may be discharged through the ocean outfall, in compliance with the applicable NPDES permit.

## **B. SPECIFICATIONS**

- 1) All hazardous waste, resulting from discharge of restricted hazardous waste into an impoundment, shall be removed within 30 days of discharge.
- 2) Wastes other than those identified in the Findings of this Order and liquid collected in the LCRSs and GDCRS shall not be discharged to the surface impoundments.
- 3) The Discharger shall inspect all leachate and groundwater collection and removal systems and respond as specified in Monitoring and Reporting Program No. R3-2009-0049.
- 4) The Discharger shall inspect each surface impoundment as specified in Monitoring and Reporting Program No. R3-2009-0049. Copies of the annual surface impoundment inspection report shall be submitted to the Water Board at the frequency specified in Monitoring and Reporting Program No. R3-2009-0049.
- 5) The treatment, placement, disposal or storage of waste shall not create a nuisance or pollution as defined in Section 13050(1) and (m) of the California Water Code.
- 6) Fluids within the impoundment's groundwater collection layer shall be removed as it becomes pumpable. These fluids shall not contact the bottom (or any portion) of the overlying LCRSs.



- 7) A minimum freeboard of two feet shall be maintained in all surface impoundments at all times.
- 8) Direct pipeline discharge to surface impoundments shall be either equipped with devices or have fail-safe operating procedures to prevent overfilling. Discharges shall be stopped immediately, in the event of any containment system failure that causes a threat to water quality.
- 9) The Discharger shall allow an authorized representative of the Water Board to:
  - a) Enter at reasonable times upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  - c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the conditions of this Order; and,
  - d) Sample or monitor at reasonable times, for the purposes of assuring compliance or as otherwise authorized by law, any substances or parameters at any location regulated by this Order.

### **C. WATER QUALITY PROTECTION STANDARDS**

Groundwater monitoring procedures and protection standards specified by the current approved "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 Hazardous Waste Facility Permit EPA ID Number CAT 08001165, must be implemented. Those procedures and standards are subject to change as the Hazardous Waste Facility Permit or the Part B Permit Application is revised and/or renewed.

### **D. PROVISIONS**

- 1) Order No. R3-2004-104 "Waste Discharge Requirements for Class I Wastewater Surface Impoundments And For Renewal Of Exemptions To The Toxic Pits Cleanup Act, Duke Energy Moss Landing LLC, Moss Landing Fossil Fueled Power Plant, Monterey County" adopted by the Board on October 22, 2004, is hereby rescinded.
- 2) Discharger shall comply with "Monitoring and Reporting Program No. R3-2009-0049," as specified by the Executive Officer.
- 3) Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January, 1984, except Item Nos. A.3., A.34., A.8., A.11., A.17., C.16, D.I., and D.2.
- 4) Water Board staff shall be notified by telephone within twenty-four (24) hours from the time of discovery of any containment structure failure or detection of migrating contaminant outside the containment system at the regulated surface impoundments. A written account

of the incident, the steps taken to remedy the problem, a plan and schedule for resolution of the problem, and a proposal to prevent the problem from recurring shall be submitted to the Water Board within 15 working days of the discovery, unless granted an extension by the Executive Officer.

- 5) The Discharger shall apply for renewal of exemptions to Health and Safety Code Sections 25208.4(a) and Section 25208.4(c) for the impoundments every five years, with the next application due December 1, 2013. The renewal application shall include a Report of Waste Discharge, appropriate filing fees, and any additional information required by the Executive Officer.
- 6) All notifications required by this Order to be made to the Water Board also shall be made to the California Department of Toxic Substances Control as follows:

California Environmental Protection Agency  
Department of Toxic Substances Control  
Northern California Permitting and Corrective Action Branch  
8800 Cal Center Drive  
Sacramento, California 95826-3200

- 7) This Water Board maintains the right to revoke at any time the exemptions granted by this Order, if it determines that a surface impoundment granted an exemption is polluting or threatening to pollute waters of the state, or if hazardous wastes are migrating from a surface impoundment in concentrations which pollute or threaten to pollute these waters.
- 8) This Order is subject to Water Board review and update, as necessary, to comply with current State and Federal laws, regulations, policies, or guidelines. Water Board review may occur in increments not to exceed five years from the effective date of this Order. This Order is not intended to prevent implementation of more stringent or restrictive requirements by another agency.

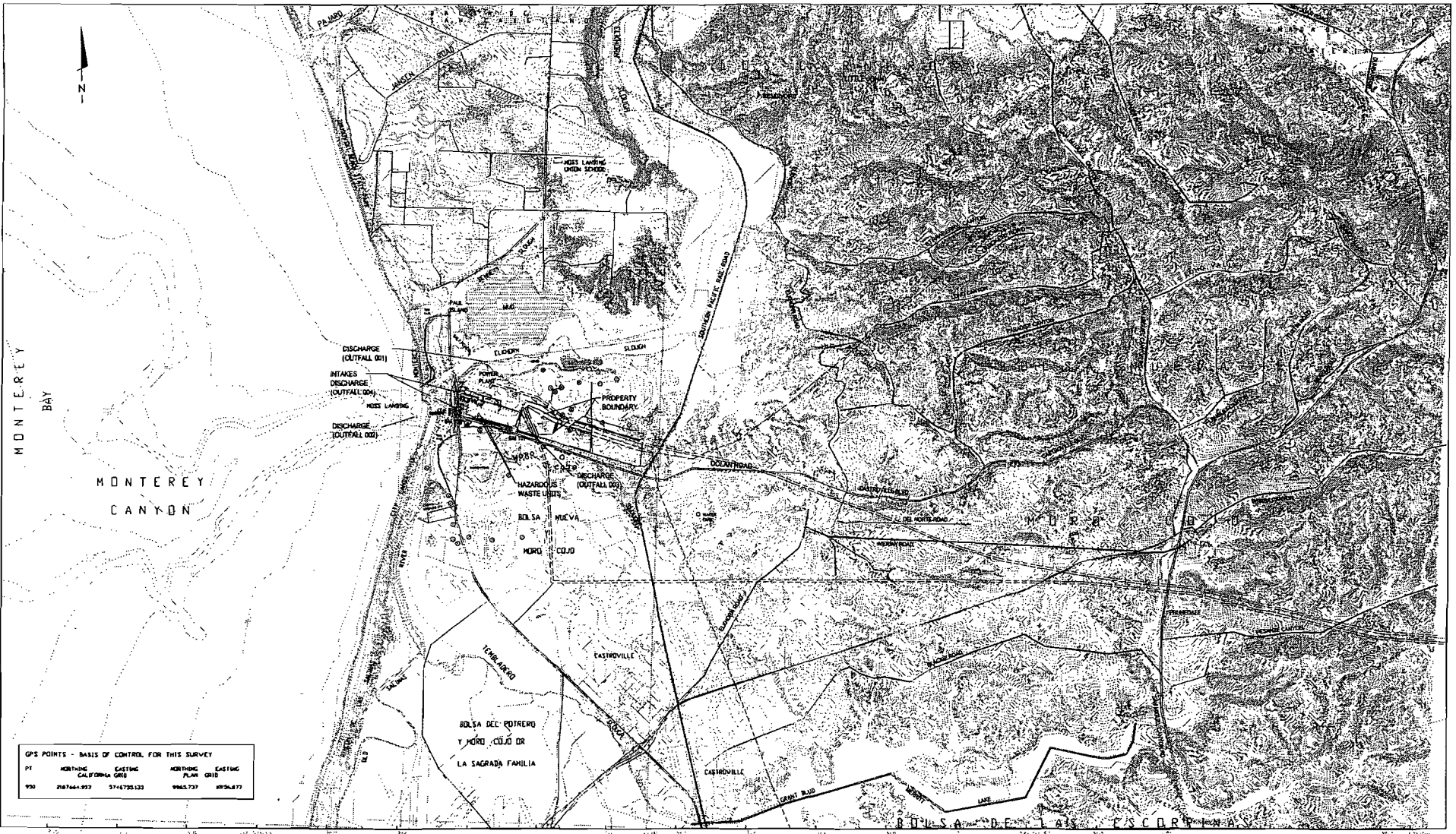
**I, ROGER W. BRIGGS, Executive Officer**, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on August 31, 2009.

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Executive Officer

#### ATTACHMENTS

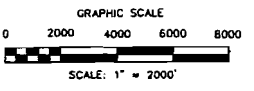
- 1, 2, and 3. Vicinity and Site maps
4. Impoundment and monitoring points map.
5. Groundwater elevation map.
6. Monitoring point map
7. Monitoring parameters



GPS POINTS - BASIS OF CONTROL FOR THIS SURVEY

PT	NORTHING CALIFORNIA GRID	EASTING CALIFORNIA GRID	NORTHING PLAN GRID	EASTING PLAN GRID
930	287664.997	5744735.123	9965.737	4094.877

NOTE:  
 THIS MAP WAS PREPARED USING PHOTOGRAMMETRIC COMPUTER  
 AFTER SHOOTING TECHNIQUES.  
 IN OPEN, UNOBSTRUCTED AREAS THIS MAP COMPLES WITH  
 NATIONAL STANDARDS FOR MAP ACCURACY. IN AREAS OF  
 DENSE VEGETATION WHERE THE GROUND IS OBTAINED FROM VIEW,  
 FIELD SURVEY CONTROL, BY ENALL, INC.  
 ELEVATIONS ARE BASED ON 1929 M.G.V.S.

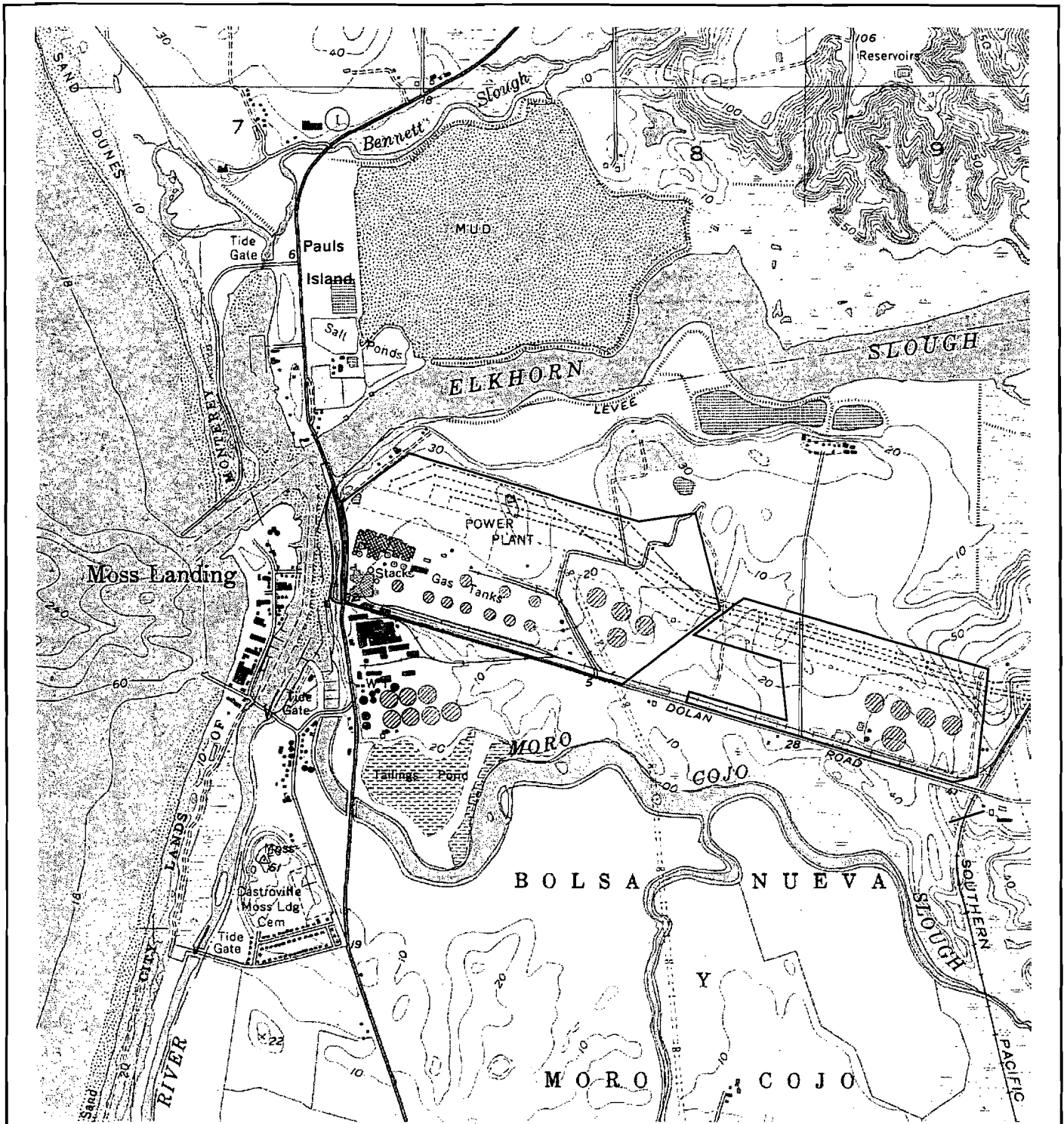


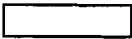
DUKE ENERGY MOSS LANDING LLC

MOSS LANDING POWER PLANT  
 PART B PERMIT APPLICATION  
 MONTEREY COUNTY, CALIFORNIA  
 SITE LOCATION

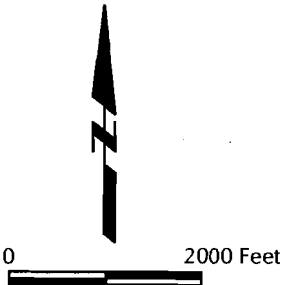
DATE:  
 DECEMBER, 08 2004

ATTACHMENT  
 2-1  
 PROJECT NO.  
 143-031.001



 = Site Location

SOURCE: U.S. GEOLOGICAL SURVEY - Moss Landing, Calif N3645-212145/7.5 1954 - Photorevised 1980

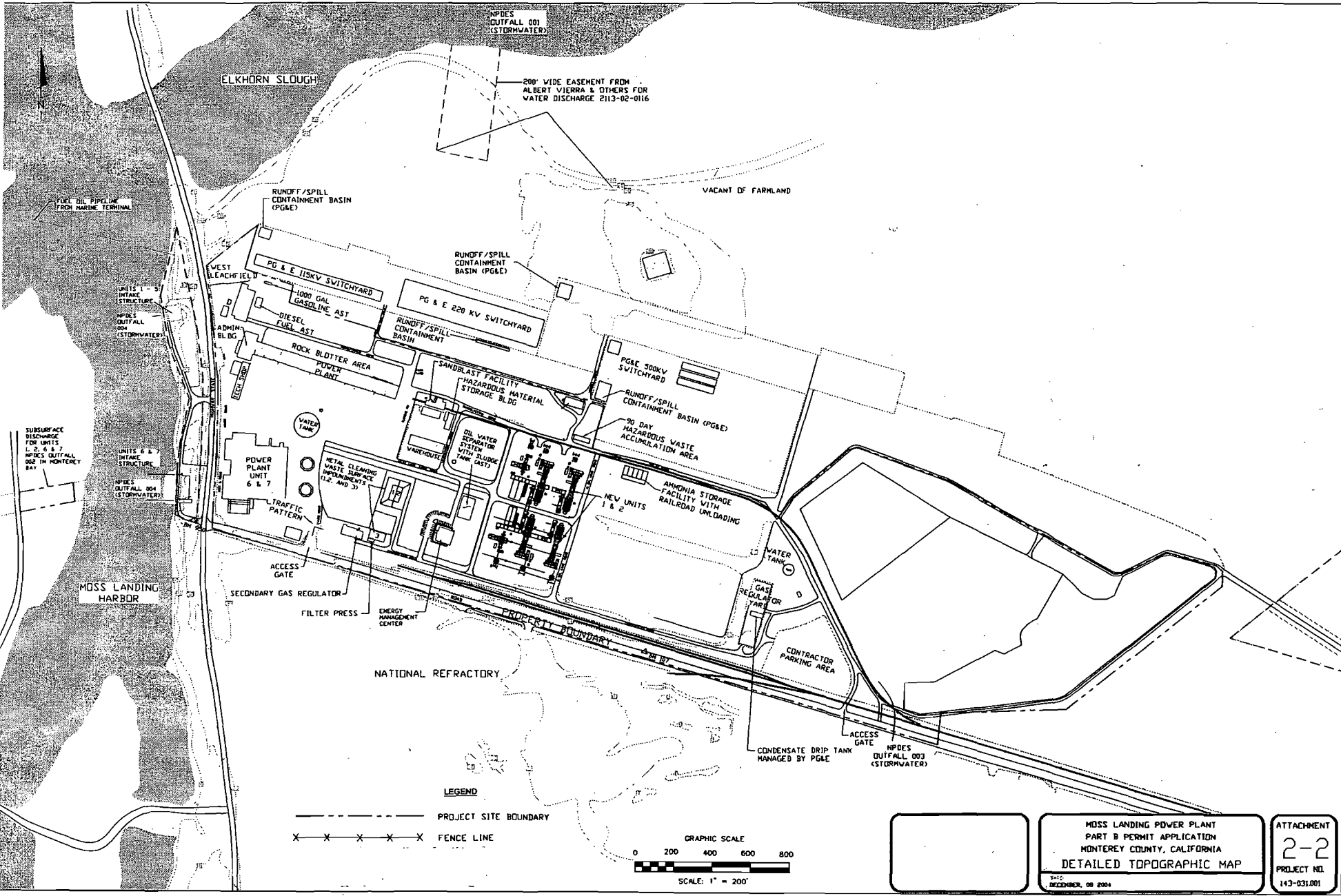


### Site Location Map

Moss Landing Power Plant, Highway 1 and Dolan Rd., Moss Landing, CA



Figure 1



NPDES  
OUTFALL 001  
(STORMWATER)

ELKHORN SLOUGH

200' WIDE EASEMENT FROM  
ALBERT VIERRA & OTHERS FOR  
WATER DISCHARGE 2113-02-0116

VACANT OF FARMLAND

RUNOFF/SPILL  
CONTAINMENT BASIN  
(PG&E)

RUNOFF/SPILL  
CONTAINMENT  
BASIN (PG&E)

PG & E 115KV SWITCHYARD

PG & E 220 KV SWITCHYARD

WEST BLEACHFIELD

RUNOFF/SPILL  
CONTAINMENT  
BASIN

1000 GAL  
GASOLINE AST

DIESEL  
FUEL AST

SANDBLAST FACILITY

HAZARDOUS MATERIAL  
STORAGE BLDG

PG&E 500KV  
SWITCHYARD

RUNOFF/SPILL  
CONTAINMENT BASIN (PG&E)

90 DAY  
HAZARDOUS WASTE  
ACCUMULATION AREA

ADMIN BLDG

ROCK BLDYTER AREA

POWDER PLANT

OIL WATER  
SEPARATOR  
SYSTEM  
WITH SLUDGE  
TANK (AST)

WAREHOUSE

AMMONIA STORAGE  
FACILITY WITH  
RAILROAD UNLOADING

NEW UNITS  
1 & 2

POWER PLANT  
UNIT  
6 & 7

TRAFFIC  
PATTERN

ACCESS  
GATE

SECONDARY GAS REGULATOR

FILTER PRESS

ENERGY  
MANAGEMENT  
CENTER

PROPERTY  
BOUNDARY

WATER  
TANK

WASTE  
GAS  
REGULATOR  
TANK

CONTRACTOR  
PARKING AREA

CONDENSATE DRIP TANK  
MANAGED BY PG&E

NPDES  
OUTFALL 003  
(STORMWATER)

MOSS LANDING  
HARBOR

SUBSURFACE  
DISCHARGE  
FOR UNITS  
1, 2, 6 & 7  
NPDES OUTFALL  
002 IN MONTEREY  
BAY

UNITS 1 - 5  
INTAKE  
STRUCTURE

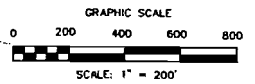
NPDES  
OUTFALL  
004  
(STORMWATER)

UNITS 6 & 7  
INTAKE  
STRUCTURE

NPDES  
OUTFALL 004  
(STORMWATER)

LEGEND

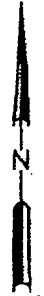
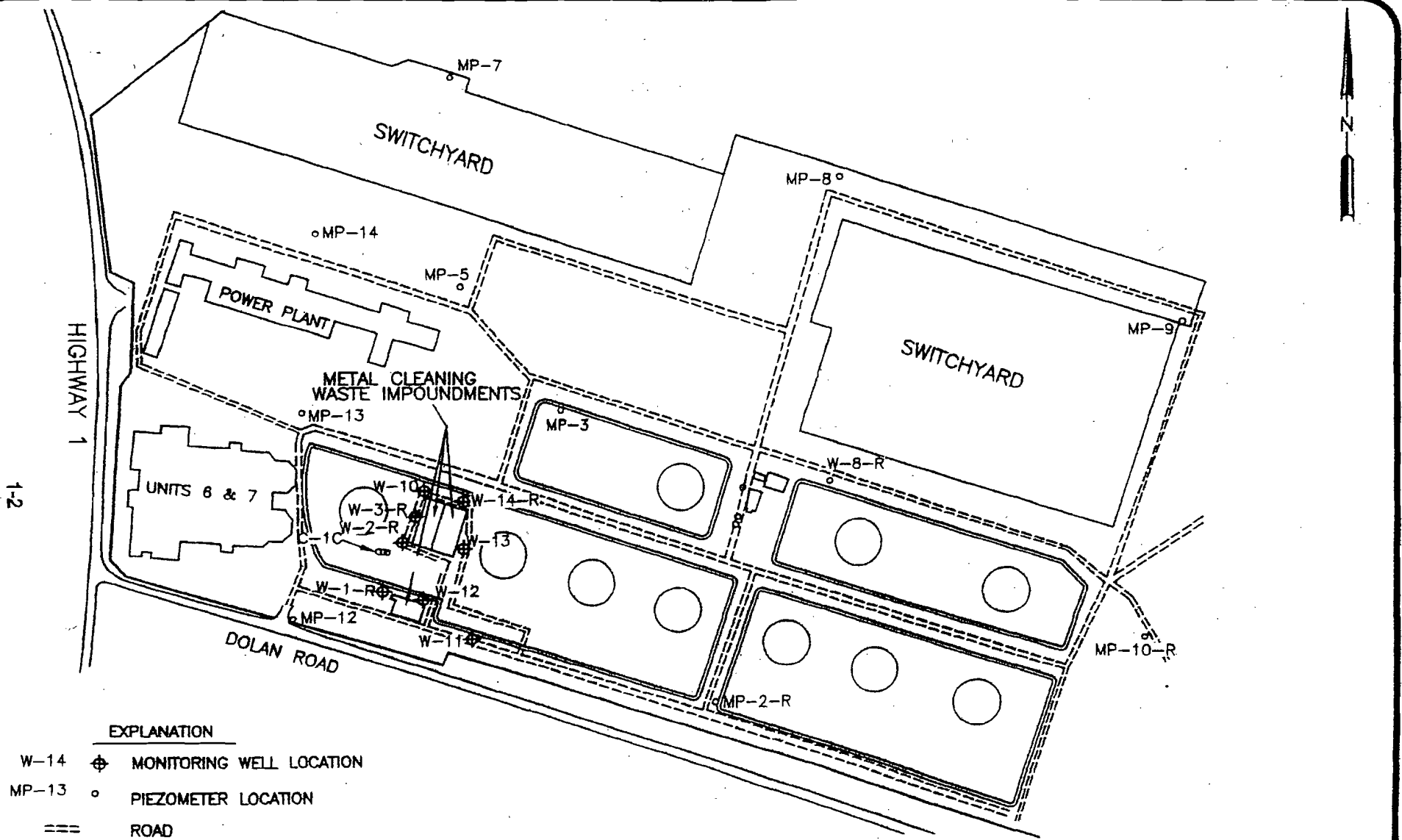
- PROJECT SITE BOUNDARY
- - - - - FENCE LINE



MOSS LANDING POWER PLANT  
PART B PERMIT APPLICATION  
MONTEREY COUNTY, CALIFORNIA  
DETAILED TOPOGRAPHIC MAP

DATE:  
DECEMBER, 09 2004

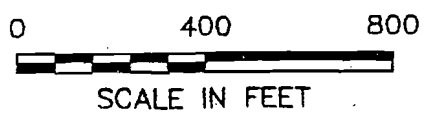
ATTACHMENT  
2-2  
PROJECT NO.  
143-031.001



HIGHWAY 1  
1-2

**EXPLANATION**

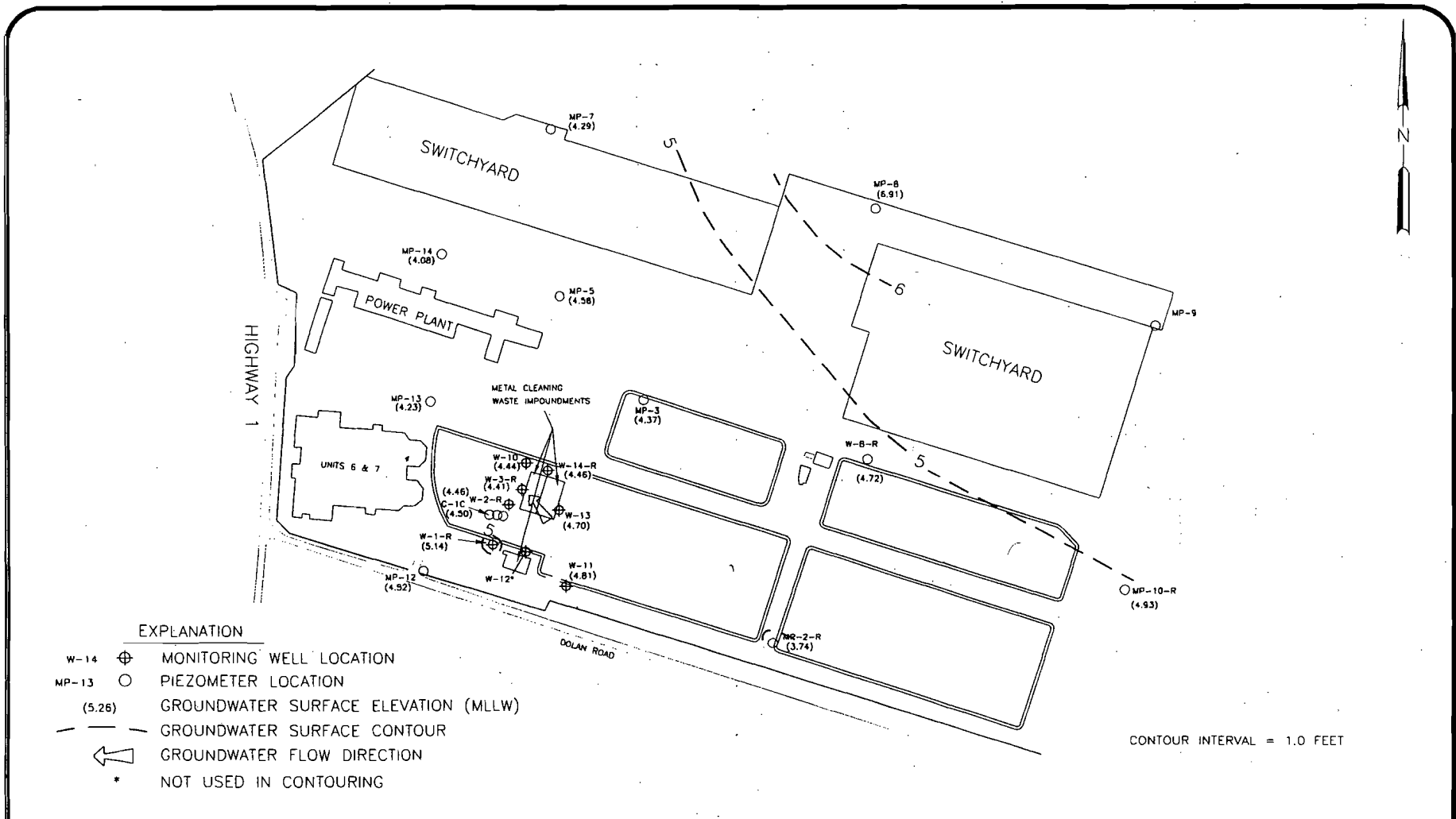
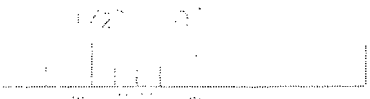
- W-14 MONITORING WELL LOCATION
- MP-13 PIEZOMETER LOCATION
- ROAD



DATE 03/2001  
DWN R/K  
APP J  
REV  
PROJECT NO.  
792793

**FIGURE 1**  
**MOSS LANDING POWER PLANT**  
**MONITORING WELL AND**  
**PIEZOMETER LOCATIONS**

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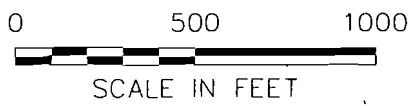
**EXPLANATION**

- W-14 ⊕ MONITORING WELL LOCATION
- MP-13 ○ PIEZOMETER LOCATION
- (5.26) GROUNDWATER SURFACE ELEVATION (MLLW)
- - - GROUNDWATER SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION
- \* NOT USED IN CONTOURING

CONTOUR INTERVAL = 1.0 FEET

**Shaw**® Shaw Environmental, Inc.

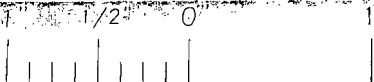
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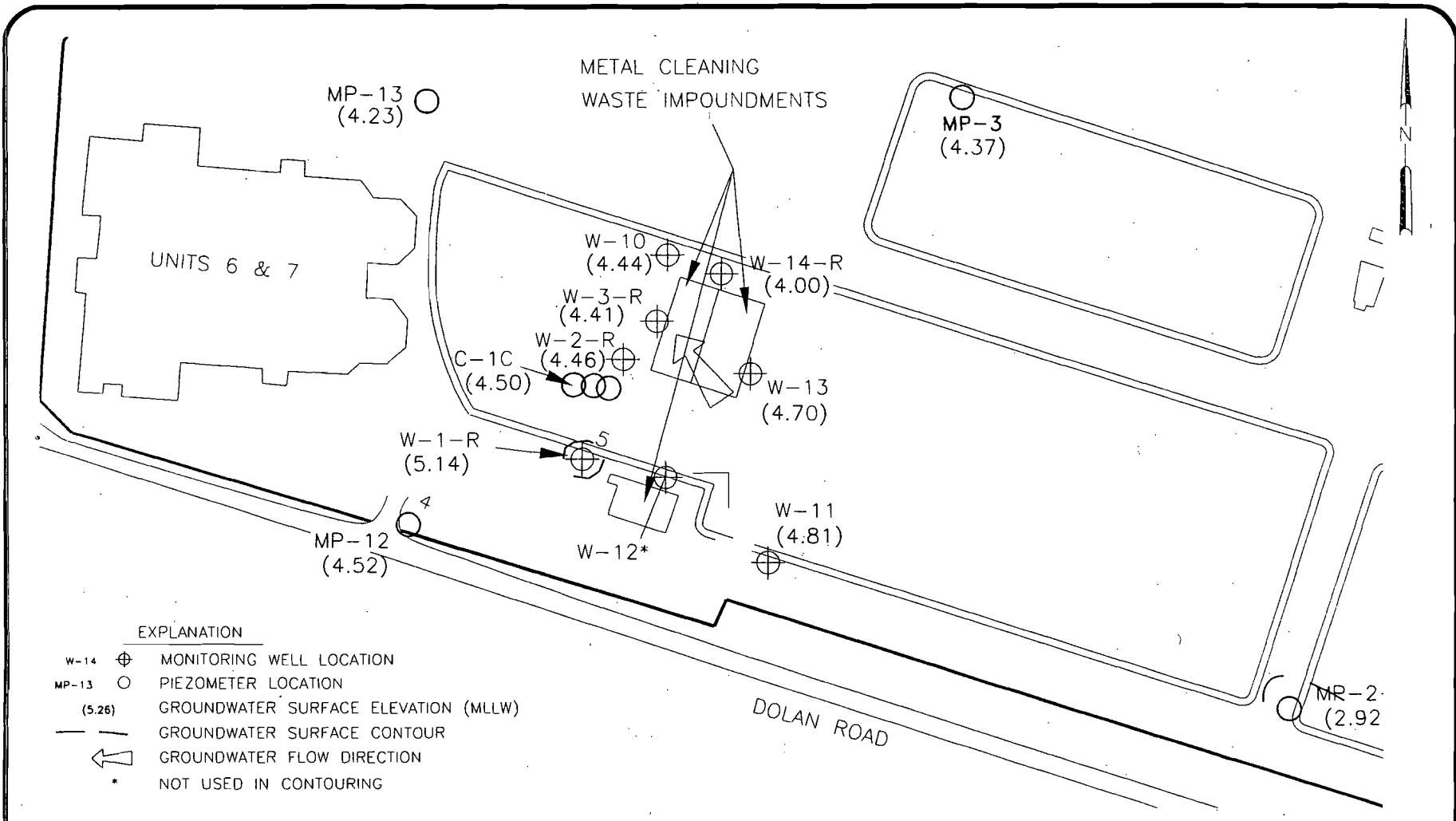
**FIGURE 3A**  
**DUKE ENERGY NORTH AMERICA**  
**MOSS LANDING POWER PLANT**

**WATER TABLE SURFACE MAP**  
**SECOND QUARTER 2009**



XREF Files: IMAGE Files:

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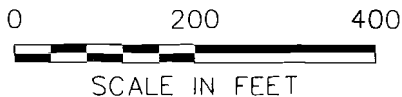


EXPLANATION

- W-14 ⊕ MONITORING WELL LOCATION
- MP-13 ○ PIEZOMETER LOCATION
- (5.26) GROUNDWATER SURFACE ELEVATION (MLLW)
- GROUNDWATER SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION
- \* NOT USED IN CONTOURING



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 103067-A10

FIGURE 3B  
 DUKE ENERGY NORTH AMERICA  
 MOSS LANDING POWER PLANT  
 IMPOUNDMENT AREA  
 WATER TABLE SURFACE MAP  
 SECOND QUARTER 2009



**Table 5-3**  
**Monitoring Parameters, Constituents of Concern, and**  
**Water Quality Parameters**

Analytes	Metal Cleaning Waste Ponds # 1, 2, and 3	Background Well
	Wells: W-1-R, W-2-R, W-3-R, W-10, W-12, W-13, W-14-R, C-1-A and C-1-B	Well: W-11
Arsenic	MP	MP
Barium	COC	COC
Cadmium	COC	COC
Calcium	WQ	WQ
Chromium, Total	MP	MP
Chromium, Hexavalent	MP	MP
Cobalt	COC	COC
Copper	MP	MP
Iron	MP	MP
Lead	COC	COC
Magnesium	MP	MP
Mercury	COC	COC
Molybdenum	COC	COC
Nickel	MP	MP
Potassium	MP	MP
Sodium	MP	MP
Vanadium	MP	MP
Zinc	MP	MP
Ammonia/Ammonium	MP	MP
Bromide	MP	MP
Carbonate/Bicarbonate	WQ	WQ
Chloride	WQ	WQ
Fluoride	MP	MP
Hydrazine	MP	MP
Sulfate	MP	MP

**Legend:**

MP = Monitoring Parameters = Quarterly sampling and statistical analysis

COC = Constituent of Concern = annual sampling in July and statistical analysis

WQ = Water Quality Parameter = Quarterly sampling but no statistical analysis (Started quarterly sampling 2<sup>nd</sup> quarter 2000)