



California Regional Water Quality Control Board
Lahontan Region



Linda S. Adams
Secretary for
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
(530) 542-5400 • Fax (530) 544-2271
www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger
Governor

M E M O R A N D U M

DOCKET

09-AFC-5

DATE APR 28 2010

RECD. MAY 05 2010

DATE: April 28, 2009

TO: Craig Hoffman
California Energy Commission
Siting, Transmission & Environmental Protection Division
1516 Ninth Street, MS 15
Sacramento, CA 95814-5512


FROM: Richard W Booth
Senior Engineering Geologist
LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

**SUBJECT: FACTS, REQUIREMENTS, MONITORING AND REPORTING
PROGRAM GROUNDWATER, MOJAVE SOLAR PROJECT**

Craig,

I am transmitting the following three documents for the California Energy Commission's use in establishing conditions for the protection of water quality for the proposed Mojave Solar Project.

1. Facts
2. Requirements
3. Monitoring and Reporting Program for Groundwater

Water Board staff appreciates working with the Energy Commission staff and believe that, as a result of this collaborative effort, the project design changes have resulted in an improved design that better protects water quality.

If you have any questions, please feel to contact James Brathovde at (530) 542-5572.

Attachments

California Environmental Protection Agency

Handwritten signature or text, possibly "H. L. ...".

FACTS

for the

MOJAVE SOLAR PROJECT SAN BERNARDINO COUNTY

**prepared by staff of the
Lahontan Regional Water Quality Control Board**

for the

California Energy Commission

1. Reason for Action and Regulatory Authority

The Applicant filed an Application for Certificate (AFC) with the Energy Commission in July 2009. The Applicant is proposing the construction and operation of a 250 megawatt (MW) solar power plant from twin, independently-operable solar fields, each feeding a 125-MW power island.

Under the Warren-Alquist Act, and Governor's Executive Order S-14-08, the California Energy Commission (Energy Commission) has the authority to streamline permitting for renewable energy generation facilities. The Energy Commission implements this "in lieu of" process by incorporating the regulatory requirements and conditions of the various local and State agencies in its certification process. All necessary State and local permits for this Facility, including those permits typically issued by the Water Board can be issued to the applicant through the Energy Commission's certification process.

In a February 26, 2010 letter, the U.S. Army Corps of Engineers (USACE) determined that the ephemeral drainages on the site are not waters of the United States (U.S.). However, the drainages affected by the Facility are waters of the State, as defined by California Water Code (Water Code) section 13050, and are subject to State requirements in accordance with Water Code section 13260 and to the Water Quality Control Plan for the Lahontan Region (Basin Plan). All actions impacting or potentially impacting these drainages, construction and industrial activities, will be regulated through these requirements, which will be incorporated in the Energy Commission's certification process.

2. Waste Discharge Requirements History

The Facility is a new project. There are no previous Lahontan Regional Water Quality Control Board (Lahontan Water Board) actions at this Facility or location. These requirements for waste discharge address storm water and groundwater requirements for the Facility.

3. Climate

The Mojave Desert has a typical desert climate, i.e., extreme daily temperature changes, low annual precipitation, strong seasonal winds, and mostly clear skies.

The annual highest temperature in the Mojave Desert exceeds 100 degrees Fahrenheit. Winter temperatures are more moderate, with mean maximum temperatures in the 60s and lows in the 30s.

Nearby City of Barstow has a total average annual precipitation of less than 6 inches. Over 70 percent of the precipitation occurs between December and March. However, occasional heavy precipitation occurs in the summer due to thunderstorms.

4. Site Geology

a. Setting

The Facility is located in Harper Valley at the northwest edge of the Mojave Desert Geomorphic Province. Shallow deposits consist of Holocene (11,000 years and younger) alluvium, lacustrine, and playa deposits. Deeper deposits consist of older alluvium. The Holocene and older alluvium are comprised of mixtures, layers, and lenses of silt, sand, and gravel. The lacustrine and playa deposits are generally finer grained, consisting of sands, silts, and clays. These deposits overlie igneous or metamorphic basement rocks at depth.

The elevation of the Facility ranges from 2,010 feet to 2,020 feet above mean sea level.

b. Faulting and Seismicity

The Facility is located in a seismically active region of southern California and within the influence of several active fault systems (northeast-trending Garlock fault to the north and the northwest-trending San Andreas Fault to the south). The northwest-trending Lenwood-Lockhart-Old Woman Springs fault is located approximately 2,300 feet southwest of the Facility.

c. Soils

Most of the Facility is covered by soil types that have rapid (i.e., high) permeability and negligible to low runoff potential. The exceptions are areas underlain by clay loams, which have moderate runoff potential and moderate to moderately slow permeability (i.e., low permeability). Clay loam soils are present in the northeast portion of the Facility and are slightly to moderately saline.

5. Groundwater

The Facility is located in the central portion of the Harper Valley groundwater basin (Department of Water Resources [DWR] groundwater basin No. 6-47). The Harper Valley groundwater basin is divided into several sub-basins based on the presence of bedrock barriers and faults that influence groundwater movement.

The Facility site overlies the Harper Lake groundwater sub-basin. Depth to perched groundwater is approximately 50 feet below ground surface (bgs) in the vicinity of Harper Lake. Depth to the regional groundwater table measured at the Facility ranged from approximately 150 to 170 feet below ground surface. Since agriculture use ceased in the 1980s, groundwater levels are slowly recovering. A groundwater depression still exists in the northeastern portion of the site. The groundwater flow direction in the sub-basin is generally toward Harper Lake. The primary source of water to the groundwater basin is from surface infiltration at the base of the mountains and in ephemeral washes. Additionally, there may be some groundwater flow into the Harper Lake sub-basin from the adjacent sub-basins.

In accordance with State Water Resources Control Board (State Water Board) Resolution No. 75-58, *Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling* and Resolution No. 77-01, *Policy with Respect to Water Reclamation in California*, the Applicant has evaluated alternative water sources for Facility operation.

In the vicinity of Harper Lake, some groundwater wells produce water with total dissolved solids (TDS) greater than 1,500 milligrams per liter.

6. Surface Water

Surface water flow in Harper Valley is to Harper Lake, a saline wet playa. The playa is a flat, unvegetated area in the lowest part of this undrained valley.

All drainages in this portion of the valley exist as ephemeral washes.

7. Land Uses and Existing Site Conditions

The approximately 1,765-acre site is on previously disturbed fallow agricultural land.

8. Storm Water Discharges

Under pre-development conditions, the Facility site has a low gradient (between 1 and 3 percent) and storm water moves via sheet flow to Harper Lake.

The following requirements regulate waste discharges in storm water runoff and other discharges associated with Facility construction activity and industrial storm water runoff.

a. Construction Storm Water Management

The Applicant estimates that the construction phase will last six months, during which time the entire Facility site will be regraded and an unnamed wash will be rerouted and channelized. Site drainage will be managed in accordance with the best management practices (BMPs) as described in the Final Storm Water Pollution Prevention Plan (SWPPP) and Drainage, Erosion, and Sediment Control Plan (DESCP).

The Applicant has proposed a channel design that will convey the 100-year flood event (29,000 cubic feet per second) between the northern (Alpha) field and southern (Beta) field without overtopping the banks. The channel will redirect flows to Harper Lake.

b. Post-Construction Storm Water Management

The Applicant proposes to manage storm water, erosion and sedimentation at the completed Facility through a comprehensive system of source controls, treatment BMPs, and site design. At a minimum, the Applicant proposes to adhere to San Bernardino County's detention and retention requirements.

Onsite storm water will be contained onsite. Offsite flow in the unnamed wash will be conveyed across the site, without any input from onsite flows, and discharged into Harper Lake. The power block will drain via sheet flow away from equipment foundations to the solar field. Good housekeeping and prompt removal of spills and leaks will be implemented to minimize storm water contact with contaminated materials.

9. Receiving Waters

The receiving waters are the minor surface waters of the Lockhart Hydrologic Area (Hydrologic Subunit 628.42) and groundwaters of the Harper Valley Ground Water Basin (DWR No. 6-47).

10. Lahontan Basin Plan

The Lahontan Water Board adopted a Water Quality Control Plan for the Lahontan Basin (Basin Plan), which became effective on March 31, 1995. These Facts, Requirements, and Monitoring and Reporting for Groundwater implement the Basin Plan.

11. Beneficial Uses -Surface Waters

The Basin Plan designates beneficial uses for surface waters in each watershed of the Lahontan region. Beneficial uses of surface waters within the Facility area and vicinity that could be impacted by the Facility include:

- a. municipal and domestic water supply (MUN),
- b. agricultural supply (AGR),
- c. groundwater recharge (GWR),
- d. navigation (NAV),
- e. water contact recreation (REC-1),
- f. non-contact water recreation (REC-2),
- g. warm freshwater habitat (WARM),
- h. wildlife habitat (WILD).

12. Beneficial Uses -Groundwaters

The Basin Plan designates beneficial uses for groundwaters in each watershed of the Lahontan region. Beneficial uses of groundwaters within the Facility area and vicinity that could be impacted by the Facility include:

- a. municipal and domestic water supply (MUN),
- b. agricultural supply (AGR),
- c. industrial surface supply (IND),
- d. freshwater replenishment (FRSH).

13. Non-Degradation

The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 (*Statement of Policy with Respect to Maintaining High Quality of Waters in California*). Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings or facts. The Basin Plan implements, and incorporates by reference, state

antidegradation policies. The permitted discharge is consistent with the antidegradation provision of Resolution No. 68-16 because either the permitted discharge will not be released into the environment or because adherence to these requirements will result in minor, if any, adverse impacts to water quality.

In accordance with State Water Board Resolution No. 68-16 and the Basin Plan, the following conditions must be met prior to any degradation of water of the State:

- a. *Any change in water quality must be consistent with maximum benefit to the people of the State;*
- b. *The degradation will not unreasonably affect present and anticipated beneficial uses;*
- c. *The degradation will not result in water quality less than that prescribed in the Basin Plan;*
- d. *Discharges must use the best practicable treatment or control to avoid pollution or nuisance and maintain the highest water quality consistent with maximum benefit to the people of the State.*

14. Other Considerations and Requirements for Discharge

Pursuant to Water Code section 13241, these requirements take into consideration:

- a. *Past, present, and probable future beneficial uses of water.*

These requirements identify past, present and probable future beneficial uses of water as described in Facts Nos. 11 and 12. The proposed discharge will not adversely affect present or probable future beneficial uses of water, including domestic water supply, agricultural supply, industrial supply, and freshwater replenishment.

- b. *Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.*

Facts Nos. 3 through 8 describe the environmental characteristics and quality of water from this hydrographic unit.

- c. *Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.*

These requirements will not result in any significant changes to groundwater quality. Adverse effects to surface water quality will be minimized.

d. *Economic considerations.*

These requirements authorize the Applicant to implement closure and post-closure maintenance actions at the Facility as proposed by the Applicant. These requirements accept the Applicant's proposed actions as meeting the best practicable control method for protecting water quality from impacts from the Facility.

e. *The need for developing housing within the region.*

The Discharger is not responsible for developing housing within the region.

f. *The need to develop and use recycled water.*

The Energy Commission and the Applicant are evaluating the feasibility of using recycled water as the water source for Facility operations.

SURFACE IMPOUNDMENTS

15. Description of Surface Impoundments (evaporation ponds)

The four proposed surface impoundments are lined evaporation ponds used for disposal of process wastewater generated primarily as spent cooling water and process water. The surface impoundments are waste management units. The anticipated total dissolved solids (TDS) concentration of the wastewater is approximately 60,000 milligrams per liter (mg/L). Wastewaters are co-mingled in the surface impoundments, which provide a combined evaporation surface of approximately 20 acres (four surface impoundments each with a nominal surface area of five acres). The collective operating capacity of the surface impoundments is designed to accommodate an annual discharge rate of 24 gallons per minute (0.035 million gallons per day).

Saturated or equilibrium concentrations of impounded wastewaters result in precipitation of solids out of solution. For safety and operational purposes, accumulated solids are to be removed from the surface impoundments when the solids reach a depth of two feet above the bottom of the impoundment. The surface impoundments must be designed to contain the 1,000-year, 24-hour precipitation storm event (pursuant to California Code of Regulations (CCR), title 27, section 20310) while maintaining the mandatory 2-foot freeboard requirement.

16. Surface Impoundments Construction Design

The proposed design for the four surface impoundments, from the surface downwards, consists of the following:

a. A hard surface/protective layer with granular fill/free draining sub-base over

- geotextile;
- b. A primary 60-mil high-density polyethylene (HDPE) liner;
- c. An interstitial leak detection and removal system (LDRS) comprising a geomembrane geonet and collection piping;
- d. A secondary 40-mil HDPE liner; and
- e. A base layer consisting of one foot of onsite screened soil below the lower liner, which contains no particles larger than one-quarter inch and which is compacted to 95 percent of the maximum dry density per ASTM D1557, or a 6-inch sand layer to prevent punctures.
- f. A leak detection system consisting of continuous carrier pipes installed at the sides and low point of each surface impoundment at a depth of approximately five feet below the secondary liner. A neutron probe will be pulled through the pipes to assess the moisture content of the vadose soil. The background moisture content, and subsequent approved action level that will indicate a leak, will be established after the surface impoundments have been constructed, but prior to any liquids being placed in the surface impoundments.

17. Leachate Collection and Removal System (LCRS)

In accordance with CCR, title 27, section 21600, subdivision (b)(8)(C), there is an LCRS proposed to be located beneath the primary liner in the surface impoundment. Additionally, an LCRS will be located between the primary and secondary liners underlying each surface impoundment. The LCRS consists of a layer of geonet sloped to a leak detection sump in each surface impoundment. The leak detection sump will include a 16-inch diameter leak-detection-and-removal-well fitted with an electronic leak sensor and a submersible pump to allow removal of collected fluids. The pump will discharge back into the surface impoundment. The discharge pipe shall be equipped with a recording flow totalizer to allow monitoring of the amount of fluid removed over time and calculation of leakage rates. The inspection and maintenance requirements for the LCRS are outlined in the April 2010 Report of Waste Discharge (ROWD).

18. Action Leakage Rate of Surface Impoundment Liners

The Action Leakage Rate (ALR) is the allowable leakage from the primary liner system above which spill prevention, control, and countermeasure (SPCC) plan actions are triggered (April 2010 ROWD). According to Code of Federal Regulations, title 40, section 264.222, the ALR is defined as "...the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding 1 foot." The ALR must also include an adequate safety margin to allow for variability in the containment system design (e.g. liner and collection pipe slope, interstitial fill hydraulic conductivity, thickness of drainage material, etc.). The estimated ALR for the surface impoundments, as documented in the April 2010 ROWD, is 2,750 gallons per acre per day. This is based on one standard hole per acre, a drainage layer geonet with hydraulic conductivity of 0.06

meters per second and a 50 percent safety factor. The assumption underlying this ALR calculation will be verified in the actual constructed surface impoundments. Based on a 5.0-acre pond, each surface impoundment would have an ALR of 13,750 gallons per day. However, the ALR will need to have field verification because this rate will vary depending on actual drainage material used and its hydraulic conductivity. A final ALR will be submitted to the Energy Commission based on field analysis. A large hole in the geomembrane may cause a rapid large leakage rate (RLLR) of approximately 9,500 gallons per acre per day. This would equate to a RLLR of 47,500 gallons per day per surface impoundment. The RLLR is provided for informational purposes only. The recording flow totalizer at each sump will be monitored at least daily to determine the leakage rate through the primary liner. If the leakage rate exceeds the ALR, then the appropriate actions in the SPCC Plan will be implemented.

LAND TREATMENT UNITS

19. Description of Land Treatment Units

Each of the two Land Treatment Units (LTUs) is a waste management unit and will cover an area of approximately 75 feet by 150 feet. The LTU will not incorporate a liner containment system or LCRS, but will be constructed with a prepared base consisting of 2 feet of compacted, low permeability, lime-treated material. This base will serve as a competent platform for land treatment activities, and will serve to slow the rate of surface water infiltration in the treatment area.

The compacted and native soil beneath the LTU is designated as a "treatment zone" to a depth of 5 feet. Although the LTU will be taking vehicle traffic, no hard surface will be required, as there is no liner system to protect. A staging area is allocated in the LTU for storage of heat transfer fluid (HTF)-impacted soils while they are being characterized. Soil characterized as hazardous will be removed from the site; therefore, no additional liner system is required in the LTU for the hazardous waste. The staging area will have temporary plastic sheeting placed beneath the soil piles during characterization and plastic sheeting placed over the piles during precipitation events.

Each LTU will be surrounded on all sides by two-feet high reinforced concrete walls. These walls and site grading will control and prevent run-on of storm water into the LTU or run-off of storm water from the unit. CCR, title 27, section 20250 (b)(5) prescriptive requirements require that no waste shall migrate below the treatment zone.

Approximately 2,292,000 gallons of HTF (Therminol VP-1 [diphenyl ether (73.5%) and biphenyl (26.5%)]) will be utilized at any one time within the Facility. However, the anticipated volume of soil within the LTU contaminated with HTF would not exceed 750 cubic yards. Based on available operation data from other sites, it is

anticipated that approximately 750 cubic yards (on average) of HTF-affected soil may be treated per year. Larger or smaller quantities could be generated during some years, depending on the frequency and size of leaks and spills. A SPCC plan will be developed for the Facility.

Storm water may occasionally accumulate in the LTU. This storm water can be pumped to the surface impoundments only after visual observation establishes that the water is free from HTF product and sheen. Based on conditions at similar sites in the area, it is anticipated that such discharge, if necessary, would only occur approximately once every three to five years.

20. Waste Management Units Classification

Pursuant to CCR, title 27, section 20250, the surface impoundments and the land treatment unit are classified as Class II waste management units. Pursuant to CCR, title 27, section 20310, the units will be located outside of the 100-year flood plain and seismic hazard zones. In addition, the base of the waste management units will have a greater than five-foot separation to the underlying groundwater because the depth to groundwater is typically greater than 150 feet bgs.

21. Waste Classification

a. Wastewater

The anticipated wastewater concentrations have been compared to the Soluble Threshold Limit Concentrations (STLCs) as reported in the CCR, title 22, section 66261.24 "Characteristics of Toxicity," and compared to Toxicity Characteristic Leaching Procedure (TCLP) values as reported in the Code of Federal Regulations (CFR) Part 261, section 261.24. The anticipated concentration of chemical constituents in wastewater discharging into the surface impoundments is less than the STLC and TCLP for all reported parameters. Therefore, the wastewater is not considered a hazardous waste under State or Federal regulations.

b. Residual Solids

Hazardous wastes, per California Health and Safety Code section 25208 (Toxic Pits Cleanup Act), are prohibited from being either discharged into, being stored or accumulating via evaporative process within the surface impoundments. The nonhazardous wastewater discharged to the surface impoundments is hereby classified as a liquid designated waste. Residual solids remaining after evaporation are expected (April 2010 ROWD) to contain inorganic salts below hazardous waste levels.

The Water Code section 13173 defines a designated waste as:

1. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Health and Safety Code, section 25143 or,
2. Nonhazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives, or that could reasonably be expected to affect beneficial uses of the waters of the state as contained in the appropriate state water quality control plan.

c. HTF-contaminated soil

The Department of Toxic Substances Control will determine a hazardous waste concentration (in milligrams of HTF per kilogram of soil) for HTF-contaminated soil. HTF-contaminated soil will be considered inert if the concentration is less than or equal to 100 milligrams per kilogram (mg/kg) or is 1/100 of the hazardous waste level, whichever is more conservative. (The hazardous waste concentration at another similar site for HTF-contaminated soil is 10,000 mg/kg.) HTF-contaminated soil at concentrations between the hazardous waste concentration and the inert concentration is classified as designated waste.

The wastewater discharged into the surface impoundments is expected to be nonhazardous; however, the wastewater will contain pollutants (e.g., TDS, fluoride, selenium, and chromium) that could exceed water quality objectives if released, or that could be expected to affect the beneficial uses of waters of the state. Therefore, the wastewater is classified as a "designated waste." This classification is consistent with CCR, title 27, section 20210.

GROUNDWATER MONITORING NETWORK

22. Groundwater Monitoring Network (GMN)

The April 2010 ROWD proposes a Groundwater Monitoring Network (GMN) of six monitoring wells: three will monitor the Alpha Block waste management units and three will monitor the Beta Block waste management units. Each pair of two surface impoundments and a land treatment unit will have one upgradient and two down-gradient monitoring wells.

MONITORING PROGRAMS

23. Statistical Methods

Statistical analysis of monitoring data is necessary for the earliest possible detection of a statistically significant evidence of a release of waste from the Facility. CCR, title 27 requires statistical data analysis. The Monitoring and Reporting Program (MRP) includes methods for statistical analysis. The monitoring parameters listed in the MRP are believed to be the best indicators of a release from the Facility.

24. Detection Monitoring Program

Pursuant to CCR, title 27 section 20420, the Applicant has proposed a detection monitoring program for the Facility. The detection monitoring program for the surface impoundments consists of monitoring the LCRS, moisture detection network (neutron probe network), and monitoring wells for the presence of liquid and/or constituents of concern. The program to monitor the LCRS and water bearing media for evidence of a release, as well as the monitoring frequency, is specified in the MRP. The detection monitoring program for the Land Treatment Unit consists of collecting and analyzing samples of the native soil in, and underneath, the treatment zone for the presence of HTF. The frequency of monitoring is specified in the MRP.

25. Evaluation Monitoring Program

An Evaluation Monitoring Program (EMP) is required, pursuant to CCR, title 27 section 20425, to evaluate evidence of a release if detection monitoring and/or verification procedures indicate evidence of a release.

26. Corrective Action Program

A Corrective Action Program (CAP) to remediate detected releases from the surface impoundments or land treatment unit may be required pursuant to CCR, title 27, section 20430, if results of an EMP warrant a CAP. The Applicant submitted a CAP as part of the April 2010 ROWD.

27. Closure and Post-Closure Maintenance Plan for the Surface Impoundments

The Applicant submitted a Preliminary Evaporation Pond Closure Plan as part of the April 2010 ROWD.

28. Reasonably Foreseeable Release for the Surface Impoundments

The Applicant submitted a CAP to address a reasonably foreseeable release. The scenario presented in the CAP is a dike failure in which the Applicant is required

to remediate and clean up soil that may become contaminated due to a release from the surface impoundments.

29. Closure and Post-Closure Maintenance Plan for the Land Treatment Unit

The Applicant submitted a Preliminary Land Treatment Unit Closure Plan as part of the April 2010 ROWD.

30. Reasonably Foreseeable Release for the Land Treatment Unit

The Applicant submitted a CAP to address a reasonably foreseeable release from the Land Treatment Unit. The scenario presented in the CAP for the Land Treatment Unit is a release to native soil underlying the treatment zone.

Corrective action includes excavation and proper disposal of HTF-contaminated soil from the Land Treatment Unit and replacing the excavation with clean native soil.

31. Narrative and Numerical Water Quality Objectives

The Basin Plan incorporates narrative and numerical water quality objectives that apply to all ground and surface waters within the Lahontan Region. In general, where more than one objective is applicable, the stricter objective applies.

REQUIREMENTS

for the

MOJAVE SOLAR PROJECT SAN BERNARDINO COUNTY

prepared by staff of the
Lahontan Regional Water Quality Control Board

for the

California Energy Commission

I. DISCHARGE SPECIFICATIONS

A. Storm Water Discharges

Waste in discharges of storm water to waters of the State must be reduced or prevented to achieve the best practicable treatment level using controls, structures, and management practices. The Applicant shall comply with all substantive portions of the requirements (with the exception of purely administrative requirements, e.g., filing a Notice of Intent) contained in State Water Board's *Waste Discharge Requirements For Discharges of Storm Water Discharges Associated With Construction Activity, General Permit No. CAS00002* and *Waste Discharge Requirements For Discharges of Storm Water Associated With Industrial Activities, General Permit No. CAS00001* and all subsequent revisions and amendments.

These requirements do not preclude the Applicant from requirements imposed by municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to separate storm sewer systems or other water, conveyances and water bodies under their jurisdiction.

B. Receiving Water Limitations

Surface Water and Groundwater Objectives

Receiving water limitations are narrative and numerical water quality objectives contained in the Water Quality Control Plan for the Lahontan Basin (Basin Plan) for all surface waters and groundwaters of the Lahontan Region. As such, they are required to be met. The discharge of waste to surface waters shall not cause, or contribute to, a violation of the following water quality objectives for waters of the Lockhart Hydrologic Unit.

Surface Water

a. Ammonia

Ammonia concentrations shall not exceed the values listed in Tables 3-1 to 3-4 of the Basin Plan for the corresponding conditions in these tables. Tables 3-1 to 3-4 of the Basin Plan are incorporated into these requirements by reference.

b. Bacteria, Coliform

- i. Waters shall not contain concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes.
- ii. The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20/100 milliliter (ml), nor shall more than 10 percent of all samples collected during any 30-day period exceed 40/100 ml. The log mean shall ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any 30-day period. However, a log mean concentration exceeding 20/100 ml, or one sample exceeding 40/100 ml, for any 30-day period shall indicate violation of this objective even if fewer than five samples were collected.

c. Biostimulatory Substances

Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.

d. Chemical Constituents

- i. Waters designated as MUN (a beneficial use of surface water of the Lockhart Hydrologic Unit) shall not contain concentrations of chemical

constituents in excess of the maximum contaminant level (MCL) or secondary MCL based upon drinking water standards specified in provisions of the CCR, Title 22, Division 4, Chapter 15, hereby incorporated by reference into these requirements. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

- ii. Waters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.

e. Chlorine, Total Residual

For the protection of aquatic life, total chlorine residual shall not exceed either a median value of 0.002 milligrams per liter (mg/L) or a maximum value of 0.003 mg/L. Median values shall be based on daily measurements taken within any six-month period.

f. Color

Waters shall be free of coloration that causes nuisance or adversely affects the water for beneficial uses.

g. Dissolved Oxygen

- i. The dissolved oxygen concentration as percent saturation shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation.
- ii. For waters with the beneficial uses of WARM (a beneficial use of surface water in the Lockhart Hydrologic Area), the minimum dissolved oxygen concentration shall not be less than that specified in Table 3-6 of the Basin Plan. Table 3-6 of the Basin Plan is incorporated herein by reference.

h. Floating Materials

- i. Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses.
- ii. The concentrations of floating material shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

i. Oil and Grease

- i. Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses.
 - ii. The concentration of oils, greases, or other film or coat generating substances shall not be altered.
- j. Pesticides
 - i. For the purposes of these requirements, pesticides are defined to include insecticides, herbicides, rodenticides, fungicides, piscicides and all other economic poisons. An economic poison is any substance intended to prevent, repel, destroy, or mitigate the damage from insects, rodents, predatory animals, bacteria, fungi, or weeds capable of infesting or harming vegetation, humans, or animals (California Agriculture Code 12753).
 - ii. Pesticide concentrations, individually or collectively, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall not be an increase in pesticide concentrations found in bottom sediments. There shall be no detectable increase in bioaccumulation of pesticides in aquatic life.
 - iii. Waters designated as MUN shall not contain concentrations of pesticides or herbicides in excess of the limiting concentrations set forth in the CCR, Title 22, Division 4, Chapter 15. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.
- k. pH
 - i. In fresh waters with designated beneficial use of WARM, changes in normal ambient pH levels shall not exceed 0.5 pH units.
 - ii. The California Energy Commission recognizes that some waters of the Lahontan Region may have natural pH levels outside of the 6.5 to 8.5 range. Compliance with the pH objective for these waters will be determined on a case-by-case basis.
- l. Radioactivity
 - i. Radionuclides shall not be present in concentrations, which are deleterious to human, plant, animal, or aquatic life nor which result in

the accumulation of radionuclides in the food web to an extent, which presents a hazard to human, plant, animal, or aquatic life.

- ii. Waters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified by the more restrictive of the CCR Title 22 Division 4, Article 5 sections 64441 et seq. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

m. Sediment

The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.

n. Settleable Materials

Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. The concentration of settleable materials shall not be raised by more than 0.1 milliliter per liter.

o. Suspended Materials

- i. Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affect the water for beneficial uses.
- ii. The concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

p. Taste and Odor

Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect the water for beneficial uses. The taste and odor shall not be altered.

q. Temperature

- i. The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the California Energy Commission that such an alteration in temperature does not adversely affect the water for beneficial uses.

- ii. For waters designated WARM, water temperature shall not be altered by more than five degrees Fahrenheit above or below the natural temperature.
- r. Toxicity
 - i. All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.
 - ii. The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for "experimental water" as defined in the most recent edition of *Standard Methods for the Examination of Water and Wastewater* (American Public Health Association, et al.).
- s. Turbidity

Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent.

Groundwater

The discharge of waste to groundwaters shall not cause, or contribute to, a violation of the following water quality objectives for waters of the Harper Valley Groundwater Basin.

- a. Bacteria, Coliform

In groundwaters designated as MUN (a beneficial use of groundwater of the Harper Valley Ground Water Basin), the median concentration of coliform organisms over any seven-day period shall be less than 1.1/100 milliliters.
- b. Chemical Constituents
 - i. Groundwaters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary MCL based upon drinking water standards specified in provisions of the CCR, Title 22, Division 4, Chapter 15; hereby incorporated by reference into these requirements. This

incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

- ii. Groundwaters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.

c. Radioactivity

Groundwaters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified by the more restrictive of the CCR Title 22 Division 4, Article 5 sections 64441 et seq. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

d. Taste and Odor

Waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses. For groundwaters designated MUN, at a minimum, concentrations shall not exceed adopted secondary MCLs based upon drinking water standards specified in provisions of the CCR, Title 22, Division 4, Chapter 15, hereby incorporated by reference into these requirements. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

II. PROHIBITIONS AND REQUIREMENTS

The discharge of wastes associated with the Facility must not violate the following waste discharge prohibitions. These waste discharge prohibitions do not apply to discharges of storm water when wastes in the discharge are controlled through the application of management practices or other means and the discharge does not cause a violation of water quality objectives. The California Energy Commission expects that control measures will be implemented in an iterative manner as needed to meet applicable receiving water quality objectives.

A. Regionwide Prohibitions

1. The discharge of waste,⁽ⁱ⁾ which causes violation of any narrative water quality objective contained in the Basin Plan, including the Nondegradation Objective, is prohibited.

Definitions:

- (i) "Waste" is defined to include any waste or deleterious material including, but not limited to, waste earthen materials (such as soil,

2. The discharge of waste, which causes a violation of any numeric water quality objective contained in the Basin Plan, is prohibited.
3. Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste which causes further degradation or pollution is prohibited.
4. The discharge of untreated sewage, garbage, or other solid wastes into surface waters of the Lahontan Region is prohibited. (For the purposes of this prohibition, "untreated sewage" is that which exceeds secondary treatment standards of the Federal Water Pollution Control Act, which are incorporated in the Basin Plan in Section 4.4 under "Surface Water Disposal of Sewage Effluent.")
5. For municipal⁽ⁱⁱ⁾ and industrial⁽ⁱⁱⁱ⁾ discharges:
 - a. The discharge, bypass, or diversion of raw or partially treated sewage, sludge, grease, or oils to surface waters is prohibited.
 - b. The discharge of wastewater except to the designated disposal site (as designated in waste discharge requirements) is prohibited.
 - c. The discharge of industrial process wastes^(iv) to surface waters designated for the Municipal and Domestic Supply (MUN) beneficial use is prohibited. The discharge of industrial process wastes to surface waters not designated for the MUN use may be permitted if such discharges comply with the General Discharge Limitations in Section 4.7 of the Basin Plan and if appropriate findings under state and federal anti-degradation regulations can be made.

Prohibitions 5(b) and 5(c) do not apply to industrial storm water. For control measures applicable to industrial storm water, see Section 4.3 of this Basin Plan, entitled "Stormwater Runoff, Erosion, and Sedimentation."

Prohibitions 5(b) and 5(c) do not apply to surface water disposal of treated groundwater. For control measures applicable to surface water disposal of treated ground water, see the current applicable Lahontan Regional Board.

silt, sand, clay, rock, or other organic or mineral material) and any other waste as defined in the California Water Code § 13050(d).

(ii) "Municipal waste" is defined in Section 4.4 of the Basin Plan.

(iii) "Industry" is defined in Section 4.7 of the Basin Plan.

(iv) "Industrial process wastes" are wastes produced by industrial activities that result from one or more actions, operations, or treatments which modify raw material(s) and that may (1) add to or create within the effluent, waste, or receiving water a constituent or constituents not present prior to processing, or (2) alter water temperature and/or the concentration(s) of one or more naturally occurring constituents within the effluent, waste or receiving water. Certain non-stormwater discharges may occur at industrial facilities that are not considered to be industrial process wastes for the purposes of Prohibition 5(c). Examples include: fire hydrant flushing, atmospheric condensates from refrigeration and air conditioning systems, and landscape watering.

B. Facility Discharge Prohibitions

1. Activities and waste discharges associated with the Facility must not cause or threaten to cause a nuisance or pollution as defined in Water Code section 13050.
2. The discharge or deposition of any wastes into channels, surface water, or any place where it would be discharged or deposited where it would be eventually transported to surface waters, including the 100-year floodplain, must not contain or consist of any substance in concentrations toxic to animal or plant life.
3. The discharge or deposition of any wastes into channels, surface water, or any place where it would be discharged or deposited where it would be eventually transported to surface waters, including the 100-year floodplain, must not contain or consist of oil or other floating materials from any activity in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters.
4. The discharge of waste, as defined in the Water Code that causes violation of any narrative water quality objective contained in the Basin Plan is prohibited.
5. The discharge of waste that causes violation of any numeric water quality objective contained in the Basin Plan is prohibited.
6. Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution (as defined in Water Code Section 13050) is prohibited.
7. The discharge of septic tank pumpings (septage) or chemical toilet wastes to other than a sewage treatment plant or a waste hauler is prohibited.

C. Requirements

The Applicant shall develop a final Storm Water Pollution Prevention Program (SWPPP) in accordance with the State Water Board's *General Permit No. CAS00001* and *General Permit No. CAS00002*. This SWPPP, or any future revision to this SWPPP, and the associated Drainage, Erosion, and Sediment Control Plan (DESCP), shall be implemented after approval by the California Energy Commission's Compliance Project Manager (CPM).

1. The Applicant must, at all times, maintain appropriate types and sufficient quantities of material on site to contain any spill or inadvertent release of

materials that may cause a condition of pollution or nuisance if the materials reach waters of the State.

2. Discharges of wastewater generated by the Facility's operations, including cooling water, are not allowed to be released to the offsite environment.
3. The Applicant must permit California Energy Commission staff or their authorized representative upon presentation of credentials:
 - a. Entry onto Facility premises.
 - b. Access to copy any record required to be kept under the terms and conditions of the Conditions of Certification or equivalent document.
 - c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by the Conditions of Certification.
 - d. Sampling of any discharge or surface water covered by the Conditions of Certification.
4. The Applicant must immediately notify the California Energy Commission staff by telephone whenever an adverse condition occurs as a result of this discharge. Such a condition includes, but is not limited to, a violation of the conditions of the Conditions of Certification, a significant spill of petroleum products or toxic chemicals, or damage to control facilities that would cause noncompliance. A written notification of the adverse condition must be provided to the California Energy Commission within two weeks of occurrence. The written notification must identify the adverse condition, describe the actions necessary to remedy the condition, and specify a timetable, subject to any modifications by California Energy Commission staff, for the remedial actions.
5. The Applicant must comply with the Monitoring and Reporting Program for Groundwater, included in these requirements.

III PROVISIONS

A. Special Provisions for Impacts to State Waters

1. Detailed final grading plans must be provided to the California Energy Commission a minimum of 60 days prior to commencement of construction activities.
2. Construction equipment must be clean and free from oil, grease, and loose metal material and must be removed from service if necessary to protect water quality.

3. No debris, cement, concrete (or wash water therefrom), oil or petroleum products must be allowed to enter into or be placed where it may be washed from the Facility site by rainfall or runoff into waters of the State. When operations are completed, any excess material must be removed from the Facility work area and any areas adjacent to the work area where such material may be transported into waters of the State as defined in Water Code section 13050.
4. No equipment may be operated in areas of flowing or standing water; no fueling, cleaning, or maintenance of vehicles or equipment must take place within any areas where an accidental discharge to waters of the State may occur; construction materials and heavy equipment must be stored outside of the flow of the waters of the State. When work within the boundaries of waters of the State is necessary, the entire streamflow must be diverted around the work area, temporarily, as needed to control waste discharge.

B. Special Provisions for Storm Water

1. The Applicant must ensure that storm water discharges and non-storm water discharges do not cause or contribute to an exceedance of any applicable water quality standards.
2. Post-construction storm water flows emanating from the Facility site must not exceed predevelopment levels. Runoff from newly constructed impervious areas that is greater than background levels must be treated and detained to predevelopment runoff levels. Methods such as *low impact development* may be used to achieve this requirement (see State Water Board Resolution No. 2008-0030). Detention and/or infiltration facilities for a 10-year, one-hour storm event fulfills this requirement for the purposes of these requirements.
3. The Applicant must implement Best Management Practices (BMPs) to prevent or reduce the discharge of wastes associated with water contacting construction materials or equipment.
4. The Applicant must provide effective cover, mulch, fiber blankets, or other erosion control for soils disturbed by construction activities.
5. The Applicant must provide BMPs for erosion stabilization for all areas of disturbed soil regardless of time of year, including erosion from rainfall, non-storm water runoff, and wind.
6. The Applicant must stabilize from erosion all finished slopes, open space, utility backfill, and graded or filled lots within two weeks from when excavation or grading activity has been completed.

7. The Applicant must control runoff from offsite areas, route flows away from disturbed areas in a manner that does not cause onsite or offsite erosion, and provide controls to minimize runoff and problems from storm water flows into active or disturbed Facility areas from offsite areas.
8. The Applicant must, at all times, maintain effective perimeter controls and stabilize all construction entrances/exits sufficiently to control erosion and soil or sediment discharges from the site.
9. The Applicant must properly install and effectively maintain all BMPs for storm drain inlets and perimeter controls, runoff control BMPs, and stabilized entrances/exits.
10. The Applicant must ensure that construction activity traffic to and from the Facility is limited to entrances and exits that employ effective controls to prevent offsite tracking of soil.
11. The Applicant must ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant control at entrances/exits are maintained and protected from activities that could reduce their effectiveness.
12. The Applicant must comply with the following source control requirements:
 - a. Develop the Facility in a way that reduces the amount of soil exposed to erosion at any time.
 - b. Inspect and remove accumulated deposits of soil at all inlets to the storm drain system at frequent intervals during rainy periods.
 - c. Provide buffer strips and/or silt barrier fencing between the active construction area and any water bodies.
 - d. Provide "good housekeeping" measures for construction materials, waste management, vehicle storage and maintenance, and landscape materials at all times including, but not limited to, the list of required measures in Attachment A, which is made a part of these requirements.
13. The Applicant must maintain, in perpetuity, post-construction control and treatment measures for storm water, or must identify in writing to the California Energy Commission, the entity that is legally responsible for maintaining the post-construction controls at the Facility site.
14. The Applicant shall have in place adequate emergency response plans in order to clean up any spill or release of any waste at the Facility.

**C. Special Provisions for the Waste Management Units
(Surface Impoundments and Land Treatment Units)**

1. There shall be no discharge, bypass, or diversion of wastewater from the collection, conveyance, or disposal facilities to adjacent land areas or surface waters.
2. All facilities used for the collection, conveyance, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage, or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years. The surface impoundments and land treatment unit (LTU) shall be designed and maintained with the capacity to capture the 1,000-year, 24-hour storm.
3. The release of wastewater shall not cause the presence of the groundwater monitoring parameters listed in the Monitoring and Reporting Programs for Groundwater to be in excess of established background levels as described in the April 2010 Report of Waste Discharge (ROWD).
4. The discharge, storage or evaporative accumulation of hazardous waste to waste management units at the Facility is prohibited.

Special Provisions for Surface Impoundments

1. Only wastewater from cooling water blow down and process water (e.g. the reverse-osmosis system reject water), or storm water that may accumulate in the LTU shall be discharged to the surface impoundments.
2. The discharge of wastewater at the Facility except to the authorized disposal sites (i.e., the surface impoundments) of these requirements is prohibited.
3. All lined facilities shall be effectively sealed to prevent the exfiltration of liquids. For this project, "effectively sealed" facilities are the surface impoundments that are designed and constructed in accordance with the requirements of CCR, title 27.
4. The vertical distance between the liquid surface elevation and the highest part of a surface impoundment dike (i.e. the freeboard), or the invert of an overflow structure, shall not be less than two feet.

Special Provisions for the Leachate Collection and Removal System

1. If liquids are detected in the leachate collection and removal system (LCRS) sumps at a rate equal to or greater than the "Action Leakage Rate" as described in the April 2010 ROWD, then the Applicant shall comply with the notice of evidence of response to exceeding the action leakage rate requirements

presented in the appropriate section of the Monitoring and Reporting Program for Groundwater included with these requirements.

2. If liquids are detected in the LCRS sumps at rates greater than the "Rapid and Large Leakage Rate" as described in the April 2010 ROWD, the Applicants shall immediately notify the California Energy Commission and cease the discharge of waste to the affected impoundment. Discharges of waste to the affected impoundment shall be prohibited until the appropriate repairs are made.
3. The depth of leachate in the leachate collection sump shall be kept at the minimum needed to ensure efficient sump dewatering pump operation.
4. The LCRS shall be operated to function without clogging throughout the life of the project including closure and post closure maintenance periods.
5. The LCRS shall be tested at least once annually to demonstrate proper operation.
6. The LCRS shall be capable of removing twice the maximum anticipated daily volume of leachate from the surface impoundments.
7. Any leachate collected in any LCRS shall be returned to the surface impoundments.

Special Provisions for the Land Treatment Unit

1. Only soil contaminated with Therminol or similarly approved HTF and originating at this Facility shall be accepted for treatment at the Land Treatment Unit.
2. All contaminated soil in the staging area shall be placed on plastic sheeting. All contaminated soil in the staging area shall be covered with plastic sheeting during precipitation events.
3. Soil treated at the Land Treatment Unit may be used as fill material, road base or as a cover at the Facility (excluding any area within the 100-year floodplain) if the following concentration limit is not exceeded:

Parameter	Maximum Concentration of the Composite Sample
Heat Transfer Fluid Therminol (biphenyl, and diphenyl oxide) or related HTF that has similar environmental fate and transport characteristics as Therminol.	100 milligram per kilogram (mg/kg) or 1/100 of the hazardous waste level, whichever is less (i.e., more conservative) (The site-specific hazardous waste level for heat transfer fluid is to be determined.)

ATTACHMENT A

Good Housekeeping Best Management Practices

1. Good housekeeping measures for construction materials include:
 - a. Maintaining an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced.
 - b. Covering and berming loose stockpiled construction materials (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).
 - c. Storing chemicals in watertight containers or in a bermed storage shed (completely enclosed), with appropriate secondary containment.
 - d. Minimizing contact of construction materials with precipitation.
 - e. Implementing BMPs to reduce or prevent the offsite tracking of loose construction and landscape materials.
2. Good housekeeping measures for waste management include:
 - a. Preventing disposal of any rinse/wash waters or materials into the storm drain system.
 - b. Berming sanitation facilities (e.g. Porta Potties) and preventing them from being kept within the curb and gutter or on sidewalks or adjacent to a storm drain.
 - c. Cleaning or replacing sanitation facilities and inspecting them regularly for leaks and spills.
 - d. Covering waste disposal containers when they are not in use and preventing them from overflowing.
 - e. Berming and securely protecting stockpiled waste material from wind and rain at all times unless actively being used where spill would enter surface drainage systems.
 - f. Addressing procedures to deal with hazardous and non-hazardous spills.
 - g. Preparing and implementing a spill response and implementation plan prior to commencement of construction activities, including:
 - i. Locations of on-site equipment and materials for cleanup of spills and leaks.
 - ii. Procedures to follow in the event of spill or leak that includes immediate cleanup.
 - iii. Locations and procedures of disposing of waste materials.
 - iv. Identification of and training for spill response personnel.

- h. Lining and berming of concrete washout areas so there is no leakage or overflow into the underlying soil and onto the surrounding areas. Washout areas must be positioned away from drain inlets and waterways and be clearly labeled.
- 3. Good housekeeping measures for vehicle storage and maintenance include:
 - a. Not allowing oil, grease, or fuel to leak in to the soil.
 - b. Placing all equipment or vehicles to be fueled, maintained and/or stored in a designated area fitted with appropriate BMPs.
 - c. Cleaning leaks immediately and disposing of leaked materials and sorbents properly.
 - d. Fix leaks immediately or remove equipment for service.
- 4. To assess the potential pollutant sources and identify all areas of the site where good housekeeping or additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and non-storm water discharges, the Applicant must assess and report on the following:
 - a. The quantity, physical characteristic (liquid, powder, solid, etc.), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
 - b. The degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
 - c. The direct and indirect pathways that pollutants may be exposed to storm water discharges and non-storm water discharges. This must include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
 - d. Sampling, visual observation, and inspection records.
 - e. Effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and non-storm water discharges.

MONITORING AND REPORTING PROGRAM FOR GROUNDWATER
FOUR SURFACE IMPOUNDMENTS AND TWO LAND TREATMENT UNITS
for
MOJAVE SOLAR PROJECT
SAN BERNARDINO COUNTY

I. WATER QUALITY PROTECTION STANDARD

Water Quality Protection Standard is required by Title 27 of the California Code of Regulations (CCR, title 27) to assure the earliest possible detection of a release from the Mojave Solar Project (Mojave) to underlying soil and/or groundwater. The Water Quality Protection Standard shall consist of the list of constituents of concern, the concentration limits, the Point of Compliance and all Monitoring Points. This Water Quality Protection Standard shall apply during the operation, closure, post-closure maintenance period, and during any compliance period. Mojave will initially undergo construction and then will be under a Detection Monitoring Program as documented in the April 2010 Report of Waste Discharge (ROWD).

II. MONITORING

A. Flow Monitoring of Discharges to the Surface Impoundments (four evaporation ponds)

The April 2010 ROWD states that discharge to the surface impoundments is derived from two primary sources (cooling tower blow down water and process wastewater [e.g. reverse-osmosis system reject water]) generated from treatment of water for use at the plant and discharged to the surface impoundments.

The Applicant shall monitor the following:

1. The volume, in million gallons per day (mgd), of wastewater delivered to the surface impoundments;
2. The cumulative total of wastewater flow delivered to the surface impoundments, in million gallons per month; and
3. The maximum daily flowrate, in mgd, delivered to the surface impoundments each month.

B. Monitoring of Wastewater Discharges to the Surface Impoundments

Semiannually, the Applicant shall record the following:

1. The sources of wastewater delivered to the surface impoundments;
2. The amount and types of chemical additives added to the cooling system water that may be discharged to the surface impoundments; and
3. The analytical results of a composite wastewater grab sample that shall be collected and analyzed at a state-certified laboratory for the parameters in Table II-1.

Mojave Solar Project
Monitoring and Reporting Program for Groundwater

Wastewater Sampling Parameters
Table II-1

Parameter	U.S. EPA or Standard Method	Reporting Limit Goal	Units
Ammonia (as N)	350.1	100	µg/L
Aluminum	200.7	20	µg/L
Arsenic	6020	2	µg/L
Antimony	6020	10	µg/L
Barium	6020	5	µg/L
Beryllium	6020	2	µg/L
Boron	200.7	140	µg/L
Cadmium	6020	5	µg/L
Calcium	200.7	40,000	µg/L
Chloride	300.0	14,000	µg/L
Chromium (total)	6020	5	µg/L
Cobalt	6020	5	µg/L
Copper	6020	5	µg/L
Fluoride	300.0	500	µg/L
Iron	200.7	20	µg/L
Lead	6020	3	µg/L
Magnesium	200.7	10,000	µg/L
Manganese	200.7	15	µg/L
Mercury	7470A	0.2	µg/L
Molybdenum	6020	10	µg/L
Nickel	6020	5	µg/L
Nitrate as nitrogen	300.0	1,000	µg/L
Nitrite as nitrogen	SM 4500	4	µg/L
Phosphate (total)	365.3	100	µg/L
Potassium	200.7	3,000	µg/L
Selenium	6020	10	µg/L
Silver	6020	5	µg/L
Sodium	200.7	10,000	µg/L
Strontium	200.7	500	µg/L
Sulfate	300.0	10,000	µg/L
Thallium	6020	10	µg/L
Total dissolved solids	SM 2540C	10,000	µg/L
Total alkalinity(as CaCO ₃)	SM 2320B	10,000	µg/L
Vanadium	6020	5	µg/L
Zinc	6020	10	µg/L
Biphenyl *	8015M	500	µg/L
Diphenyl oxide *	8015M	500	µg/L
Cyclohexamine (20-40%) *	8015M	500	µg/L
Morpholine (1-10%) *	8015M	500	µg/L
pH	Field	+/- 0.1	pH units
Temperature	Field	+/- 0.1	° F or °C

µg/L = micrograms per liter

note * -- Analysis of these constituents is not necessary if storm water from the land treatment unit was not discharged into the surface impoundments

C. Surface Impoundment Monitoring

1. Dikes and Liners

- a. Daily, the freeboard shall be measured from the top of the lowest part of the dike to the wastewater surface. If the surface impoundment is dry, indicate that it is empty of wastewater.
- b. Monthly, the integrity of the dikes and liners shall be inspected. Should the inspection indicate any damage to the dikes or liners or if an unauthorized discharge has occurred, or is likely to occur, the California Energy Commission shall be notified within 48 hours, followed by confirmation in writing.

2. Leachate Collection and Removal System (LCRS)

- a. Weekly, visual inspection for liquid in the leachate collection detection sumps for each surface impoundment shall be conducted. The results of those inspections shall be recorded in a permanent log book.
- b. All volume of liquid pumped out of the leakage detection sumps for each surface impoundment shall be recorded along with date, time and discharge location, in a permanent log book kept on-site.

3. Surface Impoundment Wastewater Monitoring

Semiannually, at each surface impoundment, liquid grab samples shall be collected at three (3) sample locations in the surface impoundments spaced approximately equidistant. For each of the four surface impoundments, the three (3) collected samples shall be composited into one sample (four samples total) by the laboratory.

The analytical results of a wastewater grab from each of the four surface impoundments shall be analyzed at a state-certified laboratory for the parameters in Table II-1. The annual samples shall be collected in the last quarter of each year.

4. Surface Impoundment Sludge Monitoring

Annually, in the last quarter of each year, three (3) representative grab samples of the bottom sludge in each surface impoundment, if

present, shall be collected, composited and analyzed for the parameters in Table II-2. For each of the four surface impoundments, the three (3) collected samples shall be composited into one sample (four samples total) by the laboratory.

Surface Impoundment Sludge Monitoring
Table II-2

Parameters	Unit
CCR title 22 metals (CAM 17)- Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc	Milligrams per kilogram (mg/kg)
Biphenyl, diphenyl oxide (Therminol or similar)	mg/kg

D. Detection Monitoring

Using approved statistical or non-statistical data analysis methods, and in compliance with CCR, title 27, the Applicant shall, for each monitoring event, compare the concentration of each monitoring parameter with its respective concentration limit to determine if there has been a release from the surface impoundments. Monitoring shall be completed in compliance with this Section D as further described below.

1. Unsaturated Zone Monitoring - Neutron Probe
 - a. Semiannually, the Applicant shall check for the presence of excess moisture below the surface impoundment liners using a neutron moisture probe calibrated for use at the site. If excess moisture content is detected, field verification testing shall be performed and the Applicant shall notify the California Energy Commission and report physical evidence of a release (see notification procedures below). Field verification testing may include a combination of additional neutron analysis, laboratory analysis of liquids drawn from the neutron probe casing and visual observation to verify existence of a release.
 - b. Annually, the Applicant shall submit documentation of instrument calibration, statistical analysis and performance

checks. Performance checks shall be a comparison of semiannual results of neutron moisture. Pre testing with earlier tests made under comparable conditions to verify proper operation of equipment must be documented.

2. Groundwater Monitoring

The groundwater monitoring network is required, as proposed in the April 2010 ROWD, consisting of six new monitoring wells, three wells adjacent to each pair of surface impoundments and associated land treatment unit (one well up gradient and two wells downgradient).

- a. Semiannually, samples shall be collected in the groundwater monitoring network and analyzed for the parameters listed in Table II-3.

The results of the analysis shall be reported in the semiannual report in tabular and graphical form. Each such graph shall be plotted with raw data at a scale appropriate to show trends or variations in water quality. For graphs showing the trends of similar constituents, the scale shall be the same. The data shall also be used to construct an Upper Tolerance Limit to determine evidence of a release and shall be used to evaluate data from the previous three quarters for evidence of a release.

Mojave Solar Project
Monitoring and Reporting Program for Groundwater

Groundwater Monitoring Well Sampling Parameters
Table II-3

Parameter	U.S. EPA or Standard Method	Reporting Limit Goal	Units
Ammonia (as N)	350.1	100	µg/L
Aluminum	200.7	20	µg/L
Arsenic	6020	2	µg/L
Antimony	6020	10	µg/L
Barium	6020	5	µg/L
Beryllium	6020	2	µg/L
Boron	200.7	140	µg/L
Cadmium	6020	5	µg/L
Calcium	200.7	40,000	µg/L
Chloride	300.0	14,000	µg/L
Chromium (total)	6020	5	µg/L
Cobalt	6020	5	µg/L
Copper	6020	5	µg/L
Fluoride	300.0	500	µg/L
Iron	200.7	20	µg/L
Lead	6020	3	µg/L
Magnesium	200.7	10,000	µg/L
Manganese	200.7	15	µg/L
Mercury	7470A	0.2	µg/L
Molybdenum	6020	10	µg/L
Nickel	6020	5	µg/L
Nitrate as nitrogen	300.0	1,000	µg/L
Nitrite as nitrogen	SM 4500	4	µg/L
Phosphate (total)	365.3	100	µg/L
Potassium	200.7	3,000	µg/L
Selenium	6020	10	µg/L
Silver	6020	5	µg/L
Sodium	200.7	10,000	µg/L
Strontium	200.7	500	µg/L
Sulfate	300.0	10,000	µg/L
Thallium	6020	10	µg/L
Total dissolved solids	SM 2540C	10,000	µg/L
Total alkalinity(as CaCO ₃)	SM 2320B	10,000	µg/L
Vanadium	6020	5	µg/L
Zinc	6020	10	µg/L
pH	Field	+/- 0.1	pH units
Temperature	Field	+/- 0.1	° F or °C

- b. Semiannually, the groundwater potentiometric surface shall be illustrated on a 8.5" x 11" copy of a site plan showing the static water level, in feet below ground surface; the monitoring well locations; the location of the surface impoundments; and the groundwater gradient under each surface impoundment.
- c. Prior to sampling, each monitoring well shall be sufficiently purged in accordance with generally accepted sampling practices in order to obtain a representative ground water sample. If any monitoring well is dry for more than a year, a new or modified monitoring well shall be installed.

Groundwater samples must be collected after the wells have been purged in accordance with California Environmental Protection Agency guidance document, *Representative Sampling of Groundwater for Hazardous Substances*, revised February 2008 (see: http://www.dtsc.ca.gov/SiteCleanup/upload/SMP_Representative_Sampling_GroundWater.pdf). The required stability parameters and criteria from this guidance are summarized in Table II-4.

Stabilization Parameters and Criteria
Table II-4

Parameter	Criteria
temperature	± 3% of reading (minimum of ± 0.2 C)
pH	+/- 0.1
specific electrical conductance	+/- 3%
Oxidation-reduction potential	+/- 10 millivolts
dissolved oxygen	+/- 0.3 milligrams per liter

E. Heat Transfer Fluid Contaminated Soil - Spills or Leaks

1. All spills of heat transfer fluid (HTF) shall be cleaned up within 48 hours. Spills of 20 gallons or more of HTF must be reported to the California Energy Commission within 48 hours. The April 2010 ROWD outlines the procedure for removing contaminated soils from the Facility and temporarily staging the soils within the Land Treatment Unit for hazardous waste testing. Representative soil samples shall be analyzed by a California certified laboratory accredited to conduct the specific analytical method. Disposal of contaminated soil resulting from HTF spills that exceed hazardous waste levels shall be accomplished in accordance with applicable waste disposal regulations.
2. HTF-contaminated soil that does not exceed the hazardous waste levels may be discharged into the Land Treatment Unit. A report for every batch of HTF-contaminated soil discharged into the Land Treatment Unit must include the

volume of cubic yards discharged, the sampling method and laboratory analytical reports.

3. Semiannually, the Applicant shall report a summary of HTF spills. The summary shall include (1) HTF spill volumes of 20 gallons or greater, (2) locations of spilled HTF, and (3) the dates of spills. The summary shall also include (1) the total volume of contaminated soil resulting from spills regardless of the volume of HTF spilled, (2) the disposition of the contaminated soil, (3) the total volume of contaminated soil, and (4) a breakdown of the total volume by disposition location (e.g., hauled offsite as hazardous waste, discharged to the LTU, or re-used onsite).

F. Land Treatment Unit (LTU) - Heat Transfer Fluid Contaminated Soil

1. After treatment, the HTF-contaminated soil may be reused at the Facility in accordance with "Special Provisions for the Land Treatment Unit" in Section III C. (Special Provisions for the Waste Management Units) in the Requirements for Mojave Solar. Representative soil samples shall be collected for every batch of treated HTF-contaminated soil prior to removal from the LTU. The samples shall be composited according to methods specified in the U. S. Environmental Protection Agency's current version of the manual: "Test Methods for Evaluating Solid Waste" (SW-846). The status and/or results of sample analysis shall be reported semiannually.

Annually, the Applicant shall verify that HTF is not migrating past the five-foot vertical treatment zone underlying the LTU. Four soil samples (one sample from each quadrant of the LTU) shall be collected at a depth of one foot below the five-foot vertical treatment zone and analyzed for the monitoring parameters listed below. The samples shall be collected and composited according to methods specified in the U. S. Environmental Protection Agency's current version of the manual, "Test Methods for Evaluating Solid Waste" (SW-846). If results of any sample analysis indicate that components of HTF are detected, the Applicant shall, within two weeks, repeat deeper sample collection at one foot intervals. The Applicant shall repeat sample collection until laboratory analytical results show that concentrations are non-detect. If components of HTF are detected beneath the five-foot treatment zone, the Applicant shall, within two weeks, report the evidence of release. The samples shall be analyzed for the parameters in Table II-5 listed below using a California certified laboratory.

Land Treatment Unit Monitoring Parameters
Table II-5

Monitoring Parameter	Units
Biphenyl, a component of HTF (Therminol or similar)	mg/kg
Diphenyl oxide , a component of HTF (Therminol or similar)	mg/kg

G. Waste Management Unit Monitoring and Maintenance

1. Quarterly the Applicant must inspect the condition of the waste management units (four surface impoundments and two land treatment units) to ensure their integrity. The Applicant must provide reports on the inspections semiannually. The quarterly inspection must consist of the following:
 - a. The Applicant must inspect the waste management units for integrity.
 - b. The Applicant must inspect the drainage features for the entire site including those that will divert water from the site.
2. During the semiannual sampling events, groundwater monitoring wells shall be inspected for damage. Any adverse conditions found in the visual inspection of the wells must be documented and promptly corrected. Documentation of the correction must be submitted with each semiannual report.

III. DATA ANALYSES

All data analyses methods (statistical or non-statistical) shall meet the requirements of CCR, title 27, section 20415, subdivision (e)(9).

A. General Non-statistical Methods

Evaluation of data will be conducted using non-statistical methods to determine if any new releases from the surface impoundments or land treatment units have occurred. Non-statistical analysis shall be as follows.

1. Physical Evidence

Physical evidence can include dike or berm(s) damage or loss, unexplained volumetric changes in the surface impoundments, groundwater mounding, or soil discoloration. Each annual report shall comment on the absence or

presence of physical evidence of a release.

2. Time Series Plots

Each annual report must include time series plots for groundwater monitoring parameters. Time series plots are not required for parameters that have never been detected above their method detection limit (as specified by the applicable USEPA Method) or if there are less than four quarters of data. Evidence of a release may include trends of increasing concentrations of one or more constituent over time.

B. General Statistical Analysis Methods

For Detection Monitoring, the Applicant shall use statistical methods to analyze the constituents of concern listed in Table II-3 of this Monitoring and Reporting Program that exhibit concentrations that equal or exceed their respective method detection limit in at least ten percent of applicable historical samples. The Applicant may propose and use any statistical method that meets the requirements of CCR, title 27, section 20415, subdivision (e)(7). The report titled "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities" (USEPA, 1989) or subsequent versions may also be used to select the statistical test to use for comparing detection monitoring well data to background monitoring data. All statistical methods and programs proposed by the Applicant are subject to California Energy Commission approval and must comply with CCR, title 27.

IV. RECORD KEEPING AND REPORTING REQUIREMENTS

A. Scheduled Reports to be filed with the California Energy Commission

A detection monitoring report shall be submitted to the California Energy Commission. The content of the detection monitoring report shall be as follows:

1. results of sampling analysis, including statistical limits or each monitoring point;
2. a description and graphical presentation of the velocity and direction of ground water flow under or around the Waste Management Units, based upon water level elevations taken during the collection of the water quality data submitted in the report;
3. a map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points;
4. an evaluation of the effectiveness of the leachate collection and recovery system, and of the runoff/runon control facilities; and
5. a letter transmitting the essential points in each report, including a discussion of any requirement violations found since the last report was submitted, and describing actions taken or planned for correcting those violations. If the Applicant has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting this schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal.

B. Unscheduled Reports To Be Filed

1. Release from the Surface Impoundments

The Applicant shall perform the procedures contained in this subsection whenever there is evidence of a release from the surface impoundments.

The Applicant shall immediately notify the California Energy Commission verbally whenever a determination is made that there is physical or statistically significant evidence of a release (as determined in compliance with CCR, title 27, section 20164) from a surface impoundment. This verbal notification shall be followed by written notification via certified mail within seven days of such determination. Upon such notification, the Applicant may initiate

verification procedures or demonstrate that another source other than the Impoundment caused evidence of a release (see below). The notification shall include the following information:

- a. the surface impoundment that may have released or be releasing wastewater;
- b. general information including the date, time, location, and cause of the release;
- c. an estimate of the flow rate and volume of waste involved;
- d. a procedure for collecting samples and description of laboratory test to be conducted;
- e. identification of any subsurface water bearing zone affected or threatened;
- f. a summary of proposed corrective actions; and

for statistically significant evidence of a release (as determined in compliance with CCR, title 27, section 20164) - monitoring parameters and/or constituents of concern that have indicated statistically significant evidence of a release from the surface impoundments; or

for physical evidence of a release - physical factors that indicate physical evidence of a release.

2. Exceeding the Action Leakage Rate

The Applicant shall immediately notify the California Energy Commission verbally within twenty-four hours whenever a determination is made that there is a fluid volume in the LCRS sumps in excess of the Action Leakage Rates. This verbal notification shall be followed by written notification via certified mail within seven days of such determination. This written notification shall be followed by a technical report via certified mail within thirty days of such determination. The technical report shall describe the actions taken to abate the adverse condition, and shall describe any proposed future actions to abate the adverse condition.

3. Evaluation Monitoring

Pursuant to California Water Code section 13267, subdivision (b), the Applicant shall, within 90 days of verifying a release, submit to the

California Energy Commission an amended Report of Waste Discharge proposing an evaluation monitoring program (CCR, title 27, sections 20420, subdivision (k)(5) and 20425). If Applicant decides not to conduct verification procedures, or decides not to make a demonstration that a source other than the surface impoundments or land treatment unit are responsible for the release, the release will be considered verified.

4. Preliminary Engineering Feasibility Study Report

The Applicant shall, within 180 days of verification of a release or detection, submit to the California Energy Commission a Preliminary Engineering Feasibility Study pursuant to CCR, title 27, section 20420, subdivision (k)(6), that shall contain either corrective action measures that could be taken to achieve background concentration or demonstrate that the waste management units are not the cause of the detection.

V. REPORTING REQUIREMENTS

A. General Provisions

The Applicant shall comply with the "General Provisions for Monitoring and Reporting" which is attached to and made part of this Monitoring and Reporting Program.

B. Semiannual Report

Beginning on June 30, 2011, a Semiannual Monitoring Report, including the preceding monitoring information, shall be submitted to the California Energy Commission. Subsequent semiannual monitoring reports shall be submitted to the California Energy Commission by January 30 and June 30 of each year.

C. Annual Report

Beginning on January 30, 2012, and by January 30 of each year, the Applicant shall submit an Annual Report to the California Energy Commission including the preceding information and with the following information:

- a. evidence that adequate financial assurance for closure, post-closure, and reasonably foreseeable releases is still in effect and may include a copy of the renewed financial instrument or a copy of the receipt for payment of the financial instrument;
- b. evidence that the amount is still adequate or increase the amount of financial assurance by the appropriate amount if necessary, due to inflation, a change in the approved closure plan, or other unforeseen events; and
- c. a review of the closure plan and a statement that the closure activities described are still accurate or an updated closure plan.

D. Data Analysis Report

The Applicant shall, by **January 30 of every year**, submit to the California Energy Commission a Data Analysis Report as specified in Section III (Data Analysis) of this Monitoring and Reporting Program.

E. Electronic Submittal of Information

Pursuant to California Code of Regulations, title 23, section 3890, the Applicant shall submit reports, including soil, vapor and water data, prepared for the purpose of subsurface investigation or remediation of a discharge of waste to land subject to Division 2 of title 27 electronically over the internet to the State Water Resources Control Board's Geotracker system. This requirement is in addition to, and not superceded by, any other applicable reporting requirement.

**GENERAL PROVISIONS
FOR MONITORING AND REPORTING**

1. SAMPLING AND ANALYSIS

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - i. Standard Methods for the Examination of Water and Wastewater
 - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health Services or a laboratory approved by the California Energy Commission. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the California Energy Commission.
- d. The Applicant shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the Facility.
- e. The Applicant shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

The Applicant shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the California Energy Commission.

b. Operational Log

An operation and maintenance log shall be maintained at the Facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

- a. For every item where the requirements are not met, the Applicant shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
- b. The applicant shall provide a brief summary of any operational problems and maintenance activities to the California Energy Commission with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
- c. Monitoring reports shall be signed by:
 - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or their duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
 - ii. In the case of a partnership, by a general partner;
 - iii. In the case of a sole proprietorship, by the proprietor; or
 - iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

Mojave Solar Project
Monitoring and Reporting Program for Groundwater

- d. Monitoring reports are to include the name and telephone number of an individual who can answer questions about the report.