

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2011-0225**

Waste Discharger Identification No. 3 400911406

**For**

**CALIFORNIA VALLEY SOLAR RANCH  
CLASS II SURFACE IMPOUNDMENTS  
SAN LUIS OBISPO COUNTY**

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

**SITE OWNER AND LOCATION**

1. The High Plains Ranch II LLC (Discharger) owns and operates the California Valley Solar Ranch (Facility). The Discharger proposes to construct and operate a reverse osmosis water treatment plant and Class II surface impoundments for brine discharge.
2. The Facility is located approximately 60 miles east of San Luis Obispo along Highway 58, **Figure 1**.
3. The Facility will treat groundwater with reverse osmosis and will discharge brine and raw well water during start up to two brine ponds (surface impoundments). The water treatment and disposal process flow diagram is shown in **Figure 2**. The surface impoundments are shown in **Figure 3**. The overall California Valley Solar Ranch Facility is 4,956 acres. The reverse osmosis water treatment plant and surface impoundments will cover approximately 10 acres, comprised of Assessor's Parcel No. 072-161-015 with a latitude of 35° 20' 10" and a longitude of 119° 55' 09".

**PURPOSE OF ORDER**

4. The Discharger submitted a Report of Waste Discharge (ROWD) on May 19, 2011, to facilitate issuance of Waste Discharge Requirements (WDR) for the surface impoundments. On July 8, 2011, the Discharger submitted a draft Construction Quality Assurance Plan, draft Sampling and Analysis Plan, and a draft Preliminary Closure and Post-Closure Maintenance Plan.
5. These WDRs classify the two brine ponds as Class II surface impoundments in accordance with Title 27, CCR Section 20005, et seq. (Title 27).
6. The maximum brine flow to the surface impoundments will be approximately 8,000 gallons per day (gpd) during Facility construction and 4,000 gpd after construction is complete when the Facility is operating. The Facility is expected to take three years to construct. The maximum capacity of each surface impoundment while maintaining the required two-foot freeboard is approximately 2.4 million gallons. The Discharger submitted a water balance demonstrating adequate surface impoundment capacity to

contain flows of approximately 8,000 gallons per day.

## **FACILITY SITE DESCRIPTION**

7. The Facility's property boundary encompasses 4,956 acres and includes Brine Pond No.1 and Brine Pond No. 2.
8. The Discharger proposes an engineered alternative to the prescriptive liner requirements of Title 27 for the Class II surface impoundments. The engineered alternative consists of the following from top down:
  - A. A primary 60-mil thick high density polyethylene (HDPE) geomembrane.
  - B. A geonet drainage layer, as a leachate collection and removal system (LCRS).
  - C. A secondary 60-mil thick HDPE geomembrane in lieu of the clay liner.
  - D. A geonet drainage layer in lieu of vadose zone monitoring.
  - E. A tertiary 60-mil thick HDPE geomembrane.
9. Side slope liners will be constructed using the same material and in the same sequence and manner as the base liner system. The liner subgrade will be prepared using acceptable engineering and construction practices to provide a smooth surface free from material that could damage the geomembrane. The Discharger will install and certify the liner in accordance with this Order and an Executive Officer-approved construction quality assurance (CQA) plan.
10. The Discharger will construct the ponds with an inboard slope of 3:1 and outside slopes of 2:1. The berm width at the crest will be approximately 14 feet.
11. Each surface impoundment will have a geonet LCRS blanket across the entire lined area.
12. The Discharger will install a pan lysimeter (geonet blanket) under each surface impoundment that will serve as an engineered alternative to the prescriptive unsaturated zone monitoring system requirement of Title 27, CCR Section 20415(d).
13. The depth to groundwater is approximately 150 feet below ground surface. Title 27, CCR Section 20240(c) requires a minimum separation of five feet between waste and the highest anticipated groundwater elevation.
14. Title 27 CCR Section 20080(b) allows the Water Board to consider the approval of an engineered alternative to the prescriptive standard. In order to approve an engineered alternative, the Discharger must demonstrate that the prescriptive design is unreasonable and unnecessarily burdensome and will cost substantially more than an alternative, which will meet the criteria contained in Title 27 CCR Section 20800(b) or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that the proposed engineered alternative liner system is consistent with the performance goal addressed by the particular prescriptive standard, and provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Title 27 CCR Section 20800(b)(2). The Executive Officer finds that

the performance of the alternative liner system is equal to, or exceeds, the waste containment capability of the regulatory prescriptive design. For these surface impoundments, the equivalence demonstration was based on the engineered alternative demonstrations made for other facilities. There are no significant differences in the characteristics of already approved engineered alternative liners and the liner system proposed for the California Valley Solar Ranch surface impoundments.

## WASTE TYPE & CLASSIFICATION

15. The wastewater consists of concentrated brine from the reverse osmosis (RO) water treatment plant. The Discharger developed the brine waste characteristics based on feed water quality, RO treatment removal, finished water quality goals, and resulting mass balance. The estimated concentrations in the waste discharged to the surface impoundments are as follows:

| <u>Parameter</u>       | <u>Concentration (mg/L<sup>1</sup>)</u> |
|------------------------|---|
| Total Dissolved Solids | 29,640                                  |
| Chloride               | 2,340                                   |
| Fluoride               | 2.4                                     |
| Sulfate                | 19,200                                  |
| Calcium                | 2,520                                   |
| Iron                   | 3.6                                     |
| Potassium              | 55.8                                    |
| Magnesium              | 1,200                                   |
| Sodium                 | 4,800                                   |
| Aluminum               | 3.3                                     |
| Arsenic                | 0.042                                   |

<sup>1</sup> milligrams per liter

16. Designated waste is identified in Title 27, Section 20210, as a nonhazardous waste, which consists of, or contains pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or that could reasonably be expected to affect beneficial uses of waters of the state.
17. The discharge poses a significant threat to water quality. Therefore, the discharge is a designated waste and, as such, must be discharged to a Class II surface impoundment as required by Title 27.
18. The surface impoundments are designed to hold 50-years of solids accumulation while maintaining adequate brine discharge capacity. Once the solids capacity of the surface impoundments are reached, the site will be clean closed with all materials hauled offsite for disposal at a facility permitted to accept the waste.

## GEOLOGY

19. Land use in the area is predominately open, undeveloped land that is vegetated with seasonal grasses.
20. The Facility is located in an area mapped with Holocene and Pleistocene alluvial deposits, which primarily consist of silt, sand, and gravel derived from the nearby Paso Robles and Monterey Formations in the Temblor Range to the northeast.
21. **Faulting/Seismicity** – The Discharger has not completed the geotechnical work necessary to verify compliance with Title 27 stability analysis requirements. The Discharger must complete all seismic and stability analyses and demonstrate compliance with Title 27 Section 20370. The Executive Officer must concur with the Discharger's analyses prior to discharge into the surface impoundments.
22. **Hydrogeology** – Groundwater beneath the surface impoundments occurs in the Carrizo Plain Groundwater Basin (sometimes referred to as the Soda Lake Sub-basin). Depth to groundwater is estimated to be approximately 150 feet below ground surface (bgs). Groundwater flow direction has not been established but the flow is expected to be generally towards the southwest in the vicinity of the surface impoundments.

## GROUNDWATER, STORMWATER, AND SURFACE WATER

23. **Groundwater Quality** – The Discharger collected one groundwater sample from an onsite well and the results indicate elevated concentrations of selenium, total dissolved solids, sulfate, sodium, chloride, and nitrate (as N). Once the facility is constructed the Discharger will collect additional groundwater samples from newly installed monitoring wells located upgradient and downgradient of the surface impoundments.
24. **Supply Wells** – An onsite supply well for the reverse osmosis treatment system is located approximately 800 feet from the surface impoundments. The onsite supply well was drilled to a total depth of 400 feet bgs and will pull water from the area's upper aquifer. No other domestic or irrigation wells are known to exist within one mile of the surface impoundments.
25. **Surface Water** – Unnamed surface drainages flow intermittently, primarily during heavy rain events. The drainages flow to Soda Lake approximately four miles to the southeast of the surface impoundments. Soda Lake is a shallow, ephemeral, alkali lake that retains water and allows no outflow to other bodies of water.
26. **Stormwater** – The Discharger routes surface drainage around the surface impoundments. Although yet to be constructed, perimeter ditches have been designed to handle the runoff from a 100-year, 24-hour storm consistent with CCR Title 27, Section 21750(e).
27. **Precipitation** – According to San Luis Obispo County Public Works Department data, the area receives an average of 9.98 inches of rain per year primarily between the

months of November and April. The highest average monthly rainfall is approximately 1.98 inches in January.

28. **Floodplain** – The Federal Emergency Management Agency Flood Insurance Rate Maps show that the surface impoundments are entirely outside the 100-year flood plain.
29. **Groundwater Separation** – Proposed and existing excavation grades and liner designs provide separation between groundwater and the surface impoundment, thus meeting the CCR Title 27 requirement for maintaining a minimum five-foot separation.

### **CONTROL SYSTEMS/MONITORING PROGRAMS**

30. **Leachate Management System** – The leachate collection and removal system (LCRS) design for each surface impoundment includes a leachate collection sump lined with a 60-mil HDPE geomembrane. The sump will contain a leachate collection pipe covered with gravel and wrapped with geonet fabric. A second sump will be located below the primary sump and will have the same design as the primary sump. The sumps are designed to detect leaks from the liner system and will be connected to leak detection monitoring wells.
31. **Monitoring and Reporting Program (MRP)** – Monitoring systems are outlined in the attached MRP No. R3-2011-0225 and include visual inspections, groundwater monitoring, and leak detection monitoring. Finding 33 below documents the groundwater monitoring well network.
32. **Groundwater Monitoring** - The groundwater monitoring well network for the Facility will consist of three monitoring wells at the locations shown in **Figure 3**.
33. **Surface Water Monitoring** – No surface water monitoring is required. All waste must be contained within the surface impoundments.
34. **Unsaturated Zone Monitoring** – The Discharger will monitor the leak detection system in lieu of unsaturated zone monitoring in accordance with the MRP.

### **BASIN PLAN**

35. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was adopted by the Water Board on September 8, 1994, and approved by the State Water Resources Control Board (State Water Board) on November 17, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the water quality objectives stated in that Plan.
36. Unnamed blue line streams drain the Facility and flow to Soda Lake. The Basin Plan identifies the following present and anticipated beneficial uses of Soda Lake:
  - a. Industrial Process Supply;
  - b. Non-contact water recreation;

- c. Wildlife habitat;
- d. Warm fresh-water aquatic habitat;
- e. Preservation of biological habitats of special significance;
- f. Rare, threatened, or endangered species;
- g. Commercial and sport fishing.

37. The Basin Plan does not designate groundwater beneficial uses in the Soda Lake Sub-basin, which is where the project is located. The Discharger will use reverse osmosis to treat groundwater for potable water use and fire protection at the Facility.

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT**

38. The County of San Luis Obispo certified the Final Environmental Impact Report for the California Valley Solar Project on April 20, 2011, and filed a Notice of Determination on April 20, 2011, in compliance with the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Title 14, Chapter 3, and Section 15301.

### **GENERAL FINDINGS**

39. In accordance with California Water Code (CWC) §13263(g), no discharge into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, must create a vested right to discharge. All discharges of waste into waters of the state are privileges, not rights. Authorization to discharge waste is conditioned upon the Discharger complying with provisions of Division 7 of the CWC and with any more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. Compliance with Order No. R3-2011-0225 should assure conditions are met and mitigate any potential changes in water quality attributed to the Facility.

40. The Facility meets the criteria of CCR Title 27 for a Class II surface impoundment suitable to receive brine. Order No. R3-2011-0225 implements, but is not limited to, the prescriptive standards and performance goals of CCR Title 27.

41. **Antidegradation** – 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 Regional Water Boards, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in a Regional Water Board's policies (e.g., quality that exceeds applicable water quality standards). Resolution No. 68-16 also states, in part:

“Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in best practicable treatment and control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained”.

42. The discharges regulated by this Order are required to comply with the land disposal regulations contained in Title 27, which are intended to prevent discharges of waste to waters of the state, preventing degradation of waters of the state. The discharge is subject to waste discharge requirements, which will result in best practicable treatment or control.
43. On **September 9, 2011**, the Water Board notified the Discharger and interested agencies and persons of its intention to issue the Facility Waste Discharge Requirements and has provided an opportunity to review a copy of the proposed Order and submit views and comments.
44. After considering all comments pertaining to this discharge during a public hearing on **February 2, 2012**, this Order was found consistent with the above findings.

**IT IS HEREBY ORDERED** pursuant to authority in Sections 13263 and 13267 of the California Water Code, the High Plains Ranch II LLC, its agents, successors, and assigns may discharge wastes at the California Valley Solar Ranch Class II Surface Impoundment, providing compliance is achieved and maintained with the following:

**A. COMPLIANCE WITH OTHER REGULATIONS, ORDERS AND STANDARD PROVISIONS**

1. Discharge of waste, operations, and monitoring shall comply with all applicable requirements contained in CCR Title 27. If any applicable regulation requirements overlap or conflict in any manner, the most water quality protective requirement must govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.

**B. PROHIBITIONS**

1. Discharge of waste to areas outside the approved and permitted Class II surface impoundments as illustrated in **Figure 3** is prohibited, unless approved by the Executive Officer.
2. Discharge of waste or leachate to ponded water, drainage way(s), or waters of the State, including groundwater, is prohibited.
3. Discharge of hazardous waste is prohibited. For the purposes of this Order, the term hazardous waste is as defined in Title 23, California Code of Regulations, Section 2510 et seq.
4. Disposal of waste within 50 feet of the property line, 100 feet of surface waters, or 100 feet of domestic water supply wells is prohibited, unless approved by the Executive Officer.
5. Disposal of wastes within five (5) feet of the highest anticipated elevation of underlying groundwater, including the capillary fringe, is prohibited, except as allowed under CCR Title 27, §20080 (b) and (c).

6. Discharge of waste to any Class II surface impoundment is prohibited until the following tasks are completed and approved by Water Board staff:
  - a. Installation of a background groundwater monitoring system.
  - b. Installation of an approved groundwater quality monitoring system.
  - c. Establishment of Financial Assurance funds for corrective action, unit closure, and post-closure maintenance.
  - d. Submittal and approval of a construction quality assurance report for the surface impoundments construction.
  - e. Submittal and approval of complete seismic design and stability analyses as required by Title 27.

### **C. SPECIFICATIONS**

1. Discharge of waste must not cause a condition of pollution or contamination to occur through a statistically significant release of pollutants, contaminants, and/or waste constituents, as indicated by the most appropriate statistical [or non-statistical] data analysis method and retest method described in MRP No. R3-2011-0225.
2. Discharge, collection, and treatment of waste must not create nuisance, as defined by CWC §13050(m).
3. Precipitation and drainage control systems shall be designed, constructed, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions.
4. The Discharger must design, construct, and maintain to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage to surface impoundments and drainage facilities resulting from natural disasters (e.g., floods with a predicted frequency of once in 100 years, the maximum probable earthquake, and severe wind storms).
5. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the site.
6. The Discharger must maintain a minimum of two feet of freeboard in the surface impoundments. Freeboard is defined as the distance between the water surface within the impoundment and the top of the lined impoundment.
7. Wastes discharged in violation of this Order, must be removed and relocated.
8. The monthly average flow to the Class II surface impoundments shall not exceed 8,000 gallons per day.



9. Both the bottom liner and side slopes liners for the Class II surface impoundments shall be constructed in accordance with the following engineered alternative that is comprised, in ascending order, of the following:
  - a. A primary 60-mil thick high density polyethylene (HDPE) geomembrane.
  - b. A geonet drainage layer, as a leachate collection and removal systems (LCRS).
  - c. A secondary 60-mil thick HDPE geomembrane in lieu of the clay liner.
  - d. A geonet drainage layer in lieu of a vadose zone monitoring system.
  - e. A tertiary 60-mil thick HDPE geomembrane.
10. The Discharger may propose changes to the liner system design prior to construction, provided that approved components are not eliminated, the engineering proportions of the components are not substantially reduced, and the proposed liner system results in the protection of water quality equal to or greater than the design prescribed by Title 27 and this Order. The proposed changes may be made following approval by the Executive Officer. Substantive changes to the design require reevaluation as an engineered alternative and concurrence by the Executive Officer.
11. The Discharger must complete all seismic design and stability analyses as required by Title 27, including obtaining Executive Officer approval, prior to the discharge of waste into the surface impoundments.
12. The unsaturated zone monitoring system shall be capable of measuring any flows that may occur as a result of a release from the surface impoundments.
13. Each surface impoundment and related containment structures shall be constructed and maintained to prevent inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions, and shall be designed to contain the 100-year annual wet weather season while maintaining the required two feet of freeboard.
14. Each LCRS shall be designed, constructed, and maintained to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of the fluid in any LCRS sump shall be kept at the minimum needed for safe pump operation.
15. Any direct-line discharge to a surface impoundment shall have fail-safe equipment or operating procedures to prevent overfilling.
16. The surface impoundments shall be designed, constructed, and maintained to prevent scouring and/or erosion of the liners and other containment features at points of discharge to the impoundments and by wave action at the water line.
17. If leachate is detected in the LCRS sump or the vadose zone monitoring system of a surface impoundment (indicating a leak in the containment structures) the Discharger shall either implement an Executive Officer approved Response Action Plan or shall:

- a. Immediately cease discharge of waste, excluding leachate to the surface impoundment, until the leaks can be found and repaired.
- b. Immediately collect a grab sample of the leachate and analyze it for constituents listed in the Monitoring and Reporting Program R3-2011-0225.
- c. Verbally notify Water Board staff that the containment structures have failed within 24 hours.
- d. Submit written notification of the release to Water Board staff within seven days, the notification should include plans for corrective measures and a time schedule to repair the containment structures.
- e. The discharge of wastes to the surface impoundment shall not resume until the Executive Officer has determined that repairs to the liners are complete and there is no further threat to water quality.

If the leak is determined to be significant according to the Response Action Plan, or if the Discharger does not have an Executive Officer approved Response Action Plan, the Discharger shall implement a – e above.

18. Leachate removed from a surface impoundment's primary LCRS or vadose zone monitoring system shall be discharged to the impoundment from which it originated. If the surface impoundment liner from which the leachate originated is being repaired, the discharger may discharge leachate to the other surface impoundment until repairs are completed. The Discharger must obtain Executive Officer approval to discharge leachate from one surface impoundment to the other.
19. If the Discharger needs to remove the solids that accumulate in the surface impoundments to maintain minimum freeboard requirements and to maintain adequate capacity, sufficient samples shall be taken for their characterization and classification pursuant to Article 2, Subchapter 2, Chapter 3, Division 2 of Title 27. The rationale for the sampling protocol used, the results of this sampling, and a rationale for classification of the solids shall be submitted to Water Board staff for review. Before any disposal of solids, the Discharger must obtain concurrence on the disposal method from Water Board staff.
20. If solids in the surface impoundments need to be removed, the Discharger must submit a solids removal plan to Water Board staff for review. The plan must include provisions for removing solids without causing liner damage. Prior to removing any solids from the surface impoundments, the Discharger must receive written approval from the Executive Officer.
21. The Discharger may only proceed with construction after the Executive Officer approves all applicable construction quality assurance plans.
22. The closure of each surface impoundment shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.
23. At closure of each surface impoundment, all residual wastes, including liquids, sludges, precipitates, settled solids, liner materials, and adjacent natural geologic materials polluted by wastes, shall be completely removed and discharged to a waste management unit approved by Water Board staff. If after reasonable

attempts, the Discharger demonstrates the removal of all remaining contamination is infeasible, the surface impoundment shall be closed as a landfill.

#### **D. WATER QUALITY PROTECTION STANDARDS**

1. The discharge of waste must not cause a statistically significant difference in water quality over background concentrations for proposed concentration limits for each monitoring parameter (per MRP No. R3-2011-0225) at the point of compliance. The Discharger must maintain concentration limits for as long as the waste poses a threat to water quality. Discharge of waste must not adversely impact the quality of State waters.
2. Pursuant to CCR Title 27 §20400, the Water Board must specify concentration limits in waste discharge requirements. The Water Board complies with the intent of CCR Title 27 §20400 by requiring the Discharger to establish and review concentration limitations on an annual basis in accordance with MRP No. R3-2011-0225.
3. Pursuant to CCR Title 27 §20405, the point of compliance is a vertical surface located at the hydraulically downgradient limit of a surface impoundment that extends through the uppermost aquifer underlying the surface impoundment.
4. Discharge of waste must not cause concentrations of chemicals and radionuclides in groundwater to exceed the State Department of Public Health's latest recommended Drinking Water Action Levels or Maximum Contaminant Levels of CCR Title 22, Division 4, Chapter 15, Article 5.5.
5. Discharge of waste must not cause a violation of any applicable water quality standard for receiving waters adopted by the Water Board or the State Water Resources Control Board.
6. Discharge of waste must neither cause nor contribute to any surface water impacts.
7. Monitoring parameters for groundwater are listed in MRP No. R3-2011-0225. Monitoring points and background monitoring points must be those specified in MRP No. R3-2011-0225.
8. The compliance period, pursuant to CCR Title 27 §20380(d)(1) and §20410, is estimated to be until the year 2062, based on the surface impoundment estimated closure date of 2061 plus 1 year to clean close the site.

#### **E. PROVISIONS**

1. The Discharger is responsible for waste containment, monitoring, and correcting any problems resulting from the discharge of waste for as long as the waste poses a threat to water quality.
2. The Discharger must comply with MRP No. R3-2011-0225, as specified by the Executive Officer.

3. **By October 1 of each year**, the Discharger must complete all necessary runoff diversion and erosion prevention measures (except for planting vegetation). The Discharger must complete all necessary construction, maintenance, or repairs of precipitation and drainage control facilities to prevent erosion. The Discharger must repair erosion rills greater than six-inches deep immediately after storm events that cause the erosion, if it is safe to do so.
4. Should additional data become available through monitoring or investigation that indicates compliance with this Order is not adequately protective of water quality, the Water Board will review and revise this Order as appropriate.
5. If the Discharger or the Water Board determines, pursuant to CCR Title 27, §20420, that there is evidence of a release from any portion of the surface impoundments, the Discharger must immediately implement the procedures outlined in CCR Title 27 §20380, §20385, §20430, and MRP No. R3-2011-0225.
6. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.
7. The Water Board must be allowed, at any time and without prior notification:
  - a. Entry upon the surface impoundment area or where records are kept under the conditions of this Order and MRP No. R3-2011-0225.
  - b. Access to a copy of any records that must be kept under the conditions of this Order and MRP No. R3-2011-0225.
  - c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP No. R3-2011-0225.
  - d. To photograph, sample, and monitor for the purpose of showing compliance with this Order.
8. The Discharger must take all reasonable steps to minimize or correct adverse impacts on the environment resulting from non-compliance with this Order.
9. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
  - a. Violation of any term or condition contained in this Order.
  - b. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts.
  - c. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge.
  - d. A material change in character, location, or volume of the waste being discharged to land.

10. **Two-weeks** prior to constructing each phase of a surface impoundment (e.g., preparing foundation, installing liner, installing leak detection system, etc.), the Discharger must notify Water Board staff.
11. Prior to liner construction, a third party (e.g., unrelated to the Discharger, project designer, contractor) must prepare a Construction Quality Assurance (CQA) Plan. The Executive Officer must approve the CQA Plan. The third party must implement the CQA Plan and provide regular construction progress reports to the Executive Officer.
12. Prior to beginning discharge of waste into any newly constructed surface impoundment, the Discharger must receive a final inspection and written approval from the Executive Officer.
13. The Discharger must obtain and maintain Financial Assurance Instruments (Instruments), which comply with CCR Title 27 (§22207 [Closure Fund], §22212 [Post Closure Fund], and §22220 et seq. [Corrective Action Fund]). Pursuant to CCR Title 27 §20380(b), the Discharger must obtain and maintain assurances of financial responsibility, naming the Water Board as beneficiary, for initiating and completing corrective action for all known or reasonably foreseeable releases. As surface impoundment conditions change, and upon the Water Board's request, the Discharger must submit a report proposing the amount of financial assurance necessary for corrective action for the Executive Officer's review and approval. The Discharger must demonstrate compliance with all financial instruments to the Water Board at a minimum of every five years.

## REPORTING

14. All reports must be signed as follows:
  - a. By either a principal executive officer or ranking elected official.
  - b. Their "duly authorized representative."
  - c. A California Registered Civil Engineer or Certified Engineering Geologist must sign engineering reports.
15. Any person signing a report makes the following certification, whether its expressed or implied:

"I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of a fine and imprisonment."
16. Except for data determined to be confidential under §13267 (b)(2) of the CWC, all reports prepared in accordance with this Order must be available for public inspection at the Water Board office. Records will also be available within the State Water Resources Control Board Geotracker database. Facility waste discharge

requirements, monitoring and reporting program, and monitoring data will be posted on the Geotracker database. The public access to the Geotracker database is located at <http://geotracker.waterboards.ca.gov/>.

17. The Discharger must submit written reports in advance of any planned changes in the permitted surface impoundment or in an activity, which could potentially or actually result in noncompliance. Any planned changes must be approved by the Executive Officer prior to implementation.
18. By **October 1** of each year, the Discharger must submit a Wet Weather Preparedness Report (WWPR). The WWPR must describe compliance with **Provisions E.3** above. The report must also detail preparedness actions taken to ensure discharges to surface or groundwater do not occur during the impending rainy season, and ensure compliance with all other relevant CCR Title 27 criteria. The report must include photographs of all wet weather preparedness measures implemented.
19. The Discharger must notify the Water Board with a written request of any proposed change in ownership or responsibility for construction or operation of the surface impoundments in accordance with CCR Title 27, §21710 (c)(1). The written request must be given at least 90-days prior to the effective date of change in ownership or responsibility and must:
  - a. Be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these Waste Discharge Requirements.
  - b. Contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Water Board.
  - c. Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.
20. Request for change in ownership or responsibility may be approved or disapproved in writing by the Executive Officer. In the event of any change in ownership of this surface impoundment, the Discharger must notify the succeeding owner or operator, in writing, of the existence of this Order. A copy of that notification must be sent to the Executive Officer.
21. The Discharger must furnish, within a reasonable time, any information the Executive Officer may request to determine compliance with this Order or to determine whether cause exists for modifying or terminating this Order.
22. The Discharger or persons employed by the Discharger must comply with all notice and reporting requirements of the State Department of Water Resources, San Luis Obispo County, and other applicable permitting agencies with concurrence of the Executive Officer regarding the permitting, construction, alteration, inactivation, destruction, or abandonment of all monitoring wells used for compliance with this Order or with MRP No. R3-2011-0225, as required by §13750.5 through §13755 and §13267 of the CWC.

23. Should the Discharger discover that it failed to submit any relevant facts or that it submitted incorrect information, it must promptly submit the missing or corrected information.
24. The Discharger must notify the Executive Officer, within 24 hours by telephone and within 14 days in writing, of:
  - a. Any noncompliance that potentially or actually endangers health or the environment. Reports of noncompliance must include a description of;
    - i. The reason for non-compliance;
    - ii. A description of the non-compliance, including photo documentation;
    - iii. Schedule of tasks necessary to achieve compliance; and,
    - iv. An estimated date for achieving full compliance.
  - b. Any flooding, equipment failure, slope failure, or other change in Facility conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures;
  - c. Leachate leaks(s) occurring on or in proximity to the surface impoundments;
  - d. Violation of a discharge prohibition; and,
  - e. Violation of any treatment system's discharge limitation.
25. Reports of compliance or noncompliance with, or any progress reports on, final requirements contained in any compliance schedule must be submitted within 14-days following each scheduled date. If reporting noncompliance, the report must include a description of:
  - a. The reason for non-compliance.
  - b. A description of the non-compliance.
  - c. Schedule of tasks necessary to achieve compliance.
  - d. An estimated date for achieving full compliance.
26. The Discharger must promptly correct any noncompliance issue that threatens the surface impoundments' containment integrity. Correction schedules are subject to the approval of the Executive Officer, except when delays will threaten the environment and/or the surface impoundments' integrity (i.e., emergency corrective measures). For emergency corrective measures, the Discharger must report details of the corrections in writing within seven (7) days of initiating correction.
27. By **June 10, 2016**, the Discharger must submit a Report of Waste Discharge (ROWD) that includes the following information:
  - a. Updated information on waste characteristics, geologic, and climatologic characteristics of the waste management facility and the surrounding region, installed features, precipitation and drainage controls, and closure and post closure maintenance plans, in accordance with CCR Title 27 §21740, §21750, §21760, and §21769.
  - b. Discuss whether, in the Discharger's opinion, there is any portion of this Order that is incorrect, obsolete, or otherwise in need of revision.

- c. Include any other technical documents needed to demonstrate continued compliance with this Order and all pertinent State and Federal requirements.
  - d. Include detailed updated information regarding regulatory considerations, operating provisions, environmental monitoring, and closure and post closure.
28. By **June 10, 2016**, or earlier as needed, submit for the Executive Officer's review and approval an updated report on a reasonably foreseeable release, along with adjustments to financial assurances (as necessary).
29. The Discharger must file with the Water Board a ROWD (in accordance with **Provision E. 27** of this Order) or secure a waiver from the Executive Officer at least **120-days** before making any material change or proposed change in the character, location, or volume of the waste being discharged to land.

## ENFORCEMENT

30. The Discharger must comply with all conditions of this Order. Non-compliance violates state law and is grounds for enforcement action or modification of the Order.
31. Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of §13267 of the CWC, or falsifying any information provided therein, is guilty of a misdemeanor.
32. The Discharger and any person who violates Waste Discharge Requirements and/or who intentionally or negligently discharges waste or causes or permits waste to be discharged into surface waters or groundwater of the state may be liable for civil and/or criminal remedies, as appropriate, pursuant to §13350, §13385, and §13387 of the CWC.
33. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order must not be affected.
34. The Water Board requires all technical and monitoring reports pursuant to this Order in accordance with §13267 of the CWC. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to §13268 of the CWC.
35. The Discharger must comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Water Board. (CWC §13261, §13267, §13263, §13265, §13268, §13300, §13301, §13304, §13340, §13350).
36. No provision or requirement of Order No. R3-2011-0225 or MRP No. R3-2011-0225 is a limit on the Discharger's responsibility to comply with other federal, state and local laws, regulations, or ordinances.



37. The Discharger must comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order.

### REPORT AND IMPLEMENTATION DATE SUMMARY

| TASK   | IMPLEMENTATION DATE                        |
|--|--|
| Runoff diversion and erosion prevention [Provision E.3]          | October 1, of each year                    |
| Notify Water Board staff [Provision E.10]                        | Two-weeks prior to constructing each phase |
| Wet Weather Preparedness Report [Provision E.18]                 | October 1, of each year                    |
| ROWD Amendment [Provision E.27]                                  | June 10, 2016                              |
| Update Report on Reasonably Foreseeable Release [Provision E.28] | June 10, 2016, or sooner, as necessary     |

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 **February 2, 2012**.

\_\_\_\_\_  
Executive Officer

**Attachments:**

- Figure 1 - Location Map
  - Figure 2 - Process Flow Diagram
  - Figure 3 - Site Map
- Monitoring and Reporting Program No. R3-2011-0225



BASE MAP SOURCE: California Solar Ranch Vicinity Map by ENGEO, dated 5/20/2011

**VICINITY MAP**  
Class II Surface Impoundments  
California Valley Solar Ranch  
San Luis Obispo County, California

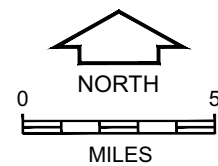
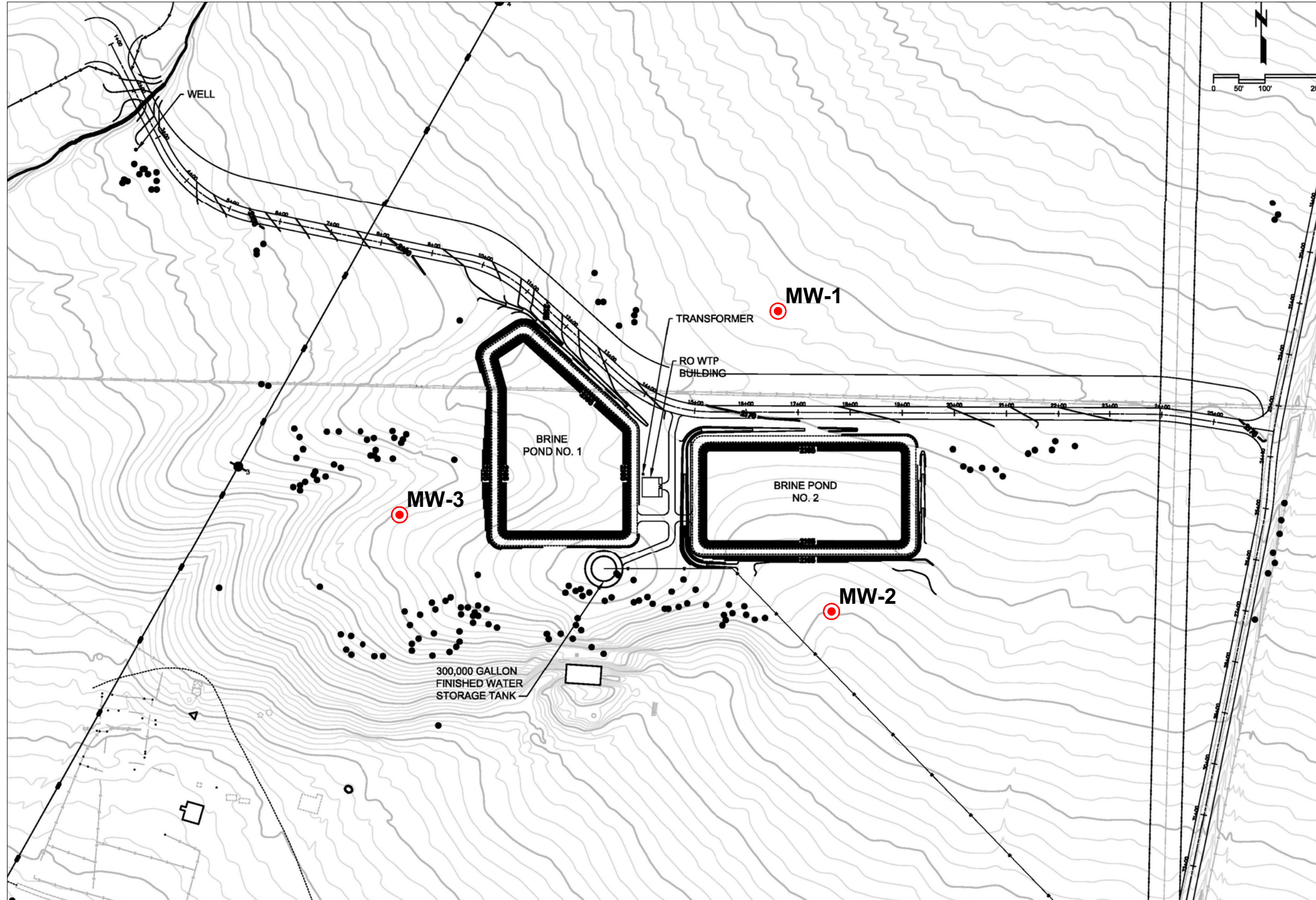


Figure 1

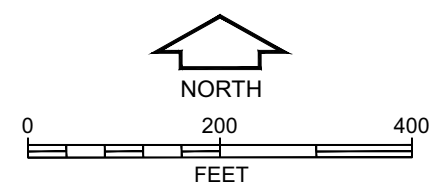


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**LEGEND**

○ Proposed location of Monitoring Well



BASE MAP SOURCE: Site Plan & Facility Index, California Valley Solar Ranch, Phase 1, North Coast Engineering, Inc. (Sheet C-01, 2011).

**WELL SITE PLAN**  
 California Valley Solar Ranch  
 San Luis Obispo, California  
 Figure 3