

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

**MONITORING AND REPORTING PROGRAM NO. R3-2011-0225
Waste Discharger Identification No. 3 400911406
Proposed for Considered at the February 2, 2012 Board Meeting**

FOR

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

The High Plains Ranch II LLC (Discharger) owns and operates the California Valley Solar Ranch Class II Surface Impoundments (surface impoundments). The Discharger is subject to Monitoring and Reporting Program Order No. R3-2011-0225 (MRP) because it owns and operates the surface impoundments. The MRP is required to assess compliance with the California Water Code (CWC), applicable state and federal regulations, and Waste Discharge Requirements Order No. R3-2011-0225.

Monitoring and Reporting Program Order No. R3-2011-0225 is issued by the Regional Water Quality Control Board, Central Coast Region (Water Board) pursuant to CWC §13267. Pursuant to CWC §13268, a violation of §13267 requirements may subject the Discharger to civil liability of up to \$1,000 per day for each day in which the violation occurs.

PART I: MONITORING AND OBSERVATION SCHEDULE

Unless otherwise indicated, the Discharger must report all monitoring and observations as outlined in **Part IV**.

A. SITE INSPECTIONS

The Discharger must inspect the surface impoundments, in accordance with the following schedule, and record (including photographs, when appropriate) at a minimum, the Standard Observations listed below:

1. Site Inspection Schedule:

- a. During the wet season (**October 1 through April 30**), following each storm event that produces onsite storm water runoff, with inspections performed at least **monthly**. For purposes of this MRP, onsite runoff is defined as surface

water flow resulting from a minimum of one inch of rain within a 24-hour period.

- b. During the dry season (**May 1 through September 30**), a minimum of one inspection each **three month period**.

2. **Standard Observations:**

- a. For the surface impoundments - this includes inspections along the perimeter of the surface impoundments, and any areas associated with the reverse osmosis treatment and brine disposal.
 - i. Whether storm water drainage ditches contain liquids.
 - ii. Inspection of storm water discharge locations for evidence of non-storm water discharges.
 - iii. Integrity of drainage systems during wet season.
- b. For Receiving Waters
 - i. Floating and suspended materials of waste origin; presence or absence, source, and size of affected area.
 - ii. Discoloration and turbidity – description of color, source, and size of affected area.
 - iii. Presence of odors – characterization, source, and distance from source.
 - iv. Evidence of beneficial use – presence of water-associated wildlife.
 - v. Estimated flow rate to the receiving water.
 - vi. Weather conditions – wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

B. ADDITIONAL DRAINAGE SYSTEMS INSPECTIONS

The Discharger must inspect all drainage control systems following each onsite runoff-producing storm event and record the following:

1. General conditions of the storm water facilities;
2. Whether storm water sedimentation/retention basins and drainage ditches contain liquids;
3. Steps taken to correct any problems found during the inspections, as required under **Part IA** of this Monitoring and Reporting Program, and date(s) when corrective action was taken. Include photographic documentation.

C. RAINFALL DATA

The Discharger must record the following information from the nearest monitoring station:

1. Total precipitation, in inches, during each **three month period** (October through December, January through March, April through June, and July through September).
2. Precipitation, in inches, during the most intense 24-hour rainfall event occurring within each contiguous **three month period**.
3. Number and date of storms (greater than or equal to one inch in 24 hours) received during the **three month period**.

D. POLLUTION CONTROL SYSTEMS

The Discharger must inspect all pollution and control systems (e.g., liner, leachate collection and removal system (LCRS), and vadose zone monitoring system) and record the following information:

1. Surface impoundments, LCRS and vadose zone monitoring system:
 - i. **Weekly** – Inspect all systems for the presence of liquid and collection system integrity, record volume of leachate collected (gallons), document any liner damage or defects.
 - ii. **Monthly** – Pumping system operational check.
 - iii. Perform routine preventative maintenance focused on keeping the system at design operation. The Discharger must summarize and report all scheduled and unscheduled maintenance.

E. INTAKE MONITORING

The Discharger must record the following information associated with surface impoundment inflows:

1. Record all flow volumes into the surface impoundments including but not limited to brine, raw supply well water, reverse osmosis bypass water, leachate collected from the LCRS, and any liquid collected from the vadose zone monitoring system.

F. MONITORING LOCATIONS AND ANALYTICAL MONITORING

The Discharger must monitor the surface impoundments in accordance with the following schedule(s). Groundwater monitoring locations are shown on the Monitoring Network, **Figure 1**. The Discharger must comply with the sampling, analyses, and reporting requirements discussed in **Parts II, III, and IV** of this monitoring and reporting program.

1. Monitoring Periods:

- a. **Semiannually** – The 1st and 2nd semiannual monitoring periods are January 1 – June 30, and July 1 – December 31.
- b. **Annually** – The annual monitoring period is from January 1 – December 31.

2. Monitoring Programs:

The Discharger must sample the following Monitoring Points and Background Monitoring Point as described below.

a. Surface Impoundments

Surface impoundment samples shall be collected in a location at least 50 feet from the influent structure. Liquids in the surface impoundment shall be monitored/sampled for the parameters as listed in Table 1.

TABLE 1 – Surface Impoundment Monitoring

Parameters	Method ¹	Units ²	Frequency
Flow Rate	Calculated	gallons/month	Monthly
Remaining Capacity	Calculated	gallons	Monthly
Freeboard	Measured	feet	Weekly
Temperature	Field	°F/C	Semiannually
Electrical Conductivity (EC)	Field	µmhos/ cm	Semiannually
pH	Field	pH Units	Semiannually
Chloride	300.0	mg/L	Semiannually
Nitrate (as Nitrogen)	300.0	mg/L	Semiannually
Total Dissolved Solids	160.1	mg/L	Semiannually
Sulfate	300.0	mg/L	Semiannually
Manganese	6010B	mg/L	Semiannually
Sodium	6010B	mg/L	Semiannually
Barium	6010B	mg/L	Semiannually
Lead	6010B	mg/L	Semiannually
Selenium	6010B	mg/L	Semiannually
Arsenic	6010B	mg/L	Semiannually
Potassium	6010B	mg/L	Semiannually
Nickel	6010B	mg/L	Semiannually
Aluminum	6010B	mg/L	Semiannually
Magnesium	6010B	mg/L	Semiannually
Calcium	6010B	mg/L	Semiannually

1. Or most recently approved United States Environmental Protection Agency (US EPA) method that provides the lowest practicable detection limits. All metals must be field filtered before laboratory analysis.
2. mg/L – milligrams per liter; µmhos/cm – micromillihos per centimeter; °F/C – degrees Fahrenheit/Centigrade; NTU – nephelometric turbidity units

b. Groundwater

Groundwater monitoring samples shall be collected from monitoring wells shown on Figure 1 and analyzed for the following:

TABLE 2 – Groundwater Monitoring

Parameters	Method^{1,2}	Units³	Frequency
Groundwater Elevations	Sounder	Feet	Semiannually
Temperature	Field	°F/C	Semiannually
Electrical Conductivity (EC)	Field	µmhos/ cm	Semiannually
pH	Field	pH Units	Semiannually
Chloride	300.0	mg/L	Semiannually
Nitrate (as Nitrogen)	300.0	mg/L	Semiannually
Total Dissolved Solids	160.1	mg/L	Semiannually
Sulfate	300.0	mg/L	Semiannually
Manganese	6010B	mg/L	Semiannually
Sodium	6010B	mg/L	Semiannually
Barium	6010B	mg/L	Semiannually
Lead	6010B	mg/L	Semiannually
Selenium	6010B	mg/L	Semiannually
Arsenic	6010B	mg/L	Semiannually
Potassium	6010B	mg/L	Semiannually
Nickel	6010B	mg/L	Semiannually
Aluminum	6010B	mg/L	Semiannually
Magnesium	6010B	mg/L	Semiannually
Calcium	6010B	mg/L	Semiannually

1. Or most recently approved United States Environmental Protection Agency (US EPA) method that provides the lowest practicable detection limits. All metals must be field filtered before laboratory analysis.
2. Statistical and non-statistical assessment methods, as required by **Part III**, must be used to evaluate the sampling results of laboratory-derived parameters.
3. mg/L – milligrams per liter; µmhos/cm – micromillihos per centimeter; °F/C – degrees Fahrenheit/Centigrade; NTU – nephelometric turbidity units

c. Leachate Monitoring

The LCRS sump shall be inspected weekly for liquids. Upon detection of liquid in a previously dry LCRS, the Discharger shall sample and analyze the LCRS liquid for the constituents listed in Table 3. If the liquid is determined to be leachate, the Discharger shall follow the steps outlined in WDR Specification C.17.

TABLE 3 – LCRS Sampling

Parameters	Method¹	Units²	Frequency³
Flow Rate	Calculated	gallons/month	Monthly
Temperature	Field	°F/C	Monthly
Electrical Conductivity (EC)	Field	µmhos/ cm	Monthly
pH	Field	pH Units	Monthly
Chloride	300.0	mg/L	Monthly
Nitrate (as Nitrogen)	300.0	mg/L	Monthly
Total Dissolved Solids	160.1	mg/L	Monthly
Sulfate	300.0	mg/L	Monthly
Manganese	6010B	mg/L	Monthly
Sodium	6010B	mg/L	Monthly

Parameters	Method ¹	Units ²	Frequency ³
Barium	6010B	mg/L	Monthly
Lead	6010B	mg/L	Monthly
Selenium	6010B	mg/L	Monthly
Arsenic	6010B	mg/L	Monthly
Potassium	6010B	mg/L	Monthly
Nickel	6010B	mg/L	Monthly
Aluminum	6010B	mg/L	Monthly
Magnesium	6010B	mg/L	Monthly
Calcium	6010B	mg/L	Monthly

1. Or most recently approved United States Environmental Protection Agency (US EPA) method that provides the lowest practicable detection limits. All metals must be field filtered before laboratory analysis.

2. mg/L – milligrams per liter; μ mhos/cm – micromillihos per centimeter; °F/C – degrees Fahrenheit/Centigrade; NTU – nephelometric turbidity units

3. Monthly when liquids are present. If no liquid is present, sampling is not required.

a. Unsaturated Zone

The pan lysimeter shall be checked weekly for liquid. Upon detection of liquid in a previously dry lysimeter, the Discharger shall sample and analyze the liquid for the constituents listed in Table 4. If the liquid is determined to be leachate, the Discharger shall follow the steps outlined in WDR Specification C.17. including ceasing discharge into the surface impoundment.

TABLE 4 – Lysimeter Sampling

Parameters	Method ¹	Units ²	Frequency ³
Flow Rate	Calculated	gallons/month	Monthly
Temperature	Field	°F/C	Monthly
Electrical Conductivity (EC)	Field	μ mhos/ cm	Monthly
pH	Field	pH Units	Monthly
Chloride	300.0	mg/L	Monthly
Nitrate (as Nitrogen)	300.0	mg/L	Monthly
Total Dissolved Solids	160.1	mg/L	Monthly
Sulfate	300.0	mg/L	Monthly
Manganese	6010B	mg/L	Monthly
Sodium	6010B	mg/L	Monthly
Barium	6010B	mg/L	Monthly
Lead	6010B	mg/L	Monthly
Selenium	6010B	mg/L	Monthly
Arsenic	6010B	mg/L	Monthly
Potassium	6010B	mg/L	Monthly
Nickel	6010B	mg/L	Monthly
Aluminum	6010B	mg/L	Monthly
Magnesium	6010B	mg/L	Monthly
Calcium	6010B	mg/L	Monthly

1. Or most recently approved United States Environmental Protection Agency (US EPA) method that provides the lowest practicable detection limits. All metals must be field filtered before laboratory analysis.

2. mg/L – milligrams per liter; μ mhos/cm – micromillihos per centimeter; °F/C – degrees Fahrenheit/Centigrade; NTU – nephelometric turbidity units

3. Monthly when liquids are present. If no liquid is present, sampling is not required.

3. Groundwater Flow Rate and Direction:

- a. For each monitored groundwater body, the Discharger must measure the water elevation in every well, at least semiannually, including the times of expected highest and lowest elevations of the water level, and determine the presence of vertical gradients, and groundwater flow rate and direction for the respective groundwater body. Groundwater elevations for all wells in a given groundwater body must be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.
- b. The Discharger must compare observed groundwater characteristics with those from previous determinations, noting the appearance of any trends and of any indications that a change in the hydrogeologic conditions beneath the site has occurred.

4. Sample Procurement Limitation:

For any given monitored medium, the Discharger must collect samples from Monitoring Points with a span not exceeding 30 days within a given Monitoring Period and collect samples in a manner that ensures sample independence to the greatest extent feasible [§2550.7(e)(12)(B) of Article 5].

PART II: SAMPLE COLLECTION AND ANALYSIS

A. SAMPLING AND ANALYTICAL METHODS

The Discharger must collect, store, and analyze samples according to the most recent version of Standard US EPA methods (US EPA publication "SW-846"), and in accordance with a sampling and analysis plan approved by the Water Board's Executive Officer. A laboratory certified for these analyses by the State of California Environmental Laboratory Program must perform all water analyses and they must identify the specific methods of analysis. The director of the laboratory whose name appears in the certification must supervise all analytical work in his/her laboratory and must sign reports of such work submitted to the Water Board. In addition, the Discharger is responsible for seeing that the laboratory analysis of samples from Monitoring Points meets the following restrictions:

1. The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90 percent non-numerical determinations (i.e., trace) in historical data for that medium, the analytical method having the lowest Method Detection Limit (MDL) must be selected.

2. Trace results (results falling between the MDL and the Practical Quantitation Limit [PQL]) must be reported as such.
3. The laboratory must derive MDLs and PQLs for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits are defined in **Part V** and must reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. If the laboratory suspects that, due to a change in matrix or their effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results must be flagged accordingly, and an estimate of the limit actually achieved must be included.
4. Report Quality Assurance and Quality Control (QA/QC) data along with the sample results to which it applies. Also report sample results that are unadjusted for blank results or spike recovery. The QA/QC data submittal must include:
 - a. Method, equipment, and analytical detection limits;
 - b. Recovery rates, an explanation for any recovery rate that is outside the US EPA-specified recovery rate;
 - c. Results of equipment and method blanks;
 - d. Results of spiked and surrogate samples;
 - e. Frequency of quality control analysis;
 - f. Chain of custody logs; and
 - g. Name and qualifications of the person(s) performing the analyses.
5. Report and flag (for easy reference) QA/QC analytical results involving detection of common laboratory contaminants in associated samples.
6. Identify, quantify, and report, to a reasonable extent, non-targeted chromatographic peaks. Perform second column or second method confirmation procedures when significant unknown peaks are encountered to identify and more accurately quantify the unknown analyte(s).

B. CONCENTRATION LIMIT DETERMINATION

1. For the purpose of establishing Concentration Limits for Monitoring Parameters detected in greater than 10 percent of a medium's samples, the Discharger must:
 - a. Statistically analyze existing monitoring data (**Part III**), and propose, to the Executive Officer, statistically derived Concentration Limits for each Monitoring Parameter at each Monitoring Point for which sufficient data exist.
 - b. In cases where sufficient data for statistically determining Concentration Limits do not exist, the Discharger must collect samples and analyze for Monitoring Parameter(s), which require additional data. Once sufficient data are obtained, the Discharger must submit proposed Concentration Limit(s) to the Executive Officer for approval. This procedure must take no longer than two calendar

- years.
- c. Sample and analyze new Monitoring Points, including any added by this Order, until sufficient data are available to establish a proposed Concentration Limit for all Monitoring Parameters. Once sufficient data are obtained, the Discharger must submit the proposed Concentration Limit(s) to the Executive Officer for approval. This procedure must take no longer than two calendar years.
2. Once established, review concentration limits a minimum of annually. Propose new concentration limits, when appropriate.

C. RECORD MAINTENANCE

The Discharger must maintain records in accordance with CCR Title 27 §21720(f), including maintenance and retention of analytical records for a minimum of five years by the Discharger or laboratory. The Discharger must extend the period of retention during the course of any unresolved litigation or when requested by the Executive Officer. Such records must show the following for each sample:

1. Identity of sample and of the Monitoring Point from which it was taken, along with the identity of the individual who obtained the sample.
2. Date and time of sampling.
3. Date and time that analyses were started and completed, and the name of the personnel performing each analysis.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Results of analyses, MDL, and PQL for each analysis.
6. A complete chain of custody log.

PART III: STATISTICAL AND NON-STATISTICAL ANALYSIS OF DATA

A. STATISTICAL ANALYSIS

For Detection Monitoring, the Discharger must use statistical methods to analyze Monitoring Parameters that exhibit concentrations that equal or exceed their respective MDL in at least 10 percent of applicable historical samples. The Discharger may propose and use any statistical method that meets the requirements of CCR Title 27, §20414(e)(7). All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.

B. NON-STATISTICAL METHOD

For Detection Monitoring, the Discharger must use the following non-statistical method for analyzing constituents, which are detected in less than 10 percent of applicable historical samples. This method involves a two-step process:

1. From constituents to whom the method applies, compile a specific list of those constituents, which exceed their respective MDL. The list must be compiled based on either data from the single sample or in cases of multiple independent samples, from the sample, which contains the largest number of constituents.
2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either the list from a single well contains two or more constituents, or contains one constituent, which equals or exceeds its Practical Quantitation Limit. If either condition is met, and the compound is not a known laboratory artifact, the Discharger must conclude that a release is tentatively indicated and must immediately implement the appropriate re-test procedure under **Part III.C**.

C. RE-TEST PROCEDURE

1. In the event that the Discharger concludes that a release has been tentatively indicated, the Discharger must carry out the reporting requirements of **Part IV.C.2** and, within 30 days of receipt of analytical results, collect two new suites of samples for the indicated Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per Monitoring Point as were used for the initial test.
2. Analyze each of the two suites of re-test analytical results using the same statistical method (or non-statistical comparison) that provided the tentative indication of a release. If the test results of either (or both) of the re-tested data suites confirm the original indication, the Discharger must conclude that a release has been discovered and must carry out the requirements of **Part IV.C.4**.
3. The Discharger must carry out re-tests only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the Monitoring Parameter(s) which triggered the indication.

PART IV: REPORTING

A. MONITORING REPORT

The Discharger must submit a Monitoring Report semiannually by **January 31 and July 31** of each year. Submit the Monitoring Reports in an electronic format, with transmittal letter, text, tables, figures, laboratory analytical data, and appendices in PDF format (one PDF for the entire report). The Discharger is required to upload the full Monitoring Report into Geotracker, as stipulated by California State law. The

Monitoring Report must address all facts of the surface impoundments' monitoring program. The Monitoring Report must include, but should not be limited to the following:

1. Letter of Transmittal:

A letter transmitting the essential points must accompany each report. The letter must include a discussion of violations caused by the surface impoundments since submittal of the last such report. If the Discharger has not observed any new violations since the last submittal, the Discharger must state this in the transmittal letter. Both the Monitoring Report and the transmittal letter must be signed as follows: for private facilities, a principal executive officer at the level of vice president; for public agencies, the director of the agency. Upon Water Board Executive Officer approval, the cited signature can be by a California Registered Civil Engineer, or Certified Engineering Geologist, or Professional Geologist who has been given signing authority by the cited signatories. The transmittal letter must contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. Compliance Summary:

The summary must contain at least a discussion of compliance with concentration limits, release indications, and any corrective actions taken.

3. Graphical Presentation of Data:

For each Monitoring Point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs must effectively illustrate trends and/or variations in the laboratory analytical data. Each graph must plot a single constituent concentration over time at one (for intra-well comparison) or more (for inter-well comparisons) Monitoring Points in a single medium. Where applicable, include Maximum Contaminant Levels (MCLs) and/or concentration limits along with graphs of constituent concentrations. When multiple samples are taken, graphs must plot each datum, rather than plotting mean values.

The Discharger must also determine horizontal gradients, groundwater flow rate, and flow direction for each respective groundwater body. Present this data on a figure that depicts groundwater contours and flow directions as well as gradient. Include one figure for each water level measuring period in the semiannual monitoring report.

4. Corrective Action Summary:

Discuss significant aspects of any corrective action measures conducted during the Monitoring Period and the status of any ongoing corrective action efforts, including constituent trend analysis. Calculate pollutant load removed from the impacted media (water, gas, leachate) by mass removal system(s). Base the mass removal calculations on actual analytical data as required by **Part I.F.**

Present discussion and indications, relating mass removal data to the violation the corrective action is addressing.

5. Laboratory Results:

Summarize and report laboratory results and statements demonstrating compliance with **Part II**. Include results of analyses performed at the surface impoundments that are outside of the requirements of this Monitoring and Reporting Program.

6. Sampling Summary:

- a. For each Monitoring Point addressed by the report, a description of: 1) the method and time of water level measurement, 2) the method of purging and purge rate and well recovery time, and 3) field parameter readings.
- b. For each Monitoring Point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; and description of any anomalies).

7. Leachate Collection and Detection Systems:

A summary of the total volume of leachate collected each month since the previous Monitoring Report for both the leachate collection and leachate detection systems. Also, include fluid level measurements in the LCRS(s) along with transducer calibration records. Tabulate and graph the LCRS(s) fluid level measurements and fluid volumes in the semiannual reports.

8. Standard Observations:

A summary of Standard Observations (**Part I**) made during the Monitoring Period.

9. Map(s):

The base map for the Monitoring Report must consist of a current aerial photograph or include relative topographical features, along with Monitoring Points and features of the surface impoundment facility.

B. ANNUAL SUMMARY REPORT

The Discharger must submit an annual report to the Water Board covering the previous monitoring year. The annual Monitoring Period ends on December 31 each year. Submit this Annual Summary Report no later than January 31 of each year. The Discharger may combine the Annual Summary Report with the Second Semiannual Monitoring Report of the year. The annual report must include the information outlined in **Part IV. A.** above and the following:

1. Discussion:
Include a comprehensive discussion of the compliance record as it relates to Waste Discharge Requirements Order No. R3-2011-0225, a review of the past year's significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of construction projects, with water quality significance, completed or commenced in the past year or planned for the upcoming year.
2. Statistical Limit Review:
The Discharger must review the statistically derived concentration limits a minimum of annually, and revise them as necessary. The Discharger must discuss data collected during the past year and consider for inclusion in, and determination of, proposed limits for the coming year. For statistical limits that are changed from the previous year, include a comprehensive discussion of the proposed limit for Executive Officer review and consideration.
3. Analytical Data:
Complete historical analytical data for detected analytes presented in tabular form in Excel™ format or in another file format acceptable to the Executive Officer.
4. Leachate Collection and Detection System:
The Discharger must submit the results of the annual leachate collection and leachate detection system testing, as required by **Part I.F.** Submit annually testing that shows the leachate is non-hazardous, if leachate is used for dust control.
5. Map(s):
A map, or set of maps, that indicate(s) the type of cover material in place (final, long-term intermediate, or intermediate) over inactive and completed areas.

C. CONTINGENCY RESPONSE

1. Leachate leak: If leachate is detected in the vadose zone monitoring system of a surface impoundment (indicating a leak in the containment structures) the Discharger shall:
 - a. Immediately cease discharge of waste, excluding leachate to the surface impoundment, until the leaks can be found and repaired.
 - b. Verbally notify the Regional Board that the containment structures have failed within 24 hours.
 - c. Submit written notification of the release to the Regional Board within seven days, the notification should include a time schedule to repair the containment structures.
 - d. The discharge of wastes to the surface impoundment shall not resume until the Regional Board has determined that repairs to the liners are complete and there is no further threat to water quality.

2. Initial Release Indication Response:

Should the initial statistical or non-statistical comparison (under **Part III. A or B**) indicate that a new release is tentatively identified, the Discharger must:

- a. Within 24 hours, notify the Water Board verbally or by email of the Monitoring Point(s) and constituent(s) or parameter(s) involved;
- b. Provide written notification by certified mail within seven days of such determination; and
- c. Either of the following:
 - i. Carry out a discrete re-test in accordance with **Part III.C**. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger must carry out the requirements of **Part IV.C.4**. In any case, the Discharger must inform the Water Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days, or;
 - ii. Make a determination, in accordance with CCR Title 27, §20420(k)(7), that a source other than the surface impoundment(s) caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation, or by natural variation in the groundwater, surface water, or the unsaturated zone.

3. Physical Evidence of a Release:

If either the Discharger or the Executive Officer determines that there is significant physical evidence of a new release pursuant to CCR Title 27, §20385(a)(3), the Discharger must conclude that a release has been discovered and must:

- a. Within seven days notify the Executive Officer of this fact by certified mail (or acknowledge the Executive Officer's determination);
- b. Carry out the requirements of **Part IV.C.4** for potentially-affected medium; and
- c. Carry out any additional investigations stipulated in writing by the Executive Officer for the purpose of identifying the cause of the indication.

4. Release Discovery Response:

If the Discharger concludes that a new release has been discovered the following steps must be carried out:

- a. Within seven days of receiving the laboratory analytical results, the Discharger must notify the Executive Officer, by certified mail, of the concentration of Monitoring Parameter at each Monitoring Point. This notification must include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration;
- b. The Discharger must, within 90 days of discovering the release, submit to the Executive Officer a Revised Report of Waste Discharge proposing an

- Evaluation Monitoring and Reporting Program that meets the requirements of CCR Title 27, §20420 and §20425 by committing to install at least one monitoring well directly down gradient of the center of the release;
- c. The Discharger must, within 180 days of discovering the release, submit to the Executive Officer a preliminary engineering feasibility study meeting the requirements of CCR Title 27, §20420; and
 - d. The Discharger must immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that the Discharger can meet the requirements of CCR Title 27, §20425 to submit a delineation report within 90 days of when the Executive Officer directs the Discharger to begin the Evaluation Monitoring Program.
5. Release Beyond Facility Boundary:
Any time the Discharger or the Executive Officer concludes that a new release from a surface impoundment has migrated beyond the facility boundary, the Discharger must notify persons who either own or reside upon the land that directly overlies any part of the plume and are immediately down gradient of the plume (Affected Persons).
- a. Initial notification to Affected Persons must be accomplished within 14 days of making this conclusion and must include a description of the Discharger's current knowledge of the nature and extent of the release.
 - b. Subsequent to initial notification, the Discharger must provide updates to Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.
 - c. Each time the Discharger sends a notification to Affected Persons (under a. or b. above), the Discharger must, within seven days of sending such notification, provide the Executive Officer with both a copy of the notification and a current mailing list of Affected Persons.

PART V: DEFINITION OF TERMS

A. AFFECTED PERSONS

Individuals who either own or reside upon the land, which directly overlies any part of that portion of a gas, or liquid phase release that may have migrated beyond the facility boundary.

B. CONCENTRATION LIMITS

The Concentration Limit for any given Monitoring Parameter in a given monitored medium must be either:

1. The constituent's statistically determined background value or tolerance limit, established using an Executive Officer approved method (**Part III**); or

2. In cases where the constituent's MDL is exceeded in less than 10 percent of historical samples, the MDL is the concentration limit defined in **Part II. A.1.**

C. MATRIX EFFECT

Any increase in the MDL or PQL for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

D. METHOD DETECTION LIMIT (MDL)

The lowest concentration at which a given laboratory, using a given analytical method to detect a given constituent, can differentiate with 99 percent reliability, between a sample which contains the constituent and one which does not. The MDL must reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

F. MONITORED MEDIUM

Those media that are monitored pursuant to this Monitoring and Reporting Program (groundwater, surface water, liquid, leachate, gas condensate, and other as specified).

G. MONITORING PARAMETERS

A short list of constituents and parameters used for the majority of monitoring activities. The Monitoring Parameters for these surface impoundments are listed in **Part I. F.**

H. MONITORING PERIOD (frequency)

The duration of time, during which a sampling event must occur. The Monitoring Period for the various media and programs is specified in **Part I.F.**

I. PRACTICAL QUANTITATION LIMIT (PQL)

The lowest acceptable calibration standard (acceptable as defined for a linear response, or by actual curve fitting) times the sample extract dilution factor times any additional factors to account for Matrix Effect. The PQL must reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. PQLs reported by the laboratory must not simply be re-stated from US EPA analytical method manuals. Laboratory derived PQLs are expected to agree closely with published US EPA estimated quantitation limits (EQL).

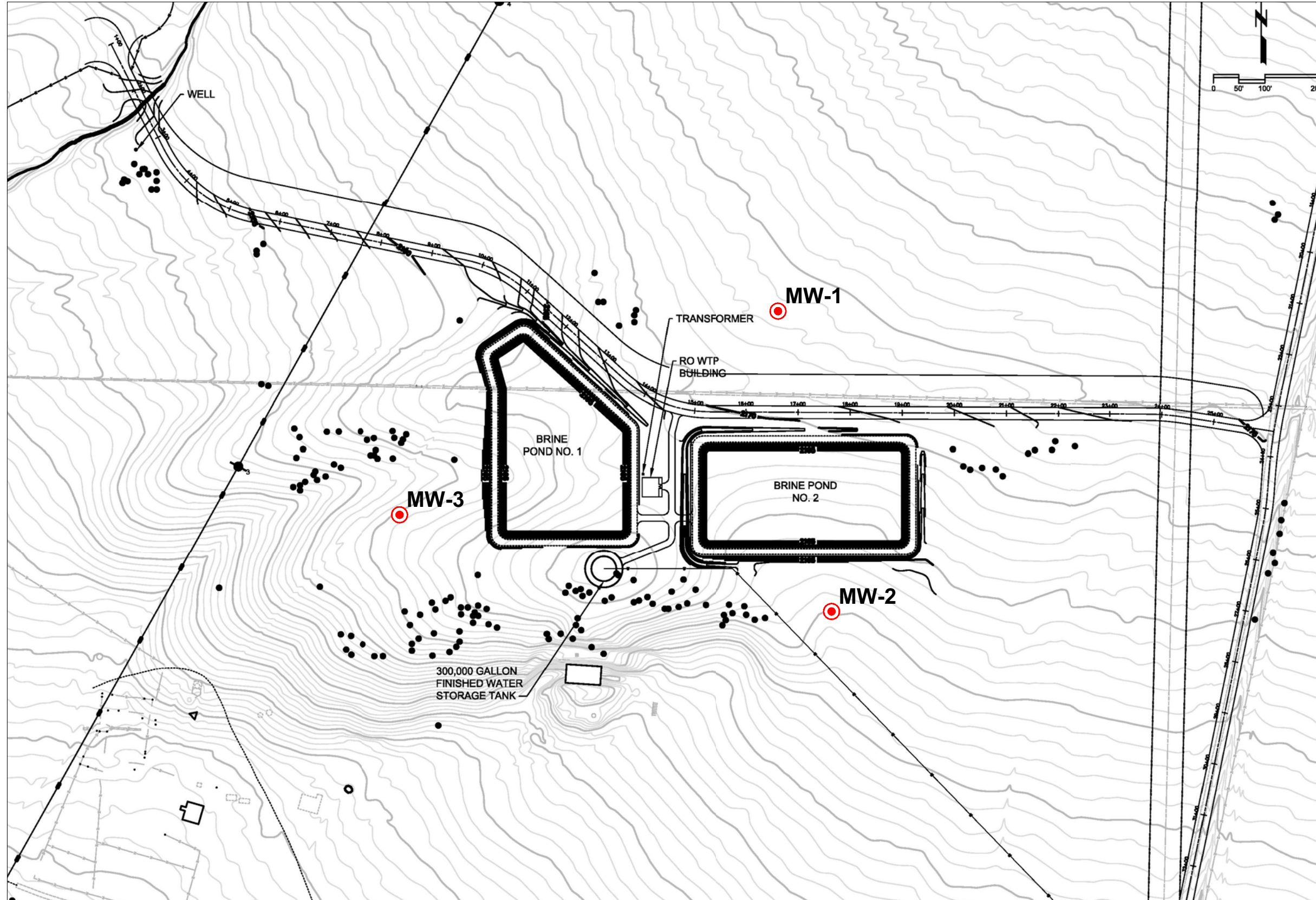
J. RECEIVING WATERS

Any surface water, which actually or potentially receives surface runoff, or groundwater, which pass over, through, or under waste materials or contaminated soils.

ORDERED BY: _____
Executive Officer **Date**

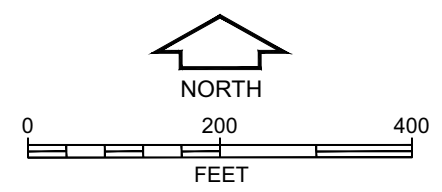
Figure: Surface Impoundment Monitoring Network, Figure 1

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LEGEND

Proposed location of Monitoring Well



WELL SITE PLAN
California Valley Solar Ranch
San Luis Obispo, California

Figure 1

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