

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION**

MONITORING AND REPORTING PROGRAM R7-2013-0061

FOR  
SOUTHERN CALIFORNIA GAS COMPANY, OWNER/OPERATOR  
SOUTH NEEDLES COMPRESSOR STATION

South of Needles – San Bernardino County

Location of Discharge: southwest quarter of the northwest quarter and the northwest quarter of  
the southeast quarter of Section 17, Township 7 North, Range 23 East,  
San Bernardino Base & Meridian

CONSISTS OF

PART I, PART II AND PART III

## PART I

### A. GENERAL

Responsibilities of waste Dischargers are specified in Sections 13260, 13264, 13267, 13271, and 13272 of the California Water Code, and in the State Water Resources Control Board's Resolution No. 93-062. This self-monitoring program is issued pursuant to Provision No. 1 of Regional Water Board Order R7-2013-0061. The principal purposes of a self-monitoring program by a waste Discharger are:

1. To document compliance with WDRs and prohibitions established by the Regional Water Board;
2. To facilitate self-policing by the waste Discharger in the prevention and abatement of pollution arising from waste discharge; and
3. To prepare water quality analyses.

### B. DEFINITION OF TERMS

1. The "Monitoring Parameters" consists of a short list of constituents and parameters used for the majority of monitoring activity.
2. "Matrix Effect" refers to any increase in the Method Detection Limit or Practical Quantitation Limit 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 of water or soil-pore gas being analyzed.
3. "Facility-Specific Method Detection Limit (MDL)", for a given analytical laboratory using a given analytical method to detect a given constituent (in spite of any Matrix Effect) means the lowest concentration at which the laboratory can regularly differentiate - with 99% reliability - between a sample which contains the constituent and one (1) which does not.

4. "Facility-Specific Practical Quantitation Limit (PQL)", for a given analytical laboratory using a given analytical method to determine the concentration of a given constituent (in spite of any Matrix Effect) means the lowest constituent concentration the laboratory can regularly quantify within specified limits of precision that are acceptable to the Regional Water Board's Executive Officer.
  
5. "Reporting period" means the duration separating the submittal of a given type of monitoring report from the time the next iteration of that report is scheduled for submittal. Therefore, the reporting period for monitoring parameters is semi-annually, and the reporting period for 5-year summary report is every five (5) years. An annual report, which is a summary of all the monitoring during the previous years, shall also be submitted to the Regional Water Board. The submittal dates for each reporting period shall be as follows:

a. Semi-Annual Detection Monitoring Report

October 1 through March 31 – Report due by April 30

April 1 through September 30 – Report due by October 31

b. Annual Summary Report

April 1 through March 31 – Report due by April 30

C. SAMPLING AND ANALYTICAL METHODS

1. Sampling collection, storage, and analysis shall be performed according to the most recent version of Standard USEPA methods, and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Water Board's Executive Officer prior to use. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Water Board. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples from Monitoring Points and Background Monitoring Points meets the following restrictions:

a. The methods and 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% non-numerical determinations (i.e. "trace" or "ND") in data from Background Monitoring Points for that medium, the analytical methods having the lowest "facility-specific method detection limit (MDL)", defined in Part I.B.3, shall be selected from among those methods which would provide valid results in light of any "Matrix Effects" (defined in Part I.B.2.) involved.

- b. "Trace" results; results falling between the MDL and the facility-specific practical quantitation limit (PQL), shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run and by an estimate of the constituents concentration.
- c. MDLs and PQLs shall be derived by the laboratory for each analytical procedure, with the MDLs derived according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. If the lab suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantitation limit actually achieved.
- d. All QA/QC data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation of any recovery rate that is less than normal recovery rates as established by EPA and inter-laboratory studies, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery.
- e. Upon receiving written approval from the Regional Water Board's Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given Reporting Period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by Regional Water Board staff.

- f. In cases where contaminants are detected in QA/QC samples (i.e. field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged.
- g. The MDL shall always be calculated such that it represents a concentration associated with a 99% reliability of a non-zero result.

#### D. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the Discharger or laboratory, and shall be retained for a minimum of five (5) years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Water Board. Such records shall show the following for each sample:

1. Identity of sample and of the Monitoring Point or Background 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 identify and volumes of reagents used;
5. Calculations of results; and
6. Results of analyses, and the MDL and PQL for each analysis.

## E. REPORTS TO BE FILED WITH THE BOARD

1. A written "Detection Monitoring Report" shall be submitted twice annually (Part II.B.2.), in addition to an "Annual Summary Report" (Part I.E.3.). The reports shall be comprised of at least the following:

- a. Letter of Transmittal

A letter transmitting the essential points in each report shall accompany each report. Such a letter shall include a discussion of any requirement violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting said requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice-president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall 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;

- b. Each Detection Monitoring Report shall include a compliance evaluation summary. The summary shall contain at least:

1. For each monitored ground water body, a description and graphical presentation of the velocity and direction of the ground water flow under/around the Unit, based upon water level elevations taken during the collection of the water quality data submitted in the report;
2. Pre-Sampling Purge for Samples Obtained From Wells: For each monitoring well addressed by the report, a description of the method and time of water level measurement, of the type of pump used for purging and the placement of the pump in the well, and of the method of purging (the pumping rate, the equipment

and methods used to monitor field pH, temperature, and conductivity during purging, the calibration of the field equipment, results of the pH, temperature, conductivity, and turbidity testing, the well recovery time, and the method of disposing of the purge water);

3. Sampling: For each Monitoring Point and Background Monitoring Point addressed by the report, a description of the type of pump - or other device - used and its placement for sampling, and a detailed description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations).
- c. A map or aerial photograph showing the locations of observation stations, Monitoring Points, and Background Monitoring Points;
- d. For each Detection Monitoring Report, include laboratory statements of results of all analyses demonstrating compliance with Part I.C.;

## 2. CONTINGENCY REPORTING

- a. The Discharger shall report by telephone concerning any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Regional Water Board within seven (7) days, containing at least the following information:
  1. A map showing the location(s) of seepage;
  2. An estimate of the flow rate;
  3. A description of the nature of the discharge (e.g., all pertinent observations and analyses); and

4. Corrective measures underway or proposed.
  - b. Should the initial statistical comparison (Part III.A.1.) or non-statistical comparison (Part III.A.2.) indicate, for any Constituent or Concern or Monitoring Parameter, that a release is tentatively identified, the Discharger shall immediately implement an internal investigation and notify the Regional Water Board verbally as to the Monitoring Point(s) and constituents(s) or parameter(s) involved, shall provide written notification by certified mail within seven (7) days of such determination (Section 20420(j)(l) of Title 27, California Code of Regulations (CCR)). Within 30 days the release shall be characterized, and, if determined to be a tentative release, the Discharger shall carry out a discrete retest in accordance with Parts II.B.1, and III.A.3. If the retest confirms the existence of a release, the Discharger shall carry out the requirements of Part I.E.2.d. In any case, the Discharger shall inform the Regional Water Board of the outcome of the retest as soon as the results are available, following up with written results submitted by certified mail within seven (7) days of completing the retest.
  - c. If either the Discharger or the Regional Water Board determines that there is significant physical evidence of a release (Section 20385(3) of Title 27, CCR.), the Discharger shall immediately notify the Regional Water Board of this fact by certified mail (or acknowledge the Regional Water Board's determination) and shall carry out the requirements of Part I.E.2.d. for all potentially affected monitored media.

- d. If the Discharger concludes that a release has been discovered:
  - i. The Discharger shall, within 90 days of discovering the release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring Program meeting the requirements of Section 20420(k)(5) of Title 27, CCR, and Section 20425 of Title 27, CCR; and
  - ii. The Discharger shall, within 180 days of discovering the release, submit a preliminary engineering feasibility study meeting the requirements of Section 20420(k)(6) of Title 27, CCR,.
- e. Any time the Discharger concludes - or the Regional Water Board Executive Officer has sufficient cause to conclude - that a liquid-phase release from the Unit has proceeded beyond the facility boundary, the Discharger shall so notify all persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons).
  - i. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release; and
  - ii. Subsequent to initial notification, the Discharger shall provide updates to all Affected Persons - including any newly Affected Persons - within 14 days of concluding there has been any material change in the nature or extent of the release.

### 3. ANNUAL SUMMARY REPORT

The Discharger shall submit an annual report by April 30 of the following year to the Regional Water Board covering the previous monitoring year. This report shall contain:

- a. A Graphical Presentation of Analytical Data (Section 20415(e)(14) of Title 27, CCR). For each Monitoring Point and Background Monitoring Point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous

five (5) calendar years. Each such graph shall plot the concentration of one (1) or more constituents over time for a given Monitoring Point and Background Monitoring Point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. On the basis of any aberrations noted in the plotted data, the Regional Water Board's Executive Officer may direct the Discharger to carry out a preliminary investigation (Section 20080(d)(2) of Title 27, CCR), the results of which will determine whether or not a release is indicated;

- b. All monitoring analytical data obtained during the previous annual Reporting Period, presented in tabular form as well as on compact disk (CD), either in MS-DOS/ASCII format or in any other file format acceptable to the Regional Water Board's Executive Officer. Data sets too large to fit on a single CD may be submitted in a commonly available compressed format (e.g., PK-ZIP or NORTON BACKUP). The Regional Water Board regards the submittal of data in hard copy and on CD as "...the form necessary for..." statistical or non-statistical analysis (Section 20420(h) of Title 27, CCR) in that this facilitates periodic review by the Regional Water Board's statistical consultant;
- c. A comprehensive discussion of the compliance record, and the result of any correction actions taken or planned which may be needed to bring the Discharger into full compliance with the WDRs;
- d. A written summary of the ground water analyses, indicating any changes made since the previous annual report.
- e. An evaluation of the effectiveness of the leachate monitoring/control facilities, pursuant to Section 20340, Title 27, CCR.

## PART II MONITORING AND OBSERVATION SCHEDULE

### A. WASTEWATER MONITORING

Report twice annually, as part of the Semi-Annual Monitoring Report (Winter/Spring and Summer/Fall reporting periods on April 30 and October 31, respectively):

1. The volume and source of all wastewater discharged to the evaporation ponds.

### B. GROUND WATER SAMPLING / ANALYSIS FOR DETECTION MONITORING

1. Thirty-Day Sample Procurement Limitation. For any given monitored medium, the samples taken from all Monitoring Points and Background Monitoring Points to satisfy the data analysis requirements for a given reporting period shall all be taken within a span not exceeding 30 days, and shall be taken in a manner that insures sample independence to the greatest extent feasible (Section 20415(e)(12)(B) of Title 27, CCR). Ground water sampling shall also include an accurate determination of the ground water surface elevation and field parameters (temperature, electrical conductivity, turbidity) for that Monitoring Point or Background Monitoring Point (Section 20415(e)(13) of Title 27, CCR); groundwater elevations taken prior to purging the well and sampling for Monitoring Parameters shall be used to fulfill the quarterly ground water flow rate/direction analyses required under Part II. Statistical or non-statistical analysis shall be carried out as soon as the data is available, in accordance with Part III of this program.
2. Monitoring Parameter: All Monitoring Points assigned to detection monitoring and all background Monitoring Points shall be monitored semi-annually, and for parameters listed in the Summary of Self Monitoring and Reporting Program R7-2013-0061.
3. Initial Background Determination: For the purpose of establishing an initial pool of background data for each Monitoring Parameter at each Background Monitoring Point in each monitored medium (Section 20415(e)(6), Title 27, CCR):

- a. Whenever a new Monitoring Parameter is added to this permit including any added by the adoption of this Board Order, the Discharger shall collect at least one (1) sample quarterly for at least one (1) year from each Background Monitoring Point in each monitored medium and analyze for the newly-added constituent(s); and
  - b. Whenever a new Background Monitoring Point is added, including any added by this Board Order, the Discharger shall sample it at least quarterly for at least one (1) year, analyzing for all Monitoring Parameters.
4. Monitoring Points and Background Monitoring Points for Each Monitored Medium: The Discharger shall sample the following Monitoring Points and Background Monitoring Points in accordance with the sampling schedule given under Parts II.B.2, taking enough samples to qualify for the most appropriate test under Part III.
  - a. For ground water in the uppermost aquifer the Monitoring Points shall be:
    - i. Background Points (MW-6 and MW-7)
    - ii. Downgradient Monitoring Points (MW-8 to MW-13)
    - iii. Point of Compliance (MW-5)
    - iv. Evaporation Ponds
    - v. Sludge from Evaporation PondsMonitoring points are shown on Figure 3, which is hereto made a part of this Order by reference.
5. Semi- Annual Determination of Ground Water Flow Rate/Direction (Section 20415 of Title 27, CCR): The Discharger shall measure the water level in each well and determine ground water flow rate and direction in each ground water body described in Part II.B.4. semi-annually, including the times of expected highest and lowest elevations of the water level for the respective ground water body. This information shall be included in the semi-annual monitoring reports required under Title 27, CCR, Section 20415(e)915).

**PART III STATISTICAL AND NON-STATISTICAL ANALYSES OF SAMPLE DATA**  
**DURING A DETECTION MONITORING PROGRAM**

A. DATA ANALYSIS METHODS

The Discharger shall propose appropriate data analysis method(s) for the approval of the Regional Water Board's Executive Officer, for comparing downgradient concentrations for each monitored constituent or parameter with its respective background concentration to determine if there has been a release from the WMF. Unless or until the Discharger proposes an alternative data analysis method(s) acceptable to the Regional Water Board's Executive Officer, the Discharger shall assess the applicability of the statistical analysis methods listed in Part III.A.1, followed by the non-statistical method in Part III.A.2, using the first method for which the data qualifies. If an analysis tentatively indicates the detection of a release, the Discharger shall implement the retest procedure under Part III.A.3.

1. Statistical Methods. The Discharger shall use one (1) of the following statistical methods to analyze Monitoring Parameters, which exhibit concentrations exceeding their respective MDL in at least 10 percent of the background samples taken during that Reporting Period. Each of these statistical methods is more fully described in the Statistical Methods Discussion, which is attached to this Program and is hereby incorporated by reference. Except for pH, which uses a two (2)-tailed approach, the statistical analysis for all constituents and parameters shall be one (1)-tailed (testing only for statistically significant increase relative to background):
  - a. One (1)-Way Parametric Analysis of Variance ANOVA followed by multiple comparisons (Section 20415(e)(8)(A)). This method requires at least four (4) independent samples from each Monitoring Point and Background Monitoring Point during each sampling episode. It shall be used when the background data from the parameter of constituent, obtained during a given sampling period, has not more than 15% of the data below PQL. Prior to analysis, replace all 'trace' determinations with a value halfway between the PQL and the MDL values reported for that sample run, and replace all "non-detect" determinations with a value equal to half the MDL value reported for that sample run. The ANOVA shall be carried out at the 95% confidence

level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the Discharger shall conclude that a release is tentatively indicated from that parameter or constituent;

- b. One (1)-Way Non-Parametric ANOVA (Kruskal-Wallis Test), followed by multiple comparisons. This method requires at least nine (9) independent samples from each Monitoring Point and Background Monitoring Point, therefore, the Discharger shall anticipate the need for taking more than four (4) samples per Monitoring Point, based upon past monitoring results. This method shall be used when the pooled background data for the parameter or constituent, obtained within a given sampling period, has not more than 50% of the data below the PQL. The ANOVA shall be carried out 95% confidence level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the Discharger shall conclude that a release is tentatively indicated for that parameter or constituent; or
  - c. Method of Proportions. This method shall be used if the "combined data set", the data from a given Monitoring Point in combination with the data from the Background Monitoring Points, has between 50% and 90% of the data below the MDL for the constituent or parameter in question. This method (1) requires at least nine (9) downgradient data points per Monitoring Point per Reporting Period, (2) requires at least 30 data points in the combined data set, and (3) requires that  $N * P > 5$  (where N is the number of data points in the combined data set and P is the proportion of the combined set that exceeds the MDL); therefore, the Discharger shall anticipate the number of samples required, based upon past monitoring results. The test shall be carried out at the 99% confidence level. If the analysis results in rejection of the Null Hypothesis (i.e., that there is no release), the Discharger shall conclude that a release is tentatively indicated for that constituent or parameter; or
  - d. Other Statistical Methods. These include methods pursuant to Section 20415(e)(8)(c-e) of Title 27, CCR.
2. Non-Statistical Method. The Discharger shall use the following non-statistical method for all Monitoring Parameters/Constituents of Concern (COCs), which are not amenable to the statistical tests under Part III.A.1. Site-specific water-quality data will be utilized to determine whether changes in concentrations of the constituents are a result of on-going facility operations. The existing historical data allows for the water-quality character to be

established at each Monitoring Point, providing both well-specific characterization, as well as, site-wide evaluation. Given the site-specific parameters being monitored, this non-statistical site evaluation method lends itself to a more thorough and accurate accounting of a “potential” release, taking into account numerous site variables that should be considered in determining the cause of an exceedance.

Water quality and appropriate hydraulic data will be collected from all Monitoring Points at the site. Background shall be represented by the data from all samples taken from the appropriate Background Monitoring Points during that Reporting Period (at least one (1) sample from each Background Monitoring Point). The evaluation method shall be implemented as follows:

- a. For Monitoring Parameters/Constituents of Concern (COCs): During each reporting period, compile a list of constituents that fall outside of the respective concentration range “established” by the existing historical and background water-quality data from each well located at the site. COC’s that exceed the MDL at the Monitoring Point or falls outside of the “established” concentration range will be reported; however, a preliminary investigation will be conducted by comparing the exceedance to the existing data at that Monitoring Point and Background Monitoring Points before establishing that a release has occurred.

1) PRELIMINARY INVESTIGATION OF A TENTATIVE RELEASE:

The Discharger shall report that a release is tentatively indicated if the COC exceedance falls outside of an “established” analyte concentration range for that well by 10 to 15% at either end of the range. The groundwater character will be determined at each well by calculating percentages of the COCs each monitoring period, and comparing it to its existing historical data. Evaluation of the exceedance will be made in light of several technical factors before confirming and reporting a tentative release has occurred for purposes of triggering a retest pursuant to Title 27, CCR. Such technical factors may include, but not be limited to: 1) changes in the quality/quantity of discharge to the ponds that would have been directly related to the specific COC exceedance; 2) historical data in which above MCLs have previously been detected and reported; 3) evaluation of

monitoring data related to the wastewater pond(s) leak detection monitoring system; 4) location of the Monitoring Point exceedance in relation to: the wastewater pond(s), site background Monitoring Point COC water-quality concentration(s), whether the exceedance occurred at an individual Monitoring Point or related to changes in water-quality occurring on a site-wide basis; 5) COC concentration exceedance in relation to an agreed to "Point of Compliance"; and 6) further assessing external hydrogeologic factors (rainfall, ponding of water and leaching factors unrelated to pond activities, soil conditions, etc.), and facility/management operational factors that may have contributed to the exceedance. Should the evaluation indicate that a tentative release has indeed occurred, then discrete retesting will be implemented.

3. Discrete Retest (Section 20415(e)(8)(E) of Title 27, CCR). In the event that the Discharger concludes that a release has been tentatively indicated (under Parts III.A.1. or III.A.2.), the Discharger shall, within 30 days of this indication, collect two (2) new suites of samples for the indicated COC or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per suite as were used for the initial test. Re-sampling of the Background Monitoring Points is optional. As soon as the data is available, the Discharger shall rerun the statistical method (or non-statistical comparison) separately upon each suite of retest data. For any indicated Monitoring Parameter /COC at an affected Monitoring Point, if the test results of either (or both) of the retest data suites confirms the original indication, the Discharger shall conclude that a release has been discovered and there is no other plausible explanation for the exceedance as outlined (Part III.A.2.a). All retests shall be carried out only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the COC or Monitoring Parameter, which triggered the indication there, as follows:
  - a. If an ANOVA method was used, the retest shall involve only a repeat of the multiple comparison procedure, carried out separately on each of the two (2) new suites of samples taken from the indicating Monitoring Point;
  - b. If the Method of Proportions statistical test was used, the retest shall consist of a full repeat of the statistical test for the indicated constituent or parameter, using the new sample suites from the indicating Monitoring Point;

c. If the non-statistical method was used:

- 1) Because all Monitoring Parameters/COCs that are jointly addressed in the non-statistical testing under Part III.A.2.a. remain as individual Constituents of Concern, the scope of the laboratory analysis for the non-statistical retest samples shall be narrowed to involve only those constituents detected in the sample, which initiated the retest.

#### SAMPLING AND ANALYTICAL METHODS

1. The collection, preservation and holding times of all samples shall be in accordance with United States Environmental Protection Agency (USEPA) approved procedures. All analyses shall be conducted by a laboratory certified for such analysis by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR 136), promulgated by the USEPA. Specific methods of analysis must be identified. If methods other than USEPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by Regional Water Board's Executive Officer prior to use. The director of the laboratory shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Water Board. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.
2. If the facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall either forward a letter, or write a notation on the required monitoring report to the Regional Water Board, indicating that there has been no activity during the required reporting period.

## SUMMARY OF SELF-MONITORING AND REPORTING PROGRAMS

The Discharger shall monitor the evaporation ponds, groundwater, and leak detection and recovery system in accordance with the following:

### A. Evaporation Pond Monitoring

1. During plant operation, grab wastewater samples shall be taken from each pond near the point of discharge, composited into a single sample in the laboratory and analyzed for the parameters and frequencies listed below:

<u>Constituents</u>	<u>Unit</u>	<u>Type of Samples</u>	<u>Reporting Frequency</u>
pH	-----	Grab	Semi- Annually
Total Dissolved Solids	mg/L <sup>1</sup>	Grab	Semi- Annually
Specific Conductance	µmhos/cm <sup>2</sup>	Grab	Semi- Annually
Fluoride	mg/L	Grab	Semi- Annually
Calcium	mg/L	Grab	Semi- Annually
Magnesium	mg/L	Grab	Semi- Annually
Potassium	mg/L	Grab	Semi- Annually
Sodium	mg/L	Grab	Semi- Annually
Boron	mg/L	Grab	Semi- Annually
Total Chromium	mg/L	Grab	Semi- Annually
Sulfates	mg/L	Grab	Semi- Annually
Chlorides	mg/L	Grab	Semi- Annually
Nitrates	mg/L	Grab	Semi- Annually
Volume of wastewater calculated & reported	GPD Semi-Annually	Daily with average monthly flow	

<sup>1</sup> mg/L – milligrams-per-Liter

<sup>2</sup> micromhos per centimeter

## B. Groundwater monitoring

Groundwater samples shall be taken from each groundwater monitoring well and analyzed for the following constituents:

<u>Constituents</u>	<u>Unit</u>	<u>Reporting Frequency</u>
pH	-----	Semi- Annually
Temperature	F or C	Semi- Annually
Static Water Level	feet bgs <sup>3</sup>	Semi- Annually
Total Dissolved Solids	mg/L	Semi- Annually
Specific Conductance	µmhos/cm	Semi- Annually
Sulfate	mg/L	Semi- Annually
Fluoride	mg/L	Semi- Annually
Calcium	mg/L	Semi- Annually
Magnesium	mg/L	Semi- Annually
Potassium	mg/L	Semi- Annually
Sodium	mg/L	Semi- Annually
Boron	mg/L	Semi- Annually
Total Chromium	mg/L	Semi- Annually
Chlorides	mg/L	Semi- Annually
Nitrates	mg/L	Semi- Annually

1. Semi-Annually, the groundwater potentiometric surface shall be illustrated on a copy of the site plan showing the static water level in feet below ground surface, monitoring well locations, the locations of the evaporation ponds, direction of ground water flow and the ground water gradient.

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<sup>3</sup> bgs – below ground surface

### C. Sludge Sampling

On an annual basis, grab sludge samples shall be taken from each pond that has sludge present and tested for the following constituents:

<u>Constituents</u>	<u>Unit</u>	<u>Reporting Frequency</u>
Antimony	mg/kg <sup>4</sup>	Annually
Arsenic	mg/kg	Annually
Barium	mg/kg	Annually
Beryllium	mg/kg	Annually
Cadmium	mg/kg	Annually
Total Chromium	mg/kg	Annually
Cobalt	mg/kg	Annually
Copper	mg/kg	Annually
Lead	mg/kg	Annually
Mercury	mg/kg	Annually
Molybdenum	mg/kg	Annually
Nickel	mg/kg	Annually
Selenium	mg/kg	Annually
Silver	mg/kg	Annually
Thallium	mg/kg	Annually
Vanadium	mg/kg	Annually
Zinc	mg/kg	Annually

The collection, preservation, and holding times of all samples shall be in accordance with the U.S. Environmental Protection Agency (EPA) recommended methods for all the aforementioned constituents.

### D. Leak Detection and Recovery System (LDRS)

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<sup>4</sup> mg/kg – milligrams-per-kilogram

Leak detection systems for the evaporation ponds shall be monitored monthly. If any liquid is found in the sump, the amount shall be recorded. The top liner shall not exceed a permeability of  $1 \times 10^{-11}$  cm/sec. If no leak occurs, or if the permeability in the top liner does not exceed  $1 \times 10^{-11}$  cm/sec, the Regional Water Board should be informed with the normal semi-annual monitoring report. If the top liner does have permeability greater than  $1 \times 10^{-11}$  cm/sec, it should be reported to the Regional Water Board immediately.

## REPORTING

1. The Discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with waste discharge requirements (WDRs).
2. Records of monitoring information shall include:
  - a. The date, exact place, and time of sampling or measurement(s);
  - b. The individual(s) who performed the sampling or measurement(s);
  - c. The individual(s) responsible for assuring the accuracy of the analyses;
  - d. The analytical techniques or methods used; and
  - e. The results of such analyses.
3. The results of any analysis performed, more frequently than required using test procedures and locations specified in this Monitoring and Reporting Program shall be reported to the Regional Water Board.
4. Monitoring reports shall be certified under penalty of perjury to be true and correct, and shall contain the required information at the frequency designated in this monitoring report.
5. Each report shall contain the following statement:

"I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations."
6. A duly authorized representative of the Discharger may sign the documents if:
  - a. The authorization is made in writing by the person described above;

- b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
- c. The written authorization is submitted to the Regional Water Board's Executive Officer.

7. Monitoring reports shall be submitted to the Regional Water Board in accordance with the following schedule:

a. Semi-Annual Detection Monitoring Report

October 1 through March 31 – Report due by April 30

April 1 through September 30 – Report due by October 31

b. Annual Summary Report

April 1 through March 31 – Report due by April 30.

8. Submit monitoring reports to:

California Regional Water Quality Control Board

Colorado River Basin Region

73-720 Fred Waring, Suite 100

Palm Desert, CA 92260

Ordered by:  June 20, 2013  
Executive Officer Date