CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. R7-2002-0012
FOR
BLYTHE ENERGY, LLC, OWNER
FPL ENERGY OPERATING SERVICES, INC., OPERATOR
BLYTHE ENERGY PROJECT
WASTEWATER EVAPORATION PONDS
Blythe - Riverside County

CONSISTS OF

PART I, PART II AND PART III

SUPERSEDED BY
BOARD ORDER NO. REV 1

PART I

A. GENERAL

Responsibilities of waste dischargers are specified in Section 13225(a), 13267(b), and 13387(b) of the California Water Code, and the State Water Resources Control Board's Resolution No. 93-062. This self-monitoring program is issued pursuant to Provision No. 1 of Regional Board Order No. R7-2002-0012. 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 Board;

2. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge;

3. To prepare water quality analyses;

4. To prepare vadose zone (unsaturated zone) gas, if applicable, and liquid quality analyses.

B. DEFINITION OF TERMS

1. The "Monitored Media" are those water media that are monitored pursuant to this Monitoring and Reporting Program. The Monitored Media may include: (1) ground water in the uppermost aquifer, in any other portion of the zone of saturation (California Code of Regulations, Title 27 (Title 27), Section 20164) in which it would be reasonable to anticipate that waste constituents migrating from the Unit could be detected, and in any perched zones underlying the Unit, (2) any bodies of surface water that could be measurably affected by a release.

2. The "Constituents of Concern (COC)" are those constituents which are likely to be in the waste in the waste management unit or which are likely to be derived from waste constituents, in the event of a release.

3. The "Monitoring Parameters" consists of a short list of constituents and parameters used for the majority of monitoring activity.

4. "Standard Observations" refers to:

    a. For Receiving Waters:

        1. Floating and suspended materials of waste origin: presence or absence, source, and size of affected area;

        2. Discoloration and turbidity: description of color, source, and size of affected area;

        3. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;

        4. Evidence of beneficial use: presence of water-associated wildlife;

        5. Flow Rate; and

        6. Weather conditions: wind direction and estimated velocity, total precipitation during the previous five (5) days and on the day of observation.

5. "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.

6. "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.

7. "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 Board's Executive Officer.

8. "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 Constituents of Concern 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 Board. The submittal dates for each reporting period shall be as follows:

    a. Semi-Annual Monitoring Reports

        1. First semi-annual (January 1 through June 30)) - report due by July 31.

        2. Second semi-annual (July 1 through December 31) - report due by February 15.

    b. Annual Summary Report

        January 1 through December 31 - report due by February 15

    c. Five (5) Year Report

        Commencing upon adoption of this Board Order, January of the first year through December of the fifth year and every five (5) years after that, as long as the WMF is in operation and through the closure/post-closure period - report due by February 15 of the sixth year.

C. SAMPLING AND ANALYTICAL METHODS

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 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 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.7., shall be selected from among those methods which would provide valid results in light of any "Matrix Effects" (defined in Part I.B.6.) 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, 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 80%, 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 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 Board staff.

f. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte.

g. 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.

h. 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 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.

PART II: MONITORING AND OBSERVATION SCHEDULE

A. 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). 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); ground water 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.B.6. 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. "Indirect Monitoring" for Monitoring Parameters Done Quarterly. All Monitoring Points assigned to detection monitoring and all background Monitoring Points shall be monitored quarterly in accordance to the following schedule and for parameters listed in the Summary of Self Monitoring and Reporting Program No. R7-2002-0012:

First Quarter:	January 1 through March 31
Second Quarter:	April 1 through June 30
Third Quarter:	July 1 through September 30
Fourth Quarter:	October 1 through December 31

3. "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.A.2. (immediately foregoing), taking enough samples to qualify for the most appropriate test under Part III.

   a. For ground water in the uppermost aquifer, Monitoring Points MW-2 and MW-3 shall be considered Point of Compliance monitoring wells (downgradient); and

   b. Monitoring Point MW-1shall be considered Background Monitoring Points (upgradient).

4. Initial Background Determination: For the purpose of establishing an initial pool of background data for each Constituent of Concern at each Background Monitoring Point in each monitored medium (Section 25415 (e)(6) of Title 27 (Section 2550.7 (e)(6) of California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15)):

   a. Whenever a new Constituent of Concern is added to the Water Quality Protection Standard, 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 Constituents of Concern and Monitoring Parameters.

5. Quarterly Determination of Ground Water Flow Rate/Direction (Section 20415 of Title 27 (Section 2550.7 (e)(6) of Chapter 15)): The discharger shall measure the water level in each well.

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

A. The discharger shall use a statistical data analysis method complaint with Section 20415(e)(8)(c), CCR Title 27, to evaluate concentrations of Constituents of Concern (COC) in groundwater and liquid samples from vadose zone monitoring devices. The discharger shall use the Tolerance Interval method for each COC and intrawell analysis to compare these concentrations with predicted values.

1. Discrete Retest (Section 20415(e)(8)(E) of Title 27. In the event that the discharger concludes that a release has been tentatively indicated, the discharger shall, within 30 days of this indication, collect two (2) new suites of samples for the indicated Constituent(s) of Concern 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 or Constituent of Concern 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.

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 approved by Regional 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 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 monthly monitoring report to the Regional 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, groundwater, leachate recovery system and vadose zone in accordance with the following:

A. Evaporation Pond Monitoring

1. During the first quarter of initial 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 semi-annual and annual parameters as listed below. Thereafter, a grab wastewater sample shall be collected 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:

Constituents	Unit	Type of Samples	Reporting Frequency
pH	-----	Grab	Semi-Annually
Total Dissolved Solids	mg/L[1]	Grab	Semi-Annually
Specific Conductance	mg/L	Grab	Semi-Annually
Chloride	mg/L	Grab	Semi-Annually
Sulfate	mg/L	Grab	Semi-Annually
Antimony	mg/L	Grab	Semi-Annually
Arsenic	mg/L	Grab	Semi-Annually
Barium	mg/L	Grab	Semi-Annually
Cadmium	mg/L	Grab	Semi-Annually
Total Chromium	mg/L	Grab	Semi-Annually
Cobalt	mg/L	Grab	Semi-Annually
Copper	mg/L	Grab	Semi-Annually
Lead	mg/L	Grab	Semi-Annually
Mercury	mg/L	Grab	Semi-Annually
Nickel	mg/L	Grab	Semi-Annually
Selenium	mg/L	Grab	Semi-Annually
Zinc	mg/L	Grab	Semi-Annually

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

Constituents	Unit	Reporting Frequency
Antimony	mg/kg[2]	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

[1] mg/L – milligrams-per-Liter
[2] mg/kg – milligrams-per-kilogram

B. Groundwater monitoring

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

Constituents	Unit	Reporting Frequency
pH	-----	Quarterly
Temperature	F or C	Quarterly
Static Water Level	feet bgs[3]	Quarterly
Chloride	mg/L	Quarterly
Total Dissolved Solids	mg/L	Quarterly
Specific Conductance	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Selenium	mg/L	Quarterly

1) Quarterly, 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.

C. Leachate Collection and Recovery System (LCRS)

Leachate collection sumps for the evaporation ponds shall be monitored weekly. If any liquid is found in the sump, the amount shall be recorded. The top liner shall not exceed a permeability of 1×10^{-11} cm/sec. If no leak occurs, or if the permeability in the top liner does not exceed 1×10^{-11} cm/sec, the Regional Board should be informed with the normal quarterly monitoring report. If the top liner does have a permeability greater than 1×10^{-11} cm/sec, it should be reported to the Regional Board immediately.

D. Vadose Zone Monitoring

The Vadose Zone Detection system for the ponds shall be monitored quarterly for the detection of liquid in the unsaturated zone. A log dating the inspection and person inspecting the Vadose Zone Detection System shall be maintained. In the event that liquid is detected, the liquid should be tested (if sufficient quantities allow), for the following constituents and reported to the Regional Board immediately:

Constituents	Unit
pH	-----
Total Dissolved Solids	mg/L
Specific Conductance	mg/L
Chloride	mg/L
Selenium	mg/L
Sulfate	mg/L

[3] bgs – below ground surface

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 date(s) analyses were performed;
   a. The individual(s) responsible for assuring the accuracy of the analyses;
   b. The analytical techniques or methods used; and
   c. 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 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; an

   c. The written authorization is submitted to the Regional Board's Executive Officer.

7. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15, of each year. Annual monitoring reports shall be submitted to the Regional Board by January 15 of each year.

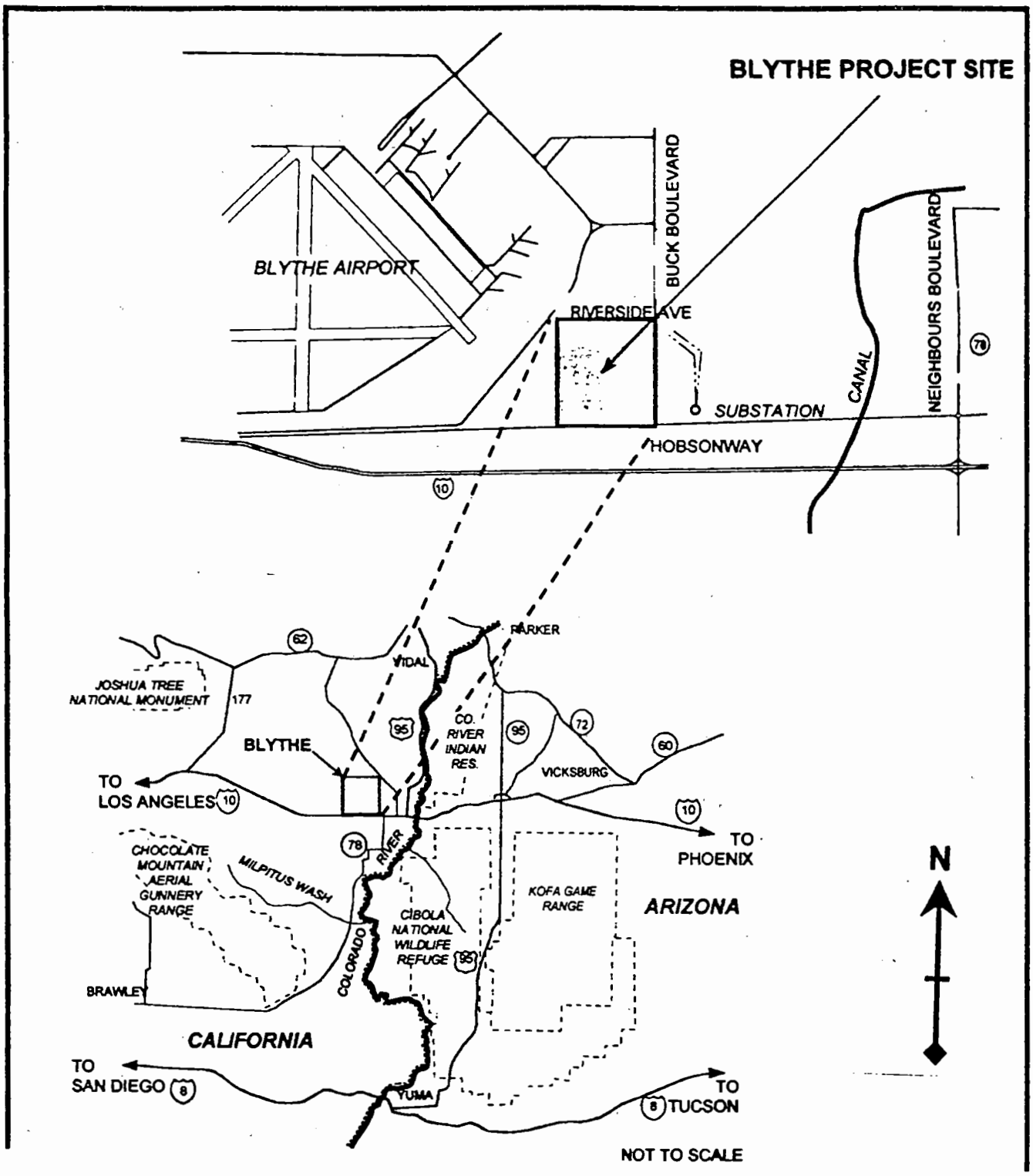
8. Submit monitoring reports to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring, Suite 100
Palm Desert, CA 92260

Ordered by: _____
Executive Officer

JUN 26 2002
Date

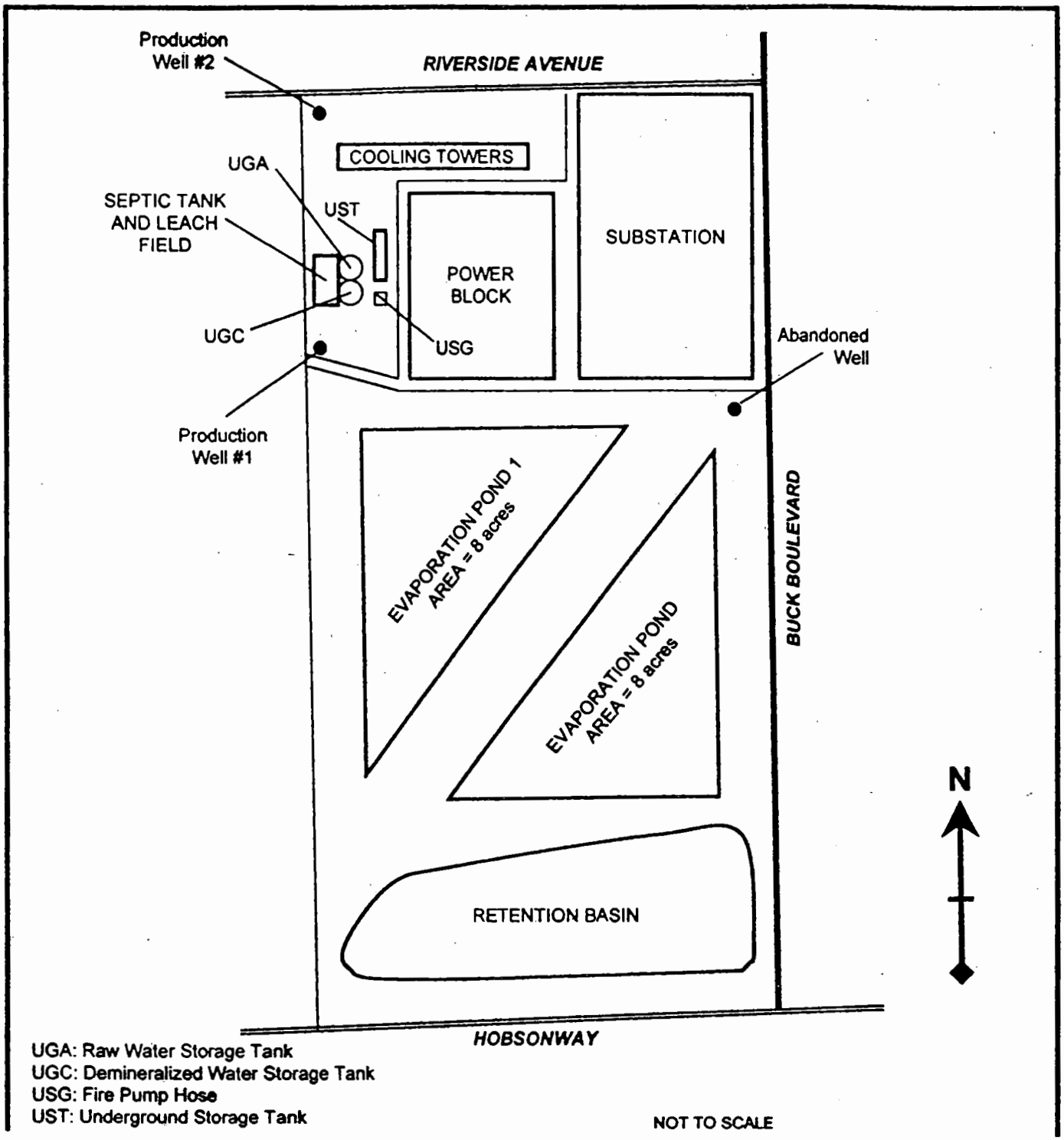
CALIFO A REGIONAL WATER QUALITY CONTR BOARD
COLORADO RIVER BASIN REGION



SITE LOCATION

BLYTHE ENERGY, LLC , OWNER
FPL ENERGY OPERATING SERVICES, INC., OPERATOR
BLYTHE ENERGY PROJECT
WASTEWATER EVAPORATION PONDS
Blythe - Riverside County
Location: NW ¼, Section 33, T6S, R22 E, SBB&M

Board Order No. R7-2002-0012



SITE PLAN

BLYTHE ENERGY, LLC , OWNER
FPL ENERGY OPERATING SERVICES, INC., OPERATOR
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