

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2018-XXXX
FOR

SOUTHERN MINNESOTA BEET SUGAR COOPERATIVE,
SPRECKELS SUGAR COMPANY, INC., AND MEYERS FARMING LLC
SURFACE IMPOUNDMENTS CLOSURE AND POST-CLOSURE MAINTENANCE
FORMER SPRECKELS MENDOTA FACILITY
FRESNO COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to Water Code section 13267. Failure to comply with this program constitutes noncompliance with the Water Code, which can result in the imposition of civil liability. The Dischargers shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions). Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Dischargers may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Dischargers may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency. Proper chain of custody procedures must be followed and a copy of the completed chain of custody form shall be submitted with the report. All analyses must be performed by a California Department of Public Health certified laboratory.

The Dischargers shall maintain all sampling and analytical results: date, exact place, and time of sampling; dates analyses were performed; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Central Valley Water Board.

GROUNDWATER MONITORING

In accordance with the schedule listed below, the Dischargers shall collect groundwater samples from shallow and deep groundwater monitoring wells (provided sufficient water exists in a well to be sampled) and from production wells. Any monitoring or production wells installed in the future shall be added to the groundwater monitoring program and sampled at the specified frequency. The groundwater surface elevation (in feet and hundredths, mean seal level) in all monitoring wells shall be measured and used to determine the gradient and direction of groundwater flow. The Dischargers shall monitor each groundwater monitoring well for the following:

Constituent/Parameter	Units	Sample Type	Frequency
Groundwater Elevation	Feet ¹	Measurement	Semi-Annually
General Minerals ²	mg/L	Grab	Semi-Annually
Nitrogen Forms ³	mg/L	Grab	Semi-Annually
Dissolved Metals ⁴	mg/L	Grab	Every Three Years ⁵

¹ In feet and hundredths, relative to Mean Sea Level (MSL)

² General Minerals include: Alkalinity (as CaCO₃), Bicarbonate (as CaCO₃), Boron, Calcium, Carbonate (as CaCO₃), Chloride, Hardness (as CaCO₃), Iron, Magnesium, Manganese, Nitrate, Phosphate, Potassium, Sodium, Sulfate, Total Dissolved Solids, Electrical Conductivity (EC), and an anion/cation balance

³ Nitrogen Forms include: Ammonia as Nitrogen, Nitrate as Nitrogen, Total Nitrogen, and Total Kjeldahl Nitrogen (TKN)

⁴ Dissolved Metals include: Arsenic, Barium, and Chromium VI

⁵ Dissolved Metals sampling frequency: once every three years beginning with the first year the Monitoring and Reporting Program is adopted.

COVER INTEGRITY MONITORING

The Dischargers shall operate and maintain an unsaturated zone detection monitoring device (e.g., pan lysimeter) beneath a portion of the 3-foot thick monofill soil evapotranspiration (ET) cover to determine if water is infiltrating through the final cover. The Dischargers shall install an unsaturated zone detection monitoring device concurrent with the constructed final cover after review and approval of the unsaturated zone monitoring device design by the Executive Officer. Unsaturated zone samples shall be collected from the unsaturated zone detection monitoring device and analyzed for the parameters and constituents listed below. In accordance with the specified methods and frequencies (pan lysimeters need only be sampled when liquid is present). The unsaturated zone monitoring device shall be inspected for the presence of liquid **annually**. If liquid is detected in a previously dry unsaturated zone monitoring device, the Dischargers shall verbally notify Central Valley Water Board staff within

seven days and shall immediately sample and test the liquid for the following and continue sampling at the frequencies listed below:

Constituent/Parameter	Units	Sample Type	Frequency
General Minerals ¹	mg/L	Grab	Annually
Nitrogen Forms ²	mg/L	Grab	Annually
Dissolved Metals ³	mg/L	Grab	Every Three Years ⁴

¹ General Minerals include: Alkalinity (as CaCO₃), Bicarbonate (as CaCO₃), Boron, Calcium, Carbonate (as CaCO₃), Chloride, Hardness (as CaCO₃), Iron, Magnesium, Manganese, Nitrate, Phosphate, Potassium, Sodium, Sulfate, Total Dissolved Solids, Electrical Conductivity (EC), and an anion/cation balance

² Nitrogen Forms include: Ammonia as Nitrogen, Nitrate as Nitrogen, Total Nitrogen, and Total Kjeldahl Nitrogen (TKN)

³ Dissolved Metals include: Arsenic, Barium, and Chromium VI

⁴ Dissolved Metals sampling frequency: Once every three years beginning with the first year the Monitoring and Reporting Program is adopted.

REMEDIATION SYSTEMS

Reports on remediation systems at the site shall be included with the groundwater monitoring reports and submitted semi-annually. The reports shall contain the following information regarding the site remediation systems:

1. Maps showing location of all wells being used as part of remediation system;
2. Status of each remediation system including amount of time operating and down time for maintenance and/or repair;
3. A written summary and a table showing the amount and frequency of groundwater removal from all on-site production wells.
4. Daily field sheets documenting any field activities (e.g., sampling, maintenance) conducted during the sampling period shall be included in the semi-annual reports.

REPORTING REQUIREMENTS

1. The Dischargers shall report all monitoring data and information as specified herein. Reports that do not comply with the required format will be REJECTED and the Dischargers shall be deemed to be in noncompliance with the Monitoring and Reporting Program.

2. Monitoring data shall be submitted to the Central Valley Water Board in accordance with the schedule below.

<u>Semi-Annual Monitoring Period</u>	<u>Report Due</u>
January – June	July 31
July – December	January 31
<u>Annual Monitoring Period</u>	<u>Report Due</u>
January – December	January 31
<u>Three Year Monitoring Period</u>	<u>Report Due</u>
Every Third Year but Beginning with the First Year	January 31

Each report shall include the following minimum information:

- (a) a description and discussion of the groundwater sampling event and results, including trends in the concentrations of pollutants and groundwater elevations in the wells, how and when samples were collected, and whether the pollutant plume is fully treated by the existing remediation systems; If there are any deficiencies during the sampling event or if impacts to groundwater extend beyond recent historical boundaries, the report shall include an explanation and/or evaluation and propose options for addressing or correcting the deficiencies;
- (b) field logs that contain, at a minimum, water quality parameters measured before, during, and after purging, method of purging, depth of water, volume of water purged, etc.; water quality parameters shall include electrical conductivity, temperature, pH, dissolved oxygen, and oxygen reduction potential;
- (c) groundwater contour maps for applicable groundwater zones;
- (d) pollutant isoconcentration maps for applicable groundwater zones. The maps shall include at a minimum plots of TDS, sodium, chloride, sulfate and nitrate for each of the groundwater zones monitored;
- (e) a table showing well construction details that shall include at a minimum well number, groundwater zone being monitored, measuring point elevation, depth to top and bottom of screen, water level elevation, and depth to water;
- (f) a table showing historical lateral and vertical (if applicable) flow directions and gradients;
- (g) cumulative data tables containing all historical water quality analytical results and depth to groundwater;
- (h) a copy of all laboratory analytical data reports;

- (i) results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program or at other locations at the site shall be reported to the Central Valley Water Board;
 - (k) an update and status on each of the outstanding tasks required by the CAO or Executive Officer;
 - (l) a map showing the location of all wells being used for groundwater monitoring;
 - (m) a table summarizing water quality parameters measured during the current semi-annual period.
3. In reporting the monitoring data, the Dischargers shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized to demonstrate compliance with the requirements. All data shall be submitted in an electronic form acceptable to the Executive Officer.
 4. The Dischargers shall submit an annual report by 31 January of each year for the preceding calendar year. The report can be combined with the Dischargers' second semi-annual report of each year. The report shall contain:
 - (a) both tabular and graphical summaries of all data obtained during the year;
 - (b) an in-depth evaluation of groundwater conditions at the site including short and long-term trends of the constituents of concern in each area of the site;
 - (c) an evaluation of the effectiveness of the groundwater monitoring network in delineating the lateral and vertical extent of impacts to groundwater in all affected areas of the site. This should include an identification of any data gaps and potential deficiencies in the monitoring system or reporting program. The report shall include recommendations to address any deficiencies in the monitoring and report program;
 - (d) an evaluation of the effectiveness of each of the remediation systems. The evaluation shall include the effectiveness of the systems in remediating impacted groundwater and each of the source areas or suspected source areas. The report shall include recommendations for improving or expanding the systems, if necessary;
 - (e) a summary of the performance of each remediation system including the amount and percentage of operating and downtime.
 5. For each required annual report, one report shall be submitted containing all monitoring data collected at the site by all Dischargers and include all information cited in the above sections. A hard copy of all required reports on/or responses shall be submitted by the due date unless otherwise arranged with Central Valley Water Board staff.

6. The Dischargers shall maintain a data base containing historical and current monitoring data in an electronic form acceptable to the Executive Officer. The data base shall be updated semi-annually and provided to the Central Valley Water Board in electronic format.
7. The Dischargers shall submit electronic copies of all workplans, reports, analytical results, and groundwater elevation data over the Internet to the State Water Board Geographic Environmental Information Management System database (GeoTracker) at <http://geotracker.swrcb.ca.gov>. Electronic submittals shall comply with GeoTracker standards and procedures as specified on the State Water Board's web site. Uploads to Geotracker shall be completed on or prior to the due date. In addition, a hardcopy of each document shall be submitted to the Central Valley Water Board at 1685 E Street, Fresno, CA 93706, attention Cleanup Unit.

PAMELA C. CREEDON, Executive Officer

(Date)