

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER R5-2012-0714
FOR

GOLDEN VALLEY CITRUS, INC.
STRATHMORE
TULARE COUNTY

This Order is issued to Golden Valley Citrus, Inc. (hereafter referred to as Discharger) pursuant to Water Code section 13304, which authorizes the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board or Board) to issue a Cleanup and Abatement Order (CAO), and Water Code section 13267, which authorizes the Central Valley Water Board to require preparation and submittal of technical and monitoring reports.

The Executive Officer finds, with respect to the Discharger's acts, or failures to act, the following:

PROPERTY OWNERSHIP AND OPERATIONS

1. The Discharger owns the former Seville Olive Company (Seville) processing facility property at 19979 Meredith Drive, Strathmore, Tulare County (APN 215-320-031) (hereafter Site), as shown on Attachment A which is attached to and made part of this Order. The Site is approximately seven acres in size and is in the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 32, Township 20 South, Range 27 East, Mount Diablo Base Line and Meridian.
2. Seville owned and operated the olive processing plant from the 1960's through 2007. Olives were received in 56-gallon plastic drums containing a brine solution which was discharged into two unlined disposal ponds on the Site. Migration of the brine wastewater resulted in contamination of the underlying soil and groundwater aquifer.
3. Seville is regulated by Waste Discharge Requirements Order 82-074, which is outdated and no longer applicable. The Order will be proposed for rescission at an upcoming meeting of the Central Valley Water Board.
4. The Discharger owns and operates the adjacent facility, Golden Valley Citrus packing. In November 2007, the Discharger purchased the Site from Seville in order to expand the Discharger's citrus packing facility.

BACKGROUND

5. The Site is underlain by sedimentary deposits of interbedded sequences of clay, silt, and sand. Analytical results of a groundwater sample collected 18 March 2008 from background monitoring well MW-13 indicated good water quality, with an electrical conductivity (EC) value of 630 micromhos per centimeter ($\mu\text{mhos/cm}$), a total dissolved solids (TDS) concentration of 450 milligrams per liter (mg/L), and a chloride concentration of 15 mg/L. Groundwater from privately owned wells in the immediate vicinity of the Site is used for irrigation and domestic drinking water supply.

6. Twelve groundwater monitoring wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-13), were installed by Seville. The wells were constructed to depths of approximately 35 to 40 feet below ground surface (bgs). The groundwater elevation has been declining in the region for years and the depth to groundwater beneath the Site is approximately 40 feet bgs. Eleven of the groundwater monitoring wells are dry. Groundwater monitoring has not been reported since 2008.
7. Groundwater impacted by olive brine waste contains elevated concentrations of chloride, TDS and an elevated EC value. Analytical results of groundwater samples last collected in 2008, indicate that impacted groundwater beneath the Site has EC values that range as high as 5,500 $\mu\text{mhos/cm}$, TDS concentrations as high as 3,400 mg/L, and chloride concentrations that range up to 1,400 mg/L.
8. Groundwater monitoring data indicate that the contaminated groundwater plume beneath the Site has migrated at least 2,300 feet downgradient to the west. The full downgradient extent of the groundwater plume has not been delineated.
9. Land use in the area is primarily agricultural. Residential land use exists to the south of the site. The predominant agricultural crop in the area is citrus.
10. Five private water supply wells are immediately downgradient to the west of the Site. At least three of the private wells have been impacted by the saline groundwater plume. In 2003, a groundwater sample from the Jones well, approximately 2,300 feet downgradient to the west of the Site, was reported with an EC value of 1,900 $\mu\text{mhos/cm}$, a chloride concentration of 420 mg/L, and a TDS concentration of 1,400 mg/L. Analytical results of a groundwater sample collected from the Jones well in 2010 indicated similar water quality results. These values exceed Title 22 recommended secondary drinking water standards for EC, TDS, and chloride.
11. In July 2008, the Discharger submitted a *Groundwater Investigation Work Plan* and a later *Addendum No. 1* dated 10 November 2008. Central Valley Water Board staff concurred with the work plan and addendum, which included sampling groundwater in the five private wells, replacement of MW-10, and installation of at least one additional downgradient monitoring well to assess the extent of the groundwater plume.
12. In correspondence dated 31 March 2009, the Discharger requested a delay in implementation of the work plan until September 2009, due to the economy and debt. In November 2009, Central Valley Water Board staff contacted the Discharger indicating the need to implement the work plan.
13. In February 2010, the Discharger submitted a report entitled *Preliminary Ground Water Assessment*. Two irrigation wells on the downgradient Sun Orchard property to the west of the Site were sampled. Central Valley Water Board staff considered the sample results inconclusive since well construction data were not submitted, well depth was unknown, and groundwater elevations not provided. Monitoring wells were not replaced or installed as proposed in the approved work plan. The downgradient extent

of the groundwater plume is still not delineated. Groundwater monitoring cannot continue until the monitoring wells have been replaced.

14. The Site contains two unlined ponds previously used by Seville for the discharge of brine solution from olive processing. The ponds have not been properly closed and salts remain in the soil and groundwater. The collection of precipitation in the ponds can cause the salts to continue to migrate to groundwater, disperse and migrate downgradient to less affected waters. Until the ponds are properly closed, and the extent of the problem determined and cleaned up, the salts can continue to alter the quality of groundwater to a degree that unreasonably affects the waters for designated beneficial uses, continuing and expanding a condition of pollution.

LEGAL AUTHORITY

15. Water Code section 13304(a) states, in relevant part:

Any person ... who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts.

16. Water Code section 13267(b)(1) states, in relevant part:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region..., shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

17. Water Code section 13304(c)(1) states, in relevant part:

... the person or persons who discharged the waste, discharges the waste, or threatened to cause or permit the discharge of the waste within the meaning of subdivision (a), are liable to that government agency to the extent of the reasonable costs actually incurred in cleaning up the waste, abating the effects of the waste, supervising cleanup or abatement activities, or taking other remedial action.

18. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, revised January 2004 ("Basin Plan"), designates beneficial uses of the waters of the State and establishes water quality objectives ("WQOs") to protect those waters. The Site overlies groundwater within the Kaweah Basin Hydrologic Unit, Detailed Analysis Unit

No. 242. Present and potential future beneficial use of this groundwater has been designated by the Basin Plan as including municipal and domestic supply (MUN) and agricultural supply (AGR). For groundwaters that are designated MUN, the Basin Plan incorporates by reference drinking water maximum contaminant levels (“MCLs”) promulgated in the California Code of Regulations, title 22, chapter 15 (“Title 22”).

19. The State Water Resources Control Board (State Water Board) has adopted Resolution 92-49, the *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* (“Resolution 92-49”). Resolution 92-49 sets forth the policies and procedures to be used during an investigation or cleanup of a polluted site and requires that cleanup levels be consistent with State Water Board Resolution 68-16, the *Statement of Policy With Respect to Maintaining High Quality of Waters in California* (“Resolution 68-16”). Resolution 92-49 and the Basin Plan establish the cleanup levels to be achieved. Resolution 92-49 requires the waste to be cleaned up in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored. Any alternative cleanup level to background must: (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of such water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and Policies of the State Water Board. Resolution 92-49 directs that investigation proceed in a progressive sequence. To the extent practical, it directs the Central Valley Water Board to require and review for adequacy written work plans for each element and phase, and the written reports that describe the results of each phase of the investigation and cleanup.
20. The Basin Plan contains numerical WQOs that apply to surface water and groundwater, including, for example, drinking water MCLs promulgated in Title 22. These WQOs apply to waters designated as supporting the MUN beneficial use in the Basin Plan. Numerical WQOs for waste constituents discharged on the Site are shown on Table 1:

TABLE 1

Constituent	Limits	WQO	Reference
EC	900 µmhos/cm	Drinking Water Goal	Secondary MCL, Title 22
TDS	500 mg/L	Drinking Water Goal	Secondary MCL, Title 22
Chloride	250 mg/L	Drinking Water Goal	Secondary MCL, Title 22

21. The concentrations of waste constituents in groundwater (Findings 7 and 10) significantly exceed the numerical water quality criteria set forth in Table 1. Therefore, the Discharger has unreasonably affected the beneficial use for drinking water, and has created a condition of pollution.
22. Agricultural water quality guidelines are contained in the *Water Quality for Agriculture, Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 29, Rev. 1* (1985) (UN Report). Numerical guidelines to evaluate compliance with the WQOs for chemical constituents discharged on the Site, are shown in Table 2:

TABLE 2

Constituent	Limits	WQO	Reference
EC	700 µmhos/cm	Irrigation Goal	UN Report
TDS	450 mg/L	Irrigation Goal	UN Report
Chloride	106 mg/L	Irrigation Goal	UN Report

23. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as Water Quality for Agriculture by Ayers and Westcot and similar references, indicate that yield reductions in nearly all crops are not evident when irrigating with water having an EC less than 700 µmhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops. It is possible to achieve full yield potential for some crops with waters having EC up to 3,000 µmhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop. Citrus is generally recognized as being sensitive to elevated concentrations of salts.
24. The concentrations of waste constituents in groundwater (Findings 7 and 10), significantly exceed agricultural water quality guidelines set forth in Table 2. Therefore, the Discharger has unreasonably affected the beneficial use of AGR, and has therefore created a condition of pollution.
25. Chapter IV of the Basin Plan also contains a policy for the *Investigation and Cleanup of Contaminated Sites*. The strategy generally outlines a process that includes site investigation, source removal or containment, information requirements for the consideration of establishing cleanup levels, and a basis for establishing soil and groundwater cleanup levels.
26. Pollution, as it is defined in Water Code section 13050(l)(1), means the alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either the waters for beneficial uses, or the facilities which serve these beneficial uses. The WQOs delineated in Findings Nos. 20 and 22 are designed to protect the beneficial uses of the groundwater underlying the Site. As the wastes discharged from the Site have caused groundwater to exceed the applicable WQOs, which have been developed to protect the beneficial uses of the groundwater, a condition of pollution is present in the groundwater.
27. California Code of Regulations, title 23, sections 3890 through 3895, require that the Discharger submit analytical data electronically via the internet using electronically deliverable formats (EDF) designated by the State Water Board that are both non-proprietary and available as public domain. All EDF data must be submitted over the internet to the State Water Board Geographic Environmental Information Management System database (Geotracker). In addition, section 3895(b) allows the Central Valley Water Board to specify submittal in alternative forms provided the benefit or need for it bears a reasonable relationship to the burden of producing it.

DISCHARGER LIABILITY

28. As described in the above Findings, the Discharger is subject to an order pursuant to Water Code section 13304 because the Discharger has discharged or deposited waste and/or has caused or permitted waste to be discharged or deposited where it has discharged to waters of the state and has created, and continues to threaten to create, a condition of pollution. The condition of pollution is a priority violation and issuance or adoption of a cleanup and abatement order pursuant to Water Code section 13304 is appropriate and consistent with policies of the Central Valley Water Board. The meaning of the term “discharge”, as interpreted by the State Water Board in precedential orders, including State Water Board Order WQ 86-2 (*In the Matter of the Petition of Zoecon Corporation*), includes the passive migration of waste from soils to groundwater. Discharges occurred and are continuing to occur or are threatening to occur on the former Seville Site now owned by the named Discharger, and, as stated in the Findings, these discharges have created a condition of pollution. The condition of pollution is a priority violation and issuance or adoption of a cleanup or abatement order pursuant to Water Code section 13304 is appropriate and consistent with policies of the Central Valley Water Board.
29. This Order requires investigation and cleanup of the Site in compliance with the Water Code, the applicable Basin Plan, Resolution 92-49, title 27, and other applicable plans, policies, and regulations.
30. As described in the above Findings, the Discharger is subject to an order pursuant to Water Code section 13267 to submit technical reports because existing data and information about the Site indicate that waste has been discharged, is discharging, or is suspected of discharging, at the Site, which is owned by the Discharger. The technical reports required by this Order are necessary to assure compliance with the Basin Plan, Resolution 92-49, directives issued pursuant to Water Code section 13304, including identification and abatement of the source and investigation and cleanup of the affected area to protect the beneficial uses of waters of the state, to protect against nuisance, and to protect human health and the environment. The burden of providing these reports consists of preparation of work plans, assessment of soil, and groundwater, and preparation of reports. These reports are needed in order to help to protect the public and the environment by defining the extent of the contamination and moving towards a plan of remediation. Therefore, the burden of producing these reports, including the costs, bears a reasonable relationship to the need for the reports and the benefit to be obtained from them.
31. Should the Discharger fail to take any of the actions specified in this Order, the Central Valley Water Board may impose administrative civil liability pursuant to Water Code section 13350, which states, in relevant part:
 - (a) Any person who (1) violates any cease and desist order or cleanup and abatement order hereafter issued, reissued, or amended by a regional board ...shall be liable civilly, and remedies may be proposed, in accordance with subdivision (d) or (e)...

(e) The state board or a regional board may impose civil liability administratively pursuant to Article 2.5 (commencing with Section 13323) of Chapter 5 either on a daily basis or on a per gallon basis, but not both.

(1) The civil liability on a daily basis may not exceed five thousand dollars (\$5,000) for each day the violation occurs.

(A) When there is a discharge, and a cleanup and abatement order is issued, except as provided in subdivision (f), the civil liability shall not be less than five hundred dollars (\$500) for each day in which the discharge occurs and for each day the cleanup and abatement order is violated.

(B) When there is no discharge, but an order issued by the regional board is violated, except as provided in subdivision (f), the civil liability shall not be less than one hundred dollars (\$100) for each day in which the violation occurs.

(2) The civil liability on a per gallon basis may not exceed ten dollars (\$10) for each gallon of waste discharged.

(f) A regional board may not administratively impose civil liability in accordance with paragraph (1) of subdivision (e) in an amount less than the minimum amount specified, unless the regional board makes express findings setting forth the reasons for its action based upon the specific factors required to be considered pursuant to Section 13327.

32. Should the Discharger fail to submit any of the technical or monitoring reports required by this Order, the Central Valley Water Board may impose administrative civil liability pursuant to Water Code section 13268 which states, in relevant part:

(a)(1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or ... falsifying any information provided therein, is guilty of a misdemeanor, and may be liable civilly in accordance with subdivision (b)....

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs....

33. The Dischargers received an opportunity to review a draft of this Order, and were given the opportunity to submit comments and additional evidence. All comments received by 2 November 2012 were given due consideration.

CEQA

34. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), pursuant to California Code of Regulations (CCR), title 14, section 15321(a)(2). The implementation of this Order may also be considered an action by a regulatory agency for the protection of the environment, exempt pursuant to CCR, title 14, section 15308. This implementation of this Order may also be considered a minor action to prevent, minimize, stabilize, mitigate, or eliminate the

release or threat of release of hazardous waste or substances at this existing Site, and is exempt from the provisions of CEQA in accordance with California Code of Regulations, title 14, section 15330.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13304 and 13267, Golden Valley Citrus, Inc. shall:

1. By **11 February 2013**, submit a Groundwater Assessment Work Plan (containing items a-b) and a Groundwater Sampling and Analysis Plan (containing items c-e) and a time schedule that includes the following elements:
 - a) Install replacement groundwater monitoring wells adjacent to dry groundwater monitoring wells. The top of the screened interval in the replacement wells should overlap the bottom of the screened interval in the dry monitoring wells. The replacement wells should be installed to an appropriate depth that will allow for future declines in groundwater elevation. The currently dry monitoring wells need to be maintained in case groundwater levels return.
 - b) Install groundwater monitoring well(s) west of Highway 65 to determine the downgradient extent of the saline groundwater plume. The new well(s) should be installed to an appropriate depth(s) that will allow for future decline or recovery of groundwater elevations. Existing groundwater wells, determined to be in appropriate locations, where well depth and construction details can be provided, may be considered as sampling points.
 - c) Collect and submit for laboratory analysis, representative groundwater samples from each new monitoring well following completion and development to consistent parameters.
 - d) Collect and submit for analysis, representative groundwater samples from each of the five private groundwater wells (Ward, Jennings, Koeneke, Lamb, and Jones) downgradient of the Site, and existing groundwater wells determined to be appropriate for sampling.
 - e) Analyze all groundwater samples at a California certified laboratory for EC, TDS, and chloride. Submit original copies of analytical laboratory results with chain-of-custody paperwork and documentation of laboratory quality assurance and quality control.
 - f) Continue groundwater characterization and installation of groundwater monitoring wells to characterize and delineate the extent of the saline groundwater plume.
2. Within **30 days** of staff concurrence with the Groundwater Assessment Work Plan and the Groundwater Sampling and Analysis Plan, implement the work plans in accordance with the time schedule as approved or directed by the Executive Officer, which shall become part of this Order.

3. Within **30 days** of staff concurrence that the extent of the groundwater impact has been determined and a groundwater monitoring well network approved, submit a soil and groundwater remediation plan. The plan shall be in accordance with State Water Board Resolution 92-49 and needs to address soil and groundwater remediation in accordance with current regulations, in a manner that promotes attainment of either background water quality, or the best water quality that is reasonable to restore beneficial uses in the area, which include drinking water and the irrigation of sensitive crops. Residential wells (drinking) determined to be impacted may need to be replaced or residents may need to be provided with an alternative source of drinking water.
4. Within **30 days** of Central Valley Water Board staff notifying the Discharger that an alternative drinking water supply is necessary for affected well(s), submit a work plan and schedule to provide an in-kind replacement for the specified water supply. The Discharger shall provide bottled water immediately on notification that a well has been impacted until an in-kind replacement can be supplied. The Discharger shall implement the work plan in accordance with a time schedule established by the Executive Officer, which shall become part of this Order.
5. By **11 February 2013**, submit a Surface Impoundment Closure Plan in accordance with Title 27, section 21400 for the two former wastewater disposal ponds on the Site, and a time schedule for completion. The plan shall include a Construction Quality Assurance (CQA) testing and inspection plan.
6. Within **60 days** following completion of closure, a closure certification report shall be submitted documenting the closure process and containing the results of all construction testing and construction reports in accordance with the approved CQA plan.

GENERAL REQUIREMENTS

The Discharger shall:

7. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, have reports prepared by, or under the supervision of, a registered professional engineer or geologist and signed by the registered professional. All technical reports submitted by the Discharger shall include a cover letter signed by the Discharger, or an authorized representative, certifying under penalty of law that the signatory has examined and is familiar with the report and that to their knowledge, the report is true, complete, and accurate. The Discharger shall also state if they agree with any recommendations/proposals and whether they approved implementation of said proposals.
8. Notify Central Valley Water Board staff at least three working days prior to any onsite work, testing, or sampling that pertains to environmental remediation and investigation that is not routine monitoring, maintenance, or inspection.

9. Obtain all local and state permits and access agreements necessary to fulfill the requirements of this Order prior to beginning the work.
10. Continue any assessment, remediation, or monitoring activities until such time as the Executive Officer determines that sufficient remediation has been accomplished to fully comply with this Order and this Order has been either amended or rescinded in writing.
11. Maintain a sufficient number of monitoring wells to completely define and encompass any identified waste plume(s). If groundwater monitoring indicates the waste in groundwater has migrated beyond laterally or vertically defined limits during a monitoring period, the monitoring reports must include a work plan and time schedule, with work to begin within thirty days of Central Valley Water Board staff approval, to define the new plume limits.
12. Comply with Monitoring and Reporting Program R5-2012-0714, which is attached to and made part of this Order. A violation of Monitoring and Reporting Program R5-2012-0714 is a violation of this Order.
14. Reimburse the Central Valley Water Board for reasonable costs associated with oversight of the investigation and remediation of the Site, as provided in Water Code section 13304(c) (1). By **19 November 2012**, the Discharger shall provide the name and address where the invoices shall be sent. Failure to provide a name and address for invoices and/or failure to reimburse the Central Valley Water Board's reasonable oversight costs shall be considered a violation of this Order.

If, for any reason, the Discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order and approved by the Executive Officer, the Discharger may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. Any extension request shall be submitted as soon as the situation is recognized and no later than the compliance date. An extension may be granted by revision of this Order or by a letter from the Executive Officer. Extension requests not approved in writing by the Executive Officer with reference to this Order are denied.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

This Order is effective upon the date of signature.

Original signed by Clay L. Rodgers for:

PAMELA C. CREEDON, Executive Officer

9 November 2012

(Date)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-0714
FOR

GOLDEN VALLEY CITRUS, INC.
STRATHMORE
TULARE COUNTY

Compliance with this Monitoring and Reporting Program is required pursuant to California Water Code section 13267 as ordered by Cleanup and Abatement Order R5-2012-0714 (CAO). Failure to comply with this program constitutes noncompliance with the CAO and the California Water Code, which can result in the imposition of civil monetary liability. All sampling and analyses shall be by USEPA approved methods. The test methods chosen for detection of the constituents of concern shall be subject to review and concurrence by the Central Valley Regional Water Quality Control Board (Central Valley Water Board).

A complete list of substances which are tested for and reported on by the testing laboratory shall be provided to the Central Valley Water Board. All peaks must be reported. In addition, both the method detection limit and the practical quantification limit shall be reported. Detection limits shall equal or be more precise than USEPA methodologies. Water samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136. All QA/QC samples must be run on the same dates when samples were actually analyzed. 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 Discharger 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

The Discharger shall collect representative groundwater samples from Site groundwater monitoring wells and nearby supply wells. Any monitoring wells installed in the future shall be added to the groundwater monitoring program and sampled quarterly. The groundwater surface elevation (in feet and hundredths, Mean Sea Level) in all monitoring wells shall be measured and used to determine the gradient and direction of groundwater flow.

The following shall constitute the monitoring program for groundwater.

<u>Constituent</u>	<u>Units</u>	<u>Method</u>
Electrical Conductivity	µmhos/cm	SM 2510-B
Total Dissolved Solids	mg/L	EPA 160.1
Chloride	mg/L	EPA 300.0
Sodium	mg/L	EPA 200.7
pH	pH units	Field

µmhos/cm – micromhos per centimeter

mg/L – milligrams per liter

MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted or parameters and locations removed or added by the Executive Officer if site conditions indicate that the changes are necessary.

REPORTING REQUIREMENTS

1. The Discharger shall report all monitoring data and information as specified herein. Reports that do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the Monitoring and Reporting Program.
2. Quarterly groundwater monitoring reports shall be submitted to the Central Valley Water Board according to the schedule below.

<u>Monitoring Period</u>	<u>Report Due</u>
January – March	April 30
April – June	July 31
July – September	October 31
October – December	January 31

Each quarterly 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 has migrated;

- (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.;
 - (c) groundwater contour maps for all groundwater zones, if applicable;
 - (d) isocontour pollutant concentration maps for all groundwater zones, if applicable. The maps shall include, at a minimum, plots of chloride, electrical conductivity, and total dissolved solids for each of the groundwater zones monitored;
 - (e) a table showing well construction details such as well number, groundwater zone being monitored, coordinates (longitude and latitude), ground surface elevation, reference elevation, elevation and depth of screen, seal, filter pack, and well bottom;
 - (f) a table showing historical lateral and vertical (if applicable) flow directions and gradients;
 - (g) cumulative data tables containing the 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;
 - (j) field monitoring well sampling sheets shall be completed for each monitoring well sampled and included in the report;
 - (k) an update and status on each of the outstanding tasks required by the CAO or Executive Officer;
 - (l) a map showing all Site wells and nearby supply wells that were sampled.
3. In reporting the monitoring data, the Discharger 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 electronic form that is acceptable to the Central Valley Water Board.
4. The Discharger shall submit an annual report by 31 January of each year for the preceding year. The report can be combined with the Discharger's fourth quarter report. 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 and surrounding properties. 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.
5. For each required quarterly and annual report, one report shall be submitted containing all monitoring data collected at the Site by the Discharger and include all information cited in the above sections.
 6. The Discharger 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 quarterly and provided to the Central Valley Water Board in electronic format.
 7. The Discharger shall submit electronic copies of all workplans, reports, analytical results, and groundwater elevation data over the Internet to the State Water Board Geotracker database. Electronic submittals shall comply with Geotracker standards and procedures as specified on the State Water Board's web site. In addition, a hardcopy of each document shall be submitted to the Central Valley Water Board at 1685 E Street, Fresno, CA 93706, attention Hazardous Disposal/Title 27 Unit.

Original signed by Clay L. Rodgers for:

Order by: _____

PAMELA C. CREEDON, Executive Officer

9 November 2012

(Date)