

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2014-0156

CEASE AND DESIST ORDER  
FOR  
CITY OF ESCALON  
ESCALON WASTEWATER TREATMENT PLAN  
SAN JOAQUIN COUNTY

TO CEASE AND DESIST  
FROM DISCHARGING CONTRARY TO REQUIREMENTS

The Regional Water Quality Control Board, Central Valley Region, (hereafter referred to as Central Valley Water Board or Board) finds that:

1. Waste Discharge Requirements (WDRs) Order No. 5-00-142, adopted by the Board on 16 May 2000, prescribes requirements for the domestic and industrial wastewater treatment plant owned and operated by the City of Escalon (hereafter referred to as Discharger).
2. The City of Escalon Wastewater Treatment Plant (WWTP) is in San Joaquin County in Sections 17 and 20, T2S, R9E, MDB&M, at 25100 East River Road. The facility is on Assessor's Parcel Numbers 247-090-36 and 247-090-38. Both parcels are owned by the City of Escalon.

**WASTEWATER TREATMENT PLANT**

3. The WWTP is on the north side of the Stanislaus River. Surrounding land uses are primarily agricultural. A golf course country club and residential development (Del Rio) are on the south side of the Stanislaus River, and approximately one quarter mile south of the WWTP. The dominate wind direction is towards the south, from the WWTP toward Del Rio.
4. The WWTP treats industrial wastewater generated by two food processing industries and domestic wastewater generated by the City of Escalon. The treatment process consists of screening and discharge to mechanically aerated treatment ponds, followed by discharge to evaporation/percolation ponds. The industrial and domestic wastewater flows are delivered to the plant in separate pipelines. The two waste streams remain separate and are treated, stored and disposed of in separate percolation and evaporation ponds. Stormwater from a limited portion of the City of Escalon is also piped to the facility and discharged to the industrial ponds.
5. Industrial dischargers consist of a tomato canner and a frozen pepper processor. Industrial wastewater is characterized by high concentrations of biological oxygen demand. The industrial dischargers' processing season is from approximately May through December.

6. The Discharger treats industrial wastewater in four aerated treatment ponds, followed by discharge to seven evaporation/percolation ponds. The Discharger treats domestic wastewater in five aerated treatment ponds, followed by discharge into four evaporation/percolation ponds. The 20 ponds are generally rectangular in shape, vary in size from about 1 acre to 5.6 acres, and are about 3 feet to 9 feet deep.
7. The Discharger allows the industrial wastewater ponds to dry completely prior to initiation of the industrial wastewater generation season. Annually, the ponds are disked and ripped to maintain percolation rates.
8. Based on groundwater monitoring performed at the site, groundwater exists approximately 37 feet below ground surface. Groundwater flows to the west-southwest, toward the Stanislaus River.

### **PREVIOUS ENFORCEMENT**

9. Objectionable odor complaints related to the facility were documented in July and August 2000, August 2001, June and July 2002, and July and August 2003.
10. Cease and Desist Order R5-2003-0124, adopted by the Board on 5 September 2003, provided the Discharger with a time schedule to (a) evaluate organic loading and pH ranges that the WWTF was capable of treating in a manner that protects water quality and prevents nuisance odors, (b) implement an enhanced industrial pretreatment program with loading limits within the WWTF's treatment capacity, (c) implement a pre-season startup program to limit the potential for odor generation and (d) submit a technical report describing the physical and management changes implemented to meet the appropriate organic loading and pH ranges for the WWTF.
11. Improvements to the industrial pretreatment programs at the food processing facilities included enhanced solids screening and installation of dissolved air floatation units. Improvements to the wastewater treatment facility included additional pond aerators and installation of an oxygen injection system for industrial ponds 2 and 3. The Discharger also updated its industrial pre-treatment program.
12. The Discharger completed the required tasks and Order R5-2003-0124 was rescinded on 2 December 2011.

### **VIOLATIONS OF WASTE DISCHARGE REQUIREMENTS**

#### Effluent Violations

13. Discharge Specifications B.4 and B.5 of the WDRs establishes a Biochemical Oxygen Demand (BOD) industrial wastewater effluent limit of 150 milligrams per liter (mg/l) as a monthly average and a domestic wastewater BOD effluent limit of 80 mg/l as a daily maximum.

14. On 4 June 2014, Board staff issued a Notice of Violation to the Discharger for exceeding the effluent limits for BOD in the industrial and domestic wastewater ponds during a portion of the 2013 food processing season (i.e., August, September and October 2013). The Discharger responded by letter on 5 August 2014 describing the steps it had taken to eliminate the violations, and stating that it would increase the BOD monitoring from monthly to bi-monthly in order to react more quickly should violations arise in the future. However, the Discharger has not increased its BOD monitoring.
15. During preparation of this Order, the Discharger stated that the industrial effluent BOD violations noted in the NOV were in error because the BOD samples were collected in the wrong location. Staff's re-review of the August 2013-October 2013 monitoring reports show that the Discharger did not collect BOD samples from every industrial percolation pond, in violation of the WDRs. Therefore, it is not possible to determine whether or not the Discharger complied with the industrial BOD effluent limit.
16. Board staff has reviewed monitoring data submitted for the period of May through September 2014. The Discharger failed to collect BOD samples from every industrial percolation pond, in violation of the WDRs. Therefore, it is not possible to determine whether or not the Discharger complied with the industrial BOD effluent limit.
17. This Order requires that the Discharger investigate the cause of the effluent violations and determine if the violations are due to inadequate pretreatment at the food processing facilities, inadequate treatment at the WWTF, inadequate monitoring at the WWTP, or a combination. This Order also requires the Discharger to make operational and mechanical improvements, as necessary, to comply with the effluent limits in the WDRs, and to ensure that future monitoring reports contain all information required by the WDRs.

Odor Violations

18. Discharge Specification No. B.6 of the WDRs states, "*Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment facility.*"
19. Discharge Specification No. B.7 states, "*As a means of discerning compliance with Discharge Specification B.6, the dissolved oxygen content shall not be less than 1.0 mg/l in any pond at any time....*" The Monitoring and Reporting Program requires that dissolved oxygen be measured in every pond (both domestic and industrial) on a weekly basis.
20. On 5 August 2014, Board staff received an odor complaint from a resident in the Del Rio subdivision. Board staff contacted the Discharger, who responded that the facility was maintaining compliance with the WDRs and that the San Joaquin Valley Unified Air Pollution Control District (Air District) had been out to the facility, but unable to confirm the complaint.

21. Between 6 August and 13 September 2014, Board staff received four additional complaints related to odors from the WWTF. On 17 September 2014, Board staff inspected the WWTF in response to the odor complaints. Odors associated with wastewater were observed in the vicinity of industrial wastewater ponds 14 and 15.
22. Between 19 July and 6 October 2014, the Air District received 59 odor complaints associated with the WWTF. Of the 59 complaints, 20 were confirmed by the Air District<sup>1</sup>. On 29 September 2014, the Air District issued a Notice of Violation to the Discharger, which states in part: "...*Facility discharged an odor that was a nuisance and annoyance to a considerable number of persons.*"
23. Board staff received additional odor complaints on 7, 8, and 9 October 2014.
24. A review of monitoring reports from August-October 2013 and from May-September 2014 shows that the Discharger only measured dissolved oxygen concentrations in the treatment ponds, but not in the percolation ponds. The lack of dissolved oxygen monitoring prevented the Discharger from determining whether there were potential odor issues, and if so, adequately responding to them.
25. This Order requires the Discharger to address the odor issues by evaluating the industrial pretreatment programs and seasonal startup procedures at the industrial facilities and the WWTP. Additionally, this Order requires the Discharger to evaluate whether facility improvements are necessary to meet the effluent limits and conditions in the WDRs, to conduct real time odor monitoring during the 2015 processing season, and to complete all of the monitoring required by the WDRs.

#### Capacity Violations

26. WDRs Discharge Specification B.11 states, "*Pond freeboard shall never be less than two feet in any pond as measured vertically from the water surface to the upper surface of the lowest adjacent dike or levee.*" The Monitoring and Reporting Program requires that freeboard measurements be measured in every pond (both domestic and industrial) on a weekly basis.
27. Standard Provisions and Reporting Requirements for Waste Discharge Requirements (Standard Provisions) Provision B. 1 states, "*In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone as soon as it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within two weeks. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for*

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<sup>1</sup> A "confirmed complaint" means that an Air District employee or reliable complainant is able to testify that a particular operation is the source of the air contaminants. Confirmation may be accomplished when Air District staff meet with a complainant and the parties trace the odor to the alleged source; a reliable complainant makes confirmation; or the identification of air contaminants is supported by data operational records, wind charts, and monitoring devices. (San Joaquin Valley Unified Air Pollution Control District Compliance Department, Com 1140, 8 February 2007).

*corrective actions.”*

28. During staff's 17 September 2014 inspection, staff observed inadequate freeboard levels in every industrial wastewater disposal pond (Ponds 10 through 16). Freeboard was generally less than 2 inches. Interior berms which separate the ponds were saturated and partially submerged below the water surface. Staff also observed inadequate freeboard levels in every domestic wastewater disposal pond (Ponds 20 through 24). For these ponds, freeboard was generally less than 6 inches. The failure to maintain two feet of freeboard is a violation of Discharge Specification B.11.
29. It is unknown how long the Discharger was in violation of the freeboard requirement. A review of the monthly monitoring reports from August 2013 through mid-September 2014 shows that the Discharger failed to submit freeboard measurements for any of the ponds, in violation of the WDRs. The Discharger also failed to verbally notify staff of the freeboard violations, in violation of Standard Provision B.1. In addition, the Discharger states that it is unable to provide freeboard logs prior to 19 September 2014 because the previous treatment plant operator is no longer employed by the City and the City is unable to find the information.
30. This Order requires the Discharger to address the continuing capacity violations by evaluating influent wastewater flows, the facility's flow monitoring system, and the storage and disposal capacity of the domestic and industrial wastewater pond system. In addition, this Order requires the Discharger to conduct daily freeboard monitoring and inspections, and to continue to report the results to the Board.

Discharge Violations

31. WDRs Prohibition A.1 states *“Discharge of wastes to surface water drainage courses is prohibited.”*
32. WDRs Prohibition A.2 states *“Bypass or overflow of untreated or partially treated waste is prohibited.”*
33. Standard Provision A.7 states *“The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.”*
34. Discharge Specification B.1 states *“For the domestic WWTP, the monthly average dry weather flow shall not exceed 0.90 mgd. The maximum daily flow shall not exceed 1.0 mgd.”*
35. On 17 September 2014, at approximately 2:20 p.m. the wastewater treatment facility operator informed Board staff by telephone that wastewater was observed seeping from a rodent hole within the berm separating industrial wastewater pond 12 from the Stanislaus River. The Discharger stopped the discharge sometime between 9:30 and 11:30 p.m. by placing several yards of a mixture soil and bentonite clay mixture on the inner berm of pond 12. The operator estimated a flow rate between two to five gallons

per minute to the Stanislaus River, and a total discharge of 2,700 gallons<sup>2</sup>. This discharge and failure to maintain the pond berm is a violation of Prohibitions A.1 and A.2, and Provision A.7.

36. On 19 September 2014, Board staff requested that the Discharger implement daily monitoring and reporting of influent flows and pond freeboard. Additionally, staff requested that the Discharger conduct daily inspections of all wastewater pond berms.
37. On 20 September 2014, as part of the daily monitoring program, the Discharger notified Board staff that the internal levee separating industrial ponds 11 and 16 was leaking. The leak was occurring through a rodent hole in the levee. All wastewater was contained in the wastewater ponds. The failure to maintain the wastewater pond berms is a violation of Standard Provision A.7. This Order requires the Discharger to implement a rodent control program.
38. On 24 September 2014, Board staff issued a Notice of Violation (NOV) to the Discharger for violations observed during staff's inspection and for the unauthorized discharge to the Stanislaus River. The NOV requires the Discharger to submit a technical report prepared by a California licensed Engineer that contains the following items:
  - An evaluation of domestic and industrial influent flows into the facility for the 2013 and 2014 processing season.
  - An evaluation of the wastewater pond berm system berms and a water balance demonstrating whether or not the ponds have adequate storage and disposal capacity.
  - A plan to manage influent flows during the winter and spring of 2014 and 2015. such that two feet of freeboard is maintained in a wastewater ponds.
  - A pond vegetation monitoring and removal plan.
  - An odor identification and mitigation plan.
  - A copy of the City's industrial discharge permits for both the tomato processing facility and the pepper processing facility.
  - The name of the licensed engineer the Discharger has retained to evaluate the industrial pretreatment program.

The NOV required that the work be completed by 31 October 2014. The City responded to the NOV on 8 October 2014. The response included workplans and implementation schedules to evaluate the wastewater pond berms, capacity, and odor issues. Additionally, the response asked for an extension for some of the tasks to 31 December 2014. This Order allows for the extension.

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<sup>2</sup> The Discharger does not know when the discharge began, so this volume is an estimate of the volume discharged between the time of discovery and the time of cessation of discharge. The actual volume discharged is greater than 2,700 gallons; but the amount is unknown at this time.

39. On 7 October 2014, Board staff was informed that the Discharger had purchased a new dissolved oxygen meter as readings from the previous meter may be incorrect. Additionally, the Discharger is in the process of performing repairs to the WWTF oxygen injection system for industrial wastewater ponds 2 and 3. The failure to adequately maintain the dissolved oxygen meter and the oxygen injection system is a violation of Standard Provision A.7, which states *"The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements."*
40. On 11 October 2014, the treatment plant operator notified Water Board staff that domestic influent wastewater flows exceeded the discharge limit of 1.0 million gallons per day (mgd) on October 6<sup>th</sup>. The flow on that day was 1.263 mgd, which is a violation of Discharge Specification B.1 of Order 5-00-142. Flows were also higher than normal on October 5<sup>th</sup>, but did not exceed the flow limit. Staff's review of the monitoring reports show that the maximum daily influent flow was also exceeded in September 2013. This Order requires an investigation into the source of the high inflow into the domestic WWTP.

#### Short Term Corrective Actions

41. On 17 September 2014, the Discharger requested that the tomato processor and pepper processor reduce wastewater generation rates. Daily wastewater flow data submitted by the Discharger shows that the combined industrial flows have been reduced from approximately 2.7 million gallons a day (mgd) to 1.7 mgd within a few days after the request. Daily flow and freeboard logs submitted by the Discharger show that freeboard levels in the ponds have increased slightly. However, the freeboard levels in a number of the ponds remains below 10 inches, in violation of the WDR requirement of 24 inches of freeboard.
42. On 24 September 2014, the Discharger submitted an interim wastewater disposal plan. Approximately 100,000 gallons per day of pretreated industrial wastewater would be sent to the City of Manteca WWTF for final disposal (pending Manteca's approval). The agreement would be valid through 31 October 2014. Board staff approved the emergency plan on 25 September 2014. The City began off-hauling treated industrial wastewater on 21 October 2014 and will cease off-hauling on 31 October 2014.
43. On 8 October 2014, the Discharger informed Board staff that odor absorbents and masking agents have been placed along the fence line of the WWTF.

#### **REGULATORY CONSIDERATIONS**

44. As a result of the events and activities described in this Order, the Regional Board finds that the Discharger has caused or permitted waste to be discharged in such a manner that it has created, and continues to threaten to create, a condition of pollution

or nuisance. The Regional Board also finds that the Discharger is discharging waste in violation of WDRs Order No. 5-00-142, as described in the Findings of this Order.

45. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. These requirements implement the Basin Plan.
46. The WWTF is adjacent to the Stanislaus River. Surface water drainage is to the Stanislaus River. As described in the Basin Plan, the beneficial uses of the Stanislaus River are municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, migration of aquatic organisms, spawning, reproduction, and/or early development, and wildlife habitat.
47. The beneficial uses of the underlying groundwater, as specified in the Basin Plan are municipal, domestic, and industrial supply.
48. Section 13050(m) of the California Water Code defines "nuisance" as anything which meets the following requirements:
  - (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
  - (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
  - (3) Occurs during, or as a result of, the treatment or disposal of wastes.
49. Section 13301 of the California Water Code states in part: "*When a Regional Board finds that a discharge of waste is taking place or threatening to take place in violation of the requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action.*"
50. Section 13267(b) of the California Water Code states: "*In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters of the state 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.”*

51. The technical reports required by this Order are necessary to ensure compliance with this Order and WDRs Order 5-00-142, and to ensure the protection of water quality. The City of Escalon owns and operates the facility that discharges waste subject to this Order and WDRs Order 5-00-142.
52. The issuance of this Order is being taken for the protection of the environment and as such is exempt from provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) pursuant to California Code of Regulations, title 14, sections 15061 subdivision (b)(3), 15306, 15307, 15308, and 15321 subdivision (a)(2).
53. On 5 December 2014, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

**IT IS HEREBY ORDERED** that, pursuant to Water Code Sections 13301 and 13267, the City of Escalon shall implement the following measures in order to comply with WDRs Order 5-00-142.

This Order requires submittal of technical reports. These technical reports shall contain the information and decisions required by the following paragraphs. If a report is submitted without the required information or decision, then the Discharger is in violation of this Order and subject to additional enforcement action.

The Board is transitioning to a paperless office. Therefore, all technical reports required by this Order must be converted to a searchable pdf file and emailed to [centralvalleysacramento@waterboards.ca.gov](mailto:centralvalleysacramento@waterboards.ca.gov). The following information shall be included in the body of the email: Attention Brendan Kenny, Compliance Section, Waste Discharge to Land Unit. In addition, include the Discharger name, facility name, county, and CIWQS place ID (222916) in the body of the email.

1. **Effective immediately**, the Discharger shall submit monitoring reports that contain all the information required by Monitoring and Reporting Program 5-00-142 (or subsequent revision).

#### Odor Mitigation and Wastewater Treatment Evaluation

2. By **15 February 2015** the Discharger shall submit an *Odor Identification and Mitigation Plan* for review and approval. The plan shall describe how the wastewater treatment

plant and Del Rio subdivision will be continuously monitored using real time sensors, such as the Odowatch© (or similar system for odor monitoring) to identify the presence of nuisance odors associated with wastewater treatment and disposal. At least one sensor shall be installed within the Del Rio subdivision. The plan must also include notification and corrective action procedures for the City and WWTF staff to follow when odors are identified.

3. By **15 January 2015**, the Discharger shall submit a *Food Processing Waste Loading* technical report that (a) evaluates the organic loading and pH ranges which the City's industrial wastewater treatment plant is capable of treating while meeting the effluent limits and conditions specified in the WDRs, and (b) describes the actions needed to ensure that the tomato processing facility and the pepper processing facility comply with the influent loading limits. This second item shall include an evaluation of best practical treatment and control options including but not limited to: operating at a reduced organic loading rate, load checking, additional screening, pretreatment options including BOD reduction at the industrial facility, segregation of high strength waste streams, and changes to the waste characteristics as it is conveyed from the industrial facilities to the treatment plant. The report shall include recommendations and a construction schedule for upgrades to the individual food processing facilities and the WWTF to comply with effluent limits in the WDRs. All upgrades shall be completed prior to the 2015 processing season.
4. By **1 April 2015**, the Discharger shall submit an evaluation of the 2013 and 2014 domestic and industrial influent flows. The evaluation shall identify any flow violations, cite the cause of the violations, and include a description of corrective actions the City has implemented to prevent future flow violations. For the industrial flows, the City shall evaluate whether increased flows in 2014 were a partial cause of the lack of capacity and odor violations.
5. By **15 June 2015**, the Discharger shall submit a report certifying that a real time continuous odor monitoring system has been installed in accordance with the approved *Odor Identification and Mitigation Plan*.
6. Beginning **10 July 2015**, the Discharger shall submit monthly *Odor Monitoring Reports* that include odor plume concentration maps. Each report shall cover the previous month, and shall include odor plume maps and a discussion of WWTP-derived odors in the Del Rio subdivision. The reports shall be submitted until this Order is rescinded or the Executive Officer determines that they are no longer necessary.
7. By **15 June 2015**, the Discharger shall submit a *Food Processing Waste Upgrades Report of Results* describing in detail the physical and management changes that have been implemented at (a) the tomato processing facility, (b) the pepper processing facility, and (c) the City wastewater treatment plant in response to the recommendations in the *Food Processing Waste Loading Report*. The *Report of Results* shall discuss changes to the pretreatment program, improvements at the

WWTF, and processing season startup procedures to limit the potential for odor generation.

Wastewater Treatment Plant

8. **Effectively immediately**, the Discharger shall conduct daily freeboard monitoring and inspections, and continue to report the results daily to the Board via email. However, effective after freeboard levels in all wastewater ponds (domestic and industrial) meet the two foot requirement for seven consecutive days, the Discharger may reduce the freeboard monitoring to a Monday through Friday basis, and report the results each Friday by email. This requirement shall continue until this Order is rescinded or the Executive Officer approves the discontinuance of the reporting.
9. By **31 December 2014**, the Discharger shall submit and implement a contingency plan for managing influent flows during the 2014/2015 winter and spring while maintaining compliance with the WDRs.
10. By **15 February 2015**, the Discharger shall submit and implement a *Vegetation and Rodent Control Plan*.
11. By **15 February 2015**, the Discharger shall submit and implement a *Pond Berm Study Report* with recommendations and a construction schedule for completing repairs and improvements as necessary to stop seepage from the berms, including Pond 12, Ponds 11/16, Pond 24 and any additional ponds where seepage is identified. The report shall include the items listed in the 2 October 2014 Wallace Kuhl and Associates workplan. Additionally, the report shall evaluate the entire wastewater pond berm system and include recommendations as to repair or other actions necessary to preclude the possibility of additional pond berm failures.
12. By **15 July 2015**, the Discharger shall submit a water balance demonstrating whether or not the ponds have adequate storage and disposal capacity. The report shall include recommendations as needed to repair/restore berm integrity and capacity such that the WWTF can comply with Discharge Specification B. 10 of the WDRs. If there is not enough capacity, then the Discharger shall submit plans to either obtain sufficient capacity or reduce flows to the current capacity of the treatment plant.

The *Water Balance Report* shall be prepared by or under the supervision of a California Registered Engineer, and signed/stamped by the registered engineer. The water balance shall include:

- Rainfall based on the 100-year return period total annual precipitation and the average annual precipitation as reported by the California Department of Water

Resources in its Depth-Duration-Frequency Tables for the Escalon Station (or other station approved by staff).<sup>[1]</sup>

- Return period ratio calculated from the abovementioned 100-year return period total annual precipitation, which is divided by the average annual precipitation for the approved Station.
  - Rainfall distributed over the months of the year using the approved station's monthly average precipitation multiplied by the return period ratio.
  - The monthly evaporation, precipitation, and percolation rates, including contributions from major sources such as infiltration and inflows, and storm water run-on.
  - Current influent flows and permitted influent flows (if different).
13. By **15 June 2015**, the Discharger shall submit a report certifying that the corrective actions identified in the Pond Study have been implemented. As built drawings for the wastewater pond system shall be submitted to the Regional Board by **15 July 2015**.

#### Other Requirements

14. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed by the registered professional. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.
15. As required by Provision F.6, of WDRs Order 5-00-142 and General Reporting Requirement B.3 of Standard Provisions and Reporting Requirements For Waste Discharge Requirements, all reports and transmittal letters shall be signed by either a principal executive officer of the corporation with at least the level of senior vice-president or a duly authorized representative in accordance with the WDRs, and any person signing a document submitted to comply with this Order shall make the following certification:

*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and 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 fine and imprisonment.*

16. 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

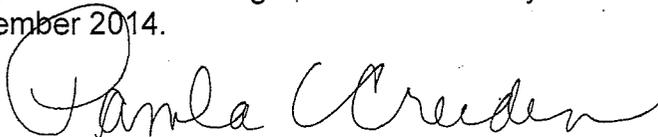
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<sup>[1]</sup> The California Department of Water Resources' station index and Depth-Duration-Frequency tables are available at the website: <ftp://ftp.water.ca.gov/users/dfmhydro/Rainfall%20Dept-Duration-Frequency/Rain%20D%20DDF%20Daily/>.

General for judicial enforcement or may issue a complaint for administrative civil liability.

17. Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.
18. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, 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, 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](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 December 2014.



PAMELA C. CREEDON, Executive Officer

12/5/2014

(Date)

# Pretreatment Compliance Audit

## Summary Report

**Discharger:** City of Escalon Wastewater Treatment Plant  
Waste Discharge Requirements Order No. 5-00-142

**Location:** 25100 West River Road; Escalon, CA 95320

**Contacts:** Tammy Alcantor, City Manager  
Juston Collins, Public Works Superintendent  
Brian Holloway, Wastewater Treatment Plant Operator  
Tom McCoy, President, Quality Services, Inc. (consultant to City for  
wastewater plant operations)

**Audit Dates:** 9/10 December 2014

**Audited By:** Brendan Kenny, Central Valley Regional Water Quality Control Board  
Kettie Holland, PG Environmental, LLC  
Jan McGoldrick, PG Environmental, LLC



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## 1. Executive Summary

This report includes several requirements and recommendations to enhance the operations of the City of Escalon's (City's) regulation and oversight of industrial user discharges within its service area. The inspection was unique in the sense that the City had not been issued a National Pollutant Discharge Elimination System (NPDES) permit and had not been required to implement an EPA-approved pretreatment program. It should be noted that the federal regulations at 40 CFR 403 are applicable to approved pretreatment programs as part of the NPDES Permit Program. The City had been issued a Waste Discharge Requirements (WDRs) Order No. 5-00-142 by the Regional Water Quality Control Board to regulate the City's wastewater treatment plant (WWTP) and effluent discharged to the percolation and evaporation ponds on the property. As explained in the sections below, several issues led to the issuance of cease and desist orders to the City by the Regional Water Quality Control Board. The purpose of the audit was to evaluate and understand the City's oversight of nondomestic discharges in the service area and gain insight related to the nature and characteristic of process wastewaters discharged to the City's WWTP.

This report presents several requirements based on the City's sewer use ordinance and permits issued to the industrial users. Numerous recommendations are also provided for improving the City's oversight and regulation of industrial discharges within the service area. The majority of the recommendations are based on the pretreatment requirements at 40 CFR 403. At the time of the audit the City was not required to comply with these pretreatment requirements. The paragraphs below cite the federal regulations and are followed by observations made during the audit process. Each issue is described in the appropriate section of this report and summarized in section 12 of the report.

As a result of the 2014 audit, the City is required to ensure that industrial wastewater is not being disposed of into the City's system without a valid permit and ensure that industrial users provide adequate notification to the City for start-up procedures during the processing season. Finally, the City is required to ensure that the industrial users submit monitoring results in accordance with the requirements in their applicable discharge permits.

Several recommendations are also provided in the report. For example, the audit team recommends the City evaluate the process of accepting hauled wastewater at the WWTP and ensure that documentation is properly maintained and samples are collected for these activities. The audit team also recommends the City participate in pharmaceutical take back events, discuss the Safer Detergents Stewardship Initiative (SDSI) with industrial laundries that may come into the City's service area, and develop a fats, oils, and grease management program if grease-related blockages or issues occur within the City's collection system. The audit team further recommends that the City ensure it has the proper authority in its sewer use ordinance to implement the necessary procedures to oversee industrial user discharges within the service area. The audit team also recommends that the City re-evaluate the limits included in the industrial user discharge permits and ensure that samples are adequately and correctly collected, preserved, and analyzed. The audit team recommends the City implement procedures to identify potential nondomestic dischargers within the service area and ensure the appropriate limits are applied to said dischargers. The audit team also recommends that the City collect samples and conduct inspections at industrial user facilities. The audit team recommends that the City evaluate

facilities for the potential for slug discharges to occur and re-evaluate the practice of accepting stormwater at the WWTP. The audit team also recommends that the City develop and implement an enforcement response plan to respond to instances of industrial user noncompliance. Finally, the audit team recommends that the City develop and implement comprehensive procedures for documenting activities related to industrial user oversight within the service area.

## 2. Introduction

On behalf of the Central Valley Regional Water Quality Control Board (Regional Water Board), PG Environmental, LLC conducted a pretreatment compliance audit (audit) of the City of Escalon's (City's) pretreatment program on 9/10 December 2014. This was the first industrial pretreatment compliance audit performed at the City. This report describes the primary concerns generated by the audit.

### 2.1 Background

The City owns and operates a wastewater collection, treatment, and disposal system and provides sewerage service to domestic, commercial, and industrial users. Pursuant to Regional Water Board Order No. 5-00-142 (Waste Discharge Requirements or WDRs), the City is authorized to discharge treated effluent from its wastewater treatment plant (WWTP) to evaporation and percolation ponds located on its property. Because the WWTP does not discharge treated effluent to waters of the United States, it is not subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements under the federal Clean Water Act (CWA) (33 U.S.C. §1342 and 40 CFR Part 402), nor has the City been required to implement and enforce a CWA industrial pretreatment program (IPP) (40 CFR Part 403).

Despite the lack of a formal requirement, the City has language in its sewer use ordinance (SUO) that provides the City with the legal authority to regulate industrial users (IUs) within its service area. See section 3, *Legal Authority*, for further information on this topic.

At the time of the audit, City staff stated they had identified and permitted the following IUs:

- Escalon Premier Brands, Inc. (non-categorical IU).
- Eckert Cold Storage Company (non-categorical IU).

Escalon Premier Brands, Inc. (EPB) and Eckert Cold Storage Company (ECS) are both food processors. EPB is a tomato canner, and ECS is a frozen pepper processor. The industrial wastewater generated from the two IUs is characterized by high concentrations of biochemical oxygen demand (BOD). Although both IUs have industrial and domestic flows throughout the year, those industrial flows increase considerably during the processing season, which is approximately mid-May to December of each year. City representatives stated that, overall, the volume of industrial wastewater received at the WWTP from these industries during the processing season ranges from approximately 2.5 to 2.9 million gallons per day (mgd). For industrial wastewater, the City's WDRs limit the industrial flow to a maximum average daily flow of 3.4 mgd over a 30 day period and the total industrial discharge over the processing season shall not exceed 370 million gallons.

The audit team (Regional Water Quality Control Board representative and PG Environmental, LLC representatives) reviewed the City's current permits for the above-noted IUs as a

component of the recent audit. In addition, the audit team reviewed recent IU sampling data submitted to the City and conducted onsite inspections at both IUs. For more information on permits and nondomestic dischargers, refer to section 5, *Nondomestic Discharger Characterization*, and section 6, *Control Mechanisms*, of this report.

The City has a population of approximately 7,200 and a land area of approximately 2.3 square miles. The City is located in the Central Valley in a predominantly agricultural region. The City's WWTP is located in San Joaquin County, on the north side of the Stanislaus River. A golf course country club and residential development (Del Rio) are on the south side of the Stanislaus River in Stanislaus County, approximately one mile south and downwind of the WWTP.

## **2.2 Staffing**

At the time of the audit, the City had a staff of six to manage its organizational responsibilities. Representatives stated that the City Manager, Public Works Superintendent, and the WWTP Operator are the individuals primarily responsible for WWTP and pretreatment activities. They also stated the municipality has had considerable turnover of staff and consultants in recent years. The City had a public works superintendent approximately 5 years ago but ended up relieving the individual in that role. The City then moved to having individuals in three parallel superintendent or operator positions: one for buildings, another for wastewater, and a third for water. In 2013 or early 2014, the City returned to having a single superintendent in charge of public works, with supporting water and wastewater plant operators. The individual in the public works superintendent position at the time of the audit reported he had been in that role since 1 July 2014, a period of approximately 5 months. He had served as the City's building superintendent prior to that time. The City hired a contractor to assist with WWTP activities in mid-September 2014. The City Manager has been in her position since approximately mid-2013. Prior to that time, she served as the City's finance director. She still serves in this capacity and oversees the City's human resource activities. Finally, City representatives explained the municipality's contract engineer has changed several times over the last few years. The contract engineer at the time of the audit had been in the role for approximately 1.5 months.

## **2.3 Description of the City's Wastewater Treatment Plant**

As summarized in Order No. 5-00-142, the City's WWTP collects, treats, and discharges both industrial and domestic waste flows to percolation and evaporation ponds. The two waste streams are not intermingled. The two IUs have separate industrial and domestic wastewater discharge pipes. The industrial flows from the two IUs meet before arriving at the WWTP, as do the domestic flow from the two facilities. The plant has 20 ponds: 4 aeration treatment and 7 evaporation/percolation ponds for industrial wastewater, and 5 aeration treatment and 4 evaporation/percolation ponds for domestic wastewater. The 20 ponds are generally rectangular and vary in size from 1 acre to 5.6 acres. They also vary in depth from approximately 3 feet to 9 feet deep. The City allows the industrial wastewater ponds to dry out before the start of the IUs' processing seasons. It disks each of the ponds on an annual basis to maintain percolation rates. City representatives stated during the audit that they had yet to remove sludge from the ponds, but they would test it as required before doing so. Finally, stormwater from a limited portion of the City is piped to the WWTP and discharged to the industrial ponds.

The Regional Water Board issued a cease and desist order (CDO) to the City of Escalon's WWTP on 5 December 2014 (Order No. R5-2014-0156) due to violations of WDRs: numeric

effluent limitations for BOD, a narrative odor limit, capacity limitations, and discharge prohibitions. The Order requires the City to undertake several short-term corrective actions. Between January and July 2015, the City is required to submit several technical reports that fully evaluate the causes of the violations and propose appropriate corrective actions. The CDO is provided in Appendix A of this report.

Prior to the above-referenced CDO, the Regional Water Board had issued another CDO (Order No. R5-2003-0124) on 5 September 2003 (Appendix B). The Board issued the 2003 CDO in response to objectionable odor complaints. The complaints occurred during the summer months each year between 2000 and 2003; this is the time of year during which the IUs had some of their most significant discharge flows. In general, the 2003 CDO required the City to evaluate the organic loading and pH ranges the WWTP was capable of treating in an attempt to prevent nuisance odors, implement an enhanced industrial pretreatment program with loading limits within the WWTP's treatment capacity, and implement a pre-season startup program with the IUs to limit the potential for odor generation. As stated in the Regional Water Board's latest CDO, the City completed the required tasks. Thus, the Regional Water Board rescinded the 2003 CDO on 2 December 2011. The pretreatment improvements at EPB and ECS included enhanced solids screening. EPB also installed a dissolved air flotation (DAF) unit. Improvements made at the WWTP included additional pond aerators and the installation of an oxygen injection system for two industrial ponds.

City representatives stated the municipality does not currently accept hauled waste at its WWTP; however, it had accepted such waste in the past from the South San Joaquin Irrigation District (SSJID). At the time of the audit, City representatives were unable to provide documentation regarding the SSJID discharges to the WWTP. Thus, the City was unable to report when the discharges occurred, the source of the wastewater discharges, the nature and volume of those discharges, whether SSJID or the City performed sampling of the hauled waste prior to discharge, and whether the wastewater was discharged to the domestic or industrial treatment ponds. Subsequent to the audit, the City Manager contacted SSJID and obtained records of some of the hauled waste discharges. The City provided this information to the audit team via e-mail on 31 December 2014. Included in this information was a City-prepared analysis (see Appendix C and Figure 1, below, which summarizes the information for 2013 and 2014) of the volume of gallons of neutralized citric wastewater SSJID discharged to the WWTP.

## Neutralized Citric Gallons to Escalon from SSJID

**Table 1 - Analysis of SSJID Wastewater Discharged to City of Escalon WWTP**

Date	Total influent		Ratio of SSJID WW to Domestic WW	Total influent Industrial/Storm WW	Ratio of SSJID WW to Industrial/Storm WW
	SSJID WW, gal	Domestic WW, gal			
<b>2013</b>					
Jan	663,000	17,141,400	3.9%	15,257,537	4.3%
Feb	461,500	13,389,000	3.4%	1,076,386	42.9%
Mar	6,500	15,520,100	0.0%	2,707,561	0.2%
Apr	500,500	15,336,200	3.3%	2,500,788	20.0%
Jun	195,000	14,848,800	1.3%	6,248,936	3.1%
Aug	195,000	16,191,300	1.2%	77,946,514	0.3%
Dec	702,000	15,528,700	4.5%	9,505,807	7.4%
<b>2014</b>					
Apr	78,000	15,019,000	0.5%	5,858,845	1.3%
May	435,500	15,676,000	2.8%	2,445,082	17.8%

**Figure 1.** Analysis of SSJID wastewater discharged to the City of Escalon WWTP (provided by the City).

The City's analysis shows SSJID discharged neutralized citric wastewater to the WWTP each year from 2010–2014. The greatest annual volume of hauled wastewater discharged was 3.9 million gallons, which occurred in 2011, followed by 2.7 million gallons in 2013. According to the City's analysis, if hauled wastewater had been discharged to the City's domestic treatment ponds in 2013 and 2014, the highest ratio of hauled wastewater to domestic wastewater would have been 4.5 percent and would have occurred in December 2013. Instead, if the hauled wastewater had been discharged to the industrial treatment ponds, the highest ratio of hauled wastewater to industrial wastewater would have been 42.9 percent in February 2013, followed by 20 percent in April 2013, and 17.8 percent in May 2014. Note, in the latter analysis, the months with the highest ratios generally do not correspond to the months the IUs have their heaviest discharge flows (mid-May to December). The City's analysis does not specify the derivation of SSJID's wastewater nor how it was neutralized.

In its 31 December 2014 e-mail to the audit team, the City also provided analytical data for wastewater samples SSJID had collected and analyzed on 8 September 2009, 14 July 2011, 13 September 2011 and 27 October 2011. The City did not provide documentation showing that the City collected samples of SSJID's discharge independently of the samples collected by SSJID. A cursory review of the records provided showed that SSJID analyzed its wastewater on the dates noted for one or more toxic organic and inorganic pollutants using appropriate water/wastewater methods. The laboratory records contain quality control (QC) results in addition to chain of custody data as appropriate. However, the approach which SSJID used to determine which parameters to sample for was unclear.

The audit team, however, identified the following issues related to the SSJID sampling data:

- The McCampbell Analytical Laboratory report for samples collected on 8 September 2009 (sample location not stated) generally compare results to a reporting limit. The sample results for most parameters are stated as "ND" (non-detect). The lab report states,

“ND means not detected above the reporting limit.” Due to the limited information available in the analytical laboratory reporting method, the audit team was unable to ascertain from the data provided how the lab established its reporting limits. Specifically, it was unclear if these limits had been established above or below the regulatory limits. If the reporting limits had been established below federal or state water standards, and the sample results were below the reporting limits, then one would not know if the federal or state water standards were exceeded if the sample result indicated the local limit was exceeded. Conversely, if the reporting limits had been established above federal or state water standards, it is possible some of the “ND” samples were contaminated at a level above regulatory limits. For example, a federal drinking water standard for a particular chemical is 0.5 µg/L; if the laboratory’s reporting limit for the chemical is 10 µg/L, and the sample result was 0.7 µg/L, the sample’s chemical concentration exceeds the federal drinking water standard. It is important for a laboratory customer to specify what reporting limits should be used for each parameter being assessed.

When listing a sample result as “ND” for some of the pollutants analyzed, the McCampbell report includes a value immediately afterward. For example, for Aldrin, the sample result is listed as “ND < 0.00040” µg/L. The reporting limit was stated as 0.0002 µg/L. The significance of the number next to “ND” was unclear to the audit team. Moreover, it was unclear how SSJID or the City may have interpreted these sampling results.

The above issue has implications on how sample results would be interpreted when the sampling results showed detections. For example, the analytical report shows a result of 0.011 µg/L for b-BHC (beta benzene hexachloride). Without knowing how the laboratory establishes its reporting limits, the significance of this number is unclear. Specifically, it was unclear if the detection was above regulatory standards of concern to the WWTP. The reports do not show how SSJID or the City interpreted or responded to sample results greater than the lab’s reporting limits.

- The Vista Analytical Laboratory results for 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) for the sample collected on 8 September 2009 show the sample holding time was missed, but the client authorized the lab to proceed with the analysis. There is no further documentation suggesting preservation techniques were sufficient to warrant the authorization. The laboratory records do not specify the nature or location of the wastewater collected.
- The FGL Environmental Analytical Chemists results for mercury for the sample collected on 14 July 2011 indicate the sample was preserved “out of hold time,” but the client authorized the lab to proceed with the analysis. There is no further documentation suggesting preservation techniques were sufficient to warrant the authorization.

Overall, the audit team determined the City had not maintained documentation in regards to accepting hauled waste. Specifically, the City had not documented the volume, character, source, and nature of the wastewater discharged to the WWTP. Further, from the documentation provided by the City, it was observed that the City had not collected samples independently of those collected by the SSJID. In the event the City were required to implement a pretreatment program (consistent with the federal regulations at 40 CFR 403), it would be required to comply with the federal regulations at 40 CFR 403.8(f)(2)(ii), which states that the POTW shall develop and implement procedures to identify the character and volume of pollutants contributed to the

POTW. Moreover, the City would be required pursuant to the regulations at 40 CFR 403.8(f)(2)(iv) to receive and analyze self-monitoring reports and other notices in accordance with the self-monitoring requirements at 40 CFR 403.12. The latter regulation requires all analyses to be performed in accordance with procedures contained at 40 CFR part 136 and amendments thereto or with any EPA-approved test procedures.

Although the City has not been required to implement a pretreatment program and City representatives explained they had experienced considerable turnover in staff, it is strongly recommended that the City maintain documentation of communications with those hauling wastewater to the WWTP. Such communications should specify the nature and volume of wastewater the City has agreed to accept; the City's sampling requirements of the discharger (e.g., pollutants to be analyzed and rationale, number and type of samples to be collected, sample location, analytical methods, etc.); and the protocol the discharger is to follow at the WWTP (e.g., entrance procedures, discharge point, waste manifest requirements, etc.). The audit team strongly recommends the City use and require its IUs and waste haulers to use EPA-approved analytical methods as specified at 40 CFR Part 136 when collecting samples and performing analyses of wastewater. It is further recommended the City develop structured procedures for documenting the hauled waste discharges at the WWTP.

In Order No. R5-2014-0156, the Regional Water Board indicates the City's WWTP was in violation of its freeboard requirements (see sidebar) during the Regional Water Board's 17 September 2014 inspection. It further noted the City had failed to submit monthly monitoring reports providing freeboard measurements during the period August 2013 through mid-September 2014 and had failed to notify the Regional Water Board of such violations. Finally, the City had been unable to provide freeboard logs prior to 19 September 2014 because the City was unable to find the records of the previous treatment plant operator.

**Capacity Provisions of Order No. 5-00-142,  
Waste Discharge Requirements for City of Escalon,  
Escalon WWTP**

**Discharge Specification B.11:** "Pond freeboard shall never be less than two feet in any pond as measured vertically from the water surface to the upper surface of the lowest adjacent dike or levee."

Under **Monitoring and Reporting Program No. 5-00-142**, the City is required to measure freeboard in every pond on a weekly basis and report the results on a monthly basis.

**Standard Provisions and Reporting Requirements for WDRs Provision B.1:** "In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone as soon as it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within two weeks. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective action."

The Standard Provisions and Reporting Requirements associated with the City's WDRs have implications on the acceptance of hauled waste. For example, General Provision No. 4 states, "Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board." The provision goes on to list some of the changes covered (e.g., an increase in the area or depth to be used for solid waste disposal; a significant change in the disposal method or location or volume of the discharge; addition of a major industrial, municipal, or domestic waste discharge facility; and the addition of a major industrial waste discharge to a discharge of essentially domestic sewage or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste).

Given the capacity issues and the lack of records at the WWTP, the audit team strongly recommends the City not accept hauled wastewater until such time that it has fully resolved its capacity issues to the satisfaction of the Regional Water Board. After that time, if the City opts to accept hauled wastewater, it should fully outline program requirements, prepare appropriate implementation and documentation materials, ensure it has the proper legal authority to accept such wastes, and train relevant staff in implementing the program. The City is reminded it must meet WDR permit conditions, including the Standard Provisions, when making a decision whether to accept hauled wastewater.

## **2.4 Focus Topics**

The audit team discussed the following topics regarding other industrial pretreatment activities with City representatives.

### **2.4.1 Pharmaceutical Recovery**

City representatives stated the City does not have a formal pharmaceutical take-back program but participates in one managed by San Joaquin County. The City advertises the County's collection events in its newsletter. City representatives stated some of the local pharmacies (i.e., Rite Aid and Vineyard Pharmacy) likely have drop boxes for old prescriptions. The representatives were unaware of any collection events sponsored by local law enforcement agencies.

As a result of the 2014 audit, the audit team recommends that the City continue to participate in the San Joaquin County's pharmaceutical management program and those, if available, of local law enforcement agencies. To the extent that pharmaceutical waste poses a threat to the City's WWTP and the underlying groundwater, the City should consider increased outreach to areas with high volumes of discharge, such as senior care centers, hospitals, and apartment complexes. Pharmaceutical take-back events have proven to be a simple and effective way of reducing the harmful effects of pharmaceuticals in wastewater on human health and aquatic organisms (in surface water systems). The San Francisco Bay Area Pollution Prevention Group (BAPPG) has implemented what the U.S. Environmental Protection Agency considers model programs.

### **2.4.2 Dental Mercury**

The City did not have a formal dental mercury program in place at the time of the audit. The City representatives stated that they were unaware of facilities conducting voluntary mercury reduction efforts. The City's WDRs does not include limits or monitoring requirements for mercury. The City was also unsure of mercury trending for the WWTP's influent, effluent, and biosolids concentrations.

### **2.4.3 Industrial Laundries**

City representatives stated the municipality does not have industrial laundries within its jurisdiction. It is recommended that the City discuss and review the EPA's Safer Detergents Stewardship Initiative (SDSI) program with any industrial laundries that may come into the City's jurisdiction in the future. This program is a voluntary one under which laundries commit to the use of safer surfactants. Safer surfactants, such as linear alcohol ethoxylates, break down quickly to non-polluting compounds. An example of a surfactant class that does not meet the definition of a safer surfactant is nonylphenol ethoxylates (NPEs). NPEs and their breakdown products are toxic to aquatic life.

#### **2.4.4 Performance Measures**

At the time of the audit, City representatives stated the municipality did not have a formalized program to address fats, oils, and grease (FOG) wastes that may be discharged to the sanitary sewer. They noted, however, that City representatives have verbally discussed FOG best management practices with local food service establishments (FSEs). City representatives, however, did not articulate the specific best management practices they recommended to the FSEs. City representatives further stated the municipality removes FOG buildup from approximately eight hot spots in the collection system every three months if not more frequently. The City's maintenance records for its collection system were not reviewed as a component of the audit. City representatives stated some of the local FSEs have grease traps or interceptors, which is now a requirement, according to the local building code. Finally, City representatives stated the municipality had not experienced any sanitary sewer overflows (SSOs) in 2013.

In the event that the City experiences issues with FOG waste accumulating within the collection system, the audit team recommends that the City develop a formal FOG program and ensure that it has the proper authority to inspect and issue proper enforcement action related to facilities generating and discharging grease-related wastes that may cause blockages within the sewer system and negatively impact the POTW as a whole.

#### **2.4.5 Potential Cleanups or Criminal Violations**

City representatives stated they were unaware of any facility, such as a metal finishing shop, that might close and leave a cleanup needing public funding. They were also unaware of any facility appearing to have knowingly violated a pretreatment or other environmental requirement.

#### **2.4.6 Hazardous and Toxic Substances Control**

City representatives stated the municipality does not have any large-box stores in its jurisdiction. As such, it does not have a program to ensure that stores are not dumping any hazardous or toxic substances into the City's sewer system.

#### **2.4.7 Nonwoven Disposable Products ("flushable wipes")**

The City has a sewage grinder (i.e., "Muffin Monster") installed at its lift station to prevent clogs due to nonwoven disposable products. The City maintains the sewage grinder on an annual basis. City representatives also conducted verbal outreach to nursing homes and other entities where such products are likely being used in significant quantities.

### **3. Legal Authority**

The federal pretreatment regulations at 40 CFR 403.8(f) require publicly owned treatment works (POTWs) subject to the national pretreatment program to have the necessary legal authority to apply and enforce sections 307(b) and (c) and section 402(b)(8) of the Clean Water Act. At the time of the audit, the City had not been required to implement and enforce a CWA industrial pretreatment program. However, the City's SUO, which provides the City with the legal authority to regulated industrial discharges, was reviewed. It should be noted that in the event the City is required to develop and implement a pretreatment program in accordance with the CWA, the City must ensure that it has the proper legal authority to implement its program in accordance with the federal regulations at 40 CFR 403.8(f)(1).

As a component of the audit, the audit team reviewed the City's SUO to determine the extent to which it contains provisions similar in intent to the federal pretreatment regulations. (See the "Legal Review Checklist" in Appendix D of this report.) The City's SUO, which was last amended in 2007, provides the municipality with the legal authority to issue IU permits, enter facilities and inspect fixtures associated with industrial discharges, and take enforcement action against IUs for failure to comply with permit conditions or applicable ordinance provisions.

City representatives stated during the audit they might make changes to their WWTP operations in response to the Regional Water Board's recent cease and desist order. Those changes could affect how the City oversees and interacts with its IUs. The City may need to revise its SUO depending on the extent to which it requires authority to implement any WWTP operational and pretreatment program changes.

As noted in section 11.2, *Billing*, of this report, the City references section 13.08.140 as its authority to adjust monthly fees in its IU permits. Ordinance 511 repealed this section of the SUO in 1986. Therefore, the City should amend the references to its SUO to ensure that it refers to the most current and proper version of the SUO granting it the legal authority to adjust monthly fees.

Overall, the audit team strongly recommends the City include the general pretreatment prohibitions specified at 40 CFR 403.5(a) and (b) in its SUO. The intent of these provisions is to protect the integrity of a City's sewer system/plant and to protect worker health and safety. The City can refer to the EPA's model pretreatment ordinance as it reviews its legal authority for regulating industrial discharges to ensure that it has the proper legal authority to regulate said discharges.

The audit team further recommends the City ensure it has authority under its SUO to inspect the pretreatment operations at its IUs and take samples representative of the facility's industrial wastewater discharge to the WWTP. At present, the SUO does not explicitly authorize the City to take samples at its IUs. Yet, on page 3 of each of the IU permits, the City includes the following statement: "The City shall routinely monitor and perform testing of the discharge into the system to determine Discharger's compliance with Chapter 13.08 of the Escalon Municipal Code, as well as the conditions of the permit."

#### **4. Local Limits**

The federal pretreatment regulations at 40 CFR 403.5(c) require POTWs to develop and enforce local limits to implement the general and specific prohibitions at 40 CFR 403.5(a) and (b). The pretreatment regulations also require POTWs to continue to develop these local limits as necessary and to effectively enforce these limits. In the event that the City were required to develop and implement a pretreatment program per the CWA (requiring it to comply with the pretreatment regulations at 40 CFR 403), the City would be required to develop and enforce specific limits to implement specific and general prohibitions listed in the federal regulations at 40 CFR 403.5(a)(1) and (b) of the federal regulations. Specifically, these local limits would be developed to protect the WWTP and collection system from industrial discharges. The limits should be technically based and should be evaluated on a regular basis to ensure protection of the POTW as a whole.

City representatives stated they had not developed or implemented local limits to protect the WWTP relative to the general and specific prohibitions listed in the federal regulations. The City, however, includes limits for flow in each of its IU permits. The limits vary based on whether discharge is occurring during the “on season” (1 June–15 November for EPB and 1 May–10 December for ECS) or the “off season” (16 November–31 May for EPB and 11 December–31 April for ECS). The City also includes mass-based limits for BOD in both permits. It includes a daily average limit for pH in both IU permits, which was incorrectly applied due to the fact that pH is a logarithmic function, and thus cannot be averaged. The audit team recommends the City express the limit for pH as instantaneous minimum and instantaneous maximum. Finally, the City includes a concentration-based and mass-based limit for total suspended solids (TSS) in the ECS permit. No limit is expressed for TSS in the EPB permit.

City representatives stated during the audit that they were uncertain how the limits had been determined for the two IUs. They speculated the limits had been developed based on engineering studies performed in response to the Regional Water Board’s 2003 CDO (R5-2003-0124). The audit team recommends that as the City completes studies due to the Regional Water Board’s latest CDO (R5-2014-0156), it use relevant data gathered to determine applicable local limits. The audit team further recommends the City fully document the rationale for any limits established. The City might find EPA’s local limits development guidance manual helpful in this effort.

## 5. Nondomestic Discharger Characterization

The federal pretreatment regulations at 40 CFR 403.8(f)(2) require POTWs to develop and implement procedures to identify and locate IUs that may be subject to the local pretreatment program. These procedures must also include proper categorization of all significant industrial users (SIUs) as defined by 40 CFR 403.3(v). In the event the City were required to develop and implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR 403), the City would be required to develop procedures to locate IUs generating and discharging wastewater to the City’s WWTP. At the time of the audit, the City had not developed an industrial waste survey or similar strategies to identify potential nondomestic dischargers within the City’s service area.

During the 2014 audit, City representatives stated the municipality’s two IUs had been discharging to the WWTP since the 1990s. The representatives were unaware of procedures or standard reviews the City may have conducted to identify possible new or existing IUs generating and discharging industrial-strength wastewater to the City’s WWTP. When asked if any City official periodically reviews freshwater consumption rates and wastewater discharge rates to determine possible new users, City representatives said they do as these rates are evaluated monthly for billing purposes.

As a component of the audit, the audit team conducted a general Internet search and referred to the EPA’s Envirofacts database to identify potential nondomestic dischargers within the City’s service area. As a result of the general Internet search, the audit team identified Hogan Manufacturing, a facility which, according to the facility’s Web site, conducts steel manufacturing and fabrication activities. The audit team asked the City representatives about this industry and the representatives stated that the facility had not been inspected. The audit team visited the facility’s main office (located at 1520 1st Street; Escalon, CA) and had general

conversations with a Hogan representative about general facility operations and wastewater-related activities occurring at the facility. The Hogan representative stated that the facility performed powder coating for its metal parts and pretreated and washed the metal prior to the powder coating operations. Wastewater generated from such activities are subject to federal categorical pretreatment standards at 40 CFR Part 433. The Hogan representative further stated that these operations took place at another facility within the City (19527 McHenry Avenue; Escalon, CA). The audit team attempted to conduct an inspection at the McHenry Avenue facility, but facility representatives were not available at the time of the inspection. Due to the nature of the discharges generated from this type of categorical operation, it is very strongly recommended that the City conduct a thorough followup inspection at the facility to identify potential wastestreams that are being discharged to the City's WWTP and may have a negative impact on the City's POTW. Using the inspection results, the City should determine the volume and nature of the wastewater discharged from the facility and regulate the facility's discharges as necessary to ensure proper operation of the City's WWTP.

A Hogan representative stated the facility was discharging wastewater (including process wastewater) to the City under an approved "permit," a copy of which was provided to the audit team during the onsite inspection. The permit consists of a building department routing sheet and an application form. Both forms appear to be dated in March 1991. The building department routing sheet includes a requirement from the Public Works Department for Hogan to submit monthly flow readings for at least the first 12 months of operation. A note at the bottom of the sheet further states, "The Discharge Application becomes a permit when the building permit is issued." It is unclear to the audit team the volume of industrial wastewater Hogan Manufacturing has discharged and continues to discharge to the City's WWTP. Moreover, the audit team is unclear to which WWTP treatment ponds, industrial or domestic, the discharge flows. City representatives were unaware that Hogan Manufacturing had any activities underway that would involve any type of industrial wastewater discharge.

Further, if Hogan Manufacturing is discharging industrial process wastewater to the City's POTW, the facility is in violation of section 13.08.030 of the City's SUO. This section of city code states, "It is unlawful for any person to discharge industrial waste into the sewage system of the city without first obtaining a permit to do so from the city manager. Permits shall be required on an annual basis." Therefore, the City is required to ensure that it is properly enforcing section 13.08.030 of its SUO.

The audit team recommends that the City review federal pretreatment requirements for the categorical wastewater requirements applicable to metal finishing facilities at 40 CFR Part 433 when developing the facility's permit to properly define limits and monitoring requirements. As part of this process, it is further recommended that the City identify the termination point of Hogan's industrial wastewater flows at the WWTP and make any necessary changes to ensure the plant complies with the conditions of its WDRs.

The audit team strongly recommends the City develop procedures for identifying nondomestic dischargers and for documenting the results of such efforts. Some activities should include annual reviews of Yellow Pages; periodic Internet searches and searches of local business association listings; periodic drive-by inspections of industrial areas and business parks; regular communication with staff reviewing water use records; coordination with building or other

municipal permitting authorities; and review of industries within the jurisdiction as shown on EPA's EnviroFacts Web site.

## 6. Control Mechanisms

To ensure compliance with applicable pretreatment standards, the federal pretreatment regulations at 40 CFR 403.8(f)(1)(iii) require POTWs to control the discharges from nondomestic dischargers by use of control mechanisms (permits or other similar means).

Section 13.08.030 of the City's SUO states that it is unlawful for any person to discharge industrial waste into the municipality's sewage system without first obtaining a permit to do so from the city manager. It further states that permits are required on an annual basis. Those wishing to discharge industrial waste must submit a written application to the City. The application must contain the name and address of the applicant; proposed location of the connection; estimated volume of wastes proposed to be discharged, time of peak loads, and other similar data; character of wastes proposed to be discharged; tonnage of waste to be processed, if applicable; and other information as may be deemed necessary by the city engineer.

The audit team reviewed copies of the current IU permits (2014–2015) for EPB and ECS. The permits consist of a cover page, which is the discharger's application sheet, followed by six sections of text. (Each permit is seven pages in length, not counting the application cover sheet.) Permit sections are titled authority, purpose, findings, conditions (and pretreatment requirements if applicable), enforcement, and miscellaneous provisions. Discharge limits and self-monitoring and reporting requirements are contained in the "Conditions" section of the permits. The final page of the IU permits contains an issuance date and the signatures of the city manager and responsible IU official. The IU permits reference the City's SUO with regard to prohibited discharges and the City's authority to disconnect certain discharges. Beyond these features, the audit team found the IU permits to contain few of the federally required pretreatment permit conditions at 40 CFR Part 403.

As noted in section 11.2, *Billing*, and section 3, *Legal Authority*, of this report, the City references section 13.08.140 as its authority to adjust monthly fees in its IU permits. This section of the SUO was repealed in 1986 by Ordinance 511. As previously stated, it is strongly recommended that the City revise its SUO and/or the references to code in its IU permits. It is further recommended that the City consider including requirements similar to some of the federal requirements in future iterations of its IU permits. In the event that the City is required to develop and implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR Part 403), the City would be required to ensure that control mechanisms issued to IUs contain, at a minimum, the following elements (as stated at 40 CFR 403.8 (f)(1)(iii)(B)(1)):

- Statement of duration (in no case more than five years).
- Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator.
- Effluent limits, based on applicable general pretreatment standards in part 403, categorical pretreatment standards, local limits, and state and local law.

- Self-monitoring, sampling, reporting, notification and recordkeeping requirement, including an identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, based on the applicable general pretreatment standards in part 403, categorical pretreatment standards, local limits, and State and local law.
- Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedules.
- Requirements to control slug discharges, if determined by the POTW to be necessary.

EPA has model pretreatment permits the City could consult for guidance. The City could further strengthen its IU permits by specifying the following for all parameters it requires its IUs to monitor: units, sample location, sample type, sample frequency, relevant analytical methods (see methods required of City's WWTP in Standard Provisions of WDRs), reporting frequency and contents (i.e., chain of custody, QA/QC results, etc.), and resampling requirements/procedures. The audit team demonstrates the value of including this information in IU permits in Table 1 under section 8.4, *Requesting, Receiving, and Analyzing Reports*, of this document.

## 7. Application of Pretreatment Standards and Requirements

The federal pretreatment regulations at 40 CFR 403.8(f)(1) require the City to have the legal authority to require compliance with applicable pretreatment standards and requirements and to ensure compliance with these standards and requirements through the use of control mechanisms such as permits.

As stated previously, the Regional Water Board's 2003 CDO (R5-2003-0124) required the City, in part, to implement an enhanced IPP with loading limits within the WWTP's treatment capacity and to implement a pre-season startup program to limit the potential for odor generation at the WWTP. The Regional Water Board's recent CDO (R5-2014-0156) states, "The Discharger completed the required tasks and Order R5-2003-0124 was rescinded on 2 December 2011." The Regional Water Board's latest CDO, however, directs the City to address odor issues "by evaluating the industrial pretreatment programs and seasonal startup procedures at the industrial facilities and the WWTP."

To date, the Regional Water Board has not required the City to implement an IPP commensurate with federal pretreatment regulations, but it has general authority to do so as stated in section 2233 of Title 23 of the California Code of Regulations (23 CCR § 2233, *Other Terms and Conditions to Be Included in Waste Discharge Requirements*). Specifically, item (a) of this section states, "A condition requiring a local pretreatment program may be included for a publicly owned treatment works treating or designed to treat an average dry weather flow of less than 5 mgd of community wastewater where deemed appropriate by the state board or regional board."

## 8. Compliance Monitoring

In the event that the City is required to implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR 403), it would be required to comply

with the federal pretreatment regulations at 40 CFR 403.8(f)(2)(v), which require a POTW to develop and implement an inspection and monitoring program to determine, independent of information supplied by nondomestic dischargers, compliance or noncompliance with applicable pretreatment standards and requirements. Furthermore, 40 CFR 403.8(f)(2)(vii) requires POTWs to investigate instances of noncompliance and to enforce the regulations as necessary.

In the subsections below, the audit team summarizes issues related to the following issues: compliance sampling; compliance inspections; requesting, receiving, and analyzing reports; and slug discharge control plans.

### **8.1 Compliance Sampling**

In the event the City is required to implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR 403), it would be required to comply with the regulations at 40 CFR 403.8(f)(2)(v). These regulations require all SIUs to be sampled at least once each year unless the POTW has authorized a CIU to forego sampling of a pollutant regulated by federal pretreatment requirements. In that case, the POTW must sample for the waived pollutant(s) at least once during the permit term (40 CFR 403.8(f)(2)(v)(A)).

City representatives stated they do not collect compliance samples at the IUs. However, during the IUs' production seasons (i.e., in season periods), the City visits the industries daily to read their respective flow meters.

The audit team strongly recommends that the City conduct sampling of its IUs at least once per year. The City should sample for all parameters included in the IU's permits, from the same locations required of the IUs, and using the same procedures and analytical methods. Moreover, the City should maintain documentation of its sampling activities (e.g., chain-of-custody and QA/QC). Consult the federal regulations at 40 CFR 403.8 for further guidance on the subject. See section 6, *Control Mechanisms*, and section 8.4, *Requesting, Receiving, and Analyzing Reports*, of this report regarding the importance of fully specifying sampling requirements in IU permits.

### **8.2 Compliance Inspections**

In the event that the City is required to implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR 403), it would be required to comply with the regulations at 40 CFR 403.8(f)(2)(v), which require all SIUs to be inspected at least once each year, unless a discharger is subject to the reduced reporting requirements under 40 CFR 403.12(e)(3). The POTW must inspect those dischargers at least once every two years [40 CFR 403.8(f)(2)(v)(C)].

City representatives stated they do not conduct inspections of the IUs. The audit team strongly recommends the City conduct comprehensive inspections of each IU (specifically evaluating the processes generating industrial wastewater) at least annually during the on season to ensure each facility is operating in compliance with its IU permit. The City should document and maintain all inspection activities and required corrective action. Documentation of these inspections should include specific manufacturing processes, condition of the pretreatment system, summaries of discussions held, calibration details, evaluation for the need to develop a slug discharge control

plan, and characteristics of facility effluent. The City's inspection reports should capture the uniqueness of features reviewed and items discussed during each facility inspection.

### **8.3 Nondomestic Discharger Site Inspections Conducted during the Audit**

As part of the audit, the audit team conducted inspections of the two permitted IUs: EPB and ESC. The audit team noted the following during the nondomestic discharger site visits:

- *Eckert Cold Storage*. The facility receives, washes, dices, freezes, and packages different types and quantities of peppers for the food industry. Pretreated wastewater from the facility's pepper washing and general sanitation operations is discharged to the City's sanitary sewer system. The facility was not in operation at the time of the inspection.

The facility's process area consisted of a large warehouse-type building that contained various process operations. The facility received different types of peppers, weighed them, washed them, and removed their pits and seeds. The peppers were then inspected, diced, blanched, and cooled prior to being packaged for shipment.

The facility representative stated that the facility conducted sanitation processes approximately four times per day. Sanitation processes included the use of soap and a quaternary ammonium sanitizer. Wastewater generated from the pepper washing, sanitation processes, and blowdown procedure were collected via trench drains and transported to the pretreatment system for treatment prior to being discharged to the City's sanitary sewer system. The facility representatives stated that the facility had recently increased its wastewater discharge volume and had taken extra precautions to decrease the risk of mold contaminating the products.

The facility discharged wastewater from its pepper washing process in addition to general sanitation operations, including cleaning process lines. The facility also generated boiler blowdown and condensate from the chilling and defrosting processes. The facility representatives stated that the wastewater generated at the facility was routed to the pretreatment system for treatment prior to being discharged to the City's sanitary sewer system.

The pretreatment system at the facility removes solids from the wastewater before it is discharged to the City's sanitary sewer system. Wastewater generated from the pepper washing process, sanitation operations, and blowdown and condensate is conveyed via trench drains either to sump 1 and then to sump 2 or directly to sump 2. The wastewater conveyed to sump 1 is filtered by a screen and is then pumped to sump 2. The wastewater collected in sump 2 flows through a screen for solids removal; a sample to determine the wastewater's pH is taken at the screen. After solids removal, the wastewater is discharged to the City's sanitary sewer system.

It should be noted that the City was not required to implement a pretreatment program at the time of the audit. As a component of the audit, the City representatives provided the audit team with a copy of the Eckert Cold Storage permit. This permit did not include an expiration date. According to the federal regulations at 40 CFR 403.8(f)(1)(iii)(B)(1), both individual and general control mechanisms must be enforceable and contain a

statement of duration (in no case more than 5 years). Therefore, it is strongly recommended that the City include a statement of duration, which does not exceed 5 years, in the SIU permits in accordance with 40 CFR 403.8(f)(1)(iii)(B)(1). This permit also did not include a notification of the industrial user's status and applicable pretreatment standards and requirements as a result of such status. According to the federal regulations at 40 CFR 403.8(f)(2)(iii), the POTW "shall develop and implement procedures to ensure compliance with the requirements of a pretreatment program. At a minimum, the POTW shall notify industrial users of applicable pretreatment standards and any applicable requirements and shall notify each SIU of its status as such and of all requirements applicable to it as a result of such status." It is strongly recommended that the City include a statement in the applicable permits notifying each SIU of its status as such and of all requirements applicable to it as a result of such status in accordance with 40 CFR 403.8(f)(2)(iii).

The facility was not in production and was not generating wastewater at the time of the inspection. The facility's on season typically occurred from June to October, and the off season took place from October to June (according to the Facility's permit, the on season occurred from May to mid-December and the off season took place from mid-December to the end of April). The facility representatives stated that during the production season the facility employed approximately 300 people and during the off season the facility employed approximately 50 people. The facility representatives also stated that during the production season the facility has two shifts and runs seven days per week; the hours of the first shift are 6:00 a.m.–3:00 p.m. and the second shift hours are 6:00 p.m.–3:00 a.m. During the off season the facility is typically staffed from 7:00 a.m. and 3:30 p.m.

The facility representatives stated that during the production season the facility generated and discharged between 5,000 and 7,000 gallons per day (gpd) of process wastewater to the city's sanitary sewer system.

The audit team observed that water was being discharged from the facility. The facility representatives stated that the discharge was not wastewater but stormwater. According to section 3, item 3 of the facility's permit, the "discharger discharges two types of industrial wastewater into the system: 1) water from storm pond which includes rainwater and 2) 'process' water which is used in conjunction with food processing. Said discharges are conveyed to the City's system through one isolated connection." Discussions with the City representatives revealed that the City had experienced capacity issues at the WWTP. In the event that the City continues to experience WWTP capacity issues that overwhelm the treatment processes and create a potential for the City's WDR Permit to be violated, it is strongly recommended that the City thoroughly evaluate the practice of accepting stormwater from the facility.

During the inspection of the pretreatment system, the facility representatives stated that their contract laboratory collected wastewater samples at the facility. Observations made of the sampler set up at the pretreatment system indicated that the contract laboratory may be measuring pH using a composite sample. According to Table II at 40 CFR 136, pH samples are to be collected as a grab samples and must be analyzed within 15 minutes of collection. A review of sampling data provided by the City indicated the facility's contract laboratory was collecting the sample but was not analyzing the sample within the

required 15-minute holding time. According to the federal regulations at 40 CFR 403.12(g)(3), grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. Additionally, 40 CFR 403.12(b)(5)(v) states that sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto. Although the City has not been required to develop and implement an EPA-approved pretreatment program, it is strongly recommended that the City ensure that samples collected at the facility are collected, preserved, and analyzed in accordance with the federal regulations at 40 CFR 136. In particular, the City should ensure that samples collected to assess the characteristics and pollutant loading of the wastewater are accurate and representative of the wastewater generated at the facility. Further, due to potentially inaccurate self-monitoring pH results, the City should collect samples independent from those of the industrial user and contract laboratory to assess industrial user compliance and evaluate the efficacy of the facility's pretreatment system in treating the wastewater.

During the inspection of the process area, the facility representatives stated that they had recently increased the volume of wastewater discharged (over the last year during the production season) and were taking extra precautions to reduce the possibility of mold contaminating their product. These precautions included conducting additional sanitation events and using peracetic acid in the chillers. The pretreatment system may not be designed to adequately treat wastewater containing peracetic acid. It is recommended that the City evaluate these discharge practices to ensure that acids are not being discharged to the City's POTW.

During the inspection of the facility's outdoor chemical storage area, the audit team observed that rainwater had collected within the bermed area of the chemical storage. The rainwater collected in this area appeared to reduce the available capacity of the containment area to contain a potential spill or leak. It is recommended that the City follow up with the facility to ensure that chemicals are being stored properly at the facility.

- *Escalon Premier Brands.* The facility processes fresh tomatoes for the U.S. food service industry under the brand names of 6-in-1, Allegro, Bontá, Bella Rosa, Christina's (an organic line), Cristoforo Colombo, and El Verano Sabroso. The tomatoes are processed and packaged in peeled, ground, diced, or crushed forms. The facility also produces ready-to-eat pizza sauce and tomato puree. Occasionally, the facility processes bell and jalapeno peppers.

The facility received tomatoes via truck. At the unloading dock, the facility removed tomatoes from the truck with water and loaded them onto conveyer belts. The incoming tomatoes were weighed, inspected, and then washed twice. They were conveyed to a "popping line," where their cores were removed and the tomatoes were halved. The tomatoes were then conveyed through reel washers, where their seeds were removed. From there, they moved onto inspection tables. Following inspection, the tomatoes were blanched via a light steam process. Tomatoes that were going to be diced passed through a hydrocooler, where they were cooled. The tomatoes passed through a series of shakers

prior to and following freezing. It should be noted that the facility was inspected during its off season, so tomatoes were not being processed.

The facility generated process wastewater from its tomato flushing process, tomato dewatering process, belt sprays, cleaning water, and clean-in-place (CIP) washing operations. It should be noted that the facility had two discharge lines to the POTW, one for sanitary wastewater and the second for industrial wastewater. The facility discharged most of its stormwater to onsite percolating ponds; however, it discharged a small portion via its industrial wastewater line to the POTW.

The facility generates wastewater when it flushes the tomatoes from the delivery truck beds. Excess water from the tomato flushing process in addition to wastewater from tomato dewatering, the belt sprayer, CIP operations, and other cleaning operations are collected and treated by the facility's pretreatment system prior to being discharged to the sanitary sewer. The facility representatives mentioned that the facility's two mechanical vapor recompression (MVR) evaporators create condensate, which is reused in the facility's boiler.

Wastewater is collected in a large pit, and two 1,500-gallon-per-minute (gpm) pumps drive it through a series of four overhead mesh screens. The solids caught in the screens fall into collection bins below the screens while wastewater flows into another tank. The wastewater is then pumped to the dissolved air floatation (DAF) unit, where flocculent chemicals are added and solids are skimmed from the wastewater. Finally, the wastewater is collected in a tank, pumped through the sampling point, and discharged to the City's sewer.

The solids from the DAF unit are routed into a screw press. Filtrate from the screw press is recirculated to the pit (to be treated by the DAF unit). The solids from the screw press are hauled offsite for disposal. The facility representatives stated there were no bypass options for the DAF unit.

It should be noted that the City was not required to implement a pretreatment program at the time of the audit. As a component of the audit, City representatives provided the audit team with a copy of the Escalon Premier Brands permit. This permit did not include an expiration date. According to the federal regulations at 40 CFR 403.8(f)(1)(iii)(B)(1), both individual and general control mechanisms must be enforceable and contain a statement of duration (in no case more than five years). Therefore, it is strongly recommended that the City include a statement of duration, which does not exceed five years, in the significant industrial user (SIU) permits in accordance with 40 CFR 403.8(f)(1)(iii)(B)(1). This permit also did not include a notification of the industrial user's status and applicable pretreatment standards and requirements as a result of such status. According to the federal regulations at 40 CFR 403.8(f)(2)(iii), the POTW "shall develop and implement procedures to ensure compliance with the requirements of a pretreatment program. At a minimum, the POTW shall notify industrial users of applicable pretreatment standards and any applicable requirements and shall notify each SIU of its status as such and of all requirements applicable to it as a result of such status." It is strongly recommended that the City include a statement in the applicable permits

notifying each SIU of its status as such and of all requirements applicable to it as a result of such status in accordance with 40 CFR 403.8(f)(2)(iii).

At the beginning of the facility inspection, the facility representatives requested that the audit team sign an agreement stating that photos and proprietary information would not be shared outside of the facility. The agreement also included a clause that would not allow the audit team to use and relay information collected during the facility inspection to the approval authority or other appropriate authorities in the event of noncompliance or during the development of any enforcement action related to the information discovered during the site inspection. Due to the conflict between the clause in the agreement and the purpose of the pretreatment compliance audit, the audit team did not sign the agreement; however, the City representatives did sign the agreement. It is strongly recommended that the City evaluate the agreement that it is signing. In the event that the City identifies permit violations or other items of noncompliance during facility inspections, the City should ensure that it has the proper legal authority to appropriately respond to the potential instances of noncompliance.

During the facility inspection, the facility representatives stated that the facility was not in operation. The facility's off season occurs from mid-October to mid-July. The facility's on season occurs from mid-July to mid-October (however, the Facility's permit states its off season occurs from mid-November to the end of May and the on season occurs from June 1 to mid-November). During the off season, the staffing schedule includes 2 shifts/day for labeling; 3 shifts/day for two 5-day weeks/month for production; and maintenance staff year round (approximately 1 shift). The on-season staffing includes all of the off-season staffing and one additional production shift. Production operates 24 hours/day, 7 days/week during the on season. Shipping (rail and truck) also occurs during these periods; the volume of shipping was not stated. During the on season, the facility's maximum allowed discharge rate is 2.4 million gallons per day (mgd), and its average discharge rate is 1.6 mgd.

The facility's permit states that the facility is allowed to discharge stormwater to the City's sanitary sewer. Due to the WWTP capacity issues discussed during the 2014 audit, it is strongly recommended that the City evaluate its process for allowing the facility to discharge stormwater to the WWTP.

In order to gain an understanding of processes taking place at the facility that might relate to issues occurring at the WWTP, the audit team asked the facility representatives to describe changes in operation that had taken place at the facility during the past year (2014). The facility representatives explained that the facility had changed its tomato peeling process resulting in a 3 percent increase in tomato peel recovery. The facility representative also stated that the facility was processing a different type of tomato and had changed the method of moving tomatoes into the facility. Additionally, the MVRs were being run for longer periods of time. The facility representative stated that sampling results indicated biochemical oxygen demand (BOD) and total suspended solids (TSS) levels had decreased in the past year.

There was confusion pertaining to pH sampling at the facility. At the beginning of the inspection, the facility representatives stated that the pH of the wastewater is measured

before the wastewater enters the DAF unit and that caustic chemicals may be added to the wastewater if its pH is below 5.5 standard units (s.u.). The facility representatives explained that this did not happen often. Later, during the inspection, the facility representatives stated that the pH of the wastewater is measured after the DAF unit, not before it. Although the pretreatment system was not in operation at the time of the inspection, a sampling port with a composite sampler was observed located after the DAF unit; this indicated that pH is measured after the DAF unit, not before the DAF unit.

Additionally, the facility representatives stated they did not have written procedures for starting the DAF unit for the on season. To their knowledge, they did not have a written start-up procedure filed with the City regarding these operations either. In 2013, the City requested that the facility provide notice one week prior to starting up operations for the on season. A City representative did not contact the facility with the same request prior to the start of the 2014 on season; however, according to the Pretreatment Requirements section of the facility's permit, "During the 'off season' Discharger shall notify the City of its production schedule a minimum of five (5) days in advance so that appropriate adjustments in the City's system may be scheduled." The facility is required to provide notification to the City prior to the start of the on season per the Pretreatment Requirements section of the permit, regardless of whether a City representative requests the notification or not. It is recommended that the facility develop written, standard procedures describing wastewater pretreatment and discharging operations to be conducted during the beginning and the end of the on season in order to create consistency in starting and decommissioning the system.

#### **8.4 Requesting, Receiving, and Analyzing Reports**

In the event that the City is required to implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR 403), it would be required to comply with the federal pretreatment regulations at 40 CFR 403.8(f)(2)(iv), which require the City to request, receive, and analyze all reports submitted by SIUs. In addition, the SIU reports must contain the information required at 40 CFR 403.12.

The City requires its IUs to perform self-monitoring for several parameters. The City presents this information in narrative form in the "Conditions" section (i.e., section 4) of its permits. The audit team tabulated the limits and self-monitoring and reporting requirements contained in the ECS permit; Table 1 below presents a summary. In the table, the audit team has highlighted in bold typeface those areas where the City's permit is missing information or is unclear regarding intent. Note the audit team found the self-monitoring requirements in the EPB permit to be similar to those in the ECS permit; therefore, the team has not presented them in this report. In general, the audit team recommends the City correct the deficiencies identified in Table 1 in its IU permits and sampling approach.

**Table 1. ECS Discharge Limits and Self-Monitoring and Reporting Requirements****Note:** Areas of the permit where information appeared to be missing or confusing is shown in **bold** typeface.

Parameter	Discharge Season <sup>1</sup>	Units	Limit	Limit Basis <sup>2</sup>	Sample Type <sup>3</sup>	Sample Frequency <sup>4</sup>	Analytical Method <sup>4</sup>	Reporting Frequency <sup>4</sup>	Comments <sup>5</sup>
Flow	On	mgd	1.5	MDEL	<b>NS</b>	D	<b>NS</b>	<b>W<sup>5</sup></b>	
Flow	On	gpm	1,500	MDEL	<b>NS</b>	D	<b>NS</b>	<b>W<sup>5</sup></b>	
Flow	On	mgd	1	ADEL	<b>NS</b>	D	<b>NS</b>	<b>W<sup>5</sup></b>	Monthly reporting implied but not stated; permit expresses limit as “average daily flow over any 30-day period.”
Flow	Off	gpm	600	ADEL	<b>NS</b>	D	<b>NS</b>	<b>W<sup>5</sup></b>	
BOD	<b>NS</b>	lbs/day	13,400	MDEL	C <sub>24</sub>	D	<b>NS</b>	<b>W<sup>5</sup></b>	
BOD	<b>NS</b>	lbs/mo	10,000	ADEL	C <sub>24</sub>	D	<b>NS</b>	<b>W<sup>5</sup></b>	Monthly reporting implied but not stated; permit expresses limit as “average daily flow over any 30-day period.”
COD	<b>NS</b>	<b>NS</b>	--	--	C <sub>24</sub>	D	<b>NS</b>	<b>W<sup>5</sup></b>	
COD	<b>NS</b>	<b>NS</b>	--	--	C <sub>24</sub>	D	<b>NS</b>	<b>W<sup>5</sup></b>	
Suspended solids	<b>NS</b>	mg/L	1,000	AMEL	C <sub>24</sub>	D	<b>NS</b>	<b>W<sup>5</sup></b>	
Suspended solids	<b>NS</b>	lbs/day	8,340	MDEL	C <sub>24</sub>	D	<b>NS</b>	<b>W<sup>5</sup></b>	
pH	<b>NS</b>	<b>NS</b>	6.0-8.5	<b>ADEL</b> See comment	G	M	<b>NS</b>	<b>NS</b>	It does not make sense to express a pH limit as a daily average.
Nitrates as nitrogen (NO <sub>3</sub> )	<b>NS</b>	<b>NS</b>	--	--	<b>NS</b>	M	<b>NS</b>	<b>NS</b>	
Total Kjeldahl nitrogen (TKN)	<b>NS</b>	<b>NS</b>	--	--	<b>NS</b>	M	<b>NS</b>	<b>NS</b>	
Specific conductivity (EC)	<b>NS</b>	<b>NS</b>	--	--	<b>NS</b>	M	<b>NS</b>	<b>NS</b>	
Chloride (Cl)	<b>NS</b>	<b>NS</b>	--	--	<b>NS</b>	M	<b>NS</b>	<b>NS</b>	
Sodium (Na)	<b>NS</b>	<b>NS</b>	--	--	<b>NS</b>	M	<b>NS</b>	<b>NS</b>	
Volatile organic compounds (VOC)	<b>NS</b>	<b>NS</b>	--	--	<b>NS</b>	M	<b>NS</b>	<b>NS</b>	Federal regulations require grab samples of VOCs at 40 CFR 403.12(g)(3). Audit team recommends the City specify the particular VOCs the discharger is to assess in the IU permits.

Parameter	Discharge Season <sup>1</sup>	Units	Limit	Limit Basis <sup>2</sup>	Sample Type <sup>3</sup>	Sample Frequency <sup>4</sup>	Analytical Method <sup>4</sup>	Reporting Frequency <sup>4</sup>	Comments <sup>5</sup>
Total dissolved solids (TDS)	NS	NS	--	--	NS	M	NS	NS	
Fixed dissolved solids (FDS)	NS	NS	--	--	NS	M	NS	NS	
Volatile dissolved solids	NS	NS	--	--	NS	M	NS	NS	
Barium	Sept. or Oct.	NS	--	--	NS	1/Y	NS	NS	
Calcium	Sept. or Oct	NS	--	--	NS	1/Y	NS	NS	
Magnesium	Sept. or Oct	NS	--	--	NS	1/Y	NS	NS	
Sodium	Sept. or Oct	NS	--	--	NS	1/Y	NS	NS	City requires monthly monitoring of this parameter already.
Potassium	Sept. or Oct	NS	--	--	NS	1/Y	NS	NS	
Chloride	Sept. or Oct	NS	--	--	NS	1/Y	NS	NS	City requires monthly monitoring of this parameter already.
Sulfate	Sept. or Oct	NS	--	--	NS	1/Y	NS	NS	
Total alkalinity (including alkalinity series)	Sept. or Oct	NS	--	--	NS	1/Y	NS	NS	Measurements of total alkalinity of wastewater effluent is usually required as CaCO <sub>3</sub> .
Hardness	Sept. or Oct	NS	--	--	NS	1/Y	NS	NS	

<sup>1</sup> On=On season (May 1 to December 10); Off=Off season (December 11 to April 30) on rainy days or during periods of heavy rain. **Heavy rain is not defined**; and NS=Not specified.

<sup>2</sup> MDEL=maximum daily effluent limit; ADEL=average daily effluent limit; AMEL=average monthly effluent limit.

<sup>3</sup> NS = not specified; C<sub>24</sub>=24-hour composite sample; and G=Grab sample.

<sup>4</sup> D=Daily; W=Weekly; M=Monthly; Y=Yearly; 1/Y= once per year.

<sup>5</sup> **In the second sentence of the last paragraph on page 3, the permit states the discharger is to sample daily for these parameters and “submit all results to the City as soon as they are received.” The last sentence in the paragraph states that the daily sample results for the parameters “shall be recorded, tabulated and submitted to the City... on a weekly basis, or as otherwise requested...”**

As a component of the 2014 audit, the audit team requested copies of self-monitoring data for calendar year 2013 or 2014. The City supplied the requested data for flow, BOD, and TSS for both IUs at the time of the audit. The City supplied the audit team with IU sampling data for the other self-monitoring parameters via e-mail on 31 December 2014. Table 2 summarizes the information in the specific sampling reports received, including parameters and sampling periods. During the onsite portion of the audit, City representatives stated that a staff person in the central office tabulates the IUs' self-monitoring data for flow, BOD, and TSS. In general, the staff person tabulates this information on a monthly basis for each industry in order to generate a bill for wastewater service. City representatives provided the audit team with copies of the municipality's monthly tabulations for 2014 for both ECS and EPB at the time of the onsite review.

**Table 2. Summary of IU Self-Monitoring Reports Provided by City**

Parameter Types (Refer to Table 1 for specific parameters.)	ECS	EPB
Parameters requiring daily sampling	Provided sampling data covering period June–October, 2014. <sup>1</sup>	Provided sampling data covering period January–November, 2014.
Parameters requiring monthly sampling	Provided sampling data for sample collection dates as follows: 2013 (7/13, 8/13, 8/22, 9/11, and 10/9) and 2014 (7/14, 9/9, and 10/7).	Provided sampling data for sample collection dates as follows: 2014 (7/10, 9/9, and 10/9).
Parameters requiring annual sampling	Provided sampling data for sample collection dates as follows: 2013 (9/11 and 9/13) and 2014 (9/9).	Provided sampling data for sample collection date of 9/9/14.

<sup>1</sup>ECS also submitted daily sample results for pH for the sampling periods noted. The self-monitoring requirement for pH is monthly.

The audit team has reviewed the self-monitoring data described in Table 2. Based on the data provided and onsite discussions with City representatives, it is not clear to the audit team if the municipality ever responded to the items identified below.

- Regarding the submittal of self-monitoring reports for parameters sampled on a daily basis, it appears ECS submitted the data on a monthly basis rather than weekly basis, as required by the IU permit. It appears that EPB submitted its reports for the daily parameters at the end of the harvest season (containing 8 months of data). The City did not provide the audit team with any records indicating it had agreed to the submittal of reports at a different frequency than what it specified in the two IU permits. Therefore the City is required to ensure that ECS and EPB submit the required sampling to the City on a weekly basis in accordance with the provision provided in the “Pretreatment Requirements” section of the facility’s permit.
- Based on the information provided to the audit team, ECS submitted data relative to its limit for maximum daily flow. ECS did not submit calculations for its limit for maximum daily and average daily flow rates.
- EPB appears not to have calculated and presented its maximum daily flow rate in gallons per minute.
- For BOD, ECS appears to have submitted data applicable to its maximum daily effluent limit but none relative to its average daily effluent limit.

- As shown in the Tables above, neither ECS nor EPB had submitted sampling results for chemical oxygen demand (COD) as required by the IU permits.
- Based on the information provided to the audit team, ECS submitted data relative to its maximum daily effluent limit for TSS. ECS did not submit calculations for its average monthly effluent limit for the parameter.
- The ECS permit states that composite sampling shall be used for BOD, COD, and TSS. It appears ECS employed grab samples for BOD and TSS. EPB’s laboratory reports for monthly parameters appear not to specify sample type.
- Several copies of the reports regarding VOCs from Aquatic Research Inc. for ECS and EPB appear to have parameters and corresponding sample results cut off at the bottom of the report pages. Therefore, the reports are missing information (or at least the copies of the reports the audit team received).
- It appears Aquatic Research Inc. used a solid waste method (EPA Method 8260) when analyzing EPG and ECS samples for VOCs. See list of sample dates in Table 2 above in the “parameters requiring monthly monitoring” row.
- The IU permits require monthly sampling for pH. ECS appears to have also taken pH samples on a daily basis. The daily sampling results reveal multiple exceedances of the pH minimum of 6 s.u.—12 in July 2014 and 21 in August 2014. Of these 33 exceedances, the lowest value, which was obtained on multiple days, was 5.6 s.u.

There also appear to have been exceedances of the pH limit of not less than 6.0 s.u. nor greater than 8.5 s.u. in ECS’s monthly laboratory reports, as summarized in Table 3 below.

**Table 3. ECS Exceedances of Monthly pH Limits**

Sample Date	pH Result (in s.u.)
<b>2013</b>	
13 July	4.8
22 August	5.8
11 September	5.2
<b>2014</b>	
29 July	4.5
13 August	9.0
9 September	4.4
7 October	5.2

In an ECS letter to the City, dated 16 December 2003, the IU stated it had installed a chemical feed pump in the latter part of its 2003 season to raise pH levels. (This letter was part of a package of materials the Regional Water Board provided the audit team in advance of the onsite review). The ECS letter further noted the feed pump operates when the facility’s discharge pumps are

activated. Due to the multiple pH exceedances, it is strongly recommended that the City conduct a followup inspection at ECS to identify potential causes of pH exceedances including ECS’s chemical management practices, equipment maintenance procedures, locations where samples are collected, methods of testing and preservation, and frequency of measurement calibration.

EPB’s monthly monitoring report for samples collected on 9 September 2014 do not contain a result for pH. The laboratory report for the sample collected on 10 July 2014 provides a value of 5.4 s.u. for pH, a violation of EPB’s minimum permitted pH limit of 6.0 s.u. The laboratory report for the sample collected on 9 October 2014 provides a value of 11.6 s.u. for pH, a violation of EPB’s maximum permitted pH limit of 8.5 s.u. During onsite discussions, City representatives stated there were low pH issues at EPB.

Moreover, they had identified considerable corrosion in EPB's 24-inch discharge pipe when lining it. The City representatives did not state when the section of the sewer system was lined. For more information on the pH exceedances, refer to section 10, *Enforcement*, below.

From the information submitted by the City and onsite discussions, the extent to which the municipality reviewed the IU's self-monitoring data and whether it responded to limit violations and other problems with the submittals was unclear to the audit team. It is strongly recommended that the City develop a process for reviewing reports and recording the results of such reviews. A POTW should be evaluating self-monitoring reports for violations of discharge limits and monitoring and reporting requirements. It should also be taking compliance samples for parameters of concern at least annually (see recommendation under section 8.1, *Compliance Sampling*) and assessing this information for discharge limit violations.

### **8.5 Slug Discharge Control Plans**

In the event the City is required to implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR 403), it would be required to comply with the federal pretreatment regulations at 40 CFR 403.8(f)(2)(vi). These regulations require applicable municipalities to evaluate each of their SIUs, either by October 14, 2006 or within one year of the facility's becoming an SIU, to determine whether the SIU needs to develop and implement a slug discharge control plan (SDCP). A slug discharge is any discharge of a non-routine, episodic nature, including an accidental spill or non-customary batch discharge [40 CFR 403.8(f)(2)(vi)]. The regulations also require an SIU to notify the POTW immediately of any changes at its facility affecting the potential for a slug discharge.

The City's SUO and IU permits do not require facilities to develop or implement SDCPs. During the 2014 audit, City representatives stated they have been performing visual inspections for slug discharges since taking their respective positions with the WWTP. During that time, they have not observed any slug discharges. City representatives stated they had not found any records of past slug discharge inspections or occurrences. The audit team strongly recommends the City not only inspect for slug discharges during onsite inspections at the IUs but ultimately evaluate each IU's potential for a slug discharge to occur. If there is potential, the City should require the applicable IU to develop an SDCP. The audit team further recommends the City record its evaluation for the potential for slug discharges to occur.

## **9. Enforcement**

In the event the City is required to implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR 403), it would be required to comply with the federal pretreatment regulations at 40 CFR 403.8(f)(5). These regulations require applicable municipalities to develop and implement an enforcement response plan (ERP). This plan must contain detailed procedures indicating how the municipality will investigate and respond to instances of industrial user noncompliance.

During onsite discussions, City representatives stated they did not have an ERP but would likely develop one in the future. Section 13.08.460 of the City's SUO provides the municipality authority to petition the court for issuance of injunctive or other equitable relief and it provides

for civil enforcement. This section of the City's SUO does not provide detail on criminal enforcement actions.

The audit team recommends that the City evaluate its existing SUO to ensure it has the proper legal authority to enforce pretreatment and other requirements and modify the ordinance to the extent necessary. The audit team further recommends the City develop an ERP describing how the municipality will respond to instances of anticipated industrial user noncompliance as granted by the SUO. The City should note that enforcement language in its IU permits should be consistent with language contained in its SUO and ERP. EPA has model SUOs and IU permits in addition to a guidance document on developing an ERP that might facilitate the City's efforts in pursuing the recommended activities. The City should also consult the federal regulations at 40 CFR 403.8(f)(5)(i-iv), which specifies the information an ERP must address.

As indicated in section 8.4, *Requesting, Receiving, and Analyzing Reports*, it appears the City did not review self-monitoring data to assess compliance with permit monitoring requirements. Moreover, it appears the City did not respond to instances of industrial user noncompliance with permit limits. For example, the City did not issue a notice of violation or require the IUs to undertake actions to ensure they returned to compliance (i.e., collecting resamples). Specifically, multiple pH violations were documented. According to section 4, "Conditions," item number 4 of the IU permits, "The pH shall not be less than 6.0 or greater than 8.5 (daily average). Chemicals used to control pH shall be approved by the City Engineer." From the information provided by the City and onsite discussions, the City did not take enforcement action against multiple instances of discharge violations from the IUs. Section 5 of the IU permits states, "In the event that discharger fails, refuses, or neglects to comply with the requirements set forth herein, the city may assess charges in addition to all other charges set forth in this permit and may require City-specified reduction in or cessation of wastewater flow from the discharger if necessary to avoid violations of permit requirements." The audit team strongly recommends that the City respond to instances of industrial user noncompliance in order to avoid experiencing violations of its WDRs and to protect the POTW as a whole.

When asked if the City annually calculates which of its IUs are in significant noncompliance (SNC), City representatives responded they were unfamiliar with the term. They noted the only calculations they perform are those related to assessments of IU pollutant loads on a monthly basis in order to prepare bills. See section 11.2, *Billing*, for further information on this topic.

The audit team has previously recommended the City begin reviewing the IUs' self-monitoring data for compliance purposes and take enforcement action where necessary. The City's ERP should spell out the steps the City will follow with respect to violations, showing how it will escalate enforcement if an IU fails to remedy violations.

When asked if the City had ever taken enforcement action to respond to instances of noncompliance with one of its IUs, City representatives stated they had with EPB due to discharge issues associated with the Regional Water Board's 2003 CDO. City representatives stated they did not refer to the action as a violation notice because EPB objected to the terminology. Instead, the City established a "Waste Water Surcharge Agreement" with EPB. The City will need to take issues such as this into consideration if it enhances its enforcement authority in its SUO and articulates its enforcement tools and processes in its ERP. If the City's

authority and supporting documents require the issuance of notices of violation followed by administrative orders or other actions, that is indeed how the City should respond.

## 10. Data Management

City representatives stated they could not find any databases the former WWTP staff may have put in place, nor could they find any related records. City representatives stated the current WWTP operator began tracking monitoring data in Microsoft Excel spreadsheets beginning in the fall of 2014. During the onsite visit, the City provided the audit team with electronic copies of these spreadsheets. The audit team received four Excel spreadsheets for tracking data relative to the following parameters:

- Dissolved oxygen (DO) levels per workday per month in the industrial treatment and percolation ponds and in the domestic treatment and percolation ponds. Data is included in the spreadsheet file for the months September–December 2014.
- Freeboard measurements per workday per month in the industrial treatment and percolation ponds and in the domestic treatment and percolation ponds. Data is included in the database file for the months September–December 2014.
- Both industrial and domestic influent flows (metered and actual) to the wastewater treatment plant per workday per month. The spreadsheet file does not contain metered data for industrial flows for the months of January–June 2014.
- Metered and actual discharge flows from EPB and ECS per workday per month. Data is included in the database for the months of October–December 2014.

City representatives stated they accept electronic reporting from their IUs. They stated the City's attorney pays attention to federal proposed e-reporting rules.

As evidenced by the above narrative, the City's representatives stated they had few records related to their pretreatment program. The audit team strongly recommends the City begin fully documenting its activities in this area. This includes maintaining records of SUO changes, IU permit applications, IU permits, IU self-monitoring records and the City's review of said information, the City's followup actions with respect to IU monitoring or discharge violations, City IU inspection reports including compliance sampling results, and City enforcement actions against IUs.

## 11. Program Resources

In this section of the report, the audit team briefly summarizes information regarding the City's resources (budget) for pretreatment activities.

### 11.1 Budget

During the audit, City representatives provided the audit team with relevant pages from the following document: *City of Escalon Budget at a Glance: Introduction to the Annual Budget Fiscal Year 2014/15*. The document is available on the City's Web site at <http://cityofescalon.org/e-documents/finance/budget/Budget%2014-15.pdf>. A summary of budget elements pertinent to industrial wastewater is presented below:

- The City’s fiscal year (FY) is July 1–June 30.
- The City’s total combined proposed annual budget for FY 2014–2015 is \$9,715,142.
- The budget includes an appropriation of \$479,009 for the Public Works Department from the overall appropriated amount for the General Fund for FY 2014–2015. This amount represents 14 percent of the overall appropriated General Fund budget of approximately \$3.5 million.
- The City maintains enterprise funds (i.e., funds that account for self-supporting activities that provide services on a user-charge basis) for water, sewer, storm, and public transit. The City estimates the following for industrial wastewater in FY 2014–2015:

Estimated Beginning Fund Balance	Revenues	Expenditures	Net Surplus (Deficit)	Estimated Ending Reserve Balance
(\$516,153)	\$778,594	\$900,406	(\$121,812)	(\$637,965)

- City representatives stated they are working with a consulting firm (Hansford Consulting) to review the City’s current user fees in an effort to maintain service and assets. The water fund was under review at the time of the onsite audit. City representatives estimated the wastewater user fund would be evaluated in 2015.
- The City’s capital improvement program for FY 2014–2015 includes some planned wastewater treatment related expenditures. The audit team did not ask City representatives to delineate which of the planned expenditures would be related to pretreatment.

## 11.2 Billing

City representatives stated, in general, that IU fees include a base rate, which was the rate first established to cover the estimated costs of City personnel to maintain WWTP operations related to industrial discharges. The base rate is adjusted annually. When preparing the annual IU permits, the City escalates the previous year’s base rates by 3 percent to derive the new base rate. In addition to the base rate, the City charges each IU fees based on their respective monthly flow rates and BOD and TSS loadings. The City bills the IUs on a monthly basis. It informs the IUs of their rates in each annual IU permit. Table 4 summarizes the IU billing rates from section 4 of the IU permits for 2014–15.

**Table 4: Monthly IU Fees for FY 2014–2015 Permit Year**

FY 2014–2015 Rates	ESC Fees Per Month	EPB Fees Per Month
Base rate	\$7,852.93	\$22,400.65
Flows	\$102.56 per million gallons	\$102.56 per million gallons
BOD	\$14.90 per 1,000 pounds	\$14.90 per 1,000 pounds
TSS	\$19.34 per 1,000 pounds	\$31.67 per 1,000 pounds
Debt service	\$647	\$4,215

If the City intends to continue making annual rate adjustments, it should ensure it references the correct section of the SUO granting it such authority in its IU permits. The current IU permits reference section 13.08.140, which has been repealed.

It should be noted that due to the scope of the audit, the City’s method for establishing its monthly rates of flow, BOD, and TSS were not discussed. Also, an in-depth review of debt

service fees was not conducted. However, City representatives stated the municipality derives the monthly billing rates for flow, BOD, and TSS based on the self-monitoring data submitted by the IUs. See more information related to this topic in section 8.4, *Requesting, Reviewing, and Analyzing Reports*.

## 12. Summary of Requirements and Recommendations

Listed below are the primary requirements and recommendations resulting from the audit of the City's pretreatment program. For more specific information pertaining to each comment, please refer to the cited sections of the report.

### 12.2 Requirements

1. In the event that the Hogan Manufacturing facility (a nondomestic discharger identified during the audit) is discharging industrial process wastewater to the City's POTW, the facility is in violation of section 13.08.030 of the City's SUO. This section of city code states, "It is unlawful for any person to discharge industrial waste into the sewage system of the city without first obtaining a permit to do so from the city manager. Permits shall be required on an annual basis." Therefore, the City is required to ensure that it is properly enforcing section 13.08.030 of its SUO. (Section 5, *Nondomestic Discharger Characterization*)
2. The EPB facility representatives stated they did not have written procedures for starting the dissolved air floatation (DAF) unit for the on season. To their knowledge, they did not have a written start-up procedure filed with the City regarding these operations either. In 2013, the City requested that the facility provide notice one week prior to starting up operations for the on season. A City representative did not contact the facility with the same request prior to the start of the 2014 on season; however, according to the Pretreatment Requirements section of the facility's permit, "During the 'off season' Discharger shall notify the City of its production schedule a minimum of five (5) days in advance so that appropriate adjustments in the City's system may be scheduled." The facility is required to provide notification to the City prior to the start of the on season per the Pretreatment Requirements section of the permit, regardless of whether a City representative requests the notification or not. The audit team recommends that the facility develop written, standard procedures describing wastewater pretreatment and discharging operations to be conducted during the beginning and the end of the on season in order to create consistency in starting and decommissioning the system. Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)
3. Regarding the submittal of self-monitoring reports for parameters sampled on a daily basis, it appears ECS submitted the data on a monthly basis rather than weekly basis, as required by the IU permit. It appears that EPB submitted its reports for the daily parameters at the end of the harvest season (containing 8 months of data). The City did not provide the audit team with any records indicating it had agreed to the submittal of reports at a different frequency than what it specified in the two IU permits. Therefore the City is required to ensure that ECS and EPB submit the required sampling to the City on a weekly basis in accordance with the provision provided in the "Pretreatment Requirements" section of the facility's permit. (Section 8.4, *Requesting, Receiving, and Analyzing Reports*)

## 12.2 Recommendations

1. Although the City has not been required to implement a pretreatment program and City representatives explained they had experienced considerable turnover in staff, it is strongly recommended that the City maintain documentation of communications with those hauling wastewater to the WWTP. Such communications should specify the nature and volume of wastewater the City has agreed to accept; the City's sampling requirements of the discharger (e.g., pollutants to be analyzed and rationale, number and type of samples to be collected, sample location, analytical methods, etc.); and the protocol the discharger is to follow at the WWTP (e.g., entrance procedures, discharge point, waste manifest requirements, etc.). The audit team strongly recommends the City use and require its IUs and waste haulers to use EPA-approved analytical methods as specified at 40 CFR Part 136 when collecting samples and performing analyses of wastewater. It is further recommended the City develop structured procedures for documenting the hauled waste discharges at the WWTP. (Section 2.3, *Description of the City's Wastewater Treatment Plant*)
2. Given the capacity issues and the lack of records at the WWTP, the audit team strongly recommends the City not accept hauled wastewater until such time that it has fully resolved its capacity issues to the satisfaction of the Regional Water Board. After that time, if the City opts to accept hauled wastewater, it should fully outline program requirements, prepare appropriate implementation and documentation materials, ensure it has the proper legal authority to accept such wastes, and train relevant staff in implementing the program. The City is reminded it must meet WDR permit conditions, including the Standard Provisions, when making a decision whether to accept hauled wastewater. (Section 2.3, *Description of the City's Wastewater Treatment Plant*)
3. As a result of the 2014 audit, the audit team recommends that the City continue to participate in the San Joaquin County's pharmaceutical management program and those, if available, of local law enforcement agencies. To the extent that pharmaceutical waste poses a threat to the City's WWTP and the underlying groundwater, the City should consider increased outreach to areas with high volumes of discharge, such as senior care centers, hospitals, and apartment complexes. Pharmaceutical take-back events have proven to be a simple and effective way of reducing the harmful effects of pharmaceuticals in wastewater on human health and aquatic organisms (in surface water systems). The San Francisco Bay Area Pollution Prevention Group (BAPPG) has implemented what the U.S. Environmental Protection Agency considers model programs. (Section 2.4.1, *Pharmaceutical Recovery*)
4. City representatives stated the municipality does not have industrial laundries within its jurisdiction. It is recommended that the City discuss and review the EPA's Safer Detergents Stewardship Initiative (SDSI) program with any industrial laundries that may come into the City's jurisdiction in the future. This program is a voluntary one under which laundries commit to the use of safer surfactants. Safer surfactants, such as linear alcohol ethoxylates, break down quickly to non-polluting compounds. An example of a surfactant class that does not meet the definition of a safer surfactant is nonylphenol

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ethoxylates (NPEs). NPEs and their breakdown products are toxic to aquatic life. (Section 2.4.3, *Industrial Laundries*)

5. In the event that the City experiences issues with FOG waste accumulating within the collection system, the audit team recommends that the City develop a formal FOG program and ensure that it has the proper authority to inspect and issue proper enforcement action related to facilities generating and discharging grease-related wastes that may cause blockages within the sewer system and negatively impact the POTW as a whole. (Section 2.4.4, *Performance Measures*)
6. Overall, the audit team strongly recommends the City include the general pretreatment prohibitions specified at 40 CFR 403.5(a) and (b) in its SUO. The intent of these provisions is to protect the integrity of a City's sewer system/plant and to protect worker health and safety. The City can refer to the EPA's model pretreatment ordinance as it reviews its legal authority for regulating industrial discharges to ensure that it has the proper legal authority to regulate said discharges. (Section 3, *Legal Authority*)
7. The audit team further recommends the City ensure it has authority under its SUO to inspect the pretreatment operations at its IUs and take samples representative of the facility's industrial wastewater discharge to the WWTP. At present, the SUO does not explicitly authorize the City to take samples at its IUs. Yet, on page 3 of each of the IU permits, the City includes the following statement: "The City shall routinely monitor and perform testing of the discharge into the system to determine Discharger's compliance with Chapter 13.08 of the Escalon Municipal Code, as well as the conditions of the permit." (Section 3, *Legal Authority*)
8. City representatives stated they had not developed or implemented local limits to protect the WWTP relative to the general and specific prohibitions listed in the federal regulations. The City, however, includes limits for flow in each of its IU permits. The limits vary based on whether discharge is occurring during the "on season" (1 June–15 November for EPB and 1 May–10 December for ECS) or the "off season" (16 November–31 May for EPB and 11 December–31 April for ECS). The City also includes mass-based limits for BOD in both permits. It includes a daily average limit for pH in both IU permits, which was incorrectly applied due to the fact that pH is a logarithmic function, and thus cannot be averaged. The audit team recommends the City express the limit for pH as instantaneous minimum and instantaneous maximum. Finally, the City includes a concentration-based and mass-based limit for total suspended solids (TSS) in the ECS permit. No limit is expressed for TSS in the EPB permit. (Section 4, *Local Limits*)
9. City representatives stated during the audit that they were uncertain how the limits had been determined for the two IUs. They speculated the limits had been developed based on engineering studies performed in response to the Regional Water Board's 2003 CDO (R5-2003-0124). The audit team recommends that as the City completes studies due to the Regional Water Board's latest CDO (R5-2014-0156), it use relevant data gathered to determine applicable local limits. The audit team further recommends the City fully document the rationale for any limits established. (Section 4, *Local Limits*)

10. As a component of the audit, the audit team conducted a general Internet search and referred to the EPA's Envirofacts database to identify potential nondomestic dischargers within the City's service area. As a result of the general Internet search, the audit team identified Hogan Manufacturing, a facility which, according to the facility's Web site, conducts steel manufacturing and fabrication activities. The audit team asked the City representatives about this industry and the representatives stated that the facility had not been inspected. The audit team visited the facility's main office (located at 1520 1st Street; Escalon, CA) and had general conversations with a Hogan Manufacturing representative about general facility operations and wastewater-related activities occurring at the facility. The Hogan representative stated that the facility performed powder coating for its metal parts and pretreated and washed the metal prior to the powder coating operations. Wastewater generated from such activities are subject to federal categorical pretreatment standards at 40 CFR Part 433. Due to the nature of the discharges generated from this type of categorical operation, it is very strongly recommended that the City conduct a thorough followup inspection at the facility to identify potential wastestreams that are being discharged to the City's WWTP and may have a negative impact on the City's POTW. Using the inspection results, the City should determine the volume and nature of the wastewater discharged from the facility and regulate the facility's discharges as necessary to ensure proper operation of the City's WWTP. (Section 5, *Nondomestic Discharger Characterization*)
11. The audit team recommends that the City review federal pretreatment requirements for the categorical wastewater requirements applicable to metal finishing facilities at 40 CFR Part 433 when developing the Hogan Manufacturing facility's permit to properly define limits and monitoring requirements. As part of this process, it is further recommended that the City identify the termination point of Hogan's industrial wastewater flows at the WWTP and make any necessary changes to ensure the plant complies with the conditions of its WDRs. (Section 5, *Nondomestic Discharger Characterization*)
12. The audit team strongly recommends the City develop procedures for identifying nondomestic dischargers and for documenting the results of such efforts. Some activities could include annual reviews of Yellow Pages; periodic Internet searches and searches of local business association listings; periodic drive-by inspections of industrial areas and business parks; regular communication with staff reviewing water use records; coordination with building or other municipal permitting authorities; and review of industries within the jurisdiction as shown on EPA's EnviroFacts Web site. (Section 5, *Nondomestic Discharger Characterization*)
13. The audit team recommends the City consider including requirements similar to some of the federal requirements in future iterations of its IU permits. In the event that the City is required to develop and implement a pretreatment program per the CWA (required to comply with the federal regulations at 40 CFR Part 403), the City would be required to ensure that control mechanisms issued to IUs contain, at a minimum, the elements stated at 40 CFR 403.8 (f)(1)(iii)(B)(1). (Section 6, *Control Mechanisms*)
14. The audit team strongly recommends that the City conduct sampling of its IUs at least once per year. The City should sample for all parameters included in the IU's permits, from the same locations required of the IUs, and using the same procedures and

analytical methods. Moreover, the City should maintain documentation of its sampling activities (e.g., chain-of-custody and QA/QC). Consult the federal regulations at 40 CFR 403.8 for further guidance on the subject. (Section 6, *Control Mechanism*; Section 8.1, *Compliance Sampling*; and Section 8.4, *Requesting, Receiving, and Analyzing Reports*)

15. City representatives stated they do not conduct inspections of the IUs. The audit team strongly recommends the City conduct comprehensive inspections of each IU (specifically evaluating the processes generating and disposing of industrial wastewater) at least annually during the on season to ensure each facility is operating in compliance with its IU permit. The City should document and maintain all inspection activities and required corrective action. Documentation of these inspections should include specific manufacturing processes, condition of the pretreatment system, summaries of discussions held, calibration details, evaluation for the need to develop a slug discharge control plan, and characteristics of facility effluent. The City's inspection reports should capture the uniqueness of features reviewed and items discussed during each facility inspection. (Section 8.2, *Compliance Inspections*)
16. As a component of the audit, the City representatives provided the audit team with a copy of the Eckert Cold Storage permit. This permit did not include an expiration date. According to the federal regulations at 40 CFR 403.8(f)(1)(iii)(B)(1), both individual and general control mechanisms must be enforceable and contain a statement of duration (in no case more than 5 years). Therefore, it is strongly recommended that the City include a statement of duration, which does not exceed 5 years, in the SIU permits in accordance with 40 CFR 403.8(f)(1)(iii)(B)(1). This permit also did not include a notification of the industrial user's status and applicable pretreatment standards and requirements as a result of such status. According to the federal regulations at 40 CFR 403.8(f)(2)(iii), the POTW "shall develop and implement procedures to ensure compliance with the requirements of a pretreatment program. At a minimum, the POTW shall notify industrial users of applicable pretreatment standards and any applicable requirements and shall notify each SIU of its status as such and of all requirements applicable to it as a result of such status." It is strongly recommended that the City include a statement in the applicable permits notifying each SIU of its status as such and of all requirements applicable to it as a result of such status in accordance with 40 CFR 403.8(f)(2)(iii). (Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)
17. The audit team observed that water was being discharged from the ECS facility at the time of the inspection. The facility representatives stated that the discharge was not wastewater but stormwater. According to section 3, item 3 of the facility's permit, the "discharger discharges two types of industrial wastewater into the system: 1) water from storm pond which includes rainwater and 2) 'process' water which is used in conjunction with food processing. Said discharges are conveyed to the City's system through one isolated connection." Discussions with the City representatives revealed that the City had experienced capacity issues at the WWTP. In the event that the City continues to experience WWTP capacity issues that overwhelm the treatment processes and create a potential for the City's WDR Permit to be violated, it is strongly recommended that the City thoroughly evaluate the practice of accepting stormwater from the facility. (Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)

18. During the inspection of the pretreatment system at ECS, the facility representatives stated that their contract laboratory collected wastewater samples at the facility. Observations made of the sampler set up at the pretreatment system indicated that the contract laboratory may be measuring pH using a composite sample. According to Table II at 40 CFR 136, pH samples are to be collected as a grab samples and must be analyzed within 15 minutes of collection. A review of sampling data provided by the City indicated the facility's contract laboratory was collecting the sample but was not analyzing the sample within the required 15-minute holding time. According to the federal regulations at 40 CFR 403.12(g)(3), grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. Additionally, 40 CFR 403.12(b)(5)(v) states that sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto. Although the City has not been required to develop and implement an EPA-approved pretreatment program, it is strongly recommended that the City ensure that samples collected at the facility are collected, preserved, and analyzed in accordance with the federal regulations at 40 CFR 136. In particular, the City should ensure that samples collected to assess the characteristics and pollutant loading of the wastewater are accurate and representative of the wastewater generated at the facility. Further, due to potentially inaccurate self-monitoring pH results, the City should collect samples independent from those of the industrial user and contract laboratory to assess industrial user compliance and evaluate the efficacy of the facility's pretreatment system in treating the wastewater. (Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)
19. During the inspection of the process area at ECS, the facility representatives stated that they had recently increased the volume of wastewater discharged (over the last year during the production season) and were taking extra precautions to reduce the possibility of mold contaminating their product. These precautions included conducting additional sanitation events and using peracetic acid in the chillers. The pretreatment system may not be designed to adequately treat wastewater containing paracetic acid. It is recommended that the City evaluate these discharge practices to ensure that acids are not being discharged to the City's POTW. (Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)
20. During the inspection of the outdoor chemical storage area at ECS, the audit team observed that rainwater had collected within the bermed portion of the chemical storage area. The rainwater collected in this area appeared to reduce the available capacity of the area to contain a potential spill or leak. It is recommended that the City follow up with the facility to ensure that chemicals are being stored properly at the facility. (Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)
21. As a component of the audit, City representatives provided the audit team with a copy of the Escalon Premier Brands permit. This permit did not include an expiration date. According to the federal regulations at 40 CFR 403.8(f)(1)(iii)(B)(1), both individual and general control mechanisms must be enforceable and contain a statement of duration (in no case more than five years). Therefore, it is strongly recommended that the City include a statement of duration, which does not exceed five years, in the significant industrial user (SIU) permits in accordance with 40 CFR 403.8(f)(1)(iii)(B)(1). This permit also did not include a notification of the industrial user's status and applicable pretreatment

standards and requirements as a result of such status. According to the federal regulations at 40 CFR 403.8(f)(2)(iii), the POTW “shall develop and implement procedures to ensure compliance with the requirements of a pretreatment program. At a minimum, the POTW shall notify industrial users of applicable pretreatment standards and any applicable requirements and shall notify each SIU of its status as such and of all requirements applicable to it as a result of such status.” It is strongly recommended that the City include a statement in the applicable permits notifying each SIU of its status as such and of all requirements applicable to it as a result of such status in accordance with 40 CFR 403.8(f)(2)(iii). (Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)

22. At the beginning of the EPB facility inspection, the facility representatives requested that the audit team sign an agreement stating that photos and proprietary information would not be shared outside of the facility. The agreement also included a clause that would not allow the audit team to use and relay information collected during the facility inspection to the approval authority or other appropriate authorities in the event of noncompliance or during the development of any enforcement action related to the information discovered during the site inspection. Due to the conflict between the clause in the agreement and the purpose of the pretreatment compliance audit, the audit team did not sign the agreement; however, the City representatives did sign the agreement. It is strongly recommended that the City evaluate the agreement that it is signing. In the event that the City identifies permit violations or other items of noncompliance during facility inspections, the City should ensure that it has the proper legal authority to appropriately respond to the potential instances of noncompliance. (Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)
23. The EPB facility’s permit states that the facility is allowed to discharge stormwater to the City’s sanitary sewer. Due to the WWTP capacity issues discussed during the 2014 audit, it is strongly recommended that the City evaluate its process for allowing the facility to discharge stormwater to the WWTP. (Section 8.3, *Nondomestic Discharge Site Inspections Conducted during the Audit*)
24. The City requires its IUs to perform self-monitoring for several parameters. The City presents this information in narrative form in the “Conditions” section (i.e., section 4) of its permits. The audit team tabulated the limits and self-monitoring and reporting requirements contained in the ECS permit (Refer to Table 1 in section 8.4 for further information). In the table, the audit team has highlighted in bold typeface those areas where the City’s permit is missing information or is unclear regarding intent. Note the audit team found the self-monitoring requirements in the EPB permit to be similar to those in the ECS permit; therefore, the team has not presented them in this report. In general, the audit team recommends the City correct the deficiencies identified in Table 1 in its IU permits and sampling approach. (Section 8.4, *Requesting, Receiving, and Analyzing Reports*)
25. The City’s SUO and IU permits do not require facilities to develop or implement SDCPs. During the 2014 audit, City representatives stated they have been performing visual inspections for slug discharges since taking their respective positions with the WWTP. During that time, they have not observed any slug discharges. City representatives stated

they had not found any records of past slug discharge inspections or occurrences. The audit team strongly recommends the City not only inspect for slug discharges during onsite inspections at the IUs but ultimately evaluate each IU's potential for a slug discharge to occur. If there is potential, the City should require the applicable IU to develop an SDCP. The audit team further recommends the City record its evaluation for the potential for slug discharges to occur. (Section 8.5, *Slug Discharge Control Plans*)

26. The audit team recommends that the City evaluate its existing SUO to ensure it has the proper legal authority to enforce pretreatment and other requirements and modify the ordinance to the extent necessary. The audit team further recommends the City develop an ERP describing how the municipality will respond to instances of anticipated industrial user noncompliance as granted by the SUO. The City should note that enforcement language in its IU permits should be consistent with language contained in its SUO and ERP. EPA has model SUOs and IU permits in addition to a guidance document on developing an ERP that might facilitate the City's efforts in pursuing the recommended activities. The City should also consult the federal regulations at 40 CFR 403.8(f)(5)(i-iv), which specifies the information an ERP must address. (Section 9, *Enforcement*)
27. As indicated in section 8.4, *Requesting, Receiving, and Analyzing Reports*, it appears the City did not review self-monitoring data to assess compliance with permit monitoring requirements. Moreover, it appears the City did not respond to instances of industrial user noncompliance with permit limits. For example, the City did not issue a notice of violation or require the IUs to undertake actions to ensure they returned to compliance (i.e., collecting resamples). Specifically, multiple pH violations were documented. According to section 4, "Conditions," item number 4 of the IU permits, "The pH shall not be less than 6.0 or greater than 8.5 (daily average). Chemicals used to control pH shall be approved by the City Engineer." From the information provided by the City and onsite discussions, the City did not take enforcement action against multiple instances of discharge violations from the IUs. Section 5 of the IU permits states, "In the event that discharger fails, refuses, or neglects to comply with the requirements set forth herein, the city may assess charges in addition to all other charges set forth in this permit and may require City-specified reduction in or cessation of wastewater flow from the discharger if necessary to avoid violations of permit requirements." The audit team strongly recommends that the City respond to instances of industrial user noncompliance in order to avoid experiencing violations of its WDRs and to protect the POTW as a whole. (Section 9, *Enforcement*)
28. The City's representatives stated they had few records related to their pretreatment program. The audit team strongly recommends the City begin fully documenting its activities in this area. This includes maintaining records of SUO changes, IU permit applications, IU permits, IU self-monitoring records and the City's review of said information, the City's followup actions with respect to IU monitoring or discharge violations, City IU inspection reports including compliance sampling results, and City enforcement actions against IUs. (Section 10, *Data Management*)

<b>ICIS WENDB DATA ENTRY WORKSHEET</b>			
PRETREATMENT COMPLIANCE INSPECTIONS/AUDITS			
<b>▶ TYPE OF COMPLIANCE MONITORING:</b>		<b>PCA NOTE: The Permittee did not have an NPDES permit and had not been required to implement a pretreatment program.</b>	
<b>▶ NAME OF PRETREATMENT PROGRAM:</b>		<b>City of Escalon</b>	
<b>▶ CONTROLLING AUTHORITY NPDES ID:</b>		<b>None/ WDR Order No. 5-00-142</b>	
START DATE OF INSPECTION..... 12/9/2014		▶ END DATE OF INSPECTION ..... 12/10/2014	
LEAD INSPECTOR (Name, Company, Phone, E-mail [if available]): Kettie Holland; PG Environmental; 303-279-1778			
ACCOMPANYING INSPECTOR(s) (Name, Company, Phone, E-mail [if available]): Jan McGoldrick; PG Environmental; 703-707-8258			
SIGNIFICANT INDUSTRIAL USERS (SIUs)	PCI CHECKLIST REFERENCE	PCA CHECKLIST REFERENCE	DATA
▶ SIUs* :	II.B.2.a	I.C.4.a	2
▶ SIUs Without Control Mechanism:	II.C.1.c	I.D.1 and II.A	0
▶ SIUs Not Inspected:	II.E.2.c	I.F.2.c	0
▶ SIUs Not Sampled:	II.E.2.b	I.F.2.b	2
▶ SIUs in SNC with Pretreatment Standards** :	II.F.3.a	I.F.3.a	0
▶ SIUs in SNC with Reporting Requirements:	II.F.3.a	I.F.3.a	0
SIUs in SNC with Pretreatment Schedule:		I.F.3.a	0
SIUs in SNC Published in Newspaper:		I.G.4; II.D.7	
Criminal Suits Filed Against SIUs:	II.F.1		0
CATEGORICAL INDUSTRIAL USERS (CIUs)			
▶ CIUs:		I.C.4.a	0
OTHER INFORMATION			
Pass-Through/Interference Indicator	(none, Yes, or No)	I.G.6	No
DEFICIENCIES			
Control Mechanism Deficiencies	(No or Yes)	I.D.1;II.A.4	Yes
Inadequacy of Sampling and Inspections	(No or Yes)	II.C and Site Visit Sheets	Yes
Adequacy of Pretreatment Resources	(Yes or No)	I.I	No
<b>FOOTNOTES:</b> ▶ denotes required information * The number of SIUs entered into PCS is based on the CA's definition of "Significant Industrial User." ** AS DEFINED IN EPA's 1986 Pretreatment Compliance Monitoring and Enforcement Guidance.			
DATA ENTRY WORKSHEET COMPLETED BY: <b>Kettie Holland</b>		DATE: <b>2/25/2015</b>	
TITLE: <b>Environmental Scientist</b>		TELEPHONE NO.: <b>303-279-1778</b>	

<b>RNC DATA ENTRY WORKSHEET</b>			
<i>INSTRUCTIONS: Enter the data provided by the specific checklist questions that are referenced.</i>			
CA name City of Escalon NOTE: This WWTP did not have an NPDES permit nor was a pretreatment program required to be implemented at the time of the inspection.			
NPDES number None/ WDR Order No. 5-00-142			
Date of inspection 12/9 – 12/10/2014			Date entered into PCS
		Level	Checklist Reference
NA	Failure to enforce against pass through and/or interference	I	II.F.6.b&9
NA	Failure to submit required reports within 30 days	I	Att. A.A.3
NA	Failure to meet compliance schedule milestone date within 90 days	I	Att. A.A.4
NA	Failure to issue/reissue control mechanisms to 90% of SIUs within 6 months	II	II.C.1.b&2
NA	Failure to inspect or sample 80% of SIUs within the last 12 months	II	II.E.2
NA	Failure to enforce pretreatment standards and reporting requirements	II	II.F.2
NA	Other (specify)	II	
<b>SNC</b>			
NA	CA in SNC for violation of any Level I criterion		
NA	CA in SNC for violation of two or more Level II criterion		
For more information on RNC, please refer to EPA's 1990 <u>Guidance for Reporting and Evaluating POTW Noncompliance with Pretreatment Implementation Requirements</u>			
RNC WORKSHEET COMPLETED BY: <b>Kettie Holland</b>		DATE: <b>02/25/2015</b>	
TITLE: <b>Environmental Scientist</b>		TELEPHONE: <b>303-279-1778</b>	

# **Eckert Cold Storage**

## **Site Visit Data Sheet**

**SITE VISIT DATA SHEET**

<b>INSTRUCTIONS:</b> Record observations made during the IU site visit. Provide as much detail as possible.						
Name of Industry: Eckert Cold Storage						
Address of Industry: 905 Clough Road; Escalon, CA 95320						
Date of visit: 12/10/2014			Time of visit: Approximately 9:00 a.m.			
Name of inspector(s): Brendan Kenny, Sacramento Regional Water Quality Control Board Juston Collins, Public Works Superintendent, City of Escalon (City) Tom McCoy, President, Quality Service Inc. (under contract to the City for wastewater operations) Kettie Holland, EPA Contractor, PG Environmental, LLC Jan McGoldrick, EPA Contractor, PG Environmental, LLC						
Provide the name(s) and title(s) of industry representative(s)						
<b>Name</b>		<b>Title</b>		<b>Phone/Email</b>		
Ed Perez		Environmental Safety Officer		209-838-4040 x219		
Mike Ragsdale		Maintenance Manager		Not provided.		
Brock Harris		Plant Manager		Not provided.		
IU Permit Number: 2014-1		Exp Date: Not provided, see note 1 in the Notes section for additional details.		IU Classification: Not provided, see note 1 in the Notes section for additional details.		
Inspection Type/Purpose	X	Scheduled		Unscheduled	X	PCA
		PCI		New Company		Complaint
Please provide the following documentation:						
1. Nature of operation: The facility receives, washes, dices, freezes, and packages different types and quantities of peppers for the food industry. Pretreated wastewater from the facility's pepper washing and general sanitation operations is discharged to the City's sanitary sewer system. The facility was not in operation at the time of the inspection. Refer to note 2 in the Notes section for information regarding the facility's production season and hours of operation.						
2.	Number of employees	See note 2 in the Notes section.	Number of shifts:	See note 2 in the Notes section.	Hours of operation:	See note 2 in the Notes section.
3. Water source: The City representatives stated that the facility had a private well and also received water from the City of Escalon.						
4. Wastestream flow(s) discharged to the POTW: The facility discharged wastewater from its pepper washing process in addition to general sanitation operations, including cleaning process lines. The facility also generated boiler blowdown and condensate from the chilling and defrosting processes. The facility representatives stated that the wastewater generated at the facility was routed to the pretreatment system for treatment prior to being discharged to the City's sanitary sewer system.						
Sanitary:	Not reviewed (N/R).	Process:	See note 3 in the Notes section for details.	Combined:	N/R.	

5.	Describe any significant changes in process or flow: The facility was not in operation and was not generating or discharging wastewater at the time of the inspection. However, the facility was discharging stormwater at the time of the inspection. See note 4 in the Notes section for additional details.			
6.	Type of pretreatment system (Describe): The pretreatment system at the facility removes solids from the wastewater before it is discharged to the City’s sanitary sewer system. Wastewater generated from the pepper washing process, sanitation operations, and blowdown and condensate is conveyed via trench drains either to sump 1 and then to sump 2 or directly to sump 2. The wastewater conveyed to sump 1 is filtered by a screen and is then pumped to sump 2. The wastewater collected in sump 2 flows through a screen for solids removal; a sample to determine the wastewater’s pH is taken at the screen. After solids removal, the wastewater is discharged to the City’s sanitary sewer system. See note 5 in the Notes section for additional information about wastewater sampling at the facility.			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;">Continuous flow</td> <td style="width: 33%; text-align: center;">Batch</td> <td style="width: 33%; text-align: center;">Combined</td> </tr> </table>	Continuous flow	Batch	Combined
Continuous flow	Batch	Combined		
7.	Condition/operation of pretreatment system (Describe): As previously stated, the facility was not in production at the time of the inspection and thus was not generating process wastewater. The pretreatment system was not in operation at the time of the inspection. The pretreatment system was located outside, on a concrete pad without overhead coverage.			
	Any unusual conditions or problems with the pretreatment system: No unusual conditions or problems with the pretreatment system were observed during the inspection. Refer to note 5 in the Notes section for additional information.			
8.	<p>Process area description (identify raw materials and processes used): The facility’s process area consisted of a large warehouse-type building that contained various process operations. The facility received different types of peppers, weighed them, washed them, and removed their pits and seeds. The peppers were then inspected, diced, blanched, and cooled prior to being packaged for shipment.</p> <p>The facility representative stated that the facility conducted sanitation processes approximately four times per day. Sanitation processes included the use of soap and a quaternary ammonium sanitizer. Wastewater generated from the pepper washing, sanitation processes, and blowdown procedure were collected via trench drains and transported to the pretreatment system for treatment prior to being discharged to the City’s sanitary sewer system. The facility representatives stated that the facility had recently increased its wastewater discharge volume and had taken extra precautions to decrease the risk of mold contaminating the products. Refer to note 6 in the Notes section for additional information.</p>			
9.	Condition/operation of process area (Describe): The process area was inactive at the time of the inspection. The area was large and contained various pieces of equipment for the pepper processing operation.			
	Any unusual conditions or problems with the process area: No unusual conditions or problems with the process area were observed during the site inspection.			
10.	General housekeeping in process area (Describe): The process area was clean and relatively free of debris at the time of the inspection. The floor was wet in some parts of the process area.			
	Any unusual conditions or problems with general housekeeping in process area: No unusual conditions or problems with the general housekeeping in the process area were identified during the site inspection.			
11.	Chemical storage area (identify the chemicals that are maintained on-site and how they are stored): The facility’s chemical storage area was located outside near the pretreatment system. Overhead coverage was provided for the chemical storage area. Various wastes and chemicals were stored within this area and included waste oil and multiple 55-gallon drums of cleaning chemicals. The chemical storage area was bermed, and no secondary containment pallets were observed within the area. The audit team observed rainwater accumulated in a corner of the chemical storage area. The facility representatives stated that they			

typically use a squeegee to transport the rainwater from the chemical storage area to the pavement, where it evaporates. See note 7 in the Notes section for additional information.			
Any floor drains?	No.	Any spill control measures?	The chemical storage area was bermed.
General housekeeping of chemical storage area (Describe): The chemical storage area was relatively clean and free of debris at the time of the inspection; however, as previously mentioned, rainwater had collected within the bermed area of the chemical storage, see note 7 in the Notes section for additional information.			
12. Are hazardous wastes drummed and labeled? Waste oil drums with hazardous waste labels were observed.			
13. Does the IU have hazardous waste manifests? N/R.			
Any problems associated with hazardous waste: No problems associated with hazardous waste were observed during the inspection.			
14. Solid waste production: The facility produced solid waste in the form of pepper seeds and cores. Similar solids were removed from the pretreatment sumps and screens.			
Solid waste disposal method(s): The facility representatives stated that solid waste consisting of pepper seeds and cores was hauled offsite for composting.			
15. Description of sample location: During the inspection, a composite sampler was identified near the pretreatment system. The facility representatives stated that the pH of the wastewater was measured as the wastewater flowed through the screen. See note 5 in the Notes section for additional information on potential sampling errors identified during the facility inspection.			
Sampling method/technique: The facility representatives thought that the contract laboratory was collecting composite samples for pH analysis. See note 5 in the Notes section for additional information.			
16. Evaluation of self-monitoring data?	Yes	X No	N/A
If yes, was self-monitoring adequate: Self-monitoring data was not reviewed as part of the onsite inspection. However, potential issues were identified with the sampling equipment and procedures used by the contract laboratory. Refer to note 5 in the Notes section for additional information.			
17. Who performs the self-monitoring analysis? IEH – JL Analytical collects and analyzes the wastewater samples.			
<b>Notes:</b>			
<p>1. It should be noted that the City was not required to implement a pretreatment program at the time of the audit. As a component of the audit, the City representatives provided the audit team with a copy of the Eckert Cold Storage permit. This permit did not include an expiration date. According to the federal regulations at 40 CFR 403.8(f)(1)(iii)(B)(1), both individual and general control mechanisms must be enforceable and contain a statement of duration (in no case more than 5 years). Therefore, it is strongly recommended that the City include a statement of duration, which does not exceed 5 years, in the SIU permits in accordance with 40 CFR 403.8(f)(1)(iii)(B)(1). This permit also did not include a notification of the industrial user’s status and applicable pretreatment standards and requirements as a result of such status. According to the federal regulations at 40 CFR 403.8(f)(2)(iii), the POTW “shall develop and implement procedures to ensure compliance with the requirements of a pretreatment program. At a minimum, the POTW shall notify industrial users of applicable pretreatment standards and any applicable requirements and shall notify each SIU of its status as such and of all requirements applicable to it as a result of such status.” It is strongly recommended that the City include a statement in the applicable permits notifying each SIU of its status as such and of all requirements applicable to it as a result of such status in accordance with 40 CFR 403.8(f)(2)(iii).</p> <p>2. The facility was not in production and was not generating wastewater at the time of the inspection. The facility’s on season typically occurred from June to October, and the off season took place from October to</p>			

June (according to the Facility's permit, the on season occurred from May to mid-December and the off season took place from mid-December to the end of April). The facility representatives stated that during the production season the facility employed approximately 300 people and during the off season the facility employed approximately 50 people. The facility representatives also stated that during the production season the facility has two shifts and runs seven days per week; the hours of the first shift are 6:00 a.m.–3:00 p.m. and the second shift hours are 6:00 p.m.–3:00 a.m. During the off season the facility is typically staffed from 7:00 a.m. and 3:30 p.m.

3. The facility representatives stated that during the production season the facility generated and discharged between 5,000 and 7,000 gallons per day (gpd) of process wastewater to the city's sanitary sewer system.
4. The audit team observed that water was being discharged from the facility. The facility representatives stated that the discharge was not wastewater but stormwater. According to section 3, item 3 of the facility's permit, the "discharger discharges two types of industrial wastewater into the system: 1) water from storm pond which includes rainwater and 2) 'process' water which is used in conjunction with food processing. Said discharges are conveyed to the City's system through one isolated connection." Discussions with the City representatives revealed that the City had experienced capacity issues at the WWTP. In the event that the City continues to experience WWTP capacity issues that overwhelm the treatment processes and create a potential for the City's WDR Permit to be violated, it is strongly recommended that the City thoroughly evaluate the practice of accepting stormwater from the facility.
5. During the inspection of the pretreatment system, the facility representatives stated that their contract laboratory collected wastewater samples at the facility. Observations made of the sampler set up at the pretreatment system indicated that the contract laboratory may be measuring pH using a composite sample. According to Table II at 40 CFR 136, pH samples are to be collected as a grab samples and must be analyzed within 15 minutes of collection. A review of sampling data provided by the City indicated the facility's contract laboratory was collecting the sample but was not analyzing the sample within the required 15-minute holding time. According to the federal regulations at 40 CFR 403.12(g)(3), grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. Additionally, 40 CFR 403.12(b)(5)(v) states that sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto. Although the City has not been required to develop and implement an EPA-approved pretreatment program, it is strongly recommended that the City ensure that samples collected at the facility are collected, preserved, and analyzed in accordance with the federal regulations at 40 CFR 136. In particular, the City should ensure that samples collected to assess the characteristics and pollutant loading of the wastewater are accurate and representative of the wastewater generated at the facility. Further, due to potentially inaccurate self-monitoring pH results, the City should collect samples independent from those of the industrial user and contract laboratory to assess industrial user compliance and evaluate the efficacy of the facility's pretreatment system in treating the wastewater.
6. During the inspection of the process area, the facility representatives stated that they had recently increased the volume of wastewater discharged (over the last year during the production season) and were taking extra precautions to reduce the possibility of mold contaminating their product. These precautions included conducting additional sanitation events and using peracetic acid in the chillers. The pretreatment system may not be designed to adequately treat wastewater containing peracetic acid. It is recommended that the City evaluate these discharge practices to ensure that acids are not being discharged to the City's POTW.

7. During the inspection of the facility's outdoor chemical storage area, the audit team observed that rainwater had collected within the bermed area of the chemical storage. The rainwater collected in this area appeared to reduce the available capacity of the containment area to contain a potential spill or leak. It is recommended that the City follow up with the facility to ensure that chemicals are being stored properly at the facility.

**Escalon Premier Brands, Inc.**  
**Site Visit Data Sheet**

**SITE VISIT DATA SHEET**

<b>INSTRUCTIONS:</b> Record observations made during the IU site visit. Provide as much detail as possible.						
Name of Industry: Escalon Premier Brands						
Address of Industry: 1905 McHenry Ave.; Escalon, CA 95320						
Date of visit: 12/9/2014			Time of visit: 10:04 a.m.			
Name of inspector(s): Brendan Kenny, Sacramento Regional Water Quality Control Board Juston Collins, Public Works Superintendent, City of Escalon (City) Tom McCoy, President, Quality Service Inc. (under contract to the City for wastewater operations) Kettie Holland, EPA Contractor, PG Environmental, LLC Jan McGoldrick, EPA Contractor, PG Environmental, LLC						
Provide the name(s) and title(s) of industry representative(s)						
<b>Name</b>		<b>Title</b>		<b>Phone/Email</b>		
John Raggio		Plant Manager		209-552-6023		
Javiar Laurel		Operations Manager		None provided.		
IU Permit Number: 2014-2		Exp Date: None, see note 1 in the Notes section for additional details.		IU Classification: Not specified in facility permit. See note 1 in the Notes section for additional details.		
Inspection Type/Purpose	Scheduled	X	Unscheduled	X	PCA	
	PCI		New Company		Complaint	
Please provide the following documentation:						
1. Nature of operation: The facility processes fresh tomatoes for the U.S. food service industry under the brand names of 6-in-1, Allegro, Bontá, Bella Rosa, Christina's (an organic line), Cristoforo Colombo, and El Verano Sabroso. The tomatoes are processed and packaged in peeled, ground, diced, or crushed forms. The facility also produces ready-to-eat pizza sauce and tomato puree. Occasionally, the facility processes bell and jalapeno peppers. The facility was not in production at the time of the inspection, see notes 2 and 3 in the Notes section for more information on the inspection and the facility's hours of operation.						
2.	Number of employees	Off season: 200–250 On season: 700–725	Number of shifts:	The number of shifts at the facility varies, see note 3 in the Notes section.	Hours of operation:	The hours of operation at the facility vary, see note 3 in the Notes section.
3. Water source: The facility extracted water from its onsite wells.						
4. Wastestream flow(s) discharged to the POTW: The facility generated process wastewater from its tomato flushing process, tomato dewatering process, belt sprays, cleaning water, and clean-in-place (CIP) washing operations. It should be noted that the facility had two discharge lines to the POTW, one for sanitary wastewater and the second for industrial wastewater. The facility discharged most of its stormwater to onsite percolating ponds; however, it discharged a small portion via its industrial						

wastewater line to the POTW. See note 4 in the Notes section for additional information regarding the facility's stormwater discharge.					
Sanitary:	The facility representatives did not know; the City representatives indicated they did not meter the sanitary line from facility.	Process:	The facility discharged varying volumes of wastewater throughout the year. See note 3 in the Notes section for additional information.	Combined:	Not applicable (N/A).
<p>5. Describe any significant changes in process or flow: No significant changes in process or flow were observed during the site inspection. However, the facility representative provided information on changes that had recently occurred in various processes at the facility. See note 5 in the Notes section for additional details.</p>					
<p>6. Type of pretreatment system (Describe): The facility generates wastewater when it flushes the tomatoes from the delivery truck beds. Excess water from the tomato flushing process in addition to wastewater from tomato dewatering, the belt sprayer, CIP operations, and other cleaning operations are collected and treated by the facility's pretreatment system prior to being discharged to the sanitary sewer. The facility representatives mentioned that the facility's two mechanical vapor recompression (MVR) evaporators create condensate, which is reused in the facility's boiler.</p> <p>Wastewater is collected in a large pit, and two 1,500-gallon-per-minute (gpm) pumps drive it through a series of four overhead mesh screens. The solids caught in the screens fall into collection bins below the screens while wastewater flows into another tank. The wastewater is then pumped to the dissolved air floatation (DAF) unit, where flocculent chemicals are added and solids are skimmed from the wastewater. Finally, the wastewater is collected in a tank, pumped through the sampling point, and discharged to the City's sewer.</p> <p>The solids from the DAF unit are routed into a screw press. Filtrate from the screw press is recirculated to the pit (to be treated by the DAF unit). The solids from the screw press are hauled offsite for disposal. The facility representatives stated there were no bypass options for the DAF unit. See note 6 in the Notes section for additional information regarding the facility's pretreatment system.</p>					
X (during the on season)	Continuous flow		Batch		Combined
<p>7. Condition/operation of pretreatment system (Describe): The facility's pretreatment system was not in operation at the time of the inspection. The audit team observed residual water marking and accumulated water on the sides of the interior of the DAF unit. The facility representatives stated they perform maintenance on the DAF unit on an annual basis during the off season.</p>					
<p>Any unusual conditions or problems with the pretreatment system: As previously stated, the DAF unit was not in operation at the time of the inspection. No unusual conditions or problems with the pretreatment system were observed during the facility site inspection. See note 6 in the Notes section for additional information.</p>					

8. Process area description (identify raw materials and processes used): The facility received tomatoes via truck. At the unloading dock, the facility removed tomatoes from the truck with water and loaded them onto conveyer belts. The incoming tomatoes were weighed, inspected, and then washed twice. They were conveyed to a “popping line,” where their cores were removed and the tomatoes were halved. The tomatoes were then conveyed through reel washers, where their seeds were removed. From there, they moved onto inspection tables. Following inspection, the tomatoes were blanched via a light steam process. Tomatoes that were going to be diced passed through a hydrocooler, where they were cooled. The tomatoes passed through a series of shakers prior to and following freezing. It should be noted that the facility was inspected during its off season, so tomatoes were not being processed.			
9. Condition/operation of process area (Describe): The site visit occurred during the facility’s off season, so only a cursory review of the process area was conducted. The process area was empty and not in operation at the time of the facility inspection.			
Any unusual conditions or problems with the process area: The facility was not in operation at the time of the inspection. No unusual conditions or problems with the process area were observed during the inspection.			
10. General housekeeping in process area (Describe): The process area was clean and free of debris.			
Any unusual conditions or problems with general housekeeping in process area: No unusual conditions or problems with the general housekeeping in the process area were identified during the onsite inspection.			
11. Chemical storage area (identify the chemicals that are maintained on-site and how they are stored): Not reviewed (N/R).			
Any floor drains?	N/R.	Any spill control measures?	N/R.
General housekeeping of chemical storage area (Describe): N/R.			
12. Are hazardous wastes drummed and labeled? Hazardous waste drums were not observed during the facility inspection.			
13. Does the IU have hazardous waste manifests? This component was not reviewed as part of the onsite inspection.			
Any problems associated with hazardous waste: No problems associated with hazardous waste were identified during the onsite inspection.			
14. Solid waste production: The facility representative stated that solid waste was generated from processing the tomatoes (e.g., skinning and seeding) and from the facility’s screw press.			
Solid waste disposal method(s): The facility representative stated that the tomato wastes were hauled offsite as animal feed and the solids from the screw press were hauled offsite to the landfill.			
15. Description of sample location: The facility’s sampling location was a flume located downstream of the tank holding the effluent from the DAF unit. A composite sampler was located at the facility. The facility representative stated that grab samples were collected from the flume by the facility’s contract laboratory.			
Sampling method/technique: Grab and composite samples were collected at the facility.			
16. Evaluation of self-monitoring data?	Yes	<input checked="" type="checkbox"/> No	N/A
If yes, was self-monitoring adequate: N/A.			
17. Who performs the self-monitoring analysis? This component was not reviewed as part of the onsite inspection.			
Notes:			
1. It should be noted that the City was not required to implement a pretreatment program at the time of the audit. As a component of the audit, City representatives provided the audit team with a copy of the			

Escalon Premier Brands permit. This permit did not include an expiration date. According to the federal regulations at 40 CFR 403.8(f)(1)(iii)(B)(1), both individual and general control mechanisms must be enforceable and contain a statement of duration (in no case more than five years). Therefore, it is strongly recommended that the City include a statement of duration, which does not exceed five years, in the significant industrial user (SIU) permits in accordance with 40 CFR 403.8(f)(1)(iii)(B)(1). This permit also did not include a notification of the industrial user's status and applicable pretreatment standards and requirements as a result of such status. According to the federal regulations at 40 CFR 403.8(f)(2)(iii), the POTW "shall develop and implement procedures to ensure compliance with the requirements of a pretreatment program. At a minimum, the POTW shall notify industrial users of applicable pretreatment standards and any applicable requirements and shall notify each SIU of its status as such and of all requirements applicable to it as a result of such status." It is strongly recommended that the City include a statement in the applicable permits notifying each SIU of its status as such and of all requirements applicable to it as a result of such status in accordance with 40 CFR 403.8(f)(2)(iii).

2. At the beginning of the facility inspection, the facility representatives requested that the audit team sign an agreement stating that photos and proprietary information would not be shared outside of the facility. The agreement also included a clause that would not allow the audit team to use and relay information collected during the facility inspection to the approval authority or other appropriate authorities in the event of noncompliance or during the development of any enforcement action related to the information discovered during the site inspection. Due to the conflict between the clause in the agreement and the purpose of the pretreatment compliance audit, the audit team did not sign the agreement; however, the City representatives did sign the agreement. It is strongly recommended that the City evaluate the agreement that it is signing. In the event that the City identifies permit violations or other items of noncompliance during facility inspections, the City should ensure that it has the proper legal authority to appropriately respond to the potential instances of noncompliance.
3. During the facility inspection, the facility representatives stated that the facility was not in operation. The facility's off season occurs from mid-October to mid-July. The facility's on season occurs from mid-July to mid-October (however, the Facility's permit states its off season occurs from mid-November to the end of May and the on season occurs from June 1 to mid-November). During the off season, the staffing schedule includes 2 shifts/day for labeling; 3 shifts/day for two 5-day weeks/month for production; and maintenance staff year round (approximately 1 shift). The on-season staffing includes all of the off-season staffing and one additional production shift. Production operates 24 hours/day, 7 days/week during the on season. Shipping (rail and truck) also occurs during these periods; the volume of shipping was not stated. During the on season, the facility's maximum allowed discharge rate is 2.4 million gallons per day (mgd), and its average discharge rate is 1.6 mgd.
4. The facility's permit states that the facility is allowed to discharge stormwater to the City's sanitary sewer. Due to the WWTP capacity issues discussed during the 2014 audit, it is strongly recommended that the City evaluate its process for allowing the facility to discharge stormwater to the WWTP.
5. In order to gain an understanding of processes taking place at the facility that might relate to issues occurring at the WWTP, the audit team asked the facility representatives to describe changes in operation that had taken place at the facility during the past year (2014). The facility representatives explained that the facility had changed its tomato peeling process resulting in a 3 percent increase in tomato peel recovery. The facility representative also stated that the facility was processing a different type of tomato and had changed the method of moving tomatoes into the facility. Additionally, the MVRs were being

run for longer periods of time. The facility representative stated that sampling results indicated biochemical oxygen demand (BOD) and total suspended solids (TSS) levels had decreased in the past year.

6. There was confusion pertaining to pH sampling at the facility. At the beginning of the inspection, the facility representatives stated that the pH of the wastewater is measured before the wastewater enters the DAF unit and that caustic chemicals may be added to the wastewater if its pH is below 5.5 standard units (s.u.). The facility representatives explained that this did not happen often. Later, during the inspection, the facility representatives stated that the pH of the wastewater is measured after the DAF unit, not before it. Although the pretreatment system was not in operation at the time of the inspection, a sampling port with a composite sampler was observed located after the DAF unit; this indicated that pH is measured after the DAF unit, not before the DAF unit.

Additionally, the facility representatives stated they did not have written procedures for starting the DAF unit for the on season. To their knowledge, they did not have a written start-up procedure filed with the City regarding these operations either. In 2013, the City requested that the facility provide notice one week prior to starting up operations for the on season. A City representative did not contact the facility with the same request prior to the start of the 2014 on season; however, according to the Pretreatment Requirements section of the facility's permit, "During the 'off season' Discharger shall notify the City of its production schedule a minimum of five (5) days in advance so that appropriate adjustments in the City's system may be scheduled." The facility is required to provide notification to the City prior to the start of the on season per the Pretreatment Requirements section of the permit, regardless of whether a City representative requests the notification or not. It is recommended that the facility develop written, standard procedures describing wastewater pretreatment and discharging operations to be conducted during the beginning and the end of the on season in order to create consistency in starting and decommissioning the system.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2014-0156

CEASE AND DESIST ORDER  
FOR  
CITY OF ESCALON  
ESCALON WASTEWATER TREATMENT PLAN  
SAN JOAQUIN COUNTY

TO CEASE AND DESIST  
FROM DISCHARGING CONTRARY TO REQUIREMENTS

The Regional Water Quality Control Board, Central Valley Region, (hereafter referred to as Central Valley Water Board or Board) finds that:

1. Waste Discharge Requirements (WDRs) Order No. 5-00-142, adopted by the Board on 16 May 2000, prescribes requirements for the domestic and industrial wastewater treatment plant owned and operated by the City of Escalon (hereafter referred to as Discharger).
2. The City of Escalon Wastewater Treatment Plant (WWTP) is in San Joaquin County in Sections 17 and 20, T2S, R9E, MDB&M, at 25100 East River Road. The facility is on Assessor's Parcel Numbers 247-090-36 and 247-090-38. Both parcels are owned by the City of Escalon.

**WASTEWATER TREATMENT PLANT**

3. The WWTP is on the north side of the Stanislaus River. Surrounding land uses are primarily agricultural. A golf course country club and residential development (Del Rio) are on the south side of the Stanislaus River, and approximately one quarter mile south of the WWTP. The dominate wind direction is towards the south, from the WWTP toward Del Rio.
4. The WWTP treats industrial wastewater generated by two food processing industries and domestic wastewater generated by the City of Escalon. The treatment process consists of screening and discharge to mechanically aerated treatment ponds, followed by discharge to evaporation/percolation ponds. The industrial and domestic wastewater flows are delivered to the plant in separate pipelines. The two waste streams remain separate and are treated, stored and disposed of in separate percolation and evaporation ponds. Stormwater from a limited portion of the City of Escalon is also piped to the facility and discharged to the industrial ponds.
5. Industrial dischargers consist of a tomato canner and a frozen pepper processor. Industrial wastewater is characterized by high concentrations of biological oxygen demand. The industrial dischargers' processing season is from approximately May through December.

6. The Discharger treats industrial wastewater in four aerated treatment ponds, followed by discharge to seven evaporation/percolation ponds. The Discharger treats domestic wastewater in five aerated treatment ponds, followed by discharge into four evaporation/percolation ponds. The 20 ponds are generally rectangular in shape, vary in size from about 1 acre to 5.6 acres, and are about 3 feet to 9 feet deep.
7. The Discharger allows the industrial wastewater ponds to dry completely prior to initiation of the industrial wastewater generation season. Annually, the ponds are disked and ripped to maintain percolation rates.
8. Based on groundwater monitoring performed at the site, groundwater exists approximately 37 feet below ground surface. Groundwater flows to the west-southwest, toward the Stanislaus River.

### PREVIOUS ENFORCEMENT

9. Objectionable odor complaints related to the facility were documented in July and August 2000, August 2001, June and July 2002, and July and August 2003.
10. Cease and Desist Order R5-2003-0124, adopted by the Board on 5 September 2003, provided the Discharger with a time schedule to (a) evaluate organic loading and pH ranges that the WWTF was capable of treating in a manner that protects water quality and prevents nuisance odors, (b) implement an enhanced industrial pretreatment program with loading limits within the WWTF's treatment capacity, (c) implement a pre-season startup program to limit the potential for odor generation and (d) submit a technical report describing the physical and management changes implemented to meet the appropriate organic loading and pH ranges for the WWTF.
11. Improvements to the industrial pretreatment programs at the food processing facilities included enhanced solids screening and installation of dissolved air floatation units. Improvements to the wastewater treatment facility included additional pond aerators and installation of an oxygen injection system for industrial ponds 2 and 3. The Discharger also updated its industrial pre-treatment program.
12. The Discharger completed the required tasks and Order R5-2003-0124 was rescinded on 2 December 2011.

### VIOLATIONS OF WASTE DISCHARGE REQUIREMENTS

#### Effluent Violations

13. Discharge Specifications B.4 and B.5 of the WDRs establishes a Biochemical Oxygen Demand (BOD) industrial wastewater effluent limit of 150 milligrams per liter (mg/l) as a monthly average and a domestic wastewater BOD effluent limit of 80 mg/l as a daily maximum.

14. On 4 June 2014, Board staff issued a Notice of Violation to the Discharger for exceeding the effluent limits for BOD in the industrial and domestic wastewater ponds during a portion of the 2013 food processing season (i.e., August, September and October 2013). The Discharger responded by letter on 5 August 2014 describing the steps it had taken to eliminate the violations, and stating that it would increase the BOD monitoring from monthly to bi-monthly in order to react more quickly should violations arise in the future. However, the Discharger has not increased its BOD monitoring.
15. During preparation of this Order, the Discharger stated that the industrial effluent BOD violations noted in the NOV were in error because the BOD samples were collected in the wrong location. Staff's re-review of the August 2013-October 2013 monitoring reports show that the Discharger did not collect BOD samples from every industrial percolation pond, in violation of the WDRs. Therefore, it is not possible to determine whether or not the Discharger complied with the industrial BOD effluent limit.
16. Board staff has reviewed monitoring data submitted for the period of May through September 2014. The Discharger failed to collect BOD samples from every industrial percolation pond, in violation of the WDRs. Therefore, it is not possible to determine whether or not the Discharger complied with the industrial BOD effluent limit.
17. This Order requires that the Discharger investigate the cause of the effluent violations and determine if the violations are due to inadequate pretreatment at the food processing facilities, inadequate treatment at the WWTF, inadequate monitoring at the WWTP, or a combination. This Order also requires the Discharger to make operational and mechanical improvements, as necessary, to comply with the effluent limits in the WDRs, and to ensure that future monitoring reports contain all information required by the WDRs.

Odor Violations

18. Discharge Specification No. B.6 of the WDRs states, "*Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment facility.*"
19. Discharge Specification No. B.7 states, "*As a means of discerning compliance with Discharge Specification B.6, the dissolved oxygen content shall not be less than 1.0 mg/l in any pond at any time....*" The Monitoring and Reporting Program requires that dissolved oxygen be measured in every pond (both domestic and industrial) on a weekly basis.
20. On 5 August 2014, Board staff received an odor complaint from a resident in the Del Rio subdivision. Board staff contacted the Discharger, who responded that the facility was maintaining compliance with the WDRs and that the San Joaquin Valley Unified Air Pollution Control District (Air District) had been out to the facility, but unable to confirm the complaint.

21. Between 6 August and 13 September 2014, Board staff received four additional complaints related to odors from the WWTF. On 17 September 2014, Board staff inspected the WWTF in response to the odor complaints. Odors associated with wastewater were observed in the vicinity of industrial wastewater ponds 14 and 15.
22. Between 19 July and 6 October 2014, the Air District received 59 odor complaints associated with the WWTF. Of the 59 complaints, 20 were confirmed by the Air District<sup>1</sup>. On 29 September 2014, the Air District issued a Notice of Violation to the Discharger, which states in part: "...*Facility discharged an odor that was a nuisance and annoyance to a considerable number of persons.*"
23. Board staff received additional odor complaints on 7, 8, and 9 October 2014.
24. A review of monitoring reports from August-October 2013 and from May-September 2014 shows that the Discharger only measured dissolved oxygen concentrations in the treatment ponds, but not in the percolation ponds. The lack of dissolved oxygen monitoring prevented the Discharger from determining whether there were potential odor issues, and if so, adequately responding to them.
25. This Order requires the Discharger to address the odor issues by evaluating the industrial pretreatment programs and seasonal startup procedures at the industrial facilities and the WWTP. Additionally, this Order requires the Discharger to evaluate whether facility improvements are necessary to meet the effluent limits and conditions in the WDRs, to conduct real time odor monitoring during the 2015 processing season, and to complete all of the monitoring required by the WDRs.

#### Capacity Violations

26. WDRs Discharge Specification B.11 states, "*Pond freeboard shall never be less than two feet in any pond as measured vertically from the water surface to the upper surface of the lowest adjacent dike or levee.*" The Monitoring and Reporting Program requires that freeboard measurements be measured in every pond (both domestic and industrial) on a weekly basis.
27. Standard Provisions and Reporting Requirements for Waste Discharge Requirements (Standard Provisions) Provision B. 1 states, "*In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone as soon as it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within two weeks. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for*

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<sup>1</sup> A "confirmed complaint" means that an Air District employee or reliable complainant is able to testify that a particular operation is the source of the air contaminants. Confirmation may be accomplished when Air District staff meet with a complainant and the parties trace the odor to the alleged source; a reliable complainant makes confirmation; or the identification of air contaminants is supported by data operational records, wind charts, and monitoring devices. (San Joaquin Valley Unified Air Pollution Control District Compliance Department, Com 1140, 8 February 2007).

*corrective actions.”*

28. During staff's 17 September 2014 inspection, staff observed inadequate freeboard levels in every industrial wastewater disposal pond (Ponds 10 through 16). Freeboard was generally less than 2 inches. Interior berms which separate the ponds were saturated and partially submerged below the water surface. Staff also observed inadequate freeboard levels in every domestic wastewater disposal pond (Ponds 20 through 24). For these ponds, freeboard was generally less than 6 inches. The failure to maintain two feet of freeboard is a violation of Discharge Specification B.11.
29. It is unknown how long the Discharger was in violation of the freeboard requirement. A review of the monthly monitoring reports from August 2013 through mid-September 2014 shows that the Discharger failed to submit freeboard measurements for any of the ponds, in violation of the WDRs. The Discharger also failed to verbally notify staff of the freeboard violations, in violation of Standard Provision B.1. In addition, the Discharger states that it is unable to provide freeboard logs prior to 19 September 2014 because the previous treatment plant operator is no longer employed by the City and the City is unable to find the information.
30. This Order requires the Discharger to address the continuing capacity violations by evaluating influent wastewater flows, the facility's flow monitoring system, and the storage and disposal capacity of the domestic and industrial wastewater pond system. In addition, this Order requires the Discharger to conduct daily freeboard monitoring and inspections, and to continue to report the results to the Board.

Discharge Violations

31. WDRs Prohibition A.1 states *“Discharge of wastes to surface water drainage courses is prohibited.”*
32. WDRs Prohibition A.2 states *“Bypass or overflow of untreated or partially treated waste is prohibited.”*
33. Standard Provision A.7 states *“The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.”*
34. Discharge Specification B.1 states *“For the domestic WWTP, the monthly average dry weather flow shall not exceed 0.90 mgd. The maximum daily flow shall not exceed 1.0 mgd.”*
35. On 17 September 2014, at approximately 2:20 p.m. the wastewater treatment facility operator informed Board staff by telephone that wastewater was observed seeping from a rodent hole within the berm separating industrial wastewater pond 12 from the Stanislaus River. The Discharger stopped the discharge sometime between 9:30 and 11:30 p.m. by placing several yards of a mixture soil and bentonite clay mixture on the inner berm of pond 12. The operator estimated a flow rate between two to five gallons

per minute to the Stanislaus River, and a total discharge of 2,700 gallons<sup>2</sup>. This discharge and failure to maintain the pond berm is a violation of Prohibitions A.1 and A.2, and Provision A.7.

36. On 19 September 2014, Board staff requested that the Discharger implement daily monitoring and reporting of influent flows and pond freeboard. Additionally, staff requested that the Discharger conduct daily inspections of all wastewater pond berms.
37. On 20 September 2014, as part of the daily monitoring program, the Discharger notified Board staff that the internal levee separating industrial ponds 11 and 16 was leaking. The leak was occurring through a rodent hole in the levee. All wastewater was contained in the wastewater ponds. The failure to maintain the wastewater pond berms is a violation of Standard Provision A.7. This Order requires the Discharger to implement a rodent control program.
38. On 24 September 2014, Board staff issued a Notice of Violation (NOV) to the Discharger for violations observed during staff's inspection and for the unauthorized discharge to the Stanislaus River. The NOV requires the Discharger to submit a technical report prepared by a California licensed Engineer that contains the following items:
  - An evaluation of domestic and industrial influent flows into the facility for the 2013 and 2014 processing season.
  - An evaluation of the wastewater pond berm system berms and a water balance demonstrating whether or not the ponds have adequate storage and disposal capacity.
  - A plan to manage influent flows during the winter and spring of 2014 and 2015. such that two feet of freeboard is maintained in a wastewater ponds.
  - A pond vegetation monitoring and removal plan.
  - An odor identification and mitigation plan.
  - A copy of the City's industrial discharge permits for both the tomato processing facility and the pepper processing facility.
  - The name of the licensed engineer the Discharger has retained to evaluate the industrial pretreatment program.

The NOV required that the work be completed by 31 October 2014. The City responded to the NOV on 8 October 2014. The response included workplans and implementation schedules to evaluate the wastewater pond berms, capacity, and odor issues. Additionally, the response asked for an extension for some of the tasks to 31 December 2014. This Order allows for the extension.

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<sup>2</sup> The Discharger does not know when the discharge began, so this volume is an estimate of the volume discharged between the time of discovery and the time of cessation of discharge. The actual volume discharged is greater than 2,700 gallons; but the amount is unknown at this time.

39. On 7 October 2014, Board staff was informed that the Discharger had purchased a new dissolved oxygen meter as readings from the previous meter may be incorrect. Additionally, the Discharger is in the process of performing repairs to the WWTF oxygen injection system for industrial wastewater ponds 2 and 3. The failure to adequately maintain the dissolved oxygen meter and the oxygen injection system is a violation of Standard Provision A.7, which states *"The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements."*
40. On 11 October 2014, the treatment plant operator notified Water Board staff that domestic influent wastewater flows exceeded the discharge limit of 1.0 million gallons per day (mgd) on October 6<sup>th</sup>. The flow on that day was 1.263 mgd, which is a violation of Discharge Specification B.1 of Order 5-00-142. Flows were also higher than normal on October 5<sup>th</sup>, but did not exceed the flow limit. Staff's review of the monitoring reports show that the maximum daily influent flow was also exceeded in September 2013. This Order requires an investigation into the source of the high inflow into the domestic WWTP.

#### Short Term Corrective Actions

41. On 17 September 2014, the Discharger requested that the tomato processor and pepper processor reduce wastewater generation rates. Daily wastewater flow data submitted by the Discharger shows that the combined industrial flows have been reduced from approximately 2.7 million gallons a day (mgd) to 1.7 mgd within a few days after the request. Daily flow and freeboard logs submitted by the Discharger show that freeboard levels in the ponds have increased slightly. However, the freeboard levels in a number of the ponds remains below 10 inches, in violation of the WDR requirement of 24 inches of freeboard.
42. On 24 September 2014, the Discharger submitted an interim wastewater disposal plan. Approximately 100,000 gallons per day of pretreated industrial wastewater would be sent to the City of Manteca WWTF for final disposal (pending Manteca's approval). The agreement would be valid through 31 October 2014. Board staff approved the emergency plan on 25 September 2014. The City began off-hauling treated industrial wastewater on 21 October 2014 and will cease off-hauling on 31 October 2014.
43. On 8 October 2014, the Discharger informed Board staff that odor absorbents and masking agents have been placed along the fence line of the WWTF.

#### **REGULATORY CONSIDERATIONS**

44. As a result of the events and activities described in this Order, the Regional Board finds that the Discharger has caused or permitted waste to be discharged in such a manner that it has created, and continues to threaten to create, a condition of pollution

or nuisance. The Regional Board also finds that the Discharger is discharging waste in violation of WDRs Order No. 5-00-142, as described in the Findings of this Order.

45. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. These requirements implement the Basin Plan.
46. The WWTF is adjacent to the Stanislaus River. Surface water drainage is to the Stanislaus River. As described in the Basin Plan, the beneficial uses of the Stanislaus River are municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, migration of aquatic organisms, spawning, reproduction, and/or early development, and wildlife habitat.
47. The beneficial uses of the underlying groundwater, as specified in the Basin Plan are municipal, domestic, and industrial supply.
48. Section 13050(m) of the California Water Code defines "nuisance" as anything which meets the following requirements:
  - (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
  - (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
  - (3) Occurs during, or as a result of, the treatment or disposal of wastes.
49. Section 13301 of the California Water Code states in part: "*When a Regional Board finds that a discharge of waste is taking place or threatening to take place in violation of the requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action.*"
50. Section 13267(b) of the California Water Code states: "*In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters of the state 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."*

51. The technical reports required by this Order are necessary to ensure compliance with this Order and WDRs Order 5-00-142, and to ensure the protection of water quality. The City of Escalon owns and operates the facility that discharges waste subject to this Order and WDRs Order 5-00-142.
52. The issuance of this Order is being taken for the protection of the environment and as such is exempt from provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) pursuant to California Code of Regulations, title 14, sections 15061 subdivision (b)(3), 15306, 15307, 15308, and 15321 subdivision (a)(2).
53. On 5 December 2014, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

**IT IS HEREBY ORDERED** that, pursuant to Water Code Sections 13301 and 13267, the City of Escalon shall implement the following measures in order to comply with WDRs Order 5-00-142.

This Order requires submittal of technical reports. These technical reports shall contain the information and decisions required by the following paragraphs. If a report is submitted without the required information or decision, then the Discharger is in violation of this Order and subject to additional enforcement action.

The Board is transitioning to a paperless office. Therefore, all technical reports required by this Order must be converted to a searchable pdf file and emailed to [centralvalleysacramento@waterboards.ca.gov](mailto:centralvalleysacramento@waterboards.ca.gov). The following information shall be included in the body of the email: Attention Brendan Kenny, Compliance Section, Waste Discharge to Land Unit. In addition, include the Discharger name, facility name, county, and CIWQS place ID (222916) in the body of the email.

1. **Effective immediately**, the Discharger shall submit monitoring reports that contain all the information required by Monitoring and Reporting Program 5-00-142 (or subsequent revision).

#### Odor Mitigation and Wastewater Treatment Evaluation

2. By **15 February 2015** the Discharger shall submit an *Odor Identification and Mitigation Plan* for review and approval. The plan shall describe how the wastewater treatment

plant and Del Rio subdivision will be continuously monitored using real time sensors, such as the Odowatch© (or similar system for odor monitoring) to identify the presence of nuisance odors associated with wastewater treatment and disposal. At least one sensor shall be installed within the Del Rio subdivision. The plan must also include notification and corrective action procedures for the City and WWTF staff to follow when odors are identified.

3. By **15 January 2015**, the Discharger shall submit a *Food Processing Waste Loading* technical report that (a) evaluates the organic loading and pH ranges which the City's industrial wastewater treatment plant is capable of treating while meeting the effluent limits and conditions specified in the WDRs, and (b) describes the actions needed to ensure that the tomato processing facility and the pepper processing facility comply with the influent loading limits. This second item shall include an evaluation of best practical treatment and control options including but not limited to: operating at a reduced organic loading rate, load checking, additional screening, pretreatment options including BOD reduction at the industrial facility, segregation of high strength waste streams, and changes to the waste characteristics as it is conveyed from the industrial facilities to the treatment plant. The report shall include recommendations and a construction schedule for upgrades to the individual food processing facilities and the WWTF to comply with effluent limits in the WDRs. All upgrades shall be completed prior to the 2015 processing season.
4. By **1 April 2015**, the Discharger shall submit an evaluation of the 2013 and 2014 domestic and industrial influent flows. The evaluation shall identify any flow violations, cite the cause of the violations, and include a description of corrective actions the City has implemented to prevent future flow violations. For the industrial flows, the City shall evaluate whether increased flows in 2014 were a partial cause of the lack of capacity and odor violations.
5. By **15 June 2015**, the Discharger shall submit a report certifying that a real time continuous odor monitoring system has been installed in accordance with the approved *Odor Identification and Mitigation Plan*.
6. Beginning **10 July 2015**, the Discharger shall submit monthly *Odor Monitoring Reports* that include odor plume concentration maps. Each report shall cover the previous month, and shall include odor plume maps and a discussion of WWTP-derived odors in the Del Rio subdivision. The reports shall be submitted until this Order is rescinded or the Executive Officer determines that they are no longer necessary.
7. By **15 June 2015**, the Discharger shall submit a *Food Processing Waste Upgrades Report of Results* describing in detail the physical and management changes that have been implemented at (a) the tomato processing facility, (b) the pepper processing facility, and (c) the City wastewater treatment plant in response to the recommendations in the *Food Processing Waste Loading Report*. The *Report of Results* shall discuss changes to the pretreatment program, improvements at the

WWTF, and processing season startup procedures to limit the potential for odor generation.

#### Wastewater Treatment Plant

8. **Effectively immediately**, the Discharger shall conduct daily freeboard monitoring and inspections, and continue to report the results daily to the Board via email. However, effective after freeboard levels in all wastewater ponds (domestic and industrial) meet the two foot requirement for seven consecutive days, the Discharger may reduce the freeboard monitoring to a Monday through Friday basis, and report the results each Friday by email. This requirement shall continue until this Order is rescinded or the Executive Officer approves the discontinuance of the reporting.
9. By **31 December 2014**, the Discharger shall submit and implement a contingency plan for managing influent flows during the 2014/2015 winter and spring while maintaining compliance with the WDRs.
10. By **15 February 2015**, the Discharger shall submit and implement a *Vegetation and Rodent Control Plan*.
11. By **15 February 2015**, the Discharger shall submit and implement a *Pond Berm Study Report* with recommendations and a construction schedule for completing repairs and improvements as necessary to stop seepage from the berms, including Pond 12, Ponds 11/16, Pond 24 and any additional ponds where seepage is identified. The report shall include the items listed in the 2 October 2014 Wallace Kuhl and Associates workplan. Additionally, the report shall evaluate the entire wastewater pond berm system and include recommendations as to repair or other actions necessary to preclude the possibility of additional pond berm failures.
12. By **15 July 2015**, the Discharger shall submit a water balance demonstrating whether or not the ponds have adequate storage and disposal capacity. The report shall include recommendations as needed to repair/restore berm integrity and capacity such that the WWTF can comply with Discharge Specification B. 10 of the WDRs. If there is not enough capacity, then the Discharger shall submit plans to either obtain sufficient capacity or reduce flows to the current capacity of the treatment plant.

The *Water Balance Report* shall be prepared by or under the supervision of a California Registered Engineer, and signed/stamped by the registered engineer. The water balance shall include:

- Rainfall based on the 100-year return period total annual precipitation and the average annual precipitation as reported by the California Department of Water

Resources in its Depth-Duration-Frequency Tables for the Escalon Station (or other station approved by staff).<sup>[1]</sup>

- Return period ratio calculated from the abovementioned 100-year return period total annual precipitation, which is divided by the average annual precipitation for the approved Station.
  - Rainfall distributed over the months of the year using the approved station's monthly average precipitation multiplied by the return period ratio.
  - The monthly evaporation, precipitation, and percolation rates, including contributions from major sources such as infiltration and inflows, and storm water run-on.
  - Current influent flows and permitted influent flows (if different).
13. By **15 June 2015**, the Discharger shall submit a report certifying that the corrective actions identified in the Pond Study have been implemented. As built drawings for the wastewater pond system shall be submitted to the Regional Board by **15 July 2015**.

#### Other Requirements

14. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed by the registered professional. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.
15. As required by Provision F.6, of WDRs Order 5-00-142 and General Reporting Requirement B.3 of Standard Provisions and Reporting Requirements For Waste Discharge Requirements, all reports and transmittal letters shall be signed by either a principal executive officer of the corporation with at least the level of senior vice-president or a duly authorized representative in accordance with the WDRs, and any person signing a document submitted to comply with this Order shall make the following certification:

*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and 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 fine and imprisonment.*

16. 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

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<sup>[1]</sup> The California Department of Water Resources' station index and Depth-Duration-Frequency tables are available at the website: <ftp://ftp.water.ca.gov/users/dfmhydro/Rainfall%20Dept-Duration-Frequency/Rain%20D%20DDF%20Daily/>.

General for judicial enforcement or may issue a complaint for administrative civil liability.

17. Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.
18. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, 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, 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](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 December 2014.



PAMELA C. CREEDON, Executive Officer

12/5/2014

(Date)

## **Appendix B**

**California Regional Water Quality Control Board  
Central Valley Region**

**Order No. R5-2003-0124**

**Cease and Desist Order  
for  
City of Escalon  
Escalon Wastewater Treatment Plant  
San Joaquin County**



# California Regional Water Quality Control Board

## Central Valley Region

Robert Schneider, Chair



Gray Davis  
Governor

Winston H. Hickox  
Secretary for  
Environmental  
Protection

Sacramento Main Office  
Internet Address: <http://www.swrcb.ca.gov/~rvqcb5>  
3443 Rautier Road, Suite A, Sacramento, California 95827-3003  
Phone (916) 255-3000 • FAX (916) 255-3015

15 September 2003

### CERTIFIED MAIL

7002 0860 0005 3013 2791

Mike Garello  
City of Escalon – Public Works  
1854 Main Street / P.O. Box 248  
Escalon, CA 95320-0248

NOTICE OF ADOPTION  
OF  
CEASE AND DESIST ORDER  
FOR  
CITY OF ESCALON  
ESCALON WASTEWATER TREATMENT PLANT  
SAN JOAQUIN COUNTY

Cease and Desist (C&D) Order No. R5-2003-0124 for the Escalon Wastewater Treatment Plant was adopted by the California Regional Water Quality Control Board, Central Valley Region, at its 5 September 2003 meeting.

Please note that the C&D Order contains compliance schedules with specific timetables for submitting reports and conducting studies to the wastewater system. The first scheduled due date is 4 December 2003, when you must submit a technical report that evaluates the industrial wastewater treatment system's capacity. Please review the enclosed Order for additional deliverable requirements.

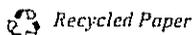
If you have any questions regarding your new C&D, please call Tim O'Brien at (916) 255-3116.

WENDY S. WYELS, Chief  
Waste Discharge to Land Unit

Enclosure - Cease & Desist Order

cc w/enc: Mike Huggins, San Joaquin County Environmental Health Department, Stockton  
Jami Aggers, San Joaquin County Air Pollution Control District, Modesto  
Mike Anderson, Nolte Associates, Sacramento  
Bob Graf, California League of Food Processors, Sacramento

California Environmental Protection Agency



bcc w/ enc:

Michael and Karen Goodman, Modesto

Mark Fenton, Modesto

Gordon and Lynn Fluker, Modesto

Andrew Lin, Modesto

William Mussman, Modesto

Steve and Jenny Zeff, Modesto

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2003-0124  
CEASE AND DESIST ORDER  
REQUIRING

CITY OF ESCALON  
ESCALON WASTEWATER TREATMENT PLANT  
SAN JOAQUIN COUNTY  
TO CEASE AND DESIST  
FROM DISCHARGING CONTRARY TO REQUIREMENTS

The Regional Water Quality Control Board, Central Valley Region, (hereafter referred to as "Regional Board") finds that:

1. Waste Discharge Requirements (WDRs) Order No. 5-00-142, adopted by the Regional Board on 16 May 2000, prescribes requirements for the domestic and industrial wastewater treatment plant owned and operated by the City of Escalon (hereafter referred to as "Discharger").
2. The City of Escalon Wastewater Treatment Plant is in San Joaquin County in Sections 17 and 20, T2S, R9E, MDB&M, at 25100 West River Road. The facility is on Assessor's Parcel Numbers 247-090-36 and 247-090-38, which are both owned by the City of Escalon.

**WASTEWATER TREATMENT PLANT AND SITE CONDITIONS**

3. The WWTP treats industrial wastewater generated by vegetable processing industries and domestic wastewater generated by the City of Escalon. The treatment process consists of screening and discharge to mechanically aerated treatment ponds, followed by discharge to evaporation/percolation ponds.
4. The industrial and domestic wastewater flows are delivered to the plant in separate pipes, are treated in separate ponds, and are discharged to separate evaporation/percolation ponds. Stormwater from a limited portion of the City of Escalon is piped to the facility and is discharged to the industrial ponds.
5. The Discharger treats domestic wastewater in five treatment ponds, all of which are mechanically aerated. The domestic wastewater is disposed in two evaporation/percolation ponds (Nos. 21 and 24). The Discharger treats industrial wastewater in four treatment ponds, all of which are mechanically aerated. The industrial wastewater is then discharged to nine evaporation/percolation ponds.
6. The Discharger allows the industrial wastewater ponds to dry completely prior to initiation of the industrial wastewater generation season. The ponds are disced and ripped annually to maintain percolation rates.
7. Industrial dischargers consist of Escalon Premier Brand (tomato canner) and Eckert Cold Storage (frozen pepper processor). The industrial dischargers' processing season is from approximately May through December. The industrial dischargers presently screen their wastewater to remove solids prior to discharge to the WWTP.
8. Industrial wastewater is characterized by high concentrations of biochemical oxygen demand. Escalon Premier Brands added tomato-peeling equipment in 1999, which resulted in additional flow and increased biochemical oxygen demand.

9. Based on the groundwater monitoring performed at the site, groundwater exists approximately 37 feet below ground surface. Groundwater flows to the west-southwest.
10. The WWTP is on the north side of the Stanislaus River. Surrounding land uses are primarily agricultural. A golf country club and residential developments are south of the Stanislaus River.

**VIOLATIONS OF WASTE DISCHARGE REQUIREMENTS**

11. WDRs Discharge Specification No. B.6 states, "*Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment facility.*"
12. Prior to adoption of revised WDRs in June 2000, objectionable odor complaints related to the facility were documented in October 1996, November 1997, and September 1999. All the complaints were related to the industrial wastewater system. The City subsequently improved the wastewater treatment system by adding more mechanical aerators to the industrial wastewater treatment ponds.
13. Since adoption of the revised WDRs in June 2000, objectionable odor complaints related to the facility were documented in July and August 2000, August 2001, June and July 2002, and July and August 2003. All odors were related to the treatment of industrial waste.
14. Staff of the San Joaquin Valley Air Quality Management District (SJAQMD) received 56 odor complaints regarding the City of Escalon wastewater treatment plant over a 9-day period in July 2003. The SJAQMD issued five violations for odor generation.
15. In late July and early August 2003, Regional Board staff received numerous telephone calls and five written complaints regarding the odor generated by the City wastewater plant. The complainants state that odor conditions have continued for years generally from mid-July through September.
16. Notices of Violation were issued to the City for objectionable odors in August 2000 and July 2003. The NOV's informed the City of its responsibility to control the odors as required by its WDRs.
17. As shown on the table below, industrial wastewater loading rates increased from a total of 2.4 million pounds of BOD in 2001 to 3.1 million pounds of BOD in 2002. Data for 2003 is not yet available.

Month/Year	Influent BOD (mg/L)	Flow Rate (Gal/Month)	BOD Loading Pounds/Month	BOD Loading Pounds/Day
July-01	1,020	57,708,800	490,917	15,836
Aug-01	1,030	80,781,200	693,927	22,385
Sept-01	1,080	79,495,080	716,028	23,868
Oct-01	960	61,385,930	491,480	15,854
Nov-01	535	16,382,830	73,099	2,437
		<i>Total for 2001</i>	2,465,451	
July-02	144	52,927,791	63,564	2,050
Aug-02	1,320	88,301,960	972,099	31,358
Sept-02	1,035	90,611,820	782,152	26,072
Oct-02	1,905	77,274,670	1,227,717	39,604

Month/Year	Influent BOD (mg/L)	Flow Rate (Gal/Month)	BOD Loading Pounds/Month	BOD Loading Pounds/Day
Nov-02	1,020	9,114,690	77,537	2,585
<i>Total for 2002</i>			3,123,069	

Flow rate and BOD data taken from 2001 Annual Wastewater Treatment Report and 2002 Annual Wastewater Treatment Report.

18. The March 2000 Report of Waste Discharge anticipated that industrial wastewater would have a BOD loading rate of 40,000 lbs/day at a flow rate of 3.4 million gallons per day. However, because odors have been documented at significantly lower loading rates than assumed in the design, further investigation of the cause of the odors is warranted.

### REGULATORY CONSIDERATIONS

19. As a result of the events and activities described in this Order, the Regional Board finds that the Discharger has caused or permitted waste to be discharged in such a manner that it has created, and continues to threaten to create, a condition of pollution or nuisance. The Regional Board also finds that the Discharger is discharging waste in violation of WDRs Order No. 5-00-142, as described in Findings No. 11 through 18.
20. Surface water drainage is to the Stanislaus River.
21. The Regional Board's Water Quality Control Plan (Fourth Edition) for the Sacramento River and San Joaquin River Basins (Basin Plan) establishes the beneficial uses of the waters of the Stanislaus River. The beneficial uses of the Stanislaus River are municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, migration of aquatic organisms, spawning, reproduction, and/or early development, and wildlife habitat.
22. Section 13301 of the California Water Code states in part: "When a Regional Board finds that a discharge of waste is taking place or threatening to take place in violation of the requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action."
23. Section 13267(b) of the California Water Code states: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters of the state 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."
24. The Discharger owns and operates the facility subject to this Order. Monitoring reports and other technical reports are necessary to determine compliance with the Waste Discharge Requirements and with this Order.

25. The issuance of this Order is an enforcement action by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act, pursuant to Section 15321(a)(2), Title 14, California Code of Regulations.
26. On 5 September 2003, in Sacramento, California, after due notice to the Discharger and all other affected persons, the Regional Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order.
27. Any person affected by this action of the Regional Board may petition the State Water Resources Control Board (State Board) to review the action in accordance with Section 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions are available at [http://www.swrcb.ca.gov/water\\_laws/cawtrcde/wqpetition\\_instr.html](http://www.swrcb.ca.gov/water_laws/cawtrcde/wqpetition_instr.html) and will also be provided upon request.

**IT IS HEREBY ORDERED** that, pursuant to Sections 13301 and 13267 of the California Water Code, the City of Escalon, its agents successors, and assigns, shall implement certain measures, and identify and implement facility improvements, in accordance with the scope and schedule set forth below to ensure long-term compliance with WDRs No. 5-00-142 or any revisions to those WDRs.

Each document submitted under this Order shall bear the following certification signed by the Discharger:

*"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and 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 fine and imprisonment."*

1. The Discharger shall immediately comply with WDRs Order No. 5-00-142, Discharge Specification B.6, which states: "*Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment facility.*"
2. By 4 December 2003, the City of Escalon shall submit a technical report that (a) evaluates the organic loading and pH ranges which the City's industrial wastewater treatment plant is capable of treating in a manner that protects water quality and prevents nuisance odors, and (b) describes the actions needed to ensure that Escalon Premier Brand and Eckert Cold Storage comply with the loading limits at the influent to the City plant. This second item shall include an evaluation of best practical treatment and control options including but not limited to: operating at a reduced organic loading rate, load checking, additional screening, pretreatment options including BOD reduction at the industrial facility, segregation of high strength waste streams, and changes to the waste characteristics as it is conveyed from the industrial facilities to the treatment plant. All physical and management changes shall be implemented prior to the start of the 2004 processing season.
3. By 15 January 2004, the City of Escalon shall submit a technical report showing that it has implemented a pretreatment program that requires the industrial wastewater dischargers to comply with loading limits that are within the treatment capacity of the City system.

4. By **15 March 2004**, the City of Escalon shall submit a technical report that describes processing season startup procedures to limit the potential for odor generation. The procedures in the technical report shall be implemented beginning with the 2004 processing season.
5. By **1 June 2004**, the City of Escalon shall submit a technical report describing in detail the physical and management changes that have been implemented at (a) Escalon Premier Brand, (b) Eckert Cold Storage, and (c) the City wastewater treatment plant to meet the actual organic loading and pH ranges which the City's wastewater treatment plant is capable of treating.

In accordance with California Business and Professions Code Sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by, or under the direct supervision of, registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal.

~~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.~~

I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 September 2003.



THOMAS R. PINKOS, Executive Officer

AMENDED

TRO: 9/5/03

## **Appendix C**

**City-prepared Wastewater Analysis, submitted by the South San  
Joaquin Irrigation District**

## **Appendix C-1**

**Samples collected on September 8, 2009**





## QUOTATION for ANALYTICAL SERVICES

Requested By: Rich Hartman  
South San Joaquin Irrigation District  
11011 East Highway 120  
Manteca, CA 95336  
(209) 249-4600  
(209) 249-4640 (Fax)

Project: Table B-1, C-1 & C-3

**Quote ID: 1576**

Prepared DATE: Aug 31, 2009  
Expired DATE: Nov 29, 2009

Prepared By: Rosa Venegas

Test Name	TestNo	TAT	Matrix	Qty	Mult	Unit Price	Test Total
Sb,As,Be,Cr,Se,Tl,Cd,Cu,Pb,Ni,Ag,Zn	E200.8	5 days	Water	1	1	\$110.00	\$110.00
Hexachrome by EPA 218.6	E218.6	5 days	Water	1	1	\$35.00	\$35.00
Cyanide, Total	Kelada-01	5 days	Water	1	1	\$62.00	\$62.00
Asbestos (sub-contracted)	Asbestos	5 days	Water	1	1	\$270.00	\$270.00
Acrolein & 2-CEVE by EPA 624	E624	5 days	Water	1	1	\$70.00	\$70.00
EPA 624 (Basic List)	E624	5 days	Water	1	1	\$100.00	\$100.00
1,1-DCE & 1,1,2,2-Tetrachloroethane by EPA 624 SIM	E624	5 days	Water	1	1	\$100.00	\$100.00
Acrylonitrile by EPA 624 SIM	E624	5 days	Water	1	1	\$100.00	\$100.00
EPA 625 (Low-Level)	E625	5 days	Water	1	1	\$500.00	\$500.00
Mercury by CVAF (TTLC)	E1631	5 days	Water	1	1	\$95.00	\$95.00
2,3,7,8-TCDD by 613	E613	5 days	Water	1	1	\$300.00	\$300.00
EPA 608 (Low-Level)	E608	5 days	Water	1	1	\$500.00	\$500.00
Mercury by CVAF (TTLC) Trip Blank	E1631	5 days	Water	1	1	\$95.00	\$95.00

**TOTAL: \$2,337.00**

**Comments:** Price quote includes all relevant sampling containers and local sample pickup.

MAI offers same day, 24hr, 48hr, 72hr TAT at 150%, 100%, 50%, 25% markup from standard TAT, respectively. All rush TATs must be arranged in advance. Sample Reception is from Monday thru Friday between 8:00AM- 9:00PM.

All bid pricing includes reasonable transportation costs as well as all relevant sampling containers. Please let us know in advance (2-3 days) if you will need sampling containers.

If you have any questions or concerns, please contact Rosa Venegas, Sales Manager at (925) 252-9262 ext 43 or by email at rosa@mcccampbell.com . We look forward to working with you and thank you for the opportunity to present our analytical capabilities to you.

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

# CHAIN-OF-CUSTODY RECORD

**WorkOrder: 0909243**

**ClientCode: SSJD**

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

<b>Report to:</b>	Rich Hartman	Email: rhartman@ssjid.com	<b>Bill to:</b>	Rich Hartman	<b>Requested TAT:</b>	<b>5 days</b>
	South San Joaquin Irrigation District	cc:		South San Joaquin Irrigation District	<i>Date Received:</i>	<b>09/09/2009</b>
	11011 East Highway 120	PO:		11011 East Highway 120	<i>Date Printed:</i>	<b>09/09/2009</b>
	Manteca, CA 95336	ProjectNo: Table B-1, C-1 & C-3		Manteca, CA 95336		
	(209) 595-1841    FAX (209) 249-4640					

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0909243-001	Table B-1, C-1 & C-3	Water	9/8/2009 7:30	<input type="checkbox"/>	B	J	H	F	G	E	I	D	C	L	K	A
0909243-002	Trip Blank	Water	9/8/2009 7:30	<input type="checkbox"/>											A	

**Test Legend:**

1	218_6_W	2	608_LL_W	3	624_SIM_W	4	624_W	5	624ACR+2CEVE_SIM_W
6	624ACR+2CEVE_W	7	625_LL_W	8	ASBESTOS_W	9	CN_TOTAL_W	10	Dioxin_613_W
11	HGPSA1_W	12	METALSMS_W						

**Prepared by: Melissa Valles**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.



### Sample Receipt Checklist

Client Name: **South San Joaquin Irrigation District**

Date and Time Received: **9/9/2009 2:17:11 PM**

Project Name: **Table B-1, C-1 & C-3**

Checklist completed and reviewed by: **Melissa Valles**

WorkOrder N°: **0909243** Matrix Water

Carrier: FedEx

#### Chain of Custody (COC) Information

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: 5.2°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
- Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments:





# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

South San Joaquin Irrigation District  11011 East Highway 120  Manteca, CA 95336	Client Project ID: Table B-1, C-1 & C-3	Date Sampled: 09/08/09
		Date Received: 09/09/09
	Client Contact: Rich Hartman	Date Extracted: 09/09/09
	Client P.O.:	Date Analyzed: 09/12/09

## Organochlorine Pesticides (608 Basic Target List) and PCBs (Low-Level)\*

Extraction Method: E608

Analytical Method: E608

Work Order: 0909243

Lab ID	0909243-001J				Reporting Limit for DF =1	
Client ID	Table B-1, C-1 & C-3				S	W
Matrix	W					
DF	1					

Compound	Concentration				µg/kg	µg/L
Aldrin	ND<0.00040				NA	0.0002
a-BHC	ND<0.00040				NA	0.0002
b-BHC	0.011				NA	0.005
d-BHC	ND<0.010				NA	0.005
g-BHC	ND<0.040				NA	0.02
Chlordane (Technical)	ND<0.0040				NA	0.002
a-Chlordane	ND<0.10				NA	0.05
g-Chlordane	ND<0.10				NA	0.05
p,p-DDD	ND<0.00080				NA	0.0004
p,p-DDE	ND<0.00080				NA	0.0004
p,p-DDT	ND<0.00080				NA	0.0004
Dieldrin	ND<0.00040				NA	0.0002
Endosulfan I	ND<0.040				NA	0.02
Endosulfan II	ND<0.020				NA	0.01
Endosulfan sulfate	ND<0.10				NA	0.05
Endrin	ND<0.020				NA	0.01
Endrin aldehyde	ND<0.10				NA	0.05
Heptachlor	ND<0.00040				NA	0.0002
Heptachlor epoxide	ND<0.00040				NA	0.0002
Hexachlorobenzene	ND<1.0				NA	0.5
Hexachlorocyclopentadiene	ND<2.0				NA	1.0
Toxaphene	ND<0.020				NA	0.01
Aroclor1016	ND<0.020				NA	0.01
Aroclor1221	ND<0.020				NA	0.01
Aroclor1232	ND<0.020				NA	0.01
Aroclor1242	ND<0.020				NA	0.01
Aroclor1248	ND<0.020				NA	0.01
Aroclor1254	ND<0.020				NA	0.01
Aroclor1260	ND<0.020				NA	0.01
PCBs, total	ND<0.020				NA	0.01

### Surrogate Recoveries (%)

%SS:	101			
Comments	a4			

\* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

a4) the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.



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South San Joaquin Irrigation District  11011 East Highway 120  Manteca, CA 95336	Client Project ID: Table B-1, C-1 & C-3	Date Sampled: 09/08/09
		Date Received: 09/09/09
	Client Contact: Rich Hartman	Date Extracted: 09/10/09
	Client P.O.:	Date Analyzed 09/10/09

### Volatile Organics by P&T and GC/MS (SIM Mode)\*

Extraction Method: E624

Analytical Method: E624

Work Order: 0909243

Lab ID	0909243-001H				Reporting Limit for DF =1	
Client ID	Table B-1, C-1 & C-3					
Matrix	W					
DF	1					
					S	W
<b>Compound</b>	<b>Concentration</b>				ug/kg	µg/L
1,1-Dichloroethene	ND				NA	0.05
1,1,2,2-Tetrachloroethane	ND				NA	0.1

### Surrogate Recoveries (%)

%SS1:	---#				
%SS2:	104				
%SS3:	97				

### Comments

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.



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South San Joaquin Irrigation District  11011 East Highway 120  Manteca, CA 95336	Client Project ID: Table B-1, C-1 & C-3	Date Sampled: 09/08/09
		Date Received: 09/09/09
	Client Contact: Rich Hartman	Date Extracted: 09/12/09
	Client P.O.:	Date Analyzed 09/12/09

### Volatile Organics by P&T and GC/MS (624 Basic Target List)\*

Extraction Method: E624

Analytical Method: E624

Work Order: 0909243

Lab ID	0909243-001F
Client ID	Table B-1, C-1 & C-3
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Benzene	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
Carbon tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	Chloroform	4.9	1.0	0.5
Chloromethane	ND	1.0	0.5	Dibromochloromethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	1,1-Dichloroethane	ND	1.0	0.5
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5	1,1-Dichloroethene	ND	1.0	0.5
cis-1,2-Dichloroethene	ND	1.0	0.5	trans-1,2-Dichloroethene	ND	1.0	0.5
1,2-Dichloropropane	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,2,2-Tetrachloroethane	ND	1.0	0.5
Tetrachloroethene	ND	1.0	0.5	Toluene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	Vinyl chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

### Surrogate Recoveries (%)

%SS1:	104	%SS2:	102
%SS3:	87		

#### Comments:

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.







South San Joaquin Irrigation District  11011 East Highway 120  Manteca, CA 95336	Client Project ID: Table B-1, C-1 & C-3	Date Sampled: 09/08/09
		Date Received: 09/09/09
	Client Contact: Rich Hartman	Date Extracted: 09/09/09
	Client P.O.:	Date Analyzed: 09/18/09

**Semi-Volatile Organics by GC/MS (Low-Level)\***

Extraction Method: E625

Analytical Method: E625

Work Order: 0909243

Lab ID	0909243-0011
Client ID	Table B-1, C-1 & C-3
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<10	10	1.0	Acenaphthylene	ND<10	10	1.0
Anthracene	ND<10	10	1.0	Benzidine	ND<1.0	10	0.1
Benzo(a)anthracene	ND<0.040	10	0.004	Benzo(b)fluoranthene	ND<0.040	10	0.004
Benzo(k)fluoranthene	ND<0.040	10	0.004	Benzo(g,h,i)perylene	ND<10	10	1.0
Benzo(a)pyrene	ND<0.040	10	0.004	Bis (2-chloroethoxy) Methane	ND<10	10	1.0
Bis (2-chloroethyl) Ether	ND<0.20	10	0.02	Bis (2-chloroisopropyl) Ether	ND<10	10	1.0
Bis (2-ethylhexyl) Adipate	ND<10	10	1.0	Bis (2-ethylhexyl) Phthalate	ND<50	10	5.0
4-Bromophenyl Phenyl Ether	ND<10	10	1.0	Butylbenzyl Phthalate	ND<10	10	1.0
4-Chloro-3-methylphenol	ND<10	10	1.0	2-Chloronaphthalene	ND<10	10	1.0
2-Chlorophenol	ND<10	10	1.0	4-Chlorophenyl Phenyl Ether	ND<10	10	1.0
Chrysene	ND<0.040	10	0.004	Dibenzo(a,h)anthracene	ND<0.04	10	0.004
Di-n-butyl Phthalate	ND<100	10	10	1,2-Dichlorobenzene	ND<10	10	1.0
1,3-Dichlorobenzene	ND<10	10	1.0	1,4-Dichlorobenzene	ND<10	10	1.0
3,3-Dichlorobenzidine	ND<0.40	10	0.04	2,4-Dichlorophenol	ND<10	10	1.0
Diethyl Phthalate	ND<10	10	1.0	2,4-Dimethylphenol	ND<10	10	1.0
Dimethyl Phthalate	ND<10	10	1.0	4,6-Dinitro-2-methylphenol	ND<50	10	5.0
2,4-Dinitrophenol	ND<50	10	5.0	2,4-Dinitrotoluene	ND<0.20	10	0.02
2,6-Dinitrotoluene	ND<0.20	10	0.02	Di-n-octyl Phthalate	ND<10	10	1.0
1,2-Diphenylhydrazine	ND<0.40	10	0.04	Fluoranthene	ND<10	10	1.0
Fluorene	ND<10	10	1.0	Hexachlorobenzene	ND<10	10	1.0
Hexachlorobutadiene	ND<10	10	1.0	Hexachlorocyclopentadiene	ND<50	10	5.0
Hexachloroethane	ND<10	10	1.0	Indeno (1,2,3-cd) pyrene	ND<0.040	10	0.004
Isophorone	ND<10	10	1.0	3 &/or 4-Methylphenol (m,p-Cres	ND<10	10	1.0
Naphthalene	ND<10	10	1.0	Nitrobenzene	ND<10	10	1.0
2-Nitrophenol	ND<50	10	5.0	4-Nitrophenol	ND<50	10	5.0
N-Nitrosodimethylamine	ND<5.0	10	0.5	N-Nitrosodiphenylamine	ND<10	10	1.0
N-Nitrosodi-n-propylamine	ND<0.50	10	0.05	Pentachlorophenol	ND<5.0	10	0.5
Phenanthrene	ND<10	10	1.0	Phenol	ND<10	10	1.0
Pyrene	ND<10	10	1.0	1,2,4-Trichlorobenzene	ND<10	10	1.0
2,4,6-Trichlorophenol	ND<10	10	1.0				

**Surrogate Recoveries (%)**

%SS1:	---	%SS2:	10
%SS3:	---	%SS4:	30
%SS5:	47	%SS6:	35

Comments: a1

\* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

#) surrogate diluted out of range; &) low or no surrogate due to matrix interference.

a1) sample diluted due to matrix interference





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Telephone: 877-252-9262 Fax: 925-252-9269

South San Joaquin Irrigation District  11011 East Highway 120  Manteca, CA 95336	Client Project ID: Table B-1, C-1 & C-3	Date Sampled: 09/08/09
		Date Received: 09/09/09
	Client Contact: Rich Hartman	Date Extracted: 09/09/09
	Client P.O.:	Date Analyzed: 09/15/09

### Mercury by CVAF\*

Extraction method: E1631

Analytical methods: E1631

Work Order: 0909243

Lab ID	Client ID	Matrix	Extraction Type	Mercury	DF	% SS	Comments
0909243-001K	Table B-1, C-1 & C-3	W	TOTAL	11	1	N/A	
0909243-002A	Trip Blank	W	TOTAL	ND	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	0.5	ng/L
	S	TOTAL	NA	mg/Kg

\*water samples are reported in ng/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

# means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.  
WET = Waste Extraction Test (STLC).  
DI WET = Waste Extraction Test using de-ionized water.

 Angela Rydelius, Lab Manager



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Telephone: 877-252-9262 Fax: 925-252-9269

South San Joaquin Irrigation District  11011 East Highway 120  Manteca, CA 95336	Client Project ID: Table B-1, C-1 & C-3	Date Sampled: 09/08/09
		Date Received: 09/09/09
	Client Contact: Rich Hartman	Date Extracted: 09/09/09
	Client P.O.:	Date Analyzed 09/10/09

### Metals\*

Extraction Method: E200.8

Analytical Method: E200.8

Work Order: 0909243

Lab ID	0909243-001A				Reporting Limit for DF =1	
Client ID	Table B-1, C-1 & C-3					
Matrix	Water					
DF	1					
Extraction Type	TOTAL					
					S	W

Compound	Concentration				µg/kg	µg/L
Antimony	0.86				NA	0.5
Arsenic	14				NA	0.5
Beryllium	ND				NA	0.5
Cadmium	0.75				NA	0.25
Chromium	22				NA	0.5
Copper	130				NA	0.5
Lead	2.7				NA	0.5
Nickel	600				NA	0.5
Selenium	ND				NA	0.5
Silver	ND				NA	0.19
Thallium	0.64				NA	0.5
Zinc	90				NA	5.0

### Surrogate Recoveries (%)

%SS:	108				
------	-----	--	--	--	--

### Comments

\*water samples are reported in ug/L, product/oil/non-aqueous liquid samples and all TCLP / WET / DI WET / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

# means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.

TRM = total recoverable metals by "direct analysis".

DISS = dissolved metals by suitable filtration and acid preservation.

WET = Waste Extraction Test (STLC).

DI WET = Waste Extraction Test using de-ionized water.

**Appendix C-2**

**Dioxin Samples collected on September 25, 2009**

September 30, 2009

**Vista Project I.D.: 32059**

Ms. Melissa Valles  
McCampbell Analytical, Inc.  
1534 Willow Pass Road  
Pittsburg, CA 94565

Dear Ms. Valles,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on September 16, 2009. These samples were extracted and analyzed using EPA Method 1613 for 2,3,7,8-TCDD. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com). Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha M. Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.*



**Section I: Sample Inventory Report**

**Date Received: 9/16/2009**

**Vista Lab. ID**

**Client Sample ID**

32059-001

TABLE B-1,C-1 & C-3

## SECTION II

Method Blank					EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	2412	Lab Sample:	0-MB001			
Sample Size:	1.00 L	Date Extracted:	25-Sep-09	Date Analyzed DB-5:	29-Sep-09	Date Analyzed DB-225:	NA	
Analyte	Conc. (pg/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.334			<u>IS</u> 13C-2,3,7,8-TCDD	94.6	31 - 137	
					<u>CRS</u> 37Cl-2,3,7,8-TCDD	95.0	37 - 158	
					<b>Footnotes</b>			
					a. Sample specific estimated detection limit.			
					b. Estimated maximum possible concentration.			
					c. Method detection limit.			
					d. Lower control limit - upper control limit.			

Analyst: JMH

Approved By: Martha M. Maier 30-Sep-2009 08:42

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	2412	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	25-Sep-09	Date Analyzed DB-5:	29-Sep-09	Date Analyzed DB-225:	NA
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.99	7.3 - 14.6	<b>IS</b> 13C-2,3,7,8-TCDD	90.0	31 - 137	
				<b>CRS</b> 37Cl-2,3,7,8-TCDD	97.3	37 - 158	

Analyst: JMH

Approved By: Martha M. Maier 30-Sep-2009 08:42

Sample ID: TABLE B-1,C-1 & C-3					EPA Method 1613			
<b>Client Data</b>			<b>Sample Data</b>		<b>Laboratory Data</b>			
Name:	McCampbell Analytical, Inc.		Matrix:	Aqueous	Lab Sample:	32059-001	Date Received:	16-Sep-09
Project:			Sample Size:	0.924 L	QC Batch No.:	2412	Date Extracted:	25-Sep-09
Date Collected:	8-Sep-09				Date Analyzed DB-5:	29-Sep-09	Date Analyzed DB-225:	NA
Time Collected:	0730							
Analyte	Conc. (pg/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.373			<u>IS</u> 13C-2,3,7,8-TCDD	84.8	31 - 137	
					<u>CRS</u> 37Cl-2,3,7,8-TCDD	86.8	37 - 158	
					<b>Footnotes</b>			
					a. Sample specific estimated detection limit.			
					b. Estimated maximum possible concentration.			
					c. Method detection limit.			
					d. Lower control limit - upper control limit.			

Analyst: JMH

Approved By: Martha M. Maier 30-Sep-2009 08:42

## **APPENDIX**

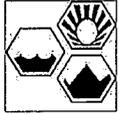
## DATA QUALIFIERS & ABBREVIATIONS

<b>B</b>	<b>This compound was also detected in the method blank.</b>
<b>D</b>	<b>Dilution</b>
<b>E</b>	<b>The amount detected is above the High Calibration Limit.</b>
<b>P</b>	<b>The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.</b>
<b>H</b>	<b>The signal-to-noise ratio is greater than 10:1.</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Low Calibration Limit.</b>
<b>*</b>	<b>See Cover Letter</b>
<b>Conc.</b>	<b>Concentration</b>
<b>DL</b>	<b>Sample-specific estimated detection limit</b>
<b>MDL</b>	<b>The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.</b>
<b>EMPC</b>	<b>Estimated Maximum Possible Concentration</b>
<b>NA</b>	<b>Not applicable</b>
<b>RL</b>	<b>Reporting Limit – concentrations that correspond to low calibration point</b>
<b>ND</b>	<b>Not Detected</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>

**Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.**

## CERTIFICATIONS

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 Phone: (925) 252-9262  
 Fax: (925) 252-9269

WorkOrder 0909243

ClientCode: SSJD

EDF: NO

32059  
 0.6°C

Subcontractor:

TestAmerica West Sacramento  
 880 Riverside Parkway  
 West Sacramento, CA 95605

TEL: (916) 373-5600  
 FAX: (916) 372-1059  
 ProjectNo: Table B-1, C-1 & C-3  
 Acct #:

Date Received: 09/09/2009

Date Printed: 09/11/2009

Lab ID	Client ID	Matrix	Collection Date	TAT	Requested Tests					
					2,3,7,8-TCDD by 613					
0909243-001L	Table B-1, C-1 & C-3	Water	9/8/2009 7:30	Standard	1					

rec'd - 001 dup.  
 09-11-09

Comments:

**PLEASE USE 'CLIENTID' AS THE SAMPLE ID AND EMAIL ASAP!**

Please email results to Melissa Valles at subdata@mcccampbell.com upon completion.

Relinquished by: <i>Melissa Valles</i>	Date/Time: 9/11/09 11:35	Received by: <i>JDP</i>	Date/Time: 9-11-09 11:35
Relinquished by: <i>JDP</i>	Date/Time: 9-11-09 15:30	Received by: <i>Cheryl</i>	Date/Time: 9-11-09 1600

Relinquished by: *Cheryl* 9/15/09-1600 rec'd by: *Bettina Benedict* 9/16/09 1620

32059

CLIENT Mc Campbell PM JS LOG # 60669  
LOT# (QUANTIMS ID) GA110363 QUOTE# 83421 LOCATION W18B

DATE RECEIVED 9-11-09 TIME RECEIVED 1530 Initials AK Date 9-11-09

DELIVERED BY  FEDEX  CA OVERNIGHT  CLIENT  
 AIRBORNE  GOLDENSTATE  DHL  
 UPS  BAX GLOBAL  GO-GETTERS  
 TAL COURIER  VALLEY LOGISTICS  MORGAN HILL COURIER  
 OTHER

CUSTODY SEAL STATUS  INTACT  BROKEN  N/A

CUSTODY SEAL #(S) \_\_\_\_\_

SHIPPING CONTAINER(S)  TAL  CLIENT  N/A

TEMPERATURE RECORD (IN °C) IR 4  5  OTHER \_\_\_\_\_

COC #(S) 4/5

TEMPERATURE BLANK Observed: AK Corrected: \_\_\_\_\_

SAMPLE TEMPERATURE

Observed: 2 3 2 Average: 2 Corrected Average: 2

COLLECTOR'S NAME:  Verified from COC  Not on COC

pH MEASURED  YES  ANOMALY  N/A

LABELLED BY.....

LABELS CHECKED BY.....

PEER REVIEW  NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING

WETCHEM  N/A

VOA-ENCORES  N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL  N/A

COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES  N/A

CLOUSEAU  TEMPERATURE EXCEEDED (2 °C - 6 °C)\*  N/A

WET ICE  BLUE ICE  GEL PACK  NO COOLING AGENTS USED  PM NOTIFIED

Notes: need 0909243-001-Dup not listed on COC

\*1 Acceptable temperature range for State of Wisconsin samples is  $\leq 4^{\circ}\text{C}$ .

SAMPLE LOG-IN CHECKLIST



Vista Project #: 32058-32059  
CRS 9/17/09

TAT Standard

Samples Arrival:	Date/Time 9/16/09 0844	Initials: CRS	Location: WR-2
			Shelf/Rack: N/A
Logged In:	Date/Time 9/17/09 0820	Initials: YBS	Location: WR-2
			Shelf/Rack: B2
Delivered By:	<u>FedEx</u>	UPS	Cal
			DHL
			Hand Delivered
			Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C	0.6°C	Time: 0847	Thermometer ID: IR-1

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill	Trk # 7969 4723 0978	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact? Seals Marked "Poison"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?	COC	Sample Container	<u>None</u>
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

1st label) McCampbell's label ID: 2nd flush citric A, B, C bottles  
 2nd label) 0909243-001 dup A & B bottle ; 0909243-001L (Lab ID from COC) 1 bottle  
 3rd label) Table B-1, C-1 & C-3 A, B, C bottles (B & C bottles marked "Dup")

### Chain of Custody Anomaly / Sample Acceptance Form

Client: McCampbell Analytical                      Project Number: 32059  
 Contact: Melissa Valles                              Date Received: 9/16/2009  
 Fax Number: \_\_\_\_\_                                  Documented by/date: rmh 9/17/2009

**Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis. Thank You! (Fax # 916-673-0106)**

**The following information or item is needed to proceed with the analysis:**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Completed Chain-of-Custody  | <input type="checkbox"/> Preservative                 | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested       | <input type="checkbox"/> Sample Identification        | <input type="checkbox"/> Sample Type      |
| <input type="checkbox"/> Analyte List Requested      | <input type="checkbox"/> Sample Collection Date /Time | <input type="checkbox"/> Sample Location  |
| <input type="checkbox"/> Sample Acceptance Checklist |   |   |

**The following anomalies were noted. Authorization is needed to proceed with the analysis:**

- |  |   |
|--|---|
| <input type="checkbox"/> Temperature outside $\pm 2^{\circ}\text{C}$ range Temp _____ $^{\circ}\text{C}$ | Ice Present? Yes <input type="checkbox"/> No <input type="checkbox"/> |
| <input type="checkbox"/> Sample ID Discrepancy   | <input type="checkbox"/> Sample Container(s) Broken                   |
| <input checked="" type="checkbox"/> Sample holding time missed   | <input type="checkbox"/> Incorrect Container Type                     |
| <input type="checkbox"/> Custody seals broken  | <input type="checkbox"/> Other  |
| <input type="checkbox"/> Insufficient Sample Size  |   |

Samples Affected: Table B-1, C-1, & C-3

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**Client Authorization:**

Proceed With Analysis: YES  NO       Signature and Date: RMH 9/23/09

Client Comments/Instructions: proceed using Method 1613 per Melissa's email

**Appendix C-3**

**Samples collected on July 14, 2011**



August 16, 2011

**South San Joaquin Irrigation District**  
P.O. Box 747  
Ripon, CA. 95366

Lab ID : STK1136467  
Customer : 3-16829

**Laboratory Report**

**Introduction:** This report package contains total of 30 pages divided into 3 sections:

- Case Narrative (5 pages) : An overview of the work performed at FGL.
- Sample Results (5 pages) : Results for each sample submitted.
- Quality Control (20 pages) : Supporting Quality Control (QC) results.

**Case Narrative**

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Lagoon	07/14/2011	07/25/2011	STK1136467-001	WW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding except those as listed in the table below.

Lab ID	Analyte/Method	Required Holding Time	Actual Holding Time
STK1136467-001	1,2,4-Trichlorobenzene	7	14 Days
STK1136467-001	1,2-Dichlorobenzene	7	14 Days
STK1136467-001	1,2-Diphenylhydrazine	7	14 Days
STK1136467-001	1,3-Dichlorobenzene	7	14 Days
STK1136467-001	1,4-Dichlorobenzene	7	14 Days
STK1136467-001	2,4,6-Tribromophenol	7	14 Days
STK1136467-001	2,4,6-Trichlorophenol	7	14 Days
STK1136467-001	2,4-Dichlorophenol	7	14 Days
STK1136467-001	2,4-Dimethylphenol	7	14 Days
STK1136467-001	2,4-Dinitrophenol	7	14 Days
STK1136467-001	2,4-Dinitrotoluene	7	14 Days
STK1136467-001	2,6-Dinitrotoluene	7	14 Days
STK1136467-001	2-Chloronaphthalene	7	14 Days
STK1136467-001	2-Chlorophenol	7	14 Days
STK1136467-001	2-Fluorobiphenyl	7	14 Days
STK1136467-001	2-Fluorophenol	7	14 Days
STK1136467-001	2-Nitrophenol	7	14 Days
STK1136467-001	3,3'-Dichlorobenzidine	7	14 Days
STK1136467-001	4-Bromophenylphenylether	7	14 Days

August 16, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1136467  
 Customer : 3-16829

Lab ID	Analyte/Method	Required Holding Time	Actual Holding Time
STK1136467-001	4-Chloro-3-methylphenol	7	14 Days
STK1136467-001	4-Chlorophenylphenylether	7	14 Days
STK1136467-001	4-Nitrophenol	7	14 Days
STK1136467-001	Acenaphthene	7	14 Days
STK1136467-001	Acenaphthylene	7	14 Days
STK1136467-001	Aldrin	7	13 Days
STK1136467-001	Alpha BHC	7	13 Days
STK1136467-001	alpha-Chlordane	7	13 Days
STK1136467-001	Anthracene	7	14 Days
STK1136467-001	Benzidine	7	14 Days
STK1136467-001	Benzo(a)anthracene	7	14 Days
STK1136467-001	Benzo(a)pyrene	7	14 Days
STK1136467-001	Benzo(b)fluoranthene	7	14 Days
STK1136467-001	Benzo(g,h,i)perylene	7	14 Days
STK1136467-001	Benzo(k)fluoranthene	7	14 Days
STK1136467-001	Beta BHC	7	13 Days
STK1136467-001	bis(2-Chloroethoxy)methane	7	14 Days
STK1136467-001	bis(2-Chloroethyl)ether	7	14 Days
STK1136467-001	bis(2-Chloroisopropyl)ether	7	14 Days
STK1136467-001	bis(2-Ethylhexyl)phthalate	7	14 Days
STK1136467-001	Butylbenzylphthalate	7	14 Days
STK1136467-001	Chrysene	7	14 Days
STK1136467-001	Delta BHC	7	13 Days
STK1136467-001	Dibenzo(a,h)anthracene	7	14 Days
STK1136467-001	Dieldrin	7	13 Days
STK1136467-001	Diethylphthalate	7	14 Days
STK1136467-001	Dimethylphthalate	7	14 Days
STK1136467-001	Di-n-butylphthalate	7	14 Days
STK1136467-001	Di-n-octylphthalate	7	14 Days
STK1136467-001	Endosulfan I	7	13 Days
STK1136467-001	Endosulfan II	7	13 Days
STK1136467-001	Endosulfan Sulfate	7	13 Days
STK1136467-001	Endrin	7	13 Days
STK1136467-001	Endrin Aldehyde	7	13 Days
STK1136467-001	Endrin Ketone	7	13 Days
STK1136467-001	Fluoranthene	7	14 Days
STK1136467-001	Fluorene	7	14 Days
STK1136467-001	gamma-Chlordane	7	13 Days
STK1136467-001	Heptachlor	7	13 Days
STK1136467-001	Heptachlor Epoxide	7	13 Days
STK1136467-001	Hexachlorobenzene	7	14 Days
STK1136467-001	Hexachlorobutadiene	7	14 Days
STK1136467-001	Hexachlorocyclopentadiene	7	14 Days
STK1136467-001	Indeno(1,2,3-c,d)pyrene	7	14 Days

August 16, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1136467  
 Customer : 3-16829

Lab ID	Analyte/Method	Required Holding Time	Actual Holding Time
STK1136467-001	Isophorone	7	14 Days
STK1136467-001	Lindane	7	13 Days
STK1136467-001	Methoxychlor	7	13 Days
STK1136467-001	Naphthalene	7	14 Days
STK1136467-001	Nitrobenzene	7	14 Days
STK1136467-001	Nitrobenzene-d5	7	14 Days
STK1136467-001	N-Nitrosodimethylamine	7	14 Days
STK1136467-001	N-Nitrosodi-n-propylamine	7	14 Days
STK1136467-001	N-Nitrosodiphenylamine	7	14 Days
STK1136467-001	o,p - DDD	7	13 Days
STK1136467-001	o,p - DDE	7	13 Days
STK1136467-001	o,p - DDT	7	13 Days
STK1136467-001	p,p'-DDD	7	13 Days
STK1136467-001	p,p'-DDE	7	13 Days
STK1136467-001	p,p'-DDT	7	13 Days
STK1136467-001	Pentachlorophenol	7	14 Days
STK1136467-001	Phenanthrene	7	14 Days
STK1136467-001	Phenol	7	14 Days
STK1136467-001	Phenol-d6	7	14 Days
STK1136467-001	p-Terphenyl-d14	7	14 Days
STK1136467-001	Pyrene	7	14 Days
STK1136467-001	Pyridine	7	14 Days
STK1136467-001	Tetrachloro-m-xylene	7	13 Days

All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

**Inorganic - Metals QC**

200.7	08/05/2011:211540 All analysis quality controls are within established criteria.
	08/10/2011:211622 All analysis quality controls are within established criteria.
245.1	07/29/2011:210980 All analysis quality controls are within established criteria.
3010	08/05/2011:208532 All preparation quality controls are within established criteria.
3500CrD	08/04/2011:211264 All analysis quality controls are within established criteria.
7196A	08/04/2011:208507 All preparation quality controls are within established criteria.

August 16, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1136467  
 Customer : 3-16829

**Inorganic - Metals QC**

7470	<p>07/27/2011:208160 All preparation quality controls are within established criteria, except:          The following note applies to Mercury:          435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.</p>
------	--

**Organic QC**

624	<p>07/28/2011:211042 All analysis quality controls are within established criteria, except:          The following note applies to 2-Chloroethylvinyl ether, Bromoform, Carbon Tetrachloride:          360 CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.          The following note applies to Fluorobenzene:          362 Surrogates are qualified on Control Chart Limits, these are CCV limits. See individual sample reports.</p>
	<p>07/27/2011:208306 All preparation quality controls are within established criteria, except:          The following note applies to 2-Chloroethylvinyl ether, Dibromochloromethane, Bromoform,          Bromodichloromethane, cis-1,3-Dichloropropene, Carbon Tetrach:          435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.          The following note applies to 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2-Dichlorobenzene, 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichloroben:          410 Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery.</p>
625	<p>08/16/2011:211916 All analysis quality controls are within established criteria, except:          The following note applies to Pyrene:          355 CCV not within Acceptance Range (AR). Results were reported with client approval.</p>
	<p>07/28/2011:208202 All preparation quality controls are within established criteria, except:          The following note applies to bis(2-Ethylhexyl)phthalate:          210 The method blank was positive. However, samples reported were either ten times greater than the blank concentration or non detect and accepted.          The following note applies to Benzidine, Hexachlorocyclopentadiene, bis(2-Ethylhexyl)phthalate, Dimethylphthalate:          435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.          The following note applies to 3,3-Dichlorobenzidine, bis(2-Ethylhexyl)phthalate:          410 Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery.          The following note applies to Benzidine, Hexachlorocyclopentadiene, Dimethylphthalate:          320 LCS not within Acceptance Range (AR). Data was accepted based on the BS/BSD recovery.</p>
625P	<p>07/29/2011:211148 All analysis quality controls are within established criteria.</p>
	<p>07/27/2011:208156 All preparation quality controls are within established criteria, except:          The following note applies to Tetrachloro-m-xylene, gamma-Chlordane:          435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.          The following note applies to alpha-Chlordane, Delta BHC, Dieldrin, Endosulfan II, Endosulfan Sulfate, Endrin Ketone, gamma-Chlordane, p,p`-DDD:          410 Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery.          The following note applies to o,p - DDE, o,p - DDT:          320 LCS not within Acceptance Range (AR). Data was accepted based on the BS/BSD recovery.</p>

August 16, 2011  
South San Joaquin Irrigation District

Lab ID : STK1136467  
Customer : 3-16829

**Inorganic - Wet Chemistry QC**

4500CNCE	07/30/2011:211010 All analysis quality controls are within established criteria.
9010B	07/27/2011:208158 All preparation quality controls are within established criteria.

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**



Digitally signed by Kelly A. Dunnahoo, B.S.  
Title: Laboratory Director  
Date: 2011-08-17



# ENVIRONMENTAL

Analytical Chemists

www.fglinc.com



August 16, 2011

Lab ID : STK1136467-001

Customer ID : 3-16829

South San Joaquin Irrigation District

P.O. Box 747

Ripon, CA. 95366

Sampled On : July 14, 2011-14:00

Sampled By : Julie Jeleti

Received On : July 25, 2011-11:15

Matrix : Waste Water

Description : Lagoon

Project : Neutralized Citric Waste

### Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>Metals, Total</b> <sup>P,15</sup>								
Antimony	ND	0.01	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Arsenic	ND	0.01	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Beryllium	ND	0.005	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Cadmium	ND	0.005	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Chromium	ND	0.01	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Chromium VI	ND	0.01	mg/L		7196A	08/04/11:208507	3500CrD	08/04/11:211264
Copper	ND	0.01	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Lead	ND	0.01	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Mercury	ND	0.00002	mg/L		7470	07/27/11:208160	245.1	07/29/11:210980
Nickel	0.01	0.01	mg/L		3010	08/05/11:208532	200.7	08/10/11:211622
Selenium	ND	0.01	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Silver	ND	0.01	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Thallium	ND	0.01	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
Zinc	ND	0.02	mg/L		3010	08/05/11:208532	200.7	08/05/11:211540
<b>Wet Chemistry</b> <sup>P,110</sup>								
Cyanide, Total	ND	0.004	mg/L		9010B	07/27/11:208158	4500CNCE	07/30/11:211010

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (AGT) Amber Glass TFE-Cap, (P) Plastic, (VFS) VOA w/Filters+Syringes, (VOA) VOA Preservatives: NaOH, HNO3 pH < 2, (NH4)2SO4, NH4OH, HCl pH < 2 ‡Surrogate. \* PQL adjusted for dilution.



August 16, 2011

Lab ID : STK1136467-001

Customer ID : 3-16829

South San Joaquin Irrigation District

P.O. Box 747

Ripon, CA. 95366

Sampled On : July 14, 2011-14:00

Sampled By : Julie Jeleti

Received On : July 25, 2011-11:15

Matrix : Waste Water

Description : Lagoon

Project : Neutralized Citric Waste

### Sample Result - Organic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>EPA 624<sup>VOA:13</sup></b>								
4-Bromofluorobenzene*	171	70-130	%		624	07/27/11:208306	624	07/28/11:211042
Fluorobenzene*	135	70-130	%		624	07/27/11:208306	624	07/28/11:211042
Pentafluorobenzene*	127	70-130	%		624	07/27/11:208306	624	07/28/11:211042
Acetone	ND	25	ug/L		624	07/27/11:208306	624	07/28/11:211042
Acrolein	ND	5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Acrylonitrile	ND	2	ug/L		624	07/27/11:208306	624	07/28/11:211042
Benzene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Bromodichloromethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Bromoform	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Bromomethane	ND	1	ug/L		624	07/27/11:208306	624	07/28/11:211042
2-Butanone (MEK)	ND	40	ug/L		624	07/27/11:208306	624	07/28/11:211042
Carbon Disulfide	ND	5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Carbon Tetrachloride	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Chlorobenzene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Chloroethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
2-Chloroethylvinyl ether	ND	10	ug/L		624	07/27/11:208306	624	07/28/11:211042
Chloroform	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Chloromethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Dibromochloromethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,2-Dichlorobenzene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,3-Dichlorobenzene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,4-Dichlorobenzene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,1-Dichloroethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,2-Dichloroethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,1-Dichloroethylene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
trans-1,2-Dichloroethylene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,2-Dichloropropane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
cis-1,3-Dichloropropene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
trans-1,3-Dichloropropene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Ethyl Benzene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
2-Hexanone	ND	30	ug/L		624	07/27/11:208306	624	07/28/11:211042
4-Methyl-2-pentanone (MIBK)	ND	30	ug/L		624	07/27/11:208306	624	07/28/11:211042
Methylene Chloride	ND	2	ug/L		624	07/27/11:208306	624	07/28/11:211042
Methyl tert-Butyl Ether (MTBE)	ND	5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Styrene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042

August 16, 2011  
 Description : Lagoon

Lab ID : STK1136467-001  
 Customer ID : 3-16829

**Sample Result - Organic**

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>EPA 624<sup>VOA:13</sup></b>								
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Tetrachloroethylene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Toluene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,1,1-Trichloroethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
1,1,2-Trichloroethane	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Trichloroethylene	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Trichlorofluoromethane	ND	2	ug/L		624	07/27/11:208306	624	07/28/11:211042
Vinyl Acetate	ND	100	ug/L		624	07/27/11:208306	624	07/28/11:211042
Vinyl Chloride	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Xylenes m,p	ND	1	ug/L		624	07/27/11:208306	624	07/28/11:211042
Xylenes o	ND	0.5	ug/L		624	07/27/11:208306	624	07/28/11:211042
Xylenes	ND	1	ug/L		624	07/27/11:208306	624	07/28/11:211042
<b>EPA 625<sup>AGT:1</sup></b>								
2-Fluorobiphenyl <sup>‡</sup>	50.4	11-119	%		625	07/28/11:208202	625	08/16/11:211916
2-Fluorophenol <sup>‡</sup>	0.0	13-124	%		625	07/28/11:208202	625	08/16/11:211916
Nitrobenzene-d5 <sup>‡</sup>	59.2	15-102	%		625	07/28/11:208202	625	08/16/11:211916
Phenol-d6 <sup>‡</sup>	0.0	5-116	%		625	07/28/11:208202	625	08/16/11:211916
p-Terphenyl-d14 <sup>‡</sup>	14.9	16-122	%		625	07/28/11:208202	625	08/16/11:211916
2,4,6-Tribromophenol <sup>‡</sup>	60.5	13-153	%		625	07/28/11:208202	625	08/16/11:211916
Acenaphthene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Acenaphthylene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Anthracene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Benzidine	ND	10	ug/L		625	07/28/11:208202	625	08/16/11:211916
Benzo(a)anthracene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Benzo(b)fluoranthene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Benzo(k)fluoranthene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Benzo(g,h,i)perylene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Benzo(a)pyrene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
4-Bromophenylphenylether	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Butylbenzylphthalate	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
bis(2-Chloroethoxy)methane	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
bis(2-Chloroethyl)ether	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
bis(2-Chloroisopropyl)ether	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
bis(2-Ethylhexyl)phthalate	8	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
4-Chloro-3-methylphenol	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
2-Chloronaphthalene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
2-Chlorophenol	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
4-Chlorophenylphenylether	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916

August 16, 2011  
 Description : Lagoon

Lab ID : STK1136467-001  
 Customer ID : 3-16829

**Sample Result - Organic**

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>EPA 625<sup>AGT-1</sup></b>								
Chrysene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Dibenzo(a,h)anthracene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Di-n-butylphthalate	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
1,2-Dichlorobenzene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
1,3-Dichlorobenzene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
1,4-Dichlorobenzene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
3,3'-Dichlorobenzidine	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
2,4-Dichlorophenol	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
Diethylphthalate	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
2,4-Dimethylphenol	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
Dimethylphthalate	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
4,6-Dinitro-2-methylphenol	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
2,4-Dinitrophenol	ND	5	ug/L		625	07/28/11:208202	625	08/16/11:211916
2,4-Dinitrotoluene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
2,6-Dinitrotoluene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Di-n-octylphthalate	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Fluoranthene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Fluorene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Hexachlorobenzene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Hexachlorobutadiene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Hexachlorocyclopentadiene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Hexachloroethane	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Indeno(1,2,3-c,d)pyrene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Isophorone	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Naphthalene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Nitrobenzene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
2-Nitrophenol	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
4-Nitrophenol	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
N-Nitrosodimethylamine	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
N-Nitrosodiphenylamine	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
N-Nitrosodi-n-propylamine	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Pentachlorophenol	ND	2	ug/L		625	07/28/11:208202	625	08/16/11:211916
Phenanthrene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Phenol	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Pyrene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
Pyridine	ND	10	ug/L		625	07/28/11:208202	625	08/16/11:211916
1,2,4-Trichlorobenzene	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
2,4,6-Trichlorophenol	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916

August 16, 2011  
 Description : Lagoon

Lab ID : STK1136467-001  
 Customer ID : 3-16829

**Sample Result - Organic**

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
EPA 625 <sup>AGT:1</sup> 1,2-Diphenylhydrazine	ND	1	ug/L		625	07/28/11:208202	625	08/16/11:211916
EPA 625 Pest <sup>AGT:1</sup>								
Aldrin	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Alpha BHC	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Beta BHC	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Delta BHC	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
alpha-Chlordane	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
gamma-Chlordane	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
p,p'-DDD	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
p,p'-DDE	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
p,p'-DDT	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Dieldrin	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Endosulfan I	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Endosulfan II	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Endosulfan Sulfate	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Endrin	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Endrin Aldehyde	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Endrin Ketone	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Heptachlor	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Heptachlor Epoxide	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Lindane	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Methoxychlor	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
o,p - DDD	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
o,p - DDE	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
o,p - DDT	ND	5	ng/L		625P	07/27/11:208156	625P	07/29/11:211148
Tetrachloro-m-xylene <sup>‡</sup>	24.9	20-150	%		625P	07/27/11:208156	625P	07/29/11:211148

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (AGT) Amber Glass TFE-Cap, (P) Plastic, (VFS) VOA w/Filters+Syringes, (VOA) VOA Preservatives: NaOH, HNO3 pH < 2, (NH4)2SO4, NH4OH, HCl pH < 2 ‡Surrogate. \* PQL adjusted for dilution.



August 16, 2011  
South San Joaquin Irrigation District

Lab ID : STK1136467  
Customer : 3-16829

**Quality Control - Inorganic**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Antimony	200.7	08/05/11:211540rs	CCV	ppm	1.000	96.3 %	90-110	
			CCB	ppm		-0.0030	0.01	
			CCV	ppm	1.000	98.2 %	90-110	
			CCB	ppm		-0.0009	0.01	
Arsenic	200.7	08/05/11:211540rs	CCV	ppm	1.000	97.2 %	90-110	
			CCB	ppm		0.0004	0.01	
			CCV	ppm	1.000	97.9 %	90-110	
			CCB	ppm		0.0021	0.01	
Beryllium	200.7	08/05/11:211540rs	CCV	ppm	1.004	95.5 %	90-110	
			CCB	ppm		-0.00003	0.005	
			CCV	ppm	1.004	95.8 %	90-110	
			CCB	ppm		-0.00009	0.005	
Cadmium	200.7	08/05/11:211540rs	CCV	ppm	1.000	95.7 %	90-110	
			CCB	ppm		-0.00009	0.005	
			CCV	ppm	1.000	96.6 %	90-110	
			CCB	ppm		-0.00021	0.005	
Chromium	200.7	08/05/11:211540rs	CCV	ppm	1.000	97.1 %	90-110	
			CCB	ppm		-0.0003	0.01	
			CCV	ppm	1.000	98.5 %	90-110	
			CCB	ppm		-0.0007	0.01	
Copper	200.7	08/05/11:211540rs	CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		-0.00007	0.01	
			CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		-0.00008	0.01	
Lead	200.7	08/05/11:211540rs	CCV	ppm	1.000	92.8 %	90-110	
			CCB	ppm		0.0002	0.01	
			CCV	ppm	1.000	93.7 %	90-110	
			CCB	ppm		-0.0014	0.01	
Nickel	200.7	08/10/11:211622ac	CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		0.00005	0.01	
			CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		0.0006	0.01	
Selenium	200.7	08/05/11:211540rs	CCV	ppm	0.9995	98.4 %	90-110	
			CCB	ppm		0.0014	0.01	
			CCV	ppm	0.9995	99.3 %	90-110	
			CCB	ppm		0.0009	0.01	
Silver	200.7	08/05/11:211540rs	CCV	ppm	0.9985	97.1 %	90-110	
			CCB	ppm		-0.0001	0.01	
			CCV	ppm	0.9985	97.6 %	90-110	
			CCB	ppm		-0.0003	0.01	
Thallium	200.7	08/05/11:211540rs	CCV	ppm	0.9995	93.7 %	90-110	
			CCB	ppm		-0.0055	0.01	
			CCV	ppm	0.9995	94.9 %	90-110	
			CCB	ppm		-0.0060	0.01	
Zinc	200.7	08/05/11:211540rs	CCV	ppm	1.000	94.1 %	90-110	
			CCB	ppm		-0.0022	0.02	
			CCV	ppm	1.000	94.7 %	90-110	
			CCB	ppm		-0.0024	0.02	
Mercury	245.1	07/29/11:210980AMB	CCV	ppt	200.0	103 %	90-110	
			CCB	ppt		4.3	20	
			CCV	ppt	200.0	101 %	90-110	
			CCB	ppt		4.2	20	
Antimony	3010	08/05/11:208532amb	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.4800	88.7 %	85-115	
			MS	mg/L	0.4800	92.2 %	75-125	

August 16, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1136467  
 Customer : 3-16829

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Antimony	3010	(CC 1181798-001)	MSD	mg/L	0.4800	91.9 %	75-125	
			MSRPD	mg/L	0.7988	0.3%	≤20.0	
			PDS	mg/L	0.4800	94.0 %	75-125	
Arsenic	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.8000	93.5 %	85-115	
			MS	mg/L	0.8000	96.9 %	75-125	
			MSD	mg/L	0.8000	95.1 %	75-125	
			MSRPD	mg/L	0.7988	1.9%	≤20	
			PDS	mg/L	0.8000	96.6 %	75-125	
Beryllium	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.005	
			LCS	mg/L	0.8028	92.1 %	85-115	
			MS	mg/L	0.8028	92.9 %	75-125	
			MSD	mg/L	0.8028	91.3 %	75-125	
			MSRPD	mg/L	0.7988	1.8%	≤20.0	
			PDS	mg/L	0.8028	92.6 %	75-125	
Cadmium	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.005	
			LCS	mg/L	0.8000	92.5 %	85-115	
			MS	mg/L	0.8000	94.3 %	75-125	
			MSD	mg/L	0.8000	93.3 %	75-125	
			MSRPD	mg/L	0.7988	1.1%	≤20	
			PDS	mg/L	0.8000	94.6 %	75-125	
Chromium	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.8000	94.1 %	85-115	
			MS	mg/L	0.8000	94.0 %	75-125	
			MSD	mg/L	0.8000	92.8 %	75-125	
			MSRPD	mg/L	0.7988	1.2%	≤20	
			PDS	mg/L	0.8000	95.0 %	75-125	
Copper	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		0.000004	0.01	
			LCS	mg/L	0.8000	98.2 %	85-115	
			MS	mg/L	0.8000	101 %	75-125	
			MSD	mg/L	0.8000	100 %	75-125	
			MSRPD	mg/L	0.7988	1.4%	≤20.0	
			PDS	mg/L	0.8000	101 %	75-125	
Lead	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.8000	89.9 %	85-115	
			MS	mg/L	0.8000	89.3 %	75-125	
			MSD	mg/L	0.8000	88.1 %	75-125	
			MSRPD	mg/L	0.7988	1.3%	≤20.0	
			PDS	mg/L	0.8000	89.8 %	75-125	
Nickel	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.8000	100 %	85-115	
			MS	mg/L	0.8000	102 %	75-125	
			MSD	mg/L	0.8000	106 %	75-125	
			MSRPD	mg/L	0.7988	3.6%	≤20	
			PDS	mg/L	0.8000	97.6 %	75-125	
Selenium	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.7996	94.1 %	80-120	
			MS	mg/L	0.7996	97.2 %	75-125	
			MSD	mg/L	0.7996	95.9 %	75-125	
			MSRPD	mg/L	0.7988	1.4%	≤20	
			PDS	mg/L	0.7996	97.7 %	75-125	
Silver	3010	08/05/11:208532amb	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.7988	95.0 %	85-115	
			MS	mg/L	0.7988	93.4 %	75-125	

**Quality Control - Inorganic**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Silver	3010	(CC 1181798-001)	MSD	mg/L	0.7988	94.7 %	75-125	
			MSRPD	mg/L	0.7988	1.4%	≤20.0	
			PDS	mg/L	0.7988	97.6 %	75-125	
Thallium	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.7996	90.2 %	85-115	
			MS	mg/L	0.7996	94.1 %	75-125	
			MSD	mg/L	0.7996	92.4 %	75-125	
			MSRPD	mg/L	0.7988	1.8%	≤20.0	
			PDS	mg/L	0.7996	94.9 %	75-125	
Zinc	3010	08/05/11:208532amb  (CC 1181798-001)	Blank	mg/L		ND	<0.02	
			LCS	mg/L	0.8000	89.7 %	85-115	
			MS	mg/L	0.8000	89.6 %	75-125	
			MSD	mg/L	0.8000	87.9 %	75-125	
			MSRPD	mg/L	0.7988	1.4%	≤20.0	
			PDS	mg/L	0.8000	90.4 %	75-125	
Chromium VI	3500CrD	08/04/11:211264SBL	CCV	mg/L	0.1000	99.0 %	90-110	
			CCB	mg/L		0.00056	0.005	
			CCV	mg/L	0.1000	97.0 %	90-110	
			CCB	mg/L		0.00179	0.005	
	7196A	08/04/11:208507SBL  (STK1136467-001)	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.1000	96.3 %	85-115	
			MS	mg/L	0.1000	80.9 %	75-125	
			MSD	mg/L	0.1000	79.9 %	75-125	
			MSRPD	mg/L	0.1000	1.2%	≤20	
Mercury	7470	07/27/11:208160AMB  (CC 1181696-001)	Blank	ug/L		ND	<0.02	
			LCS	ug/L	0.1998	103 %	85-115	
			MS	ug/L	0.1998	14.5 %	75-125	435
			MSD	ug/L	0.1998	17.6 %	75-125	435
			MSRPD	ug/L	0.1998	0.0063	≤0.02	
Wet Chem Cyanide	4500CNCE	07/30/11:211010AMM	CCV	mg/L	0.1000	105 %	90-110	
			CCB	mg/L		-0.00053	0.004	
			CCV	mg/L	0.1000	106 %	90-110	
			CCB	mg/L		-0.00053	0.004	
Cyanide, Total	9010B	07/27/11:208158AMM  (SP 1107084-002)	Blank	mg/L		ND	<0.004	
			LCS	mg/L	0.1000	106 %	90-110	
			LCS	mg/L	0.4000	99.3 %	90-110	
			MS	mg/L	0.05000	124 %	5-223	
			MSD	mg/L	0.05000	127 %	5-223	
			MSRPD	mg/L	0.05000	2.6%	≤10.0	

**Definition**

CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.  
 CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.  
 Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.  
 LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.  
 MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.  
 MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.  
 MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.  
 ND : Non-detect - Result was below the DQO listed for the analyte.  
 DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

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**Quality Control - Inorganic**

<b>Explanation</b> 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
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Lab ID : STK1136467  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic 1,1,1-Trichloroethane(TCA)	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	435
			BS	ug/L	10.00	141 %	53-155	
BSD	ug/L	10.00	159 %	53-155				
BSRPD	ug/L	10.00	12.0%	≤12.9				
1,1,2,2-Tetrachloroethane	624	07/28/11:211042VRG	CCV	ug/L	10.00	118 %	75-125	
			Blank	ug/L		ND	<0.5	
1,1,2-Trichloroethane	624	07/27/11:208306VRG	BS	ug/L	10.00	109 %	70-137	
			BSD	ug/L	10.00	100 %	70-137	
			BSRPD	ug/L	10.00	8.5%	≤10.2	
			CCV	ug/L	10.00	103 %	60-140	
1,1-Dichloroethane	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	410
			BS	ug/L	10.00	92.0 %	58-159	
			BSD	ug/L	10.00	107 %	58-159	
			BSRPD	ug/L	10.00	14.7%	≤13.5	
1,1-Dichloroethylene	624	07/27/11:208306VRG	CCV	ug/L	10.00	84.2 %	72-128	410
			Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	85.7 %	5-238	
			BSD	ug/L	10.00	104 %	5-238	
1,2-Dichlorobenzene	624	07/27/11:208306VRG	BSRPD	ug/L	10.00	19.3%	≤15.4	410
			Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	108 %	69-132	
			BSD	ug/L	10.00	92.6 %	69-132	
1,2-Dichloroethane (EDC)	624	07/27/11:208306VRG	BSRPD	ug/L	10.00	15.1%	≤9.87	410
			Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	136 %	55-157	
			BSD	ug/L	10.00	126 %	55-157	
1,2-Dichloropropane	624	07/27/11:208306VRG	BSRPD	ug/L	10.00	7.4%	≤10.1	435
			Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	107 %	74-123	
			BSD	ug/L	10.00	62.8 %	74-123	
1,3-Dichlorobenzene	624	07/27/11:208306VRG	BSRPD	ug/L	10.00	52.1%	≤9.24	410
			Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	106 %	67-131	
			BSD	ug/L	10.00	90.0 %	67-131	
1,4-Dichlorobenzene	624	07/27/11:208306VRG	BSRPD	ug/L	10.00	16.1%	≤12.7	410
			Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	105 %	68-130	
			BSD	ug/L	10.00	91.5 %	68-130	
2-Butanone (MEK)	624	07/27/11:208306VRG	BSRPD	ug/L	10.00	13.9%	≤11.8	410
			Blank	ug/L		ND	<40	
			BS	ug/L	40.00	73.1 %	49-171	
			BSD	ug/L	40.00	101 %	49-171	
2-Butanone (MEK)	624	07/28/11:211042VRG	BSRPD	ug/L	10.00	11	≤40	
			CCV	ug/L	40.00	86.0 %	50-150	

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic 2-Chloroethylvinyl ether	624	07/27/11:208306VRG	Blank	ug/L		ND	<10	
			BS	ug/L	40.00	489 %	42-158	435
BSD			ug/L	40.00	239 %	42-158	435	
BSRPD			ug/L	10.00	68.6%	≤35.9	410	
	624	07/28/11:211042VRG	CCV	ug/L	40.00	311 %	0-224	360
2-Hexanone	624	07/27/11:208306VRG	Blank	ug/L		ND	<30	
			BS	ug/L	40.00	73.4 %	49-160	
BSD			ug/L	40.00	79.9 %	49-160		
BSRPD			ug/L	10.00	2.6	≤30		
	624	07/28/11:211042VRG	CCV	ug/L	40.00	85.6 %	50-150	
4-Bromofluorobenzene	624	07/27/11:208306VRG	Blank	ug/L	10.00	133 %	70-130	560
			Surr	ug/L	10.00	133 %	70-130	
			BS	ug/L	10.00	120 %	70-130	
			Surr	ug/L	10.00	120 %	70-130	
			BSD	ug/L	10.00	111 %	70-130	
			BSRPD	ug/L	10.00	7.1%	≤30.0	
			Surr	ug/L	10.00	111 %	70-130	
			Surr	ug/L	10.00	171 %	70-130	560
	624	07/28/11:211042VRG	CCV	ug/L	10.00	108 %	70-130	
4-Methyl-2-pentanone (MIBK)	624	07/27/11:208306VRG	Blank	ug/L		ND	<30	
			BS	ug/L	40.00	106 %	57-151	
			BSD	ug/L	40.00	78.4 %	57-151	
			BSRPD	ug/L	10.00	11	≤30	
	624	07/28/11:211042VRG	CCV	ug/L	40.00	86.7 %	50-150	
Acetone	624	07/27/11:208306VRG	Blank	ug/L		ND	<25	
			BS	ug/L	40.00	81.1 %	6-241	
			BSD	ug/L	40.00	126 %	6-241	
			BSRPD	ug/L	10.00	18	≤25	
	624	07/28/11:211042VRG	CCV	ug/L	40.00	102 %	50-150	
Acrolein	624	07/27/11:208306VRG	Blank	ug/L		ND	<5	
			BS	ug/L	200.0	45.4 %	5-214	
			BSD	ug/L	200.0	75.7 %	5-214	
			BSRPD	ug/L	10.00	50.2%	≤10.0	410
	624	07/28/11:211042VRG	CCV	ug/L	200.0	64.9 %	5-150	
Acrylonitrile	624	07/27/11:208306VRG	Blank	ug/L		ND	<2	
			BS	ug/L	200.0	97.5 %	19-206	
			BSD	ug/L	200.0	151 %	19-206	
			BSRPD	ug/L	10.00	43.0%	≤10.0	410
	624	07/28/11:211042VRG	CCV	ug/L	200.0	136 %	5-150	
Benzene	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	96.8 %	70-137	
			BSD	ug/L	10.00	87.7 %	70-137	
			BSRPD	ug/L	10.00	9.8%	≤12.4	
	624	07/28/11:211042VRG	CCV	ug/L	10.00	88.9 %	64-136	
Bromodichloromethane	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	180 %	69-128	435
			BSD	ug/L	10.00	110 %	69-128	
			BSRPD	ug/L	10.00	48.0%	≤10.0	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	112 %	65-135	
Bromoform	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	155 %	65-140	435
			BSD	ug/L	10.00	134 %	65-140	
			BSRPD	ug/L	10.00	14.6%	≤10.6	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	135 %	71-129	360

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Bromomethane (Methyl Bromide)	624	07/27/11:208306VRG	Blank	ug/L		ND	<1.0	
			BS	ug/L	10.00	92.9 %	5-256	
			BSD	ug/L	10.00	124 %	5-256	
			BSRPD	ug/L	10.00	28.5%	≤27.2	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	107 %	14-186	
Carbon Disulfide	624	07/27/11:208306VRG	Blank	ug/L		ND	<5	
			BS	ug/L	40.00	81.0 %	18-201	
			BSD	ug/L	40.00	107 %	18-201	
			BSRPD	ug/L	10.00	27.5%	≤10.0	410
	624	07/28/11:211042VRG	CCV	ug/L	40.00	74.7 %	50-150	
Carbon Tetrachloride	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	168 %	42-166	435
			BSD	ug/L	10.00	188 %	42-166	435
			BSRPD	ug/L	10.00	11.2%	≤12.9	
	624	07/28/11:211042VRG	CCV	ug/L	10.00	142 %	73-127	360
Chlorobenzene	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	83.1 %	60-122	
			BSD	ug/L	10.00	75.8 %	60-122	
			BSRPD	ug/L	10.00	9.2%	≤13.3	
	624	07/28/11:211042VRG	CCV	ug/L	10.00	78.1 %	66-134	
Chloroethane (Ethyl Chloride)	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	74.9 %	5-282	
			BSD	ug/L	10.00	90.9 %	5-282	
			BSRPD	ug/L	10.00	19.2%	≤17.1	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	71.1 %	38-162	
Chloroform	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	131 %	65-145	
			BSD	ug/L	10.00	150 %	65-145	435
			BSRPD	ug/L	10.00	13.8%	≤10.7	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	116 %	67-133	
Chloromethane(Methyl Chloride)	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	84.9 %	32-189	
			BSD	ug/L	10.00	120 %	32-189	
			BSRPD	ug/L	10.00	34.6%	≤30.1	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	96.3 %	0-204	
cis-1,3-Dichloropropene	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	140 %	77-115	435
			BSD	ug/L	10.00	77.2 %	77-115	
			BSRPD	ug/L	10.00	57.8%	≤10.3	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	82.3 %	24-176	
Dibromochloromethane	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	135 %	62-126	435
			BSD	ug/L	10.00	121 %	62-126	
			BSRPD	ug/L	10.00	10.7%	≤10.0	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	117 %	67-133	
Dichloromethane	624	07/27/11:208306VRG	Blank	ug/L		ND	<2	
			BS	ug/L	10.00	89.0 %	5-315	
			BSD	ug/L	10.00	106 %	5-315	
			BSRPD	ug/L	10.00	1.7	≤2	
	624	07/28/11:211042VRG	CCV	ug/L	10.00	85.8 %	60-139	
Ethylbenzene	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	103 %	65-126	
			BSD	ug/L	10.00	82.8 %	65-126	
			BSRPD	ug/L	10.00	21.9%	≤17.3	410

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Ethylbenzene	624	07/28/11:211042VRG	CCV	ug/L	10.00	84.4 %	59-141	
Fluorobenzene	624	07/27/11:208306VRG	Blank	ug/L	10.00	113 %	70-130	435 560
			Surr	ug/L	10.00	113 %	70-130	
			BS	ug/L	10.00	131 %	70-130	
			Surr	ug/L	10.00	131 %	70-130	
			BSD	ug/L	10.00	114 %	70-130	
			BSRPD	ug/L	10.00	13.7%	≤30.0	
			Surr	ug/L	10.00	114 %	70-130	
	Surr	ug/L	10.00	135 %	70-130	560		
	624	07/28/11:211042VRG	CCV	ug/L	10.00	134 %	70-130	362
Freon-11	624	07/27/11:208306VRG	Blank	ug/L	10.00	ND	<2.0	410
			BS	ug/L	10.00	138 %	24-233	
			BSD	ug/L	10.00	172 %	24-233	
	BSRPD	ug/L	10.00	21.4%	≤15.7			
	624	07/28/11:211042VRG	CCV	ug/L	10.00	126 %	48-152	
Methyl tert-Butyl Ether (MTBE)	624	07/27/11:208306VRG	Blank	ug/L	10.00	ND	<5	
			BS	ug/L	10.00	101 %	49-168	
			BSD	ug/L	10.00	128 %	49-168	
	BSRPD	ug/L	10.00	2.8	≤5			
	624	07/28/11:211042VRG	CCV	ug/L	10.00	110 %	50-150	
Pentafluorobenzene	624	07/27/11:208306VRG	Blank	ug/L	10.00	163 %	70-130	560
			Surr	ug/L	10.00	163 %	70-130	
			BS	ug/L	10.00	119 %	70-130	
			Surr	ug/L	10.00	119 %	70-130	
			BSD	ug/L	10.00	158 %	70-130	
			BSRPD	ug/L	10.00	28.1%	≤30.0	
			Surr	ug/L	10.00	158 %	70-130	
	Surr	ug/L	10.00	127 %	70-130	560		
	624	07/28/11:211042VRG	CCV	ug/L	10.00	123 %	70-130	
Styrene	624	07/27/11:208306VRG	Blank	ug/L	10.00	ND	<0.5	410
			BS	ug/L	10.00	98.8 %	65-134	
			BSD	ug/L	10.00	81.6 %	65-134	
	BSRPD	ug/L	10.00	19.1%	≤10.0			
	624	07/28/11:211042VRG	CCV	ug/L	10.00	83.6 %	50-150	
Tetrachloroethylene (PCE)	624	07/27/11:208306VRG	Blank	ug/L	10.00	ND	<0.5	
			BS	ug/L	10.00	80.1 %	65-124	
			BSD	ug/L	10.00	72.5 %	65-124	
	BSRPD	ug/L	10.00	10%	≤12.2			
	624	07/28/11:211042VRG	CCV	ug/L	10.00	73.3 %	73-127	
Toluene	624	07/27/11:208306VRG	Blank	ug/L	10.00	ND	<0.5	435
			BS	ug/L	10.00	125 %	67-121	
			BSD	ug/L	10.00	71.4 %	67-121	
	BSRPD	ug/L	10.00	54.3%	≤11.6			
	624	07/28/11:211042VRG	CCV	ug/L	10.00	73.5 %	74-126	410
trans-1,2-Dichloroethylene	624	07/27/11:208306VRG	Blank	ug/L	10.00	ND	<0.5	
			BS	ug/L	10.00	94.2 %	29-206	
			BSD	ug/L	10.00	111 %	29-206	
	BSRPD	ug/L	10.00	16.7%	≤22.6			
	624	07/28/11:211042VRG	CCV	ug/L	10.00	85.7 %	69-131	
trans-1,3-Dichloropropene	624	07/27/11:208306VRG	Blank	ug/L	10.00	ND	<0.5	
			BS	ug/L	10.00	93.4 %	72-120	
			BSD	ug/L	10.00	85.1 %	72-120	
	BSRPD	ug/L	10.00	9.3%	≤10.7			
	624	07/28/11:211042VRG	CCV	ug/L	10.00	89.0 %	50-150	

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Lab ID : STK1136467  
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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Trichloroethylene (TCE)	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	138 %	63-136	435
			BSD	ug/L	10.00	100 %	63-136	
			BSRPD	ug/L	10.00	31.5%	≤13.4	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	82.6 %	66-134	
Vinyl Acetate	624	07/27/11:208306VRG	Blank	ug/L		ND	<100.	
			BS	ug/L	40.00	103 %	27-197	
			BSD	ug/L	40.00	143 %	27-197	
			BSRPD	ug/L	10.00	16	≤100.	
	624	07/28/11:211042VRG	CCV	ug/L	40.00	117 %	10-150	
Vinyl Chloride	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	62.7 %	5-283	
			BSD	ug/L	10.00	78.3 %	5-283	
			BSRPD	ug/L	10.00	22.1%	≤15.6	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	59.3 %	4-196	
Xylenes m,p	624	07/27/11:208306VRG	Blank	ug/L		ND	<1.0	
			BS	ug/L	20.00	95.0 %	62-137	
			BSD	ug/L	20.00	75.8 %	62-137	
			BSRPD	ug/L	10.00	22.4%	≤30.0	
	624	07/28/11:211042VRG	CCV	ug/L	20.00	77.9 %	50-150	
Xylenes o	624	07/27/11:208306VRG	Blank	ug/L		ND	<0.5	
			BS	ug/L	10.00	90.1 %	65-130	
			BSD	ug/L	10.00	72.9 %	65-130	
			BSRPD	ug/L	10.00	21.1%	≤11.5	410
	624	07/28/11:211042VRG	CCV	ug/L	10.00	76.0 %	50-150	
1,2,4-Trichlorobenzene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	54.3 %	11-123	
			BS	ug/L	10.00	55.2 %	11-123	
			BSD	ug/L	10.00	61.9 %	11-123	
			BSRPD	ug/L	20.00	11.5%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	91.0 %	80-120	
1,2-Dichlorobenzene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	55.4 %	14-114	
			BS	ug/L	10.00	54.3 %	14-114	
			BSD	ug/L	10.00	61.2 %	14-114	
			BSRPD	ug/L	20.00	12.0%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	92.9 %	80-120	
1,2-Diphenylhydrazine	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	55.0 %	20-151	
			BS	ug/L	10.00	58.9 %	20-151	
			BSD	ug/L	10.00	58.6 %	20-151	
			BSRPD	ug/L	20.00	0.6%	≤30.0	
1,3-Dichlorobenzene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	54.2 %	14-110	
			BS	ug/L	10.00	53.2 %	14-110	
			BSD	ug/L	10.00	61.2 %	14-110	
			BSRPD	ug/L	20.00	14.0%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	93.8 %	80-120	
1,4-Dichlorobenzene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	54.8 %	13-112	
			BS	ug/L	10.00	53.7 %	13-112	
			BSD	ug/L	10.00	61.0 %	13-112	
			BSRPD	ug/L	20.00	12.7%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	93.3 %	80-120	

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Lab ID : STK1136467  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic 2,4,6-Tribromophenol	625	07/28/11:208202JMG	Blank	ug/L	20.00	51.2 %	13-153	
			Surr	ug/L	20.00	51.2 %	13-153	
			LCS	ug/L	20.00	54.0 %	13-153	
			Surr	ug/L	20.00	54.0 %	13-153	
			BS	ug/L	20.00	64.5 %	20-144	
			Surr	ug/L	20.00	64.5 %	13-153	
			BSD	ug/L	20.00	63.8 %	20-144	
			BSRPD	ug/L	20.00	1.0%	≤20.0	
			Surr	ug/L	20.00	63.8 %	13-153	
			Surr	ug/L	20.00	60.5 %	13-153	
			Surr	ug/L	20.00	58.4 %	13-153	
			625	08/16/11:211916VRG	CCV	mg/L	20.00	106 %
	CCV	mg/L	20.00	101 %	80-120			
	2,4,6-Trichlorophenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<1
LCS				ug/L	20.00	52.7 %	10-147	
BS				ug/L	20.00	60.9 %	10-147	
BSD				ug/L	20.00	63.1 %	10-147	
BSRPD		ug/L	20.00	3.6%	≤30.0			
625		08/16/11:211916VRG	CCV	mg/L	10.00	89.1 %	80-120	
2,4-Dichlorophenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	54.0 %	6-135	
			BS	ug/L	20.00	56.2 %	6-135	
			BSD	ug/L	20.00	60.0 %	6-135	
	BSRPD	ug/L	20.00	6.5%	≤30.0			
	625	08/16/11:211916VRG	CCV	mg/L	10.00	83.2 %	80-120	
2,4-Dimethylphenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	59.8 %	10-130	
			BS	ug/L	20.00	63.1 %	10-130	
			BSD	ug/L	20.00	64.4 %	10-130	
	BSRPD	ug/L	20.00	2.1%	≤30.0			
	625	08/16/11:211916VRG	CCV	mg/L	10.00	88.8 %	80-120	
2,4-Dinitrophenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<5	
			LCS	ug/L	20.00	46.3 %	10-157	
			BS	ug/L	20.00	47.3 %	10-157	
			BSD	ug/L	20.00	33.1 %	10-157	
	BSRPD	ug/L	20.00	2.9	≤5			
	625	08/16/11:211916VRG	CCV	mg/L	10.00	81.1 %	80-120	
2,4-Dinitrotoluene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	59.3 %	20-204	
			BS	ug/L	10.00	63.3 %	20-204	
			BSD	ug/L	10.00	63.2 %	20-204	
	BSRPD	ug/L	20.00	0.2%	≤30.0			
	625	08/16/11:211916VRG	CCV	mg/L	10.00	94.5 %	80-120	
2,6-Dinitrotoluene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	63.6 %	20-199	
			BS	ug/L	10.00	67.0 %	20-199	
			BSD	ug/L	10.00	67.4 %	20-199	
	BSRPD	ug/L	20.00	0.7%	≤30.0			
	625	08/16/11:211916VRG	CCV	mg/L	10.00	97.8 %	80-120	
2-Chlorophenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	59.4 %	13-114	
			BS	ug/L	20.00	56.5 %	13-114	
			BSD	ug/L	20.00	63.0 %	13-114	
			BSRPD	ug/L	20.00	10.8%	≤30.0	

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note		
Organic										
2-Chlorophenol	625	08/16/11:211916VRG	CCV	mg/L	10.00	95.1 %	80-120			
2-Fluorobiphenyl	625	07/28/11:208202JMG	Blank	ug/L	10.00	43.5 %	11-119			
			Surr	ug/L	10.00	43.5 %	11-119			
			LCS	ug/L	10.00	53.9 %	11-119			
			Surr	ug/L	10.00	53.9 %	11-119			
			BS	ug/L	10.00	55.1 %	45-102			
			Surr	ug/L	10.00	55.1 %	11-119			
			BSD	ug/L	10.00	56.9 %	45-102			
			BSRPD	ug/L	20.00	3.1%	≤20.0			
			Surr	ug/L	10.00	56.9 %	11-119			
			Surr	ug/L	10.00	50.4 %	11-119			
			Surr	ug/L	10.00	52.1 %	11-119			
			625	08/16/11:211916VRG	CCV	mg/L	10.00	103 %	80-120	
			CCV	mg/L	10.00	98.6 %	80-120			
	2-Fluorophenol	625	07/28/11:208202JMG	Blank	ug/L	20.00	45.0 %	13-124		
Surr				ug/L	20.00	45.0 %	13-124			
LCS				ug/L	20.00	56.6 %	13-124			
Surr				ug/L	20.00	56.6 %	13-124			
BS				ug/L	20.00	54.7 %	20-118			
Surr				ug/L	20.00	54.7 %	13-124			
BSD				ug/L	20.00	60.6 %	20-118			
BSRPD				ug/L	20.00	10.1%	≤20.0			
Surr				ug/L	20.00	60.6 %	13-124			
Surr				ug/L	20.00	0.0 %	13-124	L		
Surr				ug/L	20.00	55.8 %	13-124			
625				08/16/11:211916VRG	CCV	mg/L	20.00	104 %	80-120	
CCV				mg/L	20.00	103 %	80-120			
2-Nitrophenol		625	07/28/11:208202JMG	Blank	ug/L		ND	<2		
	LCS			ug/L	20.00	60.9 %	3-133			
	BS			ug/L	20.00	62.4 %	3-133			
	BSD			ug/L	20.00	64.4 %	3-133			
	BSRPD			ug/L	20.00	3.0%	≤30.0			
625	08/16/11:211916VRG	CCV	mg/L	10.00	95.5 %	80-120				
3,3-Dichlorobenzidine	625	07/28/11:208202JMG	Blank	ug/L		ND	<2			
			LCS	ug/L	20.00	56.8 %	20-132			
			BS	ug/L	20.00	71.8 %	20-132			
			BSD	ug/L	20.00	26.4 %	20-132			
			BSRPD	ug/L	20.00	9.1	≤2	410		
625	08/16/11:211916VRG	CCV	mg/L	20.00	102 %	80-120				
4,6-Dinitro-2-methylphenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<1			
			LCS	ug/L	20.00	54.8 %	10-172			
			BS	ug/L	20.00	58.3 %	10-172			
			BSD	ug/L	20.00	50.9 %	10-172			
			BSRPD	ug/L	20.00	13.4%	≤30.0			
625	08/16/11:211916VRG	CCV	mg/L	10.00	80.6 %	80-120				
4-Bromophenylphenylether	625	07/28/11:208202JMG	Blank	ug/L		ND	<1			
			LCS	ug/L	10.00	57.5 %	20-159			
			BS	ug/L	10.00	61.1 %	20-159			
			BSD	ug/L	10.00	61.3 %	20-159			
			BSRPD	ug/L	20.00	0.3%	≤30.0			
	625	08/16/11:211916VRG	CCV	mg/L	10.00	90.3 %	80-120			
4-Nitrophenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<2			
			LCS	ug/L	20.00	63.4 %	20-148			
			BS	ug/L	20.00	68.7 %	20-148			

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic 4-Nitrophenol	625	07/28/11:208202JMG	BSD	ug/L	20.00	68.1 %	20-148	
			BSRPD	ug/L	20.00	0.9%	≤30.0	
Acenaphthene	625	07/28/11:208202JMG	CCV	mg/L	10.00	91.0 %	80-120	
			Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	56.3 %	13-129	
			BS	ug/L	10.00	59.2 %	13-129	
	BSD	ug/L	10.00	61.1 %	13-129			
625	08/16/11:211916VRG	BSRPD	ug/L	20.00	3.3%	≤30.0		
		CCV	mg/L	10.00	90.8 %	80-120		
Acenaphthylene	625	07/28/11:208202JMG	CCV	mg/L	10.00	86.8 %	80-120	
			Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	48.5 %	20-112	
			BS	ug/L	10.00	50.4 %	20-112	
	BSD	ug/L	10.00	52.6 %	20-112			
625	08/16/11:211916VRG	BSRPD	ug/L	20.00	4.3%	≤30.0		
		CCV	mg/L	10.00	94.3 %	80-120		
Anthracene	625	07/28/11:208202JMG	CCV	mg/L	10.00	90.6 %	80-120	
			Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	57.5 %	14-131	
			BS	ug/L	10.00	61.5 %	14-131	
	BSD	ug/L	10.00	61.4 %	14-131			
625	08/16/11:211916VRG	BSRPD	ug/L	20.00	0.2%	≤30.0		
		CCV	mg/L	10.00	92.1 %	80-120		
Azobenzene	625	08/16/11:211916VRG	CCV	mg/L	10.00	83.6 %	80-120	
			CCV	mg/L	10.00	88.7 %	80-120	
Benzidine	625	07/28/11:208202JMG	Blank	ug/L		ND	<10	
			LCS	ug/L	20.00	12.9 %	20-41	320
			BS	ug/L	20.00	13.0 %	20-41	435
			BSD	ug/L	20.00	12.9 %	20-41	435
	BSRPD	ug/L	20.00	0.0030	≤10			
625	08/16/11:211916VRG	CCV	mg/L	20.00	70.6 %	70-130		
Benzo(a)anthracene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	61.6 %	7-169	
			BS	ug/L	10.00	63.7 %	7-169	
			BSD	ug/L	10.00	63.2 %	7-169	
	BSRPD	ug/L	20.00	0.8%	≤30.0			
625	08/16/11:211916VRG	CCV	mg/L	10.00	86.6 %	80-120		
		CCV	mg/L	10.00	81.6 %	80-120		
Benzo(a)pyrene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	53.2 %	20-177	
			BS	ug/L	10.00	56.2 %	20-177	
			BSD	ug/L	10.00	56.5 %	20-177	
	BSRPD	ug/L	20.00	0.4%	≤30.0			
625	08/16/11:211916VRG	CCV	mg/L	10.00	94.4 %	80-120		
		CCV	mg/L	10.00	81.5 %	80-120		
Benzo(b)fluoranthene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	56.1 %	20-210	
			BS	ug/L	10.00	60.0 %	20-210	
			BSD	ug/L	10.00	62.9 %	20-210	
	BSRPD	ug/L	20.00	4.7%	≤30.0			
625	08/16/11:211916VRG	CCV	mg/L	10.00	81.9 %	80-120		
		CCV	mg/L	10.00	80.4 %	80-120		
Benzo(g,h,i)perylene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	64.4 %	20-190	

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Benzo(g,h,i)perylene	625	07/28/11:208202JMG	BS	ug/L	10.00	68.2 %	20-190	
			BSD	ug/L	10.00	68.8 %	20-190	
			BSRPD	ug/L	20.00	0.8%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	94.2 %	80-120	
			CCV	mg/L	10.00	87.7 %	80-120	
	Benzo(k)fluoranthene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1
LCS				ug/L	10.00	57.5 %	20-187	
BS				ug/L	10.00	59.3 %	20-187	
BSD				ug/L	10.00	59.3 %	20-187	
625		08/16/11:211916VRG	BSRPD	ug/L	20.00	0.09%	≤30.0	
			CCV	mg/L	10.00	81.8 %	80-120	
bis(2-Chloroethoxy)methane	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	58.6 %	20-127	
			BS	ug/L	10.00	60.6 %	20-127	
			BSD	ug/L	10.00	62.7 %	20-127	
	625	08/16/11:211916VRG	BSRPD	ug/L	20.00	3.4%	≤30.0	
			CCV	mg/L	10.00	95.5 %	80-120	
bis(2-Chloroethyl)ether	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	67.5 %	14-111	
			BS	ug/L	10.00	65.6 %	14-111	
			BSD	ug/L	10.00	72.8 %	14-111	
	625	08/16/11:211916VRG	BSRPD	ug/L	20.00	10.4%	≤30.0	
			CCV	mg/L	10.00	95.8 %	80-120	
bis(2-Chloroisopropyl)ether	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	60.2 %	18-115	
			BS	ug/L	10.00	60.6 %	18-115	
			BSD	ug/L	10.00	65.9 %	18-115	
	625	08/16/11:211916VRG	BSRPD	ug/L	20.00	8.3%	≤30.0	
			CCV	mg/L	10.00	95.9 %	80-120	
bis(2-Ethylhexyl)phthalate	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	210
			LCS	ug/L	10.00	195 %	20-216	
			BS	ug/L	10.00	422 %	20-216	435
			BSD	ug/L	10.00	122 %	20-216	
	625	08/16/11:211916VRG	BSRPD	ug/L	20.00	79.0%	≤30.0	410
			CCV	mg/L	10.00	99.2 %	80-120	
Butylbenzylphthalate	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	
			LCS	ug/L	10.00	24.8 %	20-79	
			BS	ug/L	10.00	24.1 %	20-79	
			BSD	ug/L	10.00	27.6 %	20-79	
	625	08/16/11:211916VRG	BSRPD	ug/L	20.00	0.35	≤2	
			CCV	mg/L	10.00	87.2 %	80-120	
Chloronaphthalene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	54.6 %	20-200	
			BS	ug/L	10.00	56.4 %	20-200	
			BSD	ug/L	10.00	60.4 %	20-200	
	625	08/16/11:211916VRG	BSRPD	ug/L	20.00	7.0%	≤30.0	
			CCV	mg/L	10.00	88.6 %	80-120	
Chlorophenylphenylether	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	59.4 %	10-186	
			BS	ug/L	10.00	62.6 %	10-186	
			BSD	ug/L	10.00	63.8 %	10-186	
	625	08/16/11:211916VRG	BSRPD	ug/L	20.00	2.0%	≤30.0	
			CCV	mg/L	10.00	92.6 %	80-120	

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Chrysene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	59.3 %	20-352	
			BS	ug/L	10.00	61.8 %	20-352	
			BSD	ug/L	10.00	60.9 %	20-352	
			BSRPD	ug/L	20.00	1.5%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	67.9 %	80-120	355
			CCV	mg/L	10.00	80.0 %	80-120	
Dibenzo(a,h)anthracene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	66.0 %	20-244	
			BS	ug/L	10.00	69.0 %	20-244	
			BSD	ug/L	10.00	70.9 %	20-244	
			BSRPD	ug/L	20.00	2.7%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	94.0 %	80-120	
			CCV	mg/L	10.00	87.0 %	80-120	
Diethylphthalate	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	26.2 %	20-89	
			BS	ug/L	10.00	29.9 %	20-89	
			BSD	ug/L	10.00	31.8 %	20-89	
			BSRPD	ug/L	20.00	0.19	≤1	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	91.5 %	80-120	
Dimethylphthalate	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	13.2 %	20-68	320
			BS	ug/L	10.00	18.7 %	20-68	435
			BSD	ug/L	10.00	18.7 %	20-68	435
			BSRPD	ug/L	20.00	0.0062	≤1	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	93.1 %	80-120	
Di-n-butylphthalate	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	
			LCS	ug/L	10.00	35.2 %	20-107	
			BS	ug/L	10.00	35.9 %	20-107	
			BSD	ug/L	10.00	39.8 %	20-107	
			BSRPD	ug/L	20.00	0.39	≤2	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	93.2 %	80-120	
Di-n-octylphthalate	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	56.1 %	20-182	
			BS	ug/L	10.00	61.3 %	20-182	
			BSD	ug/L	10.00	67.3 %	20-182	
			BSRPD	ug/L	20.00	9.3%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	92.8 %	80-120	
Fluoranthene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	62.0 %	14-141	
			BS	ug/L	10.00	65.9 %	14-141	
			BSD	ug/L	10.00	65.2 %	14-141	
			BSRPD	ug/L	20.00	1.0%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	91.5 %	80-120	
			CCV	mg/L	10.00	86.2 %	80-120	
Fluorene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	61.7 %	20-180	
			BS	ug/L	10.00	64.7 %	20-180	
			BSD	ug/L	10.00	66.7 %	20-180	
			BSRPD	ug/L	20.00	3.1%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	94.5 %	80-120	
			CCV	mg/L	10.00	90.8 %	80-120	
Hexachlorobenzene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	54.4 %	20-177	

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Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note		
Organic	625	07/28/11:208202JMG	BS	ug/L	10.00	56.6 %	20-177			
			BSD	ug/L	10.00	57.8 %	20-177			
Hexachlorobenzene	625	07/28/11:208202JMG	BSRPD	ug/L	20.00	2.0%	≤30.0			
			625	08/16/11:211916VRG	CCV	mg/L	10.00	87.1 %	80-120	
Hexachlorobutadiene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1			
			LCS	ug/L	10.00	50.9 %	20-127			
			BS	ug/L	10.00	52.0 %	20-127			
			BSD	ug/L	10.00	62.0 %	20-127			
Hexachlorocyclopentadiene	625	07/28/11:208202JMG	BSRPD	ug/L	20.00	17.6%	≤30.0			
			625	08/16/11:211916VRG	CCV	mg/L	10.00	91.8 %	80-120	
			Blank	ug/L		ND	<1			
			LCS	ug/L	10.00	13.6 %	20-84	320		
Hexachloroethane	625	07/28/11:208202JMG	BS	ug/L	10.00	11.9 %	20-84	435		
			BSD	ug/L	10.00	13.7 %	20-84	435		
			BSRPD	ug/L	20.00	0.18	≤1			
			625	08/16/11:211916VRG	CCV	mg/L	10.00	92.5 %	80-120	
Indeno(1,2,3-c,d)pyrene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1			
			LCS	ug/L	10.00	65.2 %	20-216			
			BS	ug/L	10.00	69.1 %	20-216			
			BSD	ug/L	10.00	72.4 %	20-216			
Isophorone	625	07/28/11:208202JMG	BSRPD	ug/L	20.00	4.7%	≤30.0			
			625	08/16/11:211916VRG	CCV	mg/L	10.00	94.2 %	80-120	
			Blank	ug/L		ND	<1			
			LCS	ug/L	10.00	56.3 %	17-111			
Naphthalene	625	07/28/11:208202JMG	BS	ug/L	10.00	60.0 %	39-71			
			BSD	ug/L	10.00	59.7 %	39-71			
			BSRPD	ug/L	20.00	0.6%	≤30.0			
			625	08/16/11:211916VRG	CCV	mg/L	10.00	110 %	80-120	
Nitrobenzene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1			
			LCS	ug/L	10.00	56.7 %	14-112			
			BS	ug/L	10.00	56.3 %	14-112			
			BSD	ug/L	10.00	61.2 %	14-112			
Nitrobenzene-d5	625	07/28/11:208202JMG	BSRPD	ug/L	20.00	8.4%	≤30.0			
			625	08/16/11:211916VRG	CCV	ng/L	10.00	91.0 %	80-120	
			Blank	ug/L	10.00	49.0 %	15-102			
			Surr	ug/L	10.00	49.0 %	15-102			
			LCS	ug/L	10.00	58.3 %	15-102			
			Surr	ug/L	10.00	58.3 %	15-102			
			BS	ug/L	10.00	57.0 %	51-103			
			Surr	ug/L	10.00	57.0 %	15-102			

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Organic Nitrobenzene-d5	625	07/28/11:208202JMG	BSD	ug/L	10.00	61.9 %	51-103	
			BSRPD	ug/L	20.00	8.3%	≤30.0	
			Surr	ug/L	10.00	61.9 %	15-102	
			Surr	ug/L	10.00	59.2 %	15-102	
			Surr	ug/L	10.00	58.6 %	15-102	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	110 %	80-120	
			CCV	mg/L	10.00	106 %	80-120	
N-Nitrosodimethylamine	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	
			LCS	ug/L	10.00	51.5 %	20-120	
			BS	ug/L	10.00	49.7 %	20-120	
			BSD	ug/L	10.00	57.5 %	20-120	
			BSRPD	ug/L	20.00	0.77	≤2	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	97.4 %	80-120	
N-Nitrosodi-N-propylamine	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	62.6 %	6-126	
			BS	ug/L	10.00	62.8 %	6-126	
			BSD	ug/L	10.00	65.4 %	6-126	
			BSRPD	ug/L	20.00	4.1%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	94.7 %	80-120	
N-Nitrosodiphenylamine	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	58.7 %	20-199	
			BS	ug/L	10.00	61.3 %	20-199	
			BSD	ug/L	10.00	71.2 %	20-199	
			BSRPD	ug/L	20.00	15.0%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	95.5 %	80-120	
p-Chloro-m-cresol	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	62.0 %	21-119	
			BS	ug/L	20.00	66.5 %	21-119	
			BSD	ug/L	20.00	67.0 %	21-119	
			BSRPD	ug/L	20.00	0.8%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	90.3 %	80-120	
Pentachlorophenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	54.5 %	20-195	
			BS	ug/L	20.00	61.2 %	20-195	
			BSD	ug/L	20.00	61.4 %	20-195	
			BSRPD	ug/L	20.00	0.3%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	85.5 %	80-120	
Phenanthrene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	60.7 %	13-138	
			BS	ug/L	10.00	64.6 %	13-138	
			BSD	ug/L	10.00	63.7 %	13-138	
			BSRPD	ug/L	20.00	1.4%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	93.4 %	80-120	
			CCV	mg/L	10.00	87.8 %	80-120	
Phenol	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	20.00	56.3 %	9-107	
			BS	ug/L	20.00	56.2 %	9-107	
			BSD	ug/L	20.00	62.9 %	9-107	
			BSRPD	ug/L	20.00	11.3%	≤30.0	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	92.8 %	80-120	
Phenol-d6	625	07/28/11:208202JMG	Blank	ug/L	20.00	42.5 %	5-116	
			Surr	ug/L	20.00	42.5 %	5-116	
			LCS	ug/L	20.00	57.6 %	5-116	
			Surr	ug/L	20.00	57.6 %	5-116	

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Organic Phenol-d6	625	07/28/11:208202JMG	BS	ug/L	20.00	58.1 %	20-114	560
			Surr	ug/L	20.00	58.1 %	5-116	
			BSD	ug/L	20.00	63.2 %	20-114	
			BSRPD	ug/L	20.00	8.5%	≤20.0	
			Surr	ug/L	20.00	63.2 %	5-116	
			Surr	ug/L	20.00	0.0 %	5-116	
	Surr	ug/L	20.00	54.5 %	5-116			
	625	08/16/11:211916VRG	CCV	mg/L	20.00	108 %	80-120	
			CCV	mg/L	20.00	102 %	80-120	
	p-Terphenyl-d14	625	07/28/11:208202JMG	Blank	ug/L	10.00	31.9 %	
Surr				ug/L	10.00	31.9 %	16-122	
LCS				ug/L	10.00	34.5 %	16-122	
Surr				ug/L	10.00	34.5 %	16-122	
BS				ug/L	10.00	35.9 %	20-154	
Surr				ug/L	10.00	35.9 %	16-122	
BSD				ug/L	10.00	35.7 %	20-154	
BSRPD				ug/L	20.00	0.025	≤1	
Surr		ug/L	10.00	35.7 %	16-122			
Surr		ug/L	10.00	14.9 %	16-122			
Surr	ug/L	10.00	22.8 %	16-122				
625	08/16/11:211916VRG	CCV	mg/L	10.00	96.7 %	80-120		
		CCV	mg/L	10.00	89.8 %	80-120		
Pyrene	625	07/28/11:208202JMG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	54.8 %	20-162	
			BS	ug/L	10.00	58.2 %	20-162	
			BSD	ug/L	10.00	58.0 %	20-162	
	BSRPD	ug/L	20.00	0.2%	≤30.0			
	Surr	ug/L	10.00	83.5 %	80-120			
625	08/16/11:211916VRG	CCV	mg/L	10.00	76.7 %	80-120		
		CCV	mg/L	10.00	76.7 %	80-120		
Pyridine	625	07/28/11:208202JMG	Blank	ug/L		ND	<10	
	625	08/16/11:211916VRG	CCV	mg/L	10.00	85.6 %	80-120	
2,4'-DDD	625P	07/29/11:211148SG	CCV	ug/L	100.0	93.6 %	70-130	
2,4'-DDE	625P	07/29/11:211148SG	CCV	ug/L	100.0	89.3 %	70-130	
2,4'-DDT	625P	07/29/11:211148SG	CCV	ug/L	100.0	98.6 %	70-130	
Aldrin	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	37.5 %	2-116	
			BS	ng/L	100.0	65.2 %	2-116	
			BSD	ng/L	100.0	58.7 %	2-116	
	BSRPD	ng/L	100.0	10.5%	≤28.0			
625P	07/29/11:211148SG	CCV	ug/L	100.0	99.6 %	70-130		
Alpha BHC	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	50.7 %	2-128	
			BS	ng/L	100.0	63.9 %	2-128	
			BSD	ng/L	100.0	61.3 %	2-128	
	BSRPD	ng/L	100.0	4.2%	≤25.7			
625P	07/29/11:211148SG	CCV	ug/L	100.0	73.6 %	70-130		
alpha-Chlordane	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	410
			LCS	ng/L	100.0	53.4 %	38-121	
			BS	ng/L	100.0	66.3 %	38-121	
			BSD	ng/L	100.0	44.7 %	38-121	
	BSRPD	ng/L	100.0	38.8%	≤20.9			
625P	07/29/11:211148SG	CCV	ug/L	100.0	85.9 %	70-130		
Beta BHC	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	74.4 %	2-122	

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Organic Beta BHC	625P	07/27/11:208156JMG	BS	ng/L	100.0	61.6 %	2-122	
			BSD	ng/L	100.0	64.6 %	2-122	
			BSRPD	ng/L	100.0	4.8%	≤25.7	
	625P	07/29/11:211148SG	CCV	ug/L	100.0	74.6 %	70-130	
Delta BHC	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	75.3 %	2-143	
			BS	ng/L	100.0	89.0 %	2-143	
			BSD	ng/L	100.0	73.9 %	2-143	
			BSRPD	ng/L	100.0	18.6%	≤10.0	410
	625P	07/29/11:211148SG	CCV	ug/L	100.0	118 %	70-130	
Dieldrin	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	60.3 %	2-158	
			BS	ng/L	100.0	71.5 %	2-158	
			BSD	ng/L	100.0	50.9 %	2-158	
			BSRPD	ng/L	100.0	33.6%	≤32.8	410
	625P	07/29/11:211148SG	CCV	ug/L	100.0	92.8 %	70-130	
Endosulfan I	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	43.0 %	16-151	
			BS	ng/L	100.0	68.0 %	16-151	
			BSD	ng/L	100.0	37.7 %	16-151	
			BSRPD	ng/L	100.0	57.4%	≤739	
	625P	07/29/11:211148SG	CCV	ug/L	100.0	82.6 %	70-130	
Endosulfan II	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	55.1 %	2-200	
			BS	ng/L	100.0	88.3 %	2-200	
			BSD	ng/L	100.0	50.0 %	2-200	
			BSRPD	ng/L	100.0	55.4%	≤41.4	410
	625P	07/29/11:211148SG	CCV	ug/L	100.0	90.1 %	70-130	
Endosulfan Sulfate	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	33.8 %	2-176	
			BS	ng/L	100.0	84.1 %	2-176	
			BSD	ng/L	100.0	55.2 %	2-176	
			BSRPD	ng/L	100.0	41.5%	≤28.8	410
	625P	07/29/11:211148SG	CCV	ug/L	100.0	87.0 %	70-130	
Endrin	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	55.4 %	33-157	
			BS	ng/L	100.0	48.7 %	33-157	
			BSD	ng/L	100.0	53.0 %	33-157	
			BSRPD	ng/L	100.0	8.5%	≤90.1	
	625P	07/29/11:211148SG	PEM	Days	0.2000	5.3%	20	
			CCV	ug/L	100.0	118 %	70-130	
Endrin Aldehyde	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	63.9 %	20-129	
			BS	ng/L	100.0	87.4 %	20-129	
			BSD	ng/L	100.0	65.3 %	20-129	
			BSRPD	ng/L	100.0	28.9%	≤46.4	
	625P	07/29/11:211148SG	CCV	ug/L	100.0	79.3 %	70-130	
Endrin Ketone	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	46.0 %	7-140	
			BS	ng/L	100.0	82.0 %	50-150	
			BSD	ng/L	100.0	55.8 %	50-150	
			BSRPD	ng/L	100.0	38.0%	≤20	410
	625P	07/29/11:211148SG	CCV	ug/L	100.0	88.5 %	70-130	
gamma-Chlordane	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	

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Organic gamma-Chlordane	625P	07/27/11:208156JMG	LCS	ng/L	100.0	48.1 %	37-125	435
			BS	ng/L	100.0	82.4 %	37-125	
			BSD	ng/L	100.0	23.4 %	37-125	
			BSRPD	ng/L	100.0	112%	≤28.6	
	625P	07/29/11:211148SG	CCV	ug/L	100.0	87.9 %	70-130	
Heptachlor	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	42.5 %	13-134	
			BS	ng/L	100.0	73.1 %	13-134	
			BSD	ng/L	100.0	56.8 %	13-134	
	BSRPD	ng/L	100.0	25.2%	≤36.9			
625P	07/29/11:211148SG	CCV	ug/L	100.0	96.1 %	70-130		
Heptachlor Epoxide	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	49.9 %	48-148	
			BS	ng/L	100.0	52.7 %	48-148	
			BSD	ng/L	100.0	53.5 %	48-148	
	BSRPD	ng/L	100.0	1.5%	≤24.5			
625P	07/29/11:211148SG	CCV	ug/L	100.0	96.2 %	70-130		
Lindane	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	77.8 %	18-94	
			BS	ng/L	100.0	61.6 %	18-94	
			BSD	ng/L	100.0	64.6 %	18-94	
	BSRPD	ng/L	100.0	4.8%	≤34.8			
625P	07/29/11:211148SG	CCV	ug/L	100.0	113 %	70-130		
Methoxychlor	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	62.4 %	2-199	
			BS	ng/L	100.0	72.2 %	2-199	
			BSD	ng/L	100.0	72.9 %	2-199	
	BSRPD	ng/L	100.0	1.0%	≤51.2			
625P	07/29/11:211148SG	CCV	ug/L	100.0	91.9 %	70-130		
o,p - DDD	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	49.8 %	50-150	
			BS	ng/L	100.0	73.3 %	50-150	
			BSD	ng/L	100.0	59.0 %	50-150	
	BSRPD	ng/L	100.0	21.6%	≤25			
o,p - DDE	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	320
			LCS	ng/L	100.0	49.3 %	50-150	
			BS	ng/L	100.0	61.8 %	50-150	
			BSD	ng/L	100.0	52.1 %	50-150	
	BSRPD	ng/L	100.0	17.1%	≤25			
o,p - DDT	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	320
			LCS	ng/L	100.0	43.3 %	50-150	
			BS	ng/L	100.0	57.2 %	50-150	
			BSD	ng/L	100.0	54.4 %	50-150	
	BSRPD	ng/L	100.0	5.1%	≤25			
p,p - DDD	625P	07/29/11:211148SG	CCV	ug/L	100.0	100 %	70-130	
p,p - DDE	625P	07/29/11:211148SG	CCV	ug/L	100.0	116 %	70-130	
p,p - DDT	625P	07/29/11:211148SG	PEM	Days	0.2000	3.4%	20	
			CCV	ug/L	100.0	90.9 %	70-130	
p,p'-DDD	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	410
			LCS	ng/L	100.0	76.0 %	31-126	
			BS	ng/L	100.0	102 %	31-126	
			BSD	ng/L	100.0	70.9 %	31-126	
	BSRPD	ng/L	100.0	36.0%	≤35.8			
p,p'-DDE	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic p,p'-DDE	625P	07/27/11:208156JMG	LCS	ng/L	100.0	59.5 %	31-152	
			BS	ng/L	100.0	88.0 %	31-152	
			BSD	ng/L	100.0	69.5 %	31-152	
			BSRPD	ng/L	100.0	23.4%	≤27.9	
p,p'-DDT	625P	07/27/11:208156JMG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	47.7 %	5-154	
			BS	ng/L	100.0	75.2 %	5-154	
			BSD	ng/L	100.0	60.3 %	5-154	
			BSRPD	ng/L	100.0	21.9%	≤40.9	
Tetrachloro-m-xylene	625P	07/27/11:208156JMG	Blank	ng/L	100.0	35.6 %	20-150	
			Surr	ng/L	100.0	35.6 %	20-150	
			LCS	ng/L	100.0	29.7 %	20-150	
			Surr	ng/L	100.0	29.7 %	20-150	
			BS	ng/L	100.0	30.1 %	50-150	435
			Surr	ng/L	100.0	30.1 %	20-150	
			BSD	ng/L	100.0	31.8 %	50-150	435
			BSRPD	ng/L	100.0	5.2%	≤30	
			Surr	ng/L	100.0	31.8 %	20-150	
			Surr	ng/L	100.0	28.7 %	20-150	
			Surr	ng/L	100.0	24.9 %	20-150	
	625P	07/29/11:211148SG	CCV	ug/L	100.0	82.5 %	70-130	

**Definition**  
 CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.  
 Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.  
 LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.  
 BS : Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.  
 BSD : Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.  
 BSRPD : BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation and analysis.  
 ND : Non-detect - Result was below the DQO listed for the analyte.  
 DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

**Explanation**  
 210 : The method blank was positive. However, samples reported were either ten times greater than the blank concentration or non detect and accepted.  
 320 : LCS not within Acceptance Range (AR). Data was accepted based on the BS/BSD recovery.  
 355 : CCV not within Acceptance Range (AR). Results were reported with client approval.  
 360 : CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.  
 362 : Surrogates are qualified on Control Chart Limits, these are CCV limits. See individual sample reports.  
 410 : Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery.  
 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.  
 560 : Surrogate percent recoveries not within the Acceptance Range (AR) due to suspected matrix interferences.



August 10, 2011

South San Joaquin Irrigation District  
P.O. Box 747  
Ripon, CA. 95366

**Subject: Subcontract Analysis for FGL Lab No. STK1136467**

Enclosed please find results for the following sample(s) which were received by FGL.

- Subcontract-Dioxin, 2,3,7,8 - TCDD

Please note that this analysis was performed by Test America Sacramento (NELAP Certified Laboratory)

Thank you for using FGL Environmental.

Sincerely,

**Cindy Aguirre**  Digitally signed by Cindy Aguirre  
Title: Customer Service Rep  
Date: 2011-08-10

Enclosure

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

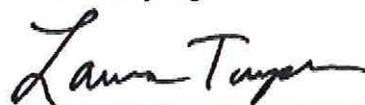
## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica West Sacramento  
880 Riverside Parkway  
West Sacramento, CA 95605  
Tel: (916)373-5600

TestAmerica Job ID: G1G260439  
Client Project/Site: 1136467-(3-16829)  
Client Project Description: Misc.

For:  
FGL Environmental  
853 Corporation Street  
P.O. Box 272  
Santa Paula, CA 93060-0272

Attn: Cindy Aguirre



Authorized for release by:  
08/10/2011 10:47:42 AM  
Laura Turpen  
Project Administrator  
[laura.turpen@testamericainc.com](mailto:laura.turpen@testamericainc.com)

Designee for  
Jeremy Sadler  
Project Manager  
[jeremyr.sadler@testamericainc.com](mailto:jeremyr.sadler@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)



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## Definitions/Glossary

Client: FGL Environmental  
Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439



### Qualifiers

#### DIOXIN

Qualifier	Qualifier Description
*	Surrogate recovery is outside stated control limits.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
✧	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

## Case Narrative

### TestAmerica West Sacramento Project Number G1G260439

#### **WATER, 1613B, 2,3,7,8-TCDD**

Sample: 1

The internal standard recovery for 13C-2,3,7,8 TCDD is lower than the method recommended criteria. The data quality is not considered affected if the internal standard signal-to-noise ratio is greater than 10:1, which is achieved for all internal standards in the above sample. All detection limits are below the lower calibration limit and there is no adverse impact on data quality.

There are no other anomalies associated with this project.

## Detection Summary

Client: FGL Environmental  
Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

**Client Sample ID: Lagoon**

**Lab Sample ID: G1G260439001**

No Detections.



# Client Sample Results

Client: FGL Environmental  
 Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

**Client Sample ID: Lagoon**

**Lab Sample ID: G1G260439001**

Date Collected: 07/14/11 14:00

Matrix: Water

Date Received: 07/26/11 08:00

**Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)**

Analyte	Result	Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	2.0	pg/L		08/02/11 09:00	08/04/11 02:57	0.96
<i>Surrogate</i>	<i>% Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
37Cl4-2,3,7,8-TCDD	98		42 - 164				08/02/11 09:00	08/04/11 02:57	0.96
<i>Internal Standard</i>	<i>% Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	28	*	31 - 137				08/02/11 09:00	08/04/11 02:57	0.96



# Surrogate Summary

Client: FGL Environmental  
Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

## Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

Matrix: Water

Prep Type: Total

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (42-164)
G1G260439001	Lagoon	98
G1H020000123B	Method Blank	98

#### Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

## Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

Matrix: Water

Prep Type: Total

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (37-158)
G1H020000123C	Lab Control Sample	100

#### Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD



# Internal Standard Summary

Client: FGL Environmental  
Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

## Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

Matrix: Water

Prep Type: Total

### Percent Internal Standard Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (31-137)
G1G260439001	Lagoon	28 *
G1H020000123B	Method Blank	57

Internal Standard Legend  
TCDD = 13C-2,3,7,8-TCDD

## Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

Matrix: Water

Prep Type: Total

### Percent Internal Standard Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-141)
G1H020000123C	Lab Control Sample	54

Internal Standard Legend  
TCDD = 13C-2,3,7,8-TCDD



## QC Sample Results

Client: FGL Environmental  
 Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

### Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

**Lab Sample ID: G1H020000123B**  
**Matrix: Water**  
**Analysis Batch: 1214123**

**Client Sample ID: Method Blank**  
**Prep Type: Total**  
**Prep Batch: 1214123\_P**

Analyte	MB MB		ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,3,7,8-TCDD	ND		10	1.4	pg/L		08/02/11 09:00	08/04/11 02:15	1
<b>MB MB</b>									
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	98		42 - 164				08/02/11 09:00	08/04/11 02:15	1
<b>MB MB</b>									
Internal Standard	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	57		31 - 137				08/02/11 09:00	08/04/11 02:15	1

**Lab Sample ID: G1H020000123C**  
**Matrix: Water**  
**Analysis Batch: 1214123**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total**  
**Prep Batch: 1214123\_P**

Analyte	Spike Added	LCS LCS		Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
2,3,7,8-TCDD	200	217		pg/L		109	73 - 146
<b>LCS LCS</b>							
Surrogate	% Recovery	Qualifier	Limits				
37Cl4-2,3,7,8-TCDD	100		37 - 158				
<b>LCS LCS</b>							
Internal Standard	% Recovery	Qualifier	Limits				
13C-2,3,7,8-TCDD	54		25 - 141				

## QC Association Summary

Client: FGL Environmental  
 Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

### JIOXIN

#### Analysis Batch: 1214123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1H020000123C	Lab Control Sample	Total	Water	1613B-Tetras	
G1H020000123B	Method Blank	Total	Water	1613B-Tetras	
G1G260439001	Lagoon	Total	Water	1613B-Tetras	

#### Prep Batch: 1214123\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1H020000123C	Lab Control Sample	Total	Water	EXTRACTION: Soxhlet and Sep Funnel	
G1H020000123B	Method Blank	Total	Water	EXTRACTION: Soxhlet and Sep Funnel	
G1G260439001	Lagoon	Total	Water	EXTRACTION: Soxhlet and Sep Funnel	



# Lab Chronicle

Client: FGL Environmental  
Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

Client Sample ID: Lagoon

Lab Sample ID: G1G260439001

Date Collected: 07/14/11 14:00

Matrix: Water

Date Received: 07/26/11 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Prep	EXTRACTION: Soxhlet and Sep Funnel			1214123_P	08/02/11 09:00	BG	TAL WSC
Total	Analysis	1613B-Tetras		0.96	1214123	08/04/11 02:57	SO	TAL WSC

**Laboratory References:**

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



## Certification Summary

Client: FGL Environmental  
 Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento		USEPA UCMR		CA00044
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska	Alaska UST	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	US Fish & Wildlife		LE148388-0
TestAmerica West Sacramento	USDA	USDA		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	West Virginia DEP	3	334
TestAmerica West Sacramento	West Virginia	West Virginia DHHR (DW)	3	9930C
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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## Method Summary

Client: FGL Environmental  
Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

---

Method	Method Description	Protocol	Laboratory
1613B-Tetras	Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)	EPA-5	TAL WSC

---

**Protocol References:**

EPA-5 = EPA-5

**Laboratory References:**

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Sample Summary

Client: FGL Environmental  
Project/Site: 1136467-(3-16829)

TestAmerica Job ID: G1G260439

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
G1G260439001	Lagoon	Water	07/14/11 14:00	07/26/11 08:00



# ENVIRONMENTAL

## Special Subcontract to Test American Sacramento

## CHAIN OF CUSTODY Laboratory Copy (1 of 3)

Client: Fruit Growers Laboratory, Inc. Address: FGL Environmental, Inc. 853 Corporation St. Santa Paula, CA 93060-3005 Phone: (805)392-2039 Fax: (805)525-6264 Contact Person: Project Name: <u>1136467</u> - (3-16829) Purchase Order Number: Quote Number: <u>ST 20110720-01</u>				34596:07/18/2011		TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information																	
Sampler(s) <u>JS</u> Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___/___				Method of Sampling: Composite(C) Grab(G)																			
Lab Number:				Type of Sample **SEE REVERSE SIDE**																			
				Potable(P) Non-Potable(NP) Ag Water(AgW)																			
				Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)																			
				Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)																			
				Subcontract-Dioxin, 2,3,7,8 - TCDD 1000ml(AGT)																			
Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling	Type of Sample	Potable(P)	Non-Potable(NP)	Ag Water(AgW)	Bacti Type	Bacti Reason	Subcontract-Dioxin, 2,3,7,8 - TCDD	1000ml(AGT)											
1	Lagoon	7/14/11	1400	G	WW							2											
Remarks:				Relinquished		Date:		Time:		Relinquished		Date:		Time:		Relinquished		Date:		Time:			
				<u>D</u>		7/25/11		1700															
				Received By:		Date:		Time:		Received By:		Date:		Time:		Received By:		Date:		Time:			
				<u>QATrac</u>		7/25/11		1700		<u>BA</u>		7-26-11		8:50									

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08/10/2011

**Corporate Offices & Laboratory**  
853 Corporation Street  
Santa Paula, CA 93060  
TEL: 805/392-2000  
FAX: 805/525-4172

**Office & Laboratory**  
2500 Stagecoach Road  
Stockton, CA 95215  
TEL: 209/942-0182  
FAX: 209/942-0423

**Office & Laboratory**  
583 E. Lindo Avenue  
Chico, CA 95926  
TEL: 530/343-5818  
FAX: 530/343-5807

**Office & Laboratory**  
3442 Empress Drive, Suite D  
San Luis Obispo, CA 93401  
TEL: 805/783-2940  
FAX: 805/525-4172

**Field Office**  
Visalia, California  
TEL: 559/734-9473  
Mobile: 559/737-2399  
FAX: 559/734-8435



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## LOT RECEIPT CHECKLIST TestAmerica West Sacramento

30647-18 7-26-11

CLIENT FCL PM JS LOG# 71869

LOT# (QUANTIMS ID) G1G260439 QUOTE# 30647 LOCATION W13D

DATE RECEIVED 7-26-11 TIME RECEIVED 8:00 Checked

DELIVERED BY  FEDEX  ON TRAC  OTHER

GOLDENSTATE  UPS  EZ PARCEL

TAL COURIER  TAL SF  CLIENT

SHIPPING CONTAINER(S)  TAL  CLIENT  N/A

CUSTODY SEAL STATUS  INTACT  BROKEN  N/A

CUSTODY SEAL #(S) NA

COC #(S) NA

TEMPERATURE BLANK Observed: NA Corrected: NA

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 5.5 Average 5 Corrected Average 5

LABORATORY THERMOMETER ID:

IR UNIT: #4  #5  OTHER

Bj 7-26-11  
Initials Date

pH MEASURED  YES  ANOMALY  N/A

LABELLED BY.....

LABELS CHECKED BY.....

PEER REVIEW  NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING

WETCHEM  N/A

VOA-ENCORES  N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL  N/A

COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES  N/A

CLOUSEAU  TEMPERATURE EXCEEDED (2 °C - 6 °C)\*  N/A

WET ICE  BLUE ICE  GEL PACK  NO COOLING AGENTS USED  PM NOTIFIED

AK 7-26-11  
Initials Date

Notes \_\_\_\_\_

\*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

15

Lot ID: G16 260439

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
AGB	2																			
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
___AGJ																				
500AGJ																				
250AGJ																				
125AGJ																				
___CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
___CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				

h = hydrochloric acid    s = sulfuric acid    na = sodium hydroxide    n = nitric acid    zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

15



August 11, 2011

South San Joaquin Irrigation District  
P.O. Box 747  
Ripon, CA. 95366

**Subject: Subcontract Analysis for FGL Lab No. STK1136467**

Enclosed please find results for the following sample(s) which were received by FGL.

- Subcontract-Asbestos-Waste Water

Please note that this analysis was performed by EMS Laboratories, Inc. (ELAP Certified Laboratory)

Thank you for using FGL Environmental.

Sincerely,

**Cindy Aguirre**  Digitally signed by Cindy Aguirre  
Title: Customer Service Rep  
Date: 2011-09-11

Enclosure

DATE: August 5, 2011  
CUSTOMER: FGL Environmental  
853 Corporation Street  
Santa Paula, CA 93060-3005  
ATTENTION: Cindy Aguirre  
REPORT NO: 146228  
REFERENCE: 1136467 - (3-16829)  
SUBJECT: ANALYSIS OF WATER SAMPLES FOR ASBESTOS BY TEM  
ACCREDITATION: California Dept. of Health Services ELAP 1119

The sample was prepared and analyzed according to EPA 600 94 134, 100.1.

The date and times of collection, UV-Ozone Treatment, filtration and analysis are as follows:

SAMPLE NO: I-LAGOON  
DATE COLLECTED: July 14, 2011 at 1400  
RECEIVED: July 25, 2011 at 1025  
UV-Ozone Treatment: July 26, 2011 1305 - 1705  
FILTERED: July 26, 2011 at 1721  
DATE ANALYZED: July 28, 2011

The results of the analysis and the detection limit(s) are summarized on the following page(s), accompanied by the chain of custody.

Respectfully submitted,  
EMS Laboratories, Inc.



B.M. Kolk  
Laboratory Director  
BMK/am

*Note: The report shall not be reproduced, except in full without the written approval of EMS Laboratories, Inc.*

*Note: The results of the analysis are based upon the sample submitted to the laboratory. No representation is made regarding the sampling area other than that implied by the analytical results for the immediate vicinity of the samples analyzed as calculated from the data presented with those samples. All the analytical quality control data meet the requirement of the procedure unless otherwise indicated. Any deviation or exclusion from the test method is noted in this cover letter. Unless otherwise noted in this cover letter the samples were received properly packaged, clearly identified and intact.*

ANALYSIS OF WATER BY TEM ( EPA-600/4-83-043 ) EPA 100.1

LAB NO: 146228  
 CLIENT: FGL Environmental Inc.  
 DATE: 7/28/2011

Laboratory I.D.	Client I.D.	FILTER MEDIA DATA			No. of G.O.	Analyzed Area, mm <sup>2</sup>	Sample Volume (ml)
		Type	Diameter mm	Effective Area mm <sup>2</sup>			
146228-1	1 Lagoon	PC	47	1017	20	0.188	1
7-26-11-BL	EMS BLANK	PC	47	1017	20	0.188	500

INDIVIDUAL ANALYTICAL RESULTS

Laboratory I.D.	Client I.D.	No of Asbestos Fib			Detection Limit (MFL)	CONCENTRATION ( MFL )		
		All sizes	Fib >5µm	Fib >10µm		Fib	Fib >5µm	Fib >10µm
146228-1	1 Lagoon	ND	ND	ND	5.4	< 5.4	< 5.4	< 5.4
7-26-11-BL	EMS BLANK	ND	ND	ND	0.01	< 0.01	< 0.01	< 0.01

The analysis was carried out to the approved TEM method. This laboratory is in compliance with the quality specified by the method.

  
 Authorized Signature

NA Not Applicable  
 ND None Detected  
 PC Polycarbonate Filter  
 GO Grid Openings  
 MFL Million Fibers per Liter  
 Fib Fibers

TEM-6A (2011 Rev)

# TEM ASBESTOS ANALYSIS

Client FCL ENV  
 Sample No. 1 LASOON

EMS Lab No. 146228  
 Page \_\_\_\_\_ of \_\_\_\_\_

RECEIVING

**TYPE OF SAMPLE**

Air  Water   
 Soil  Bulk   
 Other \_\_\_\_\_

**METHOD OF ANALYSIS**

EPA 600/4-83-043  ISO

**LEVEL OF ANALYSIS**

Chrysotile CD5Q  
 Amphibole ADQ

**ASPECT RATIO**

3:1  5:1

EPA/600/R-94/134 100.1  100.2

**LENGTHS**

All Sizes (EPA)   
 ( $\mu\text{m}$ )  $\geq 0.5$    
 $\geq 1.0$    
 $\geq 5.0$    
 $\geq 10.0$    
 PCM Range\*   
 \* $\geq 0.25 \mu\text{m}$  width  
 $\geq 5.0 \mu\text{m}$  length)

**FILTER TYPE / AREA (mm $\pm$ )**

MCE  385   
 PC  314   
 MCN  1017   
 Other \_\_\_\_\_

**PORE SIZE**

0.45  $\mu\text{m}$   0.8  $\mu\text{m}$    
 0.1  $\mu\text{m}$   0.22  $\mu\text{m}$    
 Other \_\_\_\_\_

G.O. Area (mm $^2$ ) 0.0 0.94  
 No. of G.O. to Analyze 20

**DIRECT PREP**

**INDIRECT PREP**

7-26-11  
VVOs 1305-1705  
SON 1705-1726  
REL 1721  
 Volume \_\_\_\_\_ liters  
 Working Volume 1 ml  
 Weight \_\_\_\_\_ grams  
 Ashed Area \_\_\_\_\_ %  
 Prepared By VKORUPAP  
 Date 7-28-11

PREP

ANALYSIS

**MICROSCOPE**

H600A - Serial No. 542-36-01   
 H600B - Serial No. 542-05-06   
 H600C - Serial No. 542-24-03

**ENERGY DISPERSIVE X-RAY SYSTEM**

KeveX - Model No. 3200-0106-0365   
 KeveX - Model No. 3600-0206-0146   
 Quantum System

Grid Address: A12  
 Screen Magnification: 79400 X  
 Camera Constant: 40.2  
 Accelerating Voltage: 100KV  
 Beam Current: 10  $\mu\text{A}$   
 K-Factor: 1.5  
 Analyst VKORUPAP Date 7-28-11

Grid Opening	Structure Number	Structure	Dimensions (mm)		Fiber Classification												EDS Analysis					Comments		
			Width	Length	NAM	TM	CM	CD	CQ	CMQ	CDQ	UF	AD	AX	ADX	AQ	ADQ	AZQ	AZZ	Na	Mg		Si	Ca
A	33	NSD																						
	33	USD																						
	41	USD																						
	54	USD																						
	61	NSD																						
	33	USD																						
	61	NSD																						
B	43	NSD																						
	43	USD																						
	44	USD																						
	44	USD																						
	64	NSD																						
	64	USD																						
	63	USD																						

**OBSERVATIONS:**

Clean  Debris:  Very Light  Light  Moderate  Heavy  Very Heavy   
 Gypsum:  Very Light  Light  Moderate  Heavy  Very Heavy   
 Condition of the Grid:  Good  Scruppy  Undissolved Filter  Folded

TEM - 1A (1-06)

Page 3 OF 6

# TEM ASBESTOS ANALYSIS

Client FGL ENV  
 Sample No. Lagoon

EMS Lab No. 141228  
 Page \_\_\_\_\_ of \_\_\_\_\_

RECEIVING

ANALYSIS

**MICROSCOPE**

- H600A - Serial No. 542-36-01
- H600B - Serial No. 542-05-06
- H600C - Serial No. 542-24-03

**ENERGY DISPERSIVE X-RAY SYSTEM**

- KeveX - Model No. 3200-0106-0365
- KeveX - Model No. 3600-0206-0146
- Quantum System

Grid Address: C  
 Screen Magnification: 19400X  
 Camera Constant: 30.2  
 Accelerating Voltage: 100KV  
 Beam Current: 10.  $\mu$ A  
 K-Factor: 1.5  
 Analyst CKM

Date 7-28-11

Grid Opening	Structure Number	Structure	Dimensions (mm)		Fiber Classification												EDS Analysis					Comments		
			Width	Length	NAM	TM	CM	CD	CQ	CMQ	CDQ	UF	AD	AX	ADX	AQ	ADQ	AZQ	AZZ	Na	Mg		Si	Ca
<u>416</u>	<u>USD</u>																							
<u>416</u>	<u>USD</u>																							
<u>332</u>	<u>NSD</u>																							
<u>640</u>	<u>NSD</u>																							
<u>422</u>	<u>USD</u>																							
<u>351</u>	<u>NSD</u>																							

**OBSERVATIONS:**

- Clean   
 Debris:  Very Light  Light  Moderate  Heavy  Very Heavy   
 Gypsum:  Very Light  Light  Moderate  Heavy  Very Heavy   
 Condition of the Grid:  Good  Scrapy  Undissolved Filter  Folded

# TEM ASBESTOS ANALYSIS

Client EMS BLANK EMS Lab No. \_\_\_\_\_  
 Sample No. 7-26-11 Page \_\_\_\_\_ of \_\_\_\_\_

RECEIVING

**TYPE OF SAMPLE**

Air  Water   
 Soil  Bulk   
 Other \_\_\_\_\_

**LENGTHS**

All Sizes (EPA)   
 ( $\mu\text{m}$ )  $\geq 0.5$    
 $\geq 1.0$    
 $\geq 5.0$    
 $\geq 10.0$    
 PCM Range\*   
 \* $\geq 0.25 \mu\text{m}$  width  
 $\geq 5.0 \mu\text{m}$  length)

**FILTER TYPE / AREA (mm $\pm$ )**

MCE  385   
 PC  314   
 MCN  1017   
 Other \_\_\_\_\_

DIRECT PREP   
 INDIRECT PREP

**MICROSCOPE**

H600A - Serial No. 542-36-01   
 H600B - Serial No. 542-05-06   
 H600C - Serial No. 542-24-03

**ENERGY DISPERSIVE X-RAY SYSTEM**

KeveX - Model No. 3200-0106-0365   
 KeveX - Model No. 3600-0206-0146   
 Quantum System

**METHOD OF ANALYSIS**  
 EPA 600/4-83-043  ISO

**LEVEL OF ANALYSIS**  
 Chrysotile cdcb2  
 Amphibole amo

**ASPECT RATIO**  
 3:1  5:1

EPA/600/R-94/134 100.1  100.2

G.O. Area (mm $^2$ ) 0.0 0.94  
 No. of G.O. to Analyze 10

PREP

Volume \_\_\_\_\_ liters  
 Working Volume 500 ml  
 Weight \_\_\_\_\_ grams  
 Ashed Area \_\_\_\_\_ %

Prepared By LEWIS  
 Date 7-28-11

ANALYSIS

Grid Address: A  
 Screen Magnification: 19400 X  
 Camera Constant: 30.2  
 Accelerating Voltage: 100KV  
 Beam Current: 10  $\mu\text{A}$   
 K-Factor: 1.5  
 Analyst LEWIS Date 7-29-11

Grid Opening	Structure Number	Structure	Dimensions (mm)		Fiber Classification													EDS Analysis					Comments			
			Width	Length	NAM	TM	CM	CD	CQ	CMQ	CDQ	UF	AD	AX	ADX	AQ	ADQ	AZQ	AZZ	Na	Mg	Si		Ca	Fe	
B37	NSD																									
B36	NSD																									
C33	NSD																									
C36	NSD																									
E33	NSD																									
E36	NSD																									
F33	NSD																									
F36	NSD																									
G44	NSD																									
H41	NSD																									

**OBSERVATIONS:**

Clean   
 Debris:  Very Light  Light  Moderate  Heavy  Very Heavy   
 Gypsum:  Very Light  Light  Moderate  Heavy  Very Heavy   
 Condition of the Grid:  Good  Scrappy  Undissolved Filter  Folded

# TEM ASBESTOS ANALYSIS

Client EMS Labs  
 Sample No. blank

EMS Lab No. 726-1  
 Page \_\_\_\_\_ of \_\_\_\_\_

RECEIVING

ANALYSIS

**MICROSCOPE**

- H600A - Serial No. 542-36-01
- H600B - Serial No. 542-05-06
- H600C - Serial No. 542-24-03

**ENERGY DISPERSIVE X-RAY SYSTEM**

- KeveX - Model No. 3200-0106-0365
- KeveX - Model No. 3600-0206-0146
- Quantum System

Grid Address: B  
 Screen Magnification: 1940x  
 Camera Constant: 30.2  
 Accelerating Voltage: 100KV  
 Beam Current: 10  $\mu$ A  
 K-Factor: 1.5  
 Analyst: L. Comy Date: 7-29-11

Grid Opening	Structure Number	Structure	Dimensions (mm)		Fiber Classification													EDS Analysis					Comments				
			Width	Length	NAM	TM	CM	CD	CQ	CMQ	CDQ	UF	AD	AX	ADX	AQ	ADQ	AZQ	AZZ	Na	Mg	Si		Ca	Fe		
F20		N>D																									
F21		N>D																									
F22		N>D																									
F23		N>D																									
F24		N>D																									
F25		N>D																									
F26		N>D																									
F27		N>D																									
F28		N>D																									
F29		N>D																									
F30		N>D																									
F31		N>D																									
F32		N>D																									
F33		N>D																									
F34		N>D																									
F35		N>D																									
F36		N>D																									
F37		N>D																									
F38		N>D																									
F39		N>D																									
F40		N>D																									
F41		N>D																									
F42		N>D																									
F43		N>D																									
F44		N>D																									
F45		N>D																									

**OBSERVATIONS:**

- Clean   
 Debris:   
 Gypsum:   
 Condition of the Grid:
- Very Light   
 Very Light   
 Good
- Light   
 Light   
 Scrappy
- Moderate   
 Moderate   
 Undissolved Filter
- Heavy   
 Heavy   
 Folded
- Very Heavy   
 Very Heavy

EM - 1B (1-08)





August 15, 2011

South San Joaquin Irrigation District  
P.O. Box 747  
Ripon, CA. 95366

**Subject: Subcontract Analysis for FGL Lab No. STK1136467**

Enclosed please find results for the following sample(s) which were received by FGL.

- Sub Contracted-Mercury - Ultra Low-Level EPA 1631/1669 Use Clean Hands/Dirty Hands Collection method

Please note that this analysis was performed by Cal Test (NELAP Certified Laboratory)

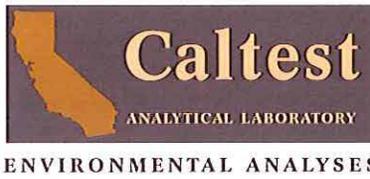
Thank you for using FGL Environmental.

Sincerely,

**Cindy Aguirre**

 Digitally signed by Cindy Aguirre  
Title: Customer Service Rep  
Date: 2011-08-15

Enclosure



Tuesday, August 09, 2011

Dawn Bravero  
 FGL Environmental  
 853 Corporation Street  
 Santa Paula, CA 93061

RE: Lab Order: L070867  
 Project ID: 1136467-(3-16829)

Collected By: CLIENT  
 PO/Contract #:

Dear Dawn Bravero:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, July 26, 2011. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

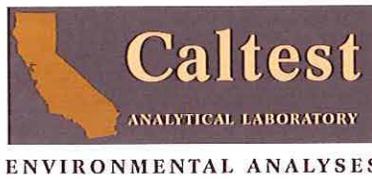
If you have any questions concerning this report, please feel free to contact me.

Enclosures



Project Manager: Sonya Alahyari



**SAMPLE SUMMARY**

Lab Order: L070867

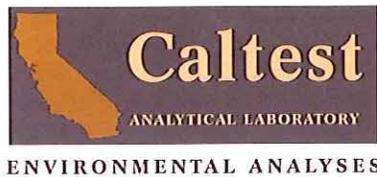
Project ID: 1136467-(3-16829)

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
L070867001	LAGOON	Water	7/14/2011 14:00	7/26/2011 07:59

---





## NARRATIVE

Lab Order: L070867

Project ID: 1136467-(3-16829)

---

### General Qualifiers and Notes

---

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

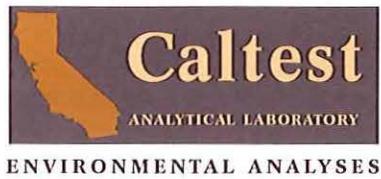
B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.





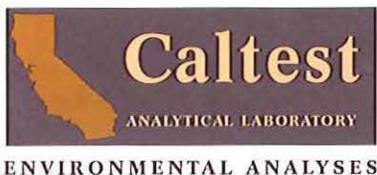
**ANALYTICAL RESULTS**

Lab Order: L070867

Project ID 1136467-(3-16829)

Lab ID: L070867001	Date Collected: 7/14/2011 14:00	Matrix: Water						
Sample ID: LAGOON	Date Received: 7/26/2011 07:59							
<b>Parameters</b>	<b>Result Units</b>	<b>R. L.</b>	<b>MDL</b>	<b>DF Prepared</b>	<b>Batch</b>	<b>Analyzed</b>	<b>Batch</b>	<b>Qual</b>
<b>Mercury Analysis, Trace Level</b>	<b>Prep Method: EPA 1631E</b>				<b>Prep by: UK</b>			
	<b>Analytical Method: EPA 1631E</b>					<b>Analyzed by: LM</b>		
Mercury	0.0047 ug/L	0.0005	0.00020	1	08/04/11 00:00	MPR 10119	08/05/11 00:00	MHG 3616





**QUALITY CONTROL DATA**

Lab Order: L070867

Project ID: 1136467-(3-16829)

<b>Analysis Description:</b> Mercury Analysis, Trace Level	<b>QC Batch:</b> MPR/10119
<b>Analysis Method:</b> EPA 1631E	<b>QC Batch Method:</b> EPA 1631E

METHOD BLANK: 403815

Parameter	Blank Result	Reporting Limit	MDL	Units	Qualifiers
Mercury	ND	0.0005	0.0002	ug/L	

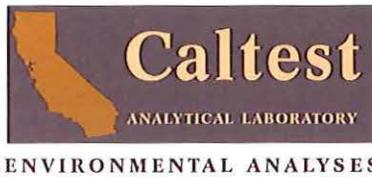
LABORATORY CONTROL SAMPLE: 403816

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.02	0.019	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 403818 403819

Parameter	Units	L070996001 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Mercury	ug/L	0.0014	0.02	0.021	0.021	99	98	80-120	0.4	24	



**QUALITY CONTROL DATA QUALIFIERS**

Lab Order: L070867

Project ID: 1136467-(3-16829)

**QUALITY CONTROL PARAMETER QUALIFIERS**

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

NS - means not spiked and will not have recoveries reported for Analyte Spike Amounts

NC - means not able to be calculated for RPD or Spike Recoveries.

QC Codes Keys: These descriptors are used to help identify the specific QC samples and clarify the report.

MB - Method Blank

Method Blanks are reported to the same Method Detection Limits (MDLs) or Reporting Limits (RLs) as the analytical samples in the corresponding QC batch.

LCS/LCSD - Laboratory Control Spike / Laboratory Control Spike Duplicate

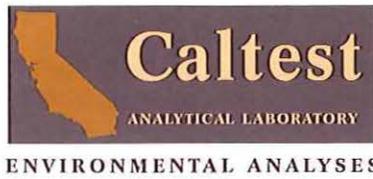
DUP - Duplicate of Original Sample Matrix

MS/MSD - Matrix Spike / Matrix Spike Duplicate

RPD - Relative Percent Difference

%Recovery - Spike Recovery stated as a percentage





**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Lab Order: L070867

Project ID: 1136467-(3-16829)

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
L070867001	LAGOON	EPA 1631E	MPR/10119	EPA 1631E	MHG/3616





Client: <b>Fruit Growers Laboratory, Inc.</b> Address: FGL Environmental, Inc. 853 Corporation St. Santa Paula, CA 93060-3005  Phone: (805)392-2039 Fax: (805)525-6264 Contact Person: Project Name: <i>1136467 - (3-16829)</i> Purchase Order Number: Quote Number: <b>ST 20110720-01</b>				34596:07/18/2011		TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information																			
				Method of Sampling: Composite(C) Grab(G)		**SEE REVERSE SIDE**		Potable(P) Non-Potable(NP) Ag Water(AgW)		Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)		Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL)		Other(O) Special(SPL)		Sub Contracted-Mercury - Ultra Low-Level EPA 1631/1669 Use Clean Hands/Dirty Hands Collection method 500ml(GT)-HCl *									
Sampler(s) <i>JR</i>  Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___																									
Lab Number:																									
Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling	Type of Sample	Potable	Bacti Type	Bacti Reason	Other	Special	Sub Contracted														
1	Lagoon	<i>07/14/11</i>	<i>1400</i>	G	WW						1														
												TEMP. (C): <u>3:1</u> SEALED: <u>✓</u> IN CASE: <u>✓</u>													
Remarks: <i>* Not preserved as stated. Preserved out of hold time on 7/27/11. OK to proceed w/analysis from client. DTR 7/28/11</i>				Relinquished		Date: <i>7/26/11</i>		Time: <i>1700</i>		Relinquished		Date: <i>7/26/11</i>		Time: <i>0759</i>											
				Received By: <i>DTR</i>		Date: <i>7/26/11</i>		Time: <i>1700</i>		Received By: <i>[Signature]</i>		Date: <i>7/26/11</i>		Time: <i>0759</i>											

### Corporate Offices & Laboratory

853 Corporation Street  
 Santa Paula, CA 93060  
 TEL: 805/392-2000  
 FAX: 805/525-4172

### Office & Laboratory

2500 Stagecoach Road  
 Stockton, CA 95215  
 TEL: 209/942-0182  
 FAX: 209/942-0423

### Office & Laboratory

563 E. Avenue  
 Chico, CA 95926  
 TEL: 530/343-5818  
 FAX: 530/343-3807

### Office & Laboratory

3442 Empresa Drive, Suite D  
 San Luis Obispo, CA 93401  
 TEL: 805/783-2940  
 FAX: 805/525-4172

### Field Office

Visalia, California  
 TEL: 559/734-9473  
 Mobile: 559/737-2399  
 FAX: 559/734-8435



				34596:07/18/2011				TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information																																											
Client: South San Joaquin Irrigation District Address: P.O. Box 747 Ripon, CA. 95366  Phone: (209)844-1510 Fax: Contact Person: Julie Jeleti Project Name: Neutralized Citric Waste Purchase Order Number: Quote Number: ST 20110720-01				Method of Sampling: Composite(C) Grab(G)  Type of Sample **SEE REVERSE SIDE** Potable(P) Non-Potable(NP) Ag Water(AgW) Bacti Type: Other(O) System(SYS) Source(SR) Waste(W) Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL) Metals, Total-Sb,As,Be,Cd,Cr,Cr(VI),Cu,Pb,Hg,Ni,Se,Ag,Ti,Zn Field Filter Cr (VI) 250ml(P)-HNO3, 40ml(VFS)-(NH4)2SO4,NH4OH Wet Chemistry-Cyanide 16oz(P)-NaOH EPA 624 40ml(VOA)-HCl EPA 625 1000ml(AGT) Subcontract-Asbestos-Waste Water 32oz(P) Subcontract-Dioxin, 2,3,7,8 - TCDD 1000ml(AGT) EPA 625 Pest 1000ml(AGT) Sub Contracted-Mercury - Ultra Low-Level EPA 1631/1669 Use Clean Hands/Dirty Hands Collection method 500ml(GT)-HCl				Sampler(s)  Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___/___ Lab Number: <b>STK 1136467</b> 3-16829				Samp Num				Location Description				Date Sampled		Time Sampled																													
Lagoon				07/25/11				1400				G				WW				1,1				1				2				1				Sub-1				Sub-2				1				Sub-1			
Remarks:				Relinquished				Date: 07/25/11				Time: 1115				Relinquished				Date: 7/25/11				Time: 1700				Relinquished				Date:				Time:															
Received By: [Signature]				Date: 7/25/11				Time: 1115				Received By: [Signature]				Date: 7/25/11				Time: 1700				Received By: [Signature]				Date: 7/25/11				Time: 0830																			

### Corporate Offices & Laboratory

853 Corporate Center  
Santa Paula, CA 91360  
TEL: 805/392-2000  
FAX: 805/525-4172

### Office & Laboratory

2500 Stagecoach Road  
Stockton, CA 95215  
TEL: 209/942-0182  
FAX: 209/942-0423

### Office & Laboratory

563 E. Avenue  
Chico, CA 95926  
TEL: 530/343-5818  
FAX: 530/343-3807

### Office & Laboratory

3442 Empresa Drive, Suite D  
San Luis Obispo, CA 93401  
TEL: 805/783-2940  
FAX: 805/525-4172

### Field Office

Visalia, California  
TEL: 559/734-9473  
Mobile: 559/737-2399  
FAX: 559/734-8435

### Stockton - Condition Upon Receipt (Attach to COC)

#### Sample Receipt at STK:

- Number of ice chests/packages received: 1
- Were samples received in a chilled condition? Temps: RRT / \_\_\_ / \_\_\_ / \_\_\_ / \_\_\_  
Acceptable is above freezing to 6° C. Also acceptable is received on ice (ROI) for the same day of sampling or received at room temperature (RRT) if sampled within one hour of receipt. Client contact for temperature failures must be documented below. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received..
- Do the number of bottles received agree with the COC?  Yes  No  N/A
- Were samples received intact? (i.e. no broken bottles, leaks etc.)  Yes  No
- VOAs checked for Headspace?  Yes  No  N/A
- Were sample custody seals intact?  Yes  No  N/A

Sign and date the COC. place in a ziplock and put in the same ice chest as the samples.

Sample Receipt Review completed by (initials): [Signature]

#### Sample Receipt at SP:

- Were samples received in a chilled condition? Temps: \_\_\_ / \_\_\_ / \_\_\_ / \_\_\_ / \_\_\_  
Acceptable is above freezing to 6° C. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received.
- Do the number of bottles received agree with the COC?  Yes  No  N/A
- Were samples received intact? (i.e. no broken bottles, leaks etc.)  Yes  No
- Were sample custody seals intact?  Yes  No  N/A

Sign and date the COC. obtain LIMS sample numbers, select methods/tests and print labels.

#### Sample Verification, Labeling and Distribution:

- Were all requested analyses understood and acceptable?  Yes  No
- Did bottle labels correspond with the client's ID's?  Yes  No
- Were all bottles requiring sample preservation properly preserved?  Yes  No  N/A FGL
- VOAs checked for Headspace?  Yes  No  N/A
- Were all analyses within holding times at time of receipt?  Yes  No
- Have rush or project due dates been checked and accepted?  Yes  No  N/A

Attach labels to the containers and include a copy of the COC for lab delivery. [Signature]

Sample Receipt, Login and Verification completed by (initials): [Signature]

#### Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

- Person Contacted: [Signature] Phone Number: [Signature]  
Initiated By: [Signature] Date: 7/25/11  
Problem: \_\_\_\_\_

Resolution: \_\_\_\_\_

(3-16829)  
South San Joaquin Irrigation Dis

STK1136467

SRP-07/26/2011-09:10:35

Atta

*If hold problem  
please go ahead  
as per... internal use only.*

**Appendix C-4**

**Samples collected on September 13, 2011**



October 7, 2011

**South San Joaquin Irrigation District**  
Attn: Julie Jeleti  
P.O. Box 747  
Ripon, CA. 95366

Lab ID : STK1138054  
Customer : 3-16829

**Laboratory Report**

**Introduction:** This report package contains total of 29 pages divided into 3 sections:

- Case Narrative (3 pages) : An overview of the work performed at FGL.
- Sample Results (5 pages) : Results for each sample submitted.
- Quality Control (21 pages) : Supporting Quality Control (QC) results.

**Case Narrative**

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Lagoon	09/13/2011	09/13/2011	STK1138054-001	WW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

**Inorganic - Metals QC**

200.7	09/21/2011:213904 All analysis quality controls are within established criteria.
	09/22/2011:213969 All analysis quality controls are within established criteria.
245.1	09/15/2011:213646 All analysis quality controls are within established criteria.
3010	09/21/2011:210428 All preparation quality controls are within established criteria.
3500CrD	09/28/2011:214265 All analysis quality controls are within established criteria.
7196A	09/28/2011:210752 All preparation quality controls are within established criteria.
7470	09/15/2011:210259 All preparation quality controls are within established criteria.

**Organic QC**

624	09/15/2011:213951 All analysis quality controls are within established criteria, except: The following note applies to Trichloroethylene (TCE): 360 CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.
	09/26/2011:214144 All analysis quality controls are within established criteria.
	09/15/2011:210435 All preparation quality controls are within established criteria, except: The following note applies to 1,2-Dichloropropane, 2-Chloroethylvinyl ether, Acetone, Bromodichloromethane, Trichloroethylene (TCE), Ethylbenzene, Tol: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to 1,1,2,2-Tetrachloroethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Acrolein, Acrylonitrile, Bromo: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
625	09/21/2011:214346 All analysis quality controls are within established criteria, except: The following note applies to 2,4-Dinitrotoluene, bis(2-Chloroethoxy)methane, 4-Nitrophenol, Butylbenzylphthalate, Hexachlorocyclopentadiene, Di-n-but: 360 CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.
	09/14/2011:210196 All preparation quality controls are within established criteria, except: The following note applies to : The following note applies to Isophorone, 2-Fluorobiphenyl, Butylbenzylphthalate, Benzidine, Hexachlorocyclopentadiene, Dimethylphthalate, Nitrobenzen: 436 Blank Spike (BS) not within Acceptance Range (AR). Data was accepted based on the LCS or CCV recovery. The following note applies to 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Fluorobiphenyl, 2-Fluorophenol,: 410 Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery. The following note applies to Benzidine, Hexachlorocyclopentadiene, Dimethylphthalate: 320 LCS not within Acceptance Range (AR). Data was accepted based on the BS/BSD recovery.
625P	09/23/2011:214148 All analysis quality controls are within established criteria.
	09/20/2011:210396 All preparation quality controls are within established criteria, except: The following note applies to Endrin, Tetrachloro-m-xylene, Heptachlor Epoxide, o,p - DDD, o,p - DDE, o,p - DDT: 436 Blank Spike (BS) not within Acceptance Range (AR). Data was accepted based on the LCS or CCV recovery. The following note applies to alpha-Chlordane, Aldrin, Delta BHC, Endrin, Endrin Aldehyde, Endrin Ketone, gamma-Chlordane, o,p - DDT, p,p'-DDE, Tetrac: 410 Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery.

**Inorganic - Wet Chemistry QC**

4500CNCE	09/26/2011:214030 All analysis quality controls are within established criteria.
9010B	09/23/2011:210566 All preparation quality controls are within established criteria.

October 7, 2011  
South San Joaquin Irrigation District

Lab ID : STK1138054  
Customer : 3-16829

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:CEA

Approved By Kelly A. Dunnahoo, B.S.



Digitally signed by Kelly A. Dunnahoo, B.S.  
Title: Laboratory Director  
Date: 2011-10-07



October 7, 2011

Lab ID : STK1138054-001

Customer ID : 3-16829

**South San Joaquin Irrigation District**

Attn: Julie Jeleti

P.O. Box 747

Ripon, CA. 95366

Sampled On : September 13, 2011-09:50

Sampled By : Julie Jeleti

Received On : September 13, 2011-14:45

Matrix : Waste Water

Description : Lagoon

Project : Neutralized Citric Waste

**Sample Result - Inorganic**

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>Metals, Total<sup>P:15</sup></b>								
Antimony	ND	0.01	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Arsenic	ND	0.01	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Beryllium	ND	0.005	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Cadmium	ND	0.005	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Chromium	0.01	0.01	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Chromium VI	ND	0.01	mg/L		7196A	09/28/11:210752	3500CrD	09/28/11:214265
Copper	0.04	0.01	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Lead	ND	0.01	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Mercury	ND	0.00002	mg/L		7470	09/15/11:210259	245.1	09/15/11:213646
Nickel	0.43	0.01	mg/L		3010	09/21/11:210428	200.7	09/22/11:213969
Selenium	0.01	0.01	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Silver	ND	0.01	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
Thallium	ND	0.01	mg/L		3010	09/21/11:210428	200.7	09/22/11:213969
Zinc	0.09	0.02	mg/L		3010	09/21/11:210428	200.7	09/21/11:213904
<b>Wet Chemistry<sup>P:110</sup></b>								
Cyanide, Total	ND	0.004	mg/L		9010B	09/23/11:210566	4500CNCE	09/26/11:214030

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (AGT) Amber Glass TFE-Cap, (P) Plastic, (VFS) VOA w/Filters+Syringes, (VOA) VOA Preservatives: NaOH, HNO3 pH < 2, (NH4)2SO4, NH4OH, HCl pH < 2 ‡Surrogate. \* PQL adjusted for dilution.



October 7, 2011

Lab ID : STK1138054-001

Customer ID : 3-16829

**South San Joaquin Irrigation District**

Attn: Julie Jeleti

P.O. Box 747

Ripon, CA. 95366

Sampled On : September 13, 2011-09:50

Sampled By : Julie Jeleti

Received On : September 13, 2011-14:45

Matrix : Waste Water

Description : Lagoon

Project : Neutralized Citric Waste

**Sample Result - Organic**

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>EPA 624<sup>VOA:13</sup></b>								
4-Bromofluorobenzene <sup>‡</sup>	122	85-144	%		624	09/15/11:210435	624	09/15/11:213951
Fluorobenzene <sup>‡</sup>	126	38-182	%		624	09/15/11:210435	624	09/15/11:213951
Pentafluorobenzene <sup>‡</sup>	81.7	36-180	%		624	09/15/11:210435	624	09/15/11:213951
Acetone	31000	5000*	ug/L		624	09/15/11:210435	624	09/26/11:214144
Acrolein	ND	5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Acrylonitrile	ND	2	ug/L		624	09/15/11:210435	624	09/15/11:213951
Benzene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Bromodichloromethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Bromoform	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Bromomethane	ND	1	ug/L		624	09/15/11:210435	624	09/15/11:213951
2-Butanone (MEK)	ND	40	ug/L		624	09/15/11:210435	624	09/15/11:213951
Carbon Disulfide	ND	5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Carbon Tetrachloride	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Chlorobenzene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Chloroethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
2-Chloroethylvinyl ether	ND	10	ug/L		624	09/15/11:210435	624	09/15/11:213951
Chloroform	1.5	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Chloromethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Dibromochloromethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,2-Dichlorobenzene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,3-Dichlorobenzene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,4-Dichlorobenzene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,1-Dichloroethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,2-Dichloroethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,1-Dichloroethylene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
trans-1,2-Dichloroethylene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,2-Dichloropropane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
cis-1,3-Dichloropropene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
trans-1,3-Dichloropropene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Ethyl Benzene	1.3	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
2-Hexanone	ND	30	ug/L		624	09/15/11:210435	624	09/15/11:213951
4-Methyl-2-pentanone (MIBK)	ND	30	ug/L		624	09/15/11:210435	624	09/15/11:213951
Methylene Chloride	ND	2	ug/L		624	09/15/11:210435	624	09/15/11:213951
Methyl tert-Butyl Ether (MTBE)	ND	5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Styrene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951

October 7, 2011  
 Description : Lagoon

Lab ID : STK1138054-001  
 Customer ID : 3-16829

Sample Result - Organic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>EPA 624<sup>VOA:13</sup></b>								
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Tetrachloroethylene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Toluene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,1,1-Trichloroethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
1,1,2-Trichloroethane	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Trichloroethylene	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Trichlorofluoromethane	ND	2	ug/L		624	09/15/11:210435	624	09/15/11:213951
Vinyl Acetate	ND	100	ug/L		624	09/15/11:210435	624	09/15/11:213951
Vinyl Chloride	ND	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Xylenes m,p	9	1	ug/L		624	09/15/11:210435	624	09/15/11:213951
Xylenes o	3.2	0.5	ug/L		624	09/15/11:210435	624	09/15/11:213951
Xylenes	12	1	ug/L		624	09/15/11:210435	624	09/15/11:213951
<b>EPA 625<sup>AGF:1</sup></b>								
2-Fluorobiphenyl <sup>‡</sup>	51.6	11-119	%		625	09/14/11:210196	625	09/21/11:214346
2-Fluorophenol <sup>‡</sup>	26.3	13-124	%		625	09/14/11:210196	625	09/21/11:214346
Nitrobenzene-d5 <sup>‡</sup>	54.9	15-102	%		625	09/14/11:210196	625	09/21/11:214346
Phenol-d6 <sup>‡</sup>	46.6	5-116	%		625	09/14/11:210196	625	09/21/11:214346
p-Terphenyl-d14 <sup>‡</sup>	31.0	16-122	%		625	09/14/11:210196	625	09/21/11:214346
2,4,6-Tribromophenol <sup>‡</sup>	61.1	13-153	%		625	09/14/11:210196	625	09/21/11:214346
Acenaphthene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Acenaphthylene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Anthracene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Benzidine	ND	10	ug/L		625	09/14/11:210196	625	09/21/11:214346
Benzo(a)anthracene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Benzo(b)fluoranthene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Benzo(k)fluoranthene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Benzo(g,h,i)perylene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Benzo(a)pyrene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
4-Bromophenylphenylether	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Butylbenzylphthalate	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
bis(2-Chloroethoxy)methane	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
bis(2-Chloroethyl)ether	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
bis(2-Chloroisopropyl)ether	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
bis(2-Ethylhexyl)phthalate	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
4-Chloro-3-methylphenol	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
2-Chloronaphthalene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
2-Chlorophenol	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
4-Chlorophenylphenylether	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346

October 7, 2011  
 Description : Lagoon

Lab ID : STK1138054-001  
 Customer ID : 3-16829

Sample Result - Organic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
EPA 625 <sup>AG1:1</sup>								
Chrysene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Dibenzo(a,h)anthracene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Di-n-butylphthalate	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
1,2-Dichlorobenzene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
1,3-Dichlorobenzene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
1,4-Dichlorobenzene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
3,3'-Dichlorobenzidine	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
2,4-Dichlorophenol	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
Diethylphthalate	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
2,4-Dimethylphenol	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
Dimethylphthalate	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
4,6-Dinitro-2-methylphenol	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
2,4-Dinitrophenol	ND	5	ug/L		625	09/14/11:210196	625	09/21/11:214346
2,4-Dinitrotoluene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
2,6-Dinitrotoluene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Di-n-octylphthalate	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Fluoranthene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Fluorene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Hexachlorobenzene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Hexachlorobutadiene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Hexachlorocyclopentadiene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Hexachloroethane	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Indeno(1,2,3-c,d)pyrene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Isophorone	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Naphthalene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Nitrobenzene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
2-Nitrophenol	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
4-Nitrophenol	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
N-Nitrosodimethylamine	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
N-Nitrosodiphenylamine	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
N-Nitrosodi-n-propylamine	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Pentachlorophenol	ND	2	ug/L		625	09/14/11:210196	625	09/21/11:214346
Phenanthrene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Phenol	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Pyrene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
Pyridine	ND	10	ug/L		625	09/14/11:210196	625	09/21/11:214346
1,2,4-Trichlorobenzene	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
2,4,6-Trichlorophenol	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346

October 7, 2011  
Description : Lagoon

Lab ID : STK1138054-001  
Customer ID : 3-16829

**Sample Result - Organic**

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
EPA 625 <sup>AGT:1</sup> 1,2-Diphenylhydrazine	ND	1	ug/L		625	09/14/11:210196	625	09/21/11:214346
EPA 625 Pest <sup>AGT:1</sup>								
Aldrin	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Alpha BHC	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Beta BHC	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Delta BHC	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
alpha-Chlordane	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
gamma-Chlordane	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
p,p'-DDD	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
p,p'-DDE	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
p,p'-DDT	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Dieldrin	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Endosulfan I	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Endosulfan II	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Endosulfan Sulfate	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Endrin	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Endrin Aldehyde	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Endrin Ketone	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Heptachlor	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Heptachlor Epoxide	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Lindane	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Methoxychlor	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
o,p - DDD	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
o,p - DDE	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
o,p - DDT	ND	5	ng/L		625P	09/20/11:210396	625P	09/23/11:214148
Tetrachloro-m-xylene <sup>‡</sup>	20.0	20-150	%		625P	09/20/11:210396	625P	09/23/11:214148

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (AGT) Amber Glass TFE-Cap, (P) Plastic, (VFS) VOA w/Filters+Syringes, (VOA) VOA Preservatives: NaOH, HNO3 pH < 2, (NH4)2SO4, NH4OH, HCl pH < 2 ‡Surrogate. \* PQL adjusted for dilution.



October 7, 2011  
South San Joaquin Irrigation District

Lab ID : STK1138054  
Customer : 3-16829

**Quality Control - Inorganic**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Antimony	200.7	09/21/11:213904AC	CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		0.0013	0.01	
			CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		-0.0006	0.01	
Arsenic	200.7	09/21/11:213904AC	CCV	ppm	1.000	99.6 %	90-110	
			CCB	ppm		0.0012	0.01	
			CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		-0.0005	0.01	
Beryllium	200.7	09/21/11:213904AC	CCV	ppm	1.004	99.3 %	90-110	
			CCB	ppm		-0.00003	0.005	
			CCV	ppm	1.004	101 %	90-110	
			CCB	ppm		-0.00004	0.005	
Cadmium	200.7	09/21/11:213904AC	CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		-0.00002	0.005	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		-0.00004	0.005	
Chromium	200.7	09/21/11:213904AC	CCV	ppm	1.000	100 %	90-110	
			CCB	ppm		0.0007	0.01	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0004	0.01	
Copper	200.7	09/21/11:213904AC	CCV	ppm	1.000	105 %	90-110	
			CCB	ppm		-0.0001	0.01	
			CCV	ppm	1.000	106 %	90-110	
			CCB	ppm		-0.0002	0.01	
Lead	200.7	09/21/11:213904AC	CCV	ppm	1.000	98.5 %	90-110	
			CCB	ppm		0.0003	0.01	
			CCV	ppm	1.000	101 %	90-110	
			CCB	ppm		0.0017	0.01	
Nickel	200.7	09/22/11:213969AC	CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0007	0.01	
			CCV	ppm	1.000	102 %	90-110	
			CCB	ppm		0.0004	0.01	
Selenium	200.7	09/21/11:213904AC	CCV	ppm	0.9995	100 %	90-110	
			CCB	ppm		0.0032	0.01	
			CCV	ppm	0.9995	101 %	90-110	
			CCB	ppm		0.0004	0.01	
Silver	200.7	09/21/11:213904AC	CCV	ppm	0.9985	101 %	90-110	
			CCB	ppm		-0.0002	0.01	
			CCV	ppm	0.9985	102 %	90-110	
			CCB	ppm		-0.0002	0.01	
Thallium	200.7	09/22/11:213969AC	CCV	ppm	0.9995	107 %	90-110	
			CCB	ppm		-0.0039	0.01	
			CCV	ppm	0.9995	107 %	90-110	
			CCB	ppm		0.0035	0.01	
Zinc	200.7	09/21/11:213904AC	CCV	ppm	1.000	98.1 %	90-110	
			CCB	ppm		-0.0006	0.02	
			CCV	ppm	1.000	98.3 %	90-110	
			CCB	ppm		0.0002	0.02	
Mercury	245.1	09/15/11:213646AC	ICV	ppt	200.0	91.3 %	90-110	
			ICB	ppt		8.3	20	
			CCV	ppt	199.8	96.5 %	90-110	
			CCB	ppt		8.0	20	
Antimony	3010	09/21/11:210428ac	Blank	mg/L		ND	<0.01	
			LCS	mg/L	0.5000	99.8 %	85-115	
			MS	mg/L	0.5000	96.6 %	75-125	

October 7, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1138054  
 Customer : 3-16829

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Metals</b>								
Antimony	3010	(CH 1175422-003)	MSD MSRPD PDS	mg/L mg/L mg/L	0.5000 0.7988 0.5000	97.3 % 0.6% 98.7 %	75-125 ≤20.0 75-125	
Arsenic	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.8000 0.8000 0.8000 0.7988 0.8000	ND 103 % 105 % 103 % 1.5% 103 %	<0.01 85-115 75-125 75-125 ≤20 75-125	
Beryllium	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.8028 0.8028 0.8028 0.7988 0.8028	ND 103 % 103 % 102 % 1.0% 102 %	<0.005 85-115 75-125 75-125 ≤20.0 75-125	
Cadmium	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.8000 0.8000 0.8000 0.7988 0.8000	0.000006 104 % 105 % 103 % 1.3% 103 %	0.005 85-115 75-125 75-125 ≤20 75-125	
Chromium	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.8000 0.8000 0.8000 0.7988 0.8000	ND 105 % 105 % 103 % 1.6% 103 %	<0.01 85-115 75-125 75-125 ≤20 75-125	
Copper	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.8000 0.8000 0.8000 0.7988 0.8000	ND 110 % 111 % 110 % 1.2% 109 %	<0.01 85-115 75-125 75-125 ≤20.0 75-125	
Lead	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.8000 0.8000 0.8000 0.7988 0.8000	ND 103 % 102 % 100 % 2.2% 101 %	<0.01 85-115 75-125 75-125 ≤20.0 75-125	
Nickel	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.8000 0.8000 0.8000 0.7988 0.8000	ND 107 % 106 % 104 % 1.6% 105 %	<0.01 85-115 75-125 75-125 ≤20 75-125	
Selenium	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.7996 0.7996 0.7996 0.7988 0.7996	ND 104 % 104 % 103 % 1.0% 103 %	<0.01 80-120 75-125 75-125 ≤20 75-125	
Silver	3010	09/21/11:210428ac	Blank LCS MS	mg/L mg/L mg/L	 0.7988 0.7988	ND 104 % 105 %	<0.01 85-115 75-125	

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Silver	3010	(CH 1175422-003)	MSD MSRPD PDS	mg/L mg/L mg/L	0.7988 0.7988 0.7988	104 % 1.2 % 104 %	75-125 ≤20.0 75-125	
Thallium	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 0.7996 0.7996 0.7996 0.7988 0.7996	 106 % 103 % 102 % 1.0 % 102 %	<0.01 85-115 75-125 75-125 ≤20.0 75-125	
Zinc	3010	09/21/11:210428ac  (CH 1175422-003)	Blank LCS MS MSD MSRPD PDS	mg/L mg/L mg/L mg/L mg/L mg/L	 2.000 2.000 2.000 0.7988 2.000	 102 % 101 % 99.6 % 1.6 % 100 %	<0.02 85-115 75-125 75-125 ≤20.0 75-125	
Chromium VI	3500CrD	09/28/11:214265SBL	CCV CCB CCV CCB	mg/L mg/L mg/L mg/L	0.1000  0.1000  	99.5 % -0.00043 102 % -0.00092	90-110 0.005 90-110 0.005	
	7196A	09/28/11:210752SBL  (STK1138054-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	 0.1000 0.1000 0.1000 0.1000	 ND 100 % 86.4 % 81.0 % 6.0 %	<0.01 85-115 75-125 75-125 ≤20	
Mercury	7470	09/15/11:210259ac  (CC 1182237-002)	Blank LCS MS MSD MSRPD	ug/L ug/L ug/L ug/L ug/L	 0.1998 0.1998 0.1998 0.1998	 ND 94.9 % 93.2 % 88.8 % 3.9 %	<0.02 85-115 75-125 75-125 ≤20	
Wet Chem								
Cyanide	4500CNCE	09/26/11:214030AMM	CCV CCB CCV CCB	mg/L mg/L mg/L mg/L	0.1000  0.1000  	92.2 % -0.00046 92.5 % -0.00046	90-110 0.004 90-110 0.004	
Cyanide, Total	9010B	09/23/11:210566AMM  (CC 1182284-001)	Blank LCS LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L	 0.1000 0.4000 0.05000 0.05000 0.05000	 ND 92.5 % 107 % 128 % 121 % 5.0 %	<0.004 90-110 90-110 5-223 5-223 ≤10.0	

Definition

- ICV : Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
- ICB : Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
- CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
- CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
- Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
- LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
- MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
- MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
- MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
- ND : Non-detect - Result was below the DQO listed for the analyte.

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Lab ID : STK1138054  
Customer : 3-16829

### Quality Control - Inorganic

<b>Definition</b> DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.
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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	101 %	53-155	
1,1,1-Trichloroethane(TCA)	624	09/15/11:210435VRG (SP 1109148-002)	MSD	ug/L	10.00	92.1 %	53-155	
			MSRPD	ug/L	10.00	9.0%	≤12.9	
1,1,2,2-Tetrachloroethane	624	09/15/11:213951VRG (SP 1109148-002)	CCV	ug/L	10.00	89.3 %	75-125	
			Blank	ug/L	10.00	ND	<0.5	
1,1,2-Trichloroethane	624	09/15/11:210435VRG (SP 1109148-002)	MS	ug/L	10.00	91.3 %	74-123	
			MSD	ug/L	10.00	97.6 %	74-123	
1,1-Dichloroethane	624	09/15/11:213951VRG (SP 1109148-002)	MSRPD	ug/L	10.00	6.8%	≤12.1	
			CCV	ug/L	10.00	88.7 %	71-129	
1,1-Dichloroethylene	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L	10.00	ND	<0.5	
			MS	ug/L	10.00	101 %	5-238	
1,2-Dichlorobenzene	624	09/15/11:210435VRG (SP 1109148-002)	MSD	ug/L	10.00	96.3 %	5-238	
			MSRPD	ug/L	10.00	4.3%	≤15.4	
1,2-Dichloroethane (EDC)	624	09/15/11:213951VRG (SP 1109148-002)	CCV	ug/L	10.00	85.9 %	51-150	
			Blank	ug/L	10.00	ND	<0.5	
1,2-Dichloropropane	624	09/15/11:210435VRG (SP 1109148-002)	MS	ug/L	10.00	109 %	69-132	
			MSD	ug/L	10.00	87.7 %	69-132	
1,3-Dichlorobenzene	624	09/15/11:213951VRG (SP 1109148-002)	MSRPD	ug/L	10.00	22.0%	≤9.87	435
			CCV	ug/L	10.00	115 %	63-137	
1,4-Dichlorobenzene	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L	10.00	ND	<0.5	
			MS	ug/L	10.00	92.6 %	55-157	
2-Butanone (MEK)	624	09/15/11:210435VRG (SP 1109148-002)	MSD	ug/L	10.00	95.4 %	55-157	
			MSRPD	ug/L	10.00	3.0%	≤10.1	
1,3-Dichlorobenzene	624	09/15/11:210435VRG (SP 1109148-002)	CCV	ug/L	10.00	85.7 %	68-132	
			Blank	ug/L	10.00	ND	<0.5	
1,4-Dichlorobenzene	624	09/15/11:213951VRG (SP 1109148-002)	MS	ug/L	10.00	164 %	74-123	435
			MSD	ug/L	10.00	154 %	74-123	435
2-Butanone (MEK)	624	09/15/11:213951VRG (SP 1109148-002)	MSRPD	ug/L	10.00	6.5%	≤9.24	
			CCV	ug/L	10.00	146 %	34-166	
2-Butanone (MEK)	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L	10.00	ND	<0.5	
			MS	ug/L	10.00	112 %	67-131	
2-Butanone (MEK)	624	09/15/11:210435VRG (SP 1109148-002)	MSD	ug/L	10.00	84.7 %	67-131	
			MSRPD	ug/L	10.00	27.9%	≤12.7	435
2-Butanone (MEK)	624	09/15/11:213951VRG (SP 1109148-002)	CCV	ug/L	10.00	118 %	73-127	
			Blank	ug/L	10.00	ND	<0.5	
2-Butanone (MEK)	624	09/15/11:210435VRG (SP 1109148-002)	MS	ug/L	40.00	114 %	68-130	
			MSD	ug/L	40.00	89.3 %	68-130	
2-Butanone (MEK)	624	09/15/11:213951VRG (SP 1109148-002)	MSRPD	ug/L	10.00	24.2%	≤11.8	435
			CCV	ug/L	10.00	120 %	63-137	
2-Butanone (MEK)	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L	40.00	ND	<40	
			MS	ug/L	40.00	63.5 %	49-171	
2-Butanone (MEK)	624	09/15/11:210435VRG (SP 1109148-002)	MSD	ug/L	40.00	88.5 %	49-171	
			MSRPD	ug/L	10.00	10	≤40	
2-Butanone (MEK)	624	09/15/11:213951VRG (SP 1109148-002)	CCV	ug/L	40.00	67.3 %	50-150	

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Lab ID : STK1138054  
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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic 2-Chloroethylvinyl ether	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<10	
			MS	ug/L	40.00	27.4 %	42-158	435
			MSD	ug/L	40.00	25.4 %	42-158	435
	624	09/15/11:213951VRG	MSRPD	ug/L	10.00	0.79	≤10	
	624	09/15/11:213951VRG	CCV	ug/L	40.00	101 %	0-224	
2-Hexanone	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<30	
			MS	ug/L	40.00	49.2 %	49-160	
			MSD	ug/L	40.00	65.5 %	49-160	
	624	09/15/11:213951VRG	MSRPD	ug/L	10.00	6.5	≤30	
	624	09/15/11:213951VRG	CCV	ug/L	40.00	64.1 %	50-150	
4-Bromofluorobenzene	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L	10.00	136 %	85-144	
			Surr	ug/L	10.00	136 %	85-144	
			MS	ug/L	10.00	109 %	70-130	
			Surr	ug/L	10.00	109 %	85-144	
			MSD	ug/L	10.00	90.7 %	70-130	
			MSRPD	ug/L	10.00	17.9%	≤30.0	
			Surr	ug/L	10.00	90.7 %	85-144	
			Surr	ug/L	10.00	95.9 %	85-144	
			Surr	ug/L	10.00	122 %	85-144	
			Surr	ug/L	10.00	121 %	85-144	
			Surr	ug/L	10.00	141 %	85-144	
			Surr	ug/L	10.00	139 %	85-144	
			Surr	ug/L	10.00	115 %	85-144	
			Surr	ug/L	10.00	134 %	85-144	
			Surr	ug/L	10.00	133 %	85-144	
Surr	ug/L	10.00	133 %	85-144				
Surr	ug/L	10.00	135 %	85-144				
Surr	ug/L	10.00	123 %	85-144				
	624	09/15/11:213951VRG	CCV	ug/L	10.00	114 %	70-130	
4-Methyl-2-pentanone (MIBK)	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<30	
			MS	ug/L	40.00	59.5 %	57-151	
			MSD	ug/L	40.00	79.0 %	57-151	
	624	09/15/11:213951VRG	MSRPD	ug/L	10.00	7.8	≤30	
	624	09/15/11:213951VRG	CCV	ug/L	40.00	74.5 %	50-150	
Acetone	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<25	
			MS	ug/L	40.00	-5.0 %	6-241	435
			MSD	ug/L	40.00	25.9 %	6-241	
	624	09/15/11:213951VRG	MSRPD	ug/L	10.00	12	≤25	
	624	09/26/11:214144VRG	CCV	ug/L	40.00	52.3 %	50-150	
Acrolein	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<5	
			MS	ug/L	200.0	33.0 %	5-214	
			MSD	ug/L	200.0	40.1 %	5-214	
	624	09/15/11:213951VRG	MSRPD	ug/L	10.00	19.3%	≤10.0	435
	624	09/15/11:213951VRG	CCV	ug/L	200.0	37.1 %	5-150	
Acrylonitrile	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<2	
			MS	ug/L	200.0	79.0 %	19-206	
			MSD	ug/L	200.0	98.0 %	19-206	
	624	09/15/11:213951VRG	MSRPD	ug/L	10.00	21.5%	≤10.0	435
	624	09/15/11:213951VRG	CCV	ug/L	200.0	96.2 %	5-150	
Benzene	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	108 %	70-137	
			MSD	ug/L	10.00	103 %	70-137	
	624	09/15/11:213951VRG	MSRPD	ug/L	10.00	4.3%	≤12.4	
	624	09/15/11:213951VRG	CCV	ug/L	10.00	98.7 %	64-136	

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	164 %	69-128	435
Bromodichloromethane	624	09/15/11:210435VRG (SP 1109148-002)	MSD	ug/L	10.00	133 %	69-128	435
			MSRPD	ug/L	10.00	21.2%	≤10.0	435
			CCV	ug/L	10.00	128 %	65-135	
			Blank	ug/L		ND	<0.5	
Bromoform	624	09/15/11:210435VRG (SP 1109148-002)	MS	ug/L	10.00	103 %	65-140	
			MSD	ug/L	10.00	97.0 %	65-140	
			MSRPD	ug/L	10.00	6.2%	≤10.6	
			CCV	ug/L	10.00	103 %	71-129	
Bromomethane (Methyl Bromide)	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<1.0	
			MS	ug/L	10.00	94.7 %	5-256	
			MSD	ug/L	10.00	97.2 %	5-256	
			MSRPD	ug/L	10.00	2.6%	≤27.2	
Carbon Disulfide	624	09/15/11:213951VRG (SP 1109148-002)	CCV	ug/L	10.00	78.9 %	14-186	
			Blank	ug/L		ND	<5	
			MS	ug/L	40.00	79.1 %	18-201	
			MSD	ug/L	40.00	86.7 %	18-201	
Carbon Tetrachloride	624	09/15/11:210435VRG (SP 1109148-002)	MSRPD	ug/L	10.00	9.0%	≤10.0	
			CCV	ug/L	40.00	70.9 %	50-150	
			Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	99.2 %	42-166	
Chlorobenzene	624	09/15/11:210435VRG (SP 1109148-002)	MSD	ug/L	10.00	91.6 %	42-166	
			MSRPD	ug/L	10.00	7.9%	≤12.9	
			CCV	ug/L	10.00	88.5 %	73-127	
			Blank	ug/L		ND	<0.5	
Chloroethane (Ethyl Chloride)	624	09/15/11:210435VRG (SP 1109148-002)	MS	ug/L	10.00	115 %	60-122	
			MSD	ug/L	10.00	102 %	60-122	
			MSRPD	ug/L	10.00	12.1%	≤13.3	
			CCV	ug/L	10.00	105 %	66-134	
Chloroform	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	91.5 %	65-145	
			MSD	ug/L	10.00	87.4 %	65-145	
			MSRPD	ug/L	10.00	2.5%	≤10.7	
Chloromethane(Methyl Chloride)	624	09/15/11:213951VRG (SP 1109148-002)	CCV	ug/L	10.00	82.0 %	67-133	
			Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	122 %	32-189	
			MSD	ug/L	10.00	118 %	32-189	
cis-1,3-Dichloropropene	624	09/15/11:210435VRG (SP 1109148-002)	MSRPD	ug/L	10.00	3.0%	≤30.1	
			CCV	ug/L	10.00	87.5 %	0-204	
			Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	98.6 %	77-115	
Dibromochloromethane	624	09/15/11:210435VRG (SP 1109148-002)	MSD	ug/L	10.00	94.2 %	77-115	
			MSRPD	ug/L	10.00	4.6%	≤10.3	
			CCV	ug/L	10.00	111 %	24-176	
			Blank	ug/L		ND	<0.5	
	624	09/15/11:210435VRG (SP 1109148-002)	MS	ug/L	10.00	94.0 %	62-126	
			MSD	ug/L	10.00	97.8 %	62-126	
			MSRPD	ug/L	10.00	3.7%	≤10.0	
			Blank	ug/L		ND	<0.5	

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Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Dibromochloromethane	624	09/15/11:213951VRG	CCV	ug/L	10.00	88.6 %	67-133	
Dichloromethane	624	09/15/11:210435VRG	Blank	ug/L		ND	<2	
		(SP 1109148-002)	MS	ug/L	10.00	92.0 %	5-315	
			MSD	ug/L	10.00	89.8 %	5-315	
			MSRPD	ug/L	10.00	0.22	≤2	
	624	09/15/11:213951VRG	CCV	ug/L	10.00	75.2 %	60-139	
Ethylbenzene	624	09/15/11:210435VRG	Blank	ug/L		ND	<0.5	
		(SP 1109148-002)	MS	ug/L	10.00	144 %	65-126	435
			MSD	ug/L	10.00	113 %	65-126	
			MSRPD	ug/L	10.00	24.3%	≤17.3	435
	624	09/15/11:213951VRG	CCV	ug/L	10.00	137 %	59-141	
Fluorobenzene	624	09/15/11:210435VRG	Blank	ug/L	10.00	116 %	38-182	
		(SP 1109148-002)	Surr	ug/L	10.00	116 %	38-182	
			MS	ug/L	10.00	128 %	70-130	
			Surr	ug/L	10.00	128 %	38-182	
			MSD	ug/L	10.00	126 %	70-130	
			MSRPD	ug/L	10.00	1.5%	≤30.0	
			Surr	ug/L	10.00	126 %	38-182	
			Surr	ug/L	10.00	121 %	38-182	
			Surr	ug/L	10.00	126 %	38-182	
			Surr	ug/L	10.00	122 %	38-182	
			Surr	ug/L	10.00	122 %	38-182	
			Surr	ug/L	10.00	122 %	38-182	
			Surr	ug/L	10.00	122 %	38-182	
			Surr	ug/L	10.00	122 %	38-182	
			Surr	ug/L	10.00	125 %	38-182	
			Surr	ug/L	10.00	121 %	38-182	
			Surr	ug/L	10.00	121 %	38-182	
			Surr	ug/L	10.00	127 %	38-182	
			Surr	ug/L	10.00	124 %	38-182	
	624	09/15/11:213951VRG	CCV	ug/L	10.00	126 %	70-130	
Freon-11	624	09/15/11:210435VRG	Blank	ug/L		ND	<2.0	
		(SP 1109148-002)	MS	ug/L	10.00	118 %	24-233	
			MSD	ug/L	10.00	114 %	24-233	
			MSRPD	ug/L	10.00	3.3%	≤15.7	
	624	09/15/11:213951VRG	CCV	ug/L	10.00	107 %	48-152	
Methyl tert-Butyl Ether (MTBE)	624	09/15/11:210435VRG	Blank	ug/L		ND	<5	
		(SP 1109148-002)	MS	ug/L	10.00	60.2 %	49-168	
			MSD	ug/L	10.00	72.2 %	49-168	
			MSRPD	ug/L	10.00	1.2	≤5	
	624	09/15/11:213951VRG	CCV	ug/L	10.00	72.8 %	50-150	
Pentafluorobenzene	624	09/15/11:210435VRG	Blank	ug/L	10.00	90.7 %	36-180	
		(SP 1109148-002)	Surr	ug/L	10.00	90.7 %	36-180	
			MS	ug/L	10.00	84.2 %	70-130	
			Surr	ug/L	10.00	84.2 %	36-180	
			MSD	ug/L	10.00	81.5 %	70-130	
			MSRPD	ug/L	10.00	3.3%	≤30.0	
			Surr	ug/L	10.00	81.5 %	36-180	
			Surr	ug/L	10.00	76.9 %	36-180	
			Surr	ug/L	10.00	81.7 %	36-180	
			Surr	ug/L	10.00	60.4 %	36-180	
			Surr	ug/L	10.00	84.1 %	36-180	
			Surr	ug/L	10.00	81.4 %	36-180	
			Surr	ug/L	10.00	68.8 %	36-180	
			Surr	ug/L	10.00	83.1 %	36-180	

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Organic Pentafluorobenzene	624	09/15/11:210435VRG	Surr	ug/L	10.00	64.4 %	36-180	
			Surr	ug/L	10.00	79.2 %	36-180	
			Surr	ug/L	10.00	80.4 %	36-180	
			Surr	ug/L	10.00	62.4 %	36-180	
	624	09/15/11:213951VRG	CCV	ug/L	10.00	84.6 %	70-130	
Styrene	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	128 %	65-134	
			MSD	ug/L	10.00	105 %	65-134	
	MSRPD	ug/L	10.00	19.9%	≤10.0	435		
624	09/15/11:213951VRG	CCV	ug/L	10.00	123 %	50-150		
Tetrachloroethylene (PCE)	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	118 %	65-124	
			MSD	ug/L	10.00	99.8 %	65-124	
	MSRPD	ug/L	10.00	17.1%	≤12.2	435		
624	09/15/11:213951VRG	CCV	ug/L	10.00	110 %	73-127		
Toluene	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	122 %	67-121	
			MSD	ug/L	10.00	109 %	67-121	
	MSRPD	ug/L	10.00	11.2%	≤11.6	435		
624	09/15/11:213951VRG	CCV	ug/L	10.00	112 %	74-126		
trans-1,2-Dichloroethylene	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	96.3 %	29-206	
			MSD	ug/L	10.00	93.5 %	29-206	
	MSRPD	ug/L	10.00	2.9%	≤22.6			
624	09/15/11:213951VRG	CCV	ug/L	10.00	84.3 %	69-131		
trans-1,3-Dichloropropene	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	97.9 %	72-120	
			MSD	ug/L	10.00	100 %	72-120	
	MSRPD	ug/L	10.00	2.4%	≤10.7			
624	09/15/11:213951VRG	CCV	ug/L	10.00	93.4 %	50-150		
Trichloroethylene (TCE)	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	145 %	63-136	435
			MSD	ug/L	10.00	138 %	63-136	435
	MSRPD	ug/L	10.00	5.1%	≤13.4			
624	09/15/11:213951VRG	CCV	ug/L	10.00	136 %	66-134	360	
Vinyl Acetate	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<100.	
			MS	ug/L	40.00	33.0 %	27-197	
			MSD	ug/L	40.00	41.7 %	27-197	
	MSRPD	ug/L	10.00	3.5	≤100.			
624	09/15/11:213951VRG	CCV	ug/L	40.00	33.8 %	10-150		
Vinyl Chloride	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	103 %	5-283	
			MSD	ug/L	10.00	98.7 %	5-283	
	MSRPD	ug/L	10.00	4.4%	≤15.6			
624	09/15/11:213951VRG	CCV	ug/L	10.00	76.0 %	4-196		
Xylenes m,p	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<1.0	
			MS	ug/L	20.00	134 %	62-137	
			MSD	ug/L	20.00	107 %	62-137	
	MSRPD	ug/L	10.00	22.3%	≤30.0			
624	09/15/11:213951VRG	CCV	ug/L	20.00	131 %	50-150		
Xylenes o	624	09/15/11:210435VRG (SP 1109148-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	109 %	65-130	
			MSD	ug/L	10.00	86.8 %	65-130	
	MSRPD	ug/L	10.00	22.8%	≤11.5	435		

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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Xylenes o	624	09/15/11:213951VRG	CCV	ug/L	10.00	103 %	50-150	
1,2,4-Trichlorobenzene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	65.6 %	11-123	
			BS	ug/L	10.00	64.6 %	11-123	
			BSD	ug/L	10.00	32.4 %	11-123	
	BSRPD	ug/L	10.00	3.2	≤1	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	111 %	80-120	
1,2-Dichlorobenzene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	65.4 %	14-114	
			BS	ug/L	10.00	63.4 %	14-114	
			BSD	ug/L	10.00	31.6 %	14-114	
	BSRPD	ug/L	10.00	3.2	≤1	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	110 %	80-120	
1,2-Diphenylhydrazine	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	76.2 %	20-151	
			BS	ug/L	10.00	73.9 %	20-151	
			BSD	ug/L	10.00	41.6 %	20-151	
	BSRPD	ug/L	10.00	55.8%	≤30.0	410		
1,3-Dichlorobenzene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	64.1 %	14-110	
			BS	ug/L	10.00	62.0 %	14-110	
			BSD	ug/L	10.00	30.3 %	14-110	
	BSRPD	ug/L	10.00	3.2	≤1	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	112 %	80-120	
1,4-Dichlorobenzene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	64.3 %	13-112	
			BS	ug/L	10.00	62.8 %	13-112	
			BSD	ug/L	10.00	30.5 %	13-112	
	BSRPD	ug/L	10.00	3.2	≤1	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	112 %	80-120	
2,4,6-Tribromophenol	625	09/14/11:210196VRG	Blank	ug/L	20.00	70.6 %	13-153	
			Surr	ug/L	20.00	70.6 %	13-153	
			LCS	ug/L	20.00	82.4 %	13-153	
			Surr	ug/L	20.00	82.4 %	13-153	
			BS	ug/L	20.00	80.0 %	20-144	
			Surr	ug/L	20.00	80.0 %	13-153	
			BSD	ug/L	20.00	44.3 %	20-144	
			BSRPD	ug/L	10.00	57.5%	≤20.0	410
			Surr	ug/L	20.00	44.3 %	13-153	
			Surr	ug/L	20.00	56.6 %	13-153	
			Surr	ug/L	20.00	80.6 %	13-153	
			Surr	ug/L	20.00	96.0 %	13-153	
			Surr	ug/L	20.00	85.6 %	13-153	
			Surr	ug/L	20.00	93.2 %	13-153	
			Surr	ug/L	20.00	61.1 %	13-153	
			Surr	ug/L	20.00	75.2 %	13-153	
	Surr	ug/L	20.00	86.1 %	13-153			
Surr	ug/L	20.00	47.6 %	13-153				
Surr	ug/L	20.00	63.3 %	13-153				
	625	09/21/11:214346VRG	CCV	mg/L	20.00	102 %	80-120	
2,4,6-Trichlorophenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	20.00	80.8 %	10-147	
			BS	ug/L	20.00	77.0 %	10-147	
			BSD	ug/L	20.00	41.7 %	10-147	

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Organic								
2,4,6-Trichlorophenol	625	09/14/11:210196VRG	BSRPD	ug/L	10.00	59.5%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	116 %	80-120	
2,4-Dichlorophenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	76.0 %	6-135	
			BS	ug/L	20.00	74.9 %	6-135	
			BSD	ug/L	20.00	41.9 %	6-135	
	BSRPD	ug/L	10.00	56.4%	≤30.0	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	117 %	80-120	
2,4-Dimethylphenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	81.6 %	10-130	
			BS	ug/L	20.00	76.9 %	10-130	
			BSD	ug/L	20.00	42.9 %	10-130	
	BSRPD	ug/L	10.00	56.7%	≤30.0	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	112 %	80-120	
2,4-Dinitrophenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<5	
			LCS	ug/L	20.00	58.9 %	10-157	
			BS	ug/L	20.00	64.1 %	10-157	
			BSD	ug/L	20.00	32.4 %	10-157	
	BSRPD	ug/L	10.00	6.3	≤5	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	113 %	80-120	
2,4-Dinitrotoluene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	85.4 %	20-204	
			BS	ug/L	10.00	84.2 %	20-204	
			BSD	ug/L	10.00	46.0 %	20-204	
	BSRPD	ug/L	10.00	58.7%	≤30.0	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	126 %	80-120	360
2,6-Dinitrotoluene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	84.7 %	20-199	
			BS	ug/L	10.00	79.0 %	20-199	
			BSD	ug/L	10.00	43.1 %	20-199	
	BSRPD	ug/L	10.00	58.8%	≤30.0	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	117 %	80-120	
2-Chlorophenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	70.3 %	13-114	
			BS	ug/L	20.00	67.3 %	13-114	
			BSD	ug/L	20.00	39.3 %	13-114	
	BSRPD	ug/L	10.00	52.6%	≤30.0	410		
	625	09/21/11:214346VRG	CCV	mg/L	10.00	107 %	80-120	
2-Fluorobiphenyl	625	09/14/11:210196VRG	Blank	ug/L	10.00	58.6 %	11-119	
			Surr	ug/L	10.00	58.6 %	11-119	
			LCS	ug/L	10.00	67.2 %	11-119	
			Surr	ug/L	10.00	67.2 %	11-119	
			BS	ug/L	10.00	65.2 %	45-102	
			Surr	ug/L	10.00	65.2 %	11-119	
			BSD	ug/L	10.00	33.4 %	45-102	436
			BSRPD	ug/L	10.00	3.2	≤1	410
			Surr	ug/L	10.00	33.4 %	11-119	
			Surr	ug/L	10.00	33.6 %	11-119	
			Surr	ug/L	10.00	45.8 %	11-119	
			Surr	ug/L	10.00	67.3 %	11-119	
			Surr	ug/L	10.00	51.2 %	11-119	
			Surr	ug/L	10.00	70.3 %	11-119	
			Surr	ug/L	10.00	51.6 %	11-119	
Surr	ug/L	10.00	62.7 %	11-119				

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Lab ID : STK1138054  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
2-Fluorobiphenyl	625	09/14/11:210196VRG	Surr	ug/L	10.00	44.6 %	11-119	
			Surr	ug/L	10.00	17.1 %	11-119	
			Surr	ug/L	10.00	65.3 %	11-119	
	625	09/21/11:214346VRG	CCV	mg/L	10.00	95.9 %	80-120	
2-Fluorophenol	625	09/14/11:210196VRG	Blank	ug/L	20.00	55.4 %	13-124	
			Surr	ug/L	20.00	55.4 %	13-124	
			LCS	ug/L	20.00	64.9 %	13-124	
			Surr	ug/L	20.00	64.9 %	13-124	
			BS	ug/L	20.00	66.7 %	20-118	
			Surr	ug/L	20.00	66.7 %	13-124	
			BSD	ug/L	20.00	37.2 %	20-118	
			BSRPD	ug/L	10.00	56.7%	≤20.0	410
			Surr	ug/L	20.00	37.2 %	13-124	
			Surr	ug/L	20.00	39.3 %	13-124	
			Surr	ug/L	20.00	53.9 %	13-124	
			Surr	ug/L	20.00	69.3 %	13-124	
			Surr	ug/L	20.00	60.3 %	13-124	
			Surr	ug/L	20.00	74.7 %	13-124	
			Surr	ug/L	20.00	26.3 %	13-124	
			Surr	ug/L	20.00	63.7 %	13-124	
			Surr	ug/L	20.00	51.7 %	13-124	
Surr	ug/L	20.00	23.1 %	13-124				
Surr	ug/L	20.00	57.7 %	13-124				
	625	09/21/11:214346VRG	CCV	mg/L	20.00	95.6 %	80-120	
2-Nitrophenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	77.8 %	3-133	
			BS	ug/L	20.00	73.2 %	3-133	
			BSD	ug/L	20.00	42.0 %	3-133	
			BSRPD	ug/L	10.00	54.1%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	117 %	80-120	
3,3-Dichlorobenzidine	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	41.7 %	20-132	
			BS	ug/L	20.00	61.1 %	20-132	
			BSD	ug/L	20.00	21.4 %	20-132	
			BSRPD	ug/L	10.00	8.0	≤2	410
	625	09/21/11:214346VRG	CCV	mg/L	20.00	116 %	80-120	
4,6-Dinitro-2-methylphenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	20.00	70.5 %	10-172	
			BS	ug/L	20.00	68.3 %	10-172	
			BSD	ug/L	20.00	40.8 %	10-172	
			BSRPD	ug/L	10.00	50.5%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	103 %	80-120	
4-Bromophenylphenylether	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	74.6 %	20-159	
			BS	ug/L	10.00	75.2 %	20-159	
			BSD	ug/L	10.00	41.1 %	20-159	
			BSRPD	ug/L	10.00	58.6%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	115 %	80-120	
4-Nitrophenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	93.6 %	20-148	
			BS	ug/L	20.00	90.5 %	20-148	
			BSD	ug/L	20.00	49.9 %	20-148	
			BSRPD	ug/L	10.00	57.9%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	127 %	80-120	360

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Lab ID : STK1138054  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Acenaphthene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	75.5 %	13-129	
			BS	ug/L	10.00	71.3 %	13-129	
			BSD	ug/L	10.00	36.6 %	13-129	
			BSRPD	ug/L	10.00	64.5%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	114 %	80-120	
Acenaphthylene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	60.1 %	20-112	
			BS	ug/L	10.00	59.5 %	20-112	
			BSD	ug/L	10.00	30.8 %	20-112	
			BSRPD	ug/L	10.00	2.9	≤1	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	116 %	80-120	
Anthracene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	75.3 %	14-131	
			BS	ug/L	10.00	75.9 %	14-131	
			BSD	ug/L	10.00	41.9 %	14-131	
			BSRPD	ug/L	10.00	57.7%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	117 %	80-120	
Azobenzene	625	09/21/11:214346VRG	CCV	mg/L	10.00	117 %	80-120	
Benzidine	625	09/14/11:210196VRG	Blank	ug/L		ND	<10	
			LCS	ug/L	20.00	15.5 %	20-41	320
			BS	ug/L	20.00	0.0 %	20-41	436
			BSD	ug/L	20.00	0.0 %	20-41	436
			BSRPD	ug/L	10.00	0.0	≤10	
	625	09/21/11:214346VRG	CCV	mg/L	20.00	77.2 %	70-130	
Benzo(a)anthracene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	81.0 %	7-169	
			BS	ug/L	10.00	81.9 %	7-169	
			BSD	ug/L	10.00	46.1 %	7-169	
			BSRPD	ug/L	10.00	56.0%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	110 %	80-120	
Benzo(a)pyrene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	70.8 %	20-177	
			BS	ug/L	10.00	73.1 %	20-177	
			BSD	ug/L	10.00	40.0 %	20-177	
			BSRPD	ug/L	10.00	58.6%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	115 %	80-120	
Benzo(b)fluoranthene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	80.0 %	20-210	
			BS	ug/L	10.00	80.9 %	20-210	
			BSD	ug/L	10.00	43.2 %	20-210	
			BSRPD	ug/L	10.00	60.7%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	107 %	80-120	
Benzo(g,h,i)perylene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	71.2 %	20-190	
			BS	ug/L	10.00	65.8 %	20-190	
			BSD	ug/L	10.00	42.4 %	20-190	
			BSRPD	ug/L	10.00	43.2%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	107 %	80-120	
Benzo(k)fluoranthene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	78.1 %	20-187	
			BS	ug/L	10.00	80.8 %	20-187	
			BSD	ug/L	10.00	44.4 %	20-187	
			BSRPD	ug/L	10.00	58.2%	≤30.0	410

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Lab ID : STK1138054  
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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Benzo(k)fluoranthene	625	09/21/11:214346VRG	CCV	mg/L	10.00	112 %	80-120	
bis(2-Chloroethoxy)methane	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	80.3 %	20-127	
			BS	ug/L	10.00	74.5 %	20-127	
			BSD	ug/L	10.00	40.0 %	20-127	
			BSRPD	ug/L	10.00	60.2%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	121 %	80-120	360
bis(2-Chloroethyl)ether	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	85.8 %	14-111	
			BS	ug/L	10.00	79.0 %	14-111	
			BSD	ug/L	10.00	43.1 %	14-111	
			BSRPD	ug/L	10.00	58.7%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	112 %	80-120	
bis(2-Chloroisopropyl)ether	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	76.9 %	18-115	
			BS	ug/L	10.00	73.2 %	18-115	
			BSD	ug/L	10.00	37.4 %	18-115	
			BSRPD	ug/L	10.00	64.8%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	118 %	80-120	
bis(2-Ethylhexyl)phthalate	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	10.00	81.2 %	20-216	
			BS	ug/L	10.00	150 %	20-216	
			BSD	ug/L	10.00	40.4 %	20-216	
			BSRPD	ug/L	10.00	106%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	120 %	80-120	
Butylbenzylphthalate	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	10.00	30.9 %	20-79	
			BS	ug/L	10.00	32.2 %	20-79	
			BSD	ug/L	10.00	15.8 %	20-79	436
			BSRPD	ug/L	10.00	1.6	<2	
	625	09/21/11:214346VRG	CCV	mg/L	10.00	121 %	80-120	360
Chloronaphthalene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	71.8 %	20-200	
			BS	ug/L	10.00	68.8 %	20-200	
			BSD	ug/L	10.00	35.7 %	20-200	
			BSRPD	ug/L	10.00	63.3%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	114 %	80-120	
Chlorophenylphenylether	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	74.8 %	10-186	
			BS	ug/L	10.00	72.9 %	10-186	
			BSD	ug/L	10.00	39.5 %	10-186	
			BSRPD	ug/L	10.00	59.4%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	114 %	80-120	
Chrysene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	86.1 %	20-352	
			BS	ug/L	10.00	87.6 %	20-352	
			BSD	ug/L	10.00	49.2 %	20-352	
			BSRPD	ug/L	10.00	56.1%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	94.5 %	80-120	
Dibenzo(a,h)anthracene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	73.3 %	20-244	
			BS	ug/L	10.00	79.0 %	20-244	
			BSD	ug/L	10.00	43.8 %	20-244	
			BSRPD	ug/L	10.00	57.4%	≤30.0	410

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Lab ID : STK1138054  
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Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Dibenzo(a,h)anthracene	625	09/21/11:214346VRG	CCV	mg/L	10.00	109 %	80-120	
Diethylphthalate	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	42.2 %	20-89	
			BS	ug/L	10.00	44.0 %	20-89	
			BSD	ug/L	10.00	21.9 %	20-89	
			BSRPD	ug/L	10.00	2.2	≤1	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	115 %	80-120	
Dimethylphthalate	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	15.1 %	20-68	320
			BS	ug/L	10.00	15.9 %	20-68	436
			BSD	ug/L	10.00	7.4 %	20-68	436
			BSRPD	ug/L	10.00	0.85	≤1	
	625	09/21/11:214346VRG	CCV	mg/L	10.00	119 %	80-120	
Di-n-butylphthalate	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	10.00	60.1 %	20-107	
			BS	ug/L	10.00	62.5 %	20-107	
			BSD	ug/L	10.00	32.5 %	20-107	
			BSRPD	ug/L	10.00	3.0	≤2	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	124 %	80-120	360
Di-n-octylphthalate	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	78.9 %	20-182	
			BS	ug/L	10.00	92.5 %	20-182	
			BSD	ug/L	10.00	46.4 %	20-182	
			BSRPD	ug/L	10.00	66.4%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	131 %	80-120	360
Fluoranthene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	81.1 %	14-141	
			BS	ug/L	10.00	80.7 %	14-141	
			BSD	ug/L	10.00	44.9 %	14-141	
			BSRPD	ug/L	10.00	56.9%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	113 %	80-120	
Fluorene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	78.0 %	20-180	
			BS	ug/L	10.00	75.6 %	20-180	
			BSD	ug/L	10.00	40.5 %	20-180	
			BSRPD	ug/L	10.00	60.5%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	114 %	80-120	
Hexachlorobenzene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	71.8 %	20-177	
			BS	ug/L	10.00	69.8 %	20-177	
			BSD	ug/L	10.00	36.2 %	20-177	
			BSRPD	ug/L	10.00	63.4%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	109 %	80-120	
Hexachlorobutadiene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	60.1 %	20-127	
			BS	ug/L	10.00	58.5 %	20-127	
			BSD	ug/L	10.00	29.0 %	20-127	
			BSRPD	ug/L	10.00	3.0	≤1	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	113 %	80-120	
Hexachlorocyclopentadiene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	19.4 %	20-84	320
			BS	ug/L	10.00	15.0 %	20-84	436
			BSD	ug/L	10.00	8.1 %	20-84	436
			BSRPD	ug/L	10.00	0.70	≤1	

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Lab ID : STK1138054  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Hexachlorocyclopentadiene	625	09/21/11:214346VRG	CCV	mg/L	10.00	133 %	80-120	360
Hexachloroethane	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	61.1 %	15-107	
			BS	ug/L	10.00	60.7 %	15-107	
			BSD	ug/L	10.00	29.0 %	15-107	
			BSRPD	ug/L	10.00	3.2	≤1	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	114 %	80-120	
Indeno(1,2,3-c,d)pyrene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	73.2 %	20-216	
			BS	ug/L	10.00	76.4 %	20-216	
			BSD	ug/L	10.00	43.3 %	20-216	
			BSRPD	ug/L	10.00	55.4%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	109 %	80-120	
Isophorone	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	79.9 %	17-111	
			BS	ug/L	10.00	74.5 %	39-71	436
			BSD	ug/L	10.00	40.2 %	39-71	
			BSRPD	ug/L	10.00	59.8%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	145 %	80-120	360
Naphthalene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	73.7 %	18-123	
			BS	ug/L	10.00	72.2 %	18-123	
			BSD	ug/L	10.00	36.6 %	18-123	
			BSRPD	ug/L	10.00	65.4%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	114 %	80-120	
Nitrobenzene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	74.6 %	14-112	
			BS	ug/L	10.00	67.6 %	14-112	
			BSD	ug/L	10.00	35.1 %	14-112	
			BSRPD	ug/L	10.00	63.2%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	114 %	80-120	
Nitrobenzene-d5	625	09/14/11:210196VRG	Blank	ug/L	10.00	59.5 %	15-102	
			Surr	ug/L	10.00	59.5 %	15-102	
			LCS	ug/L	10.00	78.1 %	15-102	
			Surr	ug/L	10.00	78.1 %	15-102	
			BS	ug/L	10.00	70.8 %	51-103	
			Surr	ug/L	10.00	70.8 %	15-102	
			BSD	ug/L	10.00	36.8 %	51-103	436
			BSRPD	ug/L	10.00	63.1%	≤30.0	410
			Surr	ug/L	10.00	36.8 %	15-102	
			Surr	ug/L	10.00	45.4 %	15-102	
			Surr	ug/L	10.00	63.2 %	15-102	
			Surr	ug/L	10.00	79.5 %	15-102	
			Surr	ug/L	10.00	69.5 %	15-102	
			Surr	ug/L	10.00	78.9 %	15-102	
			Surr	ug/L	10.00	54.9 %	15-102	
			Surr	ug/L	10.00	66.6 %	15-102	
			Surr	ug/L	10.00	57.8 %	15-102	
Surr	ug/L	10.00	10.3 %	15-102	560			
Surr	ug/L	10.00	68.6 %	15-102				
	625	09/21/11:214346VRG	CCV	mg/L	10.00	106 %	80-120	
N-Nitrosodimethylamine	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	10.00	70.3 %	20-120	
			BS	ug/L	10.00	66.0 %	20-120	

October 7, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1138054  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic N-Nitrosodimethylamine	625	09/14/11:210196VRG	BSD BSRPD	ug/L ug/L	10.00 10.00	31.4 % 3.5	20-120 ≤2	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	125 %	80-120	360
N-Nitrosodi-N-propylamine	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	91.1 %	6-126	
			BS	ug/L	10.00	86.2 %	6-126	
			BSD	ug/L	10.00	45.2 %	6-126	
	625	09/21/11:214346VRG	BSRPD	ug/L	10.00	62.4%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	119 %	80-120	
N-Nitrosodiphenylamine	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	65.0 %	20-199	
			BS	ug/L	10.00	81.4 %	20-199	
			BSD	ug/L	10.00	40.4 %	20-199	
			BSRPD	ug/L	10.00	67.4%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	107 %	80-120	
p-Chloro-m-cresol	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	81.3 %	21-119	
			BS	ug/L	20.00	77.1 %	21-119	
			BSD	ug/L	20.00	43.8 %	21-119	
			BSRPD	ug/L	10.00	55.0%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	118 %	80-120	
Pentachlorophenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<2	
			LCS	ug/L	20.00	75.8 %	20-195	
			BS	ug/L	20.00	76.2 %	20-195	
			BSD	ug/L	20.00	44.2 %	20-195	
			BSRPD	ug/L	10.00	53.1%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	110 %	80-120	
Phenanthrene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	79.7 %	13-138	
			BS	ug/L	10.00	79.5 %	13-138	
			BSD	ug/L	10.00	43.5 %	13-138	
			BSRPD	ug/L	10.00	58.6%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	117 %	80-120	
Phenol	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	20.00	79.2 %	9-107	
			BS	ug/L	20.00	72.8 %	9-107	
			BSD	ug/L	20.00	38.8 %	9-107	
			BSRPD	ug/L	10.00	60.9%	≤30.0	410
	625	09/21/11:214346VRG	CCV	mg/L	10.00	110 %	80-120	
Phenol-d6	625	09/14/11:210196VRG	Blank	ug/L	20.00	55.6 %	5-116	
			Surr	ug/L	20.00	55.6 %	5-116	
			LCS	ug/L	20.00	72.0 %	5-116	
			Surr	ug/L	20.00	72.0 %	5-116	
			BS	ug/L	20.00	68.3 %	20-114	
			Surr	ug/L	20.00	68.3 %	5-116	
			BSD	ug/L	20.00	37.1 %	20-114	
			BSRPD	ug/L	10.00	59.3%	≤20.0	410
			Surr	ug/L	20.00	37.1 %	5-116	
			Surr	ug/L	20.00	43.5 %	5-116	
			Surr	ug/L	20.00	59.3 %	5-116	
			Surr	ug/L	20.00	73.4 %	5-116	
			Surr	ug/L	20.00	63.5 %	5-116	
			Surr	ug/L	20.00	79.5 %	5-116	
			Surr	ug/L	20.00	46.6 %	5-116	

October 7, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1138054  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Phenol-d6	625	09/14/11:210196VRG	Surr	ug/L	20.00	61.3 %	5-116	
			Surr	ug/L	20.00	55.3 %	5-116	
			Surr	ug/L	20.00	34.3 %	5-116	
			Surr	ug/L	20.00	63.3 %	5-116	
	625	09/21/11:214346VRG	CCV	mg/L	20.00	96.7 %	80-120	
p-Terphenyl-d14	625	09/14/11:210196VRG	Blank	ug/L	10.00	50.8 %	16-122	
			Surr	ug/L	10.00	50.8 %	16-122	
			LCS	ug/L	10.00	47.4 %	16-122	
			Surr	ug/L	10.00	47.4 %	16-122	
			BS	ug/L	10.00	49.2 %	20-154	
			Surr	ug/L	10.00	49.2 %	16-122	
			BSD	ug/L	10.00	27.2 %	20-154	
			BSRPD	ug/L	10.00	2.2	≤1	410
			Surr	ug/L	10.00	27.2 %	16-122	
			Surr	ug/L	10.00	8.1 %	16-122	560
			Surr	ug/L	10.00	13.7 %	16-122	560
			Surr	ug/L	10.00	24.4 %	16-122	
			Surr	ug/L	10.00	16.9 %	16-122	
			Surr	ug/L	10.00	31.0 %	16-122	
	Surr	ug/L	10.00	31.0 %	16-122			
Surr	ug/L	10.00	44.6 %	16-122				
Surr	ug/L	10.00	12.0 %	16-122	560			
Surr	ug/L	10.00	35.5 %	16-122				
Surr	ug/L	10.00	48.8 %	16-122				
Pyrene	625	09/14/11:210196VRG	Blank	ug/L		ND	<1	
			LCS	ug/L	10.00	79.3 %	20-162	
			BS	ug/L	10.00	81.3 %	20-162	
			BSD	ug/L	10.00	43.9 %	20-162	
	BSRPD	ug/L	10.00	59.7%	≤30.0	410		
625	09/21/11:214346VRG	CCV	mg/L	10.00	108 %	80-120		
Pyridine	625	09/14/11:210196VRG	Blank	ug/L		ND	<10	
	625	09/21/11:214346VRG	CCV	mg/L	10.00	103 %	80-120	
2,4'-DDD	625P	09/23/11:214148SG	CCV	ug/L	100.0	89.5 %	70-130	
2,4'-DDE	625P	09/23/11:214148SG	CCV	ug/L	100.0	84.6 %	70-130	
2,4'-DDT	625P	09/23/11:214148SG	CCV	ug/L	100.0	93.5 %	70-130	
Aldrin	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	58.8 %	2-116	
			BS	ng/L	100.0	32.2 %	2-116	
			BSD	ng/L	100.0	103 %	2-116	
	BSRPD	ng/L	100.0	105%	≤28.0	410		
625P	09/23/11:214148SG	CCV	ug/L	100.0	104 %	70-130		
Alpha BHC	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	51.5 %	2-128	
			BS	ng/L	100.0	61.2 %	2-128	
			BSD	ng/L	100.0	50.7 %	2-128	
	BSRPD	ng/L	100.0	18.9%	≤25.7			
625P	09/23/11:214148SG	CCV	ug/L	100.0	75.3 %	70-130		
alpha-Chlordane	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	61.9 %	38-121	
			BS	ng/L	100.0	60.4 %	38-121	
			BSD	ng/L	100.0	48.7 %	38-121	
	BSRPD	ng/L	100.0	21.4%	≤20.9	410		
625P	09/23/11:214148SG	CCV	ug/L	100.0	86.3 %	70-130		

October 7, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1138054  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Beta BHC	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	69.6 %	2-122	
			BS	ng/L	100.0	80.4 %	2-122	
			BSD	ng/L	100.0	74.7 %	2-122	
			BSRPD	ng/L	100.0	7.4 %	≤25.7	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	74.9 %	70-130	
Delta BHC	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	82.0 %	2-143	
			BS	ng/L	100.0	83.5 %	2-143	
			BSD	ng/L	100.0	69.7 %	2-143	
			BSRPD	ng/L	100.0	18.1 %	≤10.0	410
	625P	09/23/11:214148SG	CCV	ug/L	100.0	86.3 %	70-130	
Dieldrin	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	53.8 %	2-158	
			BS	ng/L	100.0	50.0 %	2-158	
			BSD	ng/L	100.0	49.5 %	2-158	
			BSRPD	ng/L	100.0	0.9 %	≤32.8	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	96.5 %	70-130	
Endosulfan I	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	42.7 %	16-151	
			BS	ng/L	100.0	49.3 %	16-151	
			BSD	ng/L	100.0	38.3 %	16-151	
			BSRPD	ng/L	100.0	25.2 %	≤739	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	76.2 %	70-130	
Endosulfan II	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	59.3 %	2-200	
			BS	ng/L	100.0	51.9 %	2-200	
			BSD	ng/L	100.0	49.1 %	2-200	
			BSRPD	ng/L	100.0	5.5 %	≤41.4	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	93.3 %	70-130	
Endosulfan Sulfate	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	57.7 %	2-176	
			BS	ng/L	100.0	64.4 %	2-176	
			BSD	ng/L	100.0	51.7 %	2-176	
			BSRPD	ng/L	100.0	22.0 %	≤28.8	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	95.7 %	70-130	
Endrin	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	41.7 %	33-157	
			BS	ng/L	100.0	13.4 %	33-157	436
			BSD	ng/L	100.0	46.0 %	33-157	
			BSRPD	ng/L	100.0	110 %	≤90.1	410
	625P	09/23/11:214148SG	PEM	Days	0.2000	1.6 %	20	
			CCV	ug/L	100.0	97.4 %	70-130	
Endrin Aldehyde	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	76.1 %	20-129	
			BS	ng/L	100.0	77.5 %	20-129	
			BSD	ng/L	100.0	34.3 %	20-129	
			BSRPD	ng/L	100.0	77.4 %	≤46.4	410
	625P	09/23/11:214148SG	CCV	ug/L	100.0	107 %	70-130	
Endrin Ketone	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	55.8 %	7-140	
			BS	ng/L	100.0	79.3 %	50-150	
			BSD	ng/L	100.0	55.7 %	50-150	
			BSRPD	ng/L	100.0	35.0 %	≤20	410

October 7, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1138054  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Endrin Ketone	625P	09/23/11:214148SG	CCV	ug/L	100.0	81.1 %	70-130	
gamma-Chlordane	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	410
			LCS	ng/L	100.0	51.8 %	37-125	
			BS	ng/L	100.0	61.7 %	37-125	
			BSD	ng/L	100.0	44.4 %	37-125	
			BSRPD	ng/L	100.0	32.7%	≤28.6	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	96.4 %	70-130	
Heptachlor	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	56.5 %	13-134	
			BS	ng/L	100.0	54.1 %	13-134	
			BSD	ng/L	100.0	45.0 %	13-134	
			BSRPD	ng/L	100.0	18.4%	≤36.9	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	91.3 %	70-130	
Heptachlor Epoxide	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	436
			LCS	ng/L	100.0	63.7 %	48-148	
			BS	ng/L	100.0	48.5 %	48-148	
			BSD	ng/L	100.0	47.2 %	48-148	
			BSRPD	ng/L	100.0	2.7%	≤24.5	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	92.8 %	70-130	
Lindane	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	89.2 %	18-94	
			BS	ng/L	100.0	90.6 %	18-94	
			BSD	ng/L	100.0	77.3 %	18-94	
			BSRPD	ng/L	100.0	15.8%	≤34.8	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	107 %	70-130	
Methoxychlor	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	66.6 %	2-199	
			BS	ng/L	100.0	52.2 %	2-199	
			BSD	ng/L	100.0	55.8 %	2-199	
			BSRPD	ng/L	100.0	6.7%	≤51.2	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	88.5 %	70-130	
o,p - DDD	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	436
			LCS	ng/L	100.0	54.4 %	50-150	
			BS	ng/L	100.0	57.9 %	50-150	
			BSD	ng/L	100.0	47.6 %	50-150	
			BSRPD	ng/L	100.0	19.6%	≤25	
o,p - DDE	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	436
			LCS	ng/L	100.0	52.2 %	50-150	
			BS	ng/L	100.0	53.6 %	50-150	
			BSD	ng/L	100.0	41.8 %	50-150	
			BSRPD	ng/L	100.0	24.7%	≤25	
o,p - DDT	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	436 410
			LCS	ng/L	100.0	56.1 %	50-150	
			BS	ng/L	100.0	65.8 %	50-150	
			BSD	ng/L	100.0	47.9 %	50-150	
			BSRPD	ng/L	100.0	31.5%	≤25	
p,p - DDD	625P	09/23/11:214148SG	CCV	ug/L	100.0	95.6 %	70-130	
p,p - DDE	625P	09/23/11:214148SG	CCV	ug/L	100.0	106 %	70-130	
p,p - DDT	625P	09/23/11:214148SG	PEM	Days	0.2000	1.5 %	20	
			CCV	ug/L	100.0	83.3 %	70-130	
p,p'-DDD	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	75.5 %	31-126	
			BS	ng/L	100.0	78.8 %	31-126	
			BSD	ng/L	100.0	65.3 %	31-126	

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
p,p'-DDD	625P	09/20/11:210396VRG	BSRPD	ng/L	100.0	18.7%	≤35.8	
p,p'-DDE	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	64.9 %	31-152	
			BS	ng/L	100.0	77.3 %	31-152	
			BSD	ng/L	100.0	53.7 %	31-152	
			BSRPD	ng/L	100.0	36.0%	≤27.9	410
p,p'-DDT	625P	09/20/11:210396VRG	Blank	ng/L		ND	<5	
			LCS	ng/L	100.0	54.9 %	5-154	
			BS	ng/L	100.0	52.1 %	5-154	
			BSD	ng/L	100.0	42.0 %	5-154	
			BSRPD	ng/L	100.0	21.6%	≤40.9	
Tetrachloro-m-xylene	625P	09/20/11:210396VRG	Blank	ng/L	100.0	32.7 %	20-150	
			Surr	ng/L	100.0	32.7 %	20-150	
			LCS	ng/L	100.0	30.0 %	20-150	
			Surr	ng/L	100.0	30.0 %	20-150	
			BS	ng/L	100.0	30.8 %	50-150	436
			Surr	ng/L	100.0	30.8 %	20-150	
			BSD	ng/L	100.0	21.2 %	50-150	436
			BSRPD	ng/L	100.0	36.9%	≤30	410
			Surr	ng/L	100.0	21.2 %	20-150	
			Surr	ng/L	100.0	20.0 %	20-150	
	625P	09/23/11:214148SG	CCV	ug/L	100.0	80.6 %	70-130	

Definition	
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
BS	: Blank Spikes - A blank is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.
BSD	: Blank Spike Duplicate of BS/BSD pair - A blank duplicate is spiked with a known amount of analyte. It is prepared to verify that the preparation process is not affecting analyte recovery.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
BSRPD	: BS/BSD Relative Percent Difference (RPD) - The BS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

Explanation	
320	: LCS not within Acceptance Range (AR). Data was accepted based on the BS/BSD recovery.
360	: CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.
410	: Relative Percent Difference (RPD) not within Maximum Allowable Value (MAV). Data was accepted based on the LCS or CCV recovery.
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
436	: Blank Spike (BS) not within Acceptance Range (AR). Data was accepted based on the LCS or CCV recovery.
560	: Surrogate percent recoveries not within the Acceptance Range (AR) due to suspected matrix interferences.



September 29, 2011

South San Joaquin Irrigation District  
Attn: Julie Jeleti  
P.O. Box 747  
Ripon, CA. 95366

**Subject: Subcontract Analysis for FGL Lab No. STK1138054**

Enclosed please find results for the following sample(s) which were received by FGL.

- Sub Contracted-Mercury - Ultra Low-Level EPA 1631/1669 Use Clean Hands/Dirty Hands Collection method

Please note that this analysis was performed by Cal Test (NELAP Certified Laboratory)

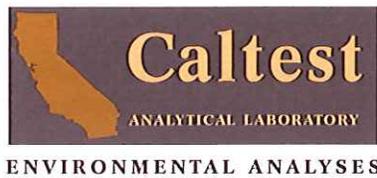
Thank you for using FGL Environmental.

Sincerely,

**Cindy Aguirre**

Digitally signed by Cindy Aguirre  
Title: Customer Service Rep  
Date: 2011-09-29

Enclosure



Friday, September 23, 2011

Dawn Bravero  
FGL Environmental  
853 Corporation Street  
Santa Paula, CA 93061

RE: Lab Order: L090480  
Project ID: 1138054-(3-16829)

Collected By: JULIE JELETI  
PO/Contract #:

Dear Dawn Bravero:

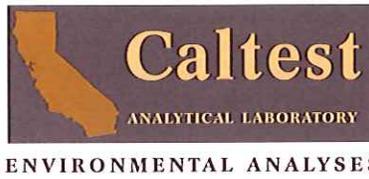
Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, September 14, 2011. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Enclosures

Project Manager: Sonya Allahyari



**SAMPLE SUMMARY**

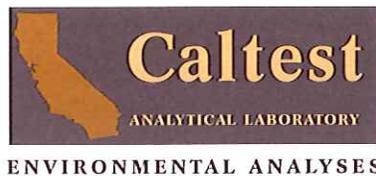
Lab Order: L090480  
Project ID: 1138054-(3-16829)

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
L090480001	LAGOON	Water	9/13/2011 09:50	9/14/2011 10:00

---





## NARRATIVE

Lab Order: L090480

Project ID: 1138054-(3-16829)

---

### General Qualifiers and Notes

---

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

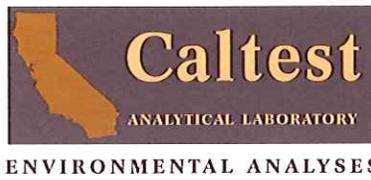
B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.





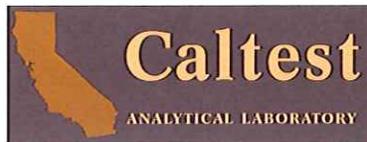
**ANALYTICAL RESULTS**

Lab Order: L090480

Project ID 1138054-(3-16829)

Lab ID: L090480001	Date Collected: 9/13/2011 09:50	Matrix: Water						
Sample ID: LAGOON	Date Received: 9/14/2011 10:00							
Parameters	Result Units	R. L.	MDL	DF Prepared	Batch	Analyzed	Batch	Qual
Mercury Analysis, Trace Level	Prep Method: EPA 1631E			Prep by: UK		Analyzed by: LM		
Mercury	0.0052 ug/L	0.0010	0.00040	1 09/20/11 17:58	MPR 10248	09/21/11 08:55	MHG 3666	





ENVIRONMENTAL ANALYSES

QUALITY CONTROL DATA

Lab Order: L090480

Project ID: 1138054-(3-16829)

Analysis Description: Mercury Analysis, Trace Level	QC Batch: MPR/10248
Analysis Method: EPA 1631E	QC Batch Method: EPA 1631E

METHOD BLANK: 411157

Parameter	Blank Result	Reporting Limit	MDL	Units	Qualifiers
Mercury	ND	0.0005	0.0002	ug/L	

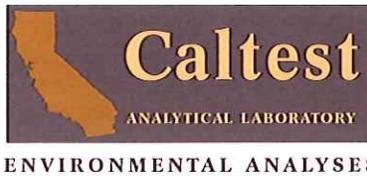
LABORATORY CONTROL SAMPLE: 411158

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.02	0.018	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 411162 411163

Parameter	Units	L090454001 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Mercury	ug/L	0.0015	0.02	0.02	0.02	91	92	80-120	0.8	24	



**QUALITY CONTROL DATA QUALIFIERS**

Lab Order: L090480

Project ID: 1138054-(3-16829)

---

**QUALITY CONTROL PARAMETER QUALIFIERS**

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

NS - means not spiked and will not have recoveries reported for Analyte Spike Amounts

QC Codes Keys: These descriptors are used to help identify the specific QC samples and clarify the report.

MB - Method Blank

Method Blanks are reported to the same Method Detection Limits (MDLs) or Reporting Limits (RLs) as the analytical samples in the corresponding QC batch.

LCS/LCSD - Laboratory Control Spike / Laboratory Control Spike Duplicate

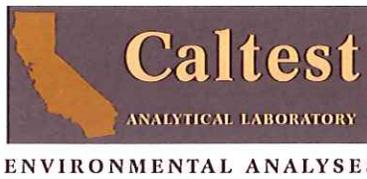
DUP - Duplicate of Original Sample Matrix

MS/MSD - Matrix Spike / Matrix Spike Duplicate

RPD - Relative Percent Difference

%Recovery - Spike Recovery stated as a percentage





**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Lab Order: L090480

Project ID: 1138054-(3-16829)

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
L090480001	LAGOON	EPA 1631E	MPR/10248	EPA 1631E	MHG/3666







September 29, 2011

South San Joaquin Irrigation District  
Attn: Julie Jeleti  
P.O. Box 747  
Ripon, CA. 95366

**Subject: Subcontract Analysis for FGL Lab No. STK1138054**

Enclosed please find results for the following sample(s) which were received by FGL.

- Subcontract-Asbestos-Waste Water

Please note that this analysis was performed by EMS Laboratories, Inc. (ELAP Certified Laboratory)

Thank you for using FGL Environmental.

Sincerely,

**Cindy Aguirre**

Digitally signed by Cindy Aguirre  
Title: Customer Service Rep  
Date: 2011-09-29

Enclosure

DATE: September 21, 2011  
CUSTOMER: FGL Environmental  
853 Corporation Street  
Santa Paula, CA 93060-3005  
ATTENTION: Cindy Aguirre  
REPORT NO: 146916  
REFERENCE: Project Name: 1138054 - (3-16829)  
SUBJECT: ANALYSIS OF WATER SAMPLES FOR ASBESTOS BY TEM  
ACCREDITATION: California Dept. of Health Services ELAP 1119

The sample was prepared and analyzed according to EPA 600 94 134, 100.1.

The date and times of collection, filtration and analysis are as follows:

SAMPLE NO: 1-Lagoon  
DATE COLLECTED: September 13, 2011 at 0950  
RECEIVED: September 14, 2011 at 1010  
FILTERED: September 14, 2011 at 1048  
DATE ANALYZED: September 16, 2011

The results of the analysis and the detection limit(s) are summarized on the following page(s), accompanied by the chain of custody.

Respectfully submitted,  
EMS Laboratories, Inc.



B.M. Kolk  
Laboratory Director  
BMK/am

*Note: The report shall not be reproduced, except in full without the written approval of EMS Laboratories, Inc.*

*Note: The results of the analysis are based upon the sample submitted to the laboratory. No representation is made regarding the sampling area other than that implied by the analytical results for the immediate vicinity of the samples analyzed as calculated from the data presented with those samples. All the analytical quality control data meet the requirement of the procedure unless otherwise indicated. Any deviation or exclusion from the test method is noted in this cover letter. Unless otherwise noted in this cover letter the samples were received properly packaged, clearly identified and intact.*

ANALYSIS OF WATER BY TEM ( EPA-600/4-83-043 ) EPA 100.1

LAB NO: 146916  
 CLIENT: Fruit Growers Laboratory, Inc.  
 DATE: 9/16/2011

Laboratory I.D.	Client I.D.	FILTER MEDIA DATA			No. of G.O.	Analyzed Area, mm <sup>2</sup>	Sample Volume (ml)
		Type	Diameter mm	Effective Area mm <sup>2</sup>			
146916-1	1 Lagoon	PC	47	1017	20	0.188	0.1
9-14-11-Blank	EMS BLANK	PC	47	1017	20	0.188	500

INDIVIDUAL ANALYTICAL RESULTS

Laboratory I.D.	Client I.D.	No of Asbestos Fib			Detection Limit (MFL)	CONCENTRATION ( MFL )		
		All sizes	Fib >5µm	Fib >10µm		Fib	Fib >5µm	Fib >10µm
146916-1	1 Lagoon	ND	ND	ND	54.1	< 54.1	< 54.1	< 54.1
9-14-11-Blank	EMS BLANK	ND	ND	ND	0.01	< 0.01	< 0.01	< 0.01

The analysis was carried out to the approved TEM method. This laboratory is in compliance with the quality specified by the method.

*B. M. Kolt*

Authorized Signature

NA Not Applicable  
 ND None Detected  
 PC Polycarbonate Filter  
 GO Grid Openings  
 MFL Million Fibers per Liter  
 Fib Fibers

TEM-6A (2011 Rev)







# TEM ASBESTOS ANALYSIS

Client EMS-BLK  
 Sample No. 9-14-11

EMS Lab No. 9/1/11  
 Page 11 of 11

## ANALYSIS

- MICROSCOPE
- H600A - Serial No. 542-36-01
  - H600B - Serial No. 542-05-06
  - H600C - Serial No. 542-24-03

ENERGY DISPERSIVE X-RAY SYSTEM

- KeveX - Model No. 3200-0106-0365
- KeveX - Model No. 3600-0206-0146 Quantum System

Grid Address: B  
 Screen Magnification: 9,200 X  
 Camera Constant: 27.5  
 Accelerating Voltage: 100KV  
 Beam Current: 10  $\mu$ A  
 K-Factor: 1.0

Analyst Rach Date 9/15

Grid Opening	Structure Number	Structure	Dimensions (mm)		Fiber Classification										EDS Analysis				Comments							
			Width	Length	NAM	TM	CM	CD	CQ	CMQ	CDQ	UF	AD	AX	ADX	AQ	ADQ	AZQ		AZZ	Na	Mg	Si	Ca	Fe	
B37		N>D																								
B34		N>D																								
E23		N>D																								
E26		N>D																								
E29		N>D																								
B34		N>D																								
B33		N>D																								
B38		N>D																								
B37		N>D																								
B34		N>D																								

OBSERVATIONS:

- Clean
- Debris:
- Gypsum:
- Condition of the Grid:

- Very Light
- Very Light
- Good
- Light
- Light
- Scrappy
- Moderate
- Moderate
- Undissolved Filter

- Heavy
- Heavy
- Folded
- Very Heavy
- Very Heavy





October 3, 2011

South San Joaquin Irrigation District  
Attn: Julie Jeleti  
P.O. Box 747  
Ripon, CA. 95366

**Subject: Subcontract Analysis for FGL Lab No. STK1138054**

Enclosed please find results for the following sample(s) which were received by FGL.

- Subcontract-Dioxin, 2,3,7,8 - TCDD

Please note that this analysis was performed by Test America Sacramento (NELAP Certified Laboratory)

Thank you for using FGL Environmental.

Sincerely,

Cindy Aguirre

Digitally signed by Cindy Aguirre  
Title: Customer Service Rep  
Date: 2011-10-03

Enclosure

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica West Sacramento  
880 Riverside Parkway  
West Sacramento, CA 95605  
Tel: (916)373-5600

TestAmerica Job ID: G11140473  
Client Project/Site: 1138054 - (3-16829)

For:  
FGL Environmental  
853 Corporation Street  
P.O. Box 272  
Santa Paula, CA 93060-0272

Attn: Cindy Aguirre

*Bryanna Vandenberg*

Authorized for release by:  
09/27/2011 09:48:12 AM  
Bryanna Vandenberg  
Project Manager  
[bryanna.vandenberg@testamericainc.com](mailto:bryanna.vandenberg@testamericainc.com)  
Designee for  
Jeremy Sadler  
Project Manager  
[jeremyr.sadler@testamericainc.com](mailto:jeremyr.sadler@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?

**?** Ask  
The  
Expert

Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

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## Definitions/Glossary

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☆	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

**Case Narrative**  
**TestAmerica West Sacramento Project Number G11140473**

There are no anomalies associated with this project.



# Detection Summary

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

Client Sample ID: LAGOON

Lab Sample ID: G11140473001

No Detections

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Client Sample Results

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

**Client Sample ID: LAGOON**

**Lab Sample ID: G11140473001**

Date Collected: 09/13/11 09:50

Matrix: Water

Date Received: 09/14/11 08:50

**Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)**

Analyte	Result	Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.4	2.1	pg/L		09/20/11 09:00	09/22/11 08:13	0.94
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
37Cl4-2,3,7,8-TCDD	86		42 - 164				09/20/11 09:00	09/22/11 08:13	0.94
<b>Internal Standard</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C-2,3,7,8-TCDD	46		31 - 137				09/20/11 09:00	09/22/11 08:13	0.94



# Surrogate Summary

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

## Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

Matrix: Water

Prep Type: Total

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (42-164)
G11140473001	LAGOON	86
G11200000110B	Method Blank	100

#### Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

## Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

Matrix: Water

Prep Type: Total

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	37TCDD (37-158)
G11200000110C	Lab Control Sample	96

#### Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

# Internal Standard Summary

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

## Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

Matrix: Water

Prep Type: Total

### Percent Internal Standard Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (31-137)
G11140473001	LAGOON	46
G11200000110B	Method Blank	37

**Internal Standard Legend**  
TCDD = 13C-2,3,7,8-TCDD

## Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

Matrix: Water

Prep Type: Total

### Percent Internal Standard Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (25-141)
G11200000110C	Lab Control Sample	39

**Internal Standard Legend**  
TCDD = 13C-2,3,7,8-TCDD



## QC Sample Results

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

### Method: 1613B-Tetras - Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)

<b>Lab Sample ID: G1I200000110B</b> <b>Matrix: Water</b> <b>Analysis Batch: 1263110</b>							<b>Client Sample ID: Method Blank</b> <b>Prep Type: Total</b> <b>Prep Batch: 1263110_P</b>			
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>ML</b>	<b>EDL</b>	<b>Unit</b>	<b>D</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
2,3,7,8-TCDD	ND		10	1.2	pg/L		09/20/11 09:00	09/21/11 23:10	1	
<b>MB MB</b>										
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
37Cl4-2,3,7,8-TCDD	100		42 - 164				09/20/11 09:00	09/21/11 23:10	1	
<b>MB MB</b>										
<b>Internal Standard</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
13C-2,3,7,8-TCDD	37		31 - 137				09/20/11 09:00	09/21/11 23:10	1	

<b>Lab Sample ID: G1I200000110C</b> <b>Matrix: Water</b> <b>Analysis Batch: 1263110</b>							<b>Client Sample ID: Lab Control Sample</b> <b>Prep Type: Total</b> <b>Prep Batch: 1263110_P</b>			
<b>Analyte</b>				<b>Spike Added</b>	<b>LCS Result</b>	<b>LCS Qualifier</b>	<b>Unit</b>	<b>D</b>	<b>% Rec</b>	<b>% Rec. Limits</b>
2,3,7,8-TCDD				200	244		pg/L		122	73 - 146
<b>LCS LCS</b>										
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
37Cl4-2,3,7,8-TCDD	96		37 - 158							
<b>LCS LCS</b>										
<b>Internal Standard</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
13C-2,3,7,8-TCDD	39		25 - 141							



# QC Association Summary

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

## DIOXIN

### Analysis Batch: 1263110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G11140473001	LAGOON	Total	Water	1613B-Tetras	
G11200000110B	Method Blank	Total	Water	1613B-Tetras	
G11200000110C	Lab Control Sample	Total	Water	1613B-Tetras	

### Prep Batch: 1263110\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G11140473001	LAGOON	Total	Water	EXTRACTION: Soxhlet and Sep Funnel	
G11200000110B	Method Blank	Total	Water	EXTRACTION: Soxhlet and Sep Funnel	
G11200000110C	Lab Control Sample	Total	Water	EXTRACTION: Soxhlet and Sep Funnel	



# Lab Chronicle

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

Client Sample ID: LAGOON

Lab Sample ID: G11140473001

Date Collected: 09/13/11 09:50

Matrix: Water

Date Received: 09/14/11 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Prep	EXTRACTION: Soxhlet and Sep Funnel			1263110_P	09/20/11 09:00	BG	TAL WSC
Total	Analysis	1613B-Tetras		0.94	1263110	09/22/11 08:13	SHK	TAL WSC

**Laboratory References:**

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



# Certification Summary

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica West Sacramento		USEPA UCMR		CA00044
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska	Alaska UST	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	US Fish & Wildlife		LE148388-0
TestAmerica West Sacramento	USDA	USDA		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	West Virginia DEP	3	334
TestAmerica West Sacramento	West Virginia	West Virginia DHHR (DW)	3	9930C
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

# Method Summary

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

---

Method	Method Description	Protocol	Laboratory
1613B-Tetras	Dioxins/Furans, HRGC/HRMS (1613B-Tetras Only)	EPA-5	TAL WSC

---

**Protocol References:**

EPA-5 = EPA-5

**Laboratory References:**

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



# Sample Summary

Client: FGL Environmental  
Project/Site: 1138054

TestAmerica Job ID: G11140473

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
G11140473001	LAGOON	Water	09/13/11 09:50	09/14/11 08:50

---

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



CLIENT AGL PM JS LOG # 72791  
LOT# (QUANTIMS ID) GIT 1406/73 QUOTE# 30647 LOCATION W19A  
DATE RECEIVED 9/14/11 TIME RECEIVED 0850 Checked (✓)   
DELIVERED BY  FEDEX  ON TRAC  OTHER  
 GOLDENSTATE  UPS  EZ PARCEL  
 TAL COURIER  TAL SF  CLIENT  
SHIPPING CONTAINER(S)  TAL  CLIENT  N/A  
CUSTODY SEAL STATUS  INTACT  BROKEN  N/A  
CUSTODY SEAL #(S) N/A  
COC #(S) N/A  
TEMPERATURE BLANK Observed: N/A Corrected: \_\_\_\_\_  
SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)  
Observed: 4.6 Average 5 Corrected Average 5  
LABORATORY THERMOMETER ID: \_\_\_\_\_  
IR UNIT: #4  #5  OTHER \_\_\_\_\_  
Initials CW Date 9/14/11

pH MEASURED  YES  ANOMALY  N/A  
LABELED BY.....  
LABELS CHECKED BY.....  
PEER REVIEW  N/A

SHORT HOLD TEST NOTIFICATION SAMPLE RECEIVING  
WETCHEM  N/A  
VOA-ENCORES  N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL  N/A  
 COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH  N/A  
APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES

CLOUSEAU  TEMPERATURE EXCEEDED (2 °C - 6 °C)\*1  N/A  
 WET ICE  BLUE ICE  GEL PACK  NO COOLING AGENTS USED  PM NOTIFIED  
Initials ES Date 9-14-11

Notes \_\_\_\_\_  
\_\_\_\_\_

\*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

Lot ID:

61E140473

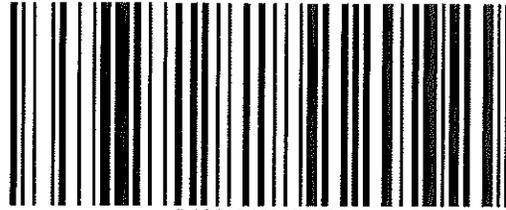
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
AGB	2																			
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
___AGJ																				
500AGJ																				
250AGJ																				
125AGJ																				
___CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
J																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
___CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				

= hydrochloric acid    s = sulfuric acid    na = sodium hydroxide    n = nitric acid    zn = zinc acetate

number of VOAs with air bubbles present / total number of VOA's



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*ontrac.com*



D10010409453026

Date Printed 9/13/2011

Tracking#D10010409453026

*Shipped From:*  
FGL ENVIRONMENTAL  
2500 STAGECOACH ROAD  
STOCKTON, CA 95215

*Sent By:* DEBBY RANKIN  
*Phone#:* (209)942-0182  
*wgt(lbs):* 18  
*Reference:* 1138054  
*Reference 2:*

<p><i>Ship To Company:</i> <b>TEST AMERICA</b> <b>880 RIVERSIDE PARKWAY</b> <b>WEST SACRAMENTO, CA 95605</b> <b>JILL KELLMANN (916)373-5600</b></p>	<p><i>Service:</i> <b>S</b> <i>Sort Code:</i> <b>SAC</b>  <i>Special Services:</i> <b>Signature Required</b></p>
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# ENVIRONMENTAL

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# CHAIN OF CUSTODY

Laboratory Copy (1 of 3)



34596:07/18/2011

TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling Information

Client: South San Joaquin Irrigation District  
Address: P.O. Box 747  
Ripon, CA. 95366

Phone: (209)844-1510 Fax:

Contact Person: Julie Jelen

Project Name: Neutralized Citric Waste

Purchase Order Number:

Quote Number: ST 20110720-01

Sampler(s) *Julie Jelen*

Sampling Fee: Pickup Fee:

Compositor Setup Date: Time:

Lab Number: **STK 1138054** 3-16829

Sample Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Metals, Total-Sb,As,Be,Cd,Cr,Cr (VI),Cu,Pb,Hg,Ni,Se,Ag,Tl,Zn	Field Filter Cr (VI) 250ml(P)-HNO3 , 40ml(VFS)-(NH4)2SO4,NH4OH	Wet Chemistry-Cyanide 16oz(P)-NaOH	EPA 624 40ml(VOA)-HCl	EPA 625 1000ml(AGT)	Subcontract-Asbestos-Waste Water 32oz(P)	Subcontract-Dioxin, 2,3,7,8 - TCDD 1000ml(AGT)	EPA 625 Pest 1000ml(AGT)	Sub Contracted-Mercury - Ultra Low-Level EPA 1631/1669 Use Clean Hands/Dirty Hands Collection method 500ml(GT)-HCl		
1	Lagoon 1	9.13.11	0950	G	WW				1.1	1	2	1	Sub-1	Sub-2	1	Sub-1			
Remarks:				Relinquished	Received By: <i>[Signature]</i>	Date: 9/13/11	Time: 11:15	Relinquished	Received By: <i>[Signature]</i>	Date: 9/13/11	Time: 1702	Relinquished	Received By: <i>[Signature]</i>	Date: 9/13/11	Time: 1702	Relinquished	Received By: <i>[Signature]</i>	Date: 9/14/11	Time: 745

**Corporate Offices & Laboratory**  
853 Corporation Street  
Santa Paula, CA 96076  
TEL: 805/392-4172  
FAX: 805/525-4172

**Office & Laboratory**  
2500 Stagecoach Road  
Stockton, CA 95215  
TEL: 209/942-0182  
FAX: 209/942-0423

**Office & Laboratory**  
563 E. 1st Avenue  
Chico, CA 95926  
TEL: 530-43-5818  
FAX: 530/343-3807

**Office & Laboratory**  
3442 Empressa Drive, Suite D  
San Luis Obispo, CA 93401  
TEL: 805/783-2940  
FAX: 805/525-4172

**Field Office**  
Visalia, California  
Tel 3/734-9473  
Mo 559/737-2399  
FAX: 559/734-8435

### Stockton - Condition Upon Receipt (Attach to COC)

#### Sample Receipt at STK:

1. Number of ice chests/packages received: ROT
2. Were samples received in a chilled condition? Temps: 1 /     /     /     /     /      
Acceptable is above freezing to 6° C. Also acceptable is received on ice (ROI) for the same day of sampling or received at room temperature (RRT) if sampled within one hour of receipt. Client contact for temperature failures must be documented below. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received..
3. Do the number of bottles received agree with the COC?  Yes  No N/A
4. Were samples received intact? (i.e. no broken bottles, leaks etc.)  Yes  No
5. VOAs checked for Headspace?  Yes  No N/A
6. Were sample custody seals intact?  Yes  No N/A

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.  
Sample Receipt Review completed by (initials):    

#### Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 6 /     /     /     /     /      
Acceptable is above freezing to 6° C. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received.
2. Do the number of bottles received agree with the COC?  Yes  No N/A
3. Were samples received intact? (i.e. no broken bottles, leaks etc.)  Yes  No
4. Were sample custody seals intact?  Yes  No N/A

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

#### Sample Verification, Labeling and Distribution:

1. Were all requested analyses understood and acceptable?  Yes  No
2. Did bottle labels correspond with the client's ID's?  Yes  No
3. Were all bottles requiring sample preservation properly preserved?  Yes  No N/A FGL
4. VOAs checked for Headspace?  Yes  No N/A
5. Were all analyses within holding times at time of receipt?  Yes  No
6. Have rush or project due dates been checked and accepted?  Yes  No  N/A

Attach labels to the containers and include a copy of the COC for lab delivery.  
Sample Receipt, Login and Verification completed by (initials):    

#### Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
Initiated By: \_\_\_\_\_ Date: \_\_\_\_\_  
Problem: \_\_\_\_\_  
Resolution: \_\_\_\_\_

(3-16829)  
South San Joaquin Irrigation District

STK1138054

IV-09/14/2011-08:45:55

**Appendix C-5**

**Samples collected on October 27, 2011**



November 15, 2011

**South San Joaquin Irrigation District**  
Attn: Julie Jeleti  
P.O. Box 747  
Ripon, CA. 95366

Lab ID : STK1139569  
Customer : 3-16829

**Laboratory Report**

**Introduction:** This report package contains total of 9 pages divided into 3 sections:

- Case Narrative (2 pages) : An overview of the work performed at FGL.
- Sample Results (2 pages) : Results for each sample submitted.
- Quality Control (5 pages) : Supporting Quality Control (QC) results.

**Case Narrative**

This Case Narrative pertains to the following samples:

*VOC'S - citric acid*

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Lagoon	10/27/2011	10/27/2011	STK1139569-001	WW

**Sampling and Receipt Information:** The sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to the following tables:

**Organic QC**

624	<p>11/03/2011:216400 All analysis quality controls are within established criteria, except: The following note applies to Fluorobenzene, Xylenes m,p, Styrene, Toluene: 360 CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted. The following note applies to Fluorobenzene: 362 Surrogates are qualified on Control Chart Limits, these are CCV limits. See individual sample reports.</p> <p>11/03/2011:212365 All preparation quality controls are within established criteria, except: The following note applies to 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Trichloroethylene (TCE), Tetrachloroethylene (PCE), Chlorobenzene, Ethylbenzen: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery. The following note applies to 1,2-Dichloroethane (EDC), Acetone, Acrolein, Acrylonitrile, Xylenes o: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.</p>
-----	--



November 15, 2011  
South San Joaquin Irrigation District

Lab ID : STK1139569  
Customer : 3-16829

**Certification::** I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:CEA

Approved By Kelly A. Dunnahoo, B.S.

 Digitally signed by Kelly A. Dunnahoo, B.S.  
Title: Laboratory Director  
Date: 2011-11-15



November 15, 2011

Lab ID : STK1139569-001

Customer ID : 3-16829

**South San Joaquin Irrigation District**

Attn: Julie Jeleti

P.O. Box 747

Ripon, CA. 95366

Sampled On : October 27, 2011-07:05

Sampled By : Julie Jeleti

Received On : October 27, 2011-12:40

Matrix : Waste Water

Description : Lagoon |

Project : Neutralized Citric Waste

**Sample Result - Organic**

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>EPA 624</b> <sup>VOA:13</sup>								
4-Bromofluorobenzene <sup>†</sup>	108	85-144	%		624	11/03/11:212365	624	11/03/11:216400
Fluorobenzene <sup>†</sup>	149	38-182	%		624	11/03/11:212365	624	11/03/11:216400
Pentafluorobenzene <sup>†</sup>	82.7	36-180	%		624	11/03/11:212365	624	11/03/11:216400
Acetone	ND	25	ug/L		624	11/03/11:212365	624	11/03/11:216400
Acrolein	ND	5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Acrylonitrile	ND	2	ug/L		624	11/03/11:212365	624	11/03/11:216400
Benzene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Bromodichloromethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Bromoform	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Bromomethane	ND	1	ug/L		624	11/03/11:212365	624	11/03/11:216400
2-Butanone (MEK)	ND	40	ug/L		624	11/03/11:212365	624	11/03/11:216400
Carbon Disulfide	ND	5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Carbon Tetrachloride	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Chlorobenzene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Chloroethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
2-Chloroethylvinyl ether	ND	10	ug/L		624	11/03/11:212365	624	11/03/11:216400
Chloroform	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Chloromethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Dibromochloromethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,2-Dichlorobenzene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,3-Dichlorobenzene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,4-Dichlorobenzene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,1-Dichloroethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,2-Dichloroethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,1-Dichloroethylene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
trans-1,2-Dichloroethylene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,2-Dichloropropane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
cis-1,3-Dichloropropene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
trans-1,3-Dichloropropene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Ethyl Benzene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
2-Hexanone	ND	30	ug/L		624	11/03/11:212365	624	11/03/11:216400
4-Methyl-2-pentanone (MIBK)	ND	30	ug/L		624	11/03/11:212365	624	11/03/11:216400
Methylene Chloride	ND	2	ug/L		624	11/03/11:212365	624	11/03/11:216400
Methyl tert-Butyl Ether (MTBE)	ND	5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Styrene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400

November 15, 2011  
 Description : Lagoon

Lab ID : STK1139569-001  
 Customer ID : 3-16829

**Sample Result - Organic**

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
<b>EPA 624</b> <sup>VOA:13</sup>								
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Tetrachloroethylene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Toluene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,1,1-Trichloroethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
1,1,2-Trichloroethane	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Trichloroethylene	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Trichlorofluoromethane	ND	2	ug/L		624	11/03/11:212365	624	11/03/11:216400
Vinyl Acetate	ND	100	ug/L		624	11/03/11:212365	624	11/03/11:216400
Vinyl Chloride	ND	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Xylenes m,p	ND	1	ug/L		624	11/03/11:212365	624	11/03/11:216400
Xylenes o	1.0	0.5	ug/L		624	11/03/11:212365	624	11/03/11:216400
Xylenes	1	1	ug/L		624	11/03/11:212365	624	11/03/11:216400

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (VOA) VOA Preservatives: HCl pH < 2 ‡Surrogate. \* PQL adjusted for dilution.



# ENVIRONMENTAL

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November 15, 2011  
South San Joaquin Irrigation District

Lab ID : STK1139569  
Customer : 3-16829

## Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic 1,1,1-Trichloroethane(TCA)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	89.9 %	53-155	
			MSD	ug/L	10.00	85.7 %	53-155	
			MSRPD	ug/L	10.00	4.8%	≤12.9	
1,1,2,2-Tetrachloroethane	624	11/03/11:216400VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	100 %	70-137	
			MSD	ug/L	10.00	99.4 %	70-137	
			MSRPD	ug/L	10.00	0.7%	≤10.2	
1,1,2-Trichloroethane	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	80.5 %	74-123	
			MSD	ug/L	10.00	84.7 %	74-123	
			MSRPD	ug/L	10.00	5.1%	≤12.1	
1,1-Dichloroethane	624	11/03/11:216400VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	102 %	58-159	
			MSD	ug/L	10.00	100 %	58-159	
			MSRPD	ug/L	10.00	1.8%	≤13.5	
1,1-Dichloroethylene	624	11/03/11:216400VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	106 %	5-238	
			MSD	ug/L	10.00	99.8 %	5-238	
			MSRPD	ug/L	10.00	5.7%	≤15.4	
1,2-Dichlorobenzene	624	11/03/11:216400VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	129 %	69-132	
			MSD	ug/L	10.00	120 %	69-132	
			MSRPD	ug/L	10.00	7.2%	≤9.87	
1,2-Dichloroethane (EDC)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	70.8 %	55-157	
			MSD	ug/L	10.00	80.2 %	55-157	
			MSRPD	ug/L	10.00	12.4%	≤10.1	435
1,2-Dichloropropane	624	11/03/11:216400VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	118 %	74-123	
			MSD	ug/L	10.00	118 %	74-123	
			MSRPD	ug/L	10.00	0.2%	≤9.24	
1,3-Dichlorobenzene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	139 %	67-131	435
			MSD	ug/L	10.00	128 %	67-131	
			MSRPD	ug/L	10.00	8.7%	≤12.7	
1,4-Dichlorobenzene	624	11/03/11:216400VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	140 %	68-130	435
			MSD	ug/L	10.00	129 %	68-130	
			MSRPD	ug/L	10.00	8.5%	≤11.8	
2-Butanone (MEK)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<40	
			MS	ug/L	20.00	97.0 %	49-171	
			MSD	ug/L	20.00	121 %	49-171	
			MSRPD	ug/L	10.00	4.8	≤40	
624	11/03/11:216400VRG	CCV	ug/L	20.00	99.7 %	50-150		

November 15, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1139569  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic 2-Chloroethyl(vinyl) ether	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<10	
			MS	ug/L	20.00	53.0 %	42-158	
			MSD	ug/L	20.00	50.6 %	42-158	
			MSRPD	ug/L	10.00	0.49	≤10	
	624	11/03/11:216400VRG	CCV	ug/L	20.00	98.9 %	0-224	
2-Hexanone	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<30	
			MS	ug/L	20.00	80.2 %	49-160	
			MSD	ug/L	20.00	94.7 %	49-160	
			MSRPD	ug/L	10.00	2.9	≤30	
	624	11/03/11:216400VRG	CCV	ug/L	20.00	75.2 %	50-150	
4-Bromofluorobenzene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L	10.00	126 %	85-144	
			MS	ug/L	10.00	119 %	70-130	
			MSD	ug/L	10.00	110 %	70-130	
			MSRPD	ug/L	10.00	7.7%	≤30.0	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	113 %	70-130	
4-Methyl-2-pentanone (MIBK)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<30	
			MS	ug/L	20.00	87.2 %	57-151	
			MSD	ug/L	20.00	107 %	57-151	
			MSRPD	ug/L	10.00	4.0	≤30	
	624	11/03/11:216400VRG	CCV	ug/L	20.00	81.8 %	50-150	
Acetone	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<25	
			MS	ug/L	20.00	37.6 %	6-241	
			MSD	ug/L	20.00	199 %	6-241	
			MSRPD	ug/L	10.00	32	≤25	435
	624	11/03/11:216400VRG	CCV	ug/L	20.00	93.6 %	50-150	
Acrolein	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<5	
			MS	ug/L	200.0	72.2 %	5-214	
			MSD	ug/L	200.0	90.0 %	5-214	
			MSRPD	ug/L	10.00	21.9%	≤10.0	435
	624	11/03/11:216400VRG	CCV	ug/L	200.0	80.8 %	5-150	
Acrylonitrile	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<2	
			MS	ug/L	200.0	50.2 %	19-206	
			MSD	ug/L	200.0	62.3 %	19-206	
			MSRPD	ug/L	10.00	21.6%	≤10.0	435
	624	11/03/11:216400VRG	CCV	ug/L	200.0	55.4 %	5-150	
Benzene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	120 %	70-137	
			MSD	ug/L	10.00	119 %	70-137	
			MSRPD	ug/L	10.00	0.1%	≤12.4	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	125 %	64-136	
Bromodichloromethane	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	81.6 %	69-128	
			MSD	ug/L	10.00	84.8 %	69-128	
			MSRPD	ug/L	10.00	3.0%	≤10.0	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	81.7 %	65-135	
Bromoform	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	89.3 %	65-140	
			MSD	ug/L	10.00	90.8 %	65-140	
			MSRPD	ug/L	10.00	1.7%	≤10.6	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	93.1 %	71-129	
Bromomethane (Methyl Bromide)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<1.0	
			MS	ug/L	10.00	86.7 %	5-256	
			MSD	ug/L	10.00	95.7 %	5-256	
			MSRPD	ug/L	10.00	9.9%	≤27.2	

November 15, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1139569  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic								
Bromomethane (Methyl Bromide)	624	11/03/11:216400VRG	CCV	ug/L	10.00	66.3 %	14-186	
Carbon Disulfide	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<5	
			MS	ug/L	20.00	173 %	18-201	
			MSD	ug/L	20.00	185 %	18-201	
			MSRPD	ug/L	10.00	7.0%	≤10.0	
	624	11/03/11:216400VRG	CCV	ug/L	20.00	142 %	50-150	
Carbon Tetrachloride	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	89.0 %	42-166	
			MSD	ug/L	10.00	83.2 %	42-166	
			MSRPD	ug/L	10.00	6.7%	≤12.9	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	88.5 %	73-127	
Chlorobenzene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	139 %	60-122	435
			MSD	ug/L	10.00	135 %	60-122	435
			MSRPD	ug/L	10.00	3.0%	≤13.3	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	138 %	66-134	360
Chloroethane (Ethyl Chloride)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	120 %	5-282	
			MSD	ug/L	10.00	129 %	5-282	
			MSRPD	ug/L	10.00	7.4%	≤17.1	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	90.5 %	38-162	
Chloroform	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	91.3 %	65-145	
			MSD	ug/L	10.00	96.4 %	65-145	
			MSRPD	ug/L	10.00	2.5%	≤10.7	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	86.2 %	67-133	
Chloromethane(Methyl Chloride)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	163 %	32-189	
			MSD	ug/L	10.00	178 %	32-189	
			MSRPD	ug/L	10.00	8.8%	≤30.1	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	116 %	0-204	
cis-1,3-Dichloropropene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	94.5 %	77-115	
			MSD	ug/L	10.00	98.7 %	77-115	
			MSRPD	ug/L	10.00	4.4%	≤10.3	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	104 %	24-176	
Dibromochloromethane	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	74.1 %	62-126	
			MSD	ug/L	10.00	79.6 %	62-126	
			MSRPD	ug/L	10.00	6.8%	≤10.0	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	82.1 %	67-133	
Dichloromethane	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<2	
			MS	ug/L	10.00	77.7 %	5-315	
			MSD	ug/L	10.00	80.7 %	5-315	
			MSRPD	ug/L	10.00	0.30	≤2	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	89.9 %	60-139	
Ethylbenzene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	219 %	65-126	435
			MSD	ug/L	10.00	188 %	65-126	435
			MSRPD	ug/L	10.00	15.1%	≤17.3	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	184 %	59-141	360
Fluorobenzene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L	10.00	150 %	38-182	
			MS	ug/L	10.00	150 %	70-130	435
			MSD	ug/L	10.00	149 %	70-130	435

November 15, 2011  
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Lab ID : STK1139569  
 Customer : 3-16829

Quality Control - Organic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Fluorobenzene	624	11/03/11:212365VRG	MSRPD	ug/L	10.00	0.5%	≤30.0	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	149 %	70-130	362
Freon-11	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<2.0	
			MS	ug/L	10.00	108 %	24-233	
			MSD	ug/L	10.00	108 %	24-233	
			MSRPD	ug/L	10.00	0.7%	≤15.7	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	78.0 %	48-152	
Methyl tert-Butyl Ether (MTBE)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<5	
			MS	ug/L	10.00	32.7 %	49-168	435
			MSD	ug/L	10.00	37.6 %	49-168	435
			MSRPD	ug/L	10.00	0.48	≤5	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	86.0 %	50-150	
Pentafluorobenzene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L	10.00	89.3 %	36-180	
			MS	ug/L	10.00	91.2 %	70-130	
			MSD	ug/L	10.00	87.2 %	70-130	
			MSRPD	ug/L	10.00	4.6%	≤30.0	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	86.8 %	70-130	
Styrene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	179 %	65-134	435
			MSD	ug/L	10.00	162 %	65-134	435
			MSRPD	ug/L	10.00	10.0%	≤10.0	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	162 %	50-150	360
Tetrachloroethylene (PCE)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	152 %	65-124	435
			MSD	ug/L	10.00	136 %	65-124	435
			MSRPD	ug/L	10.00	11.5%	≤12.2	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	135 %	73-127	360
Toluene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	151 %	67-121	435
			MSD	ug/L	10.00	141 %	67-121	435
			MSRPD	ug/L	10.00	7.2%	≤11.6	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	141 %	74-126	360
trans-1,2-Dichloroethylene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	105 %	29-206	
			MSD	ug/L	10.00	102 %	29-206	
			MSRPD	ug/L	10.00	3.1%	≤22.6	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	108 %	69-131	
trans-1,3-Dichloropropene	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	82.1 %	72-120	
			MSD	ug/L	10.00	87.4 %	72-120	
			MSRPD	ug/L	10.00	6.3%	≤10.7	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	92.8 %	50-150	
Trichloroethylene (TCE)	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	160 %	63-136	435
			MSD	ug/L	10.00	156 %	63-136	435
			MSRPD	ug/L	10.00	2.7%	≤13.4	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	164 %	66-134	360
Vinyl Acetate	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<100.	
			MS	ug/L	20.00	43.1 %	27-197	
			MSD	ug/L	20.00	56.2 %	27-197	
			MSRPD	ug/L	10.00	2.6	≤100.	
	624	11/03/11:216400VRG	CCV	ug/L	20.00	45.6 %	10-150	
Vinyl Chloride	624	11/03/11:212365VRG	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	139 %	5-283	

November 15, 2011  
 South San Joaquin Irrigation District

Lab ID : STK1139569  
 Customer : 3-16829

**Quality Control - Organic**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Organic Vinyl Chloride	624	(SP 1111076-002)	MSD	ug/L	10.00	148 %	5-283	
			MSRPD	ug/L	10.00	5.9%	≤15.6	
	624	11/03/11:216400VRG	CCV	ug/L	10.00	96.7 %	4-196	
Xylenes m,p	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<1.0	
			MS	ug/L	20.00	215 %	62-137	435
			MSD	ug/L	20.00	185 %	62-137	435
	624	11/03/11:216400VRG	MSRPD	ug/L	10.00	15.3%	≤30.0	
	624	11/03/11:216400VRG	CCV	ug/L	20.00	184 %	50-150	360
Xylenes o	624	11/03/11:212365VRG (SP 1111076-002)	Blank	ug/L		ND	<0.5	
			MS	ug/L	10.00	165 %	65-130	435
			MSD	ug/L	10.00	146 %	65-130	435
		624	11/03/11:216400VRG	MSRPD	ug/L	10.00	12.2%	≤11.5
	624	11/03/11:216400VRG	CCV	ug/L	10.00	148 %	50-150	
<b>Definition</b>								
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.							
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.							
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.							
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.							
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.							
ND	: Non-detect - Result was below the DQO listed for the analyte.							
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.							
<b>Explanation</b>								
360	: CCV above Acceptance Range (AR). Samples which were non detect for this analyte were accepted.							
362	: Surrogates are qualified on Control Chart Limits, these are CCV limits. See individual sample reports.							
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.							

## **Appendix C-6**

**Flow Comparison for SSJID Wastewater Discharged to the City's  
WWTP  
(Provided in Figure 1 of Summary Report)**

# Neutralized Citric Gallons to Escalon from SSJID

**Table 1 - Analysis of SSJID Wastewater Discharged to City of Escalon WWTP**

Date	SSJID WW, gal	Total influent Domestic WW, gal	Ratio of SSJID WW to Domestic WW	Total influent Industrial/Storm WW	Ratio of SSJID WW to Industrial/Storm WW
<b><u>2013</u></b>					
Jan	663,000	17,141,400	3.9%	15,257,537	4.3%
Feb	461,500	13,389,000	3.4%	1,076,386	42.9%
Mar	6,500	15,520,100	0.0%	2,707,561	0.2%
Apr	500,500	15,336,200	3.3%	2,500,788	20.0%
Jun	195,000	14,848,800	1.3%	6,248,936	3.1%
Aug	195,000	16,191,300	1.2%	77,946,514	0.3%
Dec	702,000	15,528,700	4.5%	9,505,807	7.4%
<b><u>2014</u></b>					
Apr	78,000	15,019,000	0.5%	5,858,845	1.3%
May	435,500	15,676,000	2.8%	2,445,082	17.8%

## **Appendix D**

### **Legal Authority Review Checklist: A Comparison of the City's SUO and the Federal Regulations at 40 CFR 403**

## CHECKLIST – PRETREATMENT PROGRAM LEGAL AUTHORITY REVIEWS

NAME OF POTW: City of Escalon Wastewater Treatment Plant

DATE OF REVIEW: 1/11/2015

Note 1: Several changes to the National Pretreatment Regulations made as a result of the 2005 revisions to the General Pretreatment Regulations (streamlining rule, 70 FR 60134-60198: October 14, 2005) are more stringent than the previous federal requirements and therefore are considered required modifications for the POTW. Therefore, to the extent that existing POTW legal authorities are inconsistent with those required changes, they must be revised. Where local authorities are already consistent with the required provisions, further changes are not necessary.

Note 2: This review focuses on whether the City of Escalon's legal authority contains sections that are similar to the intent and purposes of the federal national pretreatment program requirements. The City of Escalon's wastewater treatment plant is not a National Pollutant Discharge Elimination System (NDPES) permittee under the Clean Water Act (CWA) and is not required at present to have a pretreatment program consistent with the requirements of the federal CWA program.

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
<b>A. Definitions [403.3 &amp; 403.8(f)(2)]</b>							
1. Act, Clean Water Act	403.3(b)	§ 1.4 A					Term not defined.
2. Authorized or Duly Authorized Representative of the User	403.12(l)	§ 1.4 C				13.08.020	Defines the term “director” of public works and refers to other persons as designated by the director.
3. Best Management Practices or BMPs	403.3(e)	§ 1.4 E			X		Terms not defined.
4. Categorical Pretreatment Standard or Categorical Standard	403.6	§ 1.4 F			X		
5. Indirect Discharge or Discharge	403.3(i)	§ 1.4 M					
6. Industrial User (or equivalent)	403.3(j)	§ 1.4 LL				13.08.020	Defines the terms “industrial waste” and “user.”

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
7. Interference	403.3(k)	§ 1.4 O			X	13.08.400	Uses the term but does not define it and prohibits unauthorized interferences to the sewer system.
8. National Pretreatment Standard, Pretreatment Standard, or Standard	403.3(l)	§ 1.4 BB			X		Terms not defined.
9. New Source	403.3(m)	§ 1.4 T					
10. Pass Through	403.3(p)	§ 1.4 V			X		
11. Pretreatment Requirement	403.3(t)	§ 1.4 AA			X	13.08.060	Uses term “pretreatment” but does not define it.
12. Publicly Owned Treatment Works or POTW	403.3(q)	§ 1.4 DD					Terms not defined.
13. Significant Industrial User <i>[NOTE: §1.4 GG(3) is an optional streamlining provision for Nonsignificant Categorical Industrial User classification.]</i>	403.3(v)	§ 1.4 GG			X		
14. Significant Noncompliance	403.8(f)(2)(vii)	§ 9 (A-H)			X		
15. Slug Load or Slug Discharge	403.8(f)(2)(vi)	§ 1.4 HH			X		
16. Other definitions based on terms used in the POTW Ordinance					X		

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
<b>B. National Pretreatment Standards – Prohibited Discharges</b>							
1. General Prohibitions							
a. Interference	403.5(a)	§ 2.1A			X	13.08.400 13.08.350	Contains a prohibition for “interference” but none for “pass through”. Section 13.08.350 enables City to disconnect or plug any connections of concern.
b. Pass Through	403.5(a)	§ 2.1A			X		
2. Specific Prohibitions [403.5(b)]							
a. Fire/Explosion Hazard (60 °C or 140 °F flashpoint)	403.5(b)(1)	§ 2.1B(1)			X	13.08.350	None; see item 2.e below.
b. pH/Corrosion	403.5(b)(2)	§ 2.1B(2)			X (nothing less than 5.0 s.u.)	13.08.350	pH may not be lower than 5.5 standard units (s.u.) or higher than 8.5 s.u. unless authorized by a permit issued by the City.

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
c. Solid or Viscous/Obstruction	403.5(b)(3)	§ 2.1B(3)			X	13.08.350	Includes following prohibitions: - no oil or grease (O&G) of vegetable origin greater than (>) 300 milligrams per liter (mg/L); - no O&G of mineral or petroleum origin > 100 mg/L; -no total identifiable chlorinated hydrocarbons in excess of 0.02 mg/L; -no phenolic compounds >1.0 mg/L.
d. Flow Rate/Concentration (BOD, etc.)	403.5(b)(4)	§ 2.1B(4)			X		None. City's service fees are based on flow volume and concentrations of biological oxygen demand (BOD) and total suspended solids (TSS).
e. Heat; exceeds 40 °C (104 °F)	403.5(b)(5)	§ 2.1B(5)			X	13.08.350	Limit is 65.5 °C.
f. Petroleum/Nonbiodegradable Cutting/Mineral Oils	403.5(b)(6)	§ 2.1B(6)			X		See item 2.c above.

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
g. Toxic Gases/Vapor/Fumes	403.5(b)(7)	§ 2.1B(7)			X		No prohibitions included in ordinance.
h. Trucked/Hauled Waste	403.5(b)(8)	§ 2.1B(8)			X		
3. National Categorical Standards	403.8(f)(1)(ii)	§ 2.2			X		
4. Local Limits Development <i>[NOTE: POTWs may develop Best Management Practices (BMPs) to implement the prohibitions listed in 40 CFR 403.5(a)(1). Such BMPs shall be considered local limits and Pretreatment Standards.]</i>	403.5(c) & (d)	§ 2.4			X		
5. Prohibition Against Dilution as Treatment	403.6(d)	§ 2.6			X		
6. Best Management Practices Development <i>[NOTE: Optional streamlining provision.]</i>	403.5(c)(4)	§ 2.4C					
<b>C. Control Discharges to POTW System</b>							
1. Deny/Condition New or Increased Contributions	403.8(f)(1)(i)	§§ 4.8 & 5.2				13.08.070 13.08.130	Section 13.08.070 allows the City to impose further conditions. Section 13.08.130 authorizes City to charge additional fees if contributions increase.
2. Individual Control Mechanism (e.g., permit) to ensure compliance - <i>Permit Content</i>	403.8(f)(1)(iii)	§ 4.2				13.08.030	Requires permits; specifies application contents but does not specify permit contents.
a. Statement of Duration	403.8(f)(1)(B)(1)	§§ 5.1 & 5.2A(1)			X	13.08.030	States that permits are “required” on an annual basis.

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
b. Statement of Nontransferability	403.8(f)(1)(B)(2)	§5.2A(2)			X		Does not specify permit contents.
c. Effluent Limits	403.8(f)(1)(B)(3)	§ 5.2A(3)			X		
d. Best Management Practices <i>[Note: This is a required streamlining provision for a CIU with BMP requirements as part of its Categorical Standards. But if BMPs are being applied to other CIUs or noncategorical SIUs without categorical BMP requirements, this provision would be optional and is required only if the POTW has incorporated the use of BMPs (§ 2.4 C).]</i>	403.8(f)(1)(B)(3)	§ 5.2A(3)			X		
e. Self-Monitoring Requirements	403.8(f)(1)(B)(4)	§ 5.2A(4)			X		
f. Reporting & Notification Requirements	403.8(f)(1)(B)(4)	§ 5.2A(4)			X		
g. Record-Keeping Requirements	403.8(f)(1)(B)(4)	§ 5.2A(4)			X		
h. Process for Seeking a Waiver for Pollutants Not Present or Expected to be Present <i>[NOTE: Optional streamlining provision. Required only if the POTW has incorporated § 6.4B of the Model SUO.]</i>	403.8(f)(1)(B)(4) & 403.12(e)(2)	§ 5.2A(5)					
i. Statement of Applicable Civil and Criminal Penalties	403.8(f)(1)(B)(5)	§ 5.2A(6)				13.08.460	

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
j. Slug Discharge Requirements (if necessary) <i>[NOTE: Required streamlining change. Where the POTW has determined that slug controls are necessary the ordinance must provide authority for the POTW to include such requirements in IU permits.]</i>	403.8(f)(1)(B)(6)	§ 5.2A(7)			X		Does not specify.
k. Specific Waived Pollutant <i>[NOTE: Optional streamlining provision. Required only if the POTW has incorporated § 6.4B of the Model SUO.]</i>	403.8(f)(1)(B)(4)	§ 5.2A(8)					
l. Permit Application/Reapplication Requirements <i>[Note: Optional permit provision]</i>		§§ 5.3 & 5.7				13.08.030	States that permits are “required” on an annual basis.
m. Permit Modification <i>[Note: Optional permit provision]</i>		§ 5.4				13.08.070	Provides authority for City to change conditions or revoke permits; not specified as explicit permit conditions.
n. Permit Revocation/Termination <i>[Note: Optional permit provision]</i>		§§ 5.6 & 10.8				13.08.070	
o. Proper Operation and Maintenance <i>[Note: Optional permit provision]</i>		§ 3.1			X	13.08.240	Contains overall provision that property owners are to maintain all laterals, connection lines, and appurtenances from premises to the main. Does not discuss maintenance of pretreatment

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
							equipment but could be implied.
p. Duty of Halt/Reduce <i>[Note: Optional permit provision]</i>		§ 10.7				13.08.370	Overall provision that allows director to disconnect any user in event of emergency. The term “emergency”, however, is not defined.
q. Requirement to Submit Chain-of-Custody Forms with Monitoring Data <i>[Note: Optional permit provision]</i>					X		Requirement not discussed in ordinance nor stated as permit element.
3. General Control Mechanism to Ensure Compliance <i>[NOTE: Optional streamlining provision. Required only if the POTW has incorporated the use of General Permits (§ 4.6 of the Model SUO).] - Permit Content</i>	403.8(f)(1)(iii)(A)	§ 4.2 & 4.6					See comments under Item C.2 above. The ordinance requires industrial users to have permits. It does not specify type. City’s WWTP is not an NPDES facility, so permit type as used under CWA not applicable.
a. Statement of Duration	403.8(f)(1)(B)(1)	§§ 5.1 & 5.2A(1)					
b. Statement of Nontransferability	403.8(f)(1)(B)(2)	§ 5.2A(2)					
c. Effluent Limits	403.8(f)(1)(B)(3)	§ 5.2A(3)					
d. Best Management Practices	403.8(f)	§ 5.2A(3)					

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
<i>[Note: This is a required streamlining provision for a CIU with BMP requirements as part of its Categorical Standards. But if BMPs are being applied to other CIUs or noncategorical SIUs without categorical BMP requirements, this provision would be optional and is required only if the POTW has incorporated the use of BMPs (§ 2.4C).]</i>	(1)(B)(3)						See comments under Item 2.C. above.
e. Self-Monitoring Requirements	403.8(f) (1)(B)(4)	§ 5.2A(4)					
f. Reporting & Notification Requirements	403.8(f) (1)(B)(4)	§ 5.2A(4)					
g. Record-Keeping Requirements	403.8(f) (1)(B)(4)	§ 5.2A(4)					
h. Process for Seeking a Waiver for Pollutants Not Present or Expected to be Present <i>[Note: Required only if POTW has incorporated the use of Pollutants Not Present and § 6.4 of the Model SUO.]</i>	403.8(f) (1)(B)(4) & 403.12(e) (2)	§ 5.2A(5)					
i. Statement of Applicable Civil and Criminal Penalties	403.8(f) (1)(B)(5)	§ 5.2A(6)					
j. Slug Discharge Requirements (if necessary) <i>[NOTE: Required streamlining change. The ordinance should indicate that a user is required to develop a slug discharge control plan if determined by the POTW to be necessary.]</i>	403.8(f) (1)(B)(6)	§ 5.2A(7)					
k. Permit Application/Reapplication Requirements <i>[Note: Optional permit provision]</i>		§§ 5.3 & 5.7					
l. Permit Modification		§ 5.4					

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
<i>[Note: Optional permit provision]</i>							See comments under Item 2.C. above.
m. Permit Revocation/Termination <i>[Note: Optional permit provision]</i>		§§ 5.6 & 10.8					
n. Proper Operation and Maintenance <i>[Note: Optional permit provision]</i>		§ 3.1					
o. Duty of Halt/Reduce <i>[Note: Optional permit provision]</i>		§ 10.7					
p. Requirement to Submit Chain-of-Custody Forms with Monitoring Data <i>[Note: Optional permit provision]</i>							
<b>D. Required Reports</b>							
1. Develop Compliance Schedule for Installation of Technology	403.8(f)(1)(iv)	§§ 5.2b(2) & 10.4			X		Item not discussed in ordinance.
2. Reporting Requirements [403.12] <i>Types of Reports</i>							
a. Baseline Monitoring Report	403.12(b)	§ 6.1					Item not discussed in the ordinance.
(i) Identifying Information	403.12(b)(1)	§ 6.1B(1) & § 4.5A(1)a			X		
(ii) Other Environmental Permits Held	403.12(b)(2)	§§ 6.1B(1) & 4.5A(2)			X		
(iii) Description of Operations	403.12(b)(3)	§§ 6.1B(1) & 4.5A(3)a			X		
(iv) Flow Measurements	403.12(b)(4)	§§ 6.1(b)(2) & 4.5A(6)			X		
(v) Measurement of Pollutants	403.12(b)(5)	§ 6.1B(2)			X		
(vi) Certification	403.12(b)(6)	§ 6.1B(3)			X		
(vii) Compliance Schedule	403.12(b)(7)	§ 6.1B(4)			X		
b. Compliance Schedule Progress Report	403.12(c)	§ 6.2			X		
c. Report on Compliance with Categorical	403.12(d)	§ 6.3			X		

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
Pretreatment Standard Deadline							
d. Periodic Reports on Continued Compliance							
- From categorical users	403.12(e)	§ 6.4A			X		Item not discussed in ordinance.
- From significant noncategorical users	403.12(h)	§ 6.4A			X		
e. Notice of Potential Problems to be Reported Immediately (Including Slug Loads)	403.12(f)	§ 6.6			X		
f. Notification of Changes Affecting Potential for a Slug Discharge [ <i>NOTE: Required streamlining revision</i> ]	403.8(f)(2)(vi)	§ § 6.5 & 6.6			X		
g. Notice of Violation/Sampling Requirement [ <i>NOTE: Required streamlining revision.</i> ]	403.12(g)(2)	§ 6.8			X		
h. Requirement to Conduct Representative Sampling	403.12(g)(3)	§ 6.4E			X		
i. Notification of Changed Discharge	403.12(j)	§ 6.5			X		
j. Notification of Discharge of Hazardous Waste	403.12(p)	§ 6.9			X		
<i>Other Reporting Requirements</i>							
k. Data Accuracy Certification & Authorized Signatory	403.6(a)(2)(ii) & 403.12(l)	§§ 6.4D & 6.14			X	13.08.45	Contains overall prohibition on falsification of records.
l. Record-Keeping Requirement (3 years or longer)	403.12(o)	§ 6.13			X		Items not discussed in ordinance.

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
- Including documentation associated with Best Management Practices <i>[NOTE: Required streamlining provision.]</i>	403.12(o)	§ 6.13			X		Items not discussed in ordinance.
m. Submission of All Monitoring Data <i>[NOTE: Required streamlining revision]</i>	403.12(g)(6)	§ 6.4F			X		
n. Annual Certification by Nonsignificant Categorical Industrial Users <i>[Note: Optional provision, required only if the POTW has incorporated §1.4GG(3) of the Model SUO.]</i>	403.3(v)(2)	§§ 4.7C & 6.14B			X		
o. Certification of Pollutant Not Present <i>[NOTE: Optional provision, required only if the POTW has incorporated § 6.4 B of the Model SUO]</i>	403.12(e)(2)(v)	§ 6.14C			X		
<b>E. Test Procedures [40 CFR Part 136 &amp; 403.12(g)]</b>							
1. Analytical Procedures (40 CFR Part 136) <i>[NOTE: Required streamlining provisions]</i>	403.12(g)	§ 6.10			X		Items not discussed in ordinance
2. Sample Collection Procedures <i>[NOTE: Required streamlining provisions]</i>	403.12(g)(3) & (4)	§ 6.11			X		
<b>F. Inspection and Monitoring Procedures [403.8(f)]</b>							
1. Right to Enter All Parts of the Facility at Reasonable Times	403.8(f)(1)(v)	§ 7.1			X	13.08.260	Authorizes entry for purposes of checking fixtures and establishment of service charges.
2. Right to Inspect Generally for Compliance	403.8(f)(1)(v)	§ 7.1			X		
3. Right to Take Independent Samples	403.8(f)(1)(v), 403.8(f)(2)(v) & 403.8(f)(2)(vii)	§ 7.1			X		Items not discussed in ordinance.

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
4. Right to Require Installation of Monitoring Equipment	403.8(f)(1)(iv)	§ 7.1			X		Items not discussed in ordinance.
5. Right to inspect and copy records	403.12(o)(2)	§ 7.1			X		
<b>G. Remedies for Noncompliance (Enforcement) [403.8(f)(1)(vi)]</b>							
1. Non-Emergency Response							
a. Injunctive Relief	403.8(f)(1)(vi)	§ 11.1				13.08.460	Provides City the authority to petition the court for issuance of injunctive or other equitable relief.
b. Civil/criminal Penalties	403.8(f)(1)(vi)	§§ 11.2 & 11.3				13.08.460	Provides for civil enforcement only.
2. Emergency Response							
a. Immediately Halt Actual/Threatened Discharged	403.8(f)(1)(vi)(B)	§ 10.7				13.08.370	Allows director to “discontinue any user in case of an emergency.”
3. Legal Authority to Enforce Enforcement Response Plan	403.8(f)(1)(vi)	§ 11.4					Item not discussed in ordinance.
<b>H. Public Participation</b>							
1. Publish List of Industrial Users in Significant Noncompliance <i>[NOTE: Required streamlining revision]</i>	403.8(f)(2)(viii)	§ 9					Item not discussed in ordinance.
2. Access to Data [403.8(f)(1)(vii) & 403.14]							
a. Government	403.14(a) & (c)	§ 8					Item not discussed in ordinance.
b. Public	403.14(b)	§ 8					
<b>I. Optional Provisions</b>							
1. Net/Gross Adjustments <i>[streamlining provision]</i>	403.15	§ 2.2 D					

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
2. Equivalent Mass Limits for Concentration Limits <i>[streamlining provision]</i>	403.6(c)	§ 2.2 E					Items not discussed in ordinance.
3. Equivalent Concentration Limits for Mass Limits <i>[streamlining provision]</i>	403.6(c)	§ 2.2 F					
4. Upset Notification	403.16	§ 13.1			X		
5. Waive Monitoring for Pollutant Not Present or Expected to be Present <i>[streamlining provision]</i>	403.12(e)(2)	§ 6.4B			X		Items not discussed in ordinance.
6. Reduce Periodic Compliance Reporting <i>[streamlining provision]</i>	403.12(e)(3)	§ 6.4C					
7. Other Special Agreement or Waivers (Excluding Wavier of National Categorical Pretreatment Standards and Requirements)					X		
8. Hauled Waste Reporting/Requirements		§ 3.4			X		
9. Grease Interceptor Reporting/Requirements		§ 3.2 C			X		
10. Authority to Issue Notice of Violations (NOVs)		§ 10.1				13.08.370	Provides authority in event of violation of any of ordinance provisions.
11. Authority to Issue Administrative Orders (AOs)					X		Item not included in ordinance.
12. Authority to Issue Administrative Penalties		§ 10.6			X	13.08.390	Allows City to assess a charge if discharge causes an obstruction, damage, or other impairment to City facilities.
13. Authority to Enforce Against Falsification or Tampering					X	13.08.450 13.08.370	Authority is not explicitly provided for this item.

NONE = No revision necessary

REQ = Require Revision

REC = Recommend Revision

	Part 403 Citation	Model SUO Section	REVISIONS			POTW Ordinance Section	Comments/Notes
			NONE	REQ	REC		
14. Any Other Supplemental Enforcement Actions as Noted in the POTW's Enforcement Response Plan					X		Items not discussed in ordinance.
15. Permit Appeals Procedures					X		
16. Penalty or Enforcement Appeals Procedures					X		
17. Bypass Notification	403.17	§ 13.3			X		

Document(s) submitted for review:

Chapter 13.08: Sewer Use System, City of Escalon

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Name of Reviewers

Jan McGoldrick, PG Environmental, LLC  
Kettie Holland, PG Environmental, LLC

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# CITY OF ESCALON

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February 17, 2015

Howard Hold, P.G.  
Senior Engineering Geologist  
WDRs Compliance and Enforcement Unit  
Central Valley Regional Water Quality Control Board  
11020 Sun Center Dr. #200  
Rancho Cordova, CA 95670-6114

Re: Cease and Desist Oder R5-2014-0156, City of Escalon

Dear Mr. Hold

In accordance with the above referenced Cease and Desist Order please accept the attached report as fulfillment for order 2 regarding an Odor Identification and Mitigation Plan, due February 15, 2015, with a plan describing how the wastewater treatment plant and Del Rio subdivision will be continuously monitored using real time sensors.

The attached report was prepared by Black Water Consulting Engineers, Inc. and focuses on maintaining compliance with the WDRs for identifying and monitoring odor generated at the WWTP for the 2015 winter and spring seasons and long term compliance as it relates to treatment and operational improvements to reduce nuisance odors to the public off-site. Please note that it has been discovered that the pond referenced as Pond 16 is actually Pond 19. This change has been noted within the report and the same will be done for future reports.

The City proposes to the CVRWQCB to implement odor identification and monitoring plan using a fixed source sample methodology to identify odor sources and quantify odor concentrations at the locations suspected to generate the highest odor concentration. Included in the report are the proposed locations of fixed source sampling. While researching the OdoWatch system for application at the City of Escalon WWTP, it identified that the proper application of the equipment is to be placed at the source of the odor, and not at the off-site location where odors are detected. The City requests the CVRWQCB reconsider the requirement to place monitoring equipment at the Del Rio subdivision and allow the City to use constant, measured odor emission rates generated at the odor source locations with an OdoWatch system, or like system, and dispersion model to monitor, the potential for off-site nuisance odors. If the proposed plan does not successfully produce data to assist the City with mitigating odors at the WWTP, resulting in continued nuisance odors off-site, then the City will consider installing additional monitoring equipment at the odor source. The City is currently considering entering into a contract with Kruger, Inc. the U.S. distributor for Veolia Water Technologies to furnish, deliver and configure an odor monitoring system. Veolia is willing to discuss the appropriate application of the system with the CVRWQCB.



# CITY OF ESCALON

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With regards to the attached report *"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and 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 fine and imprisonment."*

If you have any questions or need any additional information, you may contact me at (209) 691-7421.

Sincerely,

A handwritten signature in cursive script that reads "Tammy Alcantor".

Tammy Alcantor, City Manager

Enclosures

Odor Identification and Mitigation Plan  
for the  
City of Escalon  
Wastewater Treatment Plant

February 2015

Prepared for:

CITY OF ESCALON  
2060 MCHENRY AVENUE  
ESCALON, CA 95320

Prepared by:

BLACK WATER CONSULTING ENGINEERS, INC.  
605 STANDIFORD SUITE N  
MODESTO, CA 95350  
(209) 322-1817



2/17/15

**BLACK WATER**  
CONSULTING ENGINEERS, INC.

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### APPENDIXES

Appendix A – Veolia Water Technologies Preliminary Proposal for Odor Monitoring System
Appendix B –2014 Odor Complaints List
Appendix C – OdoWatch Brochure

## 1 Introduction

The City of Escalon (City) Wastewater Treatment Plant (WWTP) operates under the California Regional Water Quality Control Board, Central Valley Region (Regional Board) Waste Discharge Requirements Order No. 5-00-142 (WDRs). A Notice of Violation (NOV) was issued to the WWTP on September 24, 2014 and Cease and Desist Order (CDO) Order R5-2014-0156 was adopted by the Regional Board on December 5, 2014. The CDO includes a requirement to submit an Odor Identification and Mitigation Plan by February 15, 2015. As required by the CDO, this Odor Identification and Mitigation Plan includes a description of how the City will: 1) identify odor sources and locations generated at the WWTP reported as nuisance odors by the public at a nearby residential community; 2) monitor odors at the WWTP and off-site locations; and 3) implement a plan to identify treatment or operational improvements to mitigate odor and provide community awareness and notification to the public.

## 2 Background

Background information regarding the WWTP, WDRs and CDO, and industrial discharges to the WWTP are provided in this section for reference.

### 2.1 Description of WWTP

The WWTP is located at 25100 West River Road. A residential community with a country club and golf course, herein referred to, jointly, as the “Del Rio subdivision” is located just south of the WWTP across the Stanislaus River, refer to Figure 1.

The WWTP consists of two separate treatment and disposal processes. The Industrial/Storm portion of the WWTP receives industrial wastewater generated by two food processing industries, Escalon Premier Brands (EPB) and Eckert Cold Storage (Eckert), and stormwater from a portion of the City. EPB is a tomato processing facility and is allowed to discharge up to 2.4 mgd of industrial wastewater between June 1 – November 15. EPB also periodically discharges small amounts of clean water during the remainder of the year. Eckert is a vegetable processing facility and is allowed to discharge up to 1.5 mgd of industrial wastewater between May 1 – December 10.

The Domestic portion of the WWTP receives municipal wastewater generated by the City. Each portion of the WWTP consists of aerated ponds for treatment (biochemical oxygen demand [BOD] and total suspended solids [TSS] removal) and percolation ponds for disposal. Figure 1 presents a site plan of the WWTP. Table 1 summarizes available historical information for the industrial/storm treatment and disposal ponds [1, 2]. Table 2 summarizes available historical information for the domestic treatment and disposal ponds [2,3]. City staff suspects that current pond depths differ from the information presented in historical reports and is investigating methods for measuring the pond depths in the near future.

I:\114075 ESCALON\_SEWER\_PS\_ROW\CAD\EXHIBITS\WIP\ESCALON\_WWTP\_SITE\_PLAN (WITH\_COUNTRY CLUB).DWG PLOT: 2/12/2015 5:21:40 PM BY ADAM HUTCHINGS



DEL RIO GOLF AND COUNTRY CLUB

UNION PACIFIC RAILROAD

SPY GLASS DRIVE

DEL RIO GOLF AND COUNTRY CLUB

STANISLAUS RIVER

EAST RIVER ROAD



<u>POND</u>	<u>DESCRIPTION</u>	<u>POND</u>	<u>DESCRIPTION</u>
1	INDUSTRIAL TREATMENT POND	10	INDUSTRIAL PERCOLATION POND
2	INDUSTRIAL TREATMENT POND	11	INDUSTRIAL PERCOLATION POND
3	INDUSTRIAL TREATMENT POND	12	INDUSTRIAL PERCOLATION POND
4	INDUSTRIAL TREATMENT POND	13	INDUSTRIAL PERCOLATION POND
5	DOMESTIC TREATMENT POND	14	INDUSTRIAL PERCOLATION POND
6	DOMESTIC TREATMENT POND	15	INDUSTRIAL PERCOLATION POND
7	DOMESTIC TREATMENT POND	19	INDUSTRIAL PERCOLATION POND
8	DOMESTIC TREATMENT POND	20	DOMESTIC PERCOLATION POND
9	DOMESTIC TREATMENT POND	22	DOMESTIC PERCOLATION POND
		23	DOMESTIC PERCOLATION POND
		24	DOMESTIC PERCOLATION POND

\*POND 19 (REFERRED TO AS POND 16 IN CDO)

**FIGURE 1**  
 CITY OF ESCALON  
 WASTEWATER TREATMENT FACILITY  
 SITE PLAN  
 25100 EAST RIVER ROAD  
 ESCALON, CA  
 FEBRUARY 2015

**BLACKWATER**  
 CONSULTING ENGINEERS, INC.  
 605 STANDIFORD AVE., SUITE N, MODESTO, CA 95350 PH. 209.322.1820

**Table 1 – WWTP Industrial/Storm Treatment and Disposal Ponds**

Pond #	Type of Pond	Surface Area (ac)	Volume (MG)	Nominal Depth (ft)
1	Treatment	2.8	5.4	5.9
2	Treatment	1.7	1.7	3.1
3	Treatment	1.8	1.8	3.1
4	Treatment	2.3	3.0	4.0
<i>Subtotal</i>		<i>8.6</i>	<i>11.9</i>	
10	Percolation	1.1	2.2	6.2
11	Percolation	2.1	6.1	8.9
12	Percolation	4	11.7	8
13	Percolation	4.2	6.0	4-4.8
14	Percolation	4.5	6.2	3.9-4.7
15	Percolation	4.0	5.3	3.8-4.6
19	Percolation	2.7	3.3	3.8
<i>Subtotal</i>		<i>22.6</i>	<i>40.8</i>	

**Table 2 – WWTP Domestic Treatment and Disposal Ponds**

Pond #	Type of Pond	Surface Area (ac)	Volume (MG)	Nominal Depth (ft)
5	Treatment	1.1	3.0	7.2
6	Treatment	1.3	3.2	8.6
7	Treatment	1.5	4.3	9.9
8	Treatment	1.6	5.4	10.8
9	Treatment	1.6	6.1	12.8
<i>Subtotal</i>		<i>7.1</i>	<i>22.0</i>	
20	Percolation	3.8	9.8	9.0
22	Percolation	6.3	6.2	3.0
23	Percolation	3.4	3.3	3.0
24	Percolation	3.9	6.3	9.0
<i>Subtotal</i>		<i>17.4</i>	<i>25.6</i>	

## 2.2 Summary of Waste Discharge Requirements and Cease and Desist Order

The WDRs for the WWTP include prohibitions, discharge specifications, and provisions. For reference, some of the prohibitions and provisions related to the WWTP, to be addressed in this Odor Identification and Mitigation Plan are summarized below. Refer to the WDRs for a complete listing of the prohibitions and provisions.

1. Objectionable odors originating at the WWTP shall not be perceivable beyond the limits of the WWTP.
2. Dissolved oxygen concentrations monitoring levels shall be monitored at all ponds on a weekly basis and shall not be less than 1.0 mg/L, to determine if there are potential odor issues.

The CDO, previous Notice of Violation, and recent inspection reports identified several violations of the WDRs, including:

1. Objectionable odor complaints related to the WWTP were documented in July and August 2000, August 2001, June and July 2002, and July and August 2003.
2. Odor complaint from resident located in the Del Rio subdivision on August 5, 2014. This odor could not be confirmed by City staff or the San Joaquin Valley Unified Air Pollution Control District (Air District).
3. Four odor complaints were reported between August 6, 2014 and September 13, 2014. Regional Board staff inspected the WWTP on September 17, 2014 and observed odors in the vicinity of industrial wastewater percolation ponds 14 and 15.
4. 59 odor complaints between July 19, 2014 and October 6, 2014, with 20 odor complaints confirmed by the Air District.
5. Odor complaints on October 7th, 8th, and 9th, 2014.
6. Lack of dissolved oxygen concentration monitoring in percolation ponds from August through October 2013.

## 3 Maintaining Compliance with Waste Discharge Requirements

This Odor Identification and Mitigation Plan focuses on maintaining compliance with the WDRs for identifying and monitoring odor generated at the WWTP for the 2015 winter and spring seasons and long term compliance as it relates to treatment and operational improvements to reduce nuisance odors to the public off-site. In particular, the plan focuses on: identifying specific odor sources at the WWTP site; installation of a monitoring system to identify and alert WWTP staff of odor concentration levels associated with detected nuisance odors at the Del Rio subdivision; interpretation of data collected from the odor monitoring system and operation and treatment data to identify causes for off-site odors; implementing a plan for operational and treatment improvements to mitigate off-site nuisance odors; and providing community awareness through notifications and a public meeting describing the monitoring and mitigation plan.

The CDO included additional requirements for the completion of evaluations and submission of technical reports to determine the cause of the WDR violations. These evaluations and reports will provide guidance for development and implementation of improvements to achieve long-term compliance.

### 3.1 Odor Identification and Monitoring

The City is in the process of implementing an odor identification plan and procuring monitoring equipment and services. The CDO states that this plan describes how the City intends to continuously monitor the presence of nuisance odors associated with the wastewater treatment and disposal. The CDO also states that at least one real-time sensor, such as the OdoWatch system, be installed within the Del Rio subdivision. However, the OdoWatch system and E-Nose technology does not monitor odors at the receptor location. Instead, the OdoWatch system is a modeling system that utilizes fixed source odor sampling data and/or real-time E-Nose odor data obtained from an odor source, in conjunction with data from a weather station, to determine how the weather will dissipate odor from the source location, where the odor will travel, and the concentrations of odor detectable at on-site and off-site locations. This information is presented visually as an odor plume. Consequently, the installation of an OdoWatch system with an E-Nose at the Del Rio subdivision would not be a correct application of the equipment, as the source of the odors is not generated from the Del Rio Subdivision. OdoWatch does have a real-time detection device (OdoSulf) that can detect hydrogen sulfide, ammonia, chlorine, methane, and carbon dioxide; however, these gases are not considered to be odors generated by the WWTP and contributing to odors detected at the Del Rio subdivision.

The OdoWatch E-Nose equipment and availability of alternative technologies for real-time odor sensors or detection devices are limited, as most are manufactured outside of the United States, and the cost for the equipment is high. As a result, the City proposes to implement odor identification and monitoring plan using fixed source sample methodology to identify odor sources and quantify odor concentrations at the locations considered to generate the highest odor concentration. The data will then be input into the OdoWatch modeling system to generate an odor plume based on real-time weather measurements. If the proposed plan does not successfully produce data to assist the City with mitigating odors at the WWTP, resulting in nuisance odors off-site, then the City will consider obtaining additional fixed source samples or installing an E-Nose.

The City is considering entering into a contract with Kruger, Inc. the U.S. distributor for Veolia Water Technologies (Veolia) to furnish, deliver, and configure an odor monitoring system, refer to Appendix A for the preliminary proposal. The Veolia proposal plan uses a fixed source sampling method and a real-time weather measurement station to model odor concentrations at off-site locations from odors originating at the WWTP. The proposal is preliminary, as a site visit by Kruger staff is needed to refine the services and equipment recommended to implement the proposed plan. Veolia is a partner company to OdoTech, the manufacturer of the OdoWatch system that provides fixed source sampling and real-time odor monitoring services.

This section discusses the proposed odor identification and monitoring plan, the methodology and equipment proposed to identify and monitor the presence of nuisance odors at the WWTP and off-site locations, specifically the Del Rio subdivision.

### 3.1.1 Odor Identification

The Del Rio golf course is located approximately 391 feet south of WWTP pond 11, and the residential area is located approximately 1,500 feet from WWTP pond 11. Most of the odor complaints are from residents located at Spy Glass Drive within the Del Rio subdivision, refer to Appendix B for the odor complaints list for 2014.

The first step to reduce or eliminate nuisance odors detected at the Del Rio subdivision is to identify and evaluate the sources of the odors at the WWTP site. The exact source of the odors from the WWTP has not been identified yet, but is thought to be the industrial percolation ponds. The industrial percolation ponds were observed to have large amounts of scum at the surface. Whereas, the domestic percolation ponds had less surface scum, and dissolved oxygen concentrations are believed to have been adequately maintained in the domestic and industrial treatment ponds. The City will work with Veolia to categorize odor concentrations into major, moderate and minor levels. A minimum of three fixed odor samples will be taken from the WWTP site, one at the southwest end of the WWTP near ponds 10-12, one at the southeast end of the WWTP near ponds 6-9, and one at the northeast end of the WWTP near ponds 1-4. Refer to Figure 2 for preliminary fixed odor sampling locations. Additional fixed odor samples can be taken to more accurately calibrate odor sources and concentrations, but the preliminary locations are selected based on areas that typically generate high odors. Sampling will occur at a time when odors are anticipated to be at the highest concentration levels. The OdoWatch system using fixed odor samples simulates a “virtual E-Nose” system with constant emission rates. Therefore, no equipment is needed to detect variations in the source. The assigned rate continues to fluctuate with the weather and the OdoWatch dispersion model.

I:\114075 ESCALON SEWER PS ROW\CAD\EXHIBITS\WIP\ESCALON WWTP ODOR MAINTENANCE AND EQUIPMENT.DWG PLOT: 2/12/2015 5:22:13 PM BY ADAM HUTCHINGS



DEL RIO GOLF AND COUNTRY CLUB

UNION PACIFIC RAILROAD

STANISLAUS RIVER

SPY GLASS DRIVE

DEL RIO GOLF AND COUNTRY CLUB

EAST RIVER ROAD

OPERATIONS BUILDING



POND	DESCRIPTION	POND	DESCRIPTION
1	INDUSTRIAL TREATMENT POND	10	INDUSTRIAL PERCOLATION POND
2	INDUSTRIAL TREATMENT POND	11	INDUSTRIAL PERCOLATION POND
3	INDUSTRIAL TREATMENT POND	12	INDUSTRIAL PERCOLATION POND
4	INDUSTRIAL TREATMENT POND	13	INDUSTRIAL PERCOLATION POND
5	DOMESTIC TREATMENT POND	14	INDUSTRIAL PERCOLATION POND
6	DOMESTIC TREATMENT POND	15	INDUSTRIAL PERCOLATION POND
7	DOMESTIC TREATMENT POND	19	INDUSTRIAL PERCOLATION POND
8	DOMESTIC TREATMENT POND	20	DOMESTIC PERCOLATION POND
9	DOMESTIC TREATMENT POND	22	DOMESTIC PERCOLATION POND
		23	DOMESTIC PERCOLATION POND
		24	DOMESTIC PERCOLATION POND

**LEGEND**

-  WEATHER STATION
-  FIXED ODOR SAMPLE LOCATION
-  ODOR COMPLAINT AREA

\*POND 19 (REFERRED TO AS POND 16 IN CDO)

**FIGURE 2**  
 CITY OF ESCALON  
 WASTEWATER TREATMENT FACILITY  
 ODOR SAMPLING AND MONITORING  
 EQUIPMENT LOCATIONS  
 25100 EAST RIVER ROAD  
 ESCALON, CA  
 FEBRUARY 2015

**BLACKWATER**  
 CONSULTING ENGINEERS, INC.  
 605 STANDIFORD AVE., SUITE N, MODESTO, CA 95350 PH. 209.322.1820

Odor quantification of the samples is calibrated by a dynamics dilution olfactometry method, where one odor unit (1 o.u./m<sup>3</sup>) is the detection threshold, defined by when 50 percent of a panel of a human jury perceives an odor. The odor concentration is a measurement of the number of dilutions (with odorless air) of the gas mixture required to obtain one odor unit. Table 3 includes examples of threshold odor units and comparison to daily recognizable odors.

**Table 3 – Odor Concentrations [4]**

Threshold Examples:	
1 o.u./m <sup>3</sup>	Perception Threshold
2-3 o.u./ m <sup>3</sup>	Recognition Threshold
5 o.u/ m <sup>3</sup>	Discrimination Threshold
10 o.u/ m <sup>3</sup>	Risk of Complaint
Typical Daily Odors:	
20-50 o.u/ m <sup>3</sup>	Perfumed Person
250 o.u/ m <sup>3</sup>	Freshly Cut Grass
500 o.u/ m <sup>3</sup>	Hold Garbage

### 3.1.2 Odor Monitoring

The City proposes to monitor odors using an OdoWatch system, a fully customizable, web-based platform to track odors generated from the WWTP. The OdoWatch system models air dispersion, based on the fixed odor source concentrations and real-time weather measurements, to develop odor concentration plume maps, refer to Figure 3 for an example of the OdoWatch system interface. All the collected data is uploaded to a ‘cloud’ that can be accessed by City staff from a computer, smartphone, or tablet. Weather measurements, such as the exact temperature, humidity, wind direction, etc., are collected at a weather station installed at the WWTP. Refer to Figure 2 for the preliminary weather station location. The model uses the fixed odor source concentration levels and real-time weather monitoring to calculate an odor plume. The odor plume generated by the model will allow the City to continuously monitor odor concentration levels at the WWTP and off-site. The OdoWatch interface will also have set ‘alert points’ that show odor concentrations that are approaching detectable concentration thresholds considered to be a nuisance to the public. Using this data, the City can monitor odor concentrations at the WWTP and off-site and be alerted when odor levels may approach nuisance levels off-site. This monitoring process will allow the City to identify the causes and source for increased odor level concentrations that may result in off-site nuisance odors, in real-time, so that modifications can be made to the operational and/or treatment process to mitigate nuisance odors. For example, if an odor complaint is received by the City from a resident in the Del Rio Subdivision, City staff can use the OdoWatch interface to review the odor plume at the date and time the off-site odor was detected to determine where the odor originated from at the WWTP (assuming the odor did originate at the WWTP) so staff can review or determine mitigation measures at that location to address the complaint.

Figure 3 – OdoWatch Interface Example



If nuisance odors continue to be detected off-site, odor concentration monitoring at the WWTP can be refined by taking additional fixed odor samples. Additionally, the City can also install an OdoWatch E-Nose. The E-Nose device measures odor concentrations every four minutes and allows for continuous detection, measurement, and monitoring of fluctuating odor concentrations at the WWTP site. Refer to Appendix C for the OdoWatch E-Nose Brochure.

It is anticipated that the City will be able to use the fixed source sampling data and the OdoWatch modeling software to monitor high odor concentration events using set alert points for odor concentrations approaching nuisance levels off-site. This will allow the City to implement mitigation measures before nuisance odors are detected off-site.

The OdoWatch data monitoring system stores real-time monitoring history, and can be used to report monitoring activities and odor levels to include in monthly monitoring reports to the Regional Board to document compliance with discharge requirements.

#### **4 Mitigation Plan**

Since receiving the NOV, the City has implemented several odor control measures at the WWTP, including the addition of wind socks filled with odor absorbents along the fence line, and regular removal of scum from the ponds. Currently there are no waste flows from the industrial dischargers, as it is the off-season, and no organic loads are being received by the industrial/storm portion of the WWTP. Therefore, objectionable odors from the WWTP are anticipated to be minimal during the 2015 winter and spring. The most recent odor complaint received by the City occurred on October 9, 2014.

Once the odor monitoring system is in place, the City will be able to more accurately identify odor sources and odor source concentration levels that results in off-site nuisance odors and be proactive, rather than reactive, to odor issues. Identification of odor sources and odor concentrations, combined with a monitoring plan, will allow the City to track potential high odor concentrations events and evaluate treatment and operational activities to address and/or prevent such events. Monitoring of DO concentration levels at treatment and percolation ponds during fixed odor sampling will be done to establish a correlation between high odor concentrations and DO concentrations. This data can be used to establish baseline measurements to reduce or prevent odor producing conditions at the treatment or percolation ponds.

The monitoring system will also allow the City to be alerted when odor concentration levels are at or approaching nuisance levels off-site, specifically at the Del Rio subdivision, using the OdoWatch interface, as well as identify the source of the nuisance odor at the WWTP. This will allow City staff to take immediate action prior to odors become a nuisance. This odor monitoring plan will also assist the City with their capital improvement plan to increase efficiency and capacity by identifying treatment measures that successfully prevent nuisance odors.

In the long-term, this monitoring plan implemented for the 2015 industrial season will allow the City to review actions that successfully reduced odor concentration levels and to determine improvements to the treatment and operations that mitigate future odor violations.

## 5 Public Outreach

In addition to implementation of the odor monitoring and mitigation plan, the City will engage in public outreach, specifically to the residents of the Del Rio subdivision, to educate the community on the OdoWatch system and measures the City will be taking to monitor and reduce/eliminate nuisance odors. The CDO referenced installation of an E-Nose at the Del Rio subdivision, however, the technology of the equipment requires it to be installed at the source of the odor. This type of information can be provided to the community at a public meeting or through notifications with information on the system via mail.

In the event that an odor complaint is received by the Regional Board or City, the OdoWatch data will be reviewed and documented for the date and time the complaint was received. A prompt response to the reporting party will be issued in writing that includes the odor plume map, odor concentration measure, and corrective actions taken by the City to mitigate the odor and address the complaint.

## 6 Implementation Schedule

The City began implementing odor control measures upon receipt of the NOV, as discussed in Section 4 of this plan. The following implementation and reporting schedule outlines the planned activities to comply with the WDR and CDO for the upcoming year.

Implementation Measure	Implementation Date	Implementation Occurrence/Frequency	Reporting/Certification to State
Installation of wind socks with odor absorbents	September 2014	As Needed	Monthly
Removal of scum from ponds	September 2014	As Needed	Monthly
Treatment and Percolation Pond DO measurement	September 2014	Monthly, or As Needed	Monthly
Written Response to Odor Complaints	January 2015	As-Needed	Document in Monthly Report
Public Outreach Meeting	May 2015	Once	Document in Monthly Report
Installation of Odor Monitoring System	June 2015	Continuous	Monthly
Public Notification for Potential or Observed Nuisance Odor	June 2015	As Needed	As Completed

## 7 References

- [1] California Regional Water Quality Control Board, Central Valley Region, Order No. 5-00-142, Waste Discharge Requirements for City of Escalon, Escalon Wastewater Treatment Plant, San Joaquin County, adopted June 16, 2000.
- [2] *City of Escalon Wastewater Treatment Facilities Improvements Preliminary Design Study*, Nolte Associates, Inc., March 2000.
- [3] City of Escalon Sewer Master Plan, Eco:Logic, January 2007.
- [4] Veolia Advantage Kruger Odor Management Presentation, February 10, 2015.

## APPENDIX A



Proposal  
Escalon, CA  
OdoWatch®



Submitted to: Aja Verburg  
Sr Engineer  
Black Water Consulting Engineers, Inc.

Submitted by: Jeffrey Privott  
Product Manager

Date: 2/13/2015

*This document is confidential and may contain proprietary information.  
It is not to be disclosed to a third party without the written consent of Veolia Water Technologies.*

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**Water Technologies**

## Introduction

Veolia is pleased to present this proposal to the Black Water Consulting Engineers, Inc. for their client Escalon, CA to Furnish, Deliver and Configure an Odor Monitoring System for the City of Escalon, CA WWTF. Veolia is formerly known as I. Veolia, Inc., but will be referred to in this proposal as Veolia. The principal place of business is 4001 Weston Parkway, Cary, North Carolina, 27513.

Veolia understands Escalon, CA is looking to monitor the emission of odors from the Escalon Wastewater Treatment Plant located at 25100 East River Rd in Escalon. By monitoring odor emissions, the City can then determine what can be done to reduce the odor footprint at the Plant. To achieve this, Veolia is proposing the OdoWatch® system. This technology will identify odorous areas and their intensities, and demonstrate the impact of these odors on the surrounding communities. Further, we plan to collect baseline data which can be used in a future project to optimize dosing of chemical odor treatment systems to provide the most accurate treatment at the lowest cost.

Veolia's scope of supply includes the OdoWatch system, comprised of a weather station (WST), Cloud computing and GPRS communication with associated OdoWatch and dispersion modeling software and (3) three fixed odor values to be used as inputs to the dispersion model. As options, the scope includes additional fixed odor sampling and an electronic nose (EN)

*Our approach* for odor monitoring is to evaluate the known sources of odor at the plant. We then work with the owner to categorize the sources into major, moderate and minor. At a minimum, OdoWatch fixed odor sampling should be done at the major sources of odor. The system is scalable, so if desired, additional samples can be added for improved accuracy, at any time. The use of "fixed odor values" are added to the model for processes with little variation in odor emission rates. This is a "virtual" eNose, which is based on a sample of the source, but uses a constant emission rate in the model. Therefore, no equipment is needed to detect variations in the source. The assigned rate continues to fluctuate with the weather and the dispersion model. If the City determines that an electronic nose (EN) is needed to monitor fluctuating odor levels, one can be installed at a later date.

## We Know Water

**Veolia (Veolia)** is a water and wastewater solutions provider specializing in advanced and differentiating technologies. Veolia provides complete processes and systems ranging from biological nutrient removal to mobile surface water treatment. The ACTIFLO® Microsand Ballasted Clarifier, BioCon® Dryer, BIOSTYR® Biological Aerated Filter (BAF) and NEOSEP™ MBR are just a few of the innovative technologies offered by Veolia. Veolia is a subsidiary of Veolia Water, a world leader in engineering and technological solutions in water treatment for industrial companies and municipal authorities.

**Veolia Water Technologies**, the fully-owned subsidiary of **Veolia Water**, is the world leader in water and wastewater treatment with over 155 years of experience. As an experienced design-build company and a specialized provider of technological solutions in water treatment, Veolia combines proven expertise with unsurpassed innovation to offer technological excellence to our industrial customers. Based on this expertise, we believe that we have developed the best solution for your application. Below is a brief description of the proposed project.

## Process Description

The OdoWatch® system was developed by Veolia's partner, Odotech. Odotech is a global company, dedicated to the development of tools aimed at controlling odor problems. Their flagship technology, OdoWatch®, is a system that will enable you to detect, measure, and monitor odors continuously from your site. This technology, the first of its kind, uses set fixed odor values or electronic sensors to detect odors much like the human nose does. Unlike other technologies that measure the presence of odor-causing chemicals, the OdoWatch system using fixed odor locations or eNoses quantifies odors in odor units and uses that information, along with meteorological data, to indicate to plant operators when odors are, or will become, a problem. By performing real-time AERMOD air dispersion modeling, the OdoWatch® system can perform in minutes the work of an engineering odor evaluation that typically would take months of data collection and interpretation.

Note that Veolia has been the sole provider of real-time odor monitoring to the U.S. municipal market since 2008. We currently have OdoWatch systems operating at several U.S. wastewater treatment plants, including two in Clark County, Nevada; two in Pima County, Arizona; Woodland, California; Orange County, California; Virginia Beach, Virginia; Colorado Springs, Colorado; and Orlando, Florida. We have several others approved on budgets for the 2015 fiscal year.

Once the OdoWatch® system is implemented, it can be used to determine the most cost effective means of controlling odor from the site based on the odors emitted from various sources. Furthermore, after an odor control option is chosen, whether it involves liquid or gaseous-phase treatment, the information can be used to optimize the dosage of treatment chemicals and thus contain chemical costs.

In **Figure 1**, the network is depicted. The proposed hardware for the City of Escalon consists of the Cloud & GPRS communication, Weather Station (WST), and other optional equipment, including eNoses, SulfNoses, which are equipped with a sensitive H<sub>2</sub>S sensor, but can accommodate up to three more chemical sensors where specific chemical compound monitoring is needed. Note that the WST measures wind speed, wind direction, temperature, humidity, barometric pressure and solar radiation.

The optional eNoses and SulfNoses are enclosed in a NEMA 4X housing and utilize a matrix of sixteen MOS sensors (metal-oxide semi-conductor chemical sensors). The system is accessed

via a web-enabled interface, giving authorized users the opportunity to see the current odor plume from desktop computers, tablets or hand-held smart phones. The eNose equipment is fixtured in place as close as possible to the odor source. In most cases, it can be attached to existing infrastructure, such as a fence rail or a wall. It also requires an electric outlet (120V). The CCU requires access to high-speed internet. (Cloud and GPRS replaces the CCU where applicable)

**Figure 1:** OdoWatch® System

Network of eNoses, “virtual” eNoses and weather station connected wirelessly  
Web-enabled system allows access via most devices



One of the chief benefits of the OdoWatch system is that it enables the user to incorporate up to 250 separate “Alert Points,” which are geographic points where the operator sets a threshold of odor units (o.u./m<sup>3</sup>) at which point they wish to be notified that the model predicts an odor exceedance at that location. The alert is then transmitted to the emails or smart phones of the



appropriate staff, with details of the processes contributing to odors at that location. This allows the staff to be proactive rather than reactive, giving them actionable data in real-time to improve operations.

## Scope of Work

## Context

The City of Escalon WWTF treats municipal and industrial. The treated effluent is sent to municipal and industrial treatment ponds and then two percolation ponds via two separate systems, nuisance odors are thought to originate at the industrial percolation ponds.

The City of Escalon WWTF has received a Notice of Violation from the State of California due to some consistent odor complaints from nearby neighboring communities. As part of this Notice of Violation, the City of Escalon shall evaluate the odors using automated real time sensors for odor monitoring. This plan is intended to provide a monitoring design using the OdoWatch real-time odor monitoring system, and will include sources of odor described in a phone call with Black Water Consulting Engineers, Inc. The design plan utilizes fixed odor values and a weather station integrated into an interface to determine when odors may be escaping the ponds, with an eNose as optional equipment. See the aerial view of the plant and nearby neighborhoods below, in Fig. 2:

**Figure 2: City of Escalon WWTF and Neighborhood**



## **Weather Station**

The weather station must be installed approximately 30 feet above ground level, and far enough away from buildings and large structures so that there is no interference collecting accurate atmospheric data. The OdoWatch system includes a 10 meter aluminum tower that is installed for this purpose. A concrete base, supplied by the client, must be provided for fixturing of the weather station tower. Electricity must also be supplied to the weather station. We suggest locating the weather station in one of the natural, open areas where there are very few obstacles to interfere with accurate collection of atmospheric data. A location will be identified and agreed to during a pre-installation site visit by the Project Manager. *(Solar power or some another power source may be needed to run the meteorological station; this will be an additional cost that will be determined at time of site visit or installation).*

## Cloud and GPRS communication

The OdoWatch system and its components will be connected with utilizing the cloud and GPRS communication. Veolia works with Odotech's I.T. support group to ensure a complete and accurate set-up of the system. Odotech would invoice the client directly upon the 12 month duration to continue the cloud and GPRS communication at an approximate additional cost of \$3500/yr.

## Scope of Supply

Veolia is pleased to present our scope of supply which includes process engineering design, equipment procurement, and field services required for the proposed system, as related to the equipment specified. The work will be performed to Veolia's high standards under the direction of a Project Manager. All matters related to the design, fixturing, or performance of the system shall be communicated through the Veolia representative giving CITY OF ESCALON ready access to Veolia's extensive capabilities.

### Process and Design Engineering

Veolia provides process engineering and design support for the system as follows:

- Technical instructions for operation and start-up of the system
- Operating manual
- Web-based training with Odotech specialist

### Field Services

Veolia will furnish an Odotech Service Engineer as specified for fixturing of the system, place the system in initial operation, and instruct operating personnel on the proper use of the equipment. Specifically, Veolia will provide:

- On-site equipment fixturing and start-up assistance, including advice during installation and operator training, for the number of man-days as detailed within the schedule below.
- On-site sampling of odor sources with shipment to an olfactometry lab for calibration.

- The Odotech Service Engineer, in addition to training the key contact(s), will also provide training in a half-day session for all shifts of CITY staff designated by the City to operate or view the OdoWatch system.

Equipment Supply

Veolia will supply the following equipment associated with the system:

Equipment	QTY	ID	Location	Cost
Cloud & GPRS	1	-	TBD	45,000.00
Weather Station WST	1	-	Situated in an open space on a 30' tower (supplied)	included
Fixed Sources	3	-	Location to be determined	12,000.00
Pre- Install visit	1	-	Determine power, sampling, location of weather station, etc.	6100.00
Install visit	1	-	Install equipment, provide demo training	6100.00
<b>OPTIONAL ITEMS</b>				
eNose (EN) w/ solar shield	1	-	Location to be determined	28,150.00
Fixed Source w/ Initial Site Visit	1	-	Location to be determined	4000.00
Fixed Source w/ Additional Site	1	-	Location to be determined	6920.00
Onsite Training after operational	1	-	1 day onsite training	2920.00
Onsite Training after operational	1	-	2 day onsite training	4490.00

The Weather Station (WST) will be placed onsite in an area that is free of possible weather turbulences caused by adjacent structures.

*(Solar power or some another power source may be needed to run the meteorological station; this will be an additional cost that will be determined at time of site visit or installation).*



## Pricing and Schedule

The price for the OdoWatch system, as defined herein, including field services, and equipment supply and additional options which are listed in the table above.

Pricing is FOB destination, with freight allowed to the job site. This pricing does not include any sales or use taxes. In addition, pricing is valid for ninety (90) days from the date of issue and is subject to negotiation of a mutually acceptable contract.

*Please note that the above pricing is expressly contingent upon the items in this proposal and are subject to I. Kruger Inc. Standard Terms of Sale detailed herein*

Standard delivery for equipment is within 10 weeks after receipt of written execution of the Purchase Order. However due to the urgency for this to be installed and data monitored in May 2015, this can be executed faster.

### **Kruger Standard Terms of Payment**

The terms of payment are as follows:

- 50% on receipt of fully executed contract
- 40% on delivery of equipment to the site
- 10% on commissioning and final acceptance

There shall be no retention in payments due to I. Kruger Inc. All other terms per our Standard Terms of Sale are attached.

All payment terms are net 30 days from the date of invoice. Final payment is not to exceed 120 days from delivery of equipment.

## **First Year Maintenance and Technical Support**

With our partner, Odotech, Veolia provides services and parts to provide complete support for the first year of operation, included in the project price. Specific items include:

### Services:

- 1 year-end inspection visit ( covering 21 points) and 1 inspection report per year with Certificate
- Up to 20 hours of technical assistance (including training and service calls).
- OdoWatch Software upgrades (4.X generation)<sup>[1]</sup>
- OdoWatch Computer Operating system upgrades and licences<sup>[2]</sup>
- OdoWatch Computer Antivirus and upgrades
- Odor Alert e-mail notifications
- Remote equipment check

### Parts:

- Up to 2 sets of pumps per e-nose per year
- Up to 1 set of particulate filters (1x140um, 1x70um) per e-nose per year
- Up to 1 membrane per e-nose per year
- Up to 1 weather station per 2 years
- Up to 1 set of gas sensors per e-nose per year
- Up to 1 IO card per year

## **Pre-Installation Site Visit**

The Odotech Installation Manager will conduct a pre-installation site visit to examine each location where equipment will be installed with the Project Manager for CITY OF ESCALON. The purpose of this visit is to plan fixturing and power for each device that will be located on site.

---

<sup>[1]</sup> Updates do not include:

- (a) Platform extensions including product extensions to (i) different hardware platforms; (ii) different windowing system platforms; (iii) different operating system platforms;
- (b) New functions such as (i) new functionality in the market data delivery infrastructure; (ii) new market data feeds; (iii) new applications; and (iv) new presentation tools.

<sup>[2]</sup> Maintenance Services do not include:

- (a) custom programming services;
- (b) support of any software that is not included with the pre-configured server supplied with OdoWatch



The need for any custom substrate or wiring will also be determined and discussed at this visit, at a date to be determined with the client.

### **Preventive Maintenance Option**

In addition to the proposed system as detailed herein, Veolia is able to further provide a **preventive maintenance agreement, through the manufacturer**. This maintenance agreement is recommended annually following the first year of operation. Full telephone technical support, software upgrades, and site visits where necessary are covered by the maintenance agreement. The annual maintenance fee is estimated at 10% of the purchase price of your Odotech OdoWatch® system.

### **Schedule**

Refer to the table below for an outline of the estimated project schedule.

CITY OF ESCALON shall appoint a contact person for subsequent system ownership, operation/maintenance. At the time of system installation on CITY OF ESCALON's site, that person will be trained by Veolia/Odottech on operation and maintenance procedures and will become the contact person once the system is operational.

CITY OF ESCALON's employee responsible for subsequent OdoWatch operation must be available on the date scheduled for the site work to assist the Veolia/Odottech technician. CITY OF ESCALON's employee will actively participate in the fixturing of the OdoWatch system and may be required to obtain specific construction equipment, such as ladders, lifts, and heavy equipment, as needed. Expenses due to delays and waiting time not caused by Veolia are billable in supplement.

In the event that an assistant is not available for the duration of the site work, Veolia will commit another technician to the project which will be billable in supplement.

**Schedule:**

Step	Timeline	Details
Equipment delivery	Can be supplied within ten weeks of receipt of purchase order	
Placement of Equipment	1 man-day per eNose	On the date scheduled for the installation, the client must have an operational high-speed Internet connection and the power connections in place for each eNose.
Run-in	4 man-days	eNose stabilization period
eNose calibration	2 man-day per eNose	<ul style="list-style-type: none"> <li>• Odor sampling on each eNose</li> <li>• Olfactometric analysis by an Odile® olfactometer</li> </ul>
Fixed source calibration	1/2 man-day per Source	<ul style="list-style-type: none"> <li>• Odor sampling on each source</li> <li>• Olfactometric analysis by an Odile® olfactometer</li> </ul>
Configuration / validation	Up to 21 man-days	<ul style="list-style-type: none"> <li>• Data analysis and calibration parameter computing</li> <li>• Loading of calibration parameters and testing</li> </ul>
Training	1 man-day for a total of 6 hours	<ul style="list-style-type: none"> <li>• For operators: Understanding Odowatch and how to use it (3 hours)</li> <li>• For maintenance staff: Basic maintenance for Odowatch (3 hours)</li> </ul>

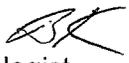
## Veolia Standard Terms of Sale

1. Applicable Terms. These terms govern the purchase and sale of the equipment and related services, if any (collectively, "Equipment"), referred to in Seller's purchase order, quotation, proposal or acknowledgment, as the case may be ("Seller's Documentation"). Whether these terms are included in an offer or an acceptance by Seller, such offer or acceptance is conditioned on Buyer's assent to these terms. Seller rejects all additional or different terms in any of Buyer's forms or documents.
2. Payment. Buyer shall pay Seller the full purchase price as set forth in Seller's Documentation. Unless Seller's Documentation provides otherwise, freight, storage, insurance and all taxes, duties or other governmental charges relating to the Equipment shall be paid by Buyer. If Seller is required to pay any such charges, Buyer shall immediately reimburse Seller. All payments are due within 30 days after receipt of invoice. Buyer shall be charged the lower of 1 ½% interest per month or the maximum legal rate on all amounts not received by the due date and shall pay all of Seller's reasonable costs (including attorneys' fees) of collecting amounts due but unpaid. All orders are subject to credit approval.
3. Delivery. Delivery of the Equipment shall be in material compliance with the schedule in Seller's Documentation. Unless Seller's Documentation provides otherwise, Delivery terms are F.O.B. Seller's facility.
4. Ownership of Materials. All devices, designs (including drawings, plans and specifications), estimates, prices, notes, electronic data and other documents or information prepared or disclosed by Seller, and all related intellectual property rights, shall remain Seller's property. Seller grants Buyer a non-exclusive, non-transferable license to use any such material solely for Buyer's use of the Equipment. Buyer shall not disclose any such material to third parties without Seller's prior written consent.
5. Changes. Seller shall not implement any changes in the scope of work described in Seller's Documentation unless Buyer and Seller agree in writing to the details of the change and any resulting price, schedule or other contractual modifications. This includes any changes necessitated by a change in applicable law occurring after the effective date of any contract including these terms.
6. Warranty. Subject to the following sentence, Seller warrants to Buyer that the Equipment shall materially conform to the description in Seller's Documentation and shall be free from defects in material and workmanship. The foregoing warranty shall not apply to any Equipment that is specified or otherwise demanded by Buyer and is not manufactured or selected by Seller, as to which (i) Seller hereby assigns to Buyer, to the extent assignable, any warranties made to Seller and (ii) Seller shall have no other liability to Buyer under warranty, tort or any other legal theory. If Buyer gives Seller prompt written notice of breach of this warranty within 18 months from delivery or 1 year from beneficial use, whichever occurs first (the "Warranty Period"), Seller shall, at its sole option and as Buyer's sole remedy, repair or replace the subject parts or refund the purchase price therefore. If Seller determines that any claimed breach is not, in fact, covered by this warranty, Buyer shall pay Seller its then customary charges for any repair or replacement made by Seller. Seller's warranty is conditioned on Buyer's (a) operating and maintaining the Equipment in accordance with Seller's instructions, (b) not making any unauthorized repairs or alterations, and (c) not being in default of any payment obligation to Seller. Seller's warranty does not cover damage caused by chemical action or abrasive material, misuse or improper installation (unless installed by Seller). **THE WARRANTIES SET FORTH IN THIS SECTION ARE SELLER'S SOLE AND EXCLUSIVE WARRANTIES AND ARE SUBJECT TO SECTION 10 BELOW. SELLER MAKES NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE.**
7. Indemnity. Seller shall indemnify, defend and hold Buyer harmless from any claim, cause of action or liability incurred by Buyer as a result of third party claims for personal injury, death or damage to tangible property, to the extent caused by Seller's negligence. Seller shall have the sole authority to direct the defense of and settle any indemnified claim. Seller's indemnification is conditioned on Buyer (a) promptly, within the Warranty Period, notifying Seller of any claim, and (b) providing reasonable cooperation in the defense of any claim.
8. Force Majeure. Neither Seller nor Buyer shall have any liability for any breach (except for breach of payment obligations) caused by extreme weather or other act of God, strike or other labor shortage or disturbance, fire, accident, war or civil disturbance, delay of carriers, failure of normal sources of supply, act of government or any other cause beyond such party's reasonable control.
9. Cancellation. If Buyer cancels or suspends its order for any reason other than Seller's breach, Buyer shall promptly pay Seller for work performed prior to cancellation or suspension and any other direct costs incurred by Seller as a result of such cancellation or suspension.
10. LIMITATION OF LIABILITY. NOTWITHSTANDING ANYTHING ELSE TO THE CONTRARY, SELLER SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR OTHER INDIRECT DAMAGES, AND SELLER'S TOTAL LIABILITY ARISING AT ANY TIME FROM THE SALE OR USE OF THE EQUIPMENT SHALL NOT EXCEED THE PURCHASE PRICE PAID FOR THE EQUIPMENT. THESE LIMITATIONS APPLY WHETHER THE LIABILITY IS BASED ON CONTRACT, TORT, STRICT LIABILITY OR ANY OTHER THEORY.
11. Miscellaneous. If these terms are issued in connection with a government contract, they shall be deemed to include those federal acquisition regulations that are required by law to be included. These terms, together with any quotation, purchase order or acknowledgement issued or signed by the Seller, comprise the complete and exclusive statement of the agreement between the parties (the "Agreement") and supersede any terms contained in Buyer's documents, unless separately signed by Seller. No part of the Agreement may be changed or cancelled except by a written document signed by Seller and Buyer. No course of dealing or performance, usage of trade or failure to enforce any term shall be used to modify the Agreement. If any of these terms is unenforceable, such term shall be limited only to the extent necessary to make it enforceable, and all other terms shall remain in full force and effect. Buyer may not assign or permit any other transfer of the Agreement without Seller's prior written consent. The Agreement shall be governed by the laws of the State of North Carolina without regard to its conflict of laws provisions.

## APPENDIX B

**Central Valley Regional Water Quality Control Board**

**TO:** Howard Hold, P.G.   
Senior Engineering Geologist  
Waste Discharge to Land Unit  
Compliance and Enforcement Section

**FROM:** Brendan Kenny   
Engineering Geologist  
Waste Discharge to Land Unit  
Compliance and Enforcement Section

**DATE:** 16 October 2014

**SUBJECT: CITY OF ESCALON WASTEWATER TREATMENT FACILITY ODOR COMPLAINTS, SAN JOAQUIN COUNTY**

Below is a list of odor complaints that we have received regarding the City of Escalon WWTF.

DATE	TIME	Complaint Source	Location
5-Aug-14	1:43 pm	E-mail	Spy Glass Drive Del Rio Subdivision
9-Aug-14	9:49pm	Phone Msg.	Spy Glass Drive Del Rio Subdivision
11-Aug-14	Not specified	Phone Msg.	Spy Glass Drive Del Rio Subdivision
9-Sep-14	12:35pm	Phone Msg.	Spy Glass Drive Del Rio Subdivision
13-Sep-14	Not specified	Phone Msg.	Spy Glass Drive Del Rio Subdivision
17-Sep-14	8:42pm	Phone Msg.	Spy Glass Drive Del Rio Subdivision
17-Sep-14	8:57 PM	Phone Msg.	Spy Glass Drive Del Rio Subdivision
19-Sep-14	5:50 PM	Phone Msg.	Spy Glass Drive Del Rio Subdivision
21-Sep-14	8:11 AM	Phone Msg.	Spy Glass Drive Del Rio Subdivision
21-Sep-14	Not specified	Phone Msg.	Spy Glass Drive Del Rio Subdivision
22-Sep-14	10:59am	Phone Msg.	Spy Glass Drive Del Rio Subdivision
23-Sep-14	7:50 AM	Phone Msg.	Spy Glass Drive Del Rio Subdivision
23-Sep-14	7:27 AM	Phone Msg.	Spy Glass Drive Del Rio Subdivision
23-Sep-14	7:38 AM	Phone Msg.	Spy Glass Drive Del Rio Subdivision
26-Sep-14	3:00pm	E-mail	Spy Glass Drive Del Rio Subdivision
6-Oct-14	Not specified	E-mail	Spy Glass Drive Del Rio Subdivision
7-Oct-14	9:00am	E-mail	Spy Glass Drive Del Rio Subdivision
8-Oct-14	9:45pm	E-mail	Spy Glass Drive Del Rio Subdivision
9-Oct-14	9:25am	E-mail	Spy Glass Drive Del Rio Subdivision

## APPENDIX C



# CITY OF ESCALON

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June 15, 2015

Howard Hold, P.G.  
Senior Engineering Geologist  
WDRs Compliance and Enforcement Unit  
Central valley Regional Water Quality Control Board  
11020 Sun Center Dr. #200  
Rancho Cordova, CA 95670-6114

Re: Cease and Desist Oder R5-2014-0156, City of Escalon

Dear Mr. Hold

In accordance with the above referenced Cease and Desist Order please find this letter as an update to the Addendum to Food Processing Waste Loading technical report. As identified in the reports the City was to; conduct maintenance on existing pure oxygen injection system, inspect and conduct necessary maintenance on surface aerators and necessary electrical repairs. This letter will also include a follow up for the Pond Berm Study and Odor Identification & Mitigation Plan.

The City and the Industries have been coordinating together to get both the oxygen injection system and surface aerators maintenance. The oxygen injection system maintenance is complete. Surface aerators maintenance is in progress with the majority complete and placed in ponds. The remaining are scheduled to be completed by June 26, 2015. There was a delay in the maintenance due to delayed parts and other unforeseen issues. The electrician has started the repairs to the panels and has estimated his completion by June 19, 2015. There have been no permit issued as of today's date and both Industries have indicated start dates in July and August.

The Pond Berm Study did not identify any imminent threats relative to the possibility of berm failures but did identify some recommendations to reduce risk in the future. The Study recommends filling rodent holes within the percolation pond areas and daily inspections of the berms. Recommendation of repairing erosion damage along the west and northwest ends of Pond 24, the berm between Ponds 10 and 11, the berm between Ponds 11 and 12, isolated erosion on the north, south, and east sides of Pond 20 and all four berms within Pond 8.

The Geotechnical Engineer has observed the regrading of the majority of the pond berms within Ponds 10, 12, 13, 14, 15, and 22. This included compaction testing performed during fill placement within the pond berms between Ponds 10 and 11 and Ponds 11 and 12. Rodent holes and penetrations have been filled and/or removed with the compaction equipment. The Geotechnical Engineer has inspected the work done to date has supplied the attached letter and compaction testing for review.



# CITY OF ESCALON

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On May 7, 2015 the City submitted a letter requesting an extension which was granted on repairs to percolation Ponds 13, 14 & 24 until July 10<sup>th</sup>. To date pond 13 is complete, Pond 14 and Pond 24 are on schedule to be completed by the July 10<sup>th</sup>. Percolations ponds 15 & 19 are scheduled to be completed by August 10<sup>th</sup>. Industrial wastewater will not be put into any pond that has not been maintained, with Pond 11 being the exception as the sacrificial pond this year. Improvements to Pond 11 will be made following the 2015 Industrial Season. Improvements to Ponds 20 and 8 will be completed by June 2016.

As identified in the Odor Identification and Mitigation plan the City has installed the Odowatch system and has been collection weather data since June 9, 2015. The sources (ponds) have been configured on Odowatch (using default flowrate values), therefore a plume calculation every 4-minutes is currently done. The first scheduled monthly report is due on July 10, 2015.

With regards to the attached report *"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and 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 fine and imprisonment."*

If you have any questions or need any additional information, you may contact me at (209) 691-7421.

Sincerely,

Tammy Alcantor  
City Manager

June 15, 2015

Ms. Tammy Alcantor  
Interim City Manager  
Finance Director/HR Administrator  
City of Escalon  
2060 McHenry Avenue  
Escalon, California 95320

*Geotechnical Observations*

**CITY OF ESCALON WASTEWATER TREATMENT PLANT**

Escalon, California  
WKA No. 10299.01P

As requested, we have performed periodic site visits during reconstruction and regrading of the existing ponds within the City of Escalon (City) Wastewater Treatment Plant in Escalon, California. Specifically, we have provided observation and testing services during fill placement within the pond berms between Ponds 10 and 11 and Ponds 11 and 12. We also observed the regrading of the majority of the pond berms within Ponds 10, 12, 14, 15, and 22.

The purposes of our observation and testing have been to note general conformance with the recommendations contained in our *Geotechnical Engineering Evaluation Report* (Wallace-Kuhl & Associates [WKA] No. 10299.01P) dated February 11, 2015.

The compaction testing performed during fill placement within the pond berms between Ponds 10 and 11 and Ponds 11 and 12 consisted of using nuclear density equipment to obtain field densities and moisture contents of the compacted soils in accordance with American Society of Testing and Materials (ASTM) D2922 Method B and ASTM D3017 test standards. Results of compaction tests performed on the soil placed indicated the soils were compacted to at least 90 percent of the ASTM D1557 maximum dry density.

In our opinion, the pond berms where fill was placed and observed by our representative has been constructed in general accordance with provisions referenced in the *Geotechnical Engineering Evaluation Report*. In addition, we observed that the majority of the rodent holes and penetrations that were previously observed during the field exploration performed for the *Geotechnical Engineering Evaluation Report* had been filled and/or removed with the compaction equipment.

*Geotechnical Observations*  
CITY OF ESCALON WASTEWATER TREATMENT PLANT  
WKA No. 10299.01P  
June 15, 2015

Horizontal and vertical lines and grades for berm construction were determined by others. Our firm does not guarantee earthwork construction, nor does our work relieve the contractor of his responsibility for full compliance with project plans and specifications.

Please contact me if you have any questions regarding this letter.

Wallace - Kuhl & Associates



Matthew S. Moyneur  
Senior Engineer



Week Ending: 5-2-15

 **Wallace Kuhl**  
& ASSOCIATES  
**FIELD REPORT**

Job No.: 10299.01P

Page No. 1

<b>Project Name:</b> CITY OF ESCALON WWTP POND BERM	<b>Client Or Owner:</b> CITY OF ESCALON	<b>DSA FILE #:</b>	<b>DSA APPL. #:</b>	<b>LEA NO. 116</b>
		<b>City Job #:</b>	<b>OSHPD #:</b>	
<b>General Location Of Work:</b> 25100 E. RIVER RD	<b>Owner's Or Client's Representative:</b> TAMMY ALCANTOR	<b>Required compaction: SG, AB etc.</b>		<b>Project Engineer:</b> MATT MOYNEUR
<b>General Contractor:</b> N/A	<b>Grading Contractor:</b> FLORES EXCAVATION & DEMO	<b>Supervisor:</b> MATT MOYNEUR		<b>Technician:</b> ROB GREGORIO
<b>Type Of Work:</b> COMPACTION TESTING	<b>Grading Contractor Superintendent / Foreman:</b> BRIAN FLORES	<b>Gauge Model:</b> 3430		<b>Serial Number:</b> 38064
<b>Description Of Fill Material:</b> NATIVE	<b>Plans:</b>	<b>Equipment used for grading operations:</b>		

**4-28-15 Tuesday**  
**GRADING**

GENERAL FILL: I arrived on site today as scheduled by Tom McCoy for the testing of the previously constructed berm between ponds 10 & 11. I met with Brian Flores on site and he informed me that the northern side of the berm between ponds 10 & 11 was where the fills were made. I spoke with our Matt Moyneur concerning testing. I performed moisture density tests on the top, middle and bottom 1/3 of the berm. I collected a representative sample of the soils tested for a curve. I informed Brian that the results of my testing would not be available until the curve was completed.

This report presents soils testing results and observations of earthwork construction. It is the contractor's responsibility to comply with the plans and specifications throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. Horizontal and vertical lines and grades were determined by others. Our firm will not be responsible for job or site safety on this project. This report is subject to correction at any time.

**File Name: 10299.01P.05-02-15RG.msm**

**Prepared by: ROB GREGORIO**

Week Ending: 5-2-15



**Wallace Kuhl**  
 & ASSOCIATES  
**FIELD REPORT**  
 LABORATORY MOISTURE-DENSITY TESTS  
ASTM D1557

Job No.: 10299.01P  
 Page No. 2

Test No.	Material Description	Maximum Dry Unit Weight (PCF)	Optimum Moisture Content (%)
<b>1</b>	<b>GREY SILTY FINE SAND</b>	<b>122.0</b>	<b>11.1</b>

**FIELD DENSITY TESTS**  
ASTM D6938

Date	Test No.	Location	Elevation	Moisture Standard Count	Density Standard Count	Test Mode	Wet Density (pcf)	Dry Density (pcf)	Test Moisture (%)	Compaction (%)	Lab Moisture Density Test No.
<b>TOP 1/3 OF THE BERM FILL</b>											
4-28	1	EAST END	SG	746	2417	8"	129.3	112.1	15.4	92	1
4-28	2	MIDDLE	SG	746	2417	8"	129.2	109.6	17.9	90	1
4-28	3	WEST END	SG	746	2417	8"	127.3	110.3	15.4	90	1
<b>MIDDLE 1/3 OF THE BERM FILL</b>											
4-28	4	EAST END	SG	746	2417	8"	129.4	112.0	15.5	92	1
4-28	5	MIDDLE	SG	746	2417	8"	128.4	109.6	17.1	90	1
4-28	6	WEST END	SG	746	2417	8"	127.7	110.2	15.9	90	1
<b>BOTTOM 1/3 OF BERM FILL</b>											
4-28	7	EAST END	SG	746	2417	8"	128.6	109.8	17.1	90	1
4-28	8	MIDDLE	SG	746	2417	8"	127.0	110.2	15.2	90	1
4-28	9	WEST END	SG	746	2417	8"	127.3	109.3	16.5	90	1

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**File Name: 10299.01P.05-02-15RG.msm**

**Prepared by: ROB GREGORIO**

Week Ending: 5-9-15



**Wallace Kuhl**  
 & ASSOCIATES  
**FIELD REPORT**

Job No.: 10299.01P  
 Page No. 1

<b>Project Name:</b> CITY OF ESCALON WWTP POND BERM	<b>Client Or Owner:</b> CITY OF ESCALON	<b>DSA FILE #:</b>	<b>DSA APPL. #:</b>	<b>LEA NO. 116</b>
		<b>City Job #:</b>	<b>OSHPD #:</b>	
<b>General Location Of Work:</b> 25100 E. RIVER RD	<b>Owner's Or Client's Representative:</b> TAMMY ALCANTOR	<b>Required compaction: SG, AB etc.</b>		<b>Project Engineer:</b> MATT MOYNEUR
<b>General Contractor:</b> N/A	<b>Grading Contractor:</b> FLORES EXCAVATION & DEMO	<b>Supervisor:</b> MATT MOYNEUR		<b>Technician:</b> ROB GREGORIO
<b>Type Of Work:</b> COMPACTION TESTING	<b>Grading Contractor Superintendent / Foreman:</b> BRIAN FLORES	<b>Gauge Model:</b> 3430		<b>Serial Number:</b> 38064
<b>Description Of Fill Material:</b> NATIVE	<b>Plans:</b>	<b>Equipment used for grading operations:</b> VIBRATORY PAD DRUM, D6 & D7 DOZERS		

**5-6-15 Wednesday**  
**GRADING**

GENERAL FILL: I arrived on site today as scheduled by Brian Flores for the testing of the berm construction between ponds 11 & 12. At the time of my arrival I met with Brian Flores on site and he informed me that they had began the fill placement on the pond 12 side of the berm and that they had cut a bench at the toe of the fill slope and mid slope. I observed the crew compacting the fill in lifts with a vibratory pad drum roller. The fill material was being cut from the bottom of pond #12 and placed in lifts by a D6 dozer. I performed moisture density tests on the fills being made and the compacted mid slope bench. I collected a representative sample of the soils tested on the mid slope bench for a curve. I informed Brian of the results of my testing on the fill area and informed him that I would not have results of the tests performed on the mid slope bench until the curve was complete. I asked Brian what was the finished grade elevation for the berm and he informed me that there was not an exact finished grade elevation, it was depending the amount of soils generated. The elevation of the test results are based on the existing top of berm elevation of the berm between ponds #12 & #19.

This report presents soils testing results and observations of earthwork construction. It is the contractor's responsibility to comply with the plans and specifications throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. Horizontal and vertical lines and grades were determined by others. Our firm will not be responsible for job or site safety on this project. This report is subject to correction at any time.

**File Name: 10299.01P.05-09-15RG.msm**

**Prepared by: ROB GREGORIO**

Week Ending: 5-9-15



Job No.: 10299.01P

Page No. 2

**5-7-15 Thursday**  
**GRADING**

GENERAL FILL: I arrived on site today as scheduled by Brian Flores for the testing of the berm construction between ponds 11 & 12. During my visit to the site I observed the crew compacting the fill in lifts with a vibratory pad drum roller. The fill material was being cut from the bottom of pond #12 and placed in lifts by a D6 dozer. I performed moisture density tests on the fills being made. The elevation of the test results are based on the existing top of berm elevation of the berm between ponds #12 & #19.

**5-8-15 Friday**  
**5-7-15 Thursday**  
**GRADING**

GENERAL FILL: I arrived on site today as scheduled by Brian Flores for the testing of the berm construction between ponds 11 & 12. During my visit to the site I observed the crew compacting the fill in lifts with a vibratory pad drum roller. The fill material was being cut from the bottom of pond #12 and placed in lifts by a D6 dozer. I performed moisture density tests on the fills being made. The elevation of the test results are based on the existing top of berm elevation of the berm between ponds #12 & #19.

This report presents soils testing results and observations of earthwork construction. It is the contractor's responsibility to comply with the plans and specifications throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. Horizontal and vertical lines and grades were determined by others. Our firm will not be responsible for job or site safety on this project. This report is subject to correction at any time.

**File Name: 10299.01P.05-09-15RG.msm**

**Prepared by: ROB GREGORIO**

Week Ending: 5-9-15

**W** Wallace Kuhl  
& ASSOCIATES  
**FIELD REPORT**

Job No.: 10299.01P

Page No. 3



Fill and mid slope bench

This report presents soils testing results and observations of earthwork construction. It is the contractor's responsibility to comply with the plans and specifications throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. Horizontal and vertical lines and grades were determined by others. Our firm will not be responsible for job or site safety on this project. This report is subject to correction at any time.

**File Name: 10299.01P.05-09-15RG.msm**

**Prepared by: ROB GREGORIO**

Week Ending: 5-9-15



**Wallace Kuhl**  
 & ASSOCIATES  
**FIELD REPORT**  
 LABORATORY MOISTURE-DENSITY TESTS  
ASTM D1557

Job No.: 10299.01P  
 Page No. 4

Test No.	Material Description	Maximum Dry Unit Weight (PCF)	Optimum Moisture Content (%)
1	GREY SILTY FINE SAND	122.0	11.1
2	BROWN SILTY SAND W/ GRAVELS	131.5	8.2

FIELD DENSITY TESTS  
ASTM D6938

Date	Test No.	Location	Elevation	Moisture Standard Count	Density Standard Count	Test Mode	Wet Density (pcf)	Dry Density (pcf)	Test Moisture (%)	Compaction (%)	Lab Moisture Density Test No.
		<b>BERM BETWEEN PONDS 11&amp;12</b>									
		<b>BERM FILL</b>									
5-6	1	SOUTHERN END	- 14 FT	746	2420	8"	126.8	113.2	12.0	93	1
5-6	2	SOUTHERN MIDDLE	- 14 FT	746	2420	8"	128.0	112.9	13.4	93	1
5-6	3	NORTHERN MIDDLE	- 14 FT	746	2420	8"	132.2	115.2	14.7	94	1
5-6	4	SOUTHERN END	- 14 FT	746	2420	8"	127.2	110.6	15.0	91	1
		<b>MID SLOPE BENCH</b>									
5-6	5	NORTHERN END	- 11 FT	746	2420	8"	124.2	109.9	13.0	90	1
5-6	6	MIDDLE	- 11 FT	746	2420	8"	129.5	120.0	7.8	91	2
5-6	7	SOUTHERN END	- 11 FT	746	2420	8"	135.4	125.3	8.1	95	2
		<b>FILL SLOPE</b>									
5-7	8	MIDDLE	- 10 FT	752	2416	8"	135.1	121.2	11.5	92	2
5-7	9	SOUTHERN END	- 10 FT	752	2416	8"	137.2	123.7	10.9	94	2

This report presents soils testing results and observations of earthwork construction. It is the contractor's responsibility to comply with the plans and specifications throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. Horizontal and vertical lines and grades were determined by others. Our firm will not be responsible for job or site safety on this project. This report is subject to correction at any time.

**File Name: 10299.01P.05-09-15RG.msm**

**Prepared by: ROB GREGORIO**

Week Ending: 5-9-15

 **Wallace Kuhl**  
& ASSOCIATES  
**FIELD REPORT**

Job No.: 10299.01P

Page No. 5

Date	Test No.	Location	Elevation	Moisture Standard Count	Density Standard Count	Test Mode	Wet Density (pcf)	Dry Density (pcf)	Test Moisture (%)	Compaction (%)	Lab Moisture Density Test No.
5-7	10	NORTHERN END	- 9 FT	752	2416	8"	134.1	120.9	10.9	92	2
5-7	11	MIDDLE	- 9 FT	752	2416	8"	134.9	121.5	11.0	92	2
5-8	12	NORTHERN END	- 6 FT	751	2411	8"	133.6	120.0	11.4	91	2
5-8	13	MIDDLE	- 6 FT	751	2411	8"	133.9	118.9	12.6	90	2
5-8	14	SOUTHERN END	- 6 FT	751	2411	8"	134.9	119.8	12.6	91	2

This report presents soils testing results and observations of earthwork construction. It is the contractor's responsibility to comply with the plans and specifications throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. Horizontal and vertical lines and grades were determined by others. Our firm will not be responsible for job or site safety on this project. This report is subject to correction at any time.

**File Name: 10299.01P.05-09-15RG.msm**

**Prepared by: ROB GREGORIO**

Week Ending: 5-23-15

 **Wallace Kuhl**  
& ASSOCIATES  
**FIELD REPORT**

Job No.: 10299.01P

Page No. 1

<b>Project Name:</b> CITY OF ESCALON WWTP POND BERM	<b>Client Or Owner:</b> CITY OF ESCALON	<b>DSA FILE #:</b>	<b>DSA APPL. #:</b>	<b>LEA NO. 116</b>
		<b>City Job #:</b>	<b>OSHPD #:</b>	
<b>General Location Of Work:</b> 25100 E. RIVER RD	<b>Owner's Or Client's Representative:</b> TAMMY ALCANTOR	<b>Required compaction: SG, AB etc.</b>		<b>Project Engineer:</b> MATT MOYNEUR
<b>General Contractor:</b> N/A	<b>Grading Contractor:</b> FLORES EXCAVATION & DEMO	<b>Supervisor:</b> MATT MOYNEUR		<b>Technician:</b> ROB GREGORIO
<b>Type Of Work:</b> COMPACTION TESTING	<b>Grading Contractor Superintendent / Foreman:</b> BRIAN FLORES	<b>Gauge Model:</b> 3430		<b>Serial Number:</b> 38064
<b>Description Of Fill Material:</b> NATIVE	<b>Plans:</b>	<b>Equipment used for grading operations:</b> VIBRATORY PAD DRUM, D6 & D7 DOZERS		

**5-18-15 Monday**  
**GRADING**

GENERAL FILL: I arrived on site today as scheduled by Brian Flores for the testing of the berm construction between ponds 11 & 12. At the time of my arrival I spoke with Brian and he informed me that the elevation that the berm is currently at would be subgrade elevation. I performed moisture density tests on the fill on the berm at the current elevation. I informed Brian of my results. The results of my testing are noted below.

This report presents soils testing results and observations of earthwork construction. It is the contractor's responsibility to comply with the plans and specifications throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. Horizontal and vertical lines and grades were determined by others. Our firm will not be responsible for job or site safety on this project. This report is subject to correction at any time.

**File Name: 10299.01P.05-23-15RG.msm**

**Prepared by: ROB GREGORIO**

Week Ending: 5-23-15



**Wallace Kuhl**  
 & ASSOCIATES  
**FIELD REPORT**

Job No.: 10299.01P  
 Page No. 2

**LABORATORY MOISTURE-DENSITY TESTS**  
ASTM D1557

Test No.	Material Description	Maximum Dry Unit Weight (PCF)	Optimum Moisture Content (%)
<b>1</b>	<b>GREY SILTY FINE SAND</b>	<b>122.0</b>	<b>11.1</b>
<b>2</b>	<b>BROWN SILTY SAND W/ GRAVELS</b>	<b>131.5</b>	<b>8.2</b>

**FIELD DENSITY TESTS**  
ASTM D6938

Date	Test No.	Location	Elevation	Moisture Standard Count	Density Standard Count	Test Mode	Wet Density (pcf)	Dry Density (pcf)	Test Moisture (%)	Compaction (%)	Lab Moisture Density Test No.
		<b>BERM BETWEEN PONDS 11&amp;12</b>									
<b>5-18</b>	<b>1</b>	<b>SOUTHERN END</b>	<b>SG</b>	<b>749</b>	<b>2408</b>	<b>8"</b>	<b>128.9</b>	<b>118.4</b>	<b>8.9</b>	<b>90</b>	<b>2</b>
<b>5-18</b>	<b>2</b>	<b>MIDDLE</b>	<b>SG</b>	<b>749</b>	<b>2408</b>	<b>8"</b>	<b>131.2</b>	<b>120.8</b>	<b>8.6</b>	<b>92</b>	<b>2</b>
<b>5-18</b>	<b>3</b>	<b>NORTHERN END</b>	<b>SG</b>	<b>749</b>	<b>2408</b>	<b>8"</b>	<b>133.8</b>	<b>123.8</b>	<b>8.1</b>	<b>94</b>	<b>2</b>

This report presents soils testing results and observations of earthwork construction. It is the contractor's responsibility to comply with the plans and specifications throughout the duration of the project irrespective of the presence of our representative. Our work does not include supervision or direction of the actual work of the contractor, his employees or agents. Horizontal and vertical lines and grades were determined by others. Our firm will not be responsible for job or site safety on this project. This report is subject to correction at any time.

**File Name: 10299.01P.05-23-15RG.msm**

**Prepared by: ROB GREGORIO**

An aerial photograph of an industrial and residential area. A large, elongated area in the center-left is overlaid with a color-coded heatmap, ranging from light blue to yellow and red, indicating odor intensity. Several red triangular warning icons are scattered across the map, primarily along a road and near industrial buildings. The background shows a mix of green fields, residential streets, and industrial structures.

**KRÜGER**

# OdoWatch® Odor Monitoring

# OdoWatch®

## Odor Monitoring

Kruger's OdoWatch® System provides treatment plants early detection of odors, allowing for greater efficiency of operations management and a timely response to potential odor issues. OdoWatch displays odors generated in real time, thus making the plant neighborhood friendly by avoiding odor problems offsite within the community.



eNose with weather tower

## Continuous, Real-time Odor Monitoring

---

OdoWatch continuously detects, measures and monitors odors at the treatment site. This technology, the first of its kind, uses electronic sensors to detect odors much like a human nose. Unlike other technologies that measure the presence of odor-causing compounds, the electronic noses (eNoses) quantify odors into odor units and use that information, along with meteorological data, to indicate to plant operators when odors are becoming a problem. By performing real-time air dispersion modeling, the OdoWatch system can complete in minutes the work of an engineering odor evaluation that typically would take months of costly data collection and interpretation.

## Providing Information for Efficient Operations

---

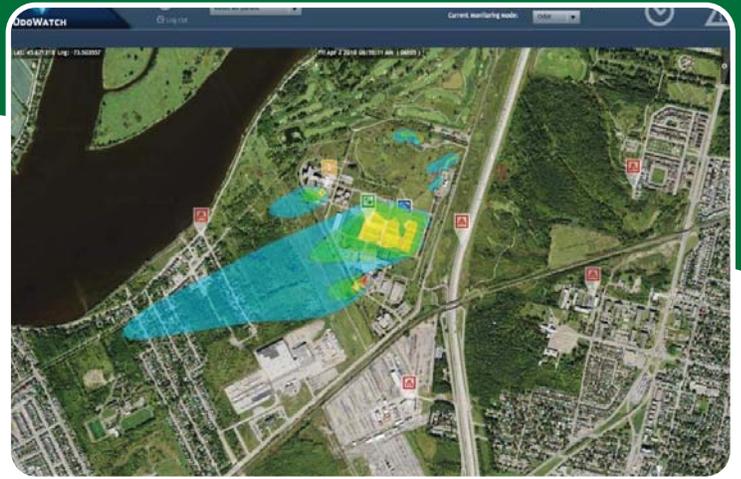
- Automated central monitoring of odor emissions
- Display of odor concentration (intensity)
- Display of real-time weather data
- Odor atmospheric dispersion modeling
- 24/7 real-time odor plume display
- Programmable odor alerts at grid points selected by the user (Alert Point)
- Data log, odor dispersion history (archive)

## Advantages On-Site and Within the Community

- Right-size odor abatement equipment
- Provides information to prioritize capital projects for odor control
- Optimizes odor neutralizing chemical use
- Facilitates community relations
- Eliminates current on-site sampling and measurement programs, saving time of operations staff
- Demonstrates good corporate citizenship
- Creates an effective communication tool between plant and community

## OdoWatch® System Components

- 1 or more Electronic Nose(s) (eNose)
- Weather tower
- Pre-configured computer
- Communication system



Odor Plume Display



eNose monitoring clarifier tanks

## OdoWatch System Operation

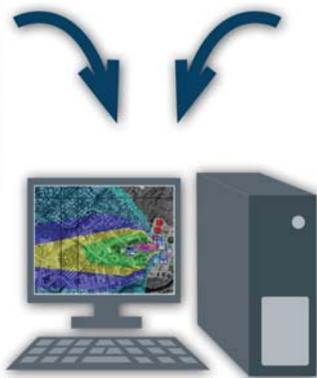
The eNoses are positioned near the potential odor sources and continuously collect data. The odor data from the eNoses and the weather data from the weather tower are sent to the OdoWatch software, which models the atmospheric dispersion and displays the site's odor plume. With the odor plume being color-coded, facility staff are able to identify quickly on the map what region is being impacted by odor and to what magnitude.



eNose



Weather Station



Central Control Unit

The weather tower is equipped for wireless transmission of weather data to the Central Control Unit (CCU) on the same frequency as the eNoses.



Odor Plume Display

The CCU is a computer that hosts the OdoWatch® operating software and is equipped with a wireless link. Its database acts as an archive for future reference in case of odor complaints by the public, allowing the plant to easily reference past data if needed. OdoWatch provides automatic reports and issues alerts when preset odor thresholds are exceeded.

**KRÜGER**

Kruger Inc.  
Phone 919.677.8310  
Fax 919.677.0082  
[www.krugerusa.com](http://www.krugerusa.com)  
[krugerincmarketing@veoliawater.com](mailto:krugerincmarketing@veoliawater.com)





# CITY OF ESCALON

---

September 10, 2015

Howard Hold, P.G.  
Senior Engineering Geologist  
WDRs Compliance and Enforcement Unit  
Central valley Regional Water Quality Control Board  
11020 Sun Center Dr. #200  
Rancho Cordova, CA 95670-6114

Re: Cease and Desist Oder R5-2014-0156, City of Escalon

Dear Mr. Hold

In accordance with the above referenced Cease and Desist Order please accept the attached report as fulfillment for the monthly odor report of August 2015.

The attached report was prepared by Black Water Consulting Engineers, Inc. and provides the details of the activities within the Odor Monitoring System for the month of August 2015. Industry discharges began on July 10, 2015. Fixed source sampling was conducted by Odotech on August 27, 2015 and future reports will have additional interpretation of the model data.

*With regards to the attached report "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and 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 fine and imprisonment."*

If you have any questions or need any additional information, you may contact me at (209) 691-7421.

Sincerely,

Tammy Alcantor, City Manager  
City Manager

Enclosures

Monthly Odor Monitoring Report  
for the  
City of Escalon  
Wastewater Treatment Plant

September 9, 2015

Prepared for:

CITY OF ESCALON  
2060 MCHENRY AVENUE  
ESCALON, CA 95320

Prepared by:

BLACK WATER CONSULTING ENGINEERS, INC.  
605 STANDIFORD SUITE N  
MODESTO, CA 95350  
(209) 322-1817



9-9-2015

**BLACKWATER**  
CONSULTING ENGINEERS, INC.

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**APPENDIXES**

Appendix A – OdoWatch Alert Point Concentration Report  
Appendix B – Odor Plume Concentration Maps

Sections 1 and 2 of the Monthly Odor Monitoring Report contain background and reference information that is included in each monthly monitoring report.

## 1 Introduction

The City of Escalon (City) Wastewater Treatment Plant (WWTP) operates under the California Regional Water Quality Control Board, Central Valley Region (Regional Board) Waste Discharge Requirements Order No. 5-00-142 (WDRs). A Notice of Violation (NOV) was issued to the WWTP on September 24, 2014 and Cease and Desist Order (CDO) Order R5-2014-0156 was adopted by the Regional Board on December 5, 2014. The CDO includes a requirement to submit monthly Odor Monitoring Reports that include odor plume concentration maps and discussion of WWTP-derived odors in the Del Rio subdivision located south of the WWTP.

This report provides an overview of the OdoWatch Odor Monitoring System (OMS) and summarizes the data of the system from August 1, 2015 through August 31, 2015.

## 2 Odor Monitoring System

The City of Escalon has been monitoring odor concentrations at the WWTP since June 9, 2015, using the OMS. The OMS is set up with a total of 20 surface sources with assigned values for odor concentration based on a typical odor emission rates for similar sources in odor-units (ou) per square meter per second. Table 1 lists the emission rate for the WWTP odor sources.

**Table 1 – WWTP Odor Source Emission Rates**

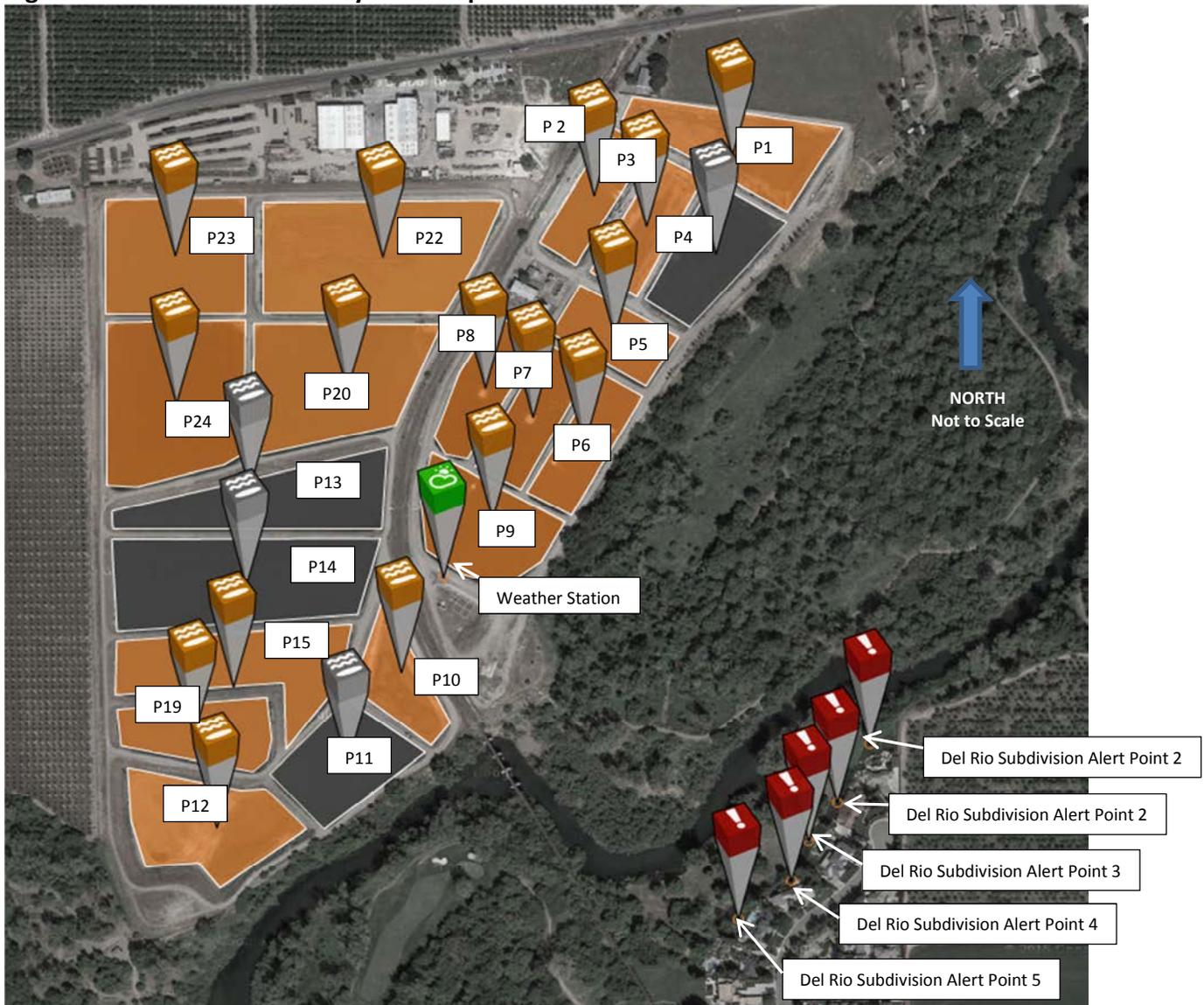
Sources	Description	Proposed Odor Emission Rate (ou/m <sup>2</sup> /s)
Ponds 1 to 4	Aerated ponds that treat industrial influent flow from tomato and vegetable (peppers) processors and storm water flow - Incoming industrial flow is split in parallel to Ponds 2 and 3, then all the flow is combined in Pond 1 and flows in series to Pond 4.	0.238 ou/m <sup>2</sup> /s <sup>(a)</sup>
Ponds 10 to 15, 19, 22, and 23	Treated industrial flow moves here for percolation into the ground. Pond 11 is inactive.	0.087 ou/m <sup>2</sup> /s <sup>(b)</sup>
Ponds 5 to 9	Aerated ponds that treat domestic (sanitary) influent flow - Primarily the ponds flow in series with flow entering Pond 5, then flowing into Pond 6, then Pond 9, then Pond 8, and lastly to Pond 7. The piping diagram indicates that there are many options for how the flow could be routed.	0.238 ou/m <sup>2</sup> /s <sup>(a)</sup>
Ponds 20 and 24	Treated domestic flow moves here for percolation into the ground.	0.087 ou/m <sup>2</sup> /s <sup>(b)</sup>

(a) McGinley, (2008). Odor Threshold Emission Factors for Common WWTP Processes, St-Croix Sensory, Water Environment Federation / Air & Waste Management Association, Specialty Conference: Odors and Air Emissions 2008, Phoenix, AZ: 6-9 April 2008, Code 424 for Aeration Basin. 3rd quartile (P75) is 371 ou/m<sup>3</sup> based on 113 values.

(b) (2008) – Code 448 for Final Clarifier. 3rd quartile (P75) is 135 ou/m<sup>3</sup> based on 25 values.

The OMS calculates odor concentrations emitted from the WWTP to generate an odor plume showing odor concentrations in the surrounding area every four minutes. Five (5) alert points are located at the Del Rio subdivision south of the WWTP at locations considered to be sensitive receptors based on previous odor complaints. The odor monitoring system allows the City of Escalon staff to be notified when odor concentrations at the alert point reach levels that approach or are at concentrations determined to be at nuisance levels. Odor concentrations of  $10 \text{ ou/m}^3$  to  $20 \text{ ou/m}^3$  are considered a 'Medium' nuisance level. Odor concentrations of  $20 \text{ ou/m}^3$  and above are considered a 'High' nuisance level. Figure 1 shows the OdoWatch system map for the WWTP.

Figure 1 – WWTP OdoWatch System Map

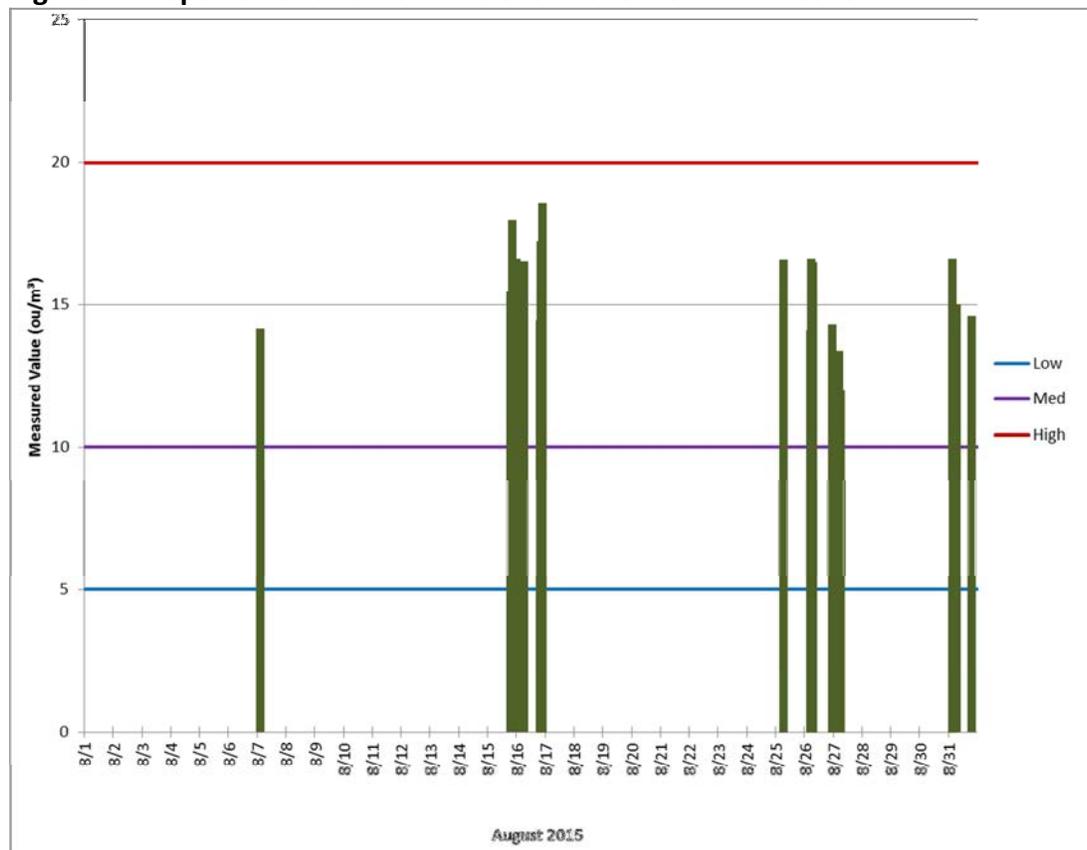


### 3 Odor Monitoring Data

August operations at the WWTP included domestic and industrial wastewater treatment. All ponds were active most of the month of August, except Pond 11. The treated industrial effluent is sent to the percolation ponds on a rotating schedule, depending on percolation rates. At times, some of the percolation ponds are mostly dry, depending on where the effluent is diverted.

Alert notifications for odor concentrations at medium threshold values were identified by the monitoring system at the Del Rio subdivision on seven (7) days during the month of August. An alert at any of the five (5) alert points at the Del Rio Subdivision is considered a detectable odor at the Del Rio Subdivision. The OMS data prioritizes the major source contributors of odor, in percentage, at each alert point. The percentages indicate the top sources (ponds) that contribute odor at that alert point at the particular time. Ponds contributing less than 5 percent to odors are omitted as they are not considered 'major' contributors. Figure 2 summarizes the measured odor concentrations for each day that medium threshold level concentrations were identified at the Del Rio Subdivision for the month of August. Table 2 list the dates, times, highest odor concentration measured, and the major source contributors when the medium threshold level concentrations were identified at the Del Rio Subdivision for the month of August.

**Figure 2 – Reported odor concentrations above medium threshold**



**Table 2 – Reported odor concentrations above 10 ou/m<sup>3</sup> threshold**

Date	Time	Highest Odor Concentration ou/m <sup>3</sup>	Major Source Contributors
August 7, 2015	2:25 AM	14.16	Pond 6 (26%); Pond 7 (22%); Pond 8 (14%); Pond 5 (10%)
August 15, 2015	7:01 PM	15.49	Pond 9 (19%); Pond 6 (16%); Pond 7 (16%); Pond 8 (13%); Pond 22 (11%)
August 15, 2015	8:25 PM	17.96	Pond 7 (18%); Pond 6 (18%); Pond 8 (16%); Pond 9 (16%); Pond 22 (12%)
August 16, 2015	12:05 AM	16.63	Pond 9 (40%); Pond 8 (17%); Pond 22 (16%)
August 16, 2015	6:37 AM	16.53	Pond 7 (20%); Pond 6 (20%); Pond 8 (18%); Pond 22 (13%)
August 16, 2015	7:29 PM	13.11	Pond 6 (15%); Pond 9 (15%); Pond 7 (14%); Pond 8 (11%); Pond 5 (10%); Pond 22 (9%); Pond 2 (5%)
August 16, 2015	7:53 PM	14.44	Pond 9 (19%); Pond 6 (15%); Pond 7 (14%); Pond 8 (12%); Pond 22 (9%); Pond 20 (8%)
August 16, 2015	8:13 PM	17.07	Pond 9 (18%); Pond 6 (17%); Pond 7 (17%); Pond 8 (14%); Pond 22 (11%)
August 16, 2015	9:37 PM	18.40	Pond 7 (20%); Pond 6 (19%); Pond 8 (18%); Pond 22 (13%)
August 16, 2015	9:53 PM	18.40	Pond 7 (20%); Pond 6 (19%); Pond 8 (18%); Pond 22 (13%)
August 25, 2015	6:21 AM	14.88	Pond 9 (39%); Pond 8 (16%); Pond 22 (15%)
August 25, 2015	6:37 AM	16.60	Pond 7 (20%); Pond 6 (19%); Pond 8 (18%); Pond 22 (13%)
August 26, 2015	5:03 AM	13.94	Pond 6 (30%); Pond 7 (25%); Pond 8 (4%); Pond 5 (10%)
August 26, 2015	5:39 AM	16.63	Pond 9 (40%); Pond 8 (17%); Pond 22 (16%)
August 26, 2015	6:55 AM	16.37	Pond 9 (30%); Pond 8 (16%); Pond 7 (15%); Pond 22 (14%)
August 26, 2015	11:23 PM	14.16	Pond 6 (26%); Pond 7 (22%); Pond 8 (14%); Pond 5 (10%)
August 26, 2015	11:51 PM	12.98	Pond 5 (20%); Pond 3 (19%); Pond 4 (16%); Pond 2 (15%)
August 27, 2015	3:11 AM	13.18	Pond 5 (22%); Pond 3 (21%); Pond 2 (16%); Pond 4 (16%)

Date	Time	Highest Odor Concentration ou/m <sup>3</sup>	Major Source Contributors
August 27, 2015	5:07 AM	13.25	Pond 5 (22%); Pond 3 (22%); Pond 2 (16%); Pond 4 (15%)
August 27, 2015	5:11 AM	13.94	Pond 6 (30%); Pond 7 (25%); Pond 8 (14%); Pond 5 (10%)
August 27, 2015	6:35 AM	11.84	Pond 5 (22%); Pond 3 (21%); Pond 2 (16%); Pond 4(16%)
August 31, 2015	3:15 AM	16.48	Pond 9 (39%); Pond 8 (17%); Pond 22(15%)
August 31, 2015	3:59 AM	13.18	Pond 5 (22%); Pond 3 (21%); Pond 2 (16%); Pond 4 (16%)
August 31, 2015	4:03 AM	16.63	Pond 9 (40%); Pond 8 (17%); Pond 22 (16%)
August 31, 2015	4:31 AM	13.94	Pond 6 (30%); Pond 7 (25%); Pond 8 (14%); Pond 5 (10%)
August 31, 2015	5:39 AM	13.25	Pond 5 (22%); Pond 3 (22%); Pond 2 (16%); Pond 4(15%)
August 31, 2015	6:43 AM	15.02	Pond 9 (40%); Pond 8 (17%); Pond 22 (15%)
August 31, 2015	7:11 AM	12.55	Pond 7 (20%); Pond 6 (20%); Pond 8 (18%); Pond 22 (13%)
August 31, 2015	7:35 PM	14.60	Pond 9 (30%); Pond 20 (10%); Pond 7 (10%); Pond 6 (10%); Pond 24 (9%); Pond 8 (8%)

The OdoWatch Alert Point Concentration Report, included in Appendix A, shows that the highest maximum 4-minute odor concentration value of 18 ou/m<sup>3</sup> occurred at the Del Rio Subdivision 2 and Del Rio Subdivision 3 alert points on August 15, 2015. The highest 1-hour average odor concentration value of 18 ou/m<sup>3</sup> occurred at the Del Rio Subdivision 2 and Del Rio Subdivision 3 alert points. The total time that the medium odor concentration threshold limit was exceeded during the entire reporting period of August at the Del Rio Subdivision was 1%. Odor concentrations did not exceed the high odor concentration threshold at the Del Rio Subdivision during the month of August.

Appendix B includes odor plume maps generated for days that odor concentrations exceeded 10 ou/m<sup>3</sup> at the Del Rio subdivision.

## 4 Discussion

The overall results of the odor monitoring indicate that the highest odor concentrations are generally detectable at the Del Rio subdivision in the early morning hours when there is no solar radiation and when the wind direction is in a southerly direction, with dissipation of the odor plume by the early morning. Odor concentrations did exceed the medium threshold limit at certain times at the Del Rio Subdivision, but these instances were not prolonged in duration. The City received no odor complaints for the month of August.

Odor source values in the OMS are the same for domestic and industrial treatment ponds at 0.238 ou/m<sup>2</sup>/s. Odor source values are also the same for domestic and industrial percolation ponds at 0.087 ou/m<sup>2</sup>/s. Weather patterns and solar radiation influence which ponds contribute the most to off-site odors. Figure 3 summarizes the percentage that each pond was a major source contributor when the medium threshold limit was reported at the Del Rio subdivision for the month of August.

**Figure 3 – Major source contributor percentage to medium threshold off-site odors for August**

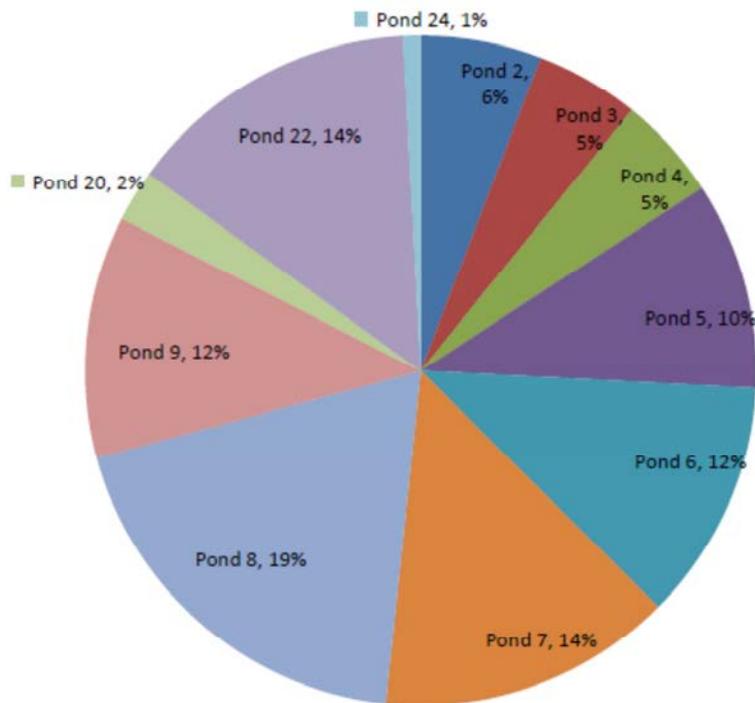
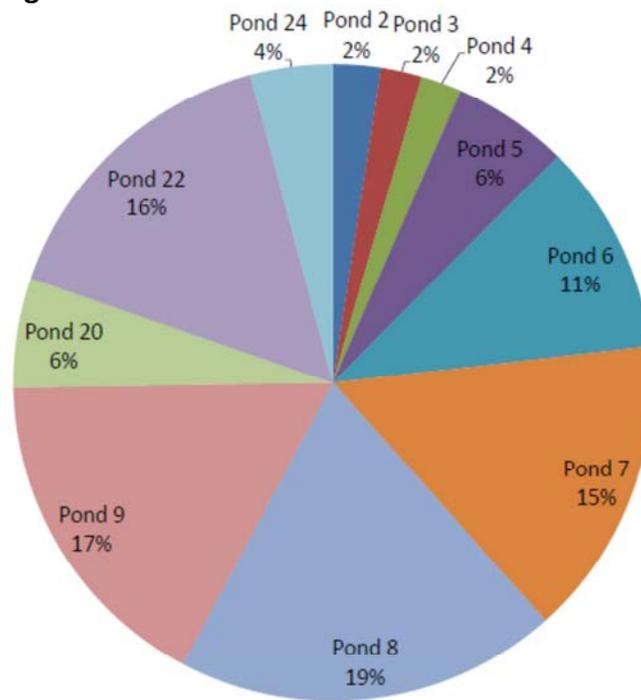


Figure 4 summarizes the percentage each pond was a major source contributor when the medium threshold limit was reported at the Del Rio subdivision for the months of June, July, and August, since implementation of the OMS.

Figure 4 – Major source contributor percentage to medium threshold off-site odors from June through August



Based on the data, Ponds 6-9 most frequently contribute to medium threshold odors off-site.

Fixed source sampling was completed by Odotech on August 27, 2015. On-site, it was determined that Industrial Treatment Pond 3 was the source of the most detected odor on site at the time of sampling. Black Water and City staff did not observe odors at nuisance levels on-site at the time of the sampling event, so the location with the most detectable odor, identified to be at Industrial Pond 3, was selected to be the best sampling location. Figure 3 presents a photo of the sampling device, used to calibrate the odor emission rate, being placed in the pond.

**Figure 5 – Fixed Odor Source Sampling**



Additional interpretation of the model data will be possible in future reports as the odor plume data set grows and fixed source sampling is added. With the additional data and the evolution of the model, odor thresholds can be re-evaluated, and future monthly odor monitoring reports will be able to correlate the extents of the odor plume and weather patterns with sources and concentrations of odors generated at the WWTP. Data results from the fixed odor sampling event are expected to be complete and updated in the model by the end of September.

## Appendix A



# OdoWatch Report for OdoSite

## ODOWATCH

Site: OdoSite

Generated: 9/4/2015 9:53:19 AM

Type of Report: Alert Point Concentration Report

Report Period: 8/1/2015 12:00:00 AM - 9/1/2015 12:00:00 AM

### Gas

ID	Alert Point Name	Highest 1-Hour Average (o.u./m <sup>3</sup> )	Maximum 4-Minute Value (o.u./m <sup>3</sup> )	Total Exceeding Time					
				Low Threshold		Medium Threshold		High Threshold	
				hh:mm	%	hh:mm	%	hh:mm	%
32	Del Rio Subdivision	16	17	16:20	2	7:52	1	0:00	0
34	Del Rio Subdivision 2	18	18	18:56	3	7:56	1	0:00	0
36	Del Rio Subdivision 3	14	18	18:12	2	8:16	1	0:00	0
38	Del Rio Subdivision 4	10	16	15:04	2	3:56	< 1	0:00	0
40	Del Rio Subdivision 5	9	17	20:04	3	3:56	< 1	0:00	0

#### Legend:

ID: Identification number of the alert point used in the OdoWatch system

Alert Point Name: Descriptive name assigned to this alert point

Highest 1-Hour Average (o.u./m<sup>3</sup>): Highest 1-hour average value in this reporting period

Maximum 4-Minute Value (o.u./m<sup>3</sup>): Maximum 4-minute value in this reporting period

Total Exceeding Time (hh:mm): Total time that a threshold limit was exceeded in this reporting period

Total Exceeding Time (%): Percentage of this reporting period where a threshold limit was exceeded

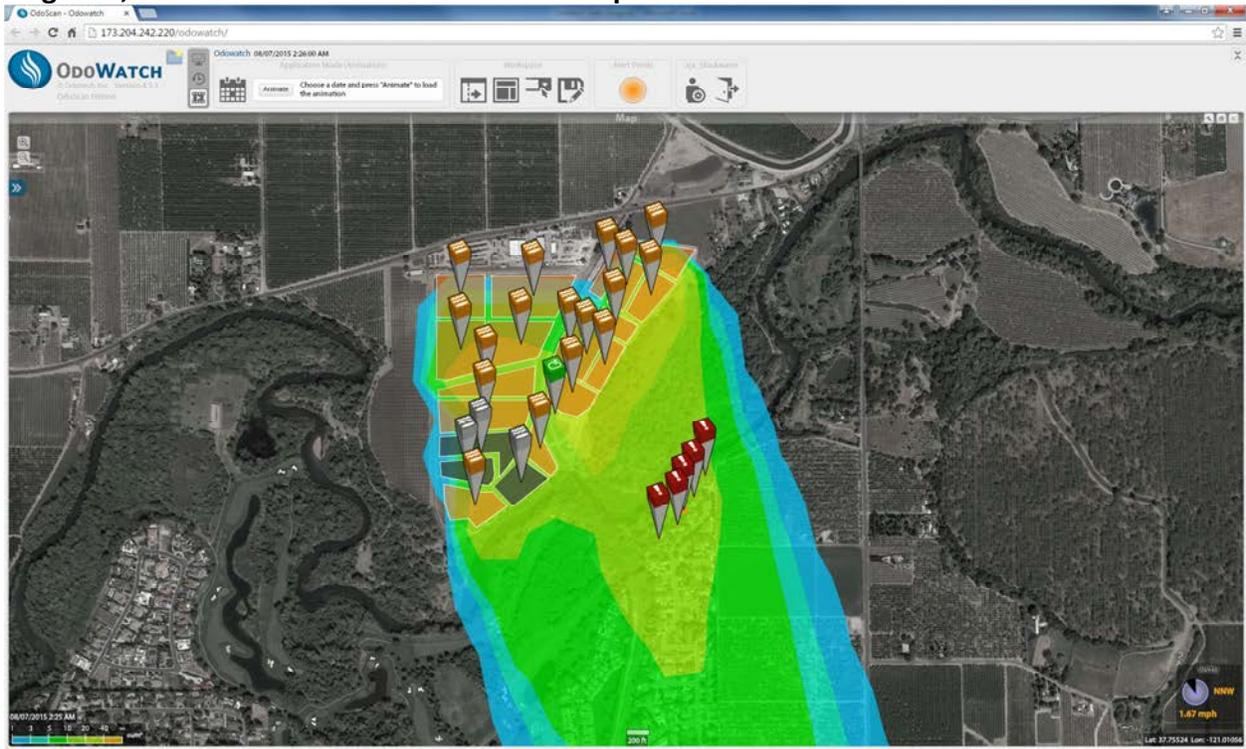
Low Threshold: Low threshold level. Triggers low level alarm

Medium Threshold: Medium threshold level. Triggers medium level alarm

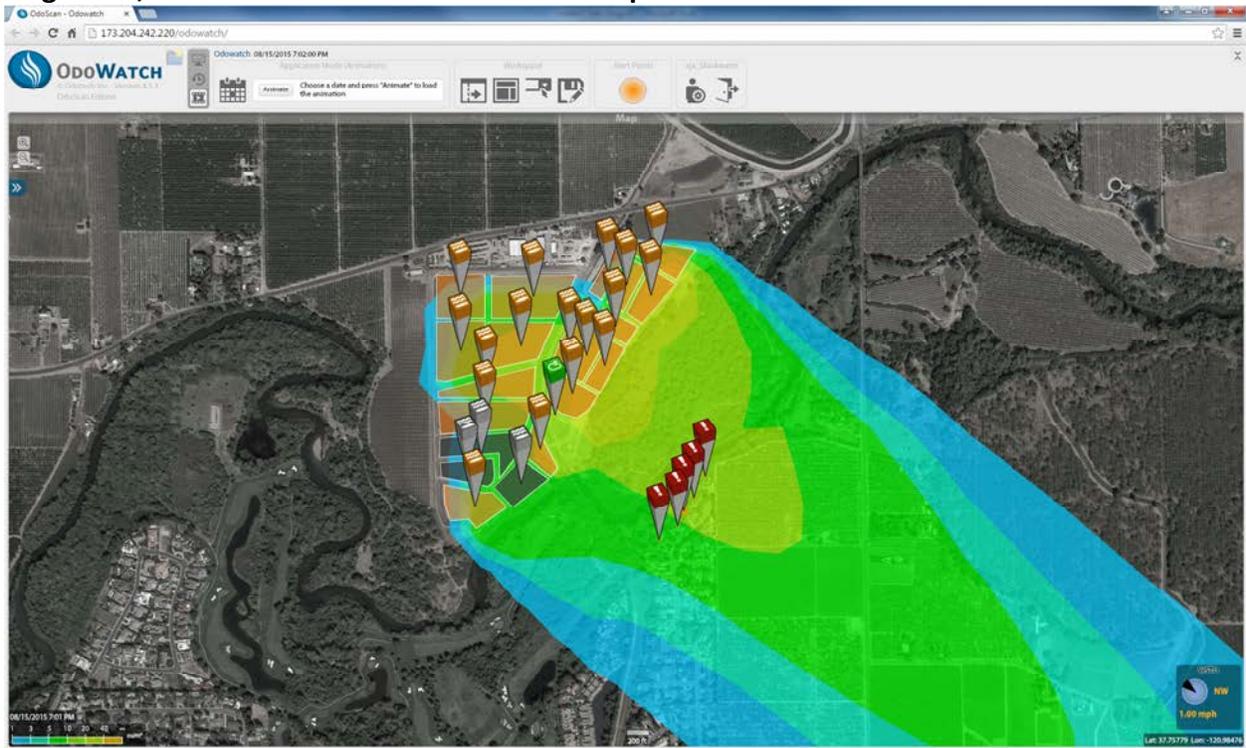
High Threshold: High threshold level. Triggers high level alarm

## Appendix B

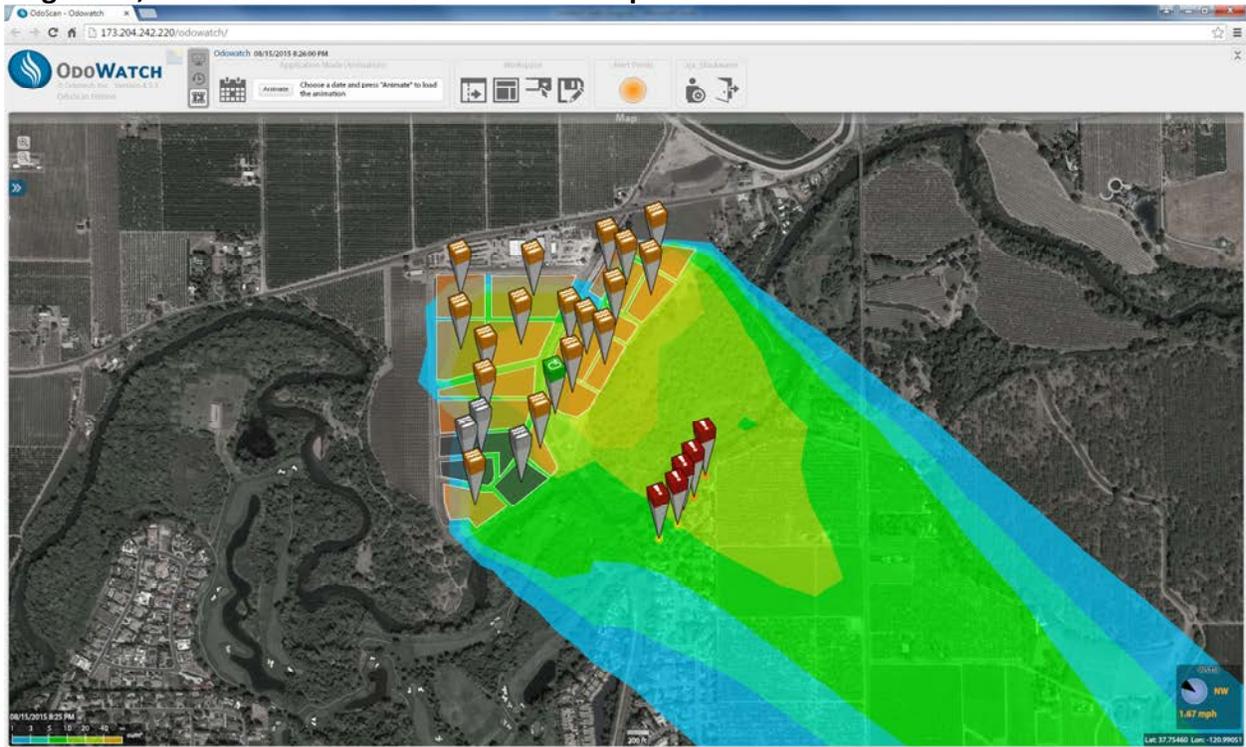
August 7, 2015 Odor Plume Concentration Map – 2:25 AM



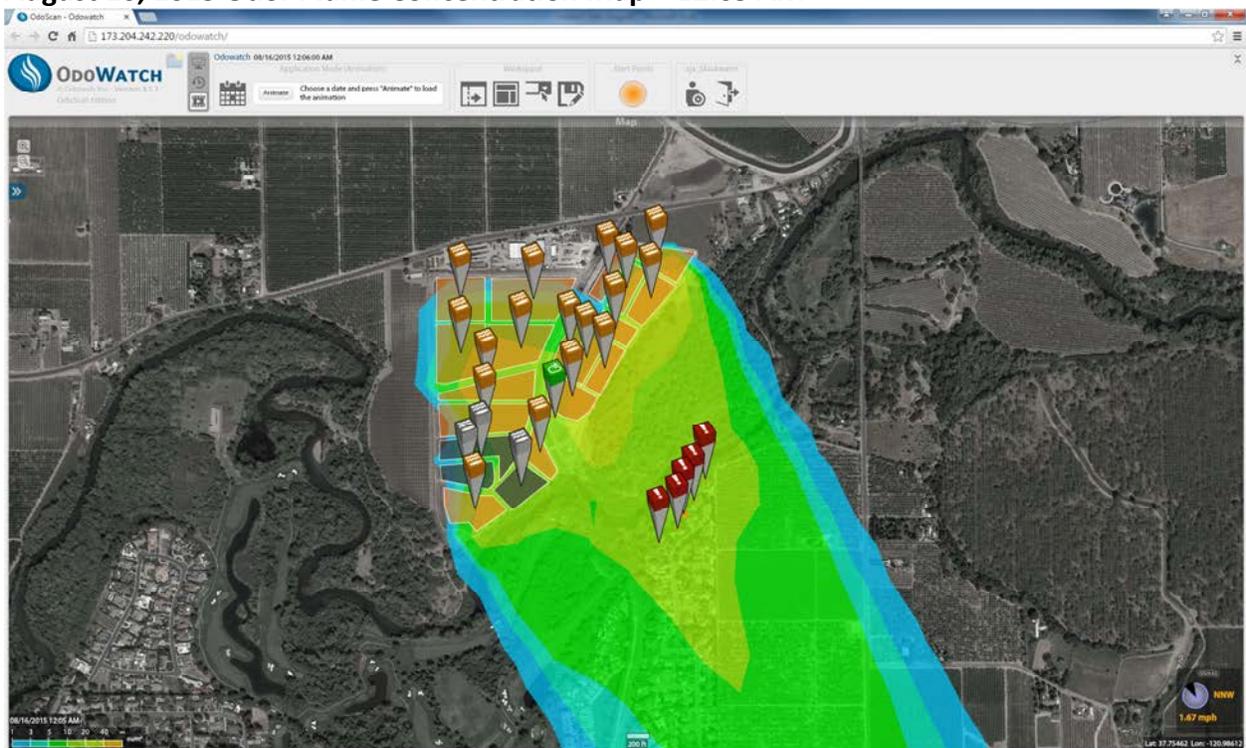
August 15, 2015 Odor Plume Concentration Map – 7:01 PM



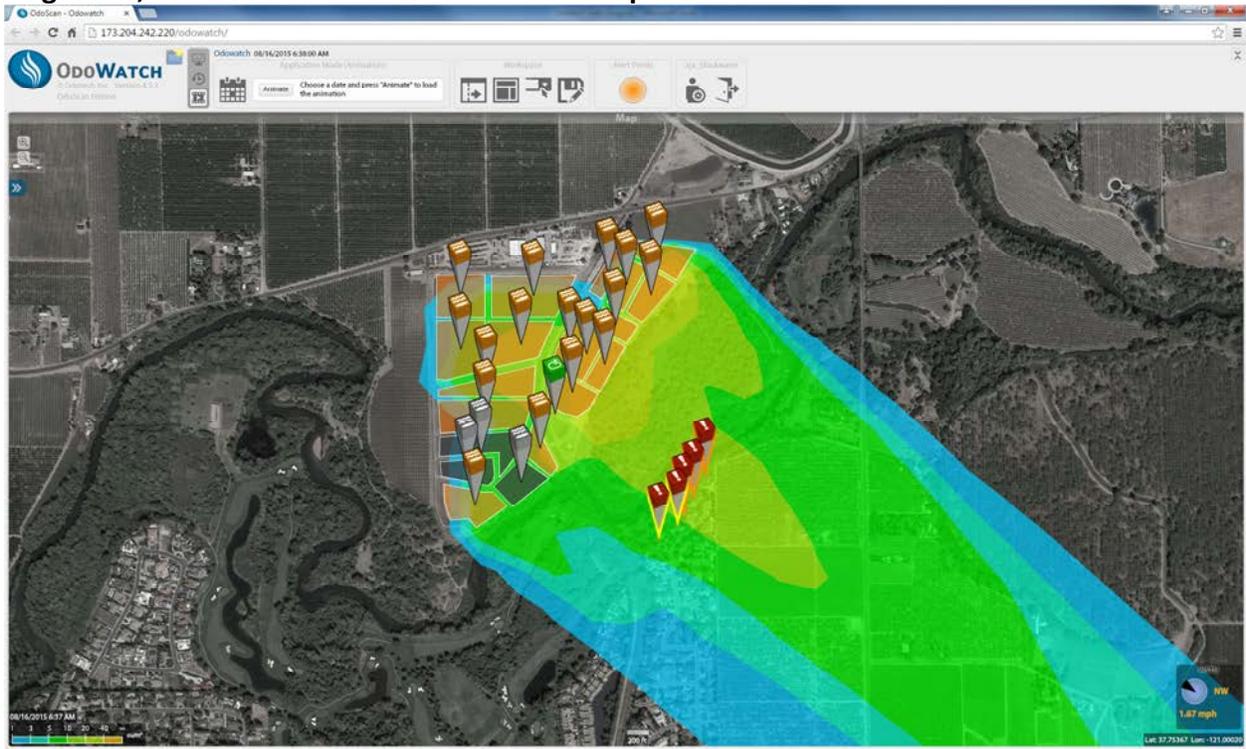
### August 15, 2015 Odor Plume Concentration Map – 8:25 PM



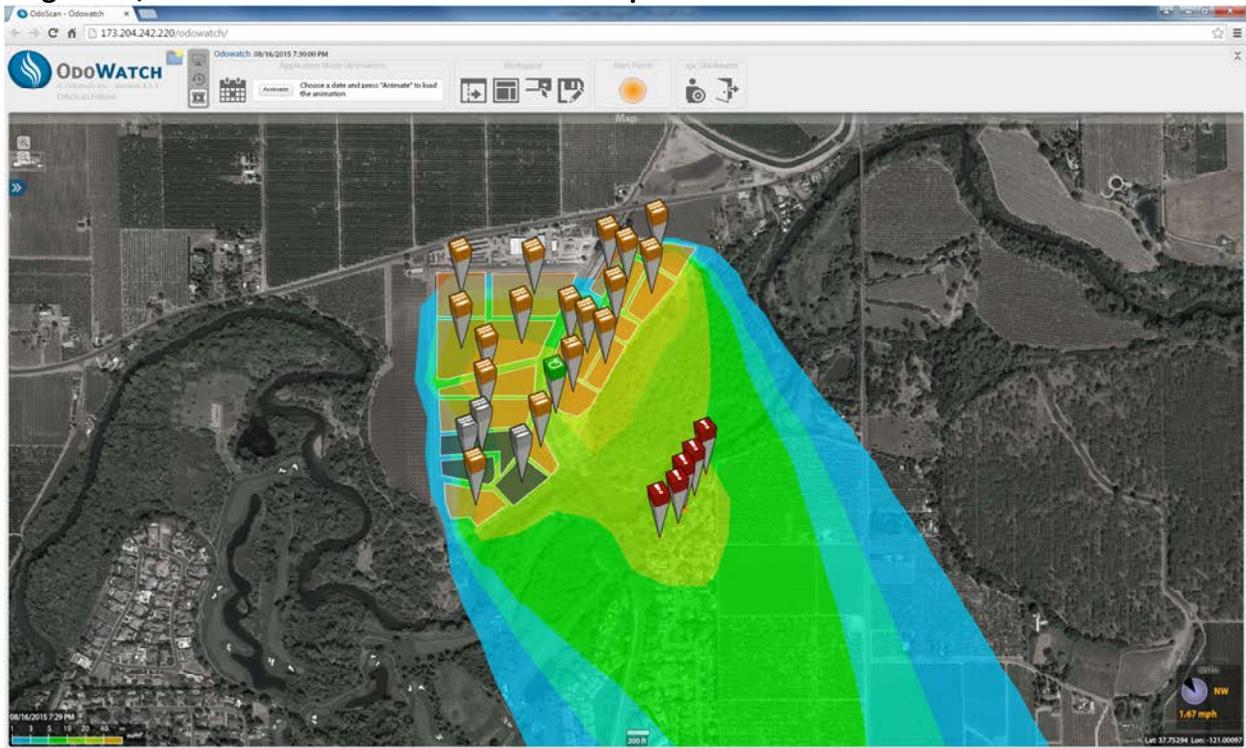
### August 16, 2015 Odor Plume Concentration Map – 12:05 AM



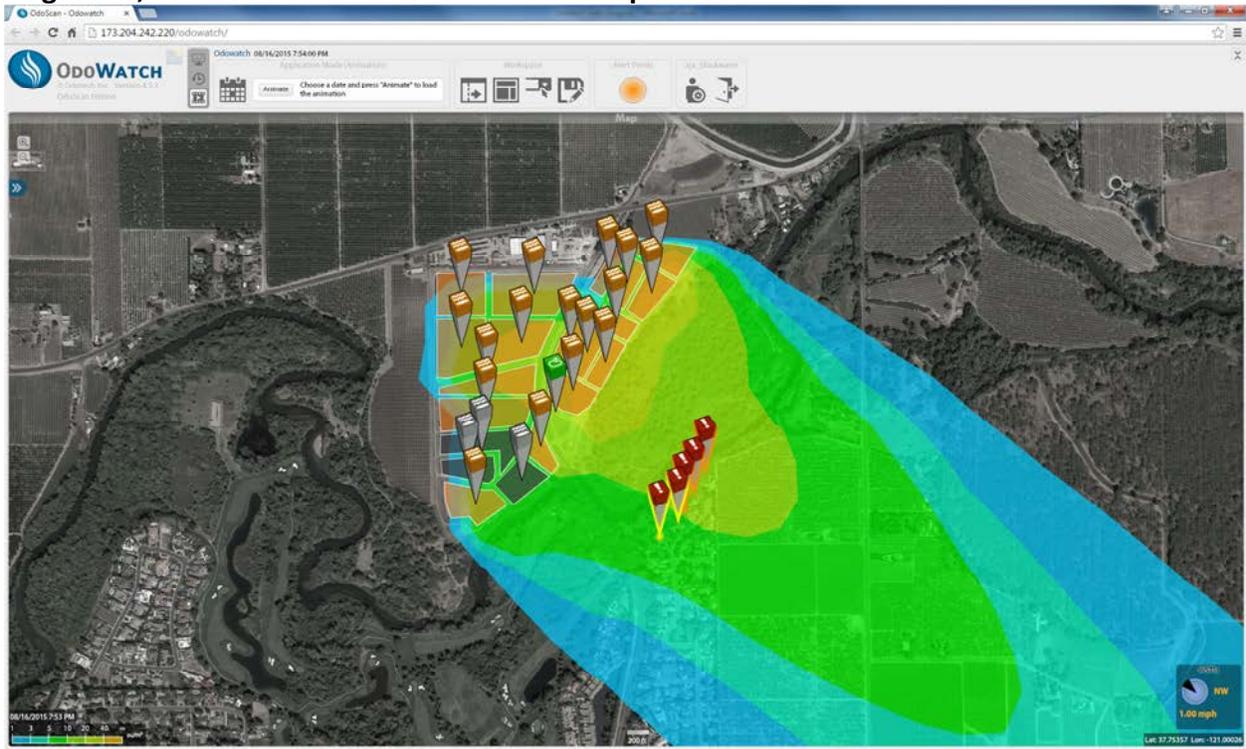
### August 16, 2015 Odor Plume Concentration Map – 6:37 AM



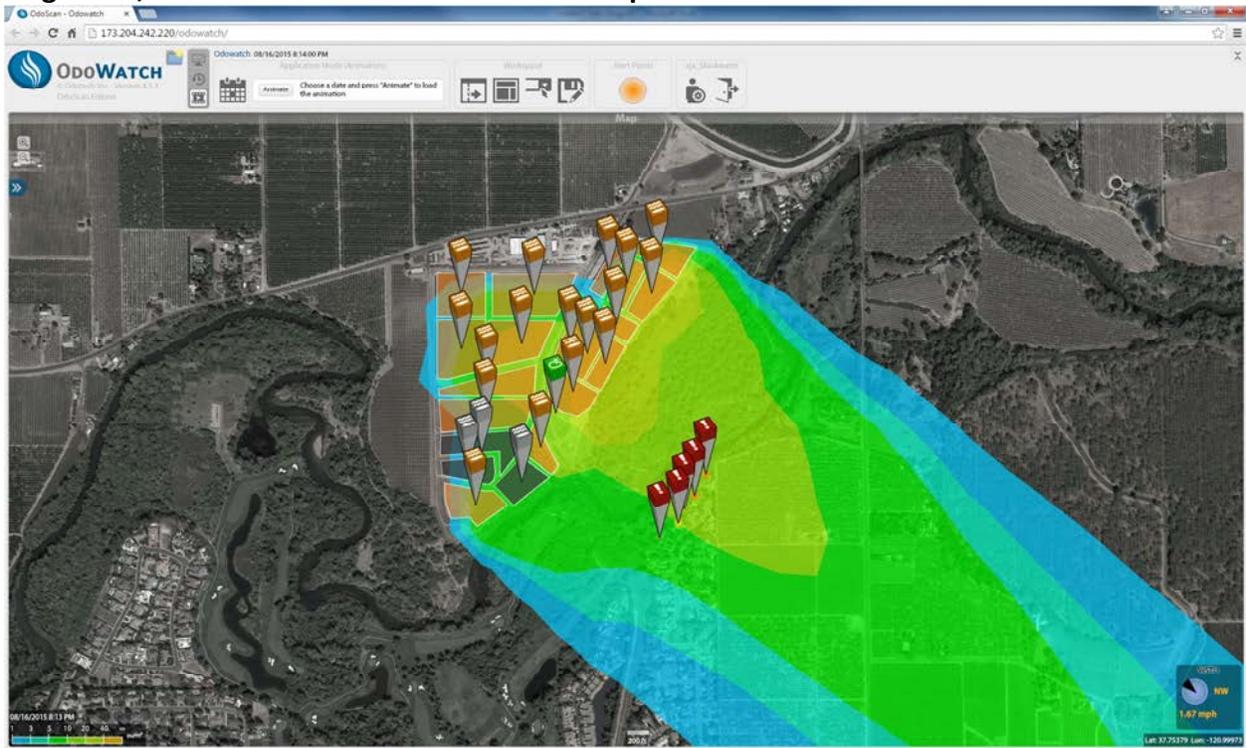
### August 16, 2015 Odor Plume Concentration Map – 7:29 PM



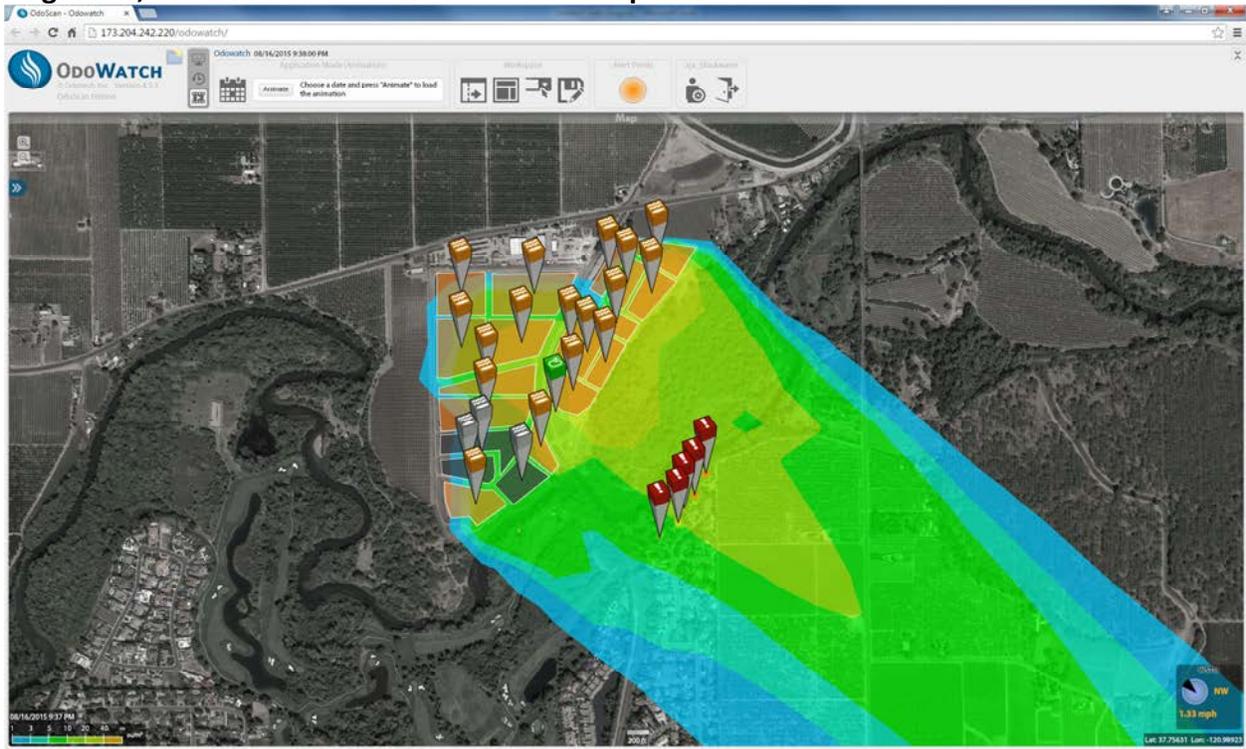
August 16, 2015 Odor Plume Concentration Map – 7:53 PM



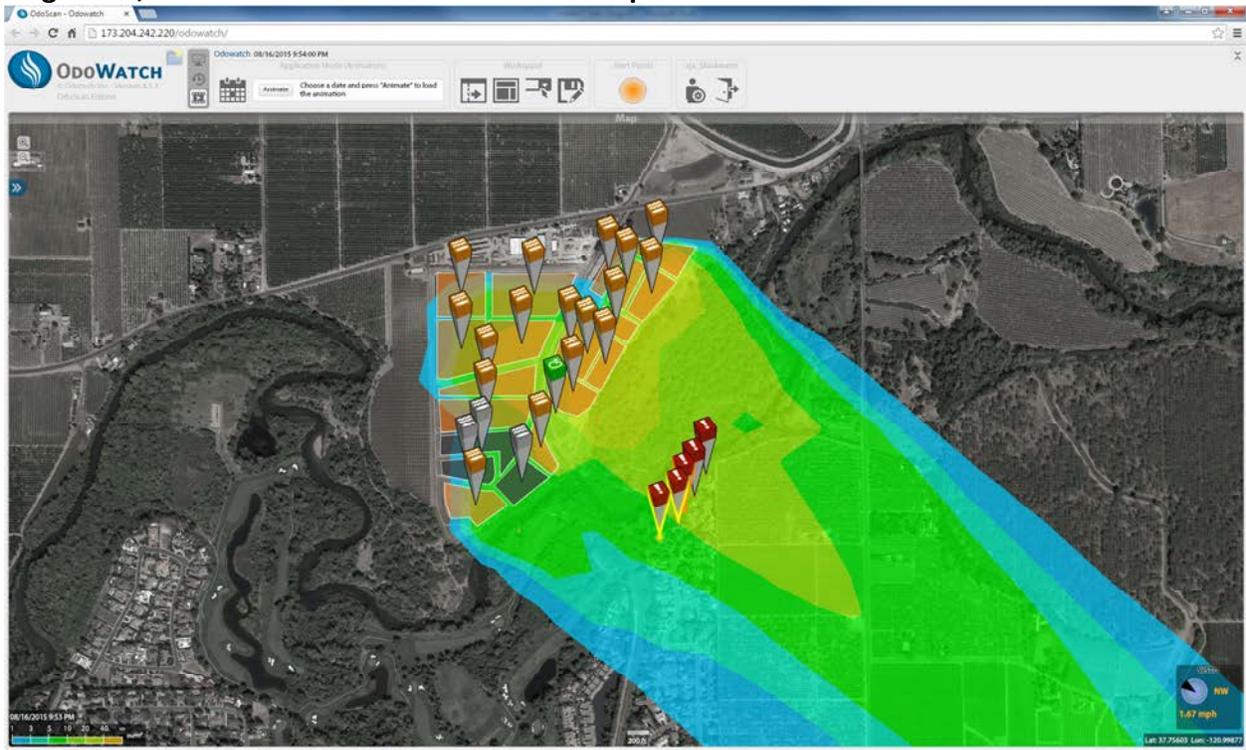
August 16, 2015 Odor Plume Concentration Map – 8:13 PM



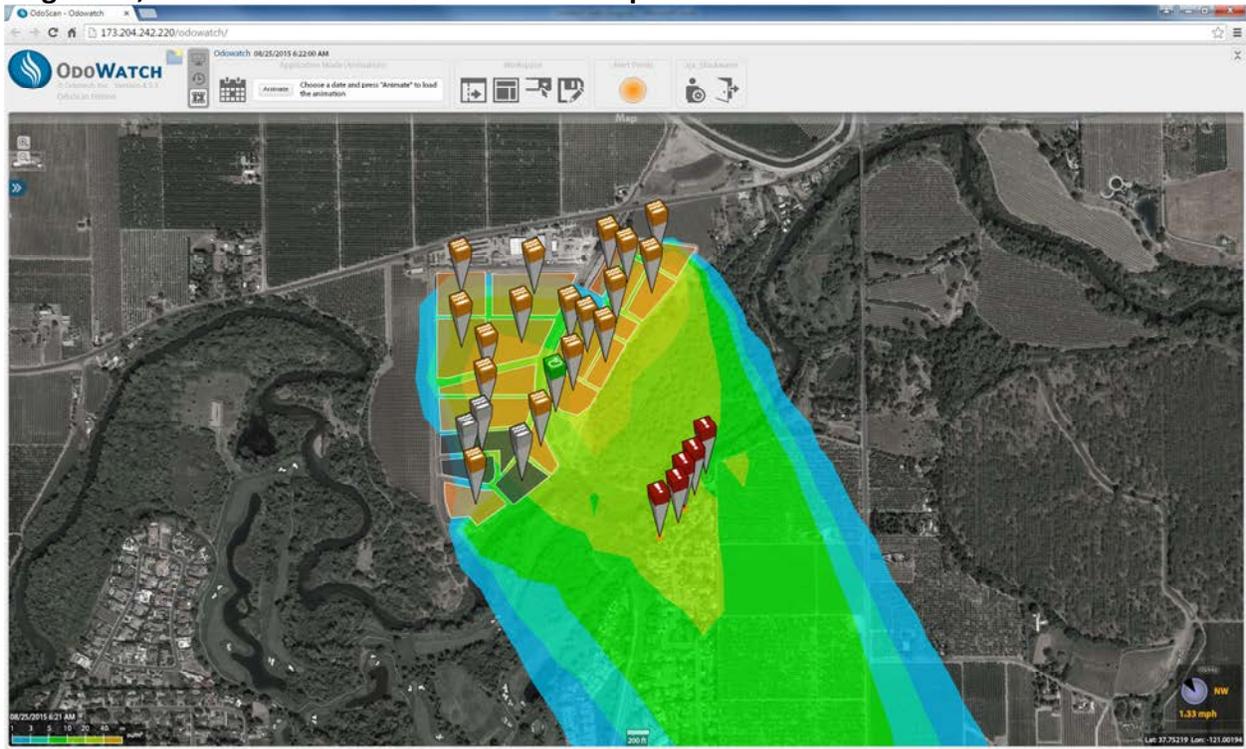
August 16, 2015 Odor Plume Concentration Map –9:37 PM



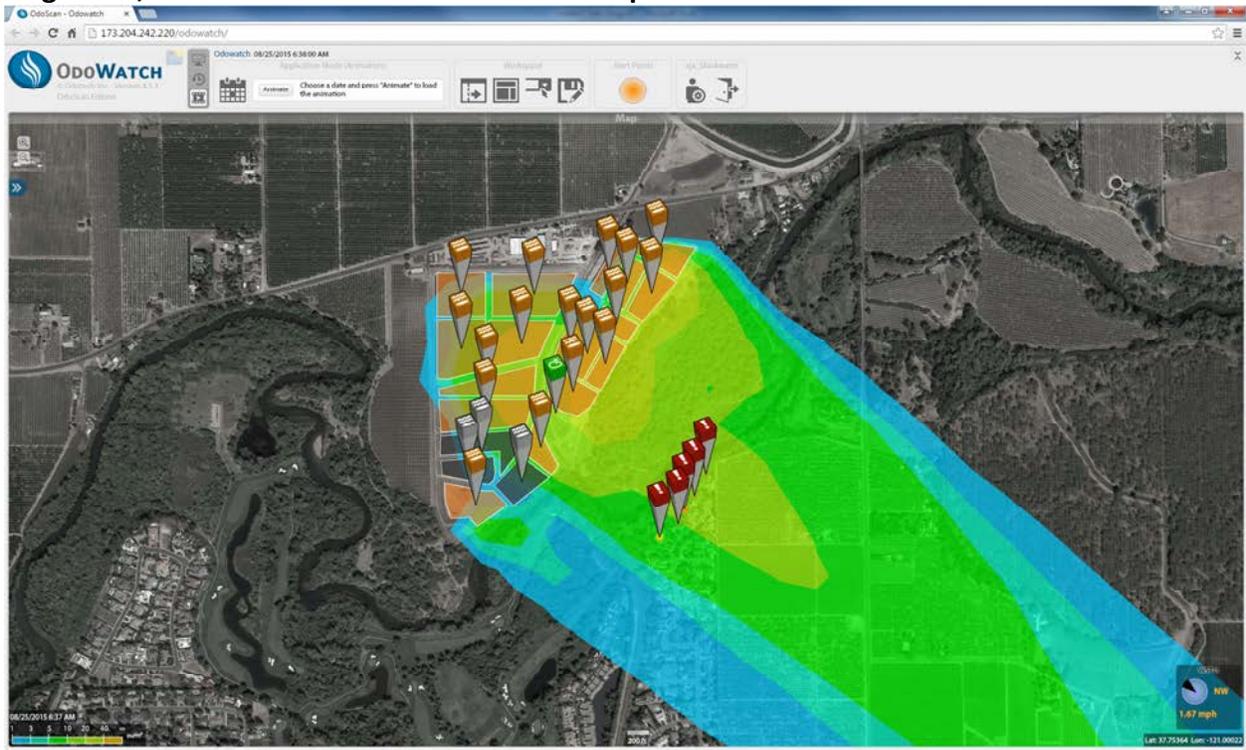
August 16, 2015 Odor Plume Concentration Map –9:53 PM



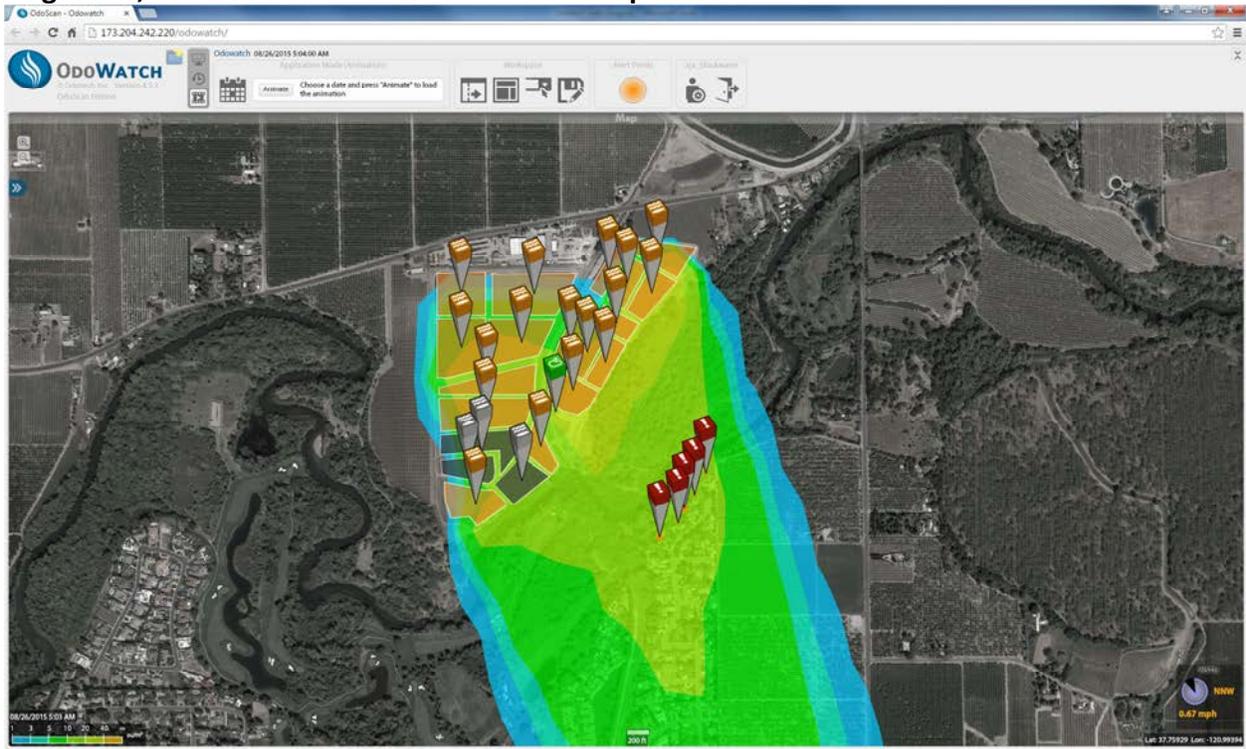
August 25, 2015 Odor Plume Concentration Map –6:21 AM



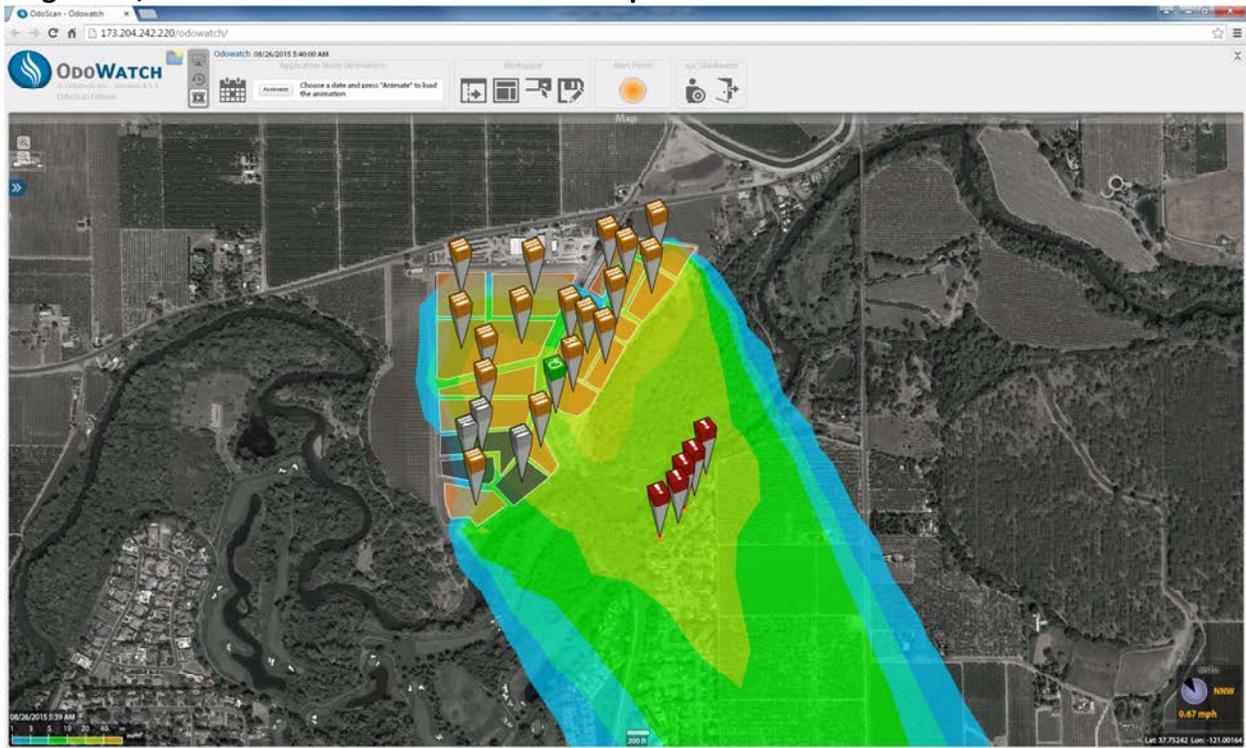
August 25, 2015 Odor Plume Concentration Map –6:37 PM



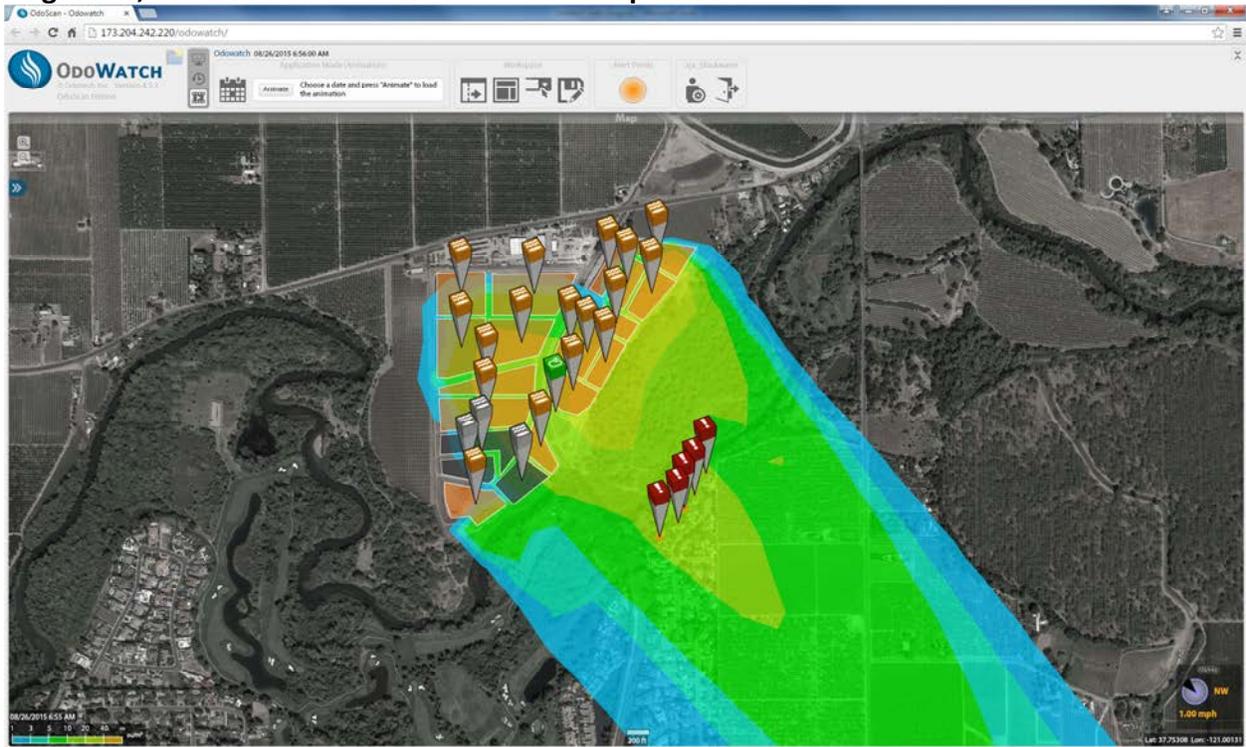
August 26, 2015 Odor Plume Concentration Map –5:03 AM



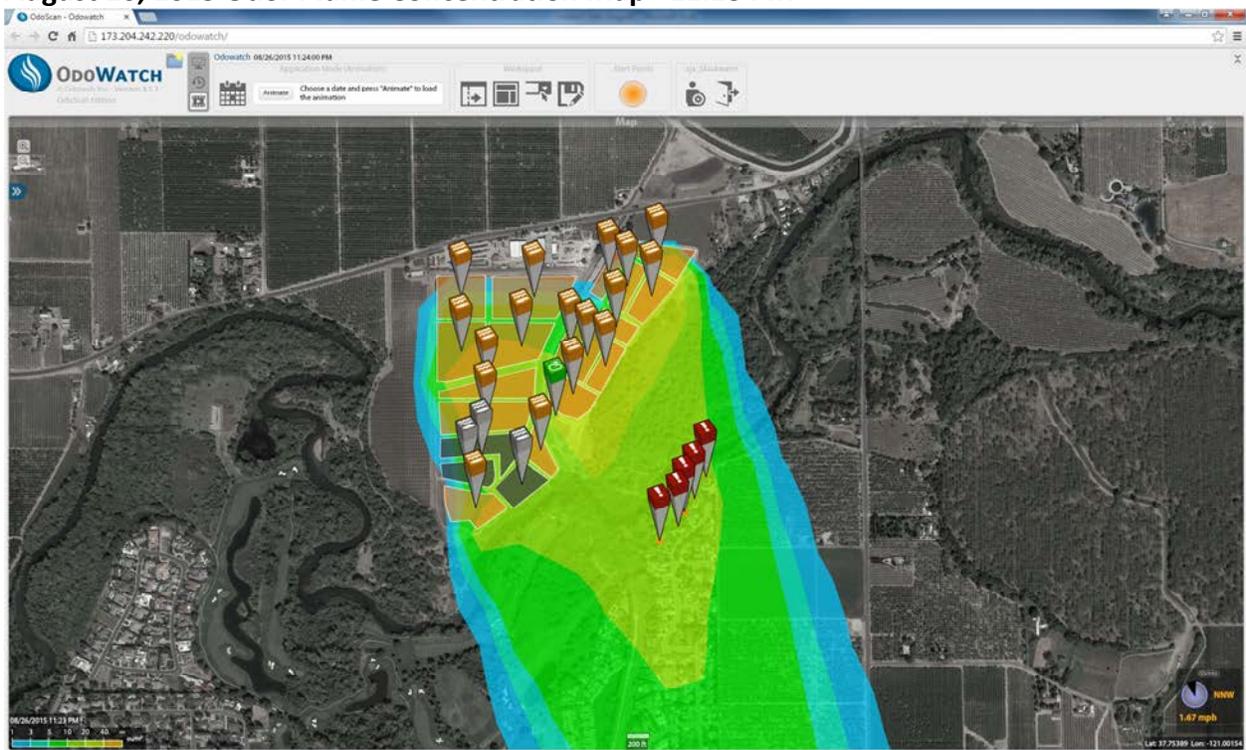
August 26, 2015 Odor Plume Concentration Map –5:39 AM



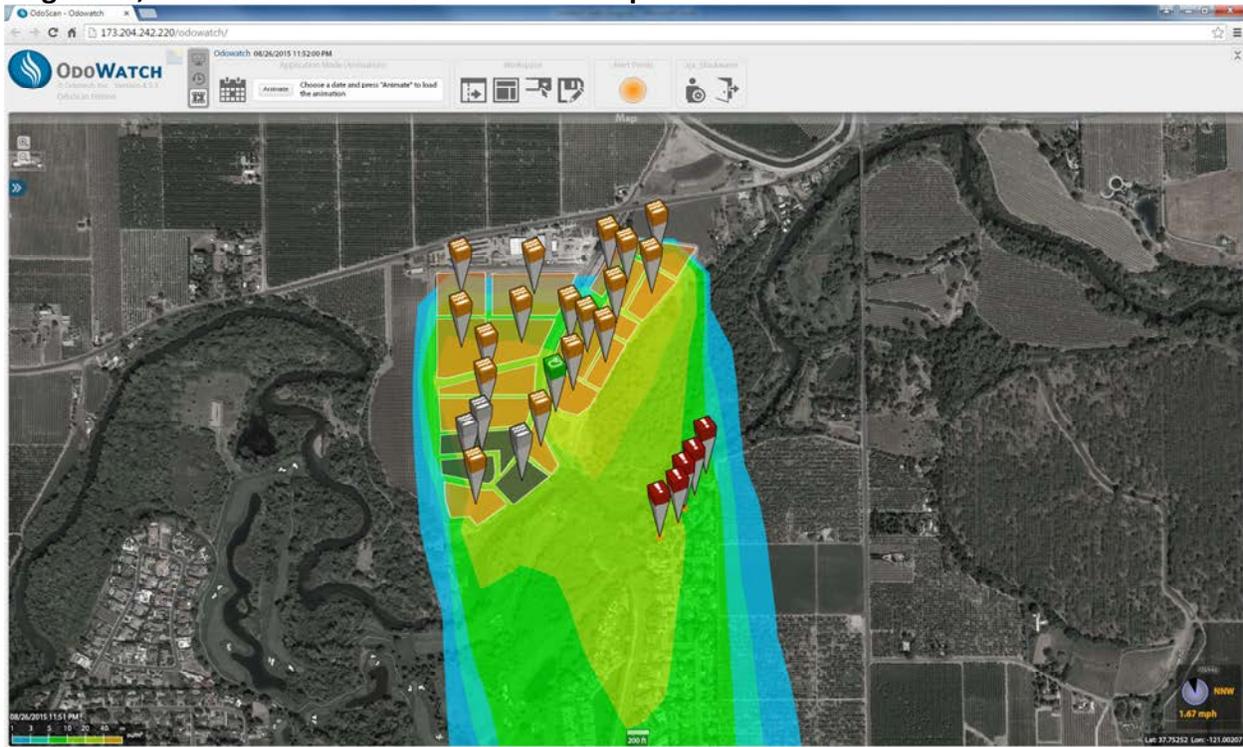
### August 26, 2015 Odor Plume Concentration Map –6:55 AM



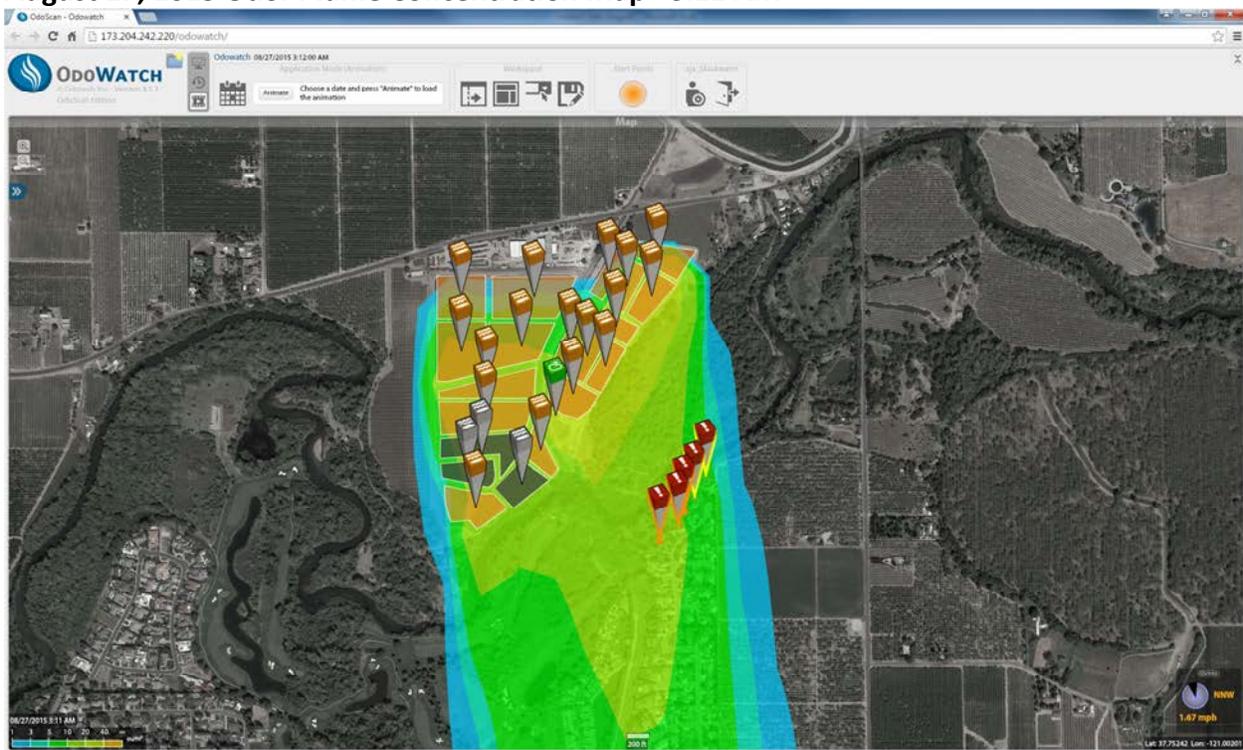
### August 26, 2015 Odor Plume Concentration Map –11:23 PM



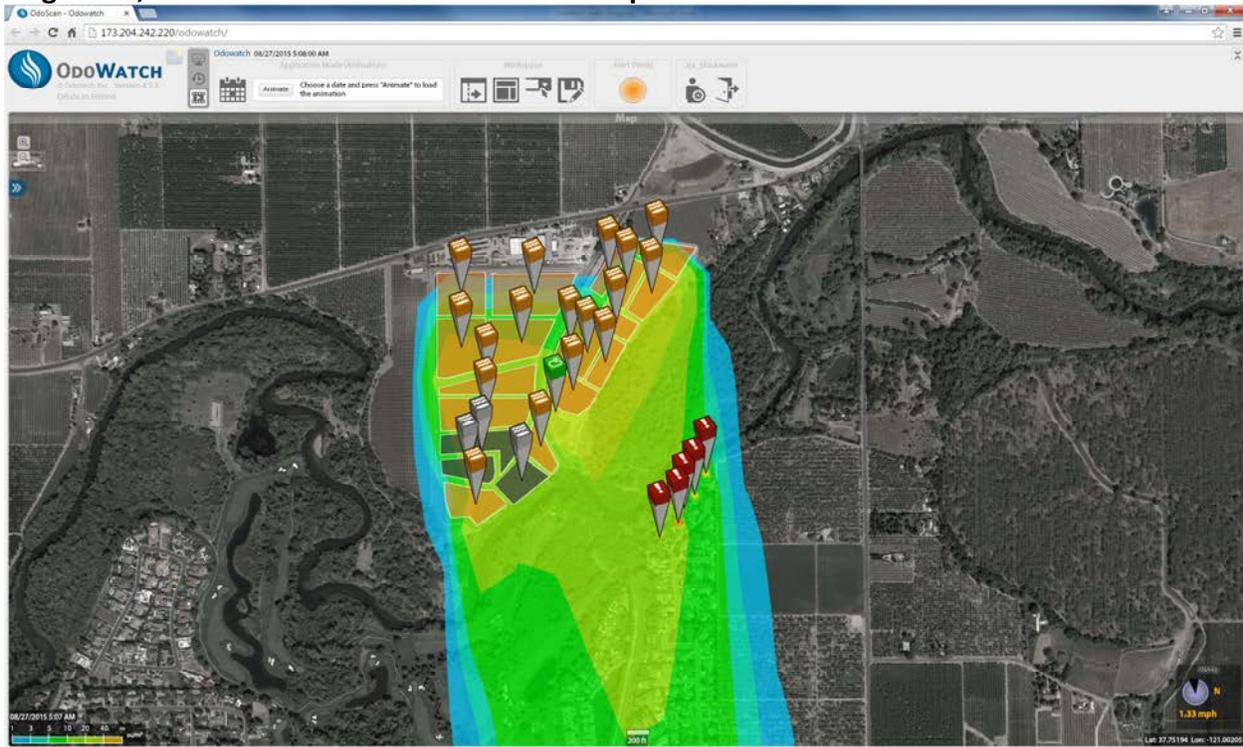
### August 26, 2015 Odor Plume Concentration Map –11:51 PM



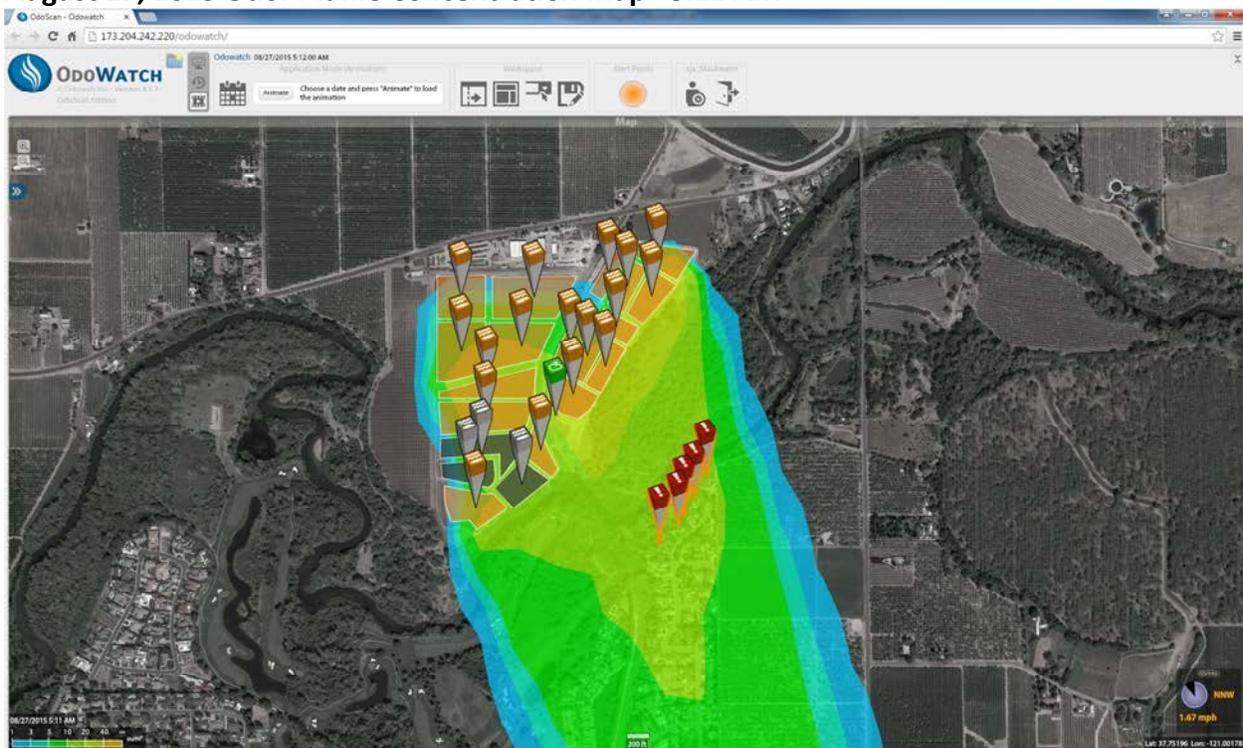
### August 27, 2015 Odor Plume Concentration Map –3:11 AM



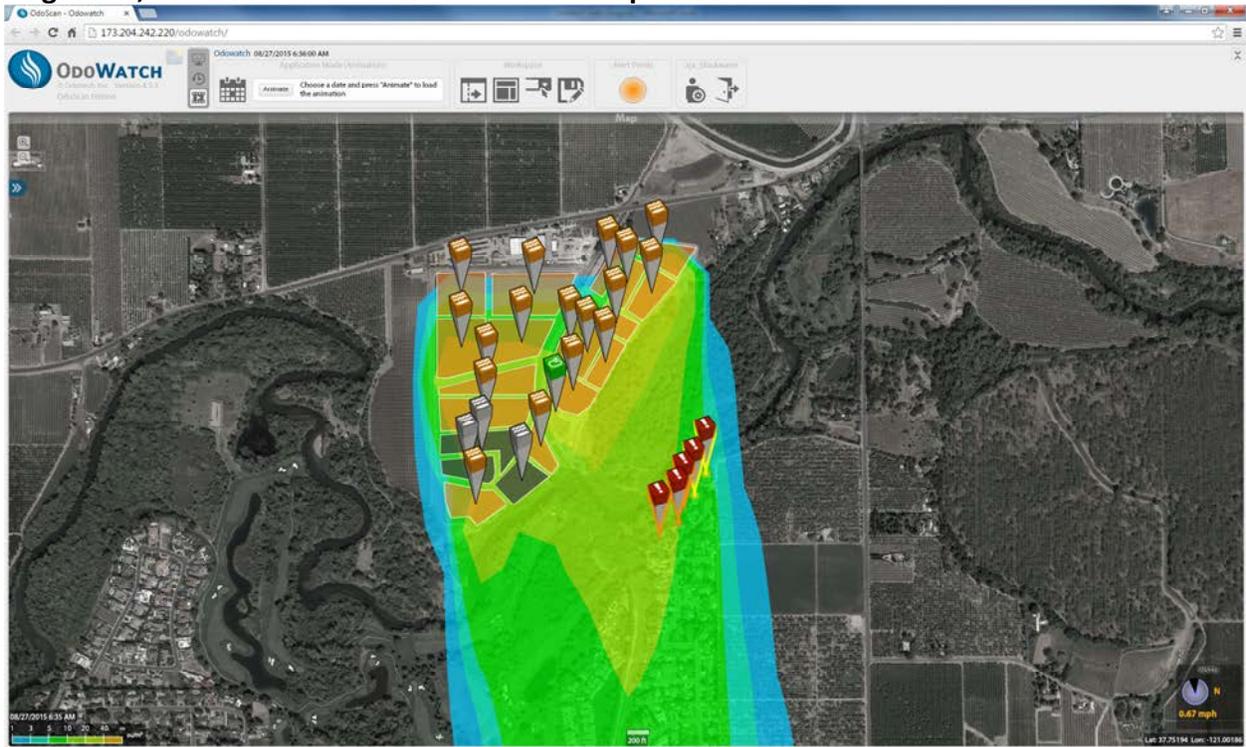
August 27, 2015 Odor Plume Concentration Map -5:07 AM



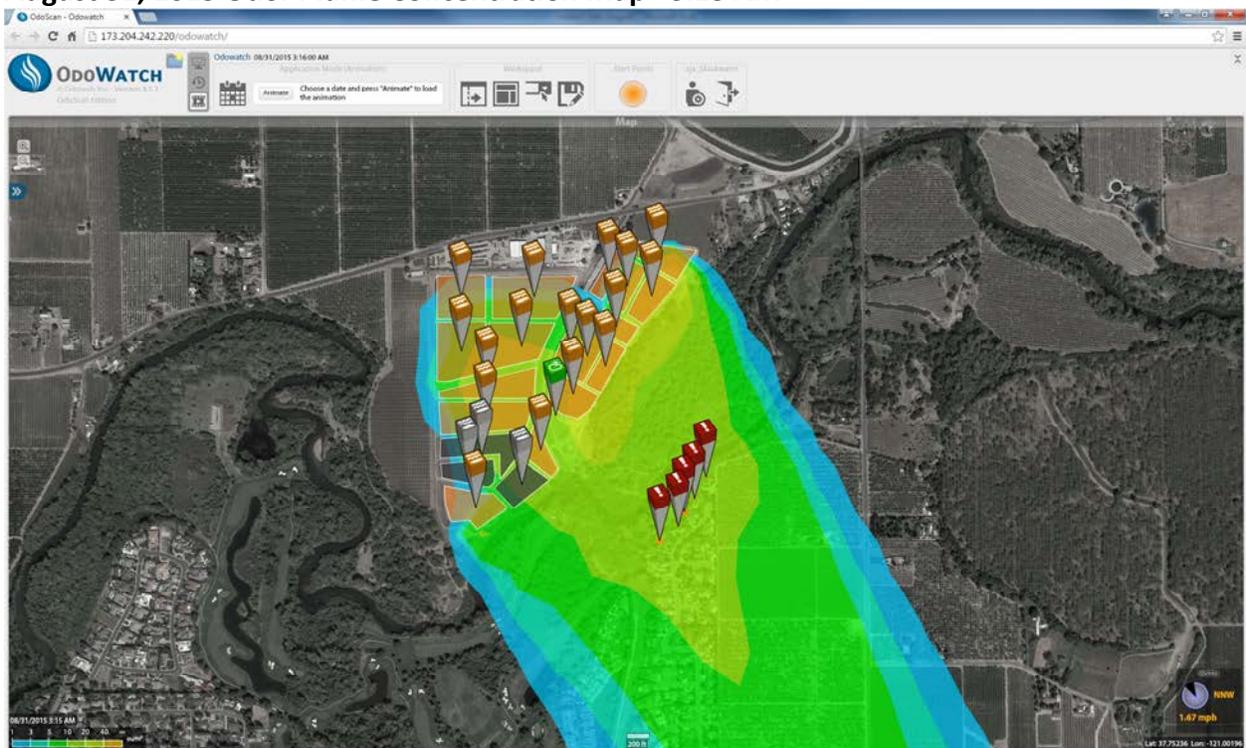
August 27, 2015 Odor Plume Concentration Map -5:11 AM



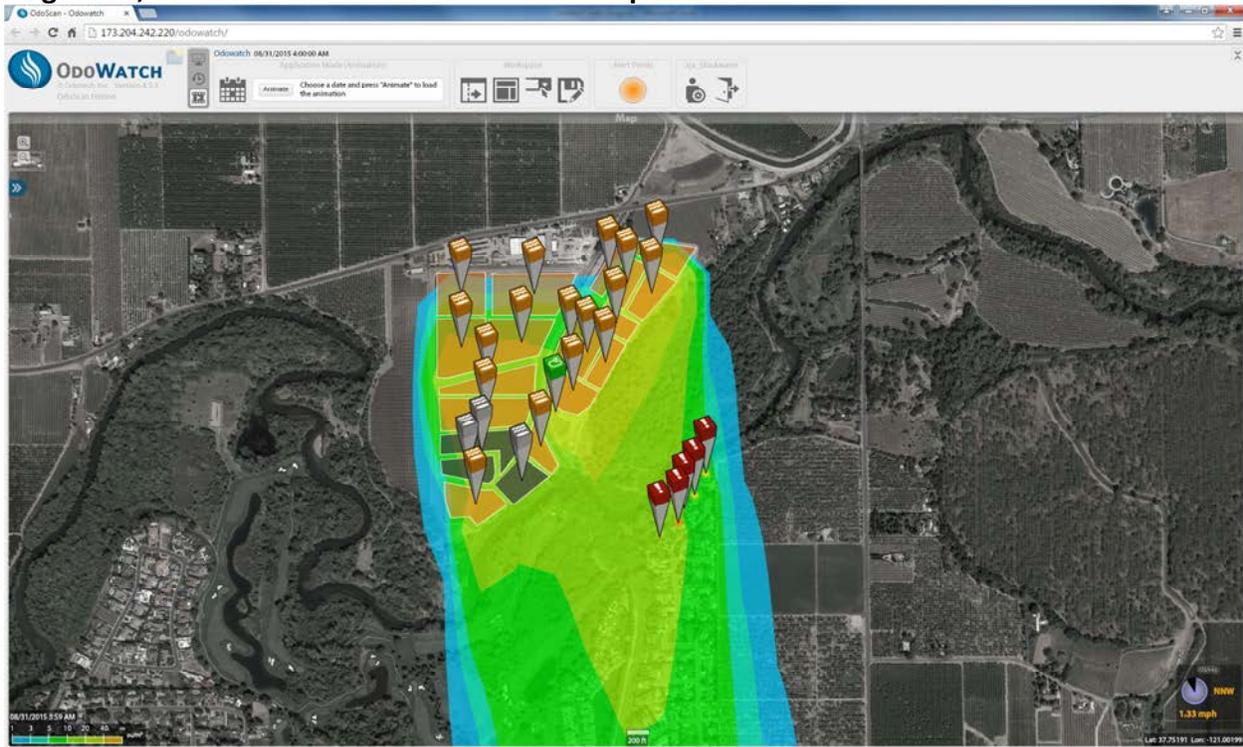
### August 27, 2015 Odor Plume Concentration Map –6:35 AM



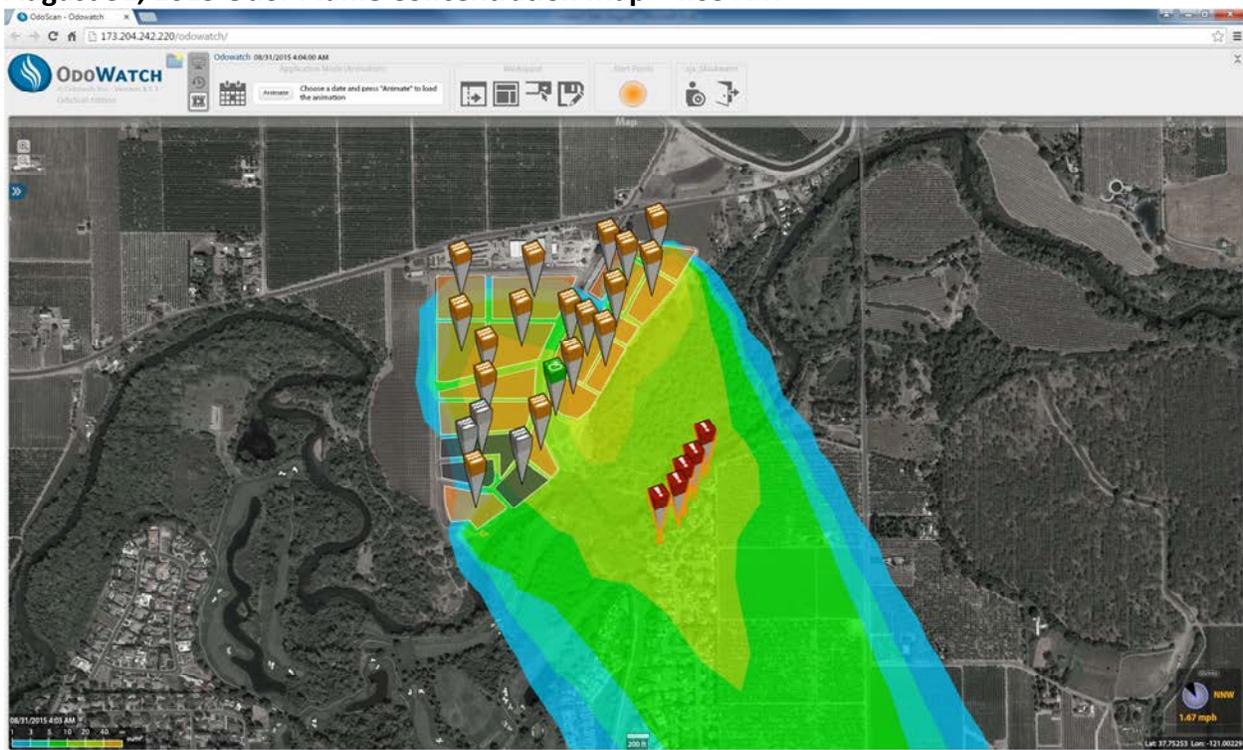
### August 31, 2015 Odor Plume Concentration Map –3:15 AM



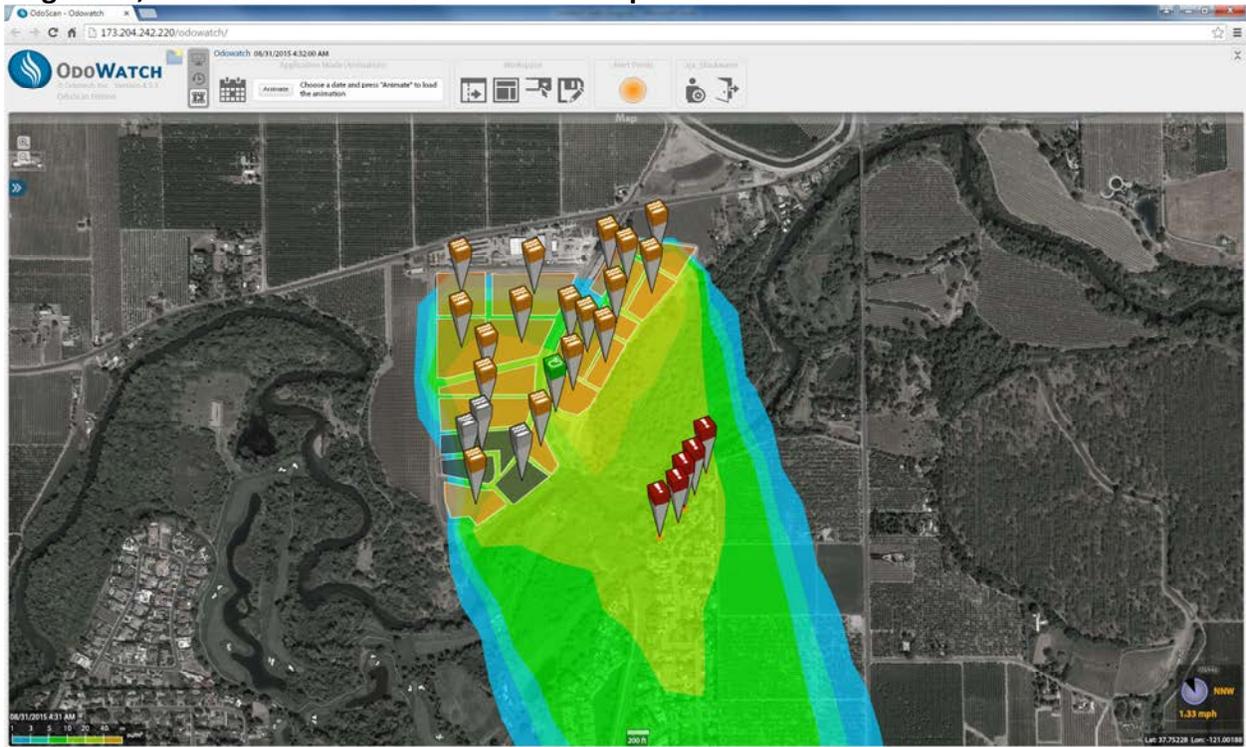
### August 31, 2015 Odor Plume Concentration Map –3:59 AM



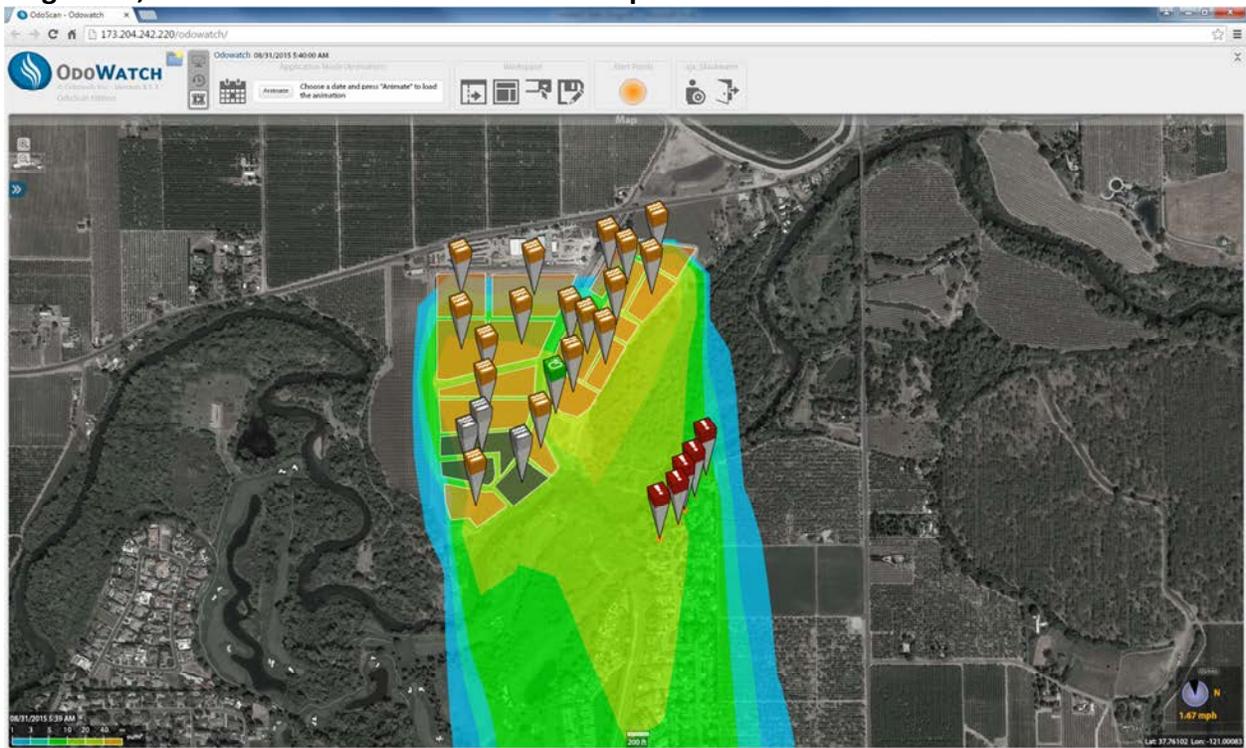
### August 31, 2015 Odor Plume Concentration Map –4:03 AM



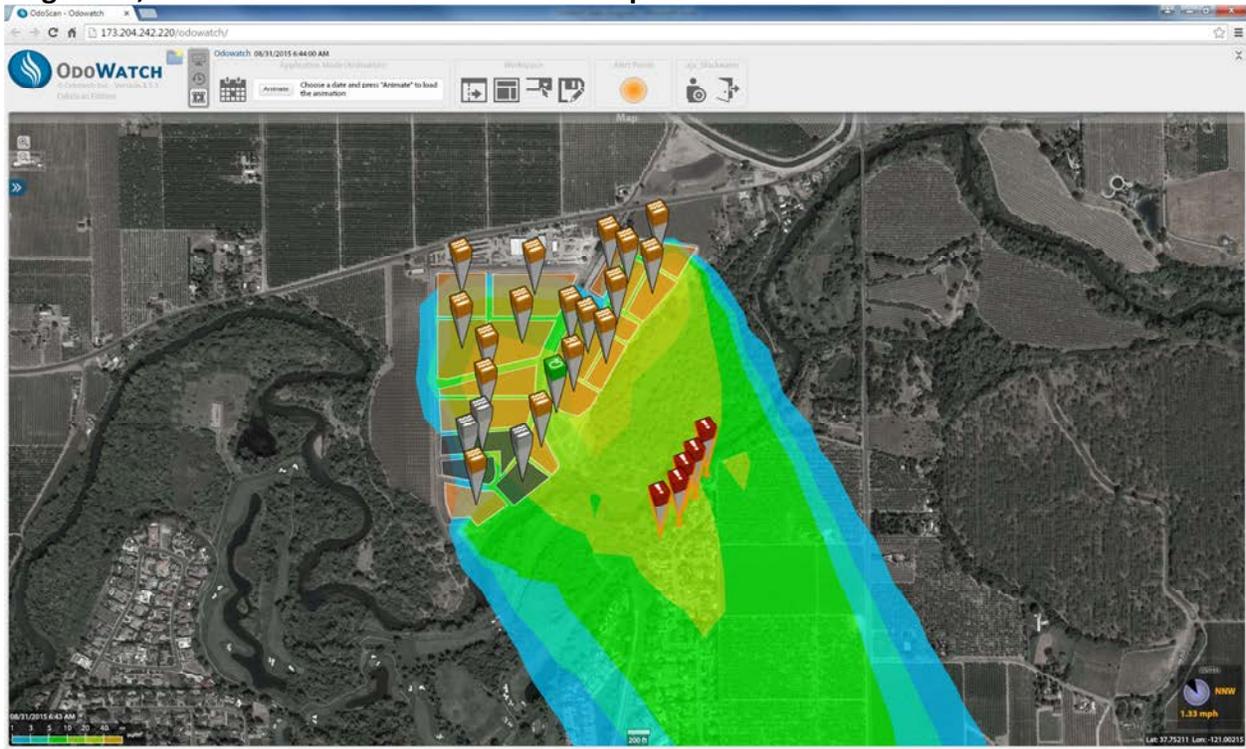
### August 31, 2015 Odor Plume Concentration Map -4:31 AM



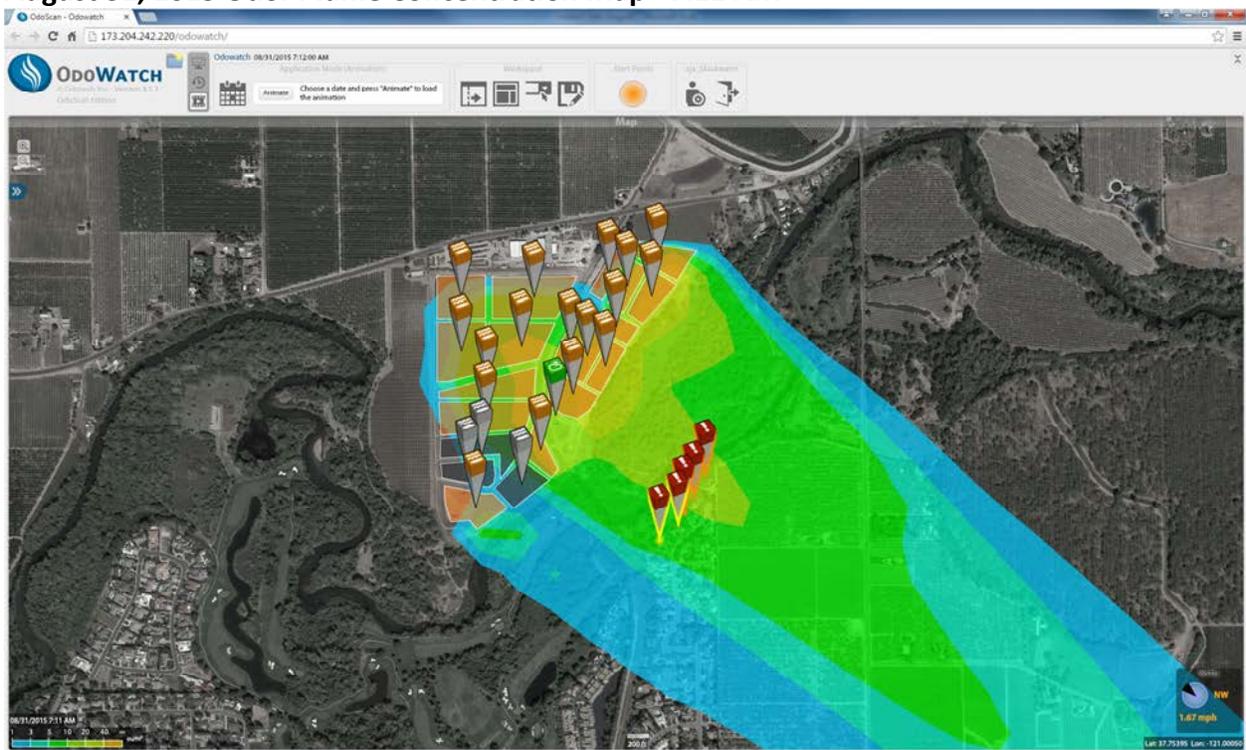
### August 31, 2015 Odor Plume Concentration Map -5:39 AM



August 31, 2015 Odor Plume Concentration Map –6:43 AM



August 31, 2015 Odor Plume Concentration Map –7:11 AM



### August 31, 2015 Odor Plume Concentration Map –7:35 PM

