

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
MEETING OF OCTOBER 12, 2011
Victorville**

- ITEM:** 5
- SUBJECT:** **ADELANTO PUBLIC UTILITY AUTHORITY CEASE AND DESIST ORDER STATUS REPORT, SAN BERNARDINO COUNTY**
- CHRONOLOGY:** September 11, 2002 – Waste Discharge Requirements adopted
August 29, 2007 – Cease and Desist Order adopted
June 10, 2009 – Waste Discharge Requirements adopted
November 1, 2010 – Cleanup and Abatement Order issued
March 10, 2011 - Cease and Desist Order adopted
May 11, 2011 - Cease and Desist Order amended
- ISSUES:** Whether the City of Adelanto Public Utility Authority (APUA) has complied with the requirements in the May 2011 amended Cease and Desist Order, which, in part, was intended to require the APUA to demonstrate that it has sufficient wastewater treatment and disposal capacity to accommodate existing and projected wastewater flows?
- DISCUSSION:** In May 2011 the Water Board adopted a Cease and Desist Order (CDO) (Enclosure 1) for the APUA requiring it to achieve compliance with its waste discharge requirements (WDRs) and other Orders of the Water Board according to a schedule. The significant violations and threatened violations addressed in the CDO are: violations of effluent limits, and violations and threatened violations of provisions and prohibitions of WDRs related to adequate treatment and disposal capacity for both current and projected wastewater flows generated in the service area.
- In both March and May 2011, the Water Board Prosecution Team recommended that the Water Board impose a restriction on additional connections as part of a CDO. At the conclusion of these hearings, the Water Board did not adopt the recommendation of the Prosecution Team to impose a restriction on connections; nonetheless, it had concerns regarding the capability of the APUA to maintain compliance with WDRs. In response to this concern, it ordered the APUA to submit specific technical reports that were to provide a quantified evaluation of the APUA's existing and proposed treatment and disposal facilities. These reports and Water Board staff responses are included as Enclosures 2 – 6.

Water Board Advisory Team has reviewed the reports and Water Board staff responses to these reports (Enclosure 7). It is our opinion that, because of the methodology used in developing the reports, one cannot reach any conclusions on the ability of the APUA to adequately treat and dispose of wastewater flows generated in its service area. This leaves the Water Board with very little new information on which to evaluate the APUA's ability to consistently comply with its WDRs.

A cornerstone of the Water Board's regulatory program is its ability to require the preparation and submittal of technical reports. When reports are submitted late or are not complete, the Water Board is stymied in its ability to evaluate a situation and take appropriate action. The CA Water Code provides the Water Board with the authority to address alleged violations of requirements to submit technical reports. However, the Water Board can only exercise this authority when an action is proposed by the Prosecution Team. The Water Board Prosecution Team has been requested to describe the options available to the Water Board to address the alleged violations of the Cease and Desist Order.

RECOMMENDATION: This is an information item. The Water Board may provide direction to staff.

ENCLOSURE	ENCLOSURES	Bates Number
1	Cease and Desist Order No. R6V-2011-15A1.	05-3
2	July 14, 2011 Status Report from the City of Adelanto.	05-43
3	August 1, 2011 City of Adelanto Percolation Pond Capacity Analysis Report.	05-56
4	September 2, 2011 e-mail response from Water Board staff on Status Report.	05-84
5	September 6, 2011 Notice of Violation issued by Water Board staff.	05-87
6	September 15, 2011 City of Adelanto Revised Restoration Plan.	05-100
7	September 22, 2011 Letter from Harold Singer to the City of Adelanto and Water Board Prosecution Team.	05-135

ENCLOSURE 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

**CEASE AND DESIST ORDER NO. R6V-2011-15A1
WDID NO. 6B369805001**

**REQUIRING ADELANTO PUBLIC UTILITY AUTHORITY TO CEASE AND DESIST FROM
DISCHARGING OR THREATENING TO DISCHARGE WASTE IN VIOLATION OF WASTE
DISCHARGE REQUIREMENTS SPECIFIED BY WATER
BOARD ORDER NOS. R6V-2002-050 AND R6V-2009-0036
AND IN VIOLATION OF
CEASE AND DESIST ORDER NO. R6V-2007-24
AND CLEANUP AND ABATEMENT ORDER NO. R6V-2010-0054
FOR
ADELANTO DOMESTIC WASTEWATER TREATMENT FACILITY
AND
ADELANTO WASTEWATER TREATMENT PLANT**

San Bernardino County

This Cease and Desist Order sets out requirements that the Adelanto Public Utility Authority must meet to maintain compliance with the waste discharge requirements for its wastewater collection, treatment and disposal system and is supported by more than a six-year history of violations of effluent limitations, influent flow limitations, and percolation pond freeboard limitations.

The California Regional Water Quality Control Board, Lahontan Region (Water Board) hereby finds:

1. Discharger

The Adelanto Public Utility Authority owns and operates wastewater collection, treatment, and disposal facilities within the City of Adelanto. The Adelanto Public Utility Authority is also identified as the "Discharger" in Waste Discharge Requirements (WDR) prescribed by Water Board Order Nos. R6V-2002-050 and R6V-2009-0036, Water Board Cease and Desist Order No. R6V-2007-24, and Water Board Cleanup and Abatement Order No. R6V-2010-0054. For the purpose of this Water Board Cease and Desist Order (Order), the Adelanto Public Utility Authority is referred to as the "Discharger."

2. Facility

- a. The Discharger collects, treats and disposes of an average of 2.2 million gallons per day (mgd) of wastewater generated within the City of Adelanto. The wastewater consists of both domestic wastewater and industrial wastewater, some of which receives pretreatment. The Discharger has two wastewater treatment facilities authorized to discharge to four percolation ponds.

- b. The older of the two treatment systems is the Adelanto Domestic Wastewater Treatment Facility, also known as the Biolac system. The Biolac system is an activated sludge system that includes a septage receiving station (inactive as of March 10, 2011), headworks, lined activated sludge basins, secondary clarifiers, multi-media filtration system, and sludge dewatering system. This treatment system is authorized to receive and treat up to 1.5 million gallons per 24-hour period and a maximum instantaneous flow rate of 2.5 mgd. This facility is regulated by revised waste discharge requirements prescribed by Water Board Order No. R6V-2002-050.
- c. The newer of the two treatment facilities is the Adelanto Wastewater Treatment Plant, also known as the Micro-Media system. The Micro-Media system includes primary clean screens, flow equalization pond (not in existence as of March 10, 2011), "micro-media" sand filter biological treatment system, and solids dewatering system. The Micro-Media system is authorized to receive and treat up to 4.0 million gallons per 24-hour period and a maximum instantaneous flow rate of 6.0 mgd. This facility is regulated by waste discharge requirements prescribed by Water Board Order No. R6V-2009-0036. The Micro-Media system has never been put into operation because the Discharger has not been able to successfully maintain the microorganism (animox bacteria) populations that are the Micro-Media system's critical treatment element.
- d. Both the Biolac and Micro-Media treatment systems are designed to discharge un-disinfected secondary-treated wastewater effluent to four percolation ponds located within an 18-acre site owned by the Discharger. Pond No. 4 is divided into Pond No. 4N and Pond No. 4S, but is considered as a single pond. All four percolation ponds are designed to infiltrate un-disinfected secondary-treated wastewater effluent. Groundwater in the uppermost aquifer is generally located at a depth of 90 to 170 feet below ground surface (bgs). There is an aquitard (clayey soil layer) located 170 to 230 feet bgs separating the uppermost aquifer from the regional aquifer.
- e. For the purposes of this Order, the Biolac system, the Micro-Media system, and the four percolation ponds are referred to as the "Facility." The Facility is located on an 18-acre site at the northeast corner of the intersection of Jonathan Street and Auburn Avenue, in the City of Adelanto, San Bernardino County, California, as shown on Attachment A of this Order. The Discharger has contracted with United Water to operate the Facility.
- f. Prior to July 28, 2010, the Discharger was routing all wastewater flows through the Biolac system; the Micro-Media system remained inoperable. Beginning August 2009, the Discharger began diverting up to 1.2 mgd of secondary-treated wastewater flows to Victor Valley Wastewater Reclamation Authority's (VWVRA) wastewater treatment facility with the remaining secondary-treated wastewater flows discharged to the Discharger's percolation ponds. Beginning July 28,

2010, the Discharger temporarily ceased diverting secondary-treated wastewater flows to VVWRA and began diverting 800,000 gallons per day (gpd) of untreated influent wastewater flows to VVWRA.

- g. At a November 18, 2010 meeting with Water Board staff, the Discharger described its plans to convert the Micro-Media system into a more traditional pure-oxygen activated sludge facility. The Discharger verbally provided the following schedule for bringing the converted Micro-Media system on line.

Date	Action
January 31, 2011	Complete design for flow equalization unit.
March 31, 2011	Complete bid process for flow equalization unit and select a contractor.
Spring, summer, and fall 2011	Construct flow equalization unit and other project elements necessary to convert the Micro-Media system into a pure-oxygen activated sludge wastewater treatment system.
November 30, 2011	Converted Micro-Media system is operational and on line.

Initially, the Discharger will use both the Biolac and converted Micro-Media systems to treat wastewater. Eventually, all wastewater flows will be treated using the converted Micro-media system. The Biolac system will subsequently become a reserve treatment system.

3. Waste Discharge Requirements Permit History

- a. **WDR Order No. 6-98-56A1:** The Water Board initially established waste discharge requirements for the Biolac system and Percolation Pond Nos. 1, 2, and 3, covering a 4.9-acre area, under Water Board Waste Discharge Requirements (WDR) Order No. 6-98-56 on September 3, 1998. Water Board WDR Order No. 6-98-56A1 was adopted on November 5, 1998 to allow the Facility to receive and treat septage.
- b. **WDR Order No. R6V-2002-050:** Water Board WDR Order No. R6V-2002-050 was adopted on September 11, 2002 and remains in effect presently. Water Board WDR Order No. R6V-2002-050 rescinds Water Board WDR Order No.6-98-56, as amended, and provides the Discharger more flexibility in operating the Septage Receiving Station by increasing the septage flow limit for a 24-hour period from 0.020 to 0.028 million gallons.

Finding No. 10 of Order No. R6V-2002-050 states that the percolation ponds' disposal capacity had been reached at a 24-hour influent flow of approximately 1.2 mgd. The same finding also states that the facility's treatment capacity (1.5 million gallons per 24-hour period) may be reached within the next four years, if wastewater flows continued to increase as they had since the facility became operational in September 1998.

Water Board WDR Order No. R6V-2002-050, in part, contains the following Discharge Specifications:

I.A.1. "The total volume of flow to the Adelanto Treatment Facility, during a 24-hour period, shall not exceed 1.5 million gallons."

I.A.5. "All wastewater discharged to the authorized disposal sites shall not contain concentrations of parameter in excess of the following limits:

<u>Parameter</u>	<u>Units</u>	<u>30-Day Mean</u> ¹	<u>Daily Maximum</u> ²
BOD ³	mg/L	15	30

¹ Compliance is determined by comparing the limit to the arithmetic mean of laboratory results for any 6-hour composite samples collected during a period of 30 days.

² Compliance is determined by comparing the limit to the laboratory result for any 6-hour composite sample.

³ Biological Oxygen Demand (five-day, 20°C) of an unfiltered sample."

I.D.2. "Surface flow or visible discharge of sewage or sewage effluent at/or from the authorized disposal sites to adjacent land areas or surface waters is prohibited."

I.D.3. "The vertical distance between the liquid surface elevation and the lowest point of a pond dike or the invert of an overflow structure shall not be less than two feet."

I.D.5. "...The discharge of wastewater except to the authorized disposal sites is prohibited."

c. **WDR Order No. R6V-2009-0036:** The Water Board adopted Water Board WDR Order No. R6V-2009-0036 on June 10, 2010, and remains in effect presently. It established new waste discharge requirements for the Micro-Media system. The WDR Order authorizes treated wastewater effluent discharges to Percolation

Pond No. 4 (north and south)¹, and authorizes constructing and discharging to a fifth percolation pond. Water Board WDR Order No. R6V-2009-0036, in part, contains the following Discharge Specifications:

- i. I.C.2. "Surface flow or visible discharge of sewage or sewage effluent at/or from the authorized disposal sites to adjacent land areas or surface waters is prohibited."
- ii. I.C.3. "The vertical distance between the liquid surface elevation and the lowest point of a pond dike or the invert of an overflow structure shall not be less than two feet."
- iii. I.C.5. "...The discharge of wastewater except to the authorized disposal sites is prohibited."

4. Formal Enforcement History

- a. **2007 Cease and Desist Order:** The Water Board adopted Cease and Desist Order No. R6V-2007-24 on August 29, 2007, in response to continual influent flow limitation violations, BOD effluent limitation violations, and discharges of waste to an unauthorized disposal site. Cease and Desist Order No. R6V-2007-24 established compliance dates for submitting and implementing an Interim Action Plan to reduce BOD concentrations, submitting a Long Term Action Plan to prepare the Facility to provide adequate wastewater treatment, storage, and disposal capacity, and to comply with Water Board WDR Order No. R6V-2002-050 by December 31, 2008. The Discharger has failed to comply with both its Interim Action Plan and its Long Term Action Plan. Attachment B, Table No. 1, lists ongoing effluent, flow, and freeboard limitation violations that have persisted beyond the compliance dates in the 2007 Cease and Desist Order. Attachment B, Table No. 1 is hereby incorporated into this Order by reference.²
- b. **2010 Investigative Order:** The Water Board adopted Investigative Order No. R6V-2010-0035 on August 2, 2010 in response to continuing violations of the influent flow and BOD effluent limitations and continuing violation of the final compliance date (December 31, 2008) specified by Cease and Desist Order No. R6V-2007-024. The Investigative Order, in part, requires the Discharger to submit to the Water Board a Flow and Effluent Compliance Plan and Implementation Schedule by September 15, 2010. The Discharger has since received a Notice of Violation for submitting a deficient Flow and Effluent Compliance Plan and Implementation Schedule.

¹ Pond No. 4 was constructed and placed into operation in 2005 without prior Water Board authorization. The Discharger's construction and operation of Pond No. 4 was not authorized by the Water Board until Water Board WDR Order No. R6V-2009-0036 was adopted on June 10, 2010, four years later.

² Table No. 1 in Attachment B does not include all violations of the WDR orders.

- c. **2010 Cleanup and Abatement Order:** The Water Board adopted Cleanup and Abatement Order No. R6V-2010-0054 on November 1, 2010 to address violations increasing in severity and frequency of percolation pond freeboard requirements specified Water Board WDR Order Nos. R6V-2002-050 and R6V-2009-0036. The Discharger has since received two Notices of Violation for submitting both a deficient Spill Contingency Management Plan and final report. On April 18, 2011, the Discharger submitted a revised Spill Contingency Management Plan. The plan was determined to be deficient pursuant to a third Notice of Violation issued on May 5, 2011. The Discharger has not submitted a final report as required by the Notices of Violation.
- d. **2011 Cease and Desist Order:** The Water Board adopted Cease and Desist Order No. R6V-2011-15 on March 10, 2011. Provision No. I.D. required the Discharger to submit a Wastewater Disposal Facilities Work Plan by May 2, 2011. The Plan was submitted by the required due date. However, pursuant to a Notice of Violation dated May 5, 2011, the Work Plan was deemed deficient. Therefore, the Discharger has not complied with this provision. Although the Discharger has made claims that its new and modified disposal facilities will be sufficient to support additional discharges to the Facility and not result in violations of the WDR, this claim needs to be quantified.

5. Summary of Violations

- a. Based upon data provided in the Discharger's self monitoring reports, the Discharger has been violating BOD effluent limitations specified by Water Board WDR Order No. R6V-2002-050 from February 2004 through August 30, 2010, as shown in Attachment B, Table No. 1. The Discharger's self monitoring reports state these violations were caused by influent flows consistently exceeding the Biolac system's design capacity.
- b. Based upon data provided in the Discharger's self monitoring reports, the Discharger has been violating influent flow limitations specified by Water Board WDR Order No. R6V-2002-050 from April 2004 through August 5, 2010, as shown in Attachment B, Table No. 1.
- c. Based upon data provided in the Discharger's self monitoring reports and weekly status reports, the Discharger most recently started violating freeboard requirements specified by Water Board WDR Order Nos. R6V-2002-050 and R6V-2009-0036 on September 29, 2010. The Discharger's December 10, 2010 weekly status report states that freeboard levels had returned to two feet or greater for all four percolation ponds. The Discharger again violated freeboard requirements on or before December 23, 2010, when Percolation Pond No. 4S

discharged to adjacent land areas. The Discharger has continued violating freeboard requirements through January 10, 2011³.

- d. In addition to the violations of effluent, flow, and freeboard limitations, the Discharger has been violating additional discharge requirements and authorized disposal site requirements specified by Water Board WDR Order Nos. R6V-2002-050 and R6V-2009-0036 beginning no later than November 2, 2010 and continuing through January 10, 2011⁴. Based upon Water Board staff's phone conversations and the Discharger's weekly status reports, the Discharger has been continuously violating these requirements as a result of constructing approximately 13 trenches through Percolation Pond No. 4's berm, as part of the Discharger's efforts to prevent an uncontrolled and unauthorized release from the percolation ponds. The trenches originally extended approximately 20 feet outward through the pond's berm into land areas adjacent to the pond, creating additional pond capacity and possibly increasing pond percolation rates. These trenches are not identified as authorized disposal sites by Water Board WDR Order Nos. R6V-2002-050 and R6V-2009-0036, and constitute sewage effluent discharges from the authorized disposal sites to adjacent land areas.
- e. On December 23, 2010 at approximately 2:00 a.m., the Discharger began an uncontrolled and unauthorized wastewater discharge from Percolation Pond No. 4S to adjacent open desert lands located south of the percolation pond. Water Board staff inspected the discharge area later in the day and observed that the wastewater discharged from Percolation Pond No. 4S had migrated to an adjacent land area under different ownership, and covered an area approximately 200 feet by 200 feet to an approximate average depth of eight inches (approximately 200,000 gallons). Water Board staff observed the Discharger further extending the trenches to increase Percolation Pond No. 4S capacity. This discharge and the additional trench extensions were not authorized by Water Board WDR Order Nos. R6V-2002-0050 and R6V-2009-0036, and constitute sewage effluent discharges from the authorized disposal sites to adjacent land areas.

6. Threatened Discharges from the Facility

- a. The Discharger has a contract with VVWRA that allows the Discharger to divert up to 800,000 gpd of wastewater to VVWRA's facility for a 15-month period. On August 4, 2010, VVWRA indicated the Discharger could increase the diversion to 1.3 mgd of wastewater (800,000 gpd of untreated influent, and 500,000 gpd of secondary treated effluent) when a diversion pump temporarily failed.

³ Based upon January 10, 2011 Weekly Status Report provided by the Discharger.

⁴ Based upon January 10, 2011 Weekly Status Report provided by the Discharger.

Beginning August 2009, the Discharger began diverting up to 1.2 mgd of secondary-treated wastewater flows to VVWRA's wastewater treatment facility. On July 28, 2010, the Discharger began diverting a portion (800,000 gpd) of its wastewater influent to VVWRA's wastewater treatment facility and temporarily halted the diversion of the secondary-treated effluent. The Discharger began violating freeboard requirements on September 29, 2010, and yet, did not substantially increase wastewater flow diversions until Water Board staff identified and strongly recommended such action. On November 10, 2010, the Discharger increased wastewater flow diversions up to 1.081 mgd, and on November 26, 2010, the Discharger obtained and installed adequate pumps to increase wastewater flow diversions up to approximately 1.3 mgd, the maximum diversion amount identified in the Discharger's agreement with VVWRA.

The diversion system implemented on July 28, 2010 allowed the Discharger to eliminate violations of the influent flow limitation beginning August 6, 2010, which in turn also allowed the Discharger to comply with the BOD effluent limitations contained in the WDR Orders beginning in the month of September 2010. However, this recent compliance with influent flow and effluent BOD limitations is currently temporary. It is possible the Discharger will again violate the influent flow and BOD effluent limitations if it is unable to consistently divert portions of its influent flows to an offsite treatment facility capable of handling and treating such flows until such time that it completes its proposed expansion of its treatment capacity. The Discharger had planned to expand its treatment capacity by bringing the converted Micro-Media system on line, but has not yet done so. Additionally, it is possible the Discharger will again violate the influent flow and BOD effluent limitations if it accepts additional flows into its collection system that increase influent flows above those it can adequately treat at its facilities and those it can divert to an offsite facility capable of handling and treating such flows. This situation constitutes an ongoing threatened violation of waste discharge requirements related to influent flow and effluent BOD.

- b. Based upon data provided in the Discharger's December 10, 2010 weekly status report, the Discharger stated it was meeting freeboard requirements specified by the WDR Orders. This situation is likely the result of the Discharger's constructed trenches through Pond No. 4's berm, beginning percolation pond dredging operations, and increased diversions to VVWRA up to approximately 1.3 mgd. This situation is also temporary under current conditions, and dependent in part upon an unauthorized discharge to land areas adjacent to Percolation Pond No. 4 and ongoing, but temporary, diversions of wastewater flows to VVWRA. The Discharger has not provided information indicating whether the infiltration rates in the percolation ponds will increase as a result of dredging operations or for how long,⁵ or whether the four percolation ponds will be able to effectively percolate the flow currently diverted to VVWRA. This

⁵ Percolation Pond Nos. 1, 2, and 3 are scheduled to be dredged over a nine to twelve-week period.

situation constitutes an ongoing threatened violation of waste discharge requirements related to freeboard requirements.

7. Water Board Authority

a. California Water Code section 13301 states, in part:

"When a Regional Board finds that a discharge of waste is taking place, or threatening to take place, in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the [regional] 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 [regional] board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentrations of waste that might be added to that system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order."

b. Title 23, section 2244 of the California Code of Regulations authorizes prohibitions or appropriate restrictions on additional discharges to community sewer systems (also known as a connection ban) in cease and desist orders if the additional discharge volume, type, or concentration entering the sewer system would cause an increase in or increase the likelihood of WDR violations. The prohibitions or restrictions are for when WDR violations are not immediately corrected, are not used as a punitive measure, and the Water Board sends written notification to all appropriate local agencies. The prohibitions or restrictions should include, but not be limited to, new residential, commercial, industrial, and/or governmental connections as deemed appropriate by the Water Board. Pursuant to Title 23, section 2244.3 of the California Code of Regulations, additional discharge prohibitions shall not be removed until the WDR violations have ceased and consistent compliance with requirements in the WDR Orders is reached.

c. Title 23, section 2244.1(a) of the California Code of Regulations provides that Orders prohibiting or restricting additional discharges should expressly exclude structures with building permits already issued at the time the notice of the cease and desist order hearing was given. Although no prohibition or restriction of additional discharges is being ordered at this time, the Water Board intends to consider imposing such a requirement no later than at its November 2011 Water Board meeting. Pursuant to Title 23, section 2244.1(a) of the California Code of Regulation, this constitutes notice that any prohibition or restriction on additional discharges could be imposed back to May 11, 2011 and may include discharges from structures that already have received building permits issued prior to May

11, 2011 but not yet commenced and/or completed construction and been issued an occupancy permit or equivalent, and those that have not been issued a building permit.

8. Water Code Section 13267 Justification

Water Code section 13267 authorizes the Water Board to require from the Dischargers technical or monitoring program reports submitted under penalty of perjury. Section 13267 requires that the Water Board explain why reports are required, and to identify the evidence that supports requirement the reports. See Attachment C of this Order, Water Code Section 13267 Fact Sheet.

The technical reports required by this Order are necessary to measure and ensure the Discharger's compliance with this Cease and Desist Order, in efforts to ensure protection of waters of the state, and to protect public health and the environment. Attachment B, Table No. 1 lists the numerous violations of effluent limitations, influent flow limitations, and minimum freeboard levels that evidence supporting requiring the reports. The burden, including costs, of the reports required by this Order bear a reasonable relationship to the need for the reports and the benefits to be obtained from them.

9. California Environmental Quality Act

Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, section 21000, et seq.), in accordance with section 15321(a)(2), title 14, California Code of Regulations.

10. Notification of Interested Parties

The Water Board sent written notification to the Discharger, the City of Adelanto, the County of San Bernardino, and other affected and interested parties of its intent to consider adoption of this Cease and Desist Order, and provided an opportunity to submit written comments and appear at a public hearing. The Water Board, in a public hearing, heard and considered all comments.

11. Requesting Administrative Review by the State Water Board.

Any person aggrieved by an action of the Water Board that is subject to review as set forth in Water Code section 13320, subdivision (a), may petition the State Water Resources Control Board (State Water Board) to review the action. Any petition must be made in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition within 30 days of the date the action was taken, except that if the thirtieth day following the date the action was taken falls on a Saturday, Sunday, or state holiday, then the State Water Board must receive the petition by 5:00 p.m. on

the next business day. Copies of the law and regulation applicable to filing petitions may be found on the internet at:

<http://www.waterboards.ca.gov/publicnotices/petitions/waterquality> or will be provided upon request.

THEREFORE, IT IS HEREBY ORDERED that, pursuant to Water Code sections 13301 and 13267, the Discharger shall cease and desist from discharging wastes or threatening to discharge wastes, in violation of provisions specified in Water Board WDR Order Nos. R6V-2002-050 and R6V-2009-0036, and shall comply with the other provisions of this Order:

I. ORDERS

- A. Maintain full compliance with all requirements specified in WDR Order Nos. R6V-2002-050 and R6V-2009-0036. Section I.C. of this Order provides a schedule for compliance with section ID.2. of Order No. R6V-2002-050 and section I.C.2 of Order No. R6V-2009-0036 related to the discharge into the trenches as described in Finding No. 5.d. of this Order. Comply forthwith and according to the schedules contained in this Order with all requirements, including reporting requirements, specified by Cease and Desist Order No. R6V-2007-0024, Investigative Order No. R6V-2010-0035, and Cleanup and Abatement Order No. R6V-2010-0054.

Pursuant to title 23, section 2245 of the California Code of Regulations, the Discharger is expected to construct emergency facilities or modify the existing plant operation to achieve rapid compliance. Such emergency facilities include chemical treatment, ponding with or without aeration, and any other steps that can be immediately implemented.

The Discharger must complete construction of Pond 5, as described in Water Board WDR Order No. R6V-2009-0036, no later than **May 31, 2011**.

- B. By **April 15, 2011**, the Discharger shall provide a Percolation Pond Restoration Plan that, at a minimum, provides the following:
- i. Design plans with a description and illustration of the measures the Discharger proposes to implement to restore the integrity of Percolation Pond No. 4 from having its berm breached and trenches installed. The design plans must identify materials, and design specifications regarding pond berm stability including, but not limited to, compaction specifications, materials gradation specifications, and soil moisture content during compaction activities. The design plans are to be stamped and signed by a California Registered Professional Engineer pursuant to California Business and Professions Code section 6735.

- ii. A project schedule, including, but not limited to, completion dates for design, contracts, permits, and for completing the measures identified in this Order's Requirement No. I.B.i, above.

The compliance date for this task was established in Order No. R6V-2011-0015 adopted on March 10, 2011. The Water Board acknowledges that this due date has past and, as described in the Findings of this Order, the Discharger has submitted a deficient Percolation Pond Restoration Plan. The Water Board is specifically not providing the Discharger additional time to comply with this task.

- C. No later than **October 15, 2011**, the Discharger shall complete its restoring Percolation Pond No. 4 as described in its accepted Percolation Pond Restoration Plan.
- D. By **April 30, 2011**, the Discharger shall provide a Wastewater Disposal Facilities Work Plan that, at a minimum, provides the following:
 - i. Final design plans for wastewater disposal facilities that can adequately dispose of all Facility wastewater flows projected through at least December 31, 2016. The final design plans shall include all design parameters and specifications. The final design plans shall include all supporting technical information (e.g., flow projections and supporting documentation; disposal site(s) assessments/characterizations/data; calculations and/or modeling results, including all assumptions) used to demonstrate that the wastewater disposal facilities will have adequate capacity for all Facility wastewater flows projected through at least December 31, 2016. The final design plans shall also identify final disposal locations and stabilization measures for all currently stockpiled excavated soil from Pond No. 4, and any additional soils excavated during construction of additional wastewater disposal facilities. The final design plans are to be stamped and signed by a California Registered Professional Engineer pursuant to California Business and Professions Code section 6735.
 - ii. A project schedule, including, but not limited to, completion dates for contracts, CEQA process (e.g., draft CEQA document, public comment period, final CEQA document approval, Notice of Determination submission, end of appeal period), permits, and construction period.

The compliance date for this task was established in Order No. R6V-2011-0015 adopted on March 10, 2011. The Water Board acknowledges that this due date has past and, as described in the Findings of this Order, the Discharger has submitted a deficient Wastewater Disposal Facilities Work Plan. The Water Board is specifically not providing the Discharger additional time to comply with this task.

- E. By **October 15, 2011**, the Discharger shall complete implementation of its accepted Wastewater Disposal Facilities Work Plan to provide adequate disposal capacity for all wastewater flows, including those diverted to VVWRA, and maintain compliance with freeboard requirements.
- F. The Water Board will consider adoption of a restriction on additional discharges as described in Finding No. 7c no later than at its November 2011 meeting. The Water Board preserves its ability, should it issue a connection ban at a future meeting, to have the connection ban apply back to May 11, 2011.

II. **REPORTING REQUIREMENTS**

- A. Beginning **July 15, 2011**, and quarterly thereafter (**October 15, January 15, and April 15**) the Discharger shall provide to the Water Board, under penalty of perjury, the status of compliance with the requirements of this Order. These reports shall include information on the status of compliance with Requirement I.A through E. of this Order and any changes in information or status as required in Requirements II.B.2 and 3 of this Order.
- B. By **August 1, 2011**, the Discharger shall submit a report that:
 - 1. Quantifies the percolation capacity of ponds 1 – 5, on an individual basis. This shall be based on a water balance accounting for evaporation, after demonstrating that steady-state conditions are reached and after completion of any improvements that the Discharger believes would support its claim that it has sufficient capacity to provide disposal capacity to accommodate current and increased flows. The Discharger may also estimate the quantifiable benefit of other actions that it intends to take and when it will have such actions completed.
 - 2. Provides a detailed status report on its efforts to provide additional treatment capacity at its Facility (Micro-media or equivalent) including actions it has taken and plans to implement, a schedule of each future action and when specific additional capacity (in million gallons per day) is expected to be fully functional.
 - 3. Provides a detailed description of the amount of flow it can consistently divert to VVWRA, the conditions under which this can occur, all measures put in place to ensure that whatever flow is purported can be maintained. This must be documented by actual diversions.
- C. **Signatory Requirements.** All reports required under this Cease and Desist Order shall be signed and certified by a duly authorized representative of the Discharger and submitted to the Water Board. A person is a duly authorized representative of the Discharger only if: (1) the authorization is made in writing by

the Discharger and (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

- D. **Certification.** Include the following signed certification with all reports submitted pursuant to this Order:

"I certify under penalty of perjury under the laws of the State of California that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted, the document and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- E. **Report Submittals.** All monitoring and technical reports required under this Order shall be submitted via electronic e-mail and/or hard copy to:

California Regional Water Quality Control Board-Lahontan Region
2501 South Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

California Regional Water Quality Control Board-Lahontan Region
14440 Civic Drive, Suite 200
Victorville, CA 92392

III. NOTIFICATION

Enforcement Notification. Failure to comply with the terms or conditions of this Cease and Desist Order may result in additional enforcement action, which may include the imposition of administrative civil liability pursuant to California Water Code section 13350 for up to \$5,000 a day for each violation or \$10 per gallon discharged; and/or section 13268 for up to \$1,000 a day for each violation; and/or referral to the Attorney General of the State of California for injunctive relief or civil or criminal liability. The Water Board reserves its right to take any further enforcement action authorized by law.

IV. PROVISIONS

This Order replaces Order No. R6V-2011-15 in its entirety.

criminal liability. The Water Board reserves its right to take any further enforcement action authorized by law.

IV. PROVISIONS

This Order replaces Order No. R6V-2011-15 in its entirety.

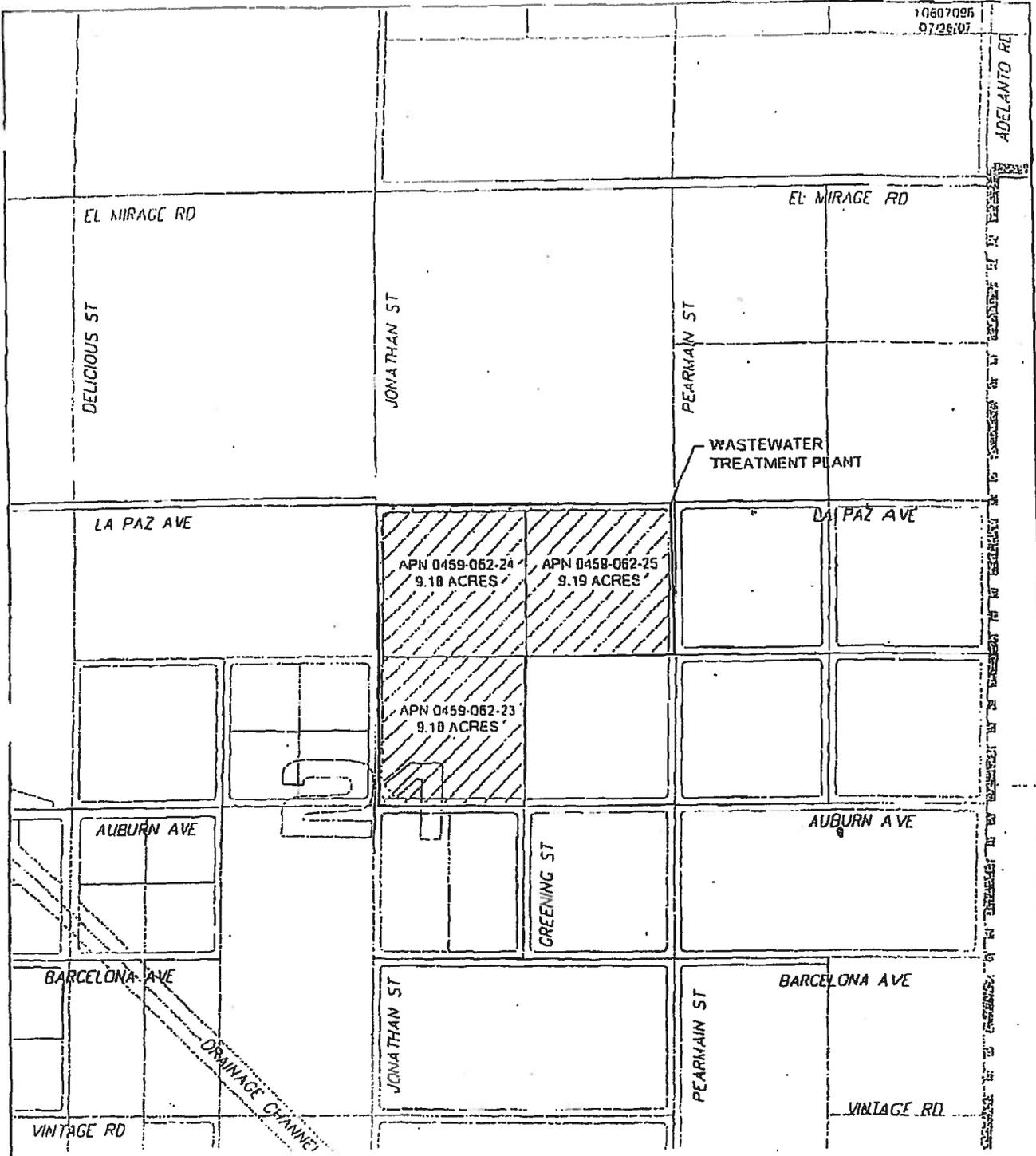
I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region on May 11, 2011.



HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments:

- A. Location Map
- B. Table No. 1 Adelanto Wastewater Treatment Facility Violations
- C. Water Code Section 13267 Fact Sheet



SCALE: 1"=600'

LOT DESCRIPTION
 SOUTHWEST 1/4 OF THE NORTHEAST 1/4,
 OF SECTION 21, T6N R5W, S.B.B.&M.

FIGURE 1

ATTACHMENT A

**CITY OF ADELANTO
 WASTEWATER TREATMENT PLANT
 LOCATION MAP**

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
February-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation two days during the month.	Daily	2
February-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
February-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
March-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation three days during the month.	Weekly	3
March-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
April-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
May-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation one day during the month.	Daily	1
May-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
May-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
June-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation six days during the month.	Daily	6
June-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation three days during the month.	Weekly	3

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
June-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
July-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation one day during the month.	Daily	1
July-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
July-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
August-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 12 days during the month.	Daily	12
August-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
August-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
September-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 21 days during the month.	Daily	21
September-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
September-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
October-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 28 days during the month.	Daily	28

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
October-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
October-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
November-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 26 days during the month.	Daily	26
November-04	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
November-04	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
December-04	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
January-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 29 days during the month.	Daily	29
January-05	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
January-05	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for seven days.		
January-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 28 days during the month.	Daily	7
February-05			Daily	28

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
February-05	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
February-05	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
February-05	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for seven days.	Daily	7
March-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 28 days during the month.	Daily	31
March-05	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
March-05	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
March-05	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for 10 days.	Daily	10
April-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 29 days during the month.	Daily	29
April-05	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
April-05	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
April-05	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for seven days.	Daily	7
May-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 29 days during the month.	Daily	29
May-05	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
May-05	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
June-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 29 days during the month.	Daily	29
June-05	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
June-05	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
July-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
July-05	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
July-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 11 days during the month.	Weekly	1
August-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 11 days during the month.	Daily	11

¹This table does not identify all facility violations.

It only identifies violations of influent flow limitations,

BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
September-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
October-05	BOD Effluent Limitation - Daily Maximum - 30 mg/L	BOD Effluent Limitation one day during the month.	Weekly	1
October-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 26 days during the month.	Daily	26
November-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
November-05	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
November-05	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
December-05	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
January-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 29 days during the month.	Daily	29
February-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 28 days during the month.	Daily	28
February-06	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
February-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation	N/A	1
March-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
March-06	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
March-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
April-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
April-06	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
April-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
May-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
May-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
June-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
June-06	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation three days during the month.	Weekly	3

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
June-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
July-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
July-06	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
July-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
August-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
August-06	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
August-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
September-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
September-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
September-06	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for two days.	Daily	2

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
October-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 29 days during the month.	Daily	29
October-06	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
October-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
November-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
November-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
December-06	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
December-06	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
December-06	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
December-06	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for one day.		
January-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
January-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
February-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 28 days during the month.	Daily	28
March-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
March-07	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
March-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation	N/A	1
March-07	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for three days.	Daily	3
April-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
April-07	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for three days.	Daily	3
May-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
May-07	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
May-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
May-07	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for six days.	Daily	6
June-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
June-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
June-07	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for four days.	Daily	4
July-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
July-07	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
July-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
July-07	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for two days.	Daily	2
August-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
August-07	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation five days during the month.	Weekly	5
August-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
September-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
September-07	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
September-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
October-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
October-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
November-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
November-07	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation three days during the month.	Weekly	3
November-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
December-07	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
December-07	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation three days during the month.	Weekly	3
December-07	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
January-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
January-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
February-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 29 days during the month.	Daily	29
February-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
February-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
March-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
March-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
March-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
April-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
April-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation five days during the month.	Weekly	5
April-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
May-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
May-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
May-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
June-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
June-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
June-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
July-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
July-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
July-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
August-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
August-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.		
August-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	Weekly	1
September-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	N/A	1
October-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	30
November-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	31
November-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Daily	30
November-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
November-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
December-08	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
December-08	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation five days during the month.	Weekly	5
December-08	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
January-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
January-09	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
January-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
February-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 28 days during the month.	Daily	28
February-09	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
February-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
March-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
March-09	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation three days during the month.	Weekly	3
March-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
April-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
April-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
May-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
May-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
June-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
June-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
July-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
July-09	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
July-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
August-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
August-09	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
August-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
September-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
September-09	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation three days during the month.	Weekly	3
September-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
October-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
October-09	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
October-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
November-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
November-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
December-09	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
December-09	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation two days during the month.	Weekly	2
December-09	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
January-10	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
January-10	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
February-10	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 28 days during the month.	Daily	28
February-10	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
February-10	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
March-10	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
March-10	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
March-10	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
April-10	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
April-10	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
April-10	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
May-10	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31
May-10	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
May-10	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
June-10	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 30 days during the month.	Daily	30
June-10	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation five days during the month.	Weekly	5
June-10	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
July-10	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation 31 days during the month.	Daily	31

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
July-10	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation four days during the month.	Weekly	4
July-10	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
August-10	Influent Flow Limitation - Daily Maximum - 1.5 million gallons per 24 hours	Exceeded Daily Maximum Influent Flow Limitation one day during the month.	Daily	1
August-10	BOD Effluent Limitation - Daily Maximum - 30 mg/L	Exceeded Daily Maximum BOD Effluent Limitation one day during the month.	Weekly	1
August-10	BOD Effluent Limitation - Monthly Average - 15 mg/L	Exceeded Monthly Average BOD Effluent Limitation.	N/A	1
September-10	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for one day.	Daily	1
October-10	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for nine days.	Daily	9

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Table No. 1
Adelanto Wastewater Treatment Facility Violations (Feb. 1, 2004 - Dec. 23, 2010)¹**

Month/Year	Violation Type	Violation Description	Sampling Frequency	Number of Violations
November-10	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for 30 days.	Daily	30
December-10	Freeboard Level Req. - Minimum of 2 feet	Failed to maintain minimum freeboard levels in one or more percolation ponds for 7 days. (*)	Daily	7
			Total Violations	2418

(*) This violation count includes the 12/23/2010 freeboard violation that occurred when Percolation Pond No. 4S discharged to open desert lands located south of the percolation pond.

¹This table does not identify all facility violations. It only identifies violations of influent flow limitations, BOD effluent limitations, and minimum freeboard levels.

**Fact Sheet – Requirements for Submitting Technical Reports
Under Section 13267 of the California Water Code**

October 8, 2008

What does it mean when the regional water board requires a technical report?

Section 13267¹ of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged...waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

Are there limits to what the regional water board can ask for?

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

What if I can provide the information, but not by the date specified?

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons. A request for a time extension should be made as soon as it is apparent that additional time will be needed and preferably before the due date for the information.

Are there penalties if I don't comply?

Depending on the situation, the regional water board can impose a fine of up to \$1,000 per day, and a court can impose fines of up to \$25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor and may be fined as well.

What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?

Any person aggrieved by this action of the Regional 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 the 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 or will be provided upon request.

Claim of Copyright or other Protection

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the discharger as if the task had not been completed.

If I have more questions, who do I ask?

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

¹ All code sections referenced herein can be found by going to www.leginfo.ca.gov. Copies of the regulations cited are available from the Regional Board upon request.

ENCLOSURE 2



Cari Thomas
Mayor

Ed Camargo
Mayor Pro Tem

Steven R. Baisden
Council Member

Trinidad Perez
Council Member

Charles S. Valvo
Council Member

D. James Hart, Ph.D.
City Manager

July 14, 2011

California Regional Water Quality Control Board, Lahontan Region
2501 South Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

California Regional Water Quality Control Board, Lahontan Region
14440 Civic Drive, Suite 200
Victorville, CA 92392

RE: Status Report - Cease and Desist Order No. R6V-2011-15A1 Adelanto Public Utility Authority (APUA)

This Quarterly Status Report is being submitted to notify the California Regional Water Quality Control, Lahontan Region, of activities underway to comply with the requirements of Order R6V-2011-15A1 issued to the City of Adelanto Public Utility Authority (City of APUA) on May 11, 2011. The Order states:

II.A. Beginning July 15, 2011, and quarterly thereafter (October 15, January 15, and April 15) the Discharger shall provide to the Water Board, under penalty of perjury, the status of compliance with the requirements of this Order...

APUA has hired Larry Walker Associates (LWA), an environmental engineering consulting firm, to assist with compliance of the items detailed in Order R6V-2011-15A1. An aggressive schedule has been developed by LWA to outline the steps necessary to come into compliance with all outstanding Orders. Future quarterly reports will contain updates to progress on this schedule.

As required by Order R6V-2011-15A1, items to be addressed in the quarterly reports are as follows:

I.A. Maintain full compliance with all requirements specified in WDR Order Nos. R6V-2002-050 and R6V-2009-0036. Comply forthwith and according to the schedules contained in this Order with all requirements, including reporting requirements, specified by Cease and Desist Order No. R6V-2007-0024, Investigative Order No. R6V-2010-0035, and Cleanup and Abatement Order No. R6V-2010-0054.

The status of the City's efforts to comply with these orders is shown in the table below. Compliance with these Orders and R6V-2011-15A1 are intended to result in compliance with the WDRs R6V-2002-0050 and R6V-2009-0036.

Order No.	Status	Proposed Schedule
R6V-2009-0036	Nitrogen Effluent Limit and Compliance Plan is under preparation	Plan to be submitted by August 31, 2011
R6V-2007-0024	Quarterly reports were submitted on most recently on 1/14/11 and 4/15/11 Modified interim action plan and compliance plan needs to be prepared.	Quarterly report to be submitted on 7/15/11 Interim action plan and compliance plan to be submitted with the quarterly report due on 10/15/11.
R6V-2010-0035	Flow and Effluent Limits Compliance Plan is being revised. Groundwater monitoring plan is also being revised	Revised Plans to be submitted by September 30, 2011.
R6V-2010-0054	Spill contingency management plan is under revision	Revised plan to be submitted by August 31, 2011.

*The Discharger must complete construction of Pond No. 5, as described in WaterBoard WDR Order No. R6V-2009-0036, no later than **May 31, 2011**.*

Percolation Pond No. 5 was completed and accepted by APUA and placed into operation on May 27, 2011. Since that date, Percolation Pond No. 5 has been handling all of the effluent (about 1.4 to 1.5 million gallons a day) processed by the Biolac wastewater treatment plant (extended aeration activated sludge process). All effluent percolates with no build-up of water level in the bottom of pond.

*I.B. By **April 15, 2011**, the Discharger shall provide a Percolation Pond No. 4 Restoration Plan...*

The Percolation Pond Restoration Plan that was originally submitted on April 15, 2011 was determined to be deficient in an NOV issued on April 22, 2011. Since then, the City provided a response to the NOV on April 29, 2011. LWA is currently reviewing this response and preparing the additional information needed to finalize the Plan.

*I.C. No later than **October 15, 2011**, the Discharger shall complete restoring Percolation Pond No. 4 as described in its accepted Percolation Pond Restoration Plan.*

The trenches between Pond 4 and Pond 5 have been filled in and compacted. Once the remaining effluent in Pond No. 4 evaporates or is pumped out as needed, a topographic survey will be conducted for Percolation Pond No. 4 and the remaining restoration of Pond 4 will be completed according to the plan as described in I.B.

*I.D. By **April 30, 2011**, the Discharger shall provide a Wastewater Disposal Facilities Work Plan...*

The Wastewater Disposal Facilities Work Plan that was originally submitted on April 30, 2011, was determined to be deficient in an NOV issued on May 5, 2011. LWA is currently reviewing the Work Plan and preparing the additional information needed to finalize the Plan.

*I.E. By **October 15, 2011**, the Discharger shall complete implementation of its accepted Wastewater Disposal Facilities Work Plan to provide adequate disposal capacity for all wastewater flows, including those diverted to VVWRA, and maintain compliance with freeboard requirements.*

As mentioned above, the revised Work Plan for Wastewater Disposal Facilities is being prepared to address all outstanding concerns. The City has successfully extended their contract with VVWRA to divert flows to VVWRA as necessary for the next three years. The agreement became effective June 1, 2011, and expires June 1, 2014). A copy of this contract is attached.

*II. B. By **August 1, 2011**, the Discharger shall submit a report that:*

- 2. Provides a detailed status report on its efforts to provide additional treatment capacity at its Facility (Micro-media or equivalent) including actions it has taken and plans to implement, a schedule of each future action and when specific additional capacity (in million gallons per day) is expected to be fully functional.*
- 3. Provides a detailed description of the amount of flow it can consistently divert to VVWRA, the conditions under which this can occur, all measures put in place to ensure that whatever flow is purported can be maintained. This must be documented by actual diversions.*

LWA has begun compiling the information necessary to complete this report. The report will be finalized and submitted to meet the August 1, 2011 deadline.

Certification: *"I certify under penalty of perjury under the laws of the State of California that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted, the document and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

Very truly yours,


John Sponsler, APUA Director

Enclosure: Wastewater Treatment Agreement between APUA and VVWRA, effective June 1, 2011.

cc: City Council Members (APUA Board)
Todd Litfin, City Attorney
D. James Hart, City Manager
Harold Singer, Executive Officer

WASTEWATER TREATMENT AGREEMENT
BETWEEN THE ADELANTO PUBLIC UTILITY AUTHORITY AND THE VICTOR
VALLEY WASTEWATER RECLAMATION AUTHORITY

This Wastewater Treatment Agreement ("Agreement") is made and entered into as of June 1, 2011, by and between the Adelanto Public Utility Authority ("APUA"), a Municipal Corporation, organized and existing under the laws of the State of California and Victor Valley Wastewater Reclamation Authority ("VVWRA"), a joint powers authority organized and existing under the laws of the State of California, and APUA and VVWRA are sometimes individually referred to as a "party" and collectively as the "parties".

RECITALS

(A) VVWRA is a joint powers authority which is engaged in the business of managing, treating and disposing of domestic strength municipal wastewater which is generated by its member agencies at facilities owned and operated by VVWRA.

(B) The APUA is a former member of VVWRA which now operates its own municipal wastewater treatment facility ("Adelanto Facility");

(C) VVWRA and APUA are parties to that certain Wastewater Treatment Agreement ("Existing Treatment Agreement") whereby VVWRA has agreed to take and treat raw untreated sewage influent ("Raw Influent") which exceeds the capacity of the Adelanto Facility on a temporary basis through the interceptor between the APUA and VVWRA's Westside Wastewater Treatment Plant ("WWTP").

(D) APUA desires VVWRA to continue to treat Raw Influent from the Adelanto Facility, but at an increased volume of up to 1.3 million gallons (MGD) of excess Raw Influent per day.

(E) VVWRA is willing to enter into an extended agreement for the treatment of Raw Influent subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual agreements hereinafter set forth, and for other good and sufficient consideration given, the receipt of all of which is hereby acknowledged, the parties hereto agree as follows:

1. Term of Agreement. The Effective Date of this Agreement shall be June 1, 2011. The term of this Agreement shall commence on the Effective Date and continue for a period of thirty-six (36) months from the Effective Date unless renewed by the Parties hereto pursuant to a written instrument executed by both the APUA and VVWRA or terminated in accordance with the terms of Section 9. APUA and VVWRA agree that the Existing Treatment Agreement shall

terminate as of June 1, 2011, provided, however, that all indemnity obligations of APUA under the Existing Treatment Agreement shall survive termination.

2. Delivery of Raw Influent and Permit Requirements

(a) Subject to the quality and quantity limitation set forth herein, VVWRA shall receive, process and dispose of Raw Influent which is delivered from APUA to the WWTP through the Adclanto interceptor. APUA shall notify VVWRA, in writing and telephonically, seventy-two (72) hours prior to the commencement of delivery of Raw Influent. APUA shall notify VVWRA, in writing and telephonically, forty-eight (48) hours prior to any anticipated material reduction in volume or cessation of the diversion of Raw Influent.

(b) APUA shall be solely responsible for determining whether the delivery of Raw Influent to the WWTP is in compliance with APUA's waste discharge requirements ("WDR") and all state and federal permits applicable to the operation of the Adelanto Facility. APUA shall indemnify, defend and hold harmless VVWRA (in accordance with the terms of Section 8) with respect to any federal or state regulatory action in connection with VVWRA's acceptance of the Raw Influent for treatment and any violation of the WDR and any other permit or requirement applicable to APUA, including without limitation, all costs, expenses, fines or penalties (including legal fees and expenses) which are incurred by VVWRA as a result.

(c) Except as set forth in Section 7(c), VVWRA shall own all reclaimed water and byproducts which are generated as a result of the treatment of the Raw Influent and shall have the right to discharge, sell, transfer or dispose of such reclaimed water and byproducts as determined by VVWRA in its sole discretion.

3. Quantity of Effluent. The quantity of Effluent delivered by the APUA to the WWTP shall not exceed 1.3 million gallons per day ("Maximum Quantity"). The treatment of the Maximum Quantity is subject to the availability of excess capacity at the WWTP and the regulatory requirements which are applicable to the treatment of Raw Influent by VVWRA. In the event that VVWRA does not have sufficient excess capacity, as determined in its sole discretion, to treat the Maximum Quantity of Raw Influent for any reason, then VVWRA shall have the right at any time during the term of this Agreement to reduce the Maximum Quantity upon thirty (30) days written notice to APUA. At the request of APUA, VVWRA may agree, in its sole discretion, to accept higher volumes of Raw Influent for treatment at the WWTP.

4. Quality of Raw Influent. The Raw Influent to be delivered pursuant to this Agreement shall be raw untreated effluent and shall strictly comply with the quality standards which are set forth in Ordinance 001 of VVWRA, as the same may be amended from time to time, including without limitation, the pretreatment requirements with respect to any industrial wastewater ("Quality Standards"). A current copy of Ordinance 001 has been provided to APUA. APUA shall further obtain all permits required pursuant to Ordinance 001 prior to

delivering any Raw Influent. VVWRA shall not be obligated to accept any Raw Influent which is not in compliance with the Quality Standards.

5. Cost of Treatment.

(a) In consideration of VVWRA's treatment and disposal of the Raw Influent at the WWTP, the APUA shall pay VVWRA a treatment fee equal to the current fees and rates charged by VVWRA to its member agencies for each one million gallons of Raw Influent delivered to the WWTP during the term of this Agreement. The foregoing fee shall be subject to change in the event of a general rate increase adopted by VVWRA during the term of this Agreement, provided, however, that VVWRA shall give APUA with no less than thirty (30) days prior written notice of any such increase.

(b) During the initial term of this Agreement, the fee for treatment and disposal identified in Paragraph 5(a) above shall be inclusive of all costs and expenses which are expected to be incurred by VVWRA and no additional fees and charges shall be payable by APUA for the treatment and discharge of Raw Influent which is in compliance with the quantity and quality limitations set forth in this Agreement. In the event that the expected cost of treatment increases as a result of unforeseen circumstances or the imposition of additional regulatory requirements associated with the treatment of Raw Influent pursuant to this Agreement, then VVWRA shall provide APUA with no less than thirty (30) days prior written notice of such additional costs, which notice shall set forth the cause and calculation of such costs in reasonable detail.

(c) APUA acknowledges that any renewal of this Agreement beyond the initial term specified in Section 1 will subject APUA to the payment of connection fees and charges at the then current rates adopted by VVWRA and will further require the negotiation of additional terms, including without limitation, the terms upon which APUA might be re-admitted as a member of VVWRA, how the Adelanto Facility would be incorporated within the VVWRA system and whether the contribution of the Adelanto Facility and other infrastructure could be offset against connection fees and other charges. All such terms and conditions shall be subject to mutual negotiation and approval of any long term arrangement will be in the sole discretion of VVWRA.

6. Billing and Payment. VVWRA shall invoice the APUA for the costs described in Section 5 on a weekly basis and the APUA shall pay such invoice within fifteen (15) business days of the invoice date.

7. Non-Conforming Raw Influent.

(a) Suspension of Raw Influent. VVWRA shall have the right to meter and test the Raw Influent which is delivered to VVWRA for compliance with the terms of this

Agreement and to suspend acceptance of Raw Influent at any time if the Raw Influent is non-conforming with the quantity limitation set forth in Section 3 or the Quality Standards ("Non-Conforming Raw Influent"), provided, however, that VVWRA shall immediately notify the manager of the Adelanto Facility of its intent to suspend delivery and shall reasonably cooperate with the APUA to perform an orderly shutdown of delivery of Raw Influent.

(b) Responsibility for Non-Conforming Raw Influent. The APUA shall be solely responsible for any additional cost or expense incurred by VVWRA in connection with Non-Conforming Raw Influent that is delivered to VVWRA prior to suspension of delivery and for any costs, expenses, fines or penalties (including legal fees and expenses) which are incurred by VVWRA as a result of any violation of Environmental Laws due to the delivery of Non-Conforming Raw Influent by the APUA. The APUA shall further be responsible for all costs of remediation, whether or not there is a formal claim or investigation against VVWRA, associated with the further treatment of Non-Conforming Raw Influent. Upon written demand by VVWRA, the APUA shall promptly advance all such costs and expenses that have not already been paid by VVWRA and shall promptly reimburse VVWRA for all costs and expenses already incurred upon presentation of an invoice from VVWRA which sets forth such costs and expenses in reasonable detail.

(c) Ownership of Non-Conforming Raw Influent. In no event shall VVWRA be deemed to have taken ownership of any Non-Conforming Raw Influent or of any hazardous materials or hazardous wastes, as defined by federal, state or local law, which are contained in any Non-Conforming Raw Influent.

8. Indemnity and Liability Provisions.

(a) Indemnity by APUA. APUA hereby agrees, at its sole cost and expense, to indemnify, protect, hold harmless and defend VVWRA, its commissioners, officers, employees, agents, successors and assigns from and against any and all claims, demands, damages, losses, liabilities, obligations, penalties, fines, actions, causes of action, judgments, suits, proceedings, costs, disbursements and expenses (including, without limitation, fees, disbursements and cost of attorneys, consultants and experts) (collectively "Losses") which may at any time be imposed upon, incurred, or suffered by, or asserted or awarded against, any Indemnified Party directly or indirectly relating to or arising from the acceptance and treatment of the Raw Influent by VVWRA, including without limitation, the violation of any permit described in Section 2(b) and/or the violation of any Environmental Laws applicable to the treatment and discharge of wastewater by VVWRA. This indemnity shall not apply to any Losses or Third Party Claims which result from a claim for which VVWRA is responsible pursuant to Section 8(b).

(b) VVWRA shall indemnify, protect, hold harmless and defend the APUA, its officers, employees, and agents from and against any and all Losses resulting from any third

party claim resulting from (i) the sole negligence or willful misconduct of VVWRA; or (ii) the failure of VVWRA to properly treat and discharge Raw Influent which strictly conforms with the terms of this Agreement.

(c) Defense of Third Party Claims. Promptly following receipt of any written claim or legal proceeding asserted by a person or entity which is not a party to this Agreement (a "Third Party Claim"), the party entitled to indemnification pursuant to this Section 8 (the "Indemnified Party") shall notify the party responsible for providing indemnification ("Indemnifying Party") of such claim in writing. The Indemnifying Party shall have a period of 30 days (or such lesser period as may be required to timely respond to a Third Party Claim) following the receipt of such notice to undertake and diligently pursue the defense of the Third Party Claim with legal counsel which is reasonable acceptable to the Indemnified Party. The Indemnifying Party shall reimburse the Indemnified Party for any legal expense reasonably incurred by the Indemnified Party to timely respond to a Third Party Claim prior to the Indemnifying Party assuming the defense thereof. The Indemnifying Party shall not consent to entry of judgment or enter into any settlement agreement, without the consent of the Indemnified Party, which does not include a complete and unconditional release of the Indemnified Party or which imposes injunctive or other equitable relief against the Indemnified Party. The Indemnified Party shall have final authority with respect to all decisions made in connection with the defense of the Third Party Claim. If the Indemnifying Party fails to assume and diligently pursue the defense of a Third Party Claim, the Indemnified Party may defend against such Third Party Claim in such manner as it may deem appropriate, including without limitation settlement thereof on such terms as the Indemnified Party may deem appropriate, and to pursue such remedies as may be available to the Indemnified Party against the Indemnifying Party.

(d) Definitions.

(i) "Environmental Law(s)" means any federal, state or local law whether common law, court or administrative decision, ordinance, regulation, permit condition, rule, court order or decree, or administrative order or any administrative policy or guideline concerning of a governmental authority relating to the environment, public health, any Hazardous Material (as hereinafter defined) or the treatment of wastewater, in effect from time to time, including, but not limited to (i) the Federal Water Pollution Control Act, as amended (33 U.S.C. §1251 et seq.); (ii) the Resource Conservation and Recovery Act, as amended (42 U.S.C. §6901 et seq.); (iii) the Comprehensive Environmental Response, Compensation and Liability Act, as amended (42 U.S.C. §9601 et seq.); (iv) the Federal Clean Air Act, as amended (42 U.S.C. §7401 et seq.); (v) the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. §136 et seq.); (vi) the Toxic Substances Control Act, as amended (15 U.S.C. §2601 et seq.); (vii) the Emergency Planning and Community Right-to-Know Act, as amended (42 U.S.C. §11001 et seq.); (viii) the Occupational Safety and Health Act, as amended (29 U.S.C. §650 et seq.); (ix) Chapter 6 of the California Health and Safety Code; California Health

and Safety Code Sections 25100 et seq. and Sections 25280 et seq.; (x) the Safe Drinking Water and Toxic Enforcement Act of 1986, as amended (Proposition 65); (xi) Title 22 of the California Code of Regulations (Division 4, Chapter 30); and (xii) all regulations or guidelines promulgated pursuant to all of the foregoing, as same may be amended from time to time.

(ii) "Hazardous Material(s)" means any petroleum or petroleum products and any hazardous or toxic material, substance, pollutant, allergen, irritant, mold, fungus, bacteria, contaminant, waste, or terms similar to the foregoing, any of which are (a) defined by or regulated as such under any Environmental Laws, or (b) determined by a final court ruling or order to be hazardous or toxic.

9. Termination.

(a) This Agreement shall terminate automatically at the end of the term set forth in Section 1.

(b) VVWRA shall have the right to terminate this Agreement on ten (10) days written notice in the event that the APUA is in material violation of its obligations under this Agreement or VVWRA determines, in its sole discretion, that the further acceptance of Raw Influent would be a violation of any Environmental Laws, permit requirements, court or administrative orders or other legal obligations applicable to VVWRA.

(c) The APUA shall further have the right to terminate this Agreement on ten (10) days written notice to VVWRA in the event that VVWRA is in material violation of its obligations under this Agreement.

(d) Following termination of this Agreement for any reason, all obligations of VVWRA to accept delivery of Raw Influent shall terminate and be of no further force and effect. The obligations of APUA pursuant to Sections 5, 7(b) and 8 shall survive termination of this Agreement. The obligations of VVWRA pursuant to Section 8 shall survive termination of this Agreement.

10. Limitation on Damages.

Except for the obligation of APUA pursuant to Section 7(b), neither party shall be liable to the other party for any special, indirect or consequential damages of any kind resulting from a breach of this Agreement, whether or not such damages were reasonably foreseeable by the other party.

11. Entire Agreement. This Agreement constitutes the entire agreement and understanding of the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, both written and verbal, between the parties with respect to the subject matter hereof.

12. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties thereto and their successors and assigns. The Agreement may not be assigned by either party without the prior written consent of the other party.

13. Amendments. This Agreement may not be amended, altered or modified except in writing signed by the parties hereto. No waiver by either party of any breach by the other party of any provisions of this Agreement shall be construed as a waiver of any subsequent breach, whether of the same or of any different provision of this Agreement. No course of conduct or series of dealings shall constitute a waiver hereunder.

14. Notice. In the event that written notice must or may be given hereunder, such notice shall be sent via a commercial overnight courier such as Federal Express or UPS to the other party at the following address or such other address as a party may notify the other in writing:

If to VVWRA: Logan Olds, General Manager
15776 Main St.
Hesperia, CA 92345

With a copy to: Best Best & Krieger LLP
Attn: Piero Dallarda
3750 University Avenue
Riverside, CA 92501

If to APUA: D. James Hart, Executive Director
11600 Air Expressway
Adelanto, CA 92301

With a copy to: Rutan & Tucker
Attn: Todd Litfin
611 Anton Blvd., 14th Fl.
Costa Mesa, CA 92626

Notice shall be sent to the above referenced persons unless the parties are otherwise notified in writing of a change in the name or address of the person to be notified.

15. Governing Law. This Agreement shall be governed by and construed under the laws of the State of California and venue for any action arising out of this Agreement shall be in the County of San Bernardino.

16. Attorney's Fees and Costs. The prevailing party in any action brought to enforce the terms of this Agreement in court or arbitration shall be entitled to an award of its reasonable

attorney's fees and costs, including without limitation, the costs of discovery and expert witnesses in connection with any such action.

17. Nature of Agreement. The parties acknowledge that the sole purpose of this Agreement is to provide standby treatment capacity for Raw Influent from the Adelanto Facility and that in no event shall this Agreement be deemed to constitute a request for admission by the APUA to be a member of VVWRA or for VVWRA to annex any portion of the service area of the APUA.

18. Effect on Standby Agreement. Upon the execution of this Agreement, the Standby Agreement with respect to the delivery of secondary effluent shall remain in effect, provided, however, that the maximum volume of secondary effluent that may be delivered pursuant to Section 3 of the Standby Agreement shall be reduced by the actual quantity of Raw Influent delivered pursuant to this Agreement.

[signature page follows]

IN WITNESS WHEREOF, the parties hereto have by their duly authorized officers or representatives executed this Agreement all on the day and year first above written.

VICTOR VALLEY WASTEWATER

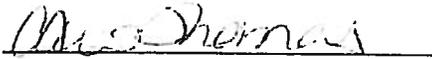
RECLAMATION AUTHORITY

By: 

Name: LOGAN OLDS

Title: GENERAL MANAGER

ADELANTO PUBLIC UTILITY AUTHORITY

By: 

Name: Cari Thomas

Title: President

ENCLOSURE 3



Cari Thomas
Mayor

Ed Camargo
Mayor Pro Tem

Steven R. Baisden
Council Member

Trinidad Perez
Council Member

Charles S. Valvo
Council Member

D. James Hart, Ph.D.
City Manager

August 1, 2011

California Regional Water Quality Control Board, Lahontan Region
Attn: Eric Taxer
2501 South Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

California Regional Water Quality Control Board, Lahontan Region
Attn: John Morales
14440 Civic Drive, Suite 200
Victorville, CA 92392

RE: Adelanto Public Utilities Authority Percolation Pond Capacity Analysis Report

The Adelanto Public Utilities Authority (APUA) owns the Adelanto Domestic Wastewater Treatment Facility (ADWWTF), which is regulated by Waste Discharge Requirements (Order Nos. R6V-2002-050 and R6V-2009-0036, WDR), Cease and Desist Order (Order Nos. R6V-2007-24 and R6V-2011-15A1), Investigative Order (Order No. R6V-2010-0035), and Cleanup and Abatement Order (Order No. R6V-2010-0054), which were all adopted by the Lahontan Regional Water Quality Control Board (Regional Water Board). As required by Section II.B of CDO Order No. R6V-2011-15A1), APUA must submit a report to the Regional Water Board that:

- Quantifies the percolation capacity of Pons 1 -5 on an individual basis in order to support its claims that it has sufficient disposal capacity to accommodate current and increased flows;
- Provides a detailed status report on its efforts to provide additional treatment capacity at the ADWWTF including actions it has taken and plans to implement, a schedule for each future action, and when specific additional capacity is expected to be fully functional; and
- Provides a detailed description of the amount of flow it can consistently divert to the Victor Valley Wastewater Reclamation Authority Westside Wastewater Treatment Plant, the conditions under which this diversion can occur, and all measures put in place to ensure that the purported flow can be maintained.

APUA submits the attached report to meet the requirement of Section II.B of CDO Order No. R6V-2011-15A1. The percolation pond capacity analysis was conducted using conservative assumptions such as assuming a low infiltration rate and operation of the percolation ponds in series in order to provide a safety factor. However, based on the conservative infiltration rate used in the analysis, only a slight increase in the infiltration rate assumption is needed to show sufficient existing percolation pond capacity.

APUA is currently conducting additional infiltration rate tests of its percolation ponds. Once these results become available, the percolation pond capacity analysis may be updated using the new data.

Certification: *"I certify under penalty of perjury under the laws of the State of California that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted, the document and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

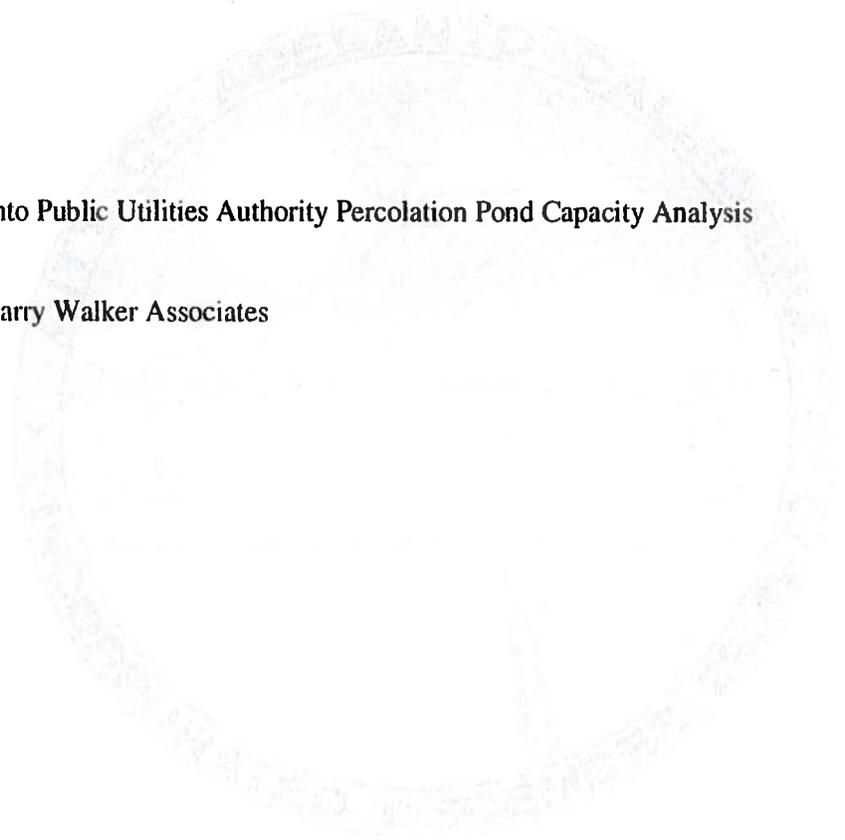
If you have any questions, or need further information, please contact me at (760)246-2300 ext. 3006, or at jsponsler@ci.adelanto.ca.us.

Sincerely,


John Sponsler
APUA Director

Attachment: Adelanto Public Utilities Authority Percolation Pond Capacity Analysis

cc: Gorman Lau, Larry Walker Associates



AUGUST 2011

ADELANTO PUBLIC UTILITIES AUTHORITY

Percolation Pond Capacity Analysis

Prepared by

LARRY WALKER ASSOCIATES



Percolation Pond Capacity Report

INTRODUCTION

The Adelanto Public Utilities Authority (APUA) owns and operates the Adelanto Domestic Wastewater Treatment Facility (ADWWTF), which treats domestic, commercial, and industrial wastewater from the City of Adelanto. The ADWWTF is a currently a secondary-level treatment facility that has an average dry weather design capacity of 1.5 million gallons per day (MGD), but currently has an average daily influent flow rate of 2.14 MGD (July 2010-June 2011). Because of this excess wastewater, APUA diverts some wastewater to the Victor Valley Wastewater Reclamation Authority (VWVRA) Westside Wastewater Treatment Plant (WWWTP)

Wastewater enters the ADWWTF through the headworks where it is pumped into a flow splitter, which directs flow into one of two Biolac System extended aeration activated sludge basins. Wastewater exits the aeration basins and enters secondary clarifiers prior to disinfection. Final effluent is discharged to percolation ponds.

The City currently operates five percolation ponds (#1-5). Percolation Pond No. 9 has been constructed, but is not yet operational. The dimensions of the percolation ponds are presented in Table 1.

Table 1. Percolation Ponds Dimensions

Pond	Top of Pond		Total Pond Depth (ft)	Maximum Water Depth (ft)	Percolation Area (ft ²)	Maximum Pond Capacity (MG)
	Length (ft)	Width (ft)				
Pond 1	470	225	14	12	69,966	7.6
Pond 2	285	195	14	12	31,831	3.7
Pond 3	195	235	14	12	24,881	3.0
Pond 4-N	275	162	14	12	33,726	3.9
Pond 4-S	295	275	14	12	52,341	5.8
Pond 5	573	273	16	9.5	106,381	8.6
Pond 9 (proposed)	574	318	16	12.5	104,040	11.5

The ADWWTF also has Micro-media treatment units that are currently not in operation. Once those units become operational, the ADWWTF will be a tertiary-level treatment facility with an average dry weather design capacity of 4.0 MGD.

Operation of the ADWWTF and disposal of treated wastewater is regulated by Waste Discharge Requirements (WDR) (Orders No. R6V-2002-050 and R6V-2009-0036), Cease and Desist Order (CDO) (Orders No. R6V-2007-24 and R6V-2011-15A1), Investigative Order (Order No. R6V-2010-0035), and Cleanup and Abatement Order (Order No. R6V-2010-0054), which were adopted by the Lahontan Regional Water Quality Control Board (Regional Water Board).

Percolation Pond Capacity Report

As required by Section II.B of CDO (Order No. R6V-2011-15A1), APUA must submit a report to the Regional Water Board that:

- Quantifies the percolation capacity of Ponds 1-5 on an individual basis in order to support its claims that it has sufficient disposal capacity to accommodate current and increased flows;
- Provides a detailed status report on its efforts to provide additional treatment capacity at the ADWWTF including actions it has taken and plans to implement, a schedule of each future action, and when specific additional capacity is expected to be fully functional; and
- Provides a detailed description of the amount of flow it can consistently divert to the VVWRA WWTP, the conditions under which this diversion can occur, and all measures put in place to ensure that the purported flow can be maintained.

The purpose of this report is to present the information listed above to the Regional Water Board. The major elements of this report include the following:

- Percolation pond capacity analysis;
- Capital improvement schedule;
- Diversion to the VVWRA WWTP; and
- Summary.

PERCOLATION POND CAPACITY ANALYSIS

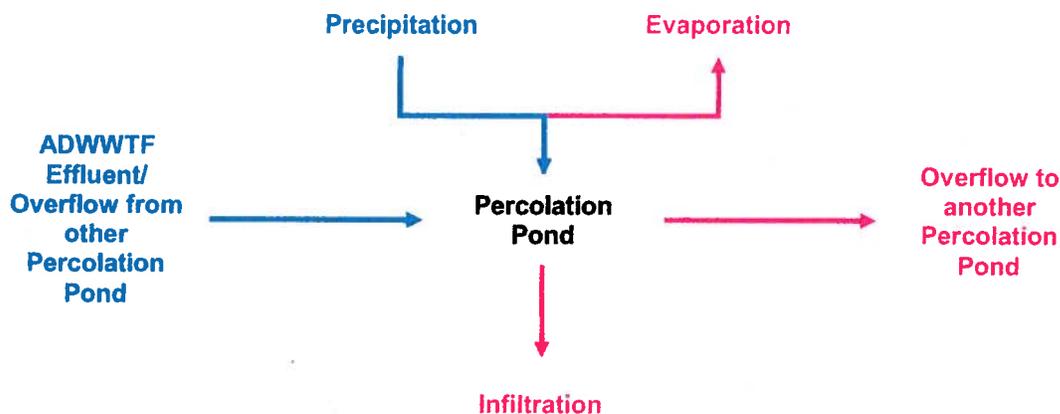
As required by Section II.B of its CDO (Order No. R6V-2011-15A1), APUA conducted several water balances of its percolation ponds to demonstrate that the ADWWTF has sufficient disposal capacity of wastewater collected from the City of Adelanto. Water balances were conducted for the following three scenarios:

- Current influent wastewater flow rates with average annual precipitation;
- Current influent wastewater flow rates with 2010-2011 precipitation rates; and
- Future influent wastewater flow rates with 2010-2011 precipitation rates.

The water balance is a straightforward calculation of water entering the system (effluent flow from the ADWWTF or other percolation pond, direct precipitation on the percolation ponds) minus the water leaving the system (effluent infiltrated, evaporation, effluent transferred to another percolation pond). The difference is the change in the amount of water stored in the percolation pond.

A schematic of the typical inflows and outflows for a percolation pond is presented in Figure 1.

Figure 1. Percolation Pond Inflows and Outflows



The water balances are discussed in further detail in the following sections:

- Data used;
- Water balance model assumptions;
- Scenario 1 – current average conditions;
- Scenario 2 – current average conditions with 2010-2011 precipitation; and
- Scenario 3 – future conditions.

Percolation Pond Capacity Report

Data Used

To complete a flow balance of the percolation ponds, the following data were collected and used:

- Influent wastewater flows;
- Local precipitation data;
- Surface evaporation rates;
- Infiltration rates.

Influent Wastewater Flows

Typically, effluent wastewater flows are used to conduct a water balance for disposal. Because some influent wastewater flow is diverted for treatment at the VVWRA WWWT, effluent wastewater flows are not representative for assessing the long-term capabilities of the ADWWTF to treat and dispose of all wastewater collected from the City of Adelanto. This water balance model assumes no wastewater is diverted to the VVWRA WWWT.

For this analysis, influent wastewater flows to the ADWWTF from July 2009 to June 2011 were used for the percolation pond water balances. The average daily flow for each month over the two-year period were calculated and used in the model. Summary statistics for the ADWWTF influent wastewater flows are summarized in Table 2. The average daily influent wastewater flows were used for Scenarios 1 and 2.

Table 2. ADWWTF Influent Wastewater Flow (July 2009-June 2011)

Month	Total Influent Flow (MG) ⁽¹⁾	Average Daily Flow (MGD) ⁽²⁾	Range (MGD)
July	130.6	2.11	1.72-2.35
August	133.1	2.15	1.86-2.35
September	132.3	2.20	1.92-3.08
October	136.0	2.19	1.76-2.59
November	131.9	2.20	1.83-2.41
December	136.8	2.21	2.00-3.19
January	133.7	2.16	1.86-2.82
February	118.8	2.12	1.59-2.60
March	132.0	2.13	1.85-2.35
April	125.2	2.09	1.88-2.33
May	127.7	2.06	1.89-2.37
June	122.9	2.05	1.78-2.49
Total	1,561	2.14	1.59-3.19

Percolation Pond Capacity Report

- (1) Total influent wastewater flow for the month during two-year period (i.e., sum of total July 2009 and July 2010 influent wastewater flow).
- (2) Average influent wastewater flow for the month during two-year period.

APUA estimates that the average daily influent wastewater flow by fiscal year 2016/2017 will be 2.80 MGD based on its assumption that 606 dwelling units are connected to the sanitary sewer system each year for a total addition of 3,636 dwelling units by fiscal year 2016/2017.¹ The average daily influent wastewater flows from Table 2 are scaled by the same proportion (2.80/2.14) to account for future growth in Scenario 3.

Local Precipitation Data

Precipitation can increase the amount of water that needs to be disposed of in the percolation ponds. The Western Regional Climate Center (WRCC) maintains precipitation data collected by the National Weather Service (NWS) National Climatic Data Center (NCDC) gage at Adelanto (site ID 040024) and the Victorville Pump Station (site ID 049325). Since limited precipitation data are available for the Adelanto gage, the Victorville Pump Station gage was used as a surrogate.² The average annual precipitation total at the Victorville Pump Station is 5.56 inches. Average daily precipitation totals are calculated from data collected between January 1917 and November 2009. These average daily precipitation totals were used to conduct the Scenario 1 water balance.

The NWS California Nevada River Forecast Center (CNRFC) compiles daily precipitation data, in the form of daily precipitation maps, for weather stations throughout California. In order to assess the impact of a wet weather year on the capacity of the percolation ponds, daily precipitation data from July 2010 to June 2011 were used.³ Since precipitation data were not available for the Adelanto weather station (site ID ADTC1) prior to February 2011, precipitation data from the Oro Grande weather station (site ID OGDC1) were used to supplement the available data from the Adelanto weather station. Based on these data, there was approximately 11.53 inches of precipitation collected from July 2010 to June 2011. The daily precipitation totals were used to conduct the Scenarios 2 and 3 water balances.

Surface Evaporation Rate

Evaporation is the secondary method for disposal of treated wastewater in the ADWWTF percolation ponds. The WRCC collects and compiles monthly average surface evaporation rates data (1948-2005) in Mojave, CA, which is the closest gage to

¹ City of Adelanto. *Wastewater Disposal Facilities Work Plan (Including Updated Response to Investigative Order R6V-2010-0035)*. April 30, 2011.

² Western Regional Climate Center. www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9325. Last accessed July 20, 2011

³ National Weather Service California Nevada River Forecast Center. www.cnrfc.noaa.gov/arc_search.php. Last accessed July 22, 2011.

Percolation Pond Capacity Report

Adelanto.⁴ Evaporation rates are measured by using the standard pan evaporation method. The monthly average pan evaporation rates are adjusted by a factor of 0.80 in this analysis to adjust to remove the impact of the pan walls transmitting radiation and heat, which skews evaporations high. A summary of the monthly average pan evaporation rates used in this analysis are presented in Table 3.

Table 3. Mojave, CA Pan Evaporation Rates (from NWS CNRFC)

Month	Average Monthly Pan Evaporation Rate (In) ⁽¹⁾	Average Daily Pan Evaporation Rate (ft) ⁽²⁾
January	4.09 ⁽³⁾	0.01
February	4.65	0.01
March	6.45	0.01
April	9.97	0.02
May	13.59	0.03
June	15.33	0.03
July	17.21	0.04
August	16.00	0.03
September	11.83	0.03
October	8.28	0.02
November	4.76	0.01
December	3.52	0.01
Total	115.68	—

(1) Total average monthly pan evaporation rate prior to adjustment for radiation and heat transfer.

(2) Average daily pan evaporation rate with the adjustment for radiation and heat transfer.

(3) No average monthly pan evaporation data were available for January. The average monthly pan evaporation rate was estimated to be the average pan evaporation rate of December and February.

Infiltration Rates

APUA is exploring the addition of Percolation Ponds #6, 7, 8, 10, and 11, which would be located on land either recently purchased or in the process of being purchased.

APUA recently conducted infiltration rate testing at the site of Percolation Ponds No. 8-A, 8-B, 9-A, and 9-B (March 1, 2011) and Percolation Ponds No. 7-A and 6-B (March 31, 2011). The March 1, 2011 infiltration rate test indicated that the sites were capable

⁴ Western Regional Climate Center. www.wrcc.dri.edu/htmlfiles/westevap.final.html, Last accessed July 20, 2011.

Percolation Pond Capacity Report

of percolating more than 320 gallons per square foot per day (gal/ft²/day).⁵ The March 31, 2011 infiltration test indicated that the sites were capable of percolating only 5 gal/ft²/day.⁶ The latter test identified the presence of a hard, calcified, fine-grained silty sand/sand silt layer.

For the purpose of this water balance analyses, the conservative infiltration rate of 5 gal/ft²/day was used. It should be noted that recent operation of Percolation Pond No. 5 indicates that the infiltration rates are likely significantly higher than the infiltration rate used in this analysis. APUA conducted additional infiltration tests for its existing percolation ponds on July 26, 2011. Once these data become available, this analysis may be modified using the new infiltration rates, which are expected to be higher than the conservative infiltration rate used in this analysis.

Water Balance Model Assumptions

The following assumptions were made for the water balance model:

- No influent wastewater flow is assumed to be diverted to the VVWRA WWTP.
- The percolation ponds are assumed to be operated in series (i.e., flow from Percolation Pond No. 1 only flows to Percolation Pond No. 2 when Percolation Pond No. 1 is full). This is a conservative assumption because use of all available percolation ponds is not optimized. Idling available percolation ponds reduces the amount of effluent that can be disposed of on a daily basis.
- Percolation Pond No. 1 is assumed to remain full (less its two-foot freeboard requirement). This percolation pond typically provides some water available for reuse in ADWWTF operations.
- APUA is required by the Regional Water Board to restore Percolation Ponds No. 4-N and 4-S into a single percolation pond according to its original design specifications. This restoration, which is expected to be completed by October 15, 2011, will increase the percolation capacity of the pond. This analysis conservatively assumes that the Percolation Pond No. 4 is still separate.
- A minimum freeboard of two feet is required for each pond. Due to some post-planning adjustments during the construction of Percolation Pond No. 5, the pond level cannot hydraulically reach its maximum capacity (less its two-foot freeboard requirement). This results in a minimum freeboard of five (5) feet.
- Percolation Pond No. 9 is assumed to be offline pending Regional Water Board approval for use following APUA's submittal of a revised Report of Waste Discharge in October 2011.

⁵ LOR Geotechnical Group, Inc. *Infiltration Feasibility, Proposed Wastewater Facility Expansion, Adelanto, California*. March 1, 2011.

⁶ LOR Geotechnical Group, Inc. *Infiltration Feasibility, Adelanto Wastewater Facility Expansion, Adelanto, California*. March 31, 2011.

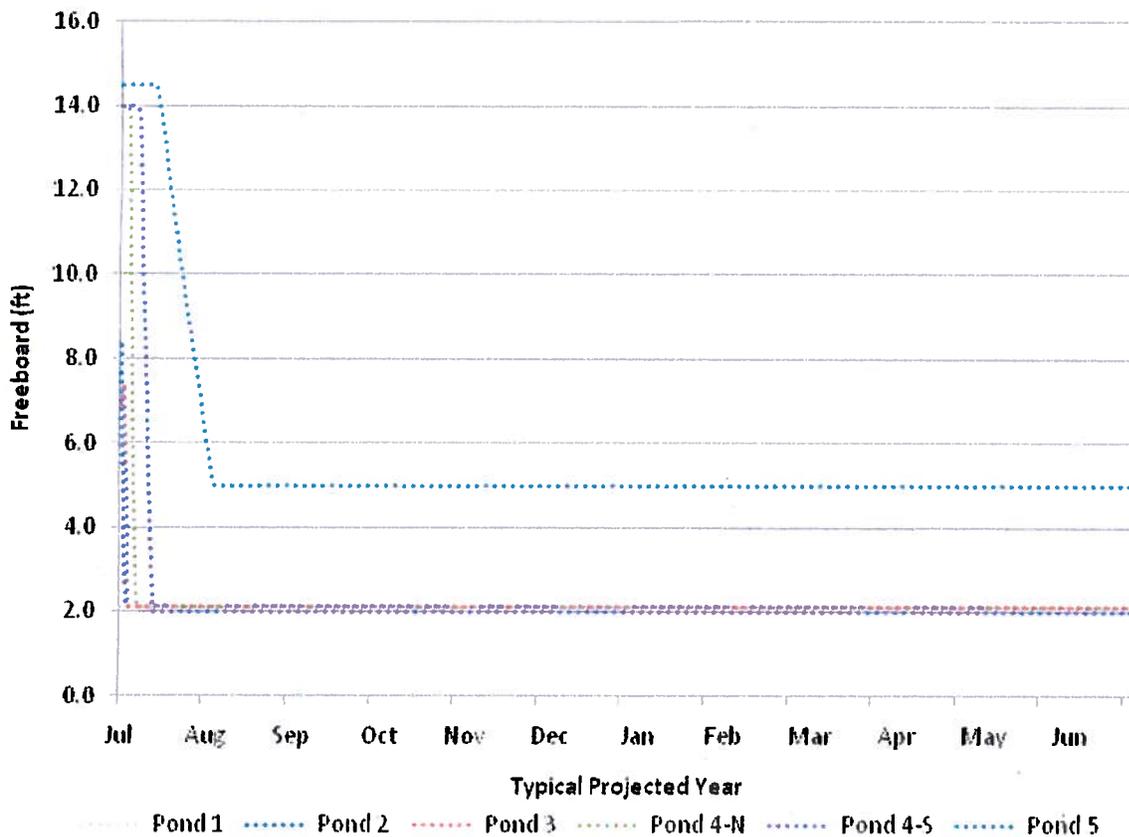
Percolation Pond Capacity Report

- The model accounts for varying percolation pond levels, which changes the water surface area, in estimating evaporation rates.
- It is assumed that all percolation ponds are operated and maintained properly, including removal of solids accumulation and resting ponds, in order to maintain adequate infiltration rates.

Scenario 1 – Average Current Conditions

A water balance analysis was conducted using current influent wastewater flow rates and historic average daily precipitation to determine if the percolation ponds have sufficient capacity to dispose of treated effluent from the ADWWTF. Based on the conservative assumptions discussed above, the water balance analysis indicates that the current percolation pond capacity may be slightly insufficient in disposing of all treated effluent from the ADWWTF. The projected freeboard for each percolation pond is illustrated in Figure 2.

Figure 2. Scenario 1 Projected Percolation Pond Freeboard

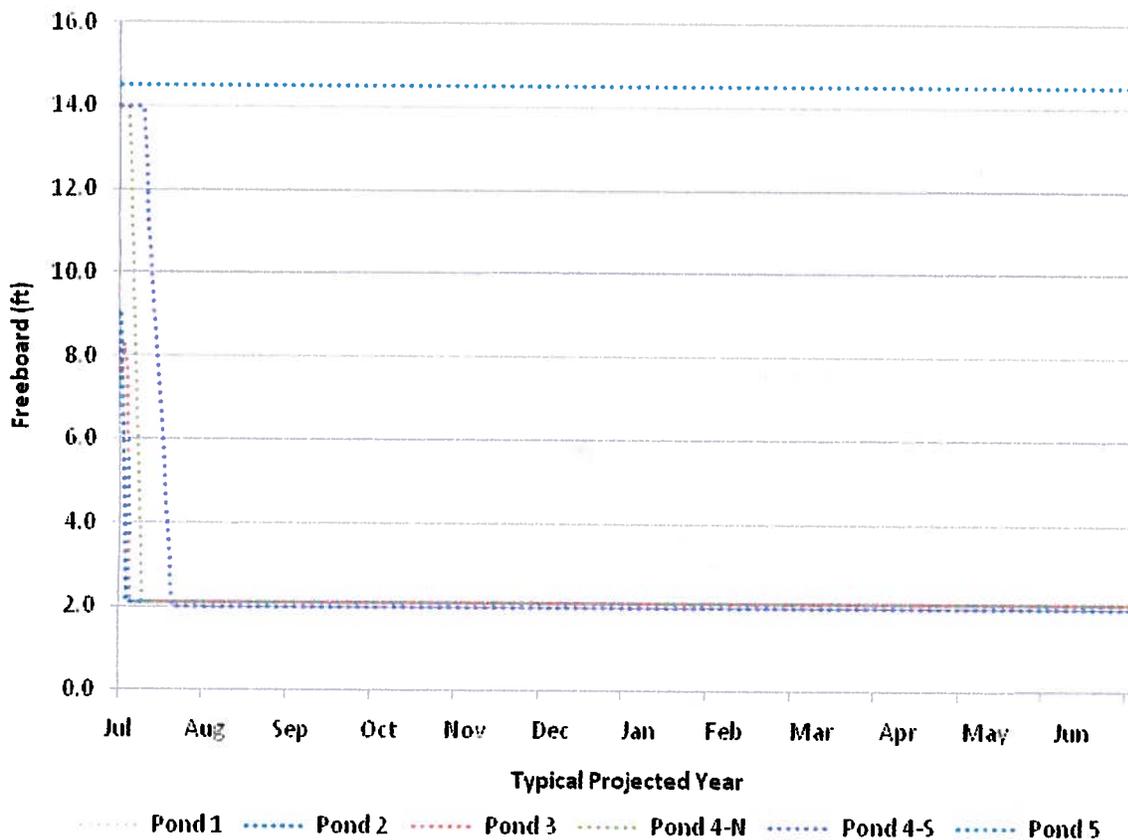


However, a slight increase in the infiltration rate to 7 gal/ft²/day in the model allows Percolation Pond No. 5 to remain primarily empty (or any other percolation pond may remain empty depending on any maintenance activities). The projected freeboard for

Percolation Pond Capacity Report

each percolation pond with a modified infiltration rate is presented in Figure 3. Because conservative assumptions were used for this water balance including the exclusion of Percolation Pond No. 9 and not considering the restoration of Percolation Pond No. 4, APUA likely has sufficient percolation pond capacity to dispose of all current influent wastewater flow.

Figure 3. Modified Scenario 1 Projected Percolation Pond Freeboard



Summary water balances for Scenario 1 and Modified Scenario 1 are presented in Appendix A.

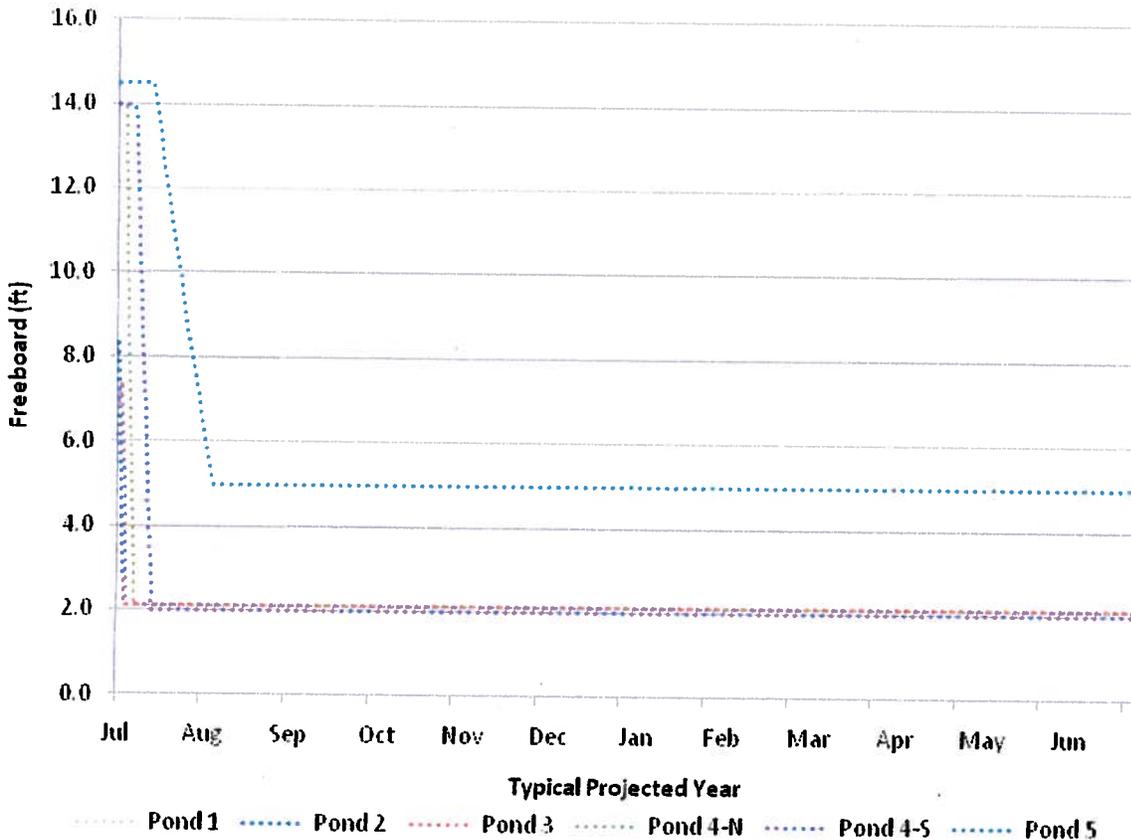
Scenario 2 – Average Current Conditions with 2010-2011 Precipitation

A water balance analysis was conducted using current influent wastewater flow rates and 2010-2011 precipitation data to determine if the percolation ponds have sufficient capacity to dispose of treated effluent from the ADWWTF. The precipitation total from July 2010 to June 2011 was more than two times the normal average annual precipitation total. This period also included a significant, record-breaking storm event in late December 2010 in which current percolation pond capacity (only Percolation Ponds No. 1-4 were operational) was insufficient.

Percolation Pond Capacity Report

Based on the conservative assumptions discussed previously, the water balance analysis indicates that the current percolation pond capacity may be slightly insufficient in disposing of all treated effluent from the ADWWTF. The projected freeboard for each percolation pond is illustrated in Figure 4.

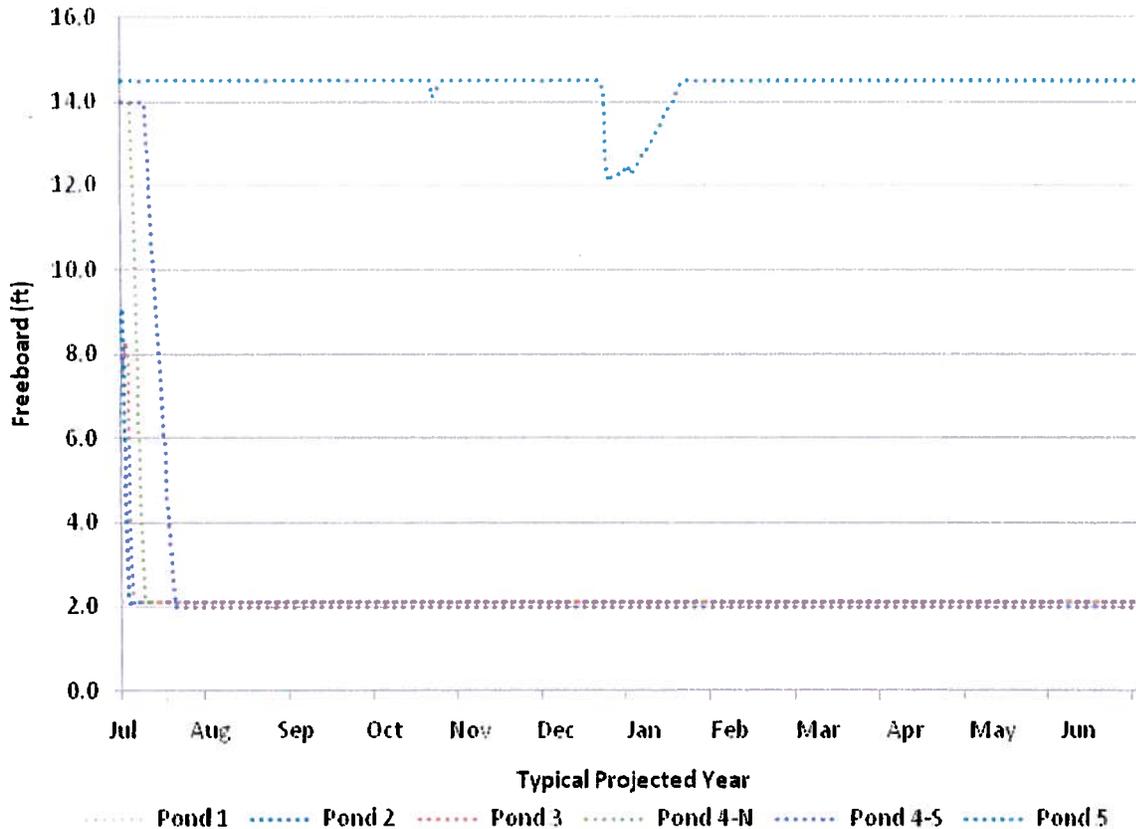
Figure 4. Scenario 2 Projected Percolation Pond Freeboard



While the conservative water balance model indicates that there is insufficient percolation pond capacity, a slight increase in the infiltration rate to 7 gal/ft²/day in the model allows Percolation Pond No. 5 to remain primarily empty (or any other percolation pond may remain empty depending on any maintenance activities). The projected freeboard for each percolation pond with a modified infiltration rate is presented in Figure 3. Because conservative assumptions were used for this water balance including the exclusion of Percolation Pond No. 9 and not considering the restoration of Percolation Pond No. 4, APUA likely has sufficient percolation pond capacity to dispose of all current influent wastewater flow under higher than normal wet weather years.

Percolation Pond Capacity Report

Figure 5. Modified Scenario 2 Projected Percolation Pond Freeboard



Summary water balances for Scenario 2 and Modified Scenario 2 are presented in Appendix A.

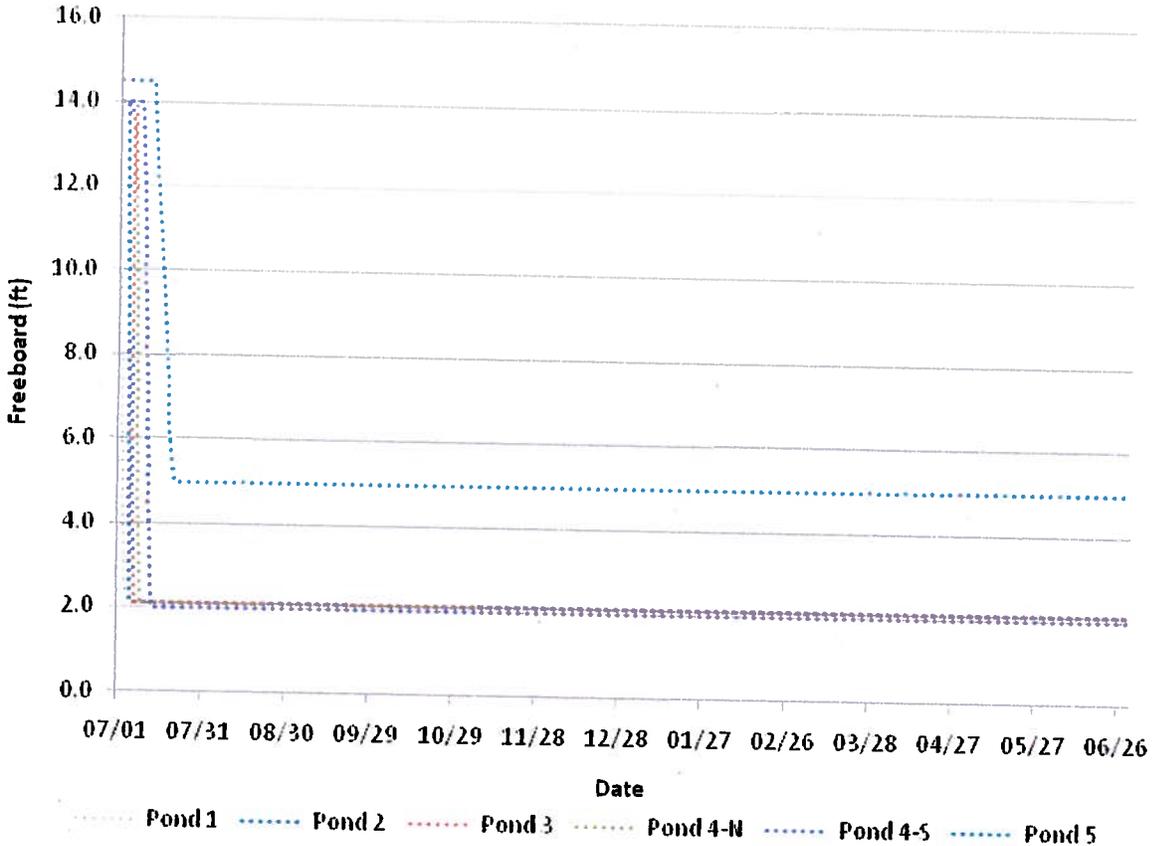
Scenario 3 – Future Conditions

A third water balance analysis was conducted to project future wastewater conditions during higher than average wet weather years to determine if the percolation ponds have sufficient capacity to dispose of treated effluent from the ADWWTF. Precipitation data from July 2010 to June 2011, which also included a significant, record-breaking storm event in December 2010, were used in this analysis.

Based on the conservative assumptions discussed previously, the water balance analysis indicates that the current percolation pond capacity is insufficient in disposing of all treated effluent from the ADWWTF. The projected freeboard for each percolation pond is illustrated in Figure 6.

Percolation Pond Capacity Report

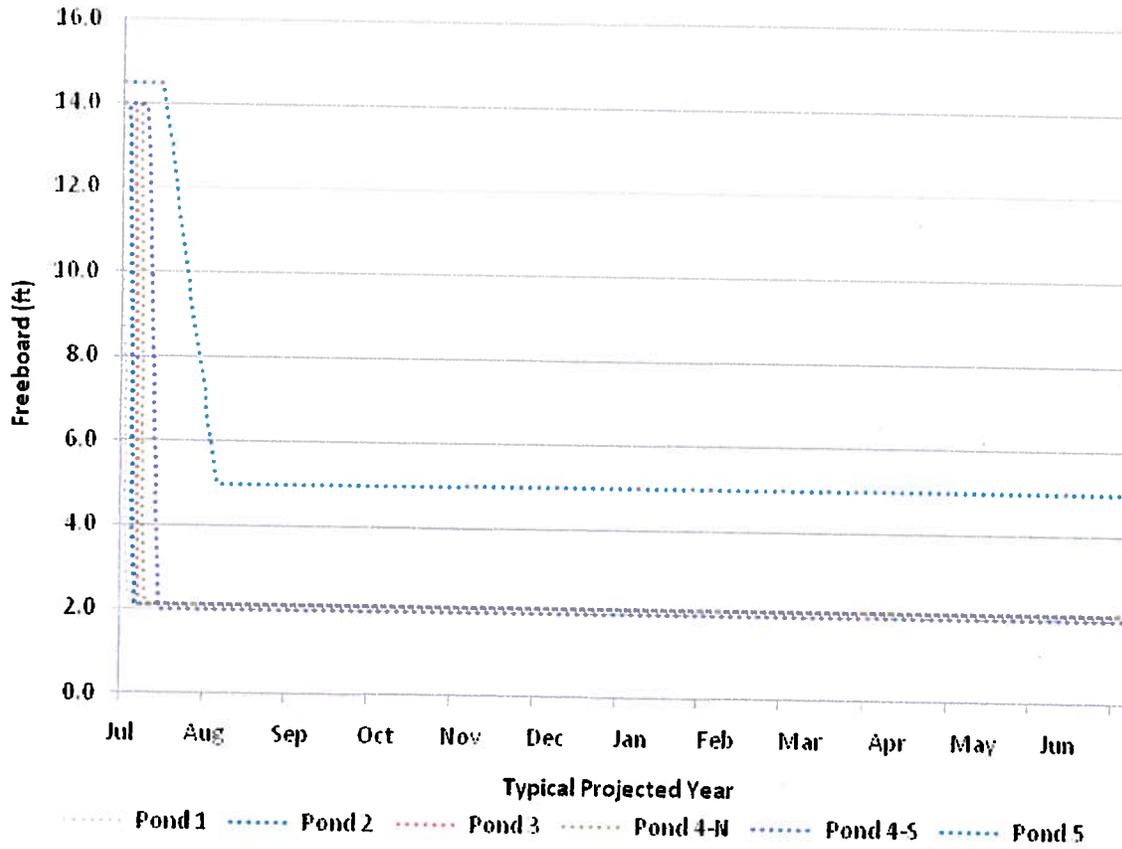
Figure 6. Scenario 3 Projected Percolation Pond Freeboard



While the conservative water balance model indicates that there is insufficient percolation pond capacity, a slight increase in the infiltration rate to 9 gal/ft²/day in the model allows Percolation Pond No. 5 to remain primarily empty (or any other percolation pond may remain empty depending on any maintenance activities). The projected freeboard for each percolation pond with a modified infiltration rate is presented in Figure 7. Because conservative assumptions were used for this water balance including the exclusion of Percolation Pond No. 9 and not considering the restoration of Percolation Pond No. 4, APUA likely has sufficient percolation pond capacity to dispose of projected future influent wastewater flow under higher than normal wet weather years.

Percolation Pond Capacity Report

Figure 7. Modified Scenario 3 Projected Percolation Pond Freeboard



Summary water balances for Scenario 3 and Modified Scenario 3 are presented in Appendix A.

CAPITAL IMPROVEMENT SCHEDULE

The following sections discuss APUA's current and future plans for providing additional treatment and disposal capacity, including actions it has taken and plans to implement the modifications to the ADWWTF and the percolation ponds.

Adelanto Domestic Wastewater Treatment Facility

APUA recently upgraded the ADWWTF to increase the capacity of the facility from 1.5 MGD to 4.0 MGD by adding Micro-media treatment units. The treatment units include clean screen separators and micro-media sand filters with coagulation. This capacity increase is expected to provide sufficient treatment capabilities until 2023. APUA is currently working to bring the new treatment units online, and expects that these treatment units will be operational by early 2012.

APUA is currently exploring the addition of a flow equalization system to the ADWWTF to regulate influent wastewater flows in order to allow for consistent wastewater treatment. A tentative schedule for construction and operation of the flow equalization basins is presented in Table 4.

Table 4. Tentative Flow Equalization Basin Construction Schedule

Task	Date
Bids Received	July 28, 2011
Begin Construction	September 2011
Complete Construction	December 2011
Begin Operation	(1)

(1) Dependent upon initiating operation of Micro-media units.

Percolation Ponds

APUA is actively increasing its disposal capacity by adding new percolation ponds. Percolation Pond No. 5 was recently completed in May 2011, and is currently in operation. APUA also completed construction of Percolation Pond No. 9 in July 2011. APUA expects to submit a revised Report of Waste Discharge to the Regional Water Board in October 2011. Upon review of the revised Report of Waste Discharge, APUA expects the Regional Water Board to grant approval for discharge into the percolation pond.

APUA divided Percolation Pond No. 4 into two percolation ponds and added trenches to increase infiltration capacity. APUA is required to restore Percolation Pond No. 4 into a single pond and remove the trenches as originally designed. Since the construction of Percolation Pond No. 5 occurred adjacent to Percolation Pond No. 4, all of the trenches have already been filled. APUA expects to complete the Percolation Pond No. 4 restoration effort by the October 15, 2011 deadline.

Percolation Pond Capacity Report

APUA has already purchased the land on which Percolation Ponds No. 6, 7, 8, 10 and 11 would be located. APUA does not currently have plans to construct additional percolation ponds at this time.

A summary of the status of the percolation ponds is presented in Table 5.

Table 5. Summary of Percolation Ponds Status

Percolation Pond No.	Status
1	Existing and operational
2	Existing and operational
3	Existing and operational
4-N	Existing and operational. Ponds will be restored into a single pond by October 15, 2011
4-S	
5	Constructed in May 2011 and operational.
6	Land purchased. No current plans for construction.
7	Land purchased. No current plans for construction.
8	Land purchased. No current plans for construction.
9	Constructed in July 2011. Not currently in operation pending APUA submittal of a revised Report of Waste Discharge to the Regional Water Board for approval in October 2011.
10	Land purchased. No current plans for construction.
11	Land purchased. No current plans for construction.

DIVERSION TO THE VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY WESTSIDE WASTEWATER TREATMENT PLANT

APUA was previously a member agency in the VVWRA prior to operating the ADWWTF. Under its prior arrangement with VVWRA, wastewater collected from the City of Adelanto was conveyed to the VVWRA WWWTTP through the Adelanto interceptor.

Under an agreement with VVWRA beginning in July 2010, APUA has diverted a portion of its raw wastewater, through the Adelanto interceptor, for treatment and disposal at the VVWRA WWWTTP. On June 1, 2011, APUA entered into a new long-term agreement with VVWRA to continue this arrangement. The primary conditions for diversion of wastewater to the VVWRA WWWTTP are presented below:

- The agreement expires on May 31, 2014 unless it is either extended by both parties or terminated by either party.
- The agreement allows APUA to divert up to 1.3 MGD of excess raw wastewater. VVWRA may reduce this maximum capacity with prior notice to APUA if it is later determined that the VVWRA WWWTTP is unable to handle the maximum excess flow.
- Raw wastewater quality from APUA must meet the VVWRA Ordinance 001 requirements. VVWRA is not obligated to accept any non-conforming raw wastewater.

Summary statistics of wastewater flows diverted to the VVWRA WWWTTP since July 2010 are presented in Table 6.

Percolation Pond Capacity Report

Table 6. Summary of Wastewater Flows Diverted to the Victor Valley Wastewater Reclamation Authority Westside Wastewater Treatment Plant

Month/Year	Total Flow Diverted (MG)	Average Daily Flow Diverted (MGD)
Jul 2010	2.2	0.73
Aug 2010	33.0	1.06
Sep 2010	33.2	1.11
Oct 2010	29.8	0.96
Nov 2010	28.8	0.96
Dec 2010	35.6	1.15
Jan 2011	35.8	1.16
Feb 2011	31.4	1.12
Mar 2011	31.8	1.03
Apr 2011	29.7	0.99
May 2011	34.0	1.10
Jun 2011	27.6	0.92

Percolation Pond Capacity Report

SUMMARY

As required by Section II.B of CDO (Order No. R6V-2011-15A1), this report:

- Quantifies the percolation capacity of Ponds 1-5 on an individual basis in order to support APUA's claims that it has sufficient disposal capacity to accommodate current and increased flows;
- Provides a detailed status report on its efforts to provide additional treatment capacity at the ADWWTF including actions it has taken and plans to implement, a schedule of each future action, and when specific additional capacity is expected to be fully functional; and
- Provides a detailed description of the amount of flow it can consistently divert to the VVWRA WWWT, the conditions under which this diversion can occur, and all measures put in place to ensure that the purported flow can be maintained.

Several water balance analyses were conducted to determine if there was sufficient capacity in the percolation ponds to dispose of treated effluent from the ADWWTF. Under conservative assumptions, it is expected that Percolation Ponds No. 1-5 have sufficient capacity to handle current ADWWTF effluent volumes.

This analysis was unable to definitively determine if current facilities are capable of handling future wastewater flows. Initial infiltration testing at various locations indicated an infiltration rate of 5-320 gal/ft²/day. This analysis is based on conservative assumptions, and only a minimal increase in infiltration rates will be necessary to meet future wastewater flows. APUA conducted additional infiltration tests of the existing percolation ponds during the week of July 25, 2011. Upon receipt of the results, this analysis may be modified to reflect current site-specific conditions at the existing percolation ponds.

APUA is required to restore Percolation Pond No. 4 by October 15, 2011. Restoration of the percolation pond includes removing berms and trenches that currently divide the percolation pond into two separate ponds. Once the pond is restored, it is expected that the percolation capacity of the pond will be increased. APUA has also constructed Percolation Pond No. 9. APUA expects to submit a revised Report of Waste Discharge to the Regional Water Board in October 2011 requesting approval to discharge into the pond. The addition of Percolation Pond No. 9 and any future percolation ponds increases the flexibility of APUA in disposal of treated effluent. APUA also regularly maintains the infiltration capacity of the percolation ponds by removing accumulated bottom solids and scarifying the percolation pond bottoms. Proper maintenance will be necessary to maintain infiltration rates in the percolation ponds.

APUA currently diverts 1.03 MGD of raw wastewater to the VVWRA WWWT for treatment and disposal under a three-year agreement with VVWRA. Upon commencement of operation of the Micro-media treatment units and the construction of flow equalization ponds, it is expected that APUA will cease diversion of raw wastewater to the VVWRA WWWT.

APPENDIX **A**

Water Balance Summary

Scenario 1 - Projected Annual Average Percolation Pond Water Balance

	Pond 1	Pond 2	Pond 3	Pond 4-N	Pond 4-S	Pond 5
Inputs						
ADWWTF Effluent (MG)			781			
Precipitation (MG)	0.35	0.18	0.15	0.19	0.26	0.47
Outputs						
Evaporation (MG)	5.80	2.94	2.41	3.04	4.29	7.64
Infiltration (MG) ⁽¹⁾	128	58.1	45.4	61.5	95.5	194
Pond Capacity (MG)	7.6	3.7	3.0	3.9	5.8	8.6
Minimum Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	5.0
Steady State Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	5.0
Average Daily Additional Capacity Needed (MGD)			0.44			
Maximum Daily Additional Capacity Needed (MGD)			0.60			

Notes:

(1) Assumed infiltration rate of 5 gal/ft²/day.

Scenario 1 (Modified) - Projected Annual Average Percolation Pond Water Balance

	Pond 1	Pond 2	Pond 3	Pond 4-N	Pond 4-S	Pond 5
Inputs						
ADWWTF Effluent (MG)			781			
Precipitation (MG)	0.35	0.18	0.15	0.19	0.26	0.47
Outputs						
Evaporation (MG)	5.80	2.94	2.40	3.03	4.26	6.14
Infiltration (MG) ⁽¹⁾	179	81.3	63.6	86.2	133.7	272
Pond Capacity (MG)	7.6	3.7	3.0	3.9	5.8	8.6
Minimum Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	14.5
Steady State Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	14.5
Average Daily Additional Capacity Needed (MGD)			0.00			
Maximum Daily Additional Capacity Needed (MGD)			0.00			

Notes:

(1) Assumed infiltration rate of 7 gal/ft²/day.

Scenario 2 - Projected Annual Average during Wet Weather Year Percolation Pond Water Balance

	Pond 1	Pond 2	Pond 3	Pond 4-N	Pond 4-S	Pond 5
Inputs						
ADWWTF Effluent (MG)			781			
Precipitation (MG)	0.72	0.37	0.31	0.39	0.55	0.97
Outputs						
Evaporation (MG)	5.80	2.94	2.41	3.04	4.29	7.64
Infiltration (MG) ⁽¹⁾	128	58.1	45.4	61.5	95.5	194
Pond Capacity (MG)	7.6	3.7	3.0	3.9	5.8	8.6
Minimum Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	5.0
Steady State Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	5.0
Average Daily Additional Capacity Needed (MGD)			0.44			
Maximum Daily Additional Capacity Needed (MGD)			1.88			

Notes:

(1) Assumed infiltration rate of 5 gal/ft²/day.

Scenario 2 (Modified) - Projected Annual Average during Wet Weather Year Percolation Pond Water Balance

	Pond 1	Pond 2	Pond 3	Pond 4-N	Pond 4-S	Pond 5
Inputs						
ADWWTF Effluent (MG)			781			
Precipitation (MG)	0.72	0.37	0.31	0.39	0.55	0.97
Outputs						
Evaporation (MG)	5.80	2.94	2.40	3.03	4.26	6.15
Infiltration (MG) ⁽¹⁾	179	81.3	63.6	86.2	133.7	272
Pond Capacity (MG)	7.6	3.7	3.0	3.9	5.8	8.6
Minimum Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	12.1
Steady State Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	14.5
Average Daily Additional Capacity Needed (MGD)			0.00			
Maximum Daily Additional Capacity Needed (MGD)			0.00			

Notes:

(1) Assumed infiltration rate of 7 gal/ft²/day.

Scenario 3 - Projected Future Annual Average during Wet Weather Year Percolation Pond Water Balance

Inputs	Pond 1	Pond 2	Pond 3	Pond 4-N	Pond 4-S	Pond 5
ADWWTF Effluent (MG)			1022			
Precipitation (MG)	0.72	0.37	0.31	0.39	0.55	0.97
Outputs						
Evaporation (MG)	5.79	2.92	2.39	3.02	4.29	7.81
Infiltration (MG) ⁽¹⁾	128	58.1	45.4	61.5	95.5	194
Pond Capacity (MG)	7.6	3.7	3.0	3.9	5.8	8.6
Minimum Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	5.0
Steady State Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	5.0
Average Daily Additional Capacity Needed (MGD)			1.08			
Maximum Daily Additional Capacity Needed (MGD)			2.57			

Notes:

(1) Assumed infiltration rate of 5 gal/ft²/day.

Scenario 3 (Modified) - Projected Future Annual Average during Wet Weather Year Percolation Pond Water Balance

Inputs	Pond 1	Pond 2	Pond 3	Pond 4-N	Pond 4-S	Pond 5
ADWWTF Effluent (MG)			1022			
Precipitation (MG)	0.72	0.37	0.31	0.39	0.55	0.97
Outputs						
Evaporation (MG)	5.79	2.92	2.38	3.01	4.26	6.20
Infiltration (MG) ⁽¹⁾	230	104.6	81.7	110.8	171.9	349
Pond Capacity (MG)	7.6	3.7	3.0	3.9	5.8	8.6
Minimum Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	11.8
Steady State Freeboard (ft)	2.0	2.0	2.0	2.0	2.0	14.5
Average Daily Additional Capacity Needed (MGD)			0.00			
Maximum Daily Additional Capacity Needed (MGD)			0.00			

Notes:

(1) Assumed infiltration rate of 9 gal/ft²/day.

ENCLOSURE 4

Harold Singer - Adelanto: Review of Quarterly Status Report

From: Eric Taxer
To: Sponsler, John
Date: 9/2/2011 3:12 PM
Subject: Adelanto: Review of Quarterly Status Report
CC: Curtis, Chuck; Drabandt, Laura; Elzufon, Betsy; Ferguson, Scott; Kem...

John -

Water Board staff has reviewed the quarterly status report you submitted on July 14, 2011. The report was submitted in response to Order No. II.A of Cease and Desist Order No. R6V-2011-15A1, adopted by the Water Board on May 11, 2011 and issued to the Adelanto Public Utility Authority (APUA). The report adequately provides a status of outstanding compliance issues identified in the Order and complies with the intent of submitting a quarterly status report. Specifically, the report identifies:

- *Completion and implementation of Percolation Pond No. 5, and completion of backfilling Pond 4 trenches.*
- *Proposed submittal date for the Nitrogen Effluent Limit and Compliance Plan (August 31, 2011).*
- *Proposed submittal date of the modified Interim Action Plan (October 15, 2011).*
- *Proposed submittal date of the Flow and Effluent Limits Compliance Plan (September 30, 2011).*
- *Proposed submittal date of the Groundwater Monitoring Plan (September 30, 2011).*
- *Resubmittal of the Percolation Pond No. 4 Restoration Plan, and implementation of plan (no date provided, but work is currently ongoing on the plan).*
- *Resubmittal of the Wastewater Disposal Facilities Work Plan (no date provided, but work is currently ongoing on the plan).*

We look forward to reviewing your next report, which is due to this office on October 15, 2011. In the meantime, could you please provide estimated dates for resubmitting the Percolation Pond No. 4 Restoration Plan and for resubmitting the Wastewater Disposal Facilities Work Plan? Also, we have not received the Nitrogen Effluent Limit and Compliance Plan which was estimated to be submitted on August 31, 2011. Could you please provide a revised submittal date for that as well, or is it already in the process of being submitted?

Thank you, and please don't hesitate to contact me if you have any questions.

Sincerely,

Eric Taxer

Eric J. Taxer, P.E.
Water Resource Control Engineer
Enforcement and Special Projects Unit
Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150
530-542-5434

"The problem with people who have no vices is that generally you can be pretty sure they're going to have some pretty annoying virtues."

-Elizabeth Taylor

ENCLOSURE 5



California Regional Water Quality Control Board

Lahontan Region

Matthew Rodriguez
Secretary for
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
(530) 542-5400 • Fax (530) 544-2271
www.waterboards.ca.gov/lahontan



Edmund G. Brown Jr.
Governor

September 6, 2011

John Sponsler, Director
Adelanto Public Utility Authority
11600 Air Expressway
Adelanto, CA 92301
jsponsler@ci.adelanto.ca.us

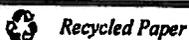
NOTICE OF VIOLATION: DEFICIENT TREATMENT AND DISPOSAL CAPACITY REPORT FOR THE ADELANTO PUBLIC UTILITY AUTHORITY WASTEWATER TREATMENT PLANT, CEASE AND DESIST ORDER NO. R6V-2011-15A1, ADELANTO, SAN BERNARDINO COUNTY, WDID NO. 6B369805001

Lahontan Regional Water Quality Control Board (Water Board) staff has reviewed the August, 2011 "Percolation Pond Capacity Analysis" report that was prepared by your consultant, Larry Walker Associates. The report was submitted on August 1, 2011 in response to Order No. II.B. of Cease and Desist Order No. R6V-2011-15A1, adopted by the Water Board on May 11, 2011 and issued to the Adelanto Public Utility Authority (APUA).

Water Board staff understands that the APUA recently hired Larry Walker Associates to assist it with the APUA's efforts to return to compliance. Water Board staff would like to acknowledge the significant improvement in communications that has occurred during the short time period Larry Walker Associates has been involved with APUA. Also, Water Board staff has observed greater progress made toward compliance as a result of Larry Walker Associates involvement. Nevertheless, the APUA received a strong message from the Water Board at its May, 2011 meeting to comply with the requirements issued. As a result, APUA should have been working on resolving compliance issues immediately following the May meeting. Instead, more than a month passed before hiring Larry Walker Associates, who then had to start from scratch in addressing all outstanding compliance issues.

The purpose of Order No. II.B of the Cease and Desist Order is to provide the Water Board adequate information: (1) demonstrating APUA has sufficient disposal capacity to accommodate current and future increases in flows; (2) describing in detail the status of APUA's efforts/actions to provide additional treatment capacity, including a schedule of each future action to be taken and a schedule when each specific additional treatment capacity element will be fully functional; and (3) identifying the amount of flow that can be consistently diverted away from APUA's facility and under what conditions.

California Environmental Protection Agency



The August 1, 2011 report is deficient and does not provide the information required. Order No. II.B. specifically requires APUA to submit a report that:

1. *Quantifies the percolation capacity of ponds 1 – 5, on an individual basis. This shall be based on a water balance accounting for evaporation, after demonstrating that steady-state conditions are reached and after completion of any improvements that the Discharger believes would support its claim that it has sufficient capacity to provide disposal capacity to accommodate current and increased flows. The Discharger may also estimate the quantifiable benefit of other actions that it intends to take and when it will have such actions completed.*
2. *Provides a detailed status report on its efforts to provide additional treatment capacity at its Facility (Micro-media or equivalent) including actions it has taken and plans to implement, a schedule of each future action and when specific additional capacity (in million gallons per day) is expected to be fully functional.*
3. *Provides a detailed description of the amount of flow it can consistently divert to VVWRA, the conditions under which this can occur, all measures put in place to ensure that whatever flow is purported can be maintained. This must be documented by actual diversions.*

The following is a description of deficiencies that must be adequately addressed before APUA's report intended to comply with the Cease and Desist Order Item II.B will be deemed acceptable.

1. Inadequate Information on Steady State Conditions.
The report relies on data provided from the March 1 and March 31, 2011, infiltration rate tests. Those test results report infiltration rates varying from 5 to 320 gallons per square foot per day. The test results were not conducted in the locations of any of the currently-active percolation ponds (Pond Nos. 1 through 5). Therefore, you did not provide the required percolation capacity of the ponds on an individual basis, as required by the Cease and Desist Order.

Furthermore, the test procedures for conducting the tests do not conform to standard percolation test procedures. Even though the report uses conservative infiltration rate estimates ranging from 5 to 9 gallons per square foot per day, the rates are still estimates and unsubstantiated. This may be of particular concern for Percolation Pond Nos. 1 through 4, which may be experiencing clogging conditions.

The nonconformity with standard percolation test procedures was documented in the Water Board's May 5, 2011 Notice of Violation (NOV, enclosed). The NOV questioned the validity of the test results and noted the difficulty in determining how the limited results apply throughout the existing and future wastewater disposal

sites. Without addressing the issues raised in the NOV, it is premature to claim that steady-state conditions have been demonstrated in all five percolation ponds.

The report indicates that additional percolation test data was conducted during the week of July 25, 2011. However, neither the results nor a description of the testing procedures used for the analyses were provided in the report.

Specifically, the report (1) does not identify which standard percolation testing method was used, (2) does not provide sufficient test monitoring data, (3) does not identify assumptions used for determining final percolation rates, (4) does not provide existing percolation capacity, and (5) is not based on a sufficient number of test data points within each area, especially given the variability in percolation rates provided over a relatively small area.

2. Inadequate Water Balance.

Although the water balance evaluation includes precipitation data, the evaluation considers only precipitation that falls directly onto the ponds. However, APUA's December 27, 2010 weekly status report notes that heavy rains cause, "...a substantial increase in flows to the plant." Presumably, this is a result of infiltration/inflow. Infiltration/inflow during normal weather years is likely considered in the average daily plant influent data. But there is no allowance for increasing the infiltration/inflow rates during higher than normal wet weather years in the corresponding water balance modeling evaluations.

Also, the modeling analyses for the water balance evaluations rely upon two questionable assumptions. The first assumption is that Pond Nos. 2 through 5 are empty at the beginning of the year. It is unclear what this assumption is based upon, and recent experience with the percolation ponds does not support such an assumption. In order to accurately evaluate plant disposal capacity, the model should consider a realistic situation that the ponds are not empty at the beginning of the evaluation period.

The second assumption is that the ponds are operated and maintained properly. However, prior correspondence from APUA provided in the Water Board's evidentiary hearing packets indicates that the ponds have never been maintained apart from the recent dredging operation. It would be appropriate to provide a description of the activities needed to adequately maintain all percolation ponds along with a maintenance log for when such activities were completed and are scheduled through 2016.

3. Inadequate Influent Flow Projections.

The report relies on the April 30, 2011 "Wastewater Disposal Facilities Work Plan" to estimate plant influent flows of 2.80 million gallons per day (MGD) by 2016. However, the Water Board's May 5, 2011 NOV stated that this flow projection is deficient because it does not adequately estimate flows through 2016 based on known permitted projects and projected growth. While the projected population

growth rate may result in wastewater flows of 2.8 MGD by 2016, current permitted projects may result in an additional wastewater flow of 0.5 MGD. This additional 0.5 MGD was not considered in determining the wastewater disposal capacity for future flows.

4. Inadequate Capacity Expansion Detail.

The capital improvement schedule provided in the report only provides information related to the construction of the equalization basin. The report states that the date to begin operation of the equalization basin is dependent upon initiating operation of the Micro-Media units. However, no information is provided for the tasks necessary to initiate operation of the Micro-Media units and for dates associated with that task. The Water Board's Cease and Desist Order specifically required detailed information on the actions taken and the plans to implement additional treatment capacity as well as a date for when additional capacity is expected to be fully functional at APUA's facility. The report does not comply with the Board's Order.

5. Inadequate Guarantee for Maintaining Diversion Flow to VWWRA.

The report notes that a contract has been signed to divert up to 1.3 MGD to the Victor Valley Wastewater Reclamation Authority (VWWRA) treatment plant. The contract expires on May 31, 2014. The report provides a table of average daily flow diversions from July 2010 through July 2011.

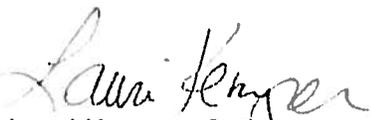
However, the contract notes that VWWRA may terminate all or a portion of the diversion flows due to various circumstances including those instances where continued diversion would cause VWWRA to violate various permit requirements or legal obligations. Such an occurrence occurred in December 2010, when the diversion was halted (contributing to the overflow of the percolation ponds). This suspension of diversion flows is not noted in the table of average daily flow diversions from July 2010 through July 2011 that was provided in the report.

The Water Board's Cease and Desist Order specifically required detailed information on all measures the APUA has put in place to ensure that the purported flow diversions can be maintained. No such information is provided and report does not comply with the Board's Order.

Water Board staff raised these issues to you in its August 31 and September 1, 2011 electronic mail correspondence. Water Board staff strongly encourages APUA to submit a revised report addressing the issues discussed above as soon as possible. Water Board staff is continuing to evaluate the Authority's response to the Cease and Desist Order and overall lack of compliance with this and other Water Board Orders. Continued non-compliance with the Cease and Desist Order will result in additional enforcement action, which may include assessing administrative civil liabilities and/or referral to the Attorney General of the State of California for injunctive relief or civil liability. The Water Board may impose administrative civil liability up to \$5,000 per day per violation, or \$10 per gallon discharged, for violating the CDO and/or the underlying

Waste Discharge Requirements pursuant to California Water Code section 13350. APUA may be subject to an additional \$1,000 per day per violation for failure to furnish technical reports pursuant to California Water Code section 13268. The potential liability the Water Board is authorized to assess against the Authority continues to increase with each day of non-compliance. The Water Board reserves its right to take any further enforcement action authorized by law.

Please contact Eric Taxer at (530) 542-5434, or Scott Ferguson at (530) 542-5432 if you have any questions regarding this matter.



Lauri Kemper, P.E.
Assistant Executive Officer

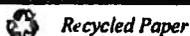
Enclosure: May 5, 2011 Notice of Violation

Cc (w/enc): Regional Board Members
Adelanto City Council
D. James Hart, Ph.D., City Manager/City of Adelanto
Todd Liftin, Attorney/City of Adelanto
Gorman Lau, Larry Walker Associates, 2151 Alessandro Drive, Suite 100,
Ventura, CA 93001

cc (email w/encl): Terri S. Williams/San Bernardino County Environmental Health
Services, Land Use Protection Program
Harold J. Singer/Lahontan Regional Water Quality Control Board
Keith Elliott/Lahontan Regional Water Quality Control Board
John Morales/Lahontan Regional Water Quality Control Board
Eric Taxer/Lahontan Regional Water Quality Control Board
Laura Drabandt/State Water Resources Control Board, Office of
Enforcement
Kim Niemeyer/State Water Resources Control Board, Office of
Chief Counsel

File Under SLT Office-WDID No. 6B369805001 (With Eric)
File Under VVL Office-WDID No. 6B369805001

California Environmental Protection Agency





California Regional Water Quality Control Board
Lahontan Region



Linda S. Adams
Acting Secretary for
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
(530) 542-5400 • Fax (530) 544-2271
www.waterboards.ca.gov/lahontan

Edmund G. Brown Jr.
Governor

May 5, 2011

John Sponsler, Director
Adelanto Public Utility Authority
11600 Air Expressway
Adelanto, CA 92301
jsponsler@ci.adelanto.ca.us

**NOTICE OF VIOLATION: DEFICIENT WASTEWATER DISPOSAL FACILITIES
WORK PLAN FOR THE ADELANTO PUBLIC UTILITY AUTHORITY WASTEWATER
TREATMENT PLANT, CEASE AND DESIST ORDER NO. R6V-2011-15, ADELANTO,
SAN BERNARDINO COUNTY, WDIID NO. 6B369805001**

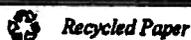
Lahontan Regional Water Quality Control Board (Water Board) staff has reviewed the Wastewater Disposal Facilities Work Plan (work plan) that was submitted by the Adelanto City Engineer, Wilson So of So and Associates Engineers Inc., on May 2, 2011. The work plan was submitted in response to Order No. I.D. of Cease and Desist Order No. R6V-2011-15, adopted by the Water Board on March 10, 2011 and issued to the Adelanto Public Utility Authority (APUA).

The purpose of Order No. I.D. of the Cease and Desist Order is to provide the Water Board with a fully designed plan to dispose all wastewater generated from the community of Adelanto at least through the year 2016. The work plan is to include all appropriate supporting information to demonstrate APUA will be able to adequately and safely provide wastewater disposal capacity through 2016. APUA's current work plan is deficient and does not provide the information required.

Order No. I.D. specifically requires APUA to submit:

- i. Final design plans for wastewater disposal facilities that can adequately dispose of all Facility wastewater flows projected through at least December 31, 2016. The final design plans shall include all design parameters and specifications. The final design plans shall include all supporting technical information (e.g., flow projections and supporting documentation; disposal site(s) assessments/characterizations/data; calculations and/or modeling results, including all assumptions) used to demonstrate that the wastewater disposal facilities will have adequate capacity for all Facility wastewater flows projected through at least December 31, 2016. The final design plans shall also identify final disposal locations and stabilization measures for all currently stockpiled

California Environmental Protection Agency



excavated soil from Pond No. 4, and any additional soils excavated during construction of additional wastewater disposal facilities. The final design plans are to be stamped and signed by a California Registered Professional Engineer pursuant to California Business and Professions Code section 6735.

- ii. A project schedule, including, but not limited to, completion dates for contracts, CEQA process (e.g., draft CEQA document, public comment period, final CEQA document approval, Notice of Determination submission, end of appeal period), permits, and construction period.

The following is a description of deficiencies that must be adequately addressed before APUA's Wastewater Disposal Facilities Work Plan will be deemed acceptable.

1. Flow Projections Through 2016.

The information provided in the work plan projects total wastewater flow of 2.8 million gallons per day (MGD) through 2016 based upon a connection of 606 equivalent dwelling units (EDU's) per year. It cross-references a report that was submitted to the Water Board in 2007 for obtaining supporting documentation. Page 221 of APUA's January 27, 2011 evidence package states that an EDU is equivalent to 200 gallons per day.

Current wastewater flows generated by the community of Adelanto are approximately 2.3 MGD (based on April 15, 2011 quarterly self monitoring report submittal). Using an increase of 606 EDU's per year for the next five years estimated 2016 flows are 2.9 MGD, not 2.8 MGD.

Pages 7 and 8 of APUA's January 27, 2011 evidence submittal identifies four major projects that are currently permitted and anticipated to be constructed in the immediate future. These include 100 homes by D. R. Horton (100 EDU's), a 3,000-bed San Bernardino County prison (Water Board staff estimates this to provide a minimum of 2,000 EDU's), Super Target Department store (Water Board staff estimates this to provide a minimum of 10 EDU's), and a Geo Prison Expansion (Water Board staff estimates this to provide a minimum of 500 EDU's). At a minimum, 2,400 EDUs are anticipated in the very near future (roughly 0.5 MGD). If you also include the expected population growth of approximately 0.6 MGD, a total increase of 1.1 MGD can be expected over the next five years, not the APUA work plan estimate of 0.5 MGD increase over five years.

Current flow projections as stated in the work plan are deficient because they do not adequately estimate flows through 2016 based on known permitted projects and projected growth.

2. Disposal Site Assessment/Characterization/Data, Calculations and/or Modeling Results, with Assumptions.

Two soils investigation reports (dated March 1 and March 31, 2011) prepared by

California Environmental Protection Agency



your consultant, LOR Geotechnical Group, are provided in the work plan.

The March 31, 2011 letter report estimates a percolation rate of five gallons per square foot per day. It indicates testing was conducted in the area proposed for Percolation Pond Nos. 7A and 6B. No supporting documentation is provided (e.g., test procedures, test locations, soil classifications encountered, etc.).

The March 1, 2011 letter report indicates percolation testing was conducted in the area proposed for Percolation Pond Nos. 8A and 9B (one test for each area). Presoaking the test area used only 10 gallons of water which infiltrated rapidly. Testing consisted of using a total of 5 gallons of water and measuring the time interval for the volume to infiltrate. Percolation rates of 450 and 995 gallons per square foot per day were recorded, and the report identifies an absorption rate of 320 gallons per square foot per day without providing a basis for how the absorption rate was derived from the monitoring data. Neither letter report identifies the testing method/protocol used making it difficult to evaluate the validity, and to determine how the limited results apply to the rest of the land APUA anticipates constructing new percolation ponds.

Using the U.S. Environmental Protection Agency's Falling Head Percolation Test Procedure as an example, a minimum of three tests are performed for each area, test holes are pre-soaked for a four-hour minimum period regardless of water volume, and percolation test measurements are read at 30-minute intervals until two successive and consistent water drops are recorded.

Another challenge in evaluating the work plan and its conclusions is that the work plan does not provide percolation test data for Percolation Pond No. 5, which is currently being constructed. The work plan estimates a percolation rate of five gallons per square foot per day for Pond No. 5 based upon testing conducted within other proposed pond areas. This is a highly unsubstantiated assumption given the high variability in percolation rates for the testing sites located in proposed Percolation Pond Nos. 6B, 7A, 8A and 9B and the lack of information regarding testing methods discussed above.

Finally, there is no discussion of the percolation capacity of the existing percolation ponds. The work plan discusses how having new percolation ponds coming on line will allow APUA to properly maintain its existing ponds. APUA assumes that there will be some unspecified increase in percolation capacity for the existing percolation ponds following future maintenance activities, but there is no current or future capacity information provided in the work plan for the existing percolation ponds.

The work plan includes some brief calculations using the percolation rate of 320 gallons per square foot per day and then using the lower percolation rate of 5 gallons per square foot per day to develop a percolation capacity range of 0.675 MGD to 43.2 MGD. Following the calculations, the work plans states, "APUA

expects that the new percolation ponds, with appropriate in-service rotation programs, will provide the Agency up to 2 plus million gallons per day of additional percolation capacity." This statement is shortly followed up with APUA stating, "With the addition of Ponds #5 and #9, the APUA is confident that it has adequate capacity for sufficient effluent disposal capacity to meet the needs through December 31, 2016, and likely longer." It is unclear where the "2 plus million gallons per day of additional percolation capacity" comes from and where the APUA's confidence comes from. Based upon Water Board staff's review of the work plan, APUA's conclusions are based upon an unclear analysis of very limited data gathered with unspecified methodologies across a very limited testing area.

The portion of the work plan addressing disposal site characterization and analyzing existing and future disposal capacity is deficient because it fails to demonstrate that the wastewater disposal facilities will have adequate capacity for all Facility wastewater flows projected through at least December 31, 2016. The work plan 1) does not identify which standard percolation testing method was used, 2) does not provide sufficient test monitoring data, 3) does not identify assumptions used for determining final percolation rates, 4) does not provide existing percolation capacity, and 5) is not based on a sufficient number of test data points within each area, especially given the variability in percolation rates provided over a relatively small area. The disposal capacity analysis provided in the work plan is unacceptable.

(Additional disposal capacity that may be handled by constructing Proposed Percolation Pond No. 9 is discussed in Item No. 5, below.)

3. Excavated Soil Disposal Locations and Stabilization Measures.

The work plan states that all excavated soils from constructing Percolation Pond Nos. 5 and 9 (includes soils excavated from constructing Percolation Pond No. 4 currently stockpiled on the Proposed Percolation Pond No. 5 site) will be stockpiled at the locations of Proposed Percolation Pond Nos. 6, 7, and 8. Stabilization will consist of light compaction and installation of a fiber roll at the base of each stockpile. The work plan indicates the stockpiled soils will not be removed until some time in 2012.

The work plan is deficient because it does not provide the quantity of soil, the slope of the stockpiles, nor the height of the stockpiles. This information is necessary for determining whether a single row of fiber rolls, as is proposed by APUA, is an adequate temporary stockpile management BMP, or if additional rows of fiber rolls or a combination of temporary BMPs will be necessary to prevent sediment-laden storm water discharges from occurring. Fiber rolls are also only intended as a temporary stabilization measure. If the stockpiles are to remain for more than a construction season, permanent stabilization measures must be identified and implemented. (See California Stormwater Quality Association's Best Management Practices Handbooks.) Finally, the work plan fails to provide an inspection and maintenance schedule to ensure any selected stabilization/treatment measure will

be maintained, especially after a storm event.

4. Final Design Plans.

The work plan provided reduced-size design plans making it somewhat difficult to review. The plans appear to indicate that Percolation Pond No. 5 will be installed in its entirety below grade, and that Percolation Pond No. 9 will be installed primarily below grade but will also have constructed embankments above existing grade around portions of its perimeter, up to two feet in height. All interior pond slopes for both ponds are 2:1 (Horizontal:Vertical).

Water Board staff is concerned that the proposed interior slope may fail (sloughing, erosion, etc.) due to its proposed slope. The Metcalf & Eddy Wastewater Engineering reference recommends interior slopes of 3:1 to 5:1 depending upon sidewall material and size of ponds.

The Bureau of Land Management Manual recommends the use of rip rap or other stabilization measures on interior slopes to prevent erosion from wind/wave action and from stormwater runoff from the crest of the pond embankments. Such design detail is not provided in the work plan nor is the technical basis for selecting a 2:1 slope for the interior pond slopes.

With respect to constructed berms, the design details in the work plan do not provide any information to ensure embankment stability above existing grade. This information was required in prior enforcement orders (Cleanup and Abatement Order No. R6V-2010-0054, subsequent Notices of Violations for the Spill Contingency Management Plan), and it includes information on compaction specifications, soils gradation, soil moisture, embankment foundation specifications and preparation, prevention of piping failure through constructed embankments, and drainage from embankment crest.

The work plan does not provide any design detail for providing maintenance access to either of the proposed percolation ponds (such as an access ramp). The design plans do not provide information for controlling any potential overflow from the proposed ponds (such as an emergency spillway). Furthermore, there is no design detail provided for loosening soils at the base of the proposed ponds that become compacted during pond construction to ensure percolation rates will be maintained.

The work plan is deficient because the design plans do not include the information identified above. This information is necessary to ensure adequate construction of wastewater disposal ponds that will function as designed. This information is also necessary to ensure that the wastewater disposal ponds will not fail under normal conditions nor fail under high-pond level conditions when minimum freeboard levels may become compromised.

5. Project Schedule.

The work plan identifies that Percolation Pond No. 5 is currently being constructed in accordance with existing permits. The construction contract requires completion by May 30, 2011. The schedule does not indicate when Percolation Pond No. 5 will be placed in use once it is completed.

The work plan identifies that Percolation Pond No. 4 will be restored by October 15, 2011. However, this is dependent upon completion and operation of Percolation Pond No. 9 by July, 2011. The construction and operation schedule for Percolation Pond No. 9 is largely based upon the APUA's emergency Notice of Exemption that was filed March 18, 2011, pursuant to the California Environmental Quality Act (CEQA). Water Board staff cannot rely on APUA's emergency exemption finding for permitting use of this pond. Operating Percolation Pond No. 9 does not legally qualify as an emergency. See the Water Board's Response to Report of Waste Discharge Application dated May 4, 2011.

Furthermore, the Water Board staff will need to ensure compliance with the requirements of California Code of Regulations, Title 27, Waste Disposal Sites and Surface Impoundments. Such compliance requires an affirmative determination from APUA that its percolation ponds have not and will not adversely impact ground water. Such an affirmative demonstration cannot be based upon a Notice of Exemption and requires further groundwater investigation and analysis by APUA. (Again, see the Water Board's Response to Report of Waste Discharge Application dated May 4, 2011.)

The work plan's project schedule inadequately identifies the requirements prescribed by CEQA and subsequent permitting time frames. Subsequently, the overall schedule for providing adequate wastewater disposal capacity is inaccurate and incomplete.

6. Compliance with Prior Enforcement.

While not a required element prescribed by the Cease and Desist Order, the work plan includes information for complying with prior enforcement orders. While Water Board staff recognizes the statements made in the work plan that APUA continues to work toward compliance, the information provided still does not provide specific details and a schedule for ultimately complying with all outstanding Water Board enforcement orders, including providing adequate wastewater treatment capacity.

Water Board staff strongly encourages APUA to submit a revised work plan addressing the issues above as soon as possible. Water Board staff is continuing to evaluate the Authority's response to the Cease and Desist Order and overall lack of compliance with this and other Water Board Orders. Continued non-compliance with the Cease and Desist Order will result in additional enforcement action, which may include assessing administrative civil liabilities. The Water Board may impose administrative civil liability up to \$5,000 for each violation each day pursuant to California Water Code section

13350(e). Failure to comply with the Cease and Desist Order may subject APUA to up to \$1,000 for each violation each day pursuant to California Water Code section 13268. The potential liability the Water Board is authorized to assess against the Authority continues to increase with each day of non-compliance. The Water Board reserves its right to take any further enforcement action authorized by law.

Please contact Eric Taxer at (530) 542-5434, or Scott Ferguson at (530) 542-5432 if you have any questions regarding this matter.



Lauri Kemper, P.E.
Assistant Executive Officer

cc: Water Board Members
Adelanto City Council
D. James Hart, Ph.D., City Manager/City of Adelanto
Wilson So/So & Associates Engineers, Inc.
Todd Liftin, Attorney/City of Adelanto

Cc (email only): Terri S. Williams/San Bernardino County Environmental Health Services, Land Use Protection Program
Harold J. Singer/Lahontan Regional Water Quality Control Board
Keith Elliott/Lahontan Regional Water Quality Control Board
John Morales/Lahontan Regional Water Quality Control Board
Eric Taxer/Lahontan Regional Water Quality Control Board
Laura Drabandt/State Water Resources Control Board, Office of Enforcement
Kim Niemeyer/State Water Resources Control Board, Office of Chief Counsel

File: U/Enforcement and Special Projects Unit/ Adelanto WWTF, Wastewater Disposal Facilities Work Plan, 2011-05-04 EJT
File Under: SLT Office-WDID No. 6B369805001 (With Eric)
File Under: VWL Office-WDID No. 6B369805001

ENCLOSURE 6



Cari Thomas
Mayor

Ed Camargo
Mayor Pro Tem

Steven R. Baisden
Council Member

Trinidad Perez
Council Member

Charles S. Valvo
Council Member

D. James Hart, Ph.D.
City Manager

September 15, 2011

California Regional Water Quality Control Board, Lahontan Region
Attn: Eric Taxer
2501 South Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

California Regional Water Quality Control Board, Lahontan Region
Attn: John Morales
14440 Civic Drive, Suite 200
Victorville, CA 92392

**RE: Revised Restoration Plan for the Adelanto Domestic Wastewater Treatment Facility
Percolation Pond No. 4**

The Adelanto Public Utility Authority (APUA) is submitting this revised report and accompanying construction plans and review to demonstrate APUA's ongoing efforts to restore conditions at Percolation Pond No. 4 at the Adelanto Domestic Wastewater Treatment Facility. Restoring the integrity of Percolation Pond No. 4 is needed following alterations conducted in November/December 2010 to increase the percolation capability of this pond. This revised report is being submitted to comply with Requirement I.B of Cease and Desist Order No. R6V-2011-15A adopted by the Lahontan Regional Water Quality Control Board's on May 11, 2011.

Certification: "I certify under penalty of perjury under the laws of the State of California that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted, the document and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

If you have any questions, or need further information, please contact me at (760) 246-2300 ext. 3006, or at jsponsler@ci.adelanto.ca.us.

Sincerely,

John Sponsler
APUA Director

cc: Betsy Elzufon, Larry Walker Associates

Enclosure: Revised Restoration Plan for Percolation Pond No. 4 and Attachments

Adelanto City Hall ~ 11600 Air Expressway, Adelanto, CA 92301 ~ (760) 246-2300 ~ Fax (760) 246-8421

SEPTEMBER 2011

Adelanto Public Utility Authority

Restoration Plan for the Adelanto Domestic Wastewater Treatment Facility Percolation Pond No. 4

Revised September 2011

submitted to:

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

prepared by:

LARRY WALKER ASSOCIATES



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Attachments: *Infiltration Testing and Slope Stability Analysis Results.* LOR Geotechnical Group, Inc. August 1, 2011.

Drawings for Construction for Percolation Pond No. 4 Restoration Plan. So & Associates Engineers, Inc. August 24, 2011.

Letter confirming review of Drawings for Construction for Percolation Pond No. 4 Restoration Plan. Harvey R. Gobas, Interim City Engineer, September 15, 2011.

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seepage trench were backfilled with previously stockpiled clean soils, one trench at a time. The soil had been removed from Percolation Pond No. 4 during trench construction and stockpiled on the site of Percolation Pond No. 5.

In November/December 2010 fill was added onto the pond walls to increase freeboard. The raised embankments were removed in mid-August 2011. Further work is necessary to raise the pond access roads by 1.5 feet to match the grade of nearby Percolation Pond No. 5. This adjustment does not affect the effective water depth and pond capacity at Percolation Pond No. 4, it only increases the available freeboard. Existing hydraulic limitations imposed by the location of the influent piping allow for a maximum water level at 12 feet from the bottom of the pond. As noted in the 12" SD Pipe Outlet Detail on Sheet 4 of the attached set of plans, the resulting freeboard is 5.0 feet (the difference between the invert of the pipe and the top elevation of the pond).

Percolation Pond No. 4 was taken out of operation as soon as Percolation Pond No. 5 began operating at the end of May 2011. It took over three months for Percolation Pond No. 4 to dry sufficiently for restoration repair and maintenance activities to commence. In the meantime, APUA has completed the design plans for the restoration work and a construction contract was awarded to Roland Construction.

PLANNED WORK

APUA is currently addressing the remaining restoration issues of Percolation Pond No. 4. Planned restoration repair and maintenance activities are listed below and detailed in the attached set of drawings.

- Remove the center berm currently separating Pond 4-S and Pond 4-N (see Sheet 2 of attached drawings) to make Percolation Pond No. 4 into a single pond;
- Remove top 6" of sediment from the surface of the pond bottom and scarify the top 12" of soil;
- Install a maintenance access-ramp to permit proper compaction of the embankment slopes from the bottom up and to ease access for future maintenance;
- Raise the pond access road by 1.5 feet to match the grade of newly constructed Percolation Pond No. 5 (per construction drawings);
- Inspect the inlet piping to the pond and install additional grouted rip-rap plus a 2-inch stilling-well (for measuring pond water level);
- Perform infiltration testing and slope stability tests.

Other site-specific construction details to consider are noted below and in the attached set of plans.

- All existing ponds at the site, including Percolation Pond No. 4, are constructed with descending 2:1 horizontal to vertical internal slopes. The internal walls on these ponds are dug into alluvial materials and do not rise above ground level. There are no above-grade embankments (see cross-sectional drawings in the attached set of plans). APUA has retained LOR Geotechnical Group, Inc. (LOR Geotechnical) to perform percolation tests and slope stability tests for Percolation Pond No. 4. The tests will be conducted at

square feet of 6 mil plastic sheeting is kept on-site for this purpose. An earthquake may increase the sloshing waves, but such wave-action should be short-lived, thereby minimizing any resultant damage. All ADWWTF facilities will be inspected for damage after a major earthquake event and any necessary maintenance will be promptly initiated.

SCHEDULE

The seepage trenches were backfilled during the construction of Percolation Pond No. 5 in April/May 2011. Percolation Pond No. 4 was taken out of rotation for drying and maintenance on May 27, 2011. The raised embankments were removed in mid August 2011.

Design plans are complete and Roland Construction has been retained to complete the restoration. Work is scheduled to begin on September 15, 2011, with specific dates for completion of various restoration activities to be determined by the contractor. Infiltration testing and slope stability tests will be performed by LOR Geotechnical as soon as restoration activities are complete or possibly sooner, in coordination with construction activities at the pond. All restoration work is scheduled to be completed on or before October 15, 2011, as required by the Revised CDO.

**INFILTRATION TESTING AND
SLOPE STABILITY ANALYSIS RESULTS
ADELANTO WASTEWATER TREATMENT
PLANT PERCOLATION POND EXPANSION
ADELANTO, CALIFORNIA**

**PROJECT NO. 62349.42
AUGUST 1, 2011**

Prepared For:

City of Adelanto
P.O. Box 10
Adelanto, CA 92301

Attention: Mr. D. James Hart

August 1, 2011

City of Adelanto
P.O. Box 10
Adelanto, California 92301

Project No. 62349.42

Attention: Mr. D. James Hart

Subject: Infiltration Testing and Slope Stability Analysis Results, Adelanto Wastewater Treatment Plant Percolation Pond Expansion

Contained within this letter are the results of our infiltration testing and slope stability analysis for percolation pond numbers 3, 5, and 9. This report was prepared as outlined by Mr. Wilson So in an email dated July 20, 2011 and our Work Authorization Agreement dated July 20, 2011.

Infiltration Testing and Test Results

Prior to our arrival and subsequent testing, pond numbers 5 and 9 were created by cutting down into the existing soils. The soils encountered and tested at ponds 5 and 9 within the infiltration basin bottom elevations consisted of dry, medium dense, fine to course-grained sand. Pond number 3 was constructed in a similar fashion, however, this pond contained sludge materials and testing was not conducted.

A total of four infiltration tests were conducted within pond numbers 5 and 9 at the site, two tests within each of the two ponds. The locations of our tests were determined by information contained from Mr. Wilson So. A copy of a portion of the site plan provided is presented as Enclosure 1 and illustrates the test locations. As the ponds were previously constructed, the tests were conducted at the existing grade. An infiltration test hole was hand excavated to a diameter of 12 inches and to a depth of 12 inches at each of the four test locations. After removing loose soils from the sidewalls and bottom of the holes, a 6-inch diameter casing was installed within the center of each test hole and was driven a minimum 3 inches below the hole bottom*. The test holes were pre-saturated immediately after the casing was installed by filling both the inside and outside area of casing and maintaining a water level depth of approximately 10 to 12 inches.

*This liner was approximately 15 inches in height leaving approximately an 12-inch inner column for test purposes. Two inches of gravel was placed in the bottom of the test hole.

Approximately 5 gallons of water was used for pre-soaking the inner column and approximately 8 gallons of water was used for pre-soaking the outer column of the tests. The pre-soak for both was allowed to absorb over night. Testing was conducted the following day.

The testing procedure was as follows:

Both the inside and outside area of the casing in each test hole was filled with water and the drop in water level inside the casing for DRI-1, DRI-3, and DRI-4 was measured at 1 inch intervals. After each reading, both the inside and outside area of the casing in each test hole were refilled with a minimum of 4 readings tabulated. As the difference between the last two consecutive readings was 15 percent or less, no additional readings were necessary. See the attached Infiltration Test Data sheets, Enclosures 2 through 5, for the test information and measurements.

The infiltration rate is measured as the drop in water level compared to the permeability of the bottom surface area soils in the bottom of the test hole. If casing is not used, the water column in the test hole is allowed to seep into both the bottom and sidewalls of the hole, for which the drop in water level must be corrected and reduced for the volume of water seeping into the sidewall and for the diameter of the test hole. As described above, the tests described herein were conducted using a 6-inch diameter casing.

The test holes were found to have the following measured infiltration rates:

Infiltration Test No.	Infiltration Area	Infiltration Rate (inches/hour)
DRI-1	Pond No. 5, North Portion	60
DRI-2	Pond No. 5, South Portion	> 60
DRI-3	Pond No. 9, South Portion	> 60
DRI-4	Pond No. 9, North Portion	> 60

The test holes were found to have measured infiltration rates of 1,440 inches per day for test DRI-1 and greater than 1,440 inches per day for tests DRI-2, DRI-3, and DRI-4. The infiltration rates obtained were clear water rates. An appropriate factor of safety for siltation should be applied. This rate is considered to be applicable for pond number 3 as materials similar to those tested are anticipated to underlie this pond.

To ensure proper drainage of the infiltration system, the project civil engineer should provide measures to achieve a uniform distribution of the runoff across such. Also design measures, such as desilting chambers or equivalent, should be taken to prevent the build-up of fines (silts and clays) within the infiltration areas which can negatively impact the percolation capability of the system. In addition, a maintenance program, which should include the removal of fines from the infiltration system, is recommended for adequate long-term performance of the infrastructure.

Slope Stability Analysis

The slopes for pond numbers 5 and 9 consisted of approximately 14 foot tall, 2 horizontal to 1 vertical cut slopes exposing native materials which typically consisted of well graded sand with occasional, thin, discontinuous layers of silty sand and heavily calcified sandy silt. In-place density testing was conducted on the slope faces via the nuclear gauge test method (ASTM D 2922). The location of these tests is presented on Enclosure 1. Samples of the materials tested were obtained and returned to our geotechnical laboratory for determination of moisture content (ASTM D 2216) and laboratory compaction characteristics (ASTM D 1557). Based on our testing, the native materials which comprise the slopes are in a relatively dense state. The results of our in-place density and laboratory testing is presented on Enclosure 6.

In 2006, this firm conducted a preliminary soils investigation for previous site improvements within the eastern portion of the wastewater facility (LOR, 2006). This investigation included four exploratory borings and subsequent laboratory testing. The results contained within our previous report are considered to be representative of the materials present within the subject slope areas and were used in conjunction with the data obtained during this investigation for the slope stability analysis for this project.

As indicated previously, shear strength parameters of ϕ equal to 33 degrees and c equal to 150 psf were obtained during our 2006 investigation. A moist unit weight of 125 pcf obtained during this investigation was used. These parameters were then used for evaluation of the current slopes for pond numbers 5 and 9. These are 14-foot tall, 2:1 (horizontal:vertical) cut slope into alluvial materials.

The stability analyses was conducted to assess the surficial stability of the subject slopes and their stability under static and pseudostatic loading. The computer program PCSTABL5M (Van Aller, 1999) was used for the static and pseudostatic analysis. A

City of Adelanto
August 1, 2011

Project No. 62349.42

seismic coefficient of 0.15g was included in the pseudostatic calculations. The factors of safety obtained were 2.48 and 1.8, respectively.

The calculated factors of safety suggest adequate stability conditions for the subject slopes. Therefore, we believe that the slopes should be grossly stable to the proposed maximum inclination of 2:1 (horizontal:vertical) and heights of 14 feet. Complete results of the slope stability analysis are presented as Enclosures 7 through 18.

Since the native materials are susceptible to erosion by running water, measures should be provided to prevent surface water from flowing over slope faces. Raveling of the slope faces should be anticipated, especially after periods of rain. This is not anticipated to degrade the overall stability of the slopes, however, any such raveling will be a maintenance concern.

We trust this information is as requested. If you have any questions regarding this report, please do not hesitate to contact this office at your convenience.

Respectfully submitted,
LOR Geotechnical Group, Inc.


M. Kevin Osmun, CE 55116
Vice President



MKO:AAT/amp

Enclosures: Site Plan and Test Data

Distribution: Addressee (1) via email

REFERENCES

LOR Geotechnical Group, Inc., 2006, Preliminary Soils Investigation, Proposed Expansions to Existing Wastewater Reclamation Facility, Adelanto Public Utility Authority, Adelanto, California, Project No. 62349.1, dated November 30, 2006.

Van Aller, Harold, 1999, Stedwin Slope Stability Program, Copyright 1999.

LOR Geotechnical Group, Inc.

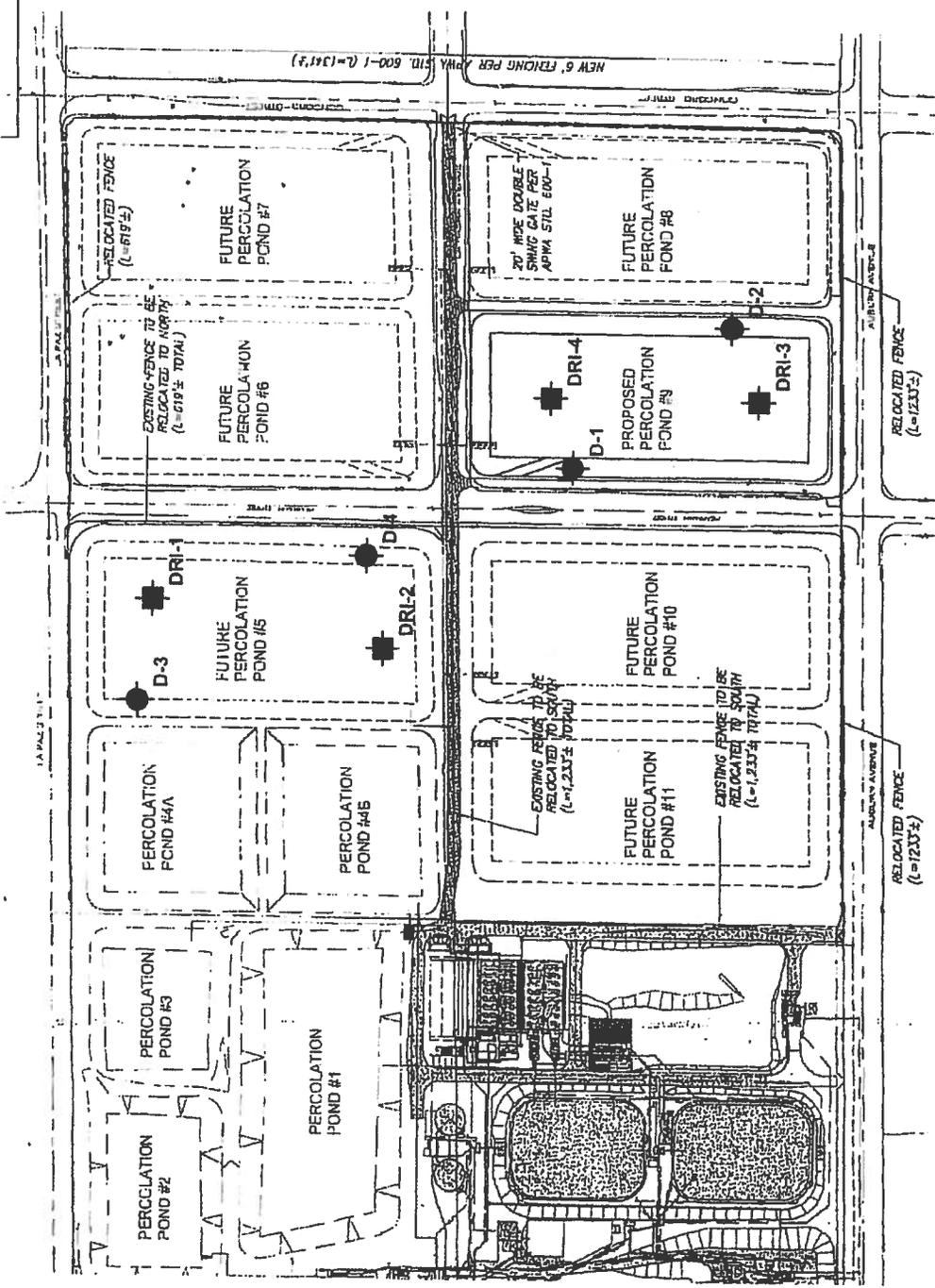
PROJECT:	WASTEWATER TREATMENT PLANT PERCOLATION FOR EXPANSION, ADRIANO, CALIFORNIA
CLIENT:	CITY OF ADRIANO
ENCLOSURE:	1
DATE:	JULY 2011
SCALE:	1" = 200'

SITE PLAN

Legend
(Locations Approximate)

Map Symbols

-  D-4 - Density Test
-  DRI-4 - Double Ring Infiltrometer Test



LEACH LINE PERCOLATION TEST DATA/CONTINUOUS PRE-SOAK

Project: Waterwater Facility Test Date: July 26, 2011
 Project No.: 62349.42 Test Hole No.: P-1
 Soil Classification: SW SM Test Hole Size: Outer: 12" Diameter x 12" Height
Inner: 6" Diameter x 12" Height
 Depth of Test Hole: 1.0' Date Excavated/Pre-Soaked: July 26, 2011

PRE-SOAK PERIOD

<u>Time Interval</u>		<u>Amount of Water Used</u>	
Start:	<u>8:37:00 AM</u>	<u>5</u>	Gal.
Stop:	<u>9:05:00 AM</u>		

TEST PERIOD

TIME	TIME INTERVALS (Minutes)	INITIAL WATER LEVEL (Inches)	FINAL WATER LEVEL (Inches)	IN WATER LEVEL (Inches)	INFILTRATION RATE (Min/Inch)
9:10:39 AM	1.03	8		1	1.0
9:11:41 AM			7		
9:12:02 AM	1.07	8		1	1.0
9:13:06 AM			7		
9:13:27 AM	1.1	8		1	1.0
9:14:33 AM			7		
9:15:05 AM	1.1	8		1	1.0
9:16:13 AM			7		

LEACH LINE PERCOLATION TEST DATA/CONTINUOUS PRE-SOAK

Project: Waterwater Facility Test Date: July 26, 2011
 Project No.: G2349.42 Test Hole No.: P-2
 Soil Classification: GW Test Hole Size: Outer: 12" Diameter x 12" Height
Inner: 6" Diameter x 12" Height
 Depth of Test Hole: 1.0' Date Excavated/Pre-Soaked: July 26, 2011

PRE-SOAK PERIOD

<u>Time Interval</u>	<u>Amount of Water Used</u>
Start: <u>8:45:00 AM</u>	<u>5</u> Gal.
Stop: <u>8:48:00 AM</u>	

TEST PERIOD					
TIME	TIME INTERVALS (Minutes)	INITIAL WATER LEVEL (Inches)	FINAL WATER LEVEL (Inches)	IN WATER LEVEL (Inches)	INFILTRATION RATE (Min/Inch)
8:49:43 AM	0.12	8		1	<1
8:49:50 AM			7		
8:50:07 AM	0.08	8		1	<1
8:50:14 AM			7		
8:50:26 AM	0.10	8		1	<1
8:50:32 AM			7		
8:50:43 AM	0.10	8		1	<1
8:50:49 AM			7		

LEACH LINE PERCOLATION TEST DATA/CONTINUOUS PRE-SOAK

Project: Waterwater Facility Test Date: July 26, 2011
 Project No.: G2349.42 Test Hole No.: P.3
 Soil Classification: SW Test Hole Size: Outer: 12" Diameter x 12" Height
Inner: 6" Diameter x 12" Height
 Depth of Test Hole: 1.0' Date Excavated/Pre-Soaked: July 26, 2011

PRE-SOAK PERIOD

<u>Time Interval</u>		<u>Amount of Water Used</u>	
Start:	<u>9:35:00 AM</u>	<u>5</u>	Gal.
Stop:	<u>9:40:00 AM</u>		

TEST PERIOD

TIME	TIME INTERVALS (Minutes)	INITIAL WATER LEVEL (Inches)	FINAL WATER LEVEL (Inches)	IN WATER LEVEL (Inches)	INFILTRATION RATE (Min/Inch)
9:42:14 AM	0.33	8		1	<1
9:42:34 AM			7		
9:43:12 AM	0.33	8		1	<1
9:43:32 AM			7		
9:43:46 AM	0.33	8		1	<1
9:44:06 AM			7		
9:44:27 AM	0.33	8		1	<1
9:44:47 AM			7		

LEACH LINE PERCOLATION TEST DATA/CONTINUOUS PRE SOAK

Project: Waterwater Facility Test Date: July 26, 2011
 Project No.: 62349 42 Test Hole No.: P-4
 Soil Classification: SW Test Hole Size: Outer: 12" Diameter x 12" Height
Inner: 6" Diameter x 12" Height
 Depth of Test Hole: 1.0' Date Excavated/Pre Soaked: July 26, 2011

PRE-SOAK PERIOD

<u>Time Interval</u>		<u>Amount of Water Used</u>	
Start:	<u>9:51:00 AM</u>	<u>5</u>	Gal.
Stop:	<u>9:57:00 AM</u>		

TEST PERIOD					
TIME	TIME INTERVALS (Minutes)	INITIAL WATER LEVEL (Inches)	FINAL WATER LEVEL (Inches)	IN WATER LEVEL (Inches)	INFILTRATION RATE (Min/Inch)
9:57:39 AM	0.22	8		1	<1
9:57:52 AM			7		
9:58:17 AM	0.2	8		1	<1
9:58:29 AM			7		
9:58:38 AM	0.2	8		1	<1
9:58:50 AM			7		
9:59:01 AM	0.2	8		1	<1
9:59:13 AM			7		

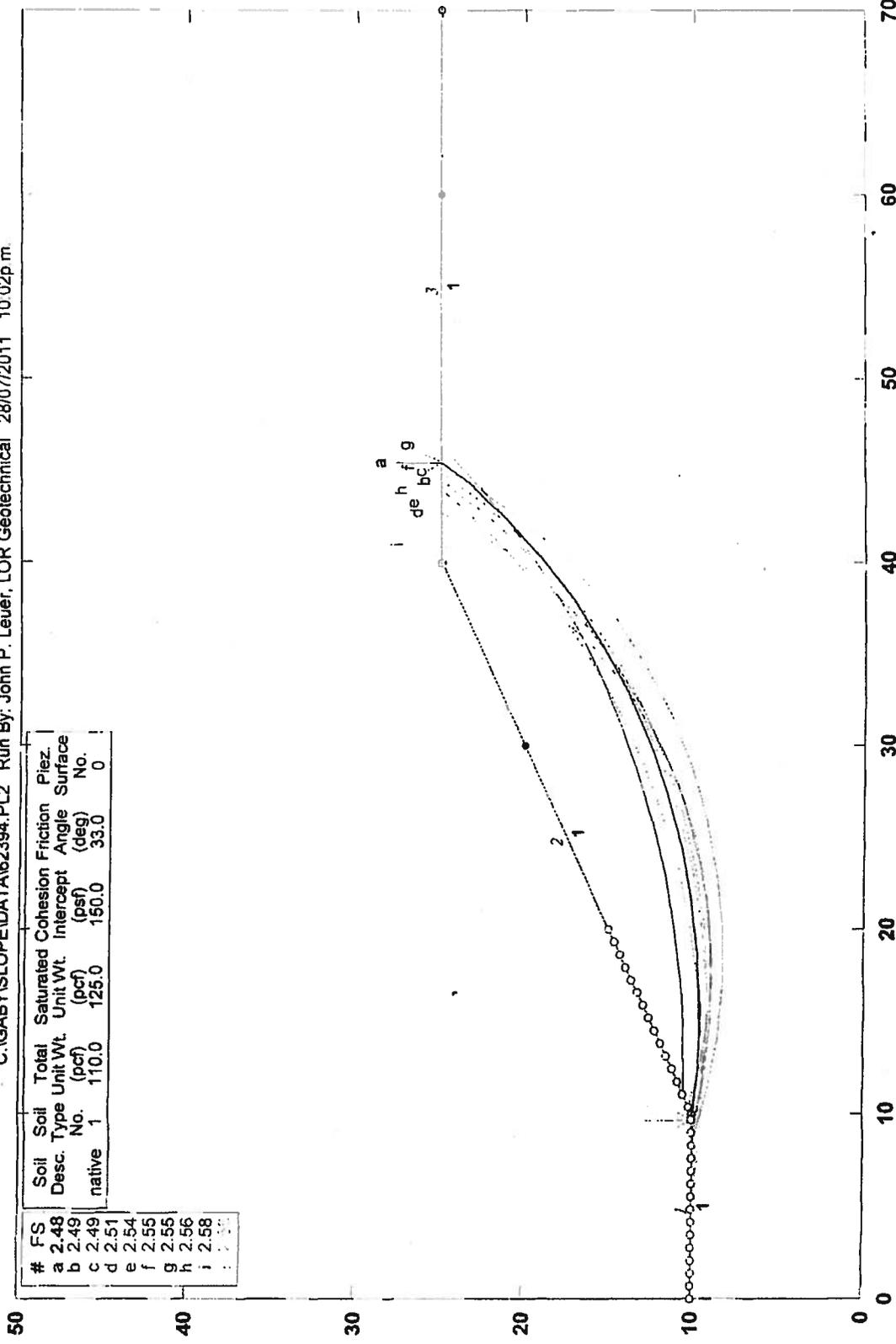
IN-PLACE DENSITY TEST RESULTS					
Test No.	Material Description U.S.C.S.	Wet Density (pcf)	Moisture Content (%)	Dry Density (pcf)	Relative Compaction (%)
D-1	(SW) Well Graded Sand	106.3	1.9	104.3	86
D-2	(SW) Well Graded Sand	107.9	4.5	103.3	85
D-3	(SM) Silty Sand	124.6	13.0	110.3	82
D-4	(SW) Well Graded Sand	110.0	0.2	109.7	91

LABORATORY COMPACTION				
Test No.	Sample Depth (feet)	Material Description (U.S.C.S.)	Maximum Dry Density (pcf)	Optimum Moisture Content (percent)
D-1	0.5 - 1.0	(SW) Well Graded Sand	121.0	5.5
D-3	0.0 - 1.0	(SM) Silty Sand	134.0	13.5

Enclosure 6

POND - HIGH DESERT

C:\GABY\SLOPE\DATA\62394.PL2 Run By: John P. Leuer, LOR Geotechnical 28/07/2011 10:02p.m.



PCSTABL5M/si FSmin=2.48
Safety Factors Are Calculated By The Modified Bishop Method



**** PCSTABL5M ****

by
 Purdue University
 --Slope Stability Analysis--
 Simplified Janbu, Simplified Bishop
 or Spencer's Method of Slices

Run Date: 28/07/2011
 Time of Run: 10:02p.m.
 Run By: John P. Leuer, LOR Geotechnical
 Input Data Filename: C:62394.IN
 Output Filename: C:62394.OUT
 Unit: ENGLISH
 Plotted Output Filename: C:62394.PLT

PROBLEM DESCRIPTION POND - HIGH DESERT

BOUNDARY COORDINATES

3 Top Boundaries
 3 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	.00	10.00	10.00	10.00	1
2	10.00	10.00	40.00	25.00	1
3	40.00	25.00	70.00	25.00	1

ISOTROPIC SOIL PARAMETERS

1 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param. (psf)	Pressure Constant (psf)	Piez. Surface No.
1	110.0	125.0	150.0	33.0	.00	.0	0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified. 900 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 30 Points Equally Spaced Along The Ground Surface Between X = .00 ft. and X = 20.00 ft. Each Surface Terminates Between X = 30.00 ft. and X = 60.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 ft.

3.00 ft. Line Segments Define Each Trial Failure Surface. Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Modified Bishop Method * * Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	9.66	10.00
2	12.63	9.65
3	15.63	9.54
4	18.63	9.67
5	21.61	10.05
6	24.54	10.67
7	27.42	11.53
8	30.21	12.61
9	32.91	13.92
10	35.49	15.45
11	37.94	17.18
12	40.24	19.11
13	42.38	21.21
14	44.34	23.49
15	45.44	25.00

Circle Center At X = 15.5 ; Y = 46.4 and Radius, 36.8
 *** 2.477 ***

Individual data on the 16 slices

Width (ft)	Weight (lbs)	Water	Water	Tie	Tie	Earthquake		Surcharge Load (lbs)
		Force Top (lbs)	Force Bot (lbs)	Force Norm (lbs)	Force Tan (lbs)	Force Hor (lbs)	Force Ver (lbs)	
.3	.8	.0	.0	.0	.0	.0	.0	.0
2.6	248.0	.0	.0	.0	.0	.0	.0	.0
3.0	816.2	.0	.0	.0	.0	.0	.0	.0
3.0	1305.8	.0	.0	.0	.0	.0	.0	.0
3.0	1701.6	.0	.0	.0	.0	.0	.0	.0
2.9	1994.5	.0	.0	.0	.0	.0	.0	.0
2.9	2179.7	.0	.0	.0	.0	.0	.0	.0
2.8	2256.8	.0	.0	.0	.0	.0	.0	.0
2.7	2229.6	.0	.0	.0	.0	.0	.0	.0
2.6	2105.9	.0	.0	.0	.0	.0	.0	.0
2.4	1897.6	.0	.0	.0	.0	.0	.0	.0
2.1	1457.7	.0	.0	.0	.0	.0	.0	.0
.2	160.5	.0	.0	.0	.0	.0	.0	.0
2.1	1137.0	.0	.0	.0	.0	.0	.0	.0
2.0	570.4	.0	.0	.0	.0	.0	.0	.0
1.1	91.6	.0	.0	.0	.0	.0	.0	.0

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.28	10.00
2	11.23	9.46
3	14.22	9.19
4	17.22	9.18
5	20.20	9.44
6	23.16	9.97
7	26.05	10.75
8	28.87	11.79
9	31.58	13.07
10	34.17	14.59
11	36.61	16.33
12	38.89	18.28
13	40.99	20.43
14	42.89	22.75
15	44.41	25.00

Circle Center At X = 15.8 ; Y = 42.9 and Radius, 33.8
 *** 2.486 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.28	10.00
2	11.22	9.43
3	14.20	9.11
4	17.20	9.07
5	20.20	9.29
6	23.16	9.78
7	26.06	10.53
8	28.89	11.53
9	31.62	12.78
10	34.22	14.27
11	36.68	15.98
12	38.98	17.91
13	41.10	20.03
14	43.03	22.34
15	44.74	24.80
16	44.85	25.00

Circle Center At X = 16.2 ; Y = 42.8 and Radius, 33.7
 *** 2.491 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
--------------	----------------	----------------

1	8.97	10.00
2	11.88	9.29
3	14.85	8.89
4	17.85	8.81
5	20.84	9.05
6	23.79	9.60
7	26.67	10.45
8	29.44	11.61
9	32.07	13.05
10	34.53	14.76
11	36.80	16.72
12	38.85	18.91
13	40.66	21.31
14	42.21	23.88
15	42.73	25.00

Circle Center At X = 17.1 ; Y = 37.2 and Radius, 28.4
 *** 2.506 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.41	11.21
2	15.38	10.79
3	18.38	10.67
4	21.38	10.87
5	24.34	11.36
6	27.23	12.16
7	30.02	13.25
8	32.69	14.62
9	35.21	16.25
10	37.55	18.13
11	39.68	20.24
12	41.59	22.55
13	43.22	25.00

Circle Center At X = 18.0 ; Y = 40.0 and Radius, 29.4
 *** 2.540 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.28	10.00
2	11.14	9.12
3	14.09	8.53
4	17.07	8.24
5	20.07	8.25
6	23.05	8.57
7	25.99	9.18
8	28.85	10.09
9	31.60	11.28
10	34.22	12.75
11	36.68	14.47
12	38.95	16.43
13	41.01	18.60
14	42.85	20.98
15	44.43	23.53
16	45.15	25.00

Circle Center At X = 18.4 ; Y = 37.8 and Radius, 29.6
 *** 2.548 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	11.03	10.52
2	14.03	10.51
3	17.03	10.70
4	20.00	11.08
5	22.95	11.65

6	25.85	12.41
7	28.70	13.36
8	31.48	14.48
9	34.18	15.78
10	36.80	17.26
11	39.31	18.90
12	41.71	20.69
13	44.00	22.64
14	46.15	24.73
15	46.40	25.00

Circle Center At X = 12.6 ; Y = 57.1 and Radius, 46.6
 *** 2.554 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	5.52	10.00
2	8.49	9.58
3	11.48	9.39
4	14.48	9.42
5	17.47	9.69
6	20.43	10.18
7	23.34	10.89
8	26.20	11.82
9	28.97	12.97
10	31.65	14.32
11	34.21	15.88
12	36.65	17.62
13	38.96	19.54
14	41.10	21.64
15	43.09	23.89
16	43.93	25.00

Circle Center At X = 12.5 ; Y = 48.7 and Radius, 39.4
 *** 2.555 ***

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	10.35	10.17
2	13.24	9.39
3	16.21	8.96
4	19.21	8.91
5	22.19	9.23
6	25.11	9.91
7	27.93	10.95
8	30.59	12.32
9	33.07	14.02
10	35.32	16.01
11	37.30	18.26
12	38.99	20.74
13	40.36	23.40
14	40.95	25.00

Circle Center At X = 18.1 ; Y = 33.1 and Radius, 24.2
 *** 2.575 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	7.59	10.00
2	10.43	9.03
3	13.35	8.35
4	16.32	7.96
5	19.32	7.88
6	22.31	8.10
7	25.27	8.61
8	28.16	9.42
9	30.95	10.52

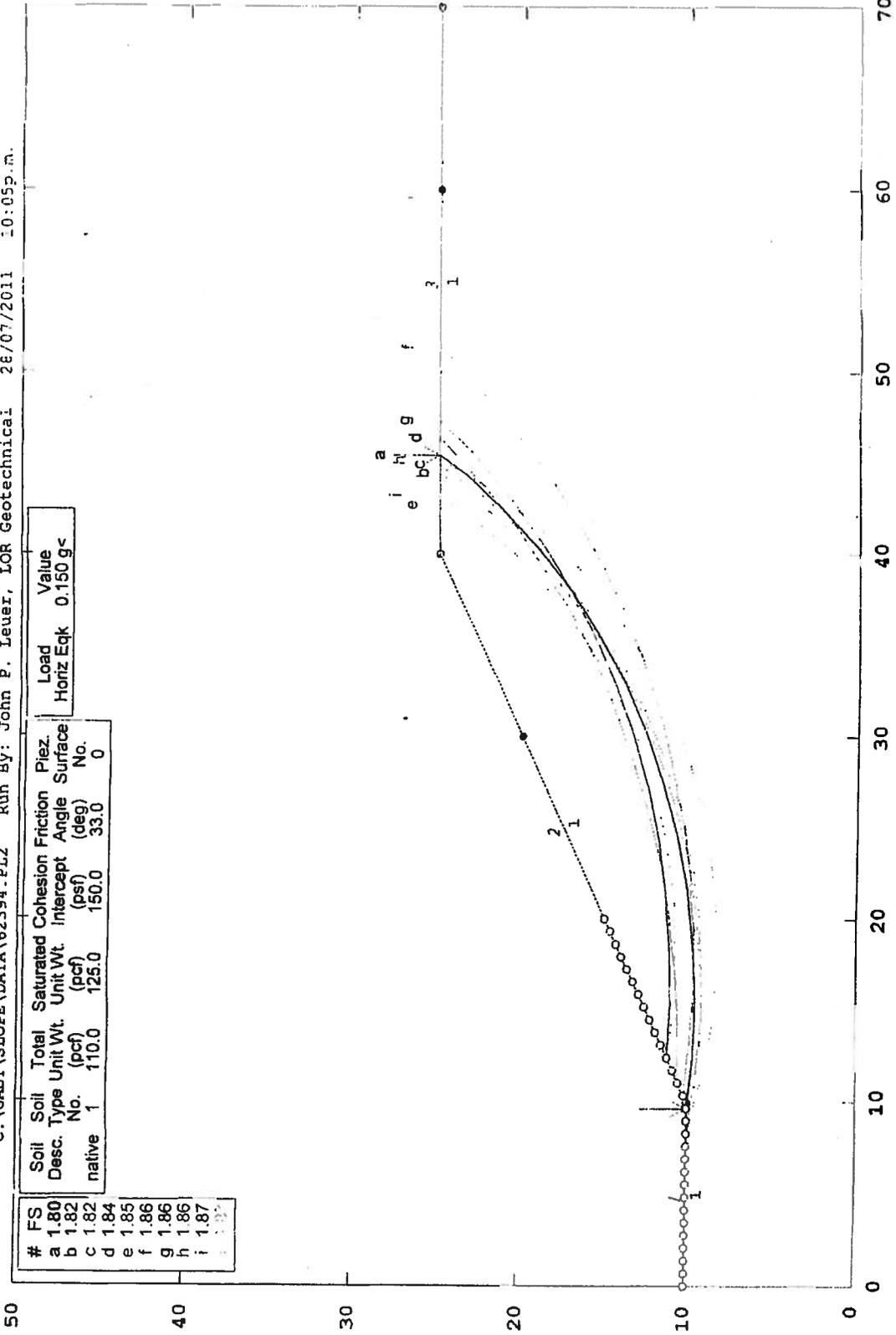
10	33.62	11.89
11	36.14	13.52
12	38.48	15.39
13	40.62	17.49
14	42.55	19.79
15	44.23	22.28
16	45.65	24.92
17	45.68	25.00

Circle Center At X = 18.7 ; Y = 37.8 and Radius, 29.9
*** 2.575 ***

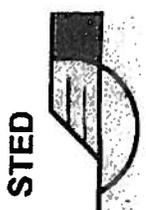
POND - HIGH DESERT

C:\GABY\SLOPE\DATA\62394.PL2 Run By: John P. Leuer, IOR Geotechnical 28/07/2011 10:05p.m.

#	FS	Soil Desc.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion (pcf)	Friction Angle (deg)	Piez. Surface No.	Load Horiz Eqk	Value
a	1.80	native	110.0	125.0	150.0	33.0	0		
b	1.82								0.150 g<
c	1.82								
d	1.84								
e	1.85								
f	1.86								
g	1.86								
h	1.86								
i	1.87								



PCSTABL5M/si FSmin=1.80
Safety Factors Are Calculated By The Modified Bishop Method



**** PCSTABL5M ****

by

Purdue University

--Slope Stability Analysis--

Simplified Janbu, Simplified Bishop

or Spencer's Method of Slices

Run Date: 28/07/2011
 Time of Run: 10:05p.m.
 Run By: John P. Leuer, LOR Geotechnical
 Input Data Filename: C:62394.IN
 Output Filename: C:62394.OUT
 Unit: ENGLISH
 Plotted Output Filename: C:62394.PLT

PROBLEM DESCRIPTION POND - HIGH DESERT

BOUNDARY COORDINATES

3 Top Boundaries

3 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	.00	10.00	10.00	10.00	1
2	10.00	10.00	40.00	25.00	1
3	40.00	25.00	70.00	25.00	1

ISOTROPIC SOIL PARAMETERS

1 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param. (psf)	Pressure Constant	Piez. Surface No.
1	110.0	125.0	150.0	33.0	.00	.0	0

A Horizontal Earthquake Loading Coefficient

Of .150 Has Been Assigned

A Vertical Earthquake Loading Coefficient

Of .000 Has Been Assigned

Cavitation Pressure = .0 (psf)

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

900 Trial Surfaces Have Been Generated.

30 Surfaces Initiate From Each Of 30 Points Equally Spaced

Along The Ground Surface Between X = .00 ft.

and X = 20.00 ft.

Each Surface Terminates Between X = 30.00 ft.

and X = 60.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation

At Which A Surface Extends Is Y = .00 ft.

3.00 ft. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial

Failure Surfaces Examined. They Are Ordered - Most Critical

First.

**** Safety Factors Are Calculated By The Modified Bishop Method ****

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	9.66	10.00
2	12.63	9.65
3	15.63	9.54
4	18.63	9.67
5	21.61	10.05
6	24.54	10.67
7	27.42	11.53
8	30.21	12.61
9	32.91	13.92
10	35.49	15.45
11	37.94	17.18
12	40.24	19.11
13	42.38	21.21

14 44.34 23.49
 15 45.44 25.00
 Circle Center At X = 15.5 ; Y = 46.4 and Radius, 36.8
 *** 1.802 ***

Individual data on the 16 slices

Width (ft)	Weight (lbs)	Water Force		Tie Force		Earthquake Force		Surcharge (lbs)
		Top (lbs)	Bot (lbs)	Norm (lbs)	Tan (lbs)	Hor (lbs)	Ver (lbs)	
.3	.8	.0	.0	.0	.0	.1	.0	.0
2.6	248.0	.0	.0	.0	.0	37.2	.0	.0
3.0	816.2	.0	.0	.0	.0	122.4	.0	.0
3.0	1305.8	.0	.0	.0	.0	195.9	.0	.0
3.0	1701.6	.0	.0	.0	.0	255.2	.0	.0
2.9	1994.5	.0	.0	.0	.0	299.2	.0	.0
2.9	2179.7	.0	.0	.0	.0	327.0	.0	.0
2.8	2256.8	.0	.0	.0	.0	338.5	.0	.0
2.7	2229.6	.0	.0	.0	.0	334.4	.0	.0
2.6	2105.9	.0	.0	.0	.0	315.9	.0	.0
2.4	1897.6	.0	.0	.0	.0	284.6	.0	.0
2.1	1457.7	.0	.0	.0	.0	218.7	.0	.0
.2	160.5	.0	.0	.0	.0	24.1	.0	.0
2.1	1137.0	.0	.0	.0	.0	170.6	.0	.0
2.0	570.4	.0	.0	.0	.0	85.6	.0	.0
1.1	91.6	.0	.0	.0	.0	13.7	.0	.0

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.28	10.00
2	11.23	9.46
3	14.22	9.19
4	17.22	9.18
5	20.20	9.44
6	23.16	9.97
7	26.05	10.75
8	28.87	11.79
9	31.58	13.07
10	34.17	14.59
11	36.61	16.33
12	38.89	18.28
13	40.99	20.43
14	42.89	22.75
15	44.41	25.00

Circle Center At X = 15.8 ; Y = 42.9 and Radius, 33.8
 *** 1.821 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.28	10.00
2	11.22	9.43
3	14.20	9.11
4	17.20	9.07
5	20.20	9.29
6	23.16	9.78
7	26.06	10.53
8	28.89	11.53
9	31.62	12.78
10	34.22	14.27
11	36.68	15.98
12	38.98	17.91
13	41.10	20.03
14	43.03	22.34
15	44.74	24.80
16	44.85	25.00

Circle Center At X = 16.2 ; Y = 42.8 and Radius, 33.7
 *** 1.821 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	11.03	10.52
2	14.03	10.51
3	17.03	10.70
4	20.00	11.08
5	22.95	11.65
6	25.85	12.41
7	28.70	13.36
8	31.48	14.48
9	34.18	15.78
10	36.80	17.26
11	39.31	18.90
12	41.71	20.69
13	44.00	22.64
14	46.15	24.73
15	46.40	25.00

Circle Center At X = 12.6 ; Y = 57.1 and Radius, 46.6
 *** 1.843 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.97	10.00
2	11.88	9.29
3	14.85	8.89
4	17.85	8.81
5	20.84	9.05
6	23.79	9.60
7	26.67	10.45
8	29.44	11.61
9	32.07	13.05
10	34.53	14.76
11	36.80	16.72
12	38.85	18.91
13	40.66	21.31
14	42.21	23.88
15	42.73	25.00

Circle Center At X = 17.1 ; Y = 37.2 and Radius, 28.4
 *** 1.849 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	10.35	10.17
2	13.32	9.80
3	16.32	9.63
4	19.32	9.66
5	22.31	9.88
6	25.28	10.31
7	28.21	10.93
8	31.10	11.74
9	33.93	12.75
10	36.68	13.94
11	39.35	15.31
12	41.92	16.85
13	44.39	18.57
14	46.73	20.44
15	48.94	22.46
16	51.02	24.63
17	51.33	25.00

Circle Center At X = 17.4 ; Y = 54.8 and Radius, 45.1
 *** 1.858 ***

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.41	11.21
2	15.41	11.03
3	18.41	11.08
4	21.40	11.34
5	24.36	11.82
6	27.28	12.51
7	30.14	13.41
8	32.93	14.51
9	35.63	15.82
10	38.23	17.31
11	40.72	18.99
12	43.07	20.85
13	45.29	22.87
14	47.31	25.00

Circle Center At X = 16.3 ; Y = 52.4 and Radius, 41.4
 *** 1.863 ***

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	8.28	10.00
2	11.14	9.12
3	14.09	8.53
4	17.07	8.24
5	20.07	8.25
6	23.05	8.57
7	25.99	9.18
8	28.85	10.09
9	31.60	11.28
10	34.22	12.75
11	36.68	14.47
12	38.95	16.43
13	41.01	18.60
14	42.85	20.98
15	44.43	23.53
16	45.15	25.00

Circle Center At X = 18.4 ; Y = 37.8 and Radius, 29.6
 *** 1.864 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	12.41	11.21
2	15.38	10.79
3	18.38	10.67
4	21.38	10.87
5	24.34	11.36
6	27.23	12.16
7	30.02	13.25
8	32.69	14.62
9	35.21	16.25
10	37.55	18.13
11	39.68	20.24
12	41.59	22.55
13	43.22	25.00

Circle Center At X = 18.0 ; Y = 40.0 and Radius, 29.4
 *** 1.868 ***

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	4.14	10.00
2	7.09	9.49
3	10.08	9.17

4	13.07	9.04
5	16.07	9.10
6	19.06	9.36
7	22.03	9.81
8	24.96	10.45
9	27.84	11.28
10	30.67	12.29
11	33.42	13.48
12	36.09	14.84
13	38.67	16.38
14	41.15	18.08
15	43.50	19.93
16	45.74	21.93
17	47.84	24.07
18	48.65	25.00

Circle Center At X = 13.6 ; Y = 55.5 and Radius, 46.5
*** 1.868 ***

September 15, 2011

Mr. D. James Hart, Ph.D.
City Manager/Executive Director
CITY OF ADELANTO
11600 Air Expressway
PO Box 10
Adelanto, CA. 92301

Submitted via email: jhart@ci.adelanto.ca.us

Subject: Comments on APUA Percolation Pond #4 Restoration Plans

Dear Dr. Hart:

At your request, and in my capacity as Adelanto's Interim City Engineer, I have reviewed the City's construction plans entitled "APUA Wastewater Reclamation Facility Percolation Pond #4 Restoration Plans" prepared by So and Associates. After reviewing these plans, which are comprised of five sheets including Drawings T-1 and C-1 through C-4, I believe this project is constructible as presented. One item, which should be incorporated in the form of an addendum to your contract, is a reference indicating all earthwork shall be performed in accordance with Section 300 of the Standard Specifications for Public Works Construction, latest edition (commonly referred to as the Greenbook). This reference was incorporated in an earlier preliminary version of the plans, but was inadvertently omitted from the final plans. The plans should also be modified by Addendum to reference a date.

The California Regional Water Quality Control Board Lahontan Region staff also provided comments on an earlier preliminary submittal of Pond #4 Restoration plans by letter dated April 22, 2011 to John Sponsler, APUA Director of Utilities. While all of those comments were pertinent at the time, many of them are no longer applicable since construction of the adjacent Pond #5 was completed earlier this year (e.g., there were several comments pertaining to embankments including slope stability, embankment height, foundation design issues, etc.; while valid at the time, these comments are no longer at issue since all embankments have now been removed).

Please feel free to contact me should you have any questions regarding this matter.

Respectfully,

PSOMAS



Harvey R. Gobas, P.E.
Vice-President/Senior Project Manager

Copies to: John Sponsler, Director of Public Utilities, City of Adelanto
Todd Litfin, City Attorney, City of Adelanto
Betsy Elzufon, Larry Walker and Associates

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ENCLOSURE 7



Matthew Rodriguez
Secretary for
Environmental Protection

California Regional Water Quality Control Board Lahontan Region

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(530) 542-5400 • FAX (530) 544-2271
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ENCLOSURE 7



Edmund G. Brown Jr.
Governor

September 22, 2011

D. James Hart, Ph.D., City Manager
City of Adelanto
Adelanto City Hall
11600 Air Expressway
Adelanto, CA 92301

Lauri Kemper
Assistant Executive Officer
CA. Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

SUBMITTALS FOR THE OCTOBER 2011 MEETING OF THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN REGION (WATER BOARD)

At its May 2011 meeting the Water Board adopted Cease and Desist Order No. 6-2011-15A1 (Order). This Order required the Adelanto Public Utility Authority (APUA) to submit reports quantifying its ability to treat and dispose of wastewater currently being generated in its service area and that which will be generated by future development in the service area. Based on the information submitted and testimony received at the May Board meeting, the Water Board indicated its intent to consider again imposing a restriction on additional connections no later than its November 2011 Board meeting in light of progress made by Adelanto in complying with the requirements of the Order.

Since the May 2011 meeting the APUA has submitted three reports: a July 14, 2011 Quarterly status report, an August 1, 2011 report in response to the requirements of Section II.B. of the Order, and a September 15, 2011 report on the restoration of Percolation Pond No. 4, which also included information on percolation rates for Pond Nos. 5 and 9. The Water Board Prosecution Team responded to these first two reports by an e-mail dated September 2, 2011 and a letter dated September 6, 2011. I intend to include these five documents in the package of material for the Water Board to consider at its October 2011 meeting. The agenda item will be structured as a status report rather than a hearing.

The September 6, 2011 letter identified, from the Prosecution Team's perspective, various deficiencies in the August 1, 2011 report. I have reviewed both the August 1, 2011 report and the September 6, 2011 letter and believe that the report is inconclusive as to whether or not the APUA has sufficient disposal capacity to accommodate current and increased wastewater flows. In the September 6, 2011 letter, the Prosecution Team "strongly encourages APUA to submit a revised report" but did not impose a due date for this revised

California Environmental Protection Agency



report. If the APUA would like the Water Board to consider a revised report, it should submit it no later than October 4, 2011 to allow the Water Board Prosecution Team time to review the report before the October Water Board meeting.

I am requesting that the Water Board Prosecution Team and the APUA be prepared to present at the October Water Board meeting a summary of its position as to whether the APUA has, or does not have, sufficient disposal capacity to accommodate current and increased wastewater flows. I request that each summary presentation be limited to five minutes. I am requesting that the APUA be prepared to discuss why it did not attempt to determine actual percolation rates of its various ponds since the May 2011 Water Board meeting by measuring actual inputs (wastewater and rainfall, if any), evaporative losses and pond water elevation changes.

In response to the Cease and Desist Order requirement to provide a detailed status report on its efforts to provide additional treatment capacity, the APUA presented a schedule for beginning operation of a flow equalization basin. However, the schedule is labeled as "tentative" and includes a footnote that indicates the schedule is "dependent upon initiating operation of Micro-media units." This information raises the question of whether there are additional actions that the APUA must take to achieve the Cease and Desist Order requirement to identify "when specific additional capacity (in millions of gallons per day) is expected to be fully functional" and what may cause the "tentative" schedule for construction of the flow equalization basin to change. At the October 2011 Water Board meeting, I am requesting the APUA to address these questions in five minutes.

Lastly, because the Prosecution Team has, in many of its letters to the APUA, indicated alleged violations of the waste discharge requirements for the APUA, the Order, and other orders issued by the Water Board, I request that the Prosecution Team describe the potential options available for addressing the alleged violations.

Please contact me if either the Prosecution Team or the APUA have any questions or comments on this letter or would like to meet prior to the October 2011 Water Board meeting.



Harold J. Singer
Executive Officer

- c. Laura Drabandt, Office of Enforcement, State Water Resources Control Board
Todd Liftin, Attorney, City of Adelanto