WDID No. 6B360109001

TO: Patty Kouyoumdjian, Executive Officer
Lahontan Regional Water Quality Control Board

Kim Niemeyer, Staff Counsel
State Water Resources Control Board, Office of Chief Counsel

FROM: Lauri Kemper
Lauri Kemper, Assistant Executive Officer
Lahontan Regional Water Quality Control Board

DATE: April 23, 2014

SUBJECT: **PROPOSED TIME SCHEDULE ORDER - VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY, VICTORVILLE, SAN BERNARDINO COUNTY**

The Lahontan Water Board's Prosecution Team (Prosecution Team) recommends issuing the enclosed Time Schedule Order to the Victor Valley Wastewater Reclamation Authority (VVWRA, or Discharger) for wastewater discharges to the Mojave River and the percolation ponds at the facility with temporary (1 year) elevated concentrations of ammonia and total nitrogen (Enclosure 1 - draft final TSO). The Lahontan Water Board's Assistant Executive Officer released a draft TSO (Enclosure 5) for public review and comment beginning March 7, 2014. The Prosecution Team is recommending minor revisions to the draft TSO in response to comments received during the 30-day public comment period. The enclosed draft final TSO is in Red-Line & Strikeout format to highlight the recommended revisions.

The Discharger is planning to upgrade 12 existing aeration basins to ensure compliance with existing effluent limitations as wastewater flows increase due to population growth. The Discharger anticipates the facility's treatment efficiency for ammonia and total nitrogen will decrease during the facility upgrade project, resulting in violations of effluent limitations established by Board Order No. R6V-2013-0038 (NPDES Permit for Mojave River discharge) and Board Order No. R6V-2012-0058 (WDR Permit for percolation pond discharge) (Enclosures 2 and 3). The facility upgrade project will take approximately one year to complete (April 2014 – March 2015) with ammonia and total nitrogen effluent concentrations returning to current or lower levels following project completion (Enclosure 4).

Issuing the TSO will establish interim effluent limits that continue to protect receiving water beneficial uses. Issuing the TSO will also exempt the Discharger from mandatory minimum penalties for violating effluent limitations prescribed by Board Order No. R6V-2013-0038, provided the Discharger complies with the interim effluent limitations.

On March 7, 2014, the Lahontan Water Board's Assistant Executive Officer released a draft TSO for public review and comment (Enclosure 5). Only the Discharger responded during the 30-day comment period (Enclosure 6). The Prosecution Team subsequently consulted with the Discharger (Enclosure 7) and have addressed the Discharger's comments (Enclosure 8) to their satisfaction.

Below is a summary of the recommended revisions in response to comments.

1. Discharger Request for TSO – Finding 2 was modified to include additional explanation for the Time Schedule Order, which is to prevent potential future effluent limitation violations for total nitrogen and ammonia as future wastewater flows to the plant increase. The proposed project constitutes a threatened violation of effluent limitations for total nitrogen and ammonia in Board Order No. R6V-2013-0038 and Board Order No. R6V-2012-0058. This Time Schedule Order is being issued to set forth actions that the Discharger shall take to prevent discharges of wastes that violate B.O. No. R6V-2013-0038 and B.O. R6V-2012-0058.

2. Project Description – Finding 5 clarifies the project description.

3. Editorial Corrections – Editorial corrections were made to Findings 6 and 7 and requirement 2.B.a (for submitting a final report). Additionally, the Attachment A (Map) was replaced to illustrate receiving water monitoring station RSW-002.

4. Total Nitrogen – The total nitrogen interim average monthly effluent limitation was modified based on historical data as described in Finding 6 and Tables 2, 4 and 5.

5. Water Impact – A new Finding 11 was added describing changes in water quality expected to occur in the receiving surface and groundwater as result of project implementation.

6. Increased Monitoring and Reporting – Require receiving water monitoring sampling at station RSW-002 twice per month for ammonia, pH, and temperature to evaluate the toxicity effects upon the receiving water during the project period. Additionally, data now collected at effluent station EFF-001 must be provided. The calculated ammonia water quality objective for total ammonia, which is temperature and pH dependent, must be determined for WARM beneficial uses. The monitoring results must be compared to the calculated objectives and reported.

Please send any questions or comments you may have regarding the draft final TSO to the following Discharger and Prosecution Team representatives for their review and response.

Discharger	Logan Olds, General Manager Victor Valley Wastewater Reclamation Authority Email: Lolds@vvwra.com
Prosecution Team	Lauri Kemper, Assistant Executive Officer Lahontan Regional Water Quality Control Board Email: Lauri.Kemper@waterboards.ca.gov

Enclosures:

1. Draft Final TSO in Red-Line Strikeout Format
2. VVWRA letter dated November 15, 2013 -Justification for TSO for total nitrogen
3. VVWRA letter dated December 11, 2013 - Justification for TSO for ammonia-N
4. VVWRA letter dated March 11, 2014 – Water Impact Assessment
5. Water Board letter dated March 7, 2014 – Request for Comments, Draft TSO
6. VVWRA letter dated March 18, 2014 – Comments on draft TSO
7. E-mails dated April 7, 9, 10, 2014
8. Water Board letter dated April 22, 2014 – Response to Discharger's Comments

cc w/encl: Logan Olds, Victor Valley Wastewater Reclamation Authority
Sean McGlade, City of Victorville
Manuel Benitez, SBCO Special Districts
Lahontan Water Board Members

public/Enforc Orders 2014/ProposedTSOTransmittalLetter4-22-14(SCF) rc

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ENCLOSURE 1

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

TIME SCHEDULE ORDER NO. R6V-2014-(PROPOSED)

ISSUED TO

VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
REGIONAL WASTEWATER TREATMENT PLANT,
SAN BERNARDINO COUNTY, WDID NO. 6B360109001

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

1. Discharger

The Victor Valley Wastewater Reclamation Authority (VVWRA) is a joint powers authority and public agency of the State of California. The authority was formed to consolidate wastewater treatment services for the Victor Valley. Member agencies include the Town of Apple Valley, the City of Hesperia, the County of San Bernardino, including County Service Area #42 (Oro Grande) and #64 (Spring Valley Lake), and the City of Victorville. For the purposes of this Board Order (Order), the VVWRA is referred to as the "Discharger."

2. Reason For Action

This Order establishes a Time Schedule that contains interim effluent limitations for total nitrogen and ammonia-N with which the Regional Wastewater Treatment Plant (RWTP) can comply while an aeration basin project is being completed. In order to comply with effluent limits contained in the National Pollutant Discharge Elimination System (NPDES) Board Order No. R6V-2013-0038 for total nitrogen and ammonia-N, this Time Schedule Order allows VVWRA one year to complete the aeration basin upgrade project and achieve compliance with the total nitrogen and ammonia-N limitations. Additionally, interim limits for total nitrogen in this Order also apply to Board Order No. R6V-2012-0058. In letters dated November 15, 2013 and December 11, 2013, VVWRA requested interim effluent limits for these two constituents for the duration of the plant upgrade project. This Order authorizes these limits. Therefore, the Discharger has notified the Water Board that without the proposed plant upgrade project, its facility's discharge will violate effluent limitations for total nitrogen and ammonia, set forth in Board Order No. R6V-2013-0038 and Board Order No. R6V-2012-0058, as future wastewater flows increase with population growth. This situation constitutes a threatened violation of effluent limitations, and pursuant to Water Code section 13300, Time Schedule Order No. R6V-2014-(PROPOSED) is being issued to set forth actions that the Discharger shall take to correct or prevent discharges of waste that violate Board Order No. R6V-2013-0038 and Board Order No. R6V-2012-0058.

~~Pursuant to Water Code section 13300, Time Schedule Order No. R6V-2014-(PROPOSED) is being issued to set forth actions that the Discharger shall take to correct or prevent discharges of waste that violate Board Order No. R6V-0138-0038 and R6V-2012-0058.~~

3. Facility Description and Authorized Discharges

The Facility in part, includes head-works, primary clarifiers, flow equalization, aeration basins, secondary clarifiers, coagulation/flocculation, filtration, Ultra-Violet disinfection, and sludge handling facilities. Board Order No. R6V-2013-0038 allows the Discharger to discharge up to an annual

average flow of 14.0 million gallons per day (mgd) of tertiary-treated wastewater from the Facility to the Mojave River at Discharge Point 001. Board Order No. R6V-2012-0058 states that the treatment facility has a capacity of 18 MGD. Board Order R6V-2012-0058 allows discharge into percolation ponds only. A Facility Plan site is included as Attachment A.

Table 1 Existing Orders

Board Order No.	Board Order Type	Adoption Date	Approved Discharge Capacity (MGD)	Purpose of Order
R6V-2012-0058	WDR	November 14, 2012	18	Discharge to Onsite Percolation Ponds
R6V-2013-0038	NPDES	July 17, 2013	14	Discharge to Mojave River

4. Beneficial Uses

The *Water Quality Control Plan for the Lahontan Region* (Basin Plan), as amended, designates the beneficial uses of waters in the Region. The designated beneficial uses of the Mojave River are:

a. Municipal and Domestic Supply (MUN)
b. Agricultural Supply (AGR)
c. Ground Water Recharge (GWR)
d. Water Contact Recreation (REC-1)
e. Non-contact Water Recreation (REC-2)
f. Commercial and Sport fishing (COMM)
g. Warm Freshwater Habitat (WARM)
h. Cold Freshwater Habitat (COLD)
g. Wildlife Habitat (WILD)

5. Proposed Project Description

The proposed upgrade project consists of the following main actions:

a. Replace - existing air diffusers in aeration basins 1 through 12 with a modern fine bubble system and with a tapered air supply at the end of each basin;
~~b. Slip-line - existing below ground aeration air piping with new pipes;~~
~~c.~~b. Upsize - the interconnection air piping between basins 1 through 8 and 9 through 12 so that blowers from either building can supply all basins; replace air header from blower No. 1 with new pipe;
~~d.~~c. Enlarge - the anoxic zones in basins 1 through 8 to enhance nitrate removal; and
~~e.~~d. Add - dissolved oxygen probes, flow meters, and motorized butterfly valves (where necessary) to enhance and improve system control.

Four aeration basins will be removed from operation at a time until the upgrades are completed. With one-third of the aeration basins unavailable, both ammonia-N and nitrate concentrations may increase to levels that would violate the requirements in Board Order No. R6V-2013-0013 and Board Order No. R6V-2012-0058. These exceedances would be due to diminished de-nitrification capabilities from the aeration basins during the project duration. After project completion, effluent

nitrate and ammonia concentrations are expected to return to current levels meeting compliance with the existing Orders. The project is expected to begin in April 2014 and be completed in March 2015.

6. Basis For Interim Limits

Effluent concentrations of ammonia-N and nitrogen measured during 2004-2006 (the time period prior to the first operation of aeration basins 9 through 12) were used to predict the concentrations likely to occur during the upcoming aeration basin upgrade project. Data subsequent to 2006 were not used because previous plant upgrades reduced effluent ammonia and nitrogen levels. Thus earlier (2004-2006) data are representative of effluent concentrations expected for the project duration. During this time frame, concentrations of ammonia-N and total nitrogen exceeded the limits stated in the current Board Orders No. R6V-2013-0038 (NPDESWDR) and R6V-2012-0058 (WDRNPDES).

The Discharger proposes two approaches to set an interim limit: 1) the maximum observed value in the data set or 2) the 99.87th percentile of the data.

Total Nitrogen

The maximum observed value of the 2004-2006 data-set for total nitrogen is 25.5 mg/L. From these two approaches, the Discharger requests an interim limit for total nitrogen of 25.5 mg/L as a maximum daily effluent limit (MDEL) and an average monthly effluent limit (AMEL) of 162.73 mg/L. These limits would apply to both Board Orders No. R6V-20123-00538 (WDR) and R6V-2013-0038 (NPDES).

Ammonia

The daily and average monthly ammonia-N effluent data sets from 2004-2006 are log-normally distributed, therefore the proposed limits for ammonia-N were calculated from the log-normal best fit regression lines as the average plus 3 times the standard deviation. This exceedance frequency corresponds to the 99.87th percentile of the data set, and the interim limit for ammonia-N is requested as a 5.7 mg/L (AMEL) and 6.7 mg/L (MDEL). These limits would apply only to Board Order No. R6V-2013-0038 (NPDES).

7. Current and Limits

Board Order No. R6V-2013-0038, section IV.A.1.a, Table 5 specifies final effluent limitations for ammonia-N and for total nitrogen. Board Order No. R6V-2012-0058, section I.A.1, Table 7 specifies final effluent limitation for Total nitrogen only. Table 2, below summarizes the current and proposed interim limits and the corresponding mass loadings for the appropriate Board Order.

Table 2 Existing and Proposed Interim Limits

	Ammonia				Total N			
	Existing Limits							
Board Order #	**MDEL (mg/L)**	**Mass (Lbs/day)**	**AMEL (mg/L)**	**Mass (Lbs/day)**	**MDEL (mg/L)**	**Mass (Lbs/day)**	**AMEL (mg/L)**	**Mass (Lbs/day)**
R6V-2013-0038 NPDES	1.6	187	0.54	63	12.3	1,436	10.3	1,203
R6V-2012-0058 WDR	N/A	N/A	N/A	N/A	12.3	N/A	10.3	N/A

	Proposed Interim Limits							
R6V-2013-0038 NPDES	6.7	783	5.7	666	25.5	2,977	162.73	1,436
R6V-2012-0058 WDR	N/A	N/A	N/A	N/A	25.5	N/A	162.73	N/A

Note: AMEL - Average Monthly Effluent Limit; MDEL – Maximum Daily Effluent Limit; N/A – not applicable

8. Mandatory Minimum Penalty Exemptions

California Water Code (Water Code) sections 13385(h) and (i) require the Water Board to impose mandatory minimum penalties (MMPs) upon dischargers that violate specified effluent limitations. Violations would be subject to mandatory minimum penalties without an exemption provided by issuing a Time Schedule Order or Cease and Desist Order.

Water Code section 13385(j)(3) exempts certain violations from MMPs as follows:

> *"where the waste discharge is in compliance with either a cease and desist order issued pursuant to section 13301 or a time schedule order issued pursuant to section 13300, if all the [specified] requirements are met."*

The Water Board finds that the requirements for exempting effluent limitation violations from MMPs, as specified by Water Code section 13385(j)(3), will be satisfied upon issuing this Time Schedule Order. For such exemptions, Water Code section 13385(j)(3) requires that:

(A) The Cease and Desist Order or Time Schedule Order is issued on or after July 1, 2000, and specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i).

This Time Schedule Order is being issued after July 1, 2000 and specifies the actions that the Discharger is required to take to correct the violations during the refurbishing of the aeration basins.

(B) The effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

The Discharger is not able to consistently comply with the new effluent limitations contained in Board Order No. R6V-2013-0038 for ammonia and Board Order No. R6V-2012-0058 for total nitrogen-N for the project duration. These effluent limitations are new requirements that became applicable to the permit after July 1, 2000. Additionally, new or modified control measures are required to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

(C) The Regional Board establishes a Time Schedule for bringing the waste discharge into compliance with the effluent limitation that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and

implementation of the control measures that are necessary to comply with the effluent limitation. Except as provided in clause (ii), for the purposes of this subdivision, the time schedule shall not exceed five years in length.

This Time Schedule Order includes: (1) interim effluent limitations for total nitrogen and ammonia, (2) actions and milestones leading to compliance within one year, and (3) associated compliance dates as required for this time schedule. The Time Schedule Order does not exceed five years in accordance with Water Code section 13385(j)(3).

9. Proposed Project Schedule

The Discharger has submitted a project schedule for obtaining compliance that includes the following milestones:

Table 3 Milestones for Permit Compliance

Action	Date	
	Air Bays 9 - 12	**Air Bays 1 - 8**
Bidding/Award of project contract completed	November 21, 2013	August 21, 2014
Notice to proceed (subject to SCE Financial approval)	December 6, 2013	September 5, 2014
Project start (Air Bay removed from service)	April 14, 2014	January 14, 2015
Project completed (Air Bay returned to service)	April 30, 2014	January 30, 2015
Start-up and testing completed	May 9, 2014	February 26, 2015
Compliance with NPDES & WDR Final Effluent Limitations	March 31, 2015	

The Water Board finds that given financial and construction scheduling constraints, this schedule represents the shortest time period for the Discharger to return to compliance with the final effluent limitations cited in Finding No.8 above. Compliance with this Time Schedule Order exempts the Discharger from MMPs associated with Board Orders No. R6V-2013 and R6V-2012-0058 for violations of effluent limitations for total nitrogen and ammonia-N, in accordance with Water Code section 13385(j)(3).

10. Authorization to Issue a Time Schedule Order

Water Code section 13300 states:

"Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements."

The Water Board finds that a discharge of waste will take place that will violate the final effluent limitations prescribed by the Water Board. The Water Board is therefore authorized to issue a Time Schedule Order pursuant to Water Code section 13300.

This Time Schedule Order requires that the Discharger to develop, submit, and implement methods of compliance that may include, but not be limited to, pollution prevention activities (operations and maintenance), acquisition of funding, and construction of new treatment facilities to meet the effluent limitations.

The Water Board finds that the Discharger can implement measures to maintain compliance with the interim effluent limitations included in this Time Schedule Order.

1. Receiving Water Impact Analysis

Interim effluent limitations are established when compliance with the final effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can degrade water quality and may adversely affect the beneficial uses of the receiving water on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitations can be achieved. VVWRA provided a March 11, 2014 Receiving Water Impact Assessment as described below.

a. Estimated Surface Water Impacts – Total Nitrogen

~~Further,~~ The one year of elevated nitrogen will cause limited degradation within and adjacent to the facility, but will not cause long term degradation. Beneficial uses and water quality standards will be achieved in the long term.

b. Estimated Groundwater Impacts – Total Nitrogen

The temporary discharge of elevated total nitrogen will increase groundwater nitrate concentrations from 6.01 mg/L to about 9.48 mg/L nitrate-N beneath the VVWRA percolation ponds. Within six months following project completion, nitrate concentrations would return to pre-project levels. Beneficial uses and water quality standards will be achieved in the long term.

c. Estimated Surface Water Impacts – Ammonia

The Mojave River has both Cold and Warm beneficial uses. The Discharger states that this project would intermittently exceed the acute ammonia objective and routinely exceed the 4-day chronic ammonia objective. The ammonia effluent limits in Board Order No. R6V-2013-0038 are established to protect the Cold use. Since the Mojave River is an effluent dependent water body, the primary riparian beneficial use is Warm. The toxicity effects to the Warm use will be less than on the Cold use. This Order requires monitoring at receiving water station RSW-002 to evaluate the effects of the discharge relative to the Warm use. Beneficial uses and water quality standards will be achieved in the long term.

d. Estimated Groundwater Impacts – Ammonia

Ammonia in the discharge oxidizes in the receiving groundwater to nitrate. Within six months following project completion, nitrate concentrations would return to pre-project levels. Beneficial uses and water quality standards will be achieved in the long term.

12. Compliance Schedule & Quarterly Reports

This Time Schedule Order requires that the Discharger abide by the Compliance Schedule, and submit Quarterly Progress Reports, pursuant to Section 13267 and 13383 of the California Water Code. The Water Board finds that the burden, including costs, of these reports bear a reasonable

relationship to the need for the reports and the benefit of the reports in providing information necessary for the Water Board to insure compliance.

13. California Environmental Quality Act

Issuance of this Time Schedule 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, of the California Code of Regulations.

14. Notification of Interested Parties

Pursuant to Water Code section 13167.5, a 30-day public comment period was provided, in which the public had an opportunity to review and comment upon this Time Schedule Order. A copy of the proposed Time Schedule Order was posted on the Water Board's internet site, and copies were mailed to interested agencies and persons.

15. Consideration of Interested Parties

Any person aggrieved by this action of the Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, state holiday, or furlough day 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.

IT IS HEREBY ORDERED, that in order to meet the effluent limitations contained in Water Board Orders R6V-2012-0058 and R6V-2013-0038, the Discharger must comply with the following:

1. The following interim effluent limitations for total nitrogen and ammonia-N shall remain effective from **issuance of this Order** until **March 31, 2015**, or when the Discharger is able to come into compliance with the final effluent limitations specified in Table 2, above, whichever is sooner.

Table 4 NPDES Interim Effluent Limitations – Board Order R6V-2013-0038

Parameter	Units	Interim Effluent Limitations	
		Average Monthly	Maximum Daily
Ammonia-N	mg/L	5.7	6.7
	Lbs/day[1]	666	783
Total Nitrogen	mg/L	16.7~~12.3~~	25.5
	Lbs/day[1]	1,950~~1,436~~	2,977

1. Based on a Mojave River discharge flow of 14 MGD.

Table 5 WDR Interim Effluent Limitations – Board Order R6V-2012-0058

Parameter	Units	Interim Effluent Limitations	
		Average Monthly	Maximum Daily
Total Nitrogen	mg/L	16.7~~12.3~~	25.5

2. The Discharger shall take specific actions as indicated in the following time schedule to achieve compliance with all requirements of Board Order No. R6V-2013-0038.

Task	Due Date
A. Submit Quarterly Progress Reports	**As Described Below**
B. Full Compliance with Final Effluent Limits	**March 31, 2015**

a. Task A – The **Quarterly Progress Reports** must, at a minimum, include the following information:

i. Progress made towards final compliance during that quarter.

ii. Milestones in the upcoming quarter that will be met.

iii. Summary of any permits obtained or signed contracts to perform work.

iv. Summary of all expenditures to ensure that the Discharger has sufficient funding to achieve full compliance.

v. The results of rReceiving water monitoring data collected ~~to~~ two times per month for ammonia, pH, dissolved oxygen, and temperature at Station RSW-002.

vi. The calculated receiving water objective for total ammonia based on Table 3-4 in the Basin Plan (4-Day Average Warm Concentration for Ammonia).

vii. Report the results of effluent monitoring at effluent station EFF-01 two times per month for ammonia, pH, and temperature

iv.viii. The results of comparing the obtained receiving water ammonia data~~results~~ with calculated receiving water objective for total ammonia.~~Results of effluent ammonia sampling compliance evaluation with respect to the receiving water quality objectives.~~

Quarterly Status Reports must be submitted according to the following schedule:

Monitoring Period	Quarterly Status Report Due Dates
January – March	May 1
April – June	August 1
July – September	November 1
October – December	February 1

The first Quarterly Progress Report covering the second quarter 2014 must be received by the Water Board by **August 1, 2014.** The last Quarterly Progress Report, due **May 1, 2016**5, must indicate how the Discharger has achieved compliance.

b. Task B – **Full compliance with final effluent limits** must be achieved by **March 31, 2015**. Compliance with final effluent limits will be the result of the Discharger implementing corrective action to comply with effluent limits set forth in Board Order No. R6V-2013-0038 and Board Order No. R6V-2012-0058.

3. The requirement that the Discharger submit Quarterly Progress Reports is made pursuant to Section 13267 and 13383 of the California Water Code. Pursuant to Section 13268 of the Water Code, a violation of Water Code Section 13267 requirement may subject you to civil liability of up to $1,000 per day for each day in which the violation occurs. Pursuant to Section 13385 of the Water Code, a violation of a Water Code Section 13383 requirement may subject you to liability of up to $10,000 per day for each day in which the violation occurs.

4. If the Discharger fails to comply with the provisions of this Order, judicial enforcement by the Attorney General may be sought. If compliance with these effluent limitations is not achieved by the full compliance date, the discharger would not be exempt from MMPs for violation of certain effluent limitations, and would be subject to issuance of a Cease and Desist Order in accordance with Water Code section 13301.

5. Upon legal notice to all concerned parties and an opportunity for public comment for 30 days, this Order may be amended to establish new conditions or modify interim effluent limitations for total nitrogen and for ammonia-N should monitoring data or other new information indicate that such modifications are necessary.

_____ _____

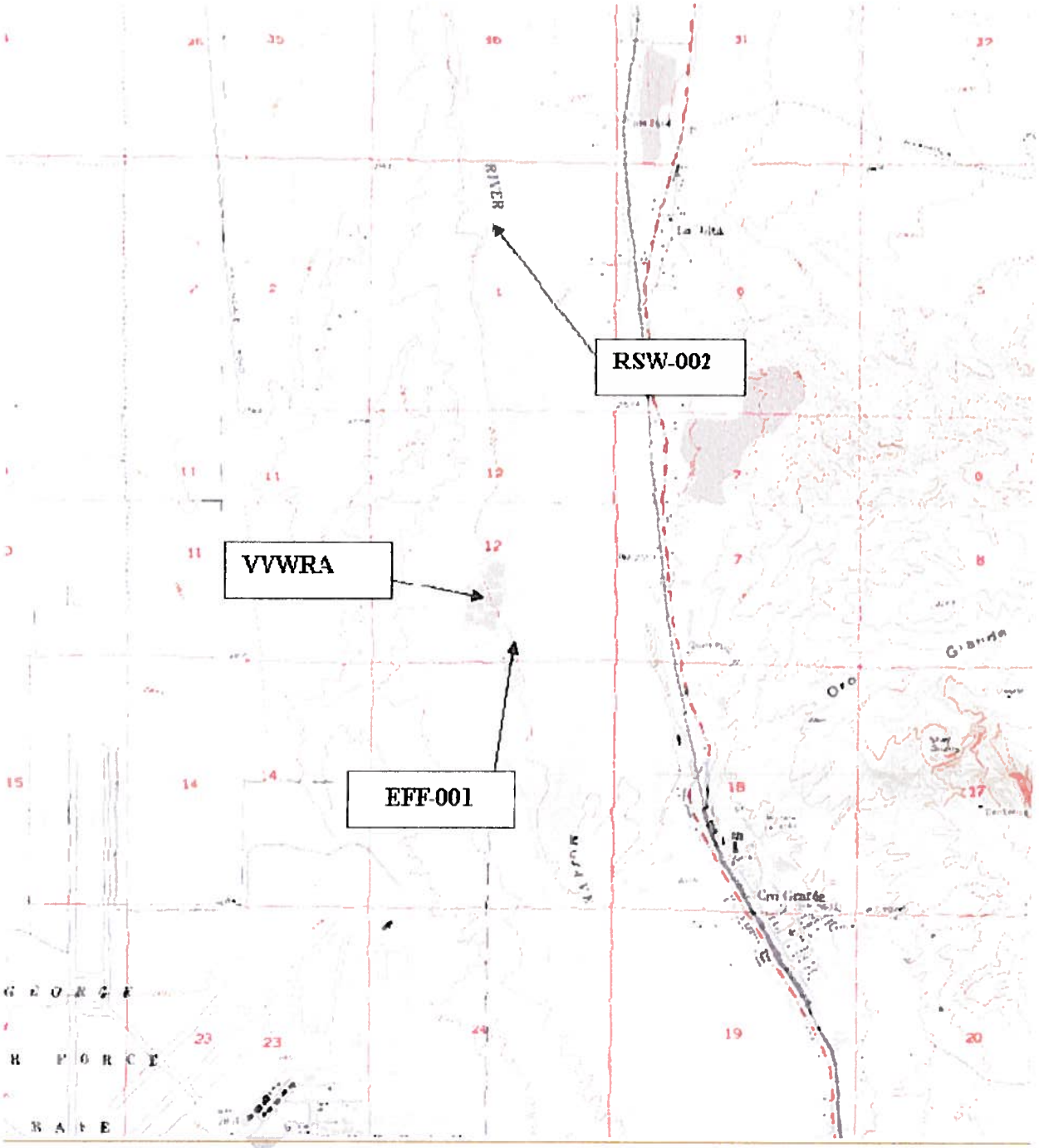
PATTY Z. KOUYOUMDJIAN Date
EXECUTIVE OFFICER

Attachment A – Facility Plan

Enforce. Orders 2014 / VVWRA TSO / VVWRA TSO NH3 & TN

Attachment A

Victor Valley Wastewater Reclamation Authority
Effluent and Receiving Water Monitoring Stations



Sources: EFF-001 – Section 12, R5W, T6N, SBB&M, USGS Topographical Map - 7.5 Series
RSW-002 - Section 1, R5W, T6N, SBB&M, USGS Topographical Map - 7.5 Series

ENCLOSURE 2

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Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California
Administrative Offices
15776 Main Street, Suite 3, Hesperia, CA 92345
Telephone: (760) 948-9849
Fax: (760) 948-9897
e-mail: mail@vvwra.com

November 15, 2013

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

SUBJECT: INFEASIBILITY ANALYSIS AND COMPLIANCE SCHEDULE JUSTIFICATION IN SUPPORT OF A TIME SCHEDULE ORDER FOR THE VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY REGIONAL WASTEWATER TREATMENT PLANT

Dear Mr. Morales:

The Victor Valley Wastewater Reclamation Authority (VVWRA) respectfully submits this request for a proposed time schedule order (TSO) with respect to final effluent limitations for total nitrogen specified in Order No. R6V-2013-0038 (NPDES Permit No. CA0102822 and WDID No. 6B360109001) for the VVWRA Regional Wastewater Treatment Plant (RWTP). Justifications to support our request for a TSO for total nitrogen are provided below.

JUSTIFICATION FOR TSO FOR TOTAL NITROGEN

The final effluent limitations for total nitrogen in VVWRA's NPDES permit are 10.3 mg/L as a monthly average and 12.3 mg/L as a daily maximum. Although the RWTP can currently achieve compliance with these effluent limitations, the scheduled upcoming Aeration Basin Upgrade Project (which is necessary for continued future compliance) is expected to cause a temporary increase in nitrate concentrations, which will elevate the total nitrogen concentrations. Without establishment of a TSO, the RWTP is at risk of violating the total nitrogen effluent limitations and being subject to the imposition of mandatory minimum penalties during the upgrade.

The infeasibility analysis and TSO justification provided here are intended to assist the Lahontan Regional Water Quality Control Board (Lahontan Water Board) in making the findings necessary to issue a TSO that protects VVWRA from mandatory minimum penalties that would otherwise be assessed pursuant to Water Code Section 13385. The Lahontan Water Board must find that the final effluent limitation is a new and/or more stringent limit, and that new or modified control measures cannot be designed, installed and put into operation within 30 calendar days (Water Code, §13385(j)(3)(B)(i)). Further, the Lahontan Water Board is required to establish a time schedule for bringing the discharge into compliance that is as short as possible, establish interim requirements if the time schedule exceeds one year from the effective date of the order, and require the discharger to prepare and implement a pollution prevention plan (Water Code, § 13385(j)(3)).

The total nitrogen effluent limitations of 10.3 mg/L as a monthly average and 12.3 mg/L as a daily maximum are assigned in Order No. R6V-2013-0038. No effluent limitations for total nitrogen were assigned in the previous NPDES permit, Order No. R6V-2008-004. Therefore, these are new effluent limitations.

The Aeration Basin Upgrade Project is estimated to require seven (7) months to complete, which is longer than 30 calendar days. During that time, nitrate concentrations are expected to increase to levels seen before aeration basins 9 through 12 began operation, due to aeration basins being temporarily removed from operation. The Aeration Basin Upgrade Project consists of the following main actions:

- Replace existing air diffusers in Aeration Basins 1-12 (which are inefficient and at the end of their useful life) with a modern fine bubble system with a tapered air supply at the end of each basin;
- Replacing below-ground aeration air piping (which is corroded and leaking) with new pipes;
- Upsize the interconnection air piping between Basins 1-8 and 9-12 (which is too small to allow for backup from the New Blower Building) so that blowers from either blower building can supply all basins.
- Enlarge the anoxic zones in Basins 1-4 to enhance nitrate removal;
- Add dissolved oxygen and nitrogen probes, flow meters, and motorized butterfly valves (where necessary) to enhance and improve system control.

After completion of the project, concentrations of nitrate are expected to decrease to current levels or below, thus the RWTP will resume compliance with the total nitrogen effluent limits within one calendar year of the start of the project. An environmental analysis was conducted for this project in January 2013 and it was determined that it would qualify for a Categorical Exemption under CEQA.

EFFLUENT LIMITATION ATTAINABILITY AND INFEASIBILITY ANALYSIS

Effluent Data Summary

The Aeration Basin Upgrade Project is expected to remove about 1/3 of the 12 aeration basins from operation (at a time) until the upgrades are completed. With 1/3 of the aeration basins unavailable, nitrate concentrations (and therefore total nitrogen concentrations) may increase to levels measured prior to 2007 due to diminished denitrification capability. Therefore, effluent concentrations of nitrogen measured during 2004-2006 (the time period prior to the first operation of Aeration Basins 9 through12) were used to predict the concentrations likely to occur during the Aeration Basin Upgrade Project, as described below.

Total Nitrogen Calculation

Total nitrogen is calculated from the sum of total Kjeldahl nitrogen (TKN), nitrate-N, and nitrite-N. TKN consists of ammonia-N and organic nitrogen.

Total Nitrogen = TKN + Nitrate-N + Nitrite-N

Where:

TKN = Ammonia-N + organic nitrogen

The effluent was not analyzed for total nitrogen between 2004 and 2006, only for ammonia-N and nitrate-N. These are typically the largest components of total nitrogen in wastewater effluent, however the other two nitrogen forms (nitrite-N and organic nitrogen) were also considered.

Nitrite-N data between 2008 and 2012 were all non-detected, but detected nitrite-N data were collected during the Nitrogen Study between October and December 2006, which are likely more representative of levels prior to the operation of all 12 aeration basins. The average nitrite-N concentration collected during the study was 0.23 mg/L. Organic nitrogen was never monitored, however TKN was monitored during the 2006 Nitrogen Study and routine TKN monitoring (of which organic nitrogen is a component) began in January 2008. Individual organic nitrogen concentrations were calculated as the difference between TKN and ammonia-N concentrations. The average calculated organic nitrogen concentration was 0.74 mg/L.

Therefore, 0.23 mg/L (nitrite-N contribution) and 0.74 mg/L (organic nitrogen contribution) were added to the sums of ammonia-N and nitrate-N between 2004 and 2006 to determine the estimated total nitrogen concentration. The calculated total nitrogen concentrations are shown in Figures 1 and 2 below, with ammonia-N, nitrate-N, and the final effluent limitations.

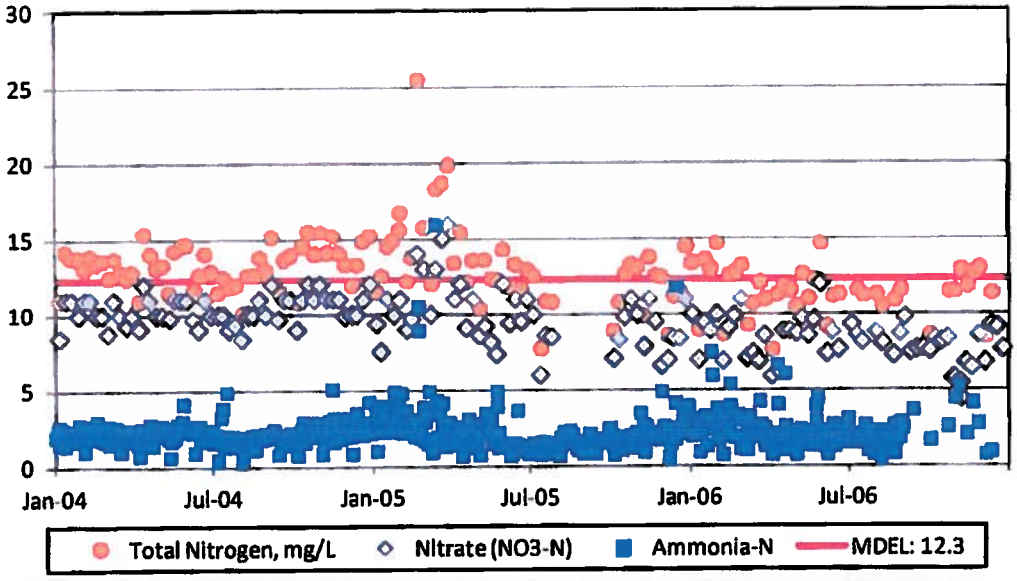

Figure 1. Estimated 2004-2006 Daily Effluent Nitrogen Concentrations with MDEL

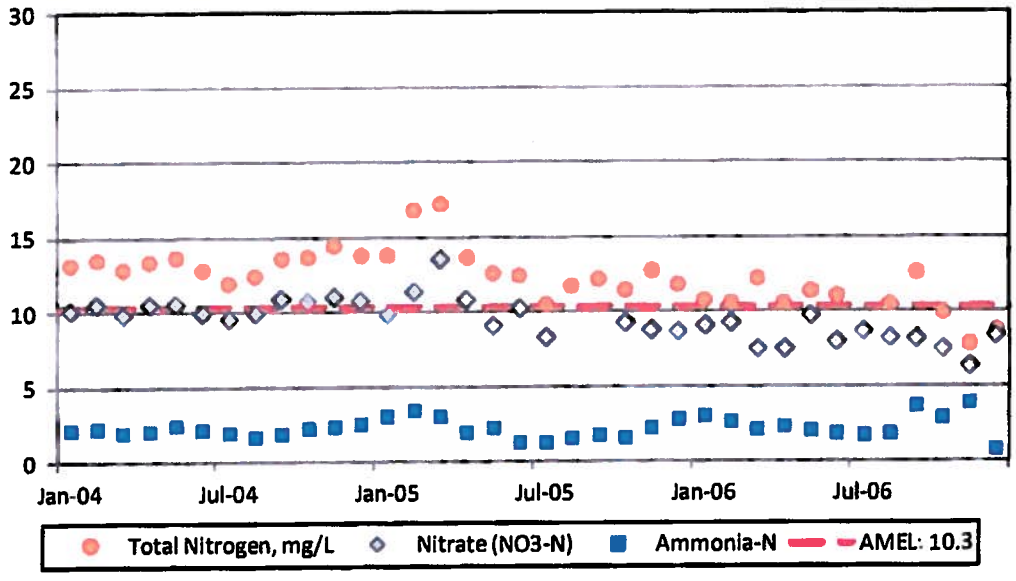

Figure 2. Estimated 2004-2006 Monthly Average Effluent Nitrogen Concentrations with AMEL

A review of the estimated effluent nitrogen concentrations over the period of 2004 to 2006 indicates that the RWTP will not be able to consistently comply with the effluent limitations for total nitrogen during the Aeration Basin Upgrade Project. **Table 1** compares the effluent limitations to the statistics calculated from nitrogen forms between 2004 and 2006.

Table 1: NPDES Permit Effluent Limitations and Observed Concentrations

		Average	Maximum	Effluent Limit
Daily	Nitrate (NO3-N)	9.4	16.0	
	Ammonia-N	2.2	15.9	
	Estimated Organic Nitrogen	0.7	2.7	
	Nitrite (NO2-N) from 2006 study	0.2	0.5	
	Estimated Total Nitrogen, mg/L	**12.7**	**25.5**	**12.3**
Monthly	Nitrate (NO3-N)	9.5	13.5	
	Ammonia-N	2.3	3.9	
	Estimated Organic Nitrogen	0.7	2.0	
	Nitrite (NO2-N) from 2006 study	0.2	0.3	
	Estimated Total Nitrogen, mg/L	**12.3**	**17.2**	**10.3**

As shown in **Table 1**, VVWRA is not likely to be able to comply with the effluent limitations for total nitrogen during the Aeration Basin Upgrade Project. Thirty-two (32) or 94% of the monthly average total nitrogen effluent concentrations based on 2004-2006 data were above the average monthly effluent limit of 10.3 mg/L. Eighty (80) or 58% of the effluent concentrations were above the maximum daily effluent limit of 12.3 mg/L.

The best-fit regression lines produced by the average monthly and daily values predict a 15% and 46% probability of compliance with the average monthly and maximum daily effluent limitations, respectively. Therefore, the VVWRA RWTP will be unable to consistently comply with the proposed effluent limitations for total nitrogen during the Aeration Basin Upgrade Project and will be at risk of non-compliance 85% and 54% of the time, respectively.

Source Control And Pollution Prevention Efforts

The sources of nitrogen to the RWTP are from human waste and are considered uncontrollable. Therefore, VVWRA will not be able to perform any effective source control or pollution prevention efforts to reduce influent concentrations of nutrients contributing to total nitrogen in the effluent during the Aeration Basin Upgrade Project.

Schedule for Compliance

The Aeration Basin Upgrade Project will be completed within one year, therefore a compliance schedule with interim requirements and dates for achievement is not required (Water Code, §13385(j)(3)(B)(iii)).

INTERIM LIMITS CALCULATION

Approaches to determining interim effluent limits vary in the different regions of California. Two approaches that are often used are to 1) Set the interim limit as the maximum observed value in the data set or 2) Set the limit at the 99.87th percentile of the data which is equivalent to the average plus 3 times the standard deviation.

The maximum observed value of the 2004-2006 data set for total nitrogen is 25.5 mg/L as shown in Table 1.

The 99.87th percentile value of the data set was calculated as the average plus 3 times the standard deviation, as shown in Table 2.

Table 2. Interim Limits for Total Nitrogen During Aeration Basin Upgrade Project

# Data points	136
% Detected	100%
Standard deviation	2.3
Average	12.7
Interim Limit	**20**

Therefore, VVWRA would request an interim effluent limit of 25 mg/L based on the maximum observed value or 20 mg/L based on the 99.87th percentile value. As noted, the need for this interim effluent limit would be for a relatively short period of time.

SUMMARY

This evaluation indicates that compliance with the final effluent limitations for total nitrogen will not be feasible for the RWTP during the Aeration Basin Upgrade Project. VVWRA respectfully requests that the Lahontan Water Board timely adopt a TSO that contains interim effluent limitations for total nitrogen with which the RWTP can comply while the aeration basins are being upgraded. The TSO should provide VVWRA with one year to complete the Aeration Basin Upgrade Project and achieve compliance with the total nitrogen effluent limitations, while protecting VVWRA from the imposition of mandatory minimum penalties.

VVWRA appreciates this opportunity to provide the above information in support of its request for a TSO. Please contact me at (760) 948-9849 x 110 or lolds@vvwra.com if you have any questions regarding this request.

Sincerely,

Logan Olds
General Manager

cc: Gilbert Perez, Director of Operations VVWRA
Betsy Elzufon, Larry Walker Associates

TOM DODSON & ASSOCIATES
2150 N. ARROWHEAD AVENUE
SAN BERNARDINO, CA 92405
TEL (909) 882-3612 • FAX (909) 882-7015
E-MAIL tda@tdaenv.com

MEMORANDUM

January 6, 2013

From: Tom Dodson

To: Logan Olds

Subj: Categorical exemption package for the VVWRA Aeration Basin Energy Efficiency Project

At your request, Tom Dodson & Associates has reviewed the possibility of adopting a Categorical Exemption (CE) as the appropriate environmental determination to comply with the California Environmental Quality Act (CEQA) for the Victor Valley Wastewater Reclamation Authority (VVWRA) "Aeration Basin Energy Efficiency Project." VVWRA presently receives wastewater from customers located in the Victor Valley. The sewage is delivered to the Westside Water Reclamation Plant (WRP). The existing aeration basins are located within the Westside WRP facility and currently function as a fully integrated system supporting wastewater treatment at the WRP.

The proposed Aeration Basin Energy Efficiency Project consists of modifications to existing aeration basin facilities and support systems at the Westside WRP in previously disturbed areas. The modifications will augment the oxygen transfer efficiency of the aeration basins; resulting in substantial electrical energy savings and better overall treatment. The modifications will also enhance treatment operations and put VVWRA in a better position to meet permit requirements.

The Aeration Basin Energy Efficiency Project consists of the following proposed modifications to existing facilities:

1. The existing air diffusers in Aeration Basins 1-12 are inefficient and at the end of their useful life. Replace all of the diffuser systems with a modern fine bubble system, such as that manufactured by Aquarius Technologies, Inc.
2. Design the new aeration diffusion system to taper air supply at the end of each basin; thereby reducing oxygen to the anoxic zones and enhancing nitrate removal
3. Add flow meters and motorized butterfly valves to all air drop legs that currently do not have them. This will improve system control.
4. The older, below ground aeration air piping is corroded and leaking. These older pipes will be slip lined with new pipes.
5. The interconnection air piping between Basins 1-8 and 9-12 is too small to allow for backup from the New Blower Building. This interconnections will be upsized so that the blowers from either building could supply all basins.
6. Enlarge the anoxic zones in Basins 1-8. Add baffle walls and additional mixers, as necessary. This will enhance nitrate removal.
7. Add dissolved oxygen probes in Basins 1-8 to enhance system control.
8. Interconnect programmable logic controllers between the Blower Buildings to enhance system control and redundancy.

These improvements will enhance system efficiency and treatment capability, but they will not measurably increase the overall size or capacity of the aeration basins

Categorical exemptions are identified in Section 15300 of the State CEQA Guidelines as *"a list of classes of projects which have been determined not to have a significant effect on the environment and which shall, therefore, be exempt from the provision of CEQA."* To determine whether a project is categorically exempt from CEQA, certain findings must be made for a project to verify that it qualifies for a specific exemption class and that it can appropriately be exempted from the requirement for the preparation of a more detailed environmental document. My analysis of these requirements follows.

The first step in this exemption process is to determine whether a specific project conforms with the criteria outlined in one or more of the exemption classes. After careful review of the various exemption classes, I have concluded and recommend to the VVWRA that the proposed implementation of the Aeration Basin Energy Efficiency Project, meets the criteria for a Class 2 Exemption. Class 2 consists of "Replacement or Reconstruction" of existing structures and facilities where the new facilities will be located on the same site as the facilities replaced and will have substantially the same purpose and capacity as the facility replaced" outlined under Section 15302 of the State CEQA Guidelines. Class 2 exemptions apply to *"Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity."*

The key criteria that are met by this project include:

1. The proposed project enhances safety, efficiency, and treatment operations to ensure that the aeration basins fulfill their role in the WRP treatment process .

2. The proposed aeration basin system will have comparable capacity to that which presently exists when construction is completed and the modified aeration basins will be located on the same site and in the same structures as presently exist at the WRP.

Proceeding with this analysis under the assumption that Aeration Basin Energy Efficiency Project (proposed project) qualifies for a Class 2 exemption, the next, and final, set of criteria to be evaluated for the applicability of this exemption (Section 15300.2) are a set of exception issues, which must be considered for certain exemptions. Although not required for a Class 2 exemption, a review of these exceptions provides additional substantiation that a Categorical Exemption is the appropriate CEQA environmental determination for the proposed project. The exception issues are described in Section 15300.2 of the State CEQA Guidelines and consist of the following issues of concern: locational, cumulative impact, significant effect, scenic highway, hazardous waste sites and historical resource limitations on the use of categorical exemptions. These are addressed below in the order presented in the preceding list.

A. Location: A review of the proposed aeration basin site shows that all of the proposed facilities and related construction disturbance will be located within the existing disturbed area of the Westside WRP. All adjacent land uses consist of existing wastewater reclamation facilities. The aeration basins are located on a totally man-made, engineered site. No fundamental operations or functions will change as a result of the proposed project, but the modified aeration basins will be more efficient and effective at meeting the treatment requirements of the WRP. Since the site specific physical changes in the environment will occur within a previously engineered or disturbed areas, no site specific locational impacts are forecast to result from implementing the proposed project.

B. Cumulative Impact: The purpose of installing the modifications to the aeration basins is to provide more efficient and effective wastewater treatment at the Westside WRP. This is a highly site specific facility improvement that will not alter the capacity of VVWRA operational activity. Thus, the proposed project has no potential to contribute to any cumulatively considerable effects if implemented. Based on higher treatment efficiency and effectiveness, the modified aeration basins will reduce the demand for electricity, which would reduce VVWRA's cumulative demand for power. There would be no cumulative effects from the project's implementation.

C. Significant Effect: Installation of the aeration basin modifications has no known potential significant adverse environmental effects associated with its implementation. The whole of the project area, temporary and permanent areas of disturbance, is already engineered and disturbed. Therefore, no significant adverse environmental effects are forecast to result from project implementation at the proposed project site.

D. Scenic Highway: There are no scenic roadways in proximity to the project site. Therefore, no potential to adversely affect scenic resources near such highways can occur from implementing the proposed project.

E. Hazardous Waste Sites: A review of known contaminated sites indicates no known locations with contamination at the Westside WRP project site. Wastewater is obviously handled within the WRP, but the proposed aeration basin modifications will not affect or be affected by the transport of hazardous

materials. Thus, this issue does not pose a significant hazard to construction employees or facility operators.

F. Historical Resources: As noted above, the whole WRP project site, including the aeration basins have been previously disturbed with the construction and operation activities at the existing WRP. Thus, no historical resources with any integrity or value can remain on the project site.

Based on the evaluation presented above, it is my recommendation that the proposed Aeration Basin Energy Efficiency Project qualifies for a Categorical Exemption, Class 2. Therefore, when the VVWRA is ready to approve this project for implementation (construction contract or budget), I recommend noticing it as Categorically Exempt from CEQA for the reasons outlined above and have the VVWRA adopt and file the attached Notice of Exemption with the San Bernardino County Clerk of the Board when the Agency makes a decision on the project. This will initiate a 35-day statute of limitations for anyone seeking to challenge the project in court. If you have any questions, please do not hesitate to give me a call.

Tom Dodson

Attachment

NOTICE OF EXEMPTION

To: San Bernardino County
Clerk of the Board
385 North Arrowhead Avenue
San Bernardino, CA 92415

From: Victor Valley Wastewater
Reclamation Authority (VVWRA)
15776 Main Street, Suite 3
Hesperia, CA 92345

Project Title: Aeration Basin Energy Efficient Project

Project Location: The proposed site modifications are located at the end of Shay Road within the boundary of the Westside Water Reclamation Plant (WRP), which is located located at 20111 Shay Road in the City of Victorville, San Bernardino County, California.

Project Location - City: City of Victorville

Project Location - County: San Bernardino

Description of Nature, Purpose, and Beneficiaries of the Project: The proposed Aeration Basin Energy Efficiency Project consists of modifications to existing aeration basin facilities and support systems at the Westside WRP in previously disturbed areas. The modifications will augment the oxygen transfer efficiency of the aeration basins; resulting in substantial electrical energy savings and better overall treatment. The modifications will also enhance treatment operations and put VVWRA in a better position to meet permit requirements.

Name of Public Agency Approving Project: Victor Valley Wastewater Reclamation Authority

Name of Person or Agency Carrying Out Project: Victor Valley Wastewater Reclamation Authority

Exempt Status: (Check One)

___ Ministerial (Sections 21080(b)(1); 15268)
___ Declared Emergency (Sections 21080(b)(3); 15269(a))
___ Emergency Project (Sections 21080(b)(4); 15269(b))
✔ Categorical Exemption (Sections 21084; 15302(c))

Reasons why project is exempt: The State CEQA Guidelines provide a series of categorical exemptions for projects that have been deemed to have minimal impacts on the environment. The proposed modifications to the Westside WRP aeration basins has been determined to have no potential to cause significant adverse effects on the environment and will ensure that the ongoing treatment of wastewater to the Westside WRP will continue without any major failures and with greater efficiency and effectiveness. Categorical Exemption Class 2 exempts *"replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced, including but not limited to....(c) Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity."* Although not required for Class 2 exemptions, the exceptions to the issuance of categorical exemptions have been evaluated for the proposed project activities to further substantiate that a Class 2 exemption is the appropriate CEQA environmental determination for the proposed project. The proposed modification to the Westside WRP aeration basins has been determined **not** to have a potential to cause significant adverse environmental effects as a result of any of the exceptions. Therefore, this proposed action is **not** forecast to cause any potential for significant adverse environmental impacts and qualifies with the requirements for Class 2 Exemption.

Lead Agency Contact Person: Logan Olds Telephone: (760) 948-9849

Signature: _____ Title: General Manager Date: _____

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ENCLOSURE 3

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Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California
Administrative Offices
15776 Main Street, Suite 3, Hesperia, CA 92345
Telephone: (760) 948-9849
Fax: (760) 948-9897
e-mail: mail@vvwra.com

12/57 JM

December 11, 2013

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

SUBJECT: INFEASIBILITY ANALYSIS AND COMPLIANCE SCHEDULE JUSTIFICATION IN SUPPORT OF A TIME SCHEDULE ORDER FOR THE VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY REGIONAL WASTEWATER TREATMENT PLANT

Dear Mr. Morales:

The Victor Valley Wastewater Reclamation Authority (VVWRA) respectfully submits this request for a proposed time schedule order (TSO) with respect to final effluent limitations for ammonia as nitrogen (ammonia-N) specified in Order No. R6V-2013-0038 (NPDES Permit No. CA0102822 and WDID No. 6B360109001) for the VVWRA Regional Wastewater Treatment Plant (RWTP). Justifications to support our request for a TSO for ammonia-N are provided below.

Justification for TSO for Ammonia

The final effluent limitations for ammonia-N in VVWRA's NPDES permit are 0.54 mg/L as a monthly average and 1.6 mg/L as a daily maximum. Although the RWTP can currently achieve compliance with these effluent limitations, the scheduled upcoming Aeration Basin Upgrade Project (which is necessary for continued future compliance) is expected to cause a temporary increase in ammonia-N concentrations. Without establishment of a TSO, the RWTP is at risk of violating the ammonia-N effluent limitations and being subject to the imposition of mandatory minimum penalties during the upgrade.

The infeasibility analysis and TSO justification provided here are intended to assist the Lahontan Regional Water Quality Control Board (Lahontan Water Board) in making the findings necessary to issue a TSO that protects VVWRA from mandatory minimum penalties that would otherwise be assessed pursuant to Water Code Section 13385. The Lahontan Water Board must find that the final effluent limitation is a new and/or more stringent limit, and that new or modified control measures cannot be designed, installed and put into operation within 30 calendar days (Water Code, §13385(j)(3)(B)(i)). Further, the Lahontan Water Board is required to establish a time schedule for bringing the discharge into compliance that is as short as possible, establish interim

requirements if the time schedule exceeds one year from the effective date of the order, and require the discharger to prepare and implement a pollution prevention plan (Water Code, § 13385(j)(3)).

The Aeration Basin Upgrade Project consists of the following main actions:

- Replace existing air diffusers in Aeration Basins 1-12 (which are inefficient and at the end of their useful life) with a modern fine bubble system with a tapered air supply at the end of each basin;
- Slip-line old, below-ground aeration air piping (which is corroded and leaking) with new pipes;
- Upsize the interconnection air piping between Basins 1-8 and 9-12 (which is too small to allow for backup from the New Blower Building) so that blowers from either blower building can supply all basins.
- Enlarge the anoxic zones in Basins 1-8 to enhance nitrate removal;
- Add dissolved oxygen probes, flow meters, and motorized butterfly valves (where necessary) to enhance and improve system control.

The Aeration Basin Upgrade Project is estimated to require seven (7) months to complete, which is longer than 30 calendar days. During that time, ammonia-N concentrations are expected to increase to levels seen before aeration basins 9 through 12 began operation, due to aeration basins being temporarily removed from operation. After completion of the project, concentrations of ammonia-N are expected to decrease to current levels or below, thus the RWTP will resume compliance with the ammonia-N effluent limits within one calendar year of the start of the project.

Effluent Limitation Attainability and Infeasibility Analysis

Effluent Data Summary

The Aeration Basin Upgrade Project is expected to remove about 1/3 of the 12 aeration basins from operation (at a time) until the upgrades are completed. With 1/3 of the aeration basins unavailable, ammonia-N concentrations may increase to levels measured prior to 2007 due to diminished nitrification/denitrification capability. Therefore, effluent concentrations of ammonia-N measured during 2004-2006 (the time period prior to the first operation of Aeration Basins 9 through12) were used to predict the concentrations likely to occur during the Aeration Basin Upgrade Project, as described below.

Ammonia-N concentrations analyzed in effluent between 2004 and 2006 are shown in Figure 1 below.

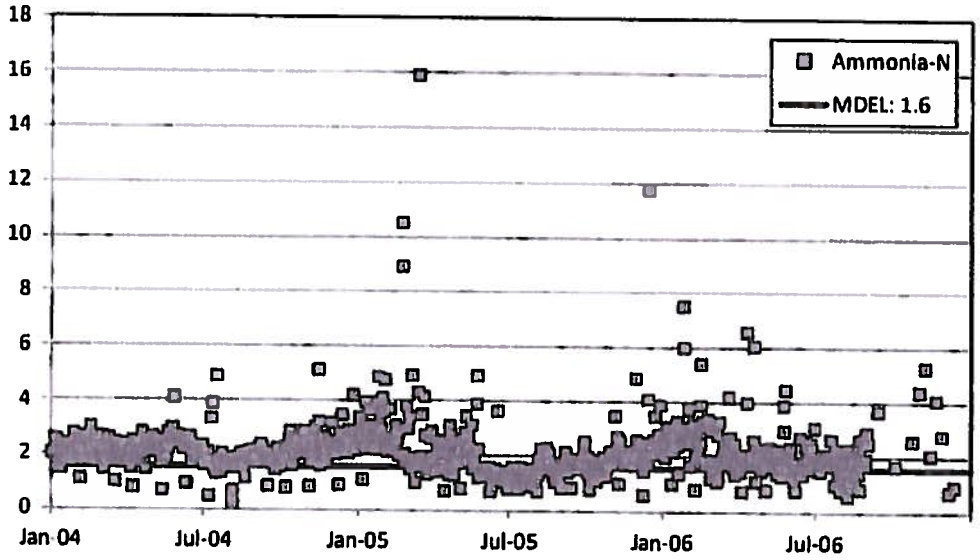

Figure 1. 2004-2006 Daily Effluent Ammonia-N Concentrations with MDEL

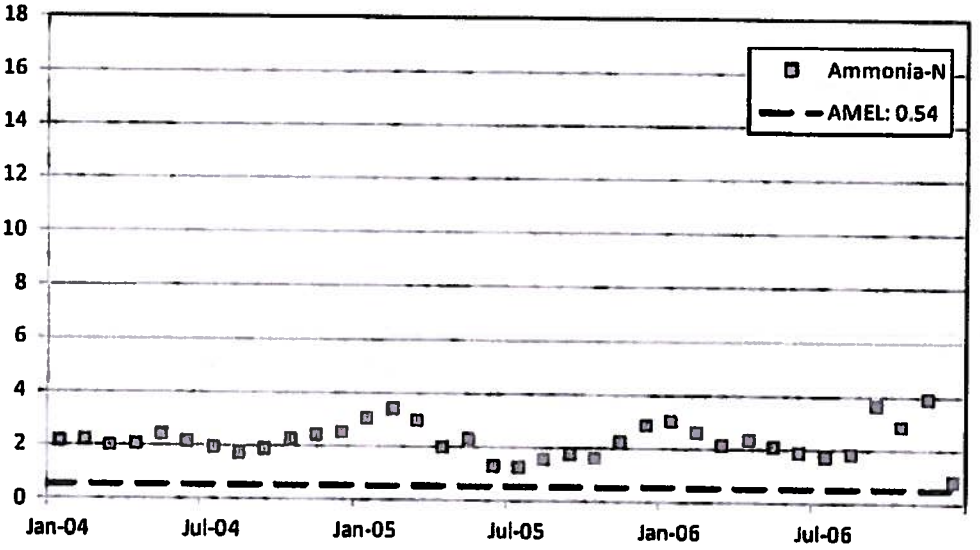

Figure 2. 2004-2006 Monthly Average Effluent Ammonia-N Concentrations with AMEL

A review of the effluent ammonia-N concentrations over the period of 2004 to 2006 indicates that the RWTP will not be able to consistently comply with the effluent limitations for ammonia-N during the Aeration Basin Upgrade Project. **Table 1** compares the effluent limitations to the statistics calculated from ammonia-N data from 2004 and 2006.

Table 1: NPDES Permit Effluent Limitations and Observed Concentrations for Ammonia-N

	Average	Maximum	Effluent Limit
Daily	2.2	15.9	0.54
Monthly	2.3	3.9	1.6

As shown in **Table 1**, VVWRA is not likely to be able to comply with the effluent limitations for ammonia-N during the Aeration Basin Upgrade Project. All 36 of the monthly average ammonia-N effluent concentrations measured between 2004-2006 data were above the average monthly effluent limit of 0.54 mg/L. Five hundred and twenty (520) or 77% of the effluent concentrations were above the maximum daily effluent limit of 1.6 mg/L.

The best-fit regression lines produced by the average monthly and daily values predict a 0% and 28% probability of compliance with the average monthly and maximum daily effluent limitations, respectively. Therefore, the VVWRA RWTP will be unable to consistently comply with the proposed effluent limitations for ammonia-N during the Aeration Basin Upgrade Project and will be at risk of non-compliance 100% and 72% of the time, respectively.

Source Control And Pollution Prevention Efforts

The sources of ammonia to the RWTP are from human waste and are considered uncontrollable. Therefore, VVWRA will not be able to perform any effective source control or pollution prevention efforts to reduce influent concentrations of ammonia-N in the effluent during the Aeration Basin Upgrade Project.

Schedule for Compliance

The Aeration Basin Upgrade Project will be completed within one year, therefore a compliance schedule with interim requirements and dates for achievement is not required (Water Code, §13385(j)(3)(B)(iii)).

Interim Limits Calculation

The daily and average monthly ammonia-N effluent datasets from 2004-2006 are log-normally distributed, therefore the proposed interim limits for ammonia-N were calculated from the log-normal best-fit regression lines as the average plus 3 times the standard deviation, as shown in **Table 2**. This exceedance frequency corresponds to the 99.87th percentile of the data set, and the need for this interim effluent limit would be for a relatively short period of time.

Table 2. Interim Limits for Ammonia-N During Aeration Basin Upgrade Project

	Monthly	Daily
# Data points	36	678
% Detected	100%	100%
Standard deviation	0.66	1.1
Average	2.3	2.2
Best-fit regression equation	LN(y) = 0.7738 + 0.3196*Z	LN(y) = 0.6974 + 0.3996*Z
Interim Limits	5.7	6.7

Summary

This evaluation indicates that compliance with the final effluent limitations for ammonia-N will not be feasible for the RWTP during the Aeration Basin Upgrade Project. VVWRA respectfully requests that the Lahontan Water Board timely adopt a TSO that contains interim effluent limitations for ammonia-N with which the RWTP can comply while the aeration basins are being

upgraded. The TSO should provide VVWRA with one year to complete the Aeration Basin Upgrade Project and achieve compliance with the ammonia-N effluent limitations, while protecting VVWRA from the imposition of mandatory minimum penalties.

VVWRA appreciates this opportunity to provide the above information in support of its request for a TSO. Please contact me at (760) 948-9849 x 110 or lolds@vvwra.com if you have any questions regarding this request.

Sincerely,

Logan Olds
General Manager

cc: Gilbert Perez, VVWRA
Betsy Elzufon, Larry Walker Associates

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ENCLOSURE 4

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6B360109001

Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California
Administrative Offices
15776 Main Street, Suite 3, Hesperia, CA 92345
Telephone: (760) 948-9849
Fax: (760) 948-9897
e-mail: mail@vvwra.com

3/76 JM
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BY:

March 11, 2014

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

SUBJECT: NUTRIENTS IMPACT ASSESSMENT RELATED TO AERATION BASIN UPGRADE PROJECT AT THE VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY REGIONAL WASTEWATER TREATMENT PLANT

Dear Mr. Morales:

The Victor Valley Wastewater Reclamation Authority (VVWRA) respectfully submits this nutrient impact assessment related to the proposed Aeration Basin Upgrade Project at the VVWRA Regional Wastewater Treatment Plant (RWTP). The nutrient impact assessment was performed in response to a request by the Lahontan Regional Water Quality Control Board (Lahontan Water Board) for additional water quality information that supports the issuance of a proposed time schedule order (TSO) with respect to final effluent limitations for total nitrogen and total ammonia as nitrogen (ammonia-N) specified in Order No. R6V-2013-0038 (NPDES Permit No. CA0102822 and WDID No. 6B360109001) for the VVWRA RWTP.

Background

Time Schedule Order Request

The final effluent limitations for total nitrogen in VVWRA's NPDES permit are 10.3 mg/L as a monthly average and 12.3 mg/L as a daily maximum. The final effluent limitations for ammonia-N are 0.54 mg/L as a monthly average and 1.6 mg/L as a daily average. Although the RWTP can currently achieve compliance with these effluent limitations, the scheduled upcoming Aeration Basin Upgrade Project (Project), which is necessary for continued future compliance, is expected to cause a temporary increase in nitrate and ammonia concentrations in RWTP effluent, resulting in elevated total nitrogen concentrations. Without establishment of a TSO, the RWTP is at risk of violating its total nitrogen effluent limitations (for discharge to percolation ponds and the Mojave River) and total ammonia effluent limitations (for discharge to the Mojave River), and being subject to the imposition of mandatory minimum penalties during the upgrade.

The Project is estimated to require 12 months (April 2014 – March 2015) to complete and will result in various upgrades to VVWRA's 12 aeration basins. During that time, nitrate-N and ammonia-N concentrations, and hence, total nitrogen concentrations, are expected to increase to levels seen before aeration basins 9 through 12 began operation, due to aeration basins being temporarily removed from operation. After completion of the project, concentrations of nitrate-N

and ammonia-N are expected to decrease to current levels or below, thus allowing the RWTP to resume compliance with final effluent limitations for the specified nitrogen-containing parameters within one calendar year of the start of the project.

Historical and Existing Effluent and Receiving Water Quality

The Project will result in reduced nitrification-denitrification of RWTP effluent for approximately 12 months while groups of aerations basins are taken offline for the purpose of upgrading them, and then brought back online and tested. The total nitrogen, nitrate-N, and ammonia-N effluent concentrations anticipated for RWTP effluent are those that were historically observed prior to treatment plant process upgrades in 2009 that improved nitrification and added denitrification in a direct effort to lower nitrogen levels to meet effluent limitations. For the purpose of the current impact assessment, RWTP effluent quality for the three nitrogen-containing parameters observed from January 2004 through December 2006 are used to characterize RWTP effluent quality anticipated during the Project (see **Table 1**). Nutrient concentrations measured in RWTP effluent from January 2011 through December 2013 are used to characterize current effluent quality, as shown in **Table 1**.

Table 1: Historical and Current RWTP Effluent Quality for Three Nitrogen-Containing Constituents.

Averaging Period	Constituent	Historical: 2004 – 2006		Current: 2011 – 2013	
		Avg.	Max.	Avg.	Max.
Daily	Nitrate-N	9.40	16.00	5.99	11.00
	Ammonia-N	2.19	15.90	0.15	3.20
	Est. Total Nitrogen[1]	12.73	25.47	7.13	11.40
Monthly	Nitrate-N	9.48	13.50	6.01	7.70
	Ammonia-N	2.26	3.92	0.21	1.16
	Est. Total Nitrogen	12.34	17.19	7.14	9.15

1. Total nitrogen was not measured during the 2004 – 2006 time period. However, measured ammonia-N and nitrate-N concentrations (2004 – 2006) were added to nitrite-N and calculated organic nitrogen concentrations from a VVRWA Nitrogen Study conducted between October and December 2006 estimate total nitrogen concentrations for the historical period.

Because the RWTP is permitted to discharge treated and disinfected effluent to both onsite percolation ponds and the Mojave River, VVWRA is required to monitor groundwater quality related to its percolation pond discharges and Mojave River ambient water quality related to its surface water discharges. Of importance to the current analysis are nitrate-N concentrations measured in the groundwater beneath the percolation ponds and nitrate-N and ammonia-N concentrations measured in the Mojave River upstream of the RWTP discharge (see **Table 2**). It is important to note that the Mojave River is typically dry upstream of VVWRA's discharge between the Lower Narrows and VVWRA. Therefore, the Mojave River at the point of the VVWRA discharge is best characterized as an effluent-dependent water body. Even when there is surface flow just upstream of the VVWRA discharge, detected concentrations of nitrate-N (as measured at RSW-001) are observed in less than 30 percent of the analyses performed, and ammonia-N concentrations at RSW-001 are almost always non-detect (see **Table 2**). To this end, the most critical condition in the Mojave River occurs when there is no upstream flow to dilute constituents contained in the RWTP effluent, which is the predominant condition observed for the discharge.

Table 2: Receiving Water Quality Associated with VVWRA RWTP Discharge

Constituent	Receiving Water	Percent Detection	Avg. Concen. (mg/L)
Nitrate-N	Groundwater	100	7.04[1]
	Mojave River at RSW-001	28.6	0.19[2]
Ammonia-N	Mojave River at RSW-001	4.8	---[3]

1. Average nitrate-N concentration for monitoring wells SP-1 through SP-4 measured during July 2009 through December 2011.
2. Average Nitrate-N concentration from January 2007 through July 2012 calculated using data collected as part of VVWRA's self-monitoring and reporting program and the Mojave River Characterization Study.
3. Ammonia-N concentrations at RSW-001 are less than 5% detected and summary statistics cannot be calculated. Ammonia-N concentrations are typically determined to be non-detect at a reporting limit of 0.10 mg/L.

Average monthly RWTP discharge flow rates to the percolation ponds have increased just less than 15 percent between the historical (January 2004 – June 2006) and current (January 2011 – December 2013) periods under consideration, while flow rates to the Mojave River have increased just over 22 percent, as shown in
Table 3. The observed increases in discharge rates coincide with an increase in the RWTP's permitted flow to the Mojave River from 8.3 to 14.0 million gallons per day (mgd) that occurred in 2008 to accommodate growth in VVWRA's service area.

Table 3: Comparison of VVWRA RWTP Average Monthly Discharge Flow Rates to Percolation Ponds and Mojave River between Historical and Current Conditions

	Average Monthly Flow Rate (mgd)		
Discharge Point	Jan 2004 – Jun 2006	Jan 2011 – Dec 2013	Percent Increase
Percolation Ponds	4.23	4.86	14.9
Mojave River	7.23	8.85	22.4

Nutrient Impact Assessment

Nitrate

Estimated Groundwater Impact

The proposed temporary discharge of effluent containing increased nitrate-N concentrations (average monthly concentration estimated to increase from 6.01 mg/L as N to 9.48 mg/L as N; see **Table** 1) to VVWRA percolation ponds for the anticipated 12-month duration of the proposed Project will not result in groundwater concentrations exceeding the Title 22 Primary MCL of 10 mg/L for nitrate-N, nor will it result in any long-term degradation of groundwater with respect to nitrate-N. A groundwater antidegradation analysis conducted by VVWRA in 2012 revealed that the treatment processes upgrades implemented in 2009 to improve nitrification and add denitrification of RWTP effluent showed decreases in nitrate-N levels in groundwater within six to nine months after the upgrades, indicating a quick response in measured groundwater concentrations to changes in effluent concentrations (VVWRA, 2012). However, a more recent groundwater antidegradation analysis performed by the City of Victorville to estimate impacts of its future discharge to VVWRA's southern percolation ponds

showed that modeled average groundwater concentrations in the aquifer beneath the ponds will take many decades to approach the concentration of the effluent discharged to them (Victorville, 2013). Additionally, the 2013 study showed that the impact to groundwater beneath the percolations ponds attenuates moving outward from the center of the ponds, indicating that most degradation occurs within and adjacent to the RWTP.

With regard to the proposed Project, it is anticipated that the temporary discharge of RWTP effluent to the percolation ponds having an average monthly nitrate-N concentration of 9.48 mg/L would cause the nitrate-N concentration in the groundwater beneath the ponds to increase to a concentration less than 9.48 mg/L. The temporary increase in average nitrate-N concentrations in the groundwater beneath the percolation ponds would not exceed the Title 22 Primary MCL of 10 mg/L for the parameter, nor would it cause any long-term degradation to the groundwater. Once the aeration basin upgrades are complete in about 12 months, the average monthly nitrate-N concentration of RWTP effluent discharged to the ponds will return to approximately 6.0 mg/L. It is anticipated that the return of the average nitrate-N concentration in the groundwater beneath the percolation ponds to its current background level (7.04 mg/L as N) will occur within six to nine months after completion of the proposed Project.

Estimated Surface Water Impact

As discussed above, the worst case water quality condition for VVWRA's discharge to the Mojave River occurs when there is no upstream flow in the water body, and hence the river downstream of the discharge is an effluent-dependent water body. In the absence of upstream diluting flows, the concentration of parameters in the river downstream of the discharge equals the concentration of those parameters in the effluent. To this end, the average monthly concentration of nitrate-N in the river downstream of the discharge during the 12-month duration of the proposed Project is estimated to be 9.48 mg/L. The temporary increase in average nitrate-N concentrations in the effluent and receiving water would not exceed the Title 22 Primary MCL of 10 mg/L for the parameter, nor would it cause any long-term degradation in the Mojave River downstream of the discharge. Once the aeration basin upgrades are complete in about 12 months, the average monthly nitrate-N concentration of RWTP effluent discharged to the Mojave Rive will return to approximately 6.0 mg/L.

Ammonia

Estimated Surface Water Impact

As is the case with the estimated surface water impact for nitrate-N described above, the worst case water quality condition with respect to ammonia-N occurs when there is no flow in the Mojave River upstream of the VVWRA discharge. The average daily and maximum daily concentrations of ammonia-N in the river downstream of the discharge during the 12-month duration of the proposed Project are estimated to be 2.19 mg/L and 15.9 mg/L, respectively. The average monthly and maximum monthly concentrations of ammonia-N to be discharged to the river during the proposed Project are estimated to be 2.26 mg/L and 3.92 mg/L, respectively.

Using the formulas to calculate water quality objectives for ammonia that are provided in Chapter 3 of the Basin Plan, along with paired pH and temperature measurements observed in RWTP effluent, the Lahontan Water Board calculated a 1-hour acute criterion for total ammonia of 4.7 mg/L as N (equivalent to 5.6 mg/L) when developing water quality based effluent limitations for VVWRA's 2013 NPDES Permit (Order No. R6V-2013-0038). The Lahontan Water Board also calculated a 4-day chronic criterion for total ammonia of 0.79 mg/L as N (equivalent to 0.95 mg/L). The projected effluent concentrations for ammonia-N discharged to

the Mojave River during the proposed Project (see **Table 1**) are anticipated to intermittently exceed the acute Basin Plan objective for ammonia, and routinely exceed the 4-day chronic objective. Based on toxicity testing results generated during the period 2004 to 2006 it is possible that the effluent discharged to the river under the proposed project occasionally may show some toxicity.

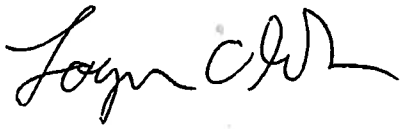
VVWRA's request to the Lahontan Water Board to issue interim effluent limitations for the RWTP discharge during the 12-month period of the proposed Project will establish an enforceable ceiling to limit degradation to the receiving water until compliance with final effluent limitations can be achieved. Additionally, the temporary increase in ammonia-N concentrations in the effluent will not cause any long-term degradation in the Mojave River downstream of the discharge. Once the aeration basin upgrades are complete in about 12 months, the average daily ammonia-N concentration of RWTP effluent discharged to the Mojave Rive will return to approximately 0.15 mg/L.

Summary

The proposed Aeration Basin Project is necessary to ensure future compliance with total nitrogen and ammonia-N effluent limitations specified in Order No. R6V-2013-0038 (NPDES Permit No. CA0102822 and WDID No. 6B360109001) for the VVWRA RWTP. The proposed Project will result in temporary increases in nitrate-N and ammonia-N concentrations, and hence total nitrogen concentrations in RWTP effluent for the 12-month duration of the Project. The temporary increase in average nitrate-N concentrations in the groundwater beneath the VVWRA percolation ponds and in the Mojave River will not exceed the Title 22 Primary MCL of 10 mg/L for the parameter, nor will they cause any long-term degradation to the groundwater or surface water, respectively. Increased ammonia-N concentrations in RWTP effluent are anticipated to intermittently exceed the 1-hour acute criterion (4.7 mg/L as N) calculated for ammonia-N and routinely exceed the 4-day criterion (0.79 mg/L as N). However, the Lahontan Water Board's granting of interim effluent limitations for both total nitrogen and ammonia-N will establish an enforceable ceiling to limit degradation to both groundwater and surface water until compliance with final effluent limitations can be achieved once aeration basin upgrades are completed.

VVWRA appreciates this opportunity to provide the above information in support of its request for a TSO. Please contact me at (760) 948-9849 x 110 or lolds@vvwra.com if you have any questions regarding this request.

Sincerely,



Logan Olds
General Manager

cc: Gilbert Perez, Utilities Director, VVWRA
Betsy Elzufon, Larry Walker Associates

References

City of Victorville Water District (Victorville). (2013). *Antidegradation Analysis for Proposed Land Discharge for City of Victorville Industrial Wastewater Treatment Plant*. October.

Victor Valley Wastewater Reclamation Authority (VVWRA). (2012). *Draft Technical Memorandum: Anti-Degradation Analysis – Groundwater Focus, March 23*. Prepared by Luhdorff & Scalmanini Consulting Engineers. March.

ENCLOSURE 5

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California Water Boards

Edmund G. Brown Jr. Governor

Matthew Rodriquez Secretary for Environmental Protection

Lahontan Regional Water Quality Control Board

March 7, 2014

WDID NO. 6B360109001

Logan Olds, General Manager
Victor Valley Wastewater Reclamation Authority
15776 Main Street, Suite 3
Hesperia, CA. 92345

REQUEST FOR COMMENTS – PROPOSED TIME SCHEDULE ORDER - VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY – VICTORVILLE, SAN BERNARDINO COUNTY

The California Regional Water Quality Control Board, Lahontan Region (Water Board) intends to issue a Time Schedule Order on or about April 15, 2014. The Water Board is requesting your review and comments upon the proposed Order (enclosed). A public review announcement is also posted on the Water Board's website at:
http://www.waterboards.ca.gov/lahontan/

All comments regarding the proposed Time Schedule Order must be received by the Water Board by **April 7, 2014, 5:00 p.m.** Please send your comments to:
John Morales, Water Resources Control Engineer
Lahontan Regional Water Quality Control Board
14440 Civic Drive, Suite 200
Victorville, CA 92392

The proposed Time Schedule Order establishes interim effluent limitations for ammonia and total nitrogen at the Victor Valley Wastewater Reclamation Authority's Regional Plant. The interim limits affect both Board Orders No. R6V-2012-0058 and R6V-2013-0038.

If you have questions or comments regarding this matter, please contact John Morales at (760) 241-7366, jmmorales@waterboards.ca.gov or Jehiel Cass, Senior Engineer, at (760) 241-2434, jcass@waterboards.ca.gov.

MIKE PLAZIAK, P.G.
SUPERVISING ENGINEERING GEOLOGIST

cc: Sean McGlade, City of Victorville
Manuel Benitez, San Bernardino County Sanitation Districts
Kimberly Cox, Helendale Community Service District
Thomas Thornton, City of Adelanto
Curt Mitchell, City of Barstow
Betsy Elzufon, Larry Walker & Associates

Enclosure: Time Schedule Order No. R6V-2014-(PROPOSED)

R:/ Public / Enforcement Orders 2014 / VVWRA TSO/ Request for Comments

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ENCLOSURE 6

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6336010900

Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California
Administrative Offices
15776 Main Street, Suite 3, Hesperia, CA 92345
Telephone: (760) 948-9849
Fax: (760) 948-9897
e-mail: mail@vvwra.com

3/15 JM
RECEIVED
MAR 27 2014
BY:

March 18, 2014

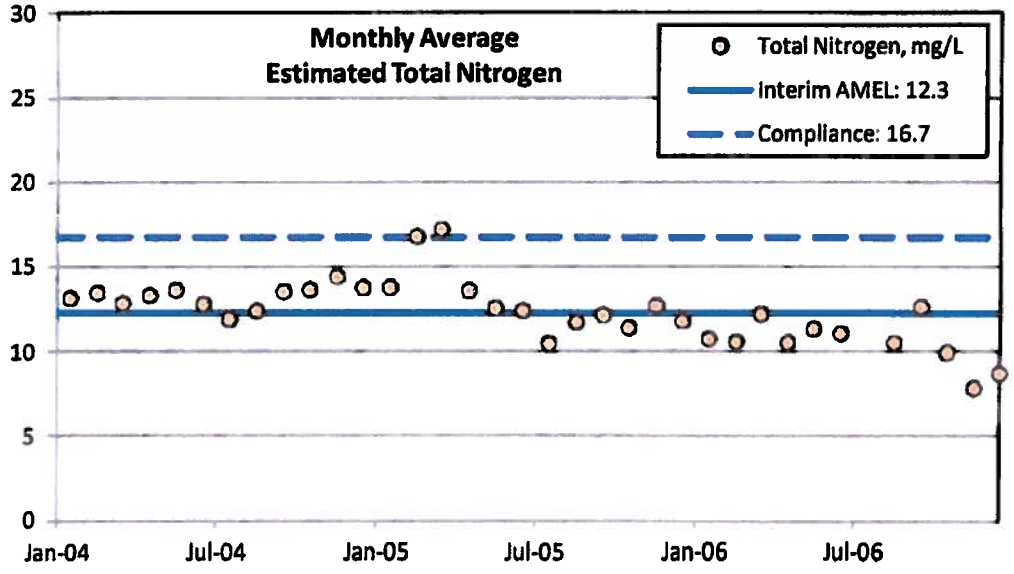
John Morales P.E., Water Resources Control Engineer
Lahontan Regional Water Quality Control Board
14440 Civic Drive, Suite 200
Victorville, CA 92392

Subject: Proposed Time Schedule Order for VVWRA Aeration Basin Upgrade Project

Dear John,

We have reviewed the Tentative Time Schedule Order issued on March 7, 2014 and we appreciate your timely response to our requests for a compliance schedule and interim effluent limits for total nitrogen and ammonia as described in our letters of November 15, 2013 and December 11, 2013. Review of the proposed interim limits indicates that VVWRA may have difficulty complying with the proposed interim average monthly effluent limit for total nitrogen.

In VVWRA's November 15th letter, VVWRA requested an interim effluent limit for total nitrogen of 25 mg/L based on the maximum observed value or 20 mg/L based on the 99.87th percentile value. This was based on daily values. This was based on a daily average. Therefore, the proposed MDEL of 25.5 mg/L should be adequate to ensure compliance during the aeration basin upgrade project. However, we did not specifically request a monthly average interim limit and the proposed AMEL of 12.3 may result in exceedances as shown in Figure 1. Therefore, VVWRA would request an AMEL of 16.7 mg/L. An alternative would be to only include a MDEL as an interim limit.



The interim limits proposed for ammonia are as requested in VVWRA's letter of December 11, 2013.

There is also an error in the Order No. referenced for the WDR in the paragraph on Total Nitrogen in Finding #6 on p. 3 of the Tentative Order. The following edits to that paragraph are requested to correct this and address the AMEL issue discussed above.

> '...From these two approaches, the Discharger requests an interim limit for total nitrogen of 25.5 mg/L as a maximum daily effluent limit (MDEL) and an average monthly effluent limit (AMEL) of ~~12.3~~ 16.7 mg/L. These limits would apply to both Board Orders No. ~~R6V-2013-0038~~ R6V-2012-0058 (WDR) and R6V-2013-0038 (NPDES).'

In addition, the value for the AMEL for total nitrogen should be changed to 16.7 mg/L in Tables 4 and 5 of the Tentative Order and the corresponding mass limit in Table 4 should be changed to 1950 lb/day.

Finally, in Provision 2.B.a., the due date for the last quarterly progress report should be changed from May 1, 2016 to May 1, 2015.

Again, we appreciate your timely response to our request. Please, feel free to contact me should you have additional questions or concerns.

Sincerely,

Logan Olds
General Manager

ENCLOSURE 7

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Morales, John@Waterboards

From: Cass, Jehiel@Waterboards
Sent: Thursday, April 10, 2014 2:42 PM
To: betsye@lwa.com; Logan Olds; Morales, John@Waterboards
Cc; Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Booth, Richard@Waterboards
Subject: RE: VVWRA TSO

Betsy – I think we are in agreement regarding what the TSO would allow. I am trying to understand the effect of the proposed discharge for ammonia on receiving water WARM beneficial uses – discounting the COLD BU. My thought was to compare the assumed WARM average ammonia objective for both wet (winter) and dry (summer) seasons with the proposed interim limit and see whether you would be over or under those theoretical average objectives.

Regards- Jay

****

Jehiel (Jay) Cass
Senior Water Resources Control Engineer
South Lahontan Regulatory Unit
CA Regional Water Quality Control Board
Lahontan Region (6B)
14440 Civic Dr., Ste 200
Victorville CA 92392
phone: (760) 241-2434
fax: (760) 241-7308
email: jcass@waterboards.ca.gov
web: http://www.waterboards.ca.gov/lahontan/
****

Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations."
****

From: Betsy Elzufon [mailto:BetsyE@lwa.com]
Sent: Thursday, April 10, 2014 2:28 PM
To: Logan Olds; Cass, Jehiel@Waterboards; Morales, John@Waterboards
Cc: Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Booth, Richard@Waterboards
Subject: Re: VVWRA TSO

Jay,
I feel compelled to repeat that an interim effluent limit can and usually does exceed water quality objectives because that is the reason for getting an interim limit. If the effluent limit was not going to exceed water quality objectives, an interim limit and compliance schedule would not be needed. It is okay for this exceedance to occur as long as the discharger has shown that they have a plan to come into compliance and that the schedule to come into compliance is as short as practicable.

You are right that this may result in an exceedance of a water quality objective in the receiving water but the Regional Board has discretion in how they handle such an exceedance (specifically receiving water exceedances are not subject to Mandatory Minimum Penalties).

All that being said, I will have someone here look at the WARM equations and what the resulting effluent limits would be.

Betsy

From: Logan Olds <lolds@vvwra.com>
Date: Thu, 10 Apr 2014 13:07:31 -0700
To: "Cass, Jehiel@Waterboards" <jehiel.cass@waterboards.ca.gov>, Betsy Elzufon <BetsyE@iwa.com>, "Morales, John@Waterboards" <john.morales@waterboards.ca.gov>
Cc: "Coony, Mike@Waterboards" <mike.coony@waterboards.ca.gov>, "Plaziak, Mike@Waterboards" <mike.plaziak@waterboards.ca.gov>, "Ralph, James@Waterboards" <James.Ralph@waterboards.ca.gov>, "Booth, Richard@Waterboards" <richard.booth@waterboards.ca.gov>
Subject: RE: VVWRA TSO

Okay.....

Thank You

Logan Olds
General Manager

20111 Shay Road
Victorville CA 92394

quot homines tot sententiae

'There are as many opinions as there are men': expressing the fact that there is considerable diversity of opinion, and the difficulty of bringing about agreement.'

From: Cass, Jehiel@Waterboards [mailto:jehiel.cass@waterboards.ca.gov]
Sent: Thursday, April 10, 2014 1:06 PM
To: Logan Olds; betsye@iwa.com; Morales, John@Waterboards
Cc: Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Booth, Richard@Waterboards
Subject: RE: VVWRA TSO

Logan – I think we could not reopen the permit and do as you suggest, unless the COLD fishery beneficial use is removed from the Basin Plan for the VVWRA discharge location. I have recommended that the Water Board develop site specific numerical objectives for the Mojave River downstream of VVWRA, which is an effluent dominated stream. That analysis should also re-examine the appropriate beneficial uses for the water body. This effort is on the official "to-do" list for the Basin Planning Unit, but will not occur during the current triennial review.

Regards- Jay

From: Logan Olds [mailto:lolds@vvwra.com]
Sent: Thursday, April 10, 2014 12:56 PM
To: Cass, Jehiel@Waterboards; betsye@lwa.com; Morales, John@Waterboards
Cc: Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards
Subject: RE: VVWRA TSO

Or can we just redo the permit for the warm fishery ammonia number?

Thank You

Logan Olds
General Manager

20111 Shay Road
Victorville CA 92394

quot homines tot sententiae

'There are as many opinions as there are men': expressing the fact that there is considerable diversity of opinion, and the difficulty of bringing about agreement.'

From: Cass, Jehiel@Waterboards [mailto:jehiel.cass@waterboards.ca.gov]
Sent: Thursday, April 10, 2014 12:59 PM
To: betsye@lwa.com; Morales, John@Waterboards
Cc: Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Logan Olds
Subject: RE: VVWRA TSO

Betsy – The point I discussed with John and our attorney, James Ralph, is that the current ammonia limits set in Order R6V-2013-0038 are to protect the most restrictive beneficial use – a COLD fishery. The Mojave River is also listed as a WARM fishery at this location. The ammonia water quality objectives for WARM fisheries are less restrictive than COLD fisheries.

The reason I asked for the average Mojave River receiving water temperature and pH, during both the cold (Oct 15 – Apr 15) and warm season (Apr 15 Oct 15) is to evaluate what an appropriate average ammonia criteria for a WARM fishery would be for cold and warm seasons.

The Mojave River at this location is at best a WARM fishery and the COLD fishery beneficial use is negligible as I have seen no evidence there are salmonids present. I wondered what would be the results of comparing the average criterion for WARM fisheries to the proposed VVWRA effluent quality that would be discharged during the one year TSO period.

I will be discussing with our attorney tomorrow whether – and how – a TSO can be developed. My hope was that the result of the above analysis could show that the primary beneficial use WARM fishery would still be protected – even with the higher ammonia interim limits.

Regards- Jay

From: Betsy Elzufon [mailto:BetsyE@lwa.com]
Sent: Thursday, April 10, 2014 12:19 PM
To: Morales, John@Waterboards
Cc: Cass, Jehiel@Waterboards; Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Logan Olds
Subject: Re: VVWRA TSO

John,
I talked this over with Logan today and he reminded me that the ammonia and total nitrogen limits in the NPDES permit are indeed 'new and more stringent limits'

R6V-2008-004 contained ammonia limits of 0.8 mg/L as an AMEL and 1.5 mg/L as an MDEL. The new permit has ammonia limits of 0.54 mg/L as an AMEL and 1.6 mg/L as an MDEL. The more stringent AMEL is the reason that VVWRA is upgrading its aeration basins.

In addition, the previous permit had an effluent limit for Nitrate while the new permit has an effluent limit for Total Nitrogen so the Total Nitrogen limit is new.

Therefore, the justification under 13385(j)(3)(B)(i) that the effluent limit is a new, more stringent or modified regulatory requirement...' should apply since it is the new limits adopted in the permit and the concern that the current operation will not result in consistent compliance with those limits that are the reason for the upgrade.

I think that is the piece of information we were missing in our conversation yesterday. As for the interim limit – it needs to be based on projected performance as requested in our previous communication. I don't think looking at different ph and temperature regimes for recalculating the ammonia limit will provide the relief needed.

Betsy

From: "Morales, John@Waterboards" <john.morales@waterboards.ca.gov>
Date: Wed, 9 Apr 2014 16:27:52 -0700
To: Betsy Elzufon <BetsyE@lwa.com>
Cc: "Cass, Jehiel@Waterboards" <jehiel.cass@waterboards.ca.gov>, "Coony, Mike@Waterboards" <mike.coony@waterboards.ca.gov>, "Plaziak, Mike@Waterboards" <mike.plaziak@waterboards.ca.gov>, "Ralph, James@Waterboards" <James.Ralph@waterboards.ca.gov>
Subject: VVWRA TSO

Betsy,

Our discussion of April 8, 2014 included the following key points:

1. Exceedances of the water quality objectives for ammonia.
2. State Water Resources Control Board Resolution No. 2008-0025
3. Standard Provisions , Section I.G.2. - Bypass

1. Exceedances of the water quality objectives for ammonia

In the March 11, 2014 letter, it is mentioned that groundwater below the percolation ponds will regain or exceed its current water quality within 6 to 9 months after completion of the aeration basin project. It is because of this reason that groundwater degradation from total nitrogen may be acceptable to include under a Time Schedule Order (TSO). Unlike total nitrogen, ammonia portrays a different impact to a receiving water body in that toxicity issues prevail to the extent that degradation with respect to ammonia is highly toxic to freshwater fish. The March 11, 2014 letter, under the estimated surface water impact for ammonia, states *"The projected effluent concentrations for ammonia-N discharged to the Mojave River during the proposed project are anticipated to intermittently exceed the acute Basin Plan objective for ammonia and routinely exceed the 4-day chronic objective. Based on toxicity testing results generated during the period 2004 to 2006 it is possible that the effluent discharged to the river under the proposed project occasionally may show some toxicity"*. Any exceedances in water quality objectives for ammonia will impair the water body to the extent that the fish habitat will be affected.

2. State Water Resources Control Board Resolution No. 2008-0025

State Board Resolution No. 2008-0025 is a policy for compliance schedules in NPDES permits. Section 1.e., "Newly interpreted water quality objective or criterion in a water quality standard" of Resolution No. 2008-0025 discusses water quality objectives with which the Discharger cannot comply because the pollutant was newly detected in the Discharger's effluent due to new analytical techniques that were developed after the prior permit was issued. This resolution also includes water quality objectives that are implemented with a permit limitation with which the Discharger cannot comply because the pollutant was newly detected in the Discharger's effluent due to new techniques developed after the prior permit. The situation described in this resolution does not apply to the VVWRA's aeration basin project because the refurbishment of the aeration basin will not occur because of a new pollutant that was recently discovered such that a water body must be protected from this constituent. The aeration basin project will be completed because of compliance with existing water quality objectives.

The total ammonia effluent limit to protect water quality standards are stated in the appropriate permit as follows:

	2008 NPDES Permit	2013 NPDES Permit	VVWRA Request
AMEL:	0.8 mg/L	0.54 mg/L	2.26 mg/L
MDEL:	1.5 mg/L	1.6 mg/L	3.92 mg/L

According to State Board Resolution 2008-0025, requirement i.e., the applicable water quality objective should be the least stringent values; namely, **AMEL=0.8 mg/L and MDEL=1.6 mg/L.**

We also discussed seasonal data for temperature and pH in an effort to justify compliance at least with the warm criteria specified in the Basin Plan for ammonia. You agreed to assign the task to a technical person to analyze the possibility of compliance for at least during a seasonal period for the warm criteria objective for ammonia.

3. NPDES Permit, Standard Provisions , Section I.G.2. – Bypass

Bypass issues depends on whether the aeration basin project is considered maintenance or a a capital improvement project. Regardless of the classification, bypassing is allowed only if the Discharger is able to meet effluent limits, which in this case, VVWRA is unable to comply with the water quality objectives for ammonia.

We concluded our conversation with the understanding of the following action items:

a. You will consult with an attorney on whether a TSO is exclusively for new water quality objectives that have to be met or can a TSO be applicable to existing water quality objectives that will be exceeded (ammonia) on a temporary basis.
b. You will consult with your technical personnel regarding compliance with the warm criteria objectives for ammonia.
c. You will have a resolution of the above items by the end of this week.

Thanks,

John M. Morales, P.E.
Water Resources Control Engineer
South Lahontan Regulatory Unit
14440 Civic Drive, Suite 200
Victorville, CA. 92392
(760) 241-7366 Office
(760) 241-7308 Fax
jmmorales@waterboards.ca.gov

Morales, John@Waterboards

From: Cass, Jehiel@Waterboards
Sent: Thursday, April 10, 2014 2:42 PM
To: betsye@lwa.com; Logan Olds; Morales, John@Waterboards
Cc; Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Booth, Richard@Waterboards
Subject: RE: VVWRA TSO

Betsy – I think we are in agreement regarding what the TSO would allow. I am trying to understand the effect of the proposed discharge for ammonia on receiving water WARM beneficial uses – discounting the COLD BU. My thought was to compare the assumed WARM average ammonia objective for both wet (winter) and dry (summer) seasons with the proposed interim limit and see whether you would be over or under those theoretical average objectives.

Regards- Jay

****

Jehiel (Jay) Cass
Senior Water Resources Control Engineer
South Lahontan Regulatory Unit
CA Regional Water Quality Control Board
Lahontan Region (6B)
14440 Civic Dr., Ste 200
Victorville CA 92392
phone: (760) 241-2434
fax: (760) 241-7308
email: jcass@waterboards.ca.gov
web: http://www.waterboards.ca.gov/lahontan/
****

Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations."
****

From: Betsy Elzufon [mailto:BetsyE@lwa.com]
Sent: Thursday, April 10, 2014 2:28 PM
To: Logan Olds; Cass, Jehiel@Waterboards; Morales, John@Waterboards
Cc: Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Booth, Richard@Waterboards
Subject: Re: VVWRA TSO

Jay,
I feel compelled to repeat that an interim effluent limit can and usually does exceed water quality objectives because that is the reason for getting an interim limit. If the effluent limit was not going to exceed water quality objectives, an interim limit and compliance schedule would not be needed. It is okay for this exceedance to occur as long as the discharger has shown that they have a plan to come into compliance and that the schedule to come into compliance is as short as practicable.

You are right that this may result in an exceedance of a water quality objective in the receiving water but the Regional Board has discretion in how they handle such an exceedance (specifically receiving water exceedances are not subject to Mandatory Minimum Penalties).

All that being said, I will have someone here look at the WARM equations and what the resulting effluent limits would be.

Betsy

From: Logan Olds <lolds@vvwra.com>
Date: Thu, 10 Apr 2014 13:07:31 -0700
To: "Cass, Jehiel@Waterboards" <jehiel.cass@waterboards.ca.gov>, Betsy Elzufon <BetsyE@lwa.com>, "Morales, John@Waterboards" <john.morales@waterboards.ca.gov>
Cc: "Coony, Mike@Waterboards" <mike.coony@waterboards.ca.gov>, "Plaziak, Mike@Waterboards" <mike.plaziak@waterboards.ca.gov>, "Ralph, James@Waterboards" <James.Ralph@waterboards.ca.gov>, "Booth, Richard@Waterboards" <richard.booth@waterboards.ca.gov>
Subject: RE: VVWRA TSO

Okay.....

Thank You

Logan Olds
General Manager

20111 Shay Road
Victorville CA 92394

quot homines tot sententiae

'There are as many opinions as there are men': expressing the fact that there is considerable diversity of opinion, and the difficulty of bringing about agreement.'

From: Cass, Jehiel@Waterboards [mailto:jehiel.cass@waterboards.ca.gov]
Sent: Thursday, April 10, 2014 1:06 PM
To: Logan Olds; betsye@lwa.com; Morales, John@Waterboards
Cc: Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Booth, Richard@Waterboards
Subject: RE: VVWRA TSO

Logan – I think we could not reopen the permit and do as you suggest, unless the COLD fishery beneficial use is removed from the Basin Plan for the VVWRA discharge location. I have recommended that the Water Board develop site specific numerical objectives for the Mojave River downstream of VVWRA, which is an effluent dominated stream. That analysis should also re-examine the appropriate beneficial uses for the water body. This effort is on the official "to-do" list for the Basin Planning Unit, but will not occur during the current triennial review.

Regards- Jay

From: Logan Olds [mailto:lolds@vvwra.com]
Sent: Thursday, April 10, 2014 12:56 PM
To: Cass, Jehiel@Waterboards; betsye@lwa.com; Morales, John@Waterboards
Cc: Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards
Subject: RE: VVWRA TSO

Or can we just redo the permit for the warm fishery ammonia number?

Thank You

Logan Olds
General Manager

20111 Shay Road
Victorville CA 92394

quot homines tot sententiae

'There are as many opinions as there are men': expressing the fact that there is considerable diversity of opinion, and the difficulty of bringing about agreement.'

From: Cass, Jehiel@Waterboards [mailto:jehiel.cass@waterboards.ca.gov]
Sent: Thursday, April 10, 2014 12:59 PM
To: betsye@lwa.com; Morales, John@Waterboards
Cc: Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Logan Olds
Subject: RE: VVWRA TSO

Betsy – The point I discussed with John and our attorney, James Ralph, is that the current ammonia limits set in Order R6V-2013-0038 are to protect the most restrictive beneficial use – a COLD fishery. The Mojave River is also listed as a WARM fishery at this location. The ammonia water quality objectives for WARM fisheries are less restrictive than COLD fisheries.

The reason I asked for the average Mojave River receiving water temperature and pH, during both the cold (Oct 15 – Apr 15) and warm season (Apr 15 Oct 15) is to evaluate what an appropriate average ammonia criteria for a WARM fishery would be for cold and warm seasons.

The Mojave River at this location is at best a WARM fishery and the COLD fishery beneficial use is negligible as I have seen no evidence there are salmonids present. I wondered what would be the results of comparing the average criterion for WARM fisheries to the proposed VVWRA effluent quality that would be discharged during the one year TSO period.

I will be discussing with our attorney tomorrow whether – and how – a TSO can be developed. My hope was that the result of the above analysis could show that the primary beneficial use WARM fishery would still be protected – even with the higher ammonia interim limits.

Regards- Jay

From: Betsy Elzufon [mailto:BetsyE@lwa.com]
Sent: Thursday, April 10, 2014 12:19 PM
To: Morales, John@Waterboards
Cc: Cass, Jehiel@Waterboards; Coony, Mike@Waterboards; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Logan Olds
Subject: Re: VVWRA TSO

John,
I talked this over with Logan today and he reminded me that the ammonia and total nitrogen limits in the NPDES permit are indeed 'new and more stringent limits'

R6V-2008-004 contained ammonia limits of 0.8 mg/L as an AMEL and 1.5 mg/L as an MDEL. The new permit has ammonia limits of 0.54 mg/L as an AMEL and 1.6 mg/L as an MDEL. The more stringent AMEL is the reason that VVWRA is upgrading its aeration basins.

In addition, the previous permit had an effluent limit for Nitrate while the new permit has an effluent limit for Total Nitrogen so the Total Nitrogen limit is new.

Therefore, the justification under 13385(j)(3)(B)(i) that the effluent limit is a new, more stringent or modified regulatory requirement...' should apply since it is the new limits adopted in the permit and the concern that the current operation will not result in consistent compliance with those limits that are the reason for the upgrade.

I think that is the piece of information we were missing in our conversation yesterday. As for the interim limit – it needs to be based on projected performance as requested in our previous communication. I don't think looking at different ph and temperature regimes for recalculating the ammonia limit will provide the relief needed.

Betsy

From: "Morales, John@Waterboards" <john.morales@waterboards.ca.gov>
Date: Wed, 9 Apr 2014 16:27:52 -0700
To: Betsy Elzufon <BetsyE@lwa.com>
Cc: "Cass, Jehiel@Waterboards" <jehiel.cass@waterboards.ca.gov>, "Coony, Mike@Waterboards" <mike.coony@waterboards.ca.gov>, "Plaziak, Mike@Waterboards" <mike.plaziak@waterboards.ca.gov>, "Ralph, James@Waterboards" <James.Ralph@waterboards.ca.gov>
Subject: VVWRA TSO

Betsy,

Our discussion of April 8, 2014 included the following key points:

1. Exceedances of the water quality objectives for ammonia.
2. State Water Resources Control Board Resolution No. 2008-0025
3. Standard Provisions , Section I.G.2. - Bypass

1. Exceedances of the water quality objectives for ammonia

In the March 11, 2014 letter, it is mentioned that groundwater below the percolation ponds will regain or exceed its current water quality within 6 to 9 months after completion of the aeration basin project. It is because of this reason that groundwater degradation from total nitrogen may be acceptable to include under a Time Schedule Order (TSO). Unlike total nitrogen, ammonia portrays a different impact to a receiving water body in that toxicity issues prevail to the extent that degradation with respect to ammonia is highly toxic to freshwater fish. The March 11, 2014 letter, under the estimated surface water impact for ammonia, states *"The projected effluent concentrations for ammonia-N discharged to the Mojave River during the proposed project are anticipated to intermittently exceed the acute Basin Plan objective for ammonia and routinely exceed the 4-day chronic objective. Based on toxicity testing results generated during the period 2004 to 2006 it is possible that the effluent discharged to the river under the proposed project occasionally may show some toxicity"*. Any exceedances in water quality objectives for ammonia will impair the water body to the extent that the fish habitat will be affected.

2. State Water Resources Control Board Resolution No. 2008-0025

State Board Resolution No. 2008-0025 is a policy for compliance schedules in NPDES permits. Section 1.e., "Newly interpreted water quality objective or criterion in a water quality standard" of Resolution No. 2008-0025 discusses water quality objectives with which the Discharger cannot comply because the pollutant was newly detected in the Discharger's effluent due to new analytical techniques that were developed after the prior permit was issued. This resolution also includes water quality objectives that are implemented with a permit limitation with which the Discharger cannot comply because the pollutant was newly detected in the Discharger's effluent due to new techniques developed after the prior permit. The situation described in this resolution does not apply to the VVWRA's aeration basin project because the refurbishment of the aeration basin will not occur because of a new pollutant that was recently discovered such that a water body must be protected from this constituent. The aeration basin project will be completed because of compliance with existing water quality objectives.

The total ammonia effluent limit to protect water quality standards are stated in the appropriate permit as follows:

	2008 NPDES Permit	2013 NPDES Permit	VVWRA Request
AMEL:	0.8 mg/L	0.54 mg/L	2.26 mg/L
MDEL:	1.5 mg/L	1.6 mg/L	3.92 mg/L

According to State Board Resolution 2008-0025, requirement I.e., the applicable water quality objective should be the least stringent values; namely, **AMEL=0.8 mg/L and MDEL=1.6 mg/L.**

We also discussed seasonal data for temperature and pH in an effort to justify compliance at least with the warm criteria specified in the Basin Plan for ammonia. You agreed to assign the task to a technical person to analyze the possibility of compliance for at least during a seasonal period for the warm criteria objective for ammonia.

3. NPDES Permit, Standard Provisions , Section I.G.2. – Bypass

Bypass issues depends on whether the aeration basin project is considered maintenance or a a capital improvement project. Regardless of the classification, bypassing is allowed only if the Discharger is able to meet effluent limits, which in this case, VVWRA is unable to comply with the water quality objectives for ammonia.

We concluded our conversation with the understanding of the following action items:

a. You will consult with an attorney on whether a TSO is exclusively for new water quality objectives that have to be met or can a TSO be applicable to existing water quality objectives that will be exceeded (ammonia) on a temporary basis.
b. You will consult with your technical personnel regarding compliance with the warm criteria objectives for ammonia.
c. You will have a resolution of the above items by the end of this week.

Thanks,

John M. Morales, P.E.
Water Resources Control Engineer
South Lahontan Regulatory Unit
14440 Civic Drive, Suite 200
Victorville, CA. 92392
(760) 241-7366 Office
(760) 241-7308 Fax
jmmorales@waterboards.ca.gov

Morales, John@Waterboards

From: Betsy Elzufon <BetsyE@lwa.com>
Sent: Monday, April 07, 2014 2:53 PM
To: Cass, Jehiel@Waterboards
Cc: Logan Olds; Plaziak, Mike@Waterboards; Ralph, James@Waterboards; Morales, John@Waterboards; Kemper, Lauri@Waterboards
Subject: FW: VVWRA TSO

Jay,
Logan asked me to reply to this.

See below in red for some specific answers, but I am concerned about the statement that you cannot issue a TSO if VVWRA effluent is going to exceed WQOs. That is just not correct and I don't understand where this is coming from – the point of the CWC Section 13385(j) is to provide a discharger time to come into compliance with water quality based effluent limits. This is summarized in a few places in the Tentative TSO for example,

The draft TSO says on p. 4,

'Water Code section 13385(j)(3) exempts certain violations from MMPs as follows:
"where the waste discharge is in compliance with a time schedule order issued pursuant to section 13300, if all the [specified requirements] are met."

The TSO goes on to say that the requirements include that

'new or modified control measures are necessary in order to comply with effluent limitations' and 'The Regional Baord estabglishes a Time Schedule for bring the waste discharge into compliance with the effluent limitations'

it is clearly acknowledged that for a short period of time when the interim effluent limits are effective that the discharger cannot comply with effluent limits that were derived from Water Quality Objectives.

Betsy
--
Betsy Elzufon
Larry Walker Associates
707 Fourth Street
Davis, CA 95616
530-753-6400

From: Logan Olds <lolds@vvwra.com>
Date: Mon, 7 Apr 2014 12:29:08 -0700
To: Betsy Elzufon <BetsyE@lwa.com>
Subject: Fwd: VVWRA TSO

Please review below ASAP I am in DC.

Sent from my iPhone

Begin forwarded message:

From: "Cass, Jehiel@Waterboards" <jehiel.cass@waterboards.ca.gov>
Date: April 7, 2014 at 3:28:39 PM EDT
To: Logan Olds <lolds@vvwra.com>
Cc: "Morales, John@Waterboards" <john.morales@waterboards.ca.gov>, "Ralph, James@Waterboards" <James.Ralph@waterboards.ca.gov>, "Plaziak, Mike@Waterboards" <mike.plaziak@waterboards.ca.gov>, "Kemper, Lauri@Waterboards" <lauri.kemper@waterboards.ca.gov>
Subject: VVWRA TSO

Logan - Well - Make sure to take a bath before you leave as I understand that inside the beltway can be dirty.

John and I left a longer message with Gilbert - but we wanted to discuss the following points regarding the TSO (comment period up today - only 03/11/14 & 03/18/14 comments from VVWRA received thus far):

1. Re: VVWRA March 18, 2014 - Confirm that you do not want an alternative that "would only include MDEL as an interim limit" as stated 2nd par., last sentence. That would mean the current AMEL in BO# R6V-2013-0038 of 10.3 mg/L (T-N) would apply during the TSO period. No – we were suggesting that compliance be determined only based on an interim MDEL with no AMEL at all for this period (VVWRA also needs relief from the current AMEL of 10.3). It is possible to have only one interim limit. But if the Board feels both and MDEL and an AMEL are needed, the interim AMEL should be 16.7 mg/L. We provided the exact edits we are asking for to change the AMEL to 16.7 further down in the March 18th letter.

2. Re: NH4 in receiving water - Because of potential effects stated in your March 11, 2014 letter, we would recommend:
a) increased receiving water sampling at RSW-001 to 2x/mo. for NH3, Temp, and pH;I don't think it is necessary to increase receiving water monitoring during this time period.
b) inclusion of results in quarterly reports;
c) inclusion of effluent data for NH4, pH, Temp in quarterly reports; and
d) analysis with respect to NH4 receiving water objectives.For this short period of time, monitoring requirements should remain unchanged. Exceedances over the short term should not adversely impact the beneficial uses in the long term.

3. Re: Resolution 68-16 - provide clear justification linking how proposed degradation criteria indicated in the policy are met with respect to:
a) maximum benefit,The proposed Aeration Basin Project is necessary to ensure future compliance with total nitrogen and ammonia-N effluent limitations
b) unreasonable impact to BU's, There will be no long term impact to beneficial uses
c) not result in water quality less than objectives,
d) utilize BPTC
e) pollution will not occur and
f) Basin Plan objectives are met - same as (c).

4. The last point above is problematic, in that if NH4 objectives may be violated, then we may not be able to consider the TSO in its current form. The effluent data at EFF-001 is assumed to represent the receiving water at the point of discharge and RSW-001 is 1.5 miles downstream of the discharge location EFF-001. If the discharge was not going to exceed water quality objectives, VVWRA would not need an interim limit. The whole point of an interim limit is to allow exceedances over a defined, short as possible time period while the discharger works to achieve compliance. By saying that WQOs cannot be exceeded, you set this up to be impossible.

Section 13385 of the California Water Code and the compliance policy (Resolution No. 2008-0025) both acknowledges that water quality objectives will be exceeded. In fact to qualify for a compliance schedule the discharger must demonstrate that they cannot consistently comply with an effluent limit and the effluent limits are based on concentrations in effluent that result in compliance with water quality objectives in the receiving water. They must also provide a plan to return to compliance as quickly as possible which VVWRA has provided.

I will be back on Thursday and John will be working through these issues in the meantime.

R/ Jay

-----Original Message-----
From: Logan Olds [mailto:lolds@vvwra.com]
Sent: Monday, April 07, 2014 11:43 AM
To: Cass, Jehiel@Waterboards
Subject: What's up

Hi Jay

In DC in mtg. What's up?

Thanks
Logan

Sent from my iPhone

BLANK

ENCLOSURE 8

BLANK

April 22, 2014

WDID No. 6B360109001

Logan Olds
Victor Valley Wastewater Reclamation Authority
15776 Main Street, Suite 3
Hesperia, CA 92345

RESPONSE TO THE NUTRIENT IMPACT ASSESSMENT AND INTERIM LIMITS RELATED TO THE AERATION BASIN UPGRADE PROJECT TIME SCHEDULE ORDER, VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY, VICTORVILLE, SAN BERNARDINO COUNTY

The California Regional Water Quality Control Board, Lahontan Region (Water Board) staff reviewed your letters, dated March 11, 2014 and March 18, 2014, regarding the Nutrient Impact Assessment and comments on the Tentative Time Schedule Order (TSO), respectively for the proposed aeration basin upgrade project. We acknowledge and accept that the nitrate-N surface and groundwater quality changes are localized and are short term and are therefore acceptable. Considering that the groundwater impact from ammonia was not included in your assessment, the oxidation of ammonia to nitrate is considered as an added localized and short term water quality change.

The March 11, 2014 letter indicates localized and short term water quality changes to both the receiving surface water and groundwater from the temporary discharges of elevated concentrations of ammonia and total nitrogen during the aeration basin upgrade project as follows.

1. *Surface Water* - Limited and temporary degradation in surface water within the vicinity of the facility with respect to total nitrogen. Intermittent exceedances of the acute and chronic ammonia objectives, and
2. *Groundwater* - Temporary discharge of elevated total nitrogen and ammonia oxidation process and conversion to nitrate in groundwater.

The ammonia surface water assessment states that some acute toxicity would result. The Proposed TSO is modified to include twice per month sampling for ammonia, temperature, pH, and dissolved oxygen at receiving water monitoring station RSW-002 for the project duration. Additionally, the Proposed TSO is modified to require the water quality objective for ammonia to be calculated and compared to the water quality objective in the Basin Plan 4-day average Warm concentration use. Data currently collected at effluent station EFF-001 should also be compared to the ammonia water quality objective, which is pH and temperature dependent.

Based on the data variations submitted in your letter dated March 18, 2014, there are points on a graph provided that render exceedances above the proposed interim average monthly effluent limit of 12.3 mg/L. Therefore, the Proposed TSO is modified to include a proposed interim limit for total nitrogen as 16.7 mg/L as an average monthly effluent limit (AMEL). Based on this value, the TSO will reflect a corresponding mass loading of 1,950 pounds per day.

The following comments addressed in the Proposed TSO are stated below:

1. Slip lining the air header is not an option. VVWRA will instead replace the air header from blower building #1 with new pipe. This change is made in Finding No. 5.
2. VVWRA requested an interim AMEL effluent limit for total nitrogen of 16.7 mg/L based on the maximum observed value. The value for the AMEL for total nitrogen was changed to 16.7 mg/L in Tables 2, 4, and 5 of the Order and the corresponding mass limit in Table 4 was changed to 1,950 Lbs/day.
3. An error was corrected in the Proposed TSO to reference the correct WDR Board Order in Finding No. 6 on page 3. VVWRA requests an interim limit for total nitrogen of 25.5 mg/L as an MDEL and an AMEL of 16.7 mg/L. These limits would apply to both Board Orders No. R6V-2012-0058 (WDR) and R6V-2013-0038 (NPDES).
4. The due date for the last quarterly progress report is changed from May 1, 2016 to May 1, 2015 under the Task A Section No. 2.a. of the Order.
5. Task A Section 2.a. of the Order is revised to include sampling for ammonia, pH, temperature and dissolved oxygen at the downstream monitoring station, RSW-002 twice per month. The Order also requests the receiving water objective for total ammonia be calculated based on the Basin Plan 4-day average Warm concentration use. Also, the results of effluent monitoring for ammonia, pH, temperature and dissolved oxygen at effluent station EFF-01 must be reported and compared to total ammonia with the calculated receiving water objective for total ammonia.

If you have any questions, please contact me at (760) 241-7366 or Jehiel Cass, P.E., Senior Engineer of the South Lahontan Regulatory Unit at (760) 241-2434.

John Morales, P.E.
Water Resources Control Engineer

cc: Gilbert Perez, VVWRA Director
Betsy Elzufon, LWA
Kimberly Niemeyer, Staff Counsel
Patty Z. Kouyoumdjian, Executive Officer
Sean McGlade, City of Victorville
Kimberly Cox, Helendale CSD
Manuel Benitez, SBCO Special Districts

Public:/Enforcement Orders 2014/VVWRA/TSO response letter to the anti degradation analysis