California Regional Water Quality Control Board
Santa Ana Region

May 19, 2006

STAFF REPORT

ITEM: **9**

SUBJECT: Amendment of Order No. R8-2004-0020, NPDES No. CA8000073, Waste Discharge and Producer/User Water Reclamation Requirements for Inland Empire Utilities Agency's Carbon Canyon Water Reclamation Facility - Order No. R8-2006-0038

DISCUSSION:

On August 13, 2004, the Regional Board adopted Order No. R8-2004-0020, NPDES No. CA8000073, prescribing waste discharge and Producer/User Water Reclamation Requirements for Inland Empire Utilities Agency's Carbon Canyon Water Reclamation Facility, for the discharge of tertiary treated wastewater into Reach 2 of Chino Creek, a tributary to Reach 3 of the Santa Ana River.

Order No. R8-2004-0020, NPDES No. CA8000073 included interim and final effluent limitations for free cyanide, including a time schedule for compliance with the free cyanide final effluent limitation in accordance with Section 2.1 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (the "SIP"). Order No. R8-2004-0020 specified that compliance with the final free cyanide limitations in the Order be achieved as soon as possible but no later than December 31, 2005, unless the discharger provides justification that compliance by this date is infeasible. The Discharger implemented an approved plan and schedule for achieving compliance with the final free cyanide effluent limitations and submitted quarterly progress reports for achieving compliance. However, on December 14, 2005, the Discharger requested an extension of the compliance schedule and interim limits in the Order.

Currently, the Discharger is conducting an agency-wide cyanide study that includes all IEUA treatment plants (RP-1, RP-4, RP-5 and the Carbon Canyon Water Reclamation Facility). Because the cyanide study involves treatment plant processes and flows that fluctuate significantly throughout the year, the Discharger has experienced unanticipated difficulties in determining whether variations in the concentrations of weak acid dissociable cyanide (WAD-CN) (free cyanide) in their discharges are due to variations in the treatment process or simply reflect temporal variability. An extension of the compliance schedule to resolve questions related to free cyanide is justified. The revised schedule continues to require that the Discharger comply with the final limits for free cyanide as soon as possible.

The following show the proposed changes to the Order. Additions are bold and highlighted. Deletions are stricken-out.

1. Findings Section of Order No. R8-2004-0020, page 6 of 32, modify Finding 28. as follows:

   28. On July 1, 2004, IEUA requested that a compliance schedule for free cyanide limitations be included in this Order. IEUA demonstrated that immediate compliance with the proposed effluent limitations for free cyanide is infeasible. Prior to December 2003, IEUA had conducted analysis for total cyanide, rather than free cyanide, in samples collected from all IEUA treatment plants, in accordance with then applicable waste discharge requirements. IEUA began analysis for free cyanide in December 2003. The data indicate the likelihood that free cyanide is formed during the disinfection process at CCWRF. IEUA has initiated a free cyanide investigation that will address all treatment plants (RP-1, RP-4, RP-5 and CCWRF). The first phase of the investigation will focus on CCWRF. Data collection is expected to be complete by December 31, 2004. Based on analysis of these data and review of experience with this problem elsewhere, the need for and type of remedial actions will be identified. It is anticipated that compliance will be achieved as soon as possible but no later than ~~December 31, 2005~~**October 21, 2007**. This schedule will be reconsidered and revised as appropriate if it is demonstrated that additional time is required to identify and implement appropriate control measures. This Order will be reopened to consider appropriate changes to the compliance schedule if and as necessary based on submission of additional justification.

2. Discharge Specifications Section of Order No. R8-2004-0020, page 9 of 32, modify Trace Constituent Limitations Table in Discharge Specifications A.1.e. as follows:

Constituent	Maximum Daily Concentration Limit (µg/l)	Average Monthly Concentration Limit (µg/l)	Maximum Daily Mass Emission Rate[5] (lbs/day)	Average Monthly Mass Emission Rate[5] (lbs /day)
Final Limit effective August 13, 2004				
Total Recoverable Chromium VI[12]	16.3	8.2	1.55	0.78
Total Recoverable Selenium	8.2	4.1	0.78	0.39
Bis(2-ethylhexyl) phthalate	11.8	5.9	1.12	0.56
Interim Limit effective from August 13, 2004 through ~~December 31, 2005~~ **October 21, 2007**[13]				
Free Cyanide	8.5	8	0.81	0.76
Final Limit effective ~~January 1, 2006~~ **October 22, 2007**				
Free Cyanide	8.5	4.3	0.81	0.41

12 *Total hardness used in calculating metal limits is 144 mg/l, based on the median of CCWRF effluent flow data from January 2000 through December 2003.*

13 *See Section H. 10.Required Notices and Reports; Section K.9. Permit Re-opening, Revisions, Revocation and Re-issuance; and J. 27. Provisions*

3. Required Notices and Reports Section of Order No. R8-2004-0020, page 24 of 32, modify Required Notices and Reports H.10.c. as follows:

   c. A proposed plan and schedule for implementation of recommended control measures. The plan and schedule shall assure that control measures are implemented so that compliance with the final free cyanide limitations in this Order is achieved as soon as possible but no later than ~~December 31, 2005~~**October 21, 2007**, unless the discharger provides justification that compliance by this date is infeasible. (see also K. 9. Permit Re-opening, Revision, Revocation and Re-issuance.)

RECOMMENDATION:

Adopt Order No. R8-2006-0038, as presented.

Comments were solicited from the following agencies:

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) – Doug Eberhardt
U.S. Army District, Los Angeles, Corps of Engineers, Regulatory Branch
U.S. Fish and Wildlife Service, Carlsbad
State Water Resources Control Board, Office of the Chief Counsel - Jorge Leon
State Water Resources Control Board, Division of Water Quality - James Maughan
State Department of Water Resources, Glendale
State Department of Fish and Game, Ontario
State Department of Health Services, San Bernardino – Sean McCarthy
San Bernardino County Transportation/Flood Control District – Naresh Varma
San Bernardino County Environmental Health Services – Daniel Avera
Orange County Water District - Nira Yamachika
City of Chino - Public Works Department, Engineering Division – Jim Hill
City of Chino Hills, Public Works Department
City of Upland, City Manager
City of Montclair, Mike Hudson
Santa Ana River Discharger's Association – Roger Turner
Santa Ana Watershed Project Authority – Daniel Cozad
Orange County Coastkeeper
Lawyers for Clean Water C/c San Francisco Baykeeper

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2006-0038
Amending Order No. R8-2004-0020, NPDES No. CA8000073
Waste Discharge and Producer/User Reclamation Requirements

for

Inland Empire Utilities Agency
Carbon Canyon Water Reclamation Facility
San Bernardino County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter, Board), finds that:

1. On August 13, 2004, the Board adopted Order No. R8-2004-0020, NPDES No. CA8000073, prescribing Waste Discharge and Producer/User Reclamation Requirements for Inland Empire Utilities Agency's (IEUA) Carbon Canyon Water Reclamation Facility for the discharge of tertiary treated wastewater into Reach 2 of Chino Creek, a tributary to Reach 3 of the Santa Ana River. Order No. R8-2004-0020 will expire on August 1, 2009.

2. Order No. R8-2004-0020, NPDES No. CA8000073 includes interim and final effluent limitations for free cyanide and a time schedule for compliance with the free cyanide final effluent limitations in accordance with Section 2.1 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Order No. R8-2004-0020 specifies that compliance with the final free cyanide limitations in the Order is to be achieved as soon as possible but no later than December 31, 2005, unless the discharger provides justification that compliance by this date is infeasible.

3. On December 14, 2005, the Discharger requested an extension of the compliance schedule and interim limits in Order No. R8-2004-0020 based on the determination that that the results of the studies that had been conducted were inconclusive and that additional investigation was therefore required.

4. Currently, the Discharger is conducting an agency-wide cyanide study that includes all IEUA treatment plants (RP-1, RP-4, RP-5 and Carbon Canyon Water Reclamation Facility). Because the cyanide study involves treatment plant processes and flows that fluctuate significantly throughout the year, the Discharger has experienced unanticipated difficulties in determining whether variations in the concentrations of weak acid dissociable cyanide (WAD-CN) (free cyanide) in their discharges are due to variations in the treatment process or simply reflect temporal variability.

5. It is appropriate to extend the compliance schedule and interim limits in Order No. R8-2004-0020, in light of the difficulties encountered in identifying and correcting free cyanide levels in the Discharger's wastewater discharges.

TENTATIVE

6. In accordance with Water Code Section 13389, amending the waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.

7. The Board has notified the discharger and other interested agencies and persons of its intent to amend waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

8. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. R8-2004-0020 be amended as follows:

1. Findings Section of Order No. R8-2004-0020, page 6 of 32, replace Finding 28. with the following:

    28. On July 1, 2004, IEUA requested that a compliance schedule for free cyanide limitations be included in this Order. IEUA demonstrated that immediate compliance with the proposed effluent limitations for free cyanide is infeasible. Prior to December 2003, IEUA had conducted analysis for total cyanide, rather than free cyanide, in samples collected from all IEUA treatment plants, in accordance with then applicable waste discharge requirements. IEUA began analysis for free cyanide in December 2003. The data indicate the likelihood that free cyanide is formed during the disinfection process at CCWRF. IEUA has initiated a free cyanide investigation that will address all treatment plants (RP-1, RP-4, RP-5 and CCWRF). The first phase of the investigation will focus on CCWRF. Data collection is expected to be complete by December 31, 2004. Based on analysis of these data and review of experience with this problem elsewhere, the need for and type of remedial actions will be identified. It is anticipated that compliance will be achieved as soon as possible but no later than October 21, 2007. This schedule will be reconsidered and revised as appropriate if it is demonstrated that additional time is required to identify and implement appropriate control measures. This Order will be reopened to consider appropriate changes to the compliance schedule if and as necessary based on submission of additional justification.

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   c. A proposed plan and schedule for implementation of recommended control measures. The plan and schedule shall assure that control measures are implemented so that compliance with the final free cyanide limitations in this Order is achieved as soon as possible but no later than October 21, 2007, unless the discharger provides justification that compliance by this date is infeasible. (see also K. 9. Permit Re-opening, Revision, Revocation and Re-issuance.)

4. All other conditions and requirements of Order No. R8-2004-0020, shall remain unchanged.

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12 *Total hardness used in calculating metal limits is 144 mg/l, based on the median of CCWRF effluent flow data from January 2000 through December 2003.*

13 *See Section H. 10.Required Notices and Reports; Section K.9. Permit Re-opening, Revisions, Revocation and Re-issuance; and J. 27. Provisions*

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on May 19, 2006.

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Gerard J. Thibeault
Executive Officer