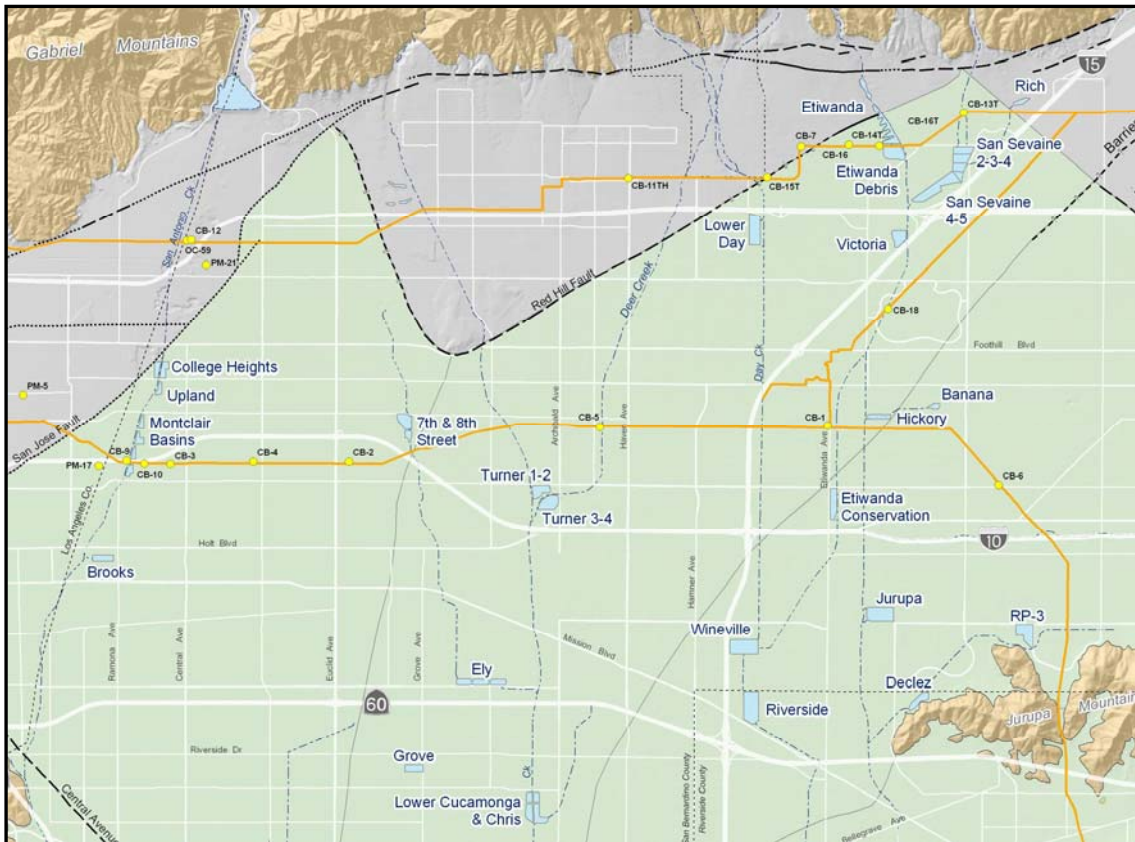


Chino Basin Recycled Water Recharge Program

Quarterly Monitoring Report October through December 2005



Prepared by:



and



February 15, 2006



Richard Atwater
CEO and General Manager

Kenneth Manning
CEO

February 15, 2006

Regional Water Quality Control Board, Santa Ana Region

Attention: Mr. Gerard Thibeault

3737 Main Street, Suite 500

Riverside, California 92501-3348

**Subject: Chino Basin Recycled Water Recharge Program
Transmittal of the Quarterly Monitoring Report for October through December 2005**

Dear Mr. Thibeault,

The Inland Empire Utilities Agency (IEUA) and the Chino Basin Watermaster (Watermaster) hereby submit the *Quarterly Monitoring Report* for the fourth quarter of 2005 (4Q05) – October through December 2005 for the *Recycled Water Groundwater Recharge Program* being implemented by IEUA and Watermaster. This document is submitted pursuant to requirements in Order No. R8-2005-0033 and Monitoring and Reporting Program No. R8-2005-0033:

- California Regional Water Quality Control Board, Santa Ana Region. Order No. R8-2005-0033. Water Recycling Requirements for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County. Draft Order: April 2005.
- California Regional Water Quality Control Board, Santa Ana Region. Monitoring and Reporting Program No. R8-2005-0033 for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.

If you have any questions, please do not hesitate to call us.

Best regards,

A handwritten signature in blue ink that reads "Richard Atwater".

Richard Atwater
Chief Executive Officer and General Manager

A handwritten signature in blue ink that reads "Kenneth Manning".

Kenneth Manning
Chief Executive Officer

Chino Basin

Recycled Water Recharge Program

Quarterly Monitoring Report

October through December 2005

Prepared by:



and



February 15, 2006

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1. Introduction

Inland Empire Utilities Agency (IEUA), Chino Basin Watermaster (Watermaster), Chino Basin Water Conservation District, and San Bernardino County Flood Control District jointly sponsor the Chino Basin Recycled Water Groundwater Recharge Program. This is a comprehensive water supply program to enhance water supply reliability and improve the groundwater quality in local drinking water wells throughout the Chino Groundwater Basin by increasing the recharge of stormwater, imported water and recycled water. This program is an integral part of Watermaster's Optimum Basin Management Plan (OBMP).

1.1 Requirements of Order No. R8-2005-0033

The Recycled Water Groundwater Recharge Program being implemented by IEUA and Watermaster is subject to the following requirements:

- California Regional Water Quality Control Board, Santa Ana Region (RWQCB). Order No. R8-2005-0033 (Order). Water Recycling Requirements for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.
- RWQCB, Santa Ana Region. Monitoring and Reporting Program (M&RP) No. R8-2005-0033 for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.

The M&RP (RWQCB, 2005b) describes the requirements for the quarterly monitoring reports. This document is the Fourth Quarter 2005 (4Q05) Quarterly Report. Following is an excerpt of Section VI. of the M&RP:

VI. REPORTING REQUIREMENTS

A. Quarterly Monitoring Reports

1. Quarterly monitoring reports shall be submitted in accordance with following schedule:

<u>Reporting Period</u>	<u>Report Due Date</u>
January – March	May 15 th
April – June	August 15 th
July – September	November 15 th
October – December	February 15 th

2. If no reclaimed water was delivered for spreading during the quarter, the report shall so state.
3. Each quarterly monitoring report shall include, at a minimum, the following:
 - a. All monitoring results for recycled water produced from the RWRP-1 and RWRP-4 facilities, diluents, recharged water with or without blending with diluents prior to recharge, and groundwater.
 - b. A tabular form report showing the amount of recharged recycled water and diluent water recharge[d] into each recharge basin including any non-compliance events, which occurred at the individual recharge sites during the reporting period. A summary of these data shall be included in the annual report.



- c. Records of any operational problems, plant upset and equipment breakdowns or malfunctions, and any diversion(s) of off-specification recycled water and the location(s) of final disposal.
- d. All corrective or preventive action(s) taken.
- e. A certification by the users that no groundwater has been pumped from the zone that extends 500 feet and 6 months underground travel time from the recharge basin(s) where recycled water is applied for domestic water supply use.
- f. The Regional Board may request supporting documentation, such as daily logs of operations.

1.2 Basin Operations

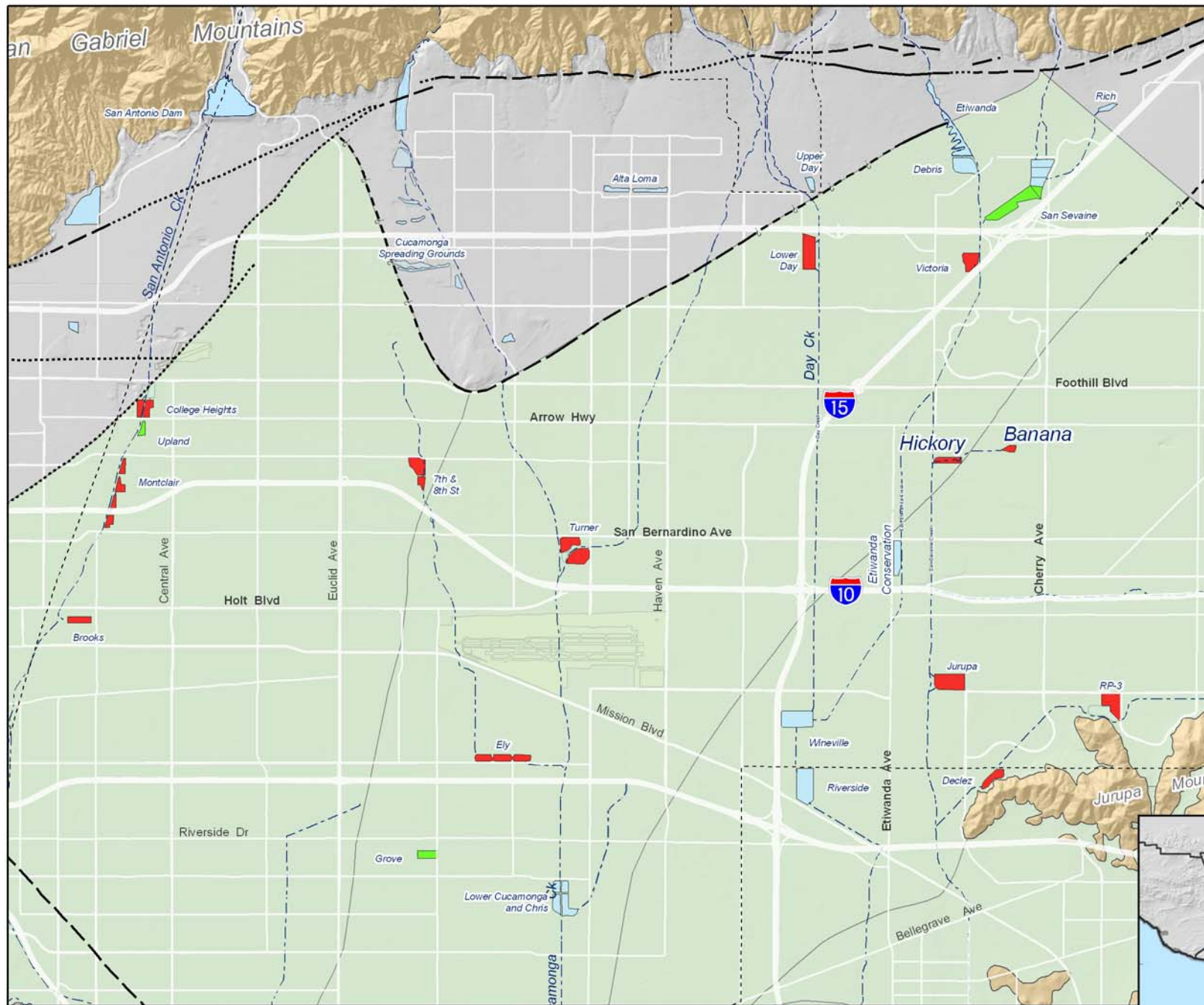
During 4Q05 IEUA continued recycled water recharge at Banana and Hickory Basins. Banana and Hickory Basins were still in their Start-Up Periods through 4Q05. During 4Q05, recycled water was not recharged in the other Phase 1 basins, namely RP3 Basins, Declez Basin, and Turner Basins.

This quarterly report contains monitoring results for Banana Basin and Hickory Basin operations prior to the completion of their Start-Up Periods. Because the compliance monitoring points have not yet been established for Banana and Hickory Basins, all sampling data are presented in this report. In quarterly reports following the completion of basin Start-Up Period reports, quarterly monitoring and reporting will be limited to sampling points that are selected as compliance monitoring points as determined through the Start-Up Protocols.

1.3 Outline of the Quarterly Report

Section 2 of this quarterly report discusses the monitoring results for recycled water, diluent water, basin surface water and lysimeter samples, and groundwater monitoring well water samples. Section 3 provides an overview of recharge operations, including the volume of diluent water and recycled water recharged. Sections 4 and 5 list the operational problems encountered and the preventive and/or corrective actions taken. Finally, Section 6 is the certification of non-pumping in the 500-foot buffer zones.





Recharge Basins (Symbolized by Improvements)

- Chino Basin Facilities Improvement Program
- Improvement By Others
- No Improvements

Other Features

- Rivers, Creeks, and Flood Control Channels
- Chino Basin

Geology

- Unconsolidated Water-Bearing Sediments
- Consolidated Bedrock

Faults

- Location Certain
- Location Approximate
- Location Concealed
- Location Uncertain

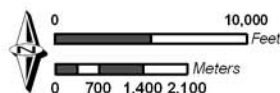


Basin Locations

Figure 1-1



Recycled Water Recharge Program
Quarterly Monitoring Report -- 4Q05



Author: WEL
Date: 20060215
File: Figure_1-1.mxd

Produced by:
WILDERMUTH
ENVIRONMENTAL INC.

2. Monitoring Results

2.1 Recycled Water: RP-1 and RP-4

The monitoring requirements for recycled water monitoring are provided in the M&RP (RWQCB, 2005b). Tables 2-1 through 2-9 summarize all the requisite 4Q05 data results. Many of the limits defined in the Order are based on moving averages. For example, compliance with Recycled Water Specifications A.1 and A.2 (Tables I and II in the Order) “shall be based on the running-quarterly average concentration, calculated each quarter using the previous consecutive four quarterly data for the specific constituent.” Running-quarterly average concentration data for 3Q05 and 4Q05 are summarized in Table 2-4 of this report.

For analytes with a limit specified in Tables I through III in the Order (RWQCB, 2005a), the compliance limit is included next to the result for that analyte in Tables 2-6, 2-7, and 2-9 to facilitate a comparison. IEUA is in the process of selecting a recycled water sampling location that will be representative of the system blend of recycled water recharged. IEUA has conducted sampling from the distribution pipeline at the turnout to IEUA’s recycled water customer Reliant Energy. For most constituents this sampling location has been suitable. However, it is not suitable for parameters that can change upon leaving the reclamation plants. Such parameters include Total Trihalomethanes (THMs) and Total Haloacetic Acids (HAA5). Over the past 12 months THMs have ranged between 80 and 130 mg/L from RP1, and have averaged approximately 97 mg/L. Rather than provide inconsistent values for these parameters, IEUA conducted sampling of the surface water and pore water in the 25-foot lysimeters at both Banana and Hickory Basins. The samples at the basin should provide a more consistent and representative sample of the recharged water.

Of the numerous parameters tested at the distribution system location and the basins, only odor exceeded limits in the Order during 4Q05.

Samples for THMs were collected from the compliance point lysimeters on November 8th, 15th and December 20th at Banana Basin and the results were 24, 14, and 18 µg/L, respectively. Samples were collected from Hickory East on November 8th, 15th and December 20th and the results were 48, 14, and 13 µg/L, respectively. Samples were collected from Hickory West on November 8th and 15th and the results were 12 and 60 µg/L, respectively. The average of these THMs results is 25 µg/L and the median is 16 µg/L.

Samples for HAA5 analytes occurred from the compliance point lysimeters at both Banana and Hickory East Basin on December 20th and the results were <1 µg/L for both samples, respectively.

In Table 2-6, the 3Q05 total trihalomethane result was based on a blend of RP-1 and RP-4 effluent. Representative samples for 4Q05 were obtained from compliance point lysimeters from both Banana and Hickory Basins. Running average values will be initiated as additional data is obtained from a consistent representative sampling location.

Representative samples collected from the treatment basins were within permitted limits for THMs prior to recharge water reaching the groundwater table.

In addition to the limits listed in Tables I, II, and III in the Order, the following “narrative” limits also apply to recycled water quality (A.4 through A.8 in RWQCB, 2005a):

4. Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:



- a. The turbidity of the filter effluent shall not exceed any of the following:
 - (1) Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
 - (2) 5 NTU more than 5 percent of the time in any 24-hour period; and
 - (3) 10 NTU at any time.
 - b. The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
 - c. The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
 - d. No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.
5. The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively from the combined effluent of all IEUA treatment plants (see also Provisions H.4. and H.5.).
 6. The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:
 - a. A total nitrogen concentration of 10 mg/L;
 - b. The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
 - c. The nitrite level shall not exceed 1 mg/L as nitrogen.
 7. The pH of recycled water used for recharge shall at all times be within the range of 6 to 9 pH units.
 8. The total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L for more than two consecutive readings.

None of these limits were exceeded in 4Q05, as summarized in Tables 2-1 through 2-3.

2.2 Diluent Water

No SWP water was delivered in 4Q05 to Banana and Hickory Basins. Table 2-10 lists the water quality of the State Water Project (SWP) water that is that is available to IEUA. These data were obtained through the LaVerne laboratory of Metropolitan Water District of Southern California.

As shown in Table 3-1, some local runoff from rainfall was introduced into both Hickory and Banana Basins. This has resulted in sporadic spikes in TOC in surface water grab samples collected from Hickory Basin East Cell; these TOC spikes range from up to 19.8 mg/L. Again, this TOC is likely of nuisance and/or stormwater origin, because recycled water average TOC is less than 6.3 mg/L for the blend of RP-1 and RP-4 this quarter.

The water quality of the blend of SWP and local runoff is provided in the surface water grab samples at the basins during periods when SWP was being recharged (see Section 2.3).

2.3 Basin and Lysimeter Samples

The M&RP schedule for basin and lysimeter sampling is the following (RWQCB, 2005b):

- TOC: Grab, Weekly



- Nitrate-Nitrogen: Grab, Twice per Week
- Nitrate-Nitrogen: Grab, Twice per Week
- Nitrite-Nitrogen: Grab, Twice per Week
- Ammonia: Grab, Twice per Week
- Organic Nitrogen: Grab, Twice per Week
- Total Inorganic Nitrogen (TIN) – by Addition: Grab, Twice per Week
- Total Nitrogen (TN) – by Addition: Grab, Twice per Week

These data are summarized in Tables 2-11 through 2-16. The tables are organized by basin (Banana and Hickory) and analyte group (TOC, Nitrogen Species). Hickory Basin has two lysimeter clusters – one each in the east and west cells of the basin (Hickory East Cell and Hickory West Cell, respectively), one lysimeter from these two clusters will be used for the compliance lysimeter for compliance monitoring following evaluation of start-up period data. Each table also lists the result by lysimeter name, depth and date.

Sample recovery was insufficient on occasion from Hickory Basin East 5 and Hickory Basin West 10 and 15-foot lysimeters. This issue proved to be intermittent at these lysimeters.

2.4 Groundwater Monitoring Wells

Groundwater quality within the vicinity of the Banana and Hickory Basins is monitored by sampling a network of six wells, including one nested monitoring well, BH-1, installed downgradient of Hickory Basin (Figure 2-1). BH-1 is screened in two zones; BH-1/1 is screened from 366 – 406 feet below top of casing, and BH-1/2 is screened from 437 – 477 feet below top of casing. BH-1/1 is screened above the regional groundwater table and is not sampled at this time. Should the regional water table rise, sampling within BH-1/1 will begin.

Groundwater monitoring results are presented in Table 2-17. Based on estimated travel times in the Title 22 Engineering Report (CH2M-Hill, 2003), the travel times to well BH-1/2 is approximately six months. IEUA began recharging recycled water in Banana Basin in July 2005 and preliminary EC results suggest that this well may currently be affected by recycled water recharge. Hence, the groundwater quality results for 4Q05 at this well show a departure from background conditions. The other monitoring wells continue to show background EC. The MCLs for one constituent was exceeded: aluminum in California Speedway 1, Ontario Well 20, and Fontana F-37A. Aluminum exceedances in groundwater samples are often artifacts of sampling (dissolution of fine particulates or colloidal material when the sample is acidified to preserve it). The BH-1/2 well had nitrate concentrations greater than the MCL. All water recharged in the Chino Basin Recycled Water Groundwater Recharge Program: stormwater, SWP water, and recycled water all have very low concentrations of total nitrogen.



Table 2-1
Results of Daily Recycled Water Monitoring for October 2005: Turbidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrate, TIN, pH, EC, TDS, Hardness, and Coliform

Date	RP1 Effluent														RP4 Effluent														
	Turbidity ¹	TOC	NH ₃ -N	NO ₃ -N	NO ₂ -N	TKN	TN	TKN-N O ₂ -N	TIN	pH ¹	EC	TDS	Hardness	Coliform	Turbidity ¹	TOC	NH ₃ -N	NO ₃ -N	NO ₂ -N	TKN	TN	TKN-N O ₂ -N	TIN	pH ¹	EC	TDS	Hardness	Coliform	
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm	mg/L	mg/L	MPN	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm	mg/L	mg/L	MPN		
Order Limit	2, 5, 10	16			1		10	5	8	6<pH<9		550		2.2, 23, 240	2, 5, 10	16			1		10	5	8	6<pH<9		550		2.2, 23, 240	
10/1/2005	0.7	7								7.36	710			2	1.0	10	0.2	0.4	<0.01					0.6	7.10	765		<2	
10/2/2005	0.7	7	0.3	4.9	0.03	1.0	6.0	1.0	5.3	7.40	700			<2	1.1	11	0.1	0.5	<0.01	1.0	1.5	1.0		0.6	7.20	780		<2	
10/3/2005	0.6	7								7.38	710			2	1.0	11	0.1	0.3	<0.01					0.4	7.10	780		<2	
10/4/2005	0.7	8	0.1	5.5	0.03	0.8	6.3	0.8	5.6	7.36	690	436	131	<2	1.0	11	0.1	0.6	<0.01	1.0	1.6	1.0		0.7	7.10	750	456	124	<2
10/5/2005	0.7	8								7.39	725			<2	1.0	11	0.1	0.9	<0.01					1.0	7.10	780		<2	
10/6/2005	0.8	8	0.1	6.1	<0.01	0.8	6.9		6.2	7.38	720			4	1.1	11	0.1	0.6	<0.01	1.0	1.6	1.0		0.7	7.20	770		<2	
10/7/2005	0.8	7								7.40	710			QC	1.2	11	0.1	0.4	<0.01					0.5	7.10	750		QC	
10/8/2005	0.8	7								7.44	705			<2	0.9	11	0.1	0.3	<0.01					0.4	7.10	765		<2	
10/9/2005	0.8	8	0.1	4.8	0.02	0.8	5.6	0.8	5.0	7.42	720			<2	0.8	11	0.2	0.4	<0.01	1.0	1.4	1.0		0.6	7.20	815		<2	
10/10/2005	0.8	8								7.43	680			<2	0.8	11	0.1	0.5	<0.01					0.6	7.20	770		<2	
10/11/2005	0.8	7	0.1	4.7	0.02	1.0	5.7	1.0	4.8	7.35	710	460		<2	0.8	10	0.1	0.5	<0.01	1.0	1.5	1.0		0.6	7.10	750	468	<2	
10/12/2005	0.8	7								7.38	715			2	0.7	10	0.1	1.4	<0.01					1.5	7.10	750		<2	
10/13/2005	0.8	7	0.2	5.5	0.02	0.7	6.2	0.7	5.7	7.39	715			<2	0.7	10	0.1	0.3	0.07	0.9	1.3	1.0		0.5	7.10	745		<2	
10/14/2005	0.8	7								7.43	715			<2	0.7	10	0.1	0.4	<0.01					0.5	7.10	750		<2	
10/15/2005	0.8	8								7.45	720			QC	0.8	10	0.1	0.3	<0.01					0.4	7.10	750		QC	
10/16/2005	0.7	8	0.1	5.5	0.02	0.8	6.3	0.8	5.6	7.43	730			<2	1.0	11	0.2	0.3	<0.01	0.9	1.2	0.9		0.5	7.20	770		2	
10/17/2005	1.0	9								7.39	705			<2	1.0	11	0.1	0.4	<0.01					0.5	7.10	760		<2	
10/18/2005	1.0	8	0.2	6.9	0.02	0.8	7.7	0.8	7.1	7.29	695	454		<2	0.9	11	0.1	0.6	<0.01	1.0	1.6	1.0		0.7	7.10	755	472	<2	
10/19/2005	1.1	7								7.30	710			<2	1.1	10	0.1	0.6	<0.01					0.7	7.10	755		<2	
10/20/2005	1.1	7	<0.1	6.2	0.03	0.9	7.1	1.0	6.2	7.33	710			<2	1.1	9	0.1	0.4	<0.01	1.0	1.4	1.0		0.5	7.10	745		<2	
10/21/2005	1.1	8								7.32	720			2	0.9	8	0.1	0.6	<0.01					0.7	7.10	730		2	
10/22/2005	0.9	6								7.34	735			<2	0.9	7	0.1	0.5	<0.01					0.6	7.10	730		<2	
10/23/2005	0.9	7	0.1	6.4	0.04	1.0	7.4	1.0	6.5	7.36	740			<2	0.9	8	0.1	0.5	<0.01	1.7	2.3	1.7		0.6	7.10	745		<2	
10/24/2005	1.0	8								7.39	730			<2	0.7	9	<0.1	0.3	<0.01					0.3	7.10	735		<2	
10/25/2005	0.8	7	0.2	5.6	0.02				5.8	7.41	720	458		<2	0.7	8	0.1	0.4	<0.01					0.5	7.10	725	442	<2	
10/26/2005	0.9	6								7.37	705			<2	0.9	8	<0.1	0.5	<0.01					0.5	7.10	725		<2	
10/27/2005	0.9	6	0.1							7.35	705			<2	0.9	8	0.1	0.7	<0.01					0.8	7.10	720		<2	
10/28/2005	0.9	6								7.37	710			<2	1.1	8	0.1	1.1	<0.01					1.2	7.10	720		<2	
10/29/2005	0.9	6								7.40	705			2	1.2	9	0.1	1.9	<0.01					2.0	7.10	705		<2	
10/30/2005	0.8	8	0.1	6.0	0.02	0.8	6.8	0.8	6.1	7.42	680			2	1.3	12	0.1	0.7	<0.01	1.3	2.0	1.3		0.8	7.10	705		<2	
10/31/2005	0.8	8								7.44	725			2	1.4	10	0.1	1.0	1.0					2.1	7.10	755		<2	
Average	0.8	7	0.1	5.7	0.02	0.9	6.6	0.9	5.8	7.38	712	452		<2	1.0	10	0.1	0.6	<0.01	1.1	1.6	1.1		0.7	7.12	750	460	<2	
Min	0.6	6	0.1	4.7	0.02	0.7	5.6	0.7	4.8	7.29	680	436		<2	0.7	7	0.1	0.3	<0.01	0.9	1.2	0.9		0.3	7.10	705	442	<2	
Max	1.1	9	0.3	6.9	0.04	1.0	7.7	1.0	7.1	7.45	740	460		4	1.4	12	0.2	1.9	1.00	1.7	2.3	1.7		2.1	7.20	815	472	2	

¹Turbidity and pH are 24 Hour averages of continuous monitoring

Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

- The turbidity of the filter effluent shall not exceed any of the following:
 - Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
 - 5 NTU more than 5 percent of the time in any 24-hour period; and
 - 10 NTU at any time.
- The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
- The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
- No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.

The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

- A total nitrogen concentration of 10 mg/L;
- The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
- The nitrite level shall not exceed 1 mg/L as nitrogen.

The pH of recycled water for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall at all times be within the range of 6 to 9 pH units.

For the first year of operation after project start-up, the weekly average total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L.

QC: Quality Control Failure, no data reported.

Bold signifies an exceedance of a limit in the Order.



Table 2-2
Results of Daily Recycled Water Monitoring for November 2005: Turbidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrate, TIN, pH, EC, TDS, Hardness, and Coliform

Date	RP1 Effluent														RP4 Effluent													
	Turbidity	TOC	NH ₃ -N	NO ₃ -N	NO ₂ -N	TKN	TN	TKN-N O ₂ -N	TIN	pH ¹	EC	TDS	Hardness	Coliform	Turbidity ²	TOC	NH ₃ -N	NO ₃ -N	NO ₂ -N	TKN	TN	TKN-N O ₂ -N	TIN	pH ¹	EC	TDS	Hardness	Coliform
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm	mg/L	mg/L	MPN		NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm	mg/L	mg/L	MPN		
Order Limit	2; 5; 10	16		1		10	5	8	6<pH<9		550	2; 23; 240			2; 5; 10	16		1		10	5	8	6<pH<9		550	2; 23; 240		
11/1/2005	0.8	8	0.2	5.6	0.02	1.4	7.0	1.4	7.0	7.43	715	462	136	<2	1.3	10	0.1	0.5	<0.01	0.6	1.1	0.6	1.1	7.10	725	446	130	2
11/2/2005	0.7	7								7.46	705			<2	1.7	9	0.1	0.4	<0.01				0.4	7.10	730			<2
11/3/2005	0.7	7	0.1	5.8	0.02				5.8	7.45	705			2	1.4	9	0.1	0.4	<0.01				0.4	7.10	715			<2
11/4/2005	0.8	7								7.45	705			2	1.0	9	0.1	0.3	<0.01				0.3	7.10	720			<2
11/5/2005	0.8	7								7.44	705			<2	1.0	9	0.1	0.4	<0.01				0.4	7.10	710			2
11/6/2005	0.7	7	0.1	6.0	0.03				6.0	7.42	725			<2	0.9	9	0.1	0.5	<0.01				0.5	7.10	745			<2
11/7/2005	0.7	7								7.44	720			2	0.9	10	0.1	0.8	<0.01				0.8	7.20	745			<2
11/8/2005	0.7	7	0.2	5.7	0.02				5.8	7.44	715	450		<2	0.8	10	0.1	1.1	<0.01				1.1	7.10	740	454		2
11/9/2005	0.7	7								7.44	705			<2	1.0	10	0.1	0.6	<0.01				0.6	7.20	715			<2
11/10/2005	0.8	7	0.1	5.6	0.01	0.8	6.4	0.8	6.4	7.44	710			<2	0.7	9	0.1	2.2	<0.01	0.2	2.4	0.2	2.4	7.20	705			<2
11/11/2005	0.8	7								7.47	705			<2	0.6	8	0.1	1.9	<0.01				1.9	7.10	700			<2
11/12/2005	0.8	6								7.44	710			<2	0.6	8	0.4	1.7	<0.01				1.7	7.10	720			<2
11/13/2005	0.8	7	0.2	4.6	0.02	0.5	5.1	0.5	5.1	7.46	715			2	0.7	9	0.1	0.9	<0.01	0.4	1.3	0.4	1.3	7.10	730			<2
11/14/2005	0.8	6								7.47	705			2	0.8	8	0.2	1.0	<0.01				1.0	7.20	725			<2
11/15/2005	0.9	8	0.2	4.9	0.02				5.0	7.49	705	440		<2	0.8	10	0.1	2.4	0.0				2.4	7.10	720	448		<2
11/16/2005	1.0	9								7.46	720			<2	0.8	10	0.1	2.6	<0.01				2.6	7.10	725			<2
11/17/2005	1.0	8	0.1	5.6	0.02				5.6	7.50	715			2	0.7	10	0.1	1.6	<0.01				1.6	7.10	710			<2
11/18/2005	0.9	8		5.2	0.02	1.9	7.1	1.9	7.1	7.49	735			<2	0.5	9	0.1	1.3	<0.01	1.2	2.5	1.2	2.5	7.10	730			2
11/19/2005	1.0	7								7.49	725			2	0.9	10	0.1	1.1	<0.01				1.1	7.10	720			2
11/20/2005	0.9	8	0.2	4.6	0.02	1.0	5.6	1.0	5.6	7.53	720			<2	0.6	11	0.1	0.6	<0.01	1.1	1.7	1.1	1.7	7.10	750			<2
11/21/2005	0.9	8								7.50	710			<2	1.1	12	0.1	0.8	<0.01				0.8	7.10	770			<2
11/22/2005	0.9	8	0.2	4.7	0.02				4.7	7.49	710	448		2	1.0	11	0.1	1.0	<0.01				1.0	7.10	765	470		<2
11/23/2005	0.9	8								7.47	715			<2	0.7	11	0.1	0.8	<0.01				0.8	7.10	770			<2
11/24/2005	0.9	9								7.50	715			<2	0.7	11	0.1	0.3	<0.01				0.3	7.10	755			<2
11/25/2005	0.9	8								7.49	720			<2	0.7	12	<0.1	0.3	<0.01				0.3	7.10	790			<2
11/26/2005	0.9	9								7.47	725			2	0.9	11	0.1	0.7	<0.01				0.7	7.10	790			<2
11/27/2005	0.9	9	0.2	6.6	0.02	1.4	8.0	1.4	8.0	7.47	720			2	0.9	12	0.2	0.7	<0.01	1.6	2.3	1.6	2.3	7.10	760			4
11/28/2005	0.9	9								7.47	720			<2	1.4	13	0.2	2.0	0.33				2.3	7.10	770			2
11/29/2005	0.9	9	0.2	6.7	0.01					7.44	735	466		2	1.8	13	0.2	2.6	<0.01				2.6	7.00	755	466		<2
11/30/2005	0.9	9								7.44	725			<2	1.1	12	<0.1	0.9	<0.01				0.9	7.00	745			<2
Average	0.8	8	0.2	5.5	0.02	1.2	6.5	1.2	6.0	7.47	715	453		<2	0.9	10	0.1	1.1	<0.01	0.8	1.9	0.8	1.3	7.11	738	457		<2
Min	0.7	6	<0.1	4.6	0.01	0.5	5.1	0.5	4.7	7.42	705	440		<2	0.5	8	<0.1	<0.1	<0.01	0.2	1.1	0.2	0.3	7.00	700	446		<2
Max	1.0	9	0.2	6.7	0.03	1.9	8.0	1.9	8.0	7.53	735	466		2	1.8	13	0.4	2.6	0.33	1.6	2.5	1.6	2.6	7.20	790	470		4

¹Turbidity and pH are 24 Hour averages of continuous monitoring

Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

- The turbidity of the filter effluent shall not exceed any of the following:
 - Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
 - 5 NTU more than 5 percent of the time in any 24-hour period; and
 - 10 NTU at any time.
- The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
- The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
- No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.

The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

- A total nitrogen concentration of 10 mg/L;
- The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
- The nitrite level shall not exceed 1 mg/L as nitrogen.

The pH of recycled water for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall at all times be within the range of 6 to 9 pH units.

For the first year of operation after project start-up, the weekly average total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L.

Bold signifies an exceedance of a limit in the Order.

Table 2-3
Results of Daily Recycled Water Monitoring for December 2005: Turbidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrate, TIN, pH, EC, TDS, Hardness, and Coliform

Date	RP1 Effluent													RP4 Effluent														
	Turbidity	TOC	NH ₃ -N	NO ₃ -N	NO ₂ -N	TKN	TN	TKN-N O ₃ -N	TIN	pH ¹	EC	TDS	Hardness: Coliform	Turbidity ²	TOC	NH ₃ -N	NO ₃ -N	NO ₂ -N	TKN	TN	TKN-N O ₃ -N	TIN	pH ¹	EC	TDS	Hardness	Coliform	
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm	mg/L	mg/L	MPN	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm	mg/L	mg/L	MPN	
Order Limit	2, 5, 10	16			1		10	5	8	6<pH<9		550	2.2; 23; 240	2, 5, 10	16			1	10	5	8	6<pH<9		550	2.2; 23; 240			
12/1/2005	0.9	9	0.1	6.8	0.02	1.6	8.5	1.6	8.5	7.40	720		2	1.0	12	0.1	0.9	<0.01	1.7	2.6	1.7	2.6	7.10	720		<2		
12/2/2005	1.0	9								7.36	730		2	1.0	12	0.1	1.0	<0.01				1.0	7.10	735		<2		
12/3/2005	1.1	9								7.37	725		2	1.2	13	0.1	1.2	<0.01				1.2	7.10	740		<2		
12/4/2005	1.2	10	0.1	6.2	0.03				6.2	7.35	735		<2	1.1	12	0.1	2.4	<0.01				2.4	7.10	755		<2		
12/5/2005	1.5	10								7.42	755		<2	1.3	14	0.1	1.8	<0.01				1.8	7.10	755		<2		
12/6/2005	1.1	10	0.2	5.3	0.02	1.7	7.1	1.7	7.1	7.43	735	474	132	<2	1.4	16	0.1	1.3	<0.01	2.0	3.3	2.0	3.3	7.00	790	474	130	<2
12/7/2005	0.8	9								7.43	715		<2	1.1	16	0.1	0.3	<0.01				0.3	7.10	760		<2		
12/8/2005	0.9	9	0.2	7.3	0.02	1.2	8.5	1.2	8.5	7.43	705		2	1.0	15	0.1	1.1	<0.01	1.8	2.9	1.8	2.9	7.10	740		<2		
12/9/2005	0.9	6								7.44	695		4	1.1	11	0.1	1.3	<0.01				1.3	7.00	730		<2		
12/10/2005	0.9	6								7.44	725		<2	1.3	11	0.1	1.5	<0.01				1.5	7.00	765		<2		
12/11/2005	1.0	6	0.1	8.0	0.04	1.3	9.3	1.3	9.3	7.45	730		<2	1.4	12	0.1	1.4	0.0	1.6	3.0	1.6	3.0	7.00	770		<2		
12/12/2005	1.0	7	0.2							7.44	730		<2	1.5	12	0.1	0.4	0.0					7.10	765		<2		
12/13/2005	1.2	8	0.2	9.4	0.06				9.4	7.42	730	470	2	1.2	12	0.1	1.3	0.2				1.5	7.00	745	456		2	
12/14/2005	1.3	7								7.41	740		<2	1.2	9	0.1	0.8	<0.01				0.8	7.00	740		<2		
12/15/2005	1.0	9	0.1	9.8	0.04				9.8	7.38	735		<2	1.7	10	<0.1	0.4	<0.01				0.4	7.00	755		<2		
12/16/2005	1.0	10								7.37	700		4	1.9	13	0.1	0.3	<0.01				0.3	7.00	740		2		
12/17/2005	1.0	11								7.38	710		<2	1.2	11	0.1	0.3	<0.01				0.3	7.00	750		2		
12/18/2005	1.1	8	0.1	12.0	0.02				12.0	7.40	745		<2	1.0	10	0.1	0.9	<0.01				0.9	7.00	790		<2		
12/19/2005	1.1	6								7.39	715		<2	1.8	9	<0.1	1.0	<0.01				1.0	7.00	775		<2		
12/20/2005	1.2	6	<0.1	10.9	0.03				10.9	7.39	715	470	2	1.5	10	0.1	1.1	<0.01				1.1	7.00	775	482		<2	
12/21/2005	1.1	6								7.41	720		2	1.1	9	0.1	0.2	<0.01				0.2	7.00	775		<2		
12/22/2005	1.0	6	1.0	11.3	0.02				11.3	7.39	735		ND	0.8	9	0.1	0.1	<0.01				0.1	7.10	770		ND		
12/23/2005	1.0	6								7.39	730		2	0.6	8	0.1	0.1	<0.01				0.1	7.10	755		<2		
12/24/2005	1.0	6								7.63	750		2	0.5	8	0.1	0.3	<0.01				0.3	7.00	785		<2		
12/25/2005	0.9	6								7.39	730		<2	0.4	8	0.1	0.2	<0.01				0.2	7.10	810		<2		
12/26/2005	0.9	6								7.30	735		2	0.4	8	0.1	0.6	<0.01				0.6	7.00	805		<2		
12/27/2005	1.0	7	0.2	11.0	0.02				11.1	7.39	735	478	<2	0.6	10	0.2	0.7	<0.01				0.7	7.00	805	492		<2	
12/28/2005	1.0	10								7.39	735		<2	0.8	13	0.1	0.1	<0.01				0.1	7.00	810		2		
12/29/2005	1.0	9	0.2	9.9	0.02				9.9	7.39	720		<2	0.8	13	0.1	<0.1	<0.01				0.0	7.00	805		<2		
12/30/2005	1.0	9								7.39	725		<2	0.8	13	0.2	0.3	<0.01				0.3	7.00	825		<2		
12/31/2005	1.0	8								7.38	730		<2	11	0.1	0.2	<0.01					7.00	830		<2			
Average	1.0	8	0.2	9.0	0.03	1.5	8.3	1.5	9.5	7.40	727	473	<2	1.1	11	0.1	0.8	<0.01	1.8	3.0	1.8	1.0	7.04	770	476		<2	
Min	0.8	6	<0.1	5.3	<0.01	1.2	7.1	1.2	6.2	7.30	695	470	<2	0.4	8	<0.1	<0.1	<0.01	1.6	2.6	1.6	0.0	7.00	720	456		<2	
Max	1.5	11	1.0	12.0	0.06	1.7	9.3	1.7	12.0	7.63	755	478	4	1.9	16	0.2	2.4	0.15	2.0	3.3	2.0	3.3	7.10	830	492		<2	

¹Turbidity and pH are 24 Hour averages of continuous monitoring

Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

- The turbidity of the filter effluent shall not exceed any of the following:
 - Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
 - 5 NTU more than 5 percent of the time in any 24-hour period; and
 - 10 NTU at any time.
- The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
- The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
- No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.

The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

- A total nitrogen concentration of 10 mg/L;
- The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
- The nitrite level shall not exceed 1 mg/L as nitrogen.

The pH of recycled water for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall at all times be within the range of 6 to 9 pH units.

For the first year of operation after project start-up, the weekly average total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L.

ND: Not detected above method reporting limit

Bold signifies an exceedance of a limit in the Order.

Table 2-4
Results of Running Quarterly Average Concentration from Each Quarter:
Turbidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrate, TIN, pH, EC, TDS, Hardness, and Coliform

Date	RP1 Effluent														RP4 Effluent													
	Turbidity	TOC	NH ₃ -N	NO ₃ -N	NO ₂ -N	TKN	TN	TKN-N O ₃ -N	TIN	pH	EC	TDS	Hardness	Coliform	Turbidity	TOC	NH ₃ -N	NO ₃ -N	NO ₂ -N	TKN	TN	TKN-N O ₃ -N	TIN	pH	EC	TDS	Hardness	Coliform
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN
Order Limit	2, 5, 10	16			1		10	5	8	6<pH<9		550		2.2, 23, 240	2, 5, 10	16			1		10	5	8	6<pH<9		550		2.2, 23, 240
Average 3Q05	0.77	7.19	0.13	5.86	0.03	0.89	6.86	0.93	6.02	7.21	711.14	454.15	133.00	2.00	0.96	10.20	0.19	1.14	0.04	1.01	2.11	1.01	1.24	7.06	742.14	456.77	119.00	2.00
Min	0.28	5.80	0.10	4.40	0.01	0.80	5.43	0.80	4.53	6.69	670.00	436.00	127.00	2.00	0.44	8.70	0.10	0.10	0.02	0.70	0.70	0.70	0.00	6.90	675.00	438.00	113.00	2.00
Max	1.14	8.60	0.30	8.64	0.12	1.10	9.70	1.12	8.90	7.39	785.00	490.00	137.00	2.00	1.90	18.60	6.60	6.46	0.05	1.25	7.56	1.25	6.86	7.20	790.00	488.00	122.00	2.00
Average 4Q05	0.91	7.60	0.17	6.69	0.02	1.06	6.89	1.09	7.11	7.42	718.10	458.92	133.00	2.19	0.99	10.37	0.11	0.82	0.23	1.14	1.94	1.15	1.01	7.09	752.93	463.54	128.00	2.15
Min	0.64	5.60	0.10	4.56	0.01	0.50	5.08	0.52	4.71	7.29	680.00	436.00	131.00	2.00	0.40	7.00	0.10	0.10	0.02	0.20	1.05	0.20	0.00	7.00	700.00	442.00	124.00	2.00
Max	1.52	11.00	1.00	12.00	0.06	1.90	9.34	1.92	12.02	7.63	755.00	478.00	136.00	4.00	1.90	15.70	0.40	2.63	1.00	2.00	3.35	2.00	3.35	7.20	830.00	492.00	130.00	4.00
Running Average	0.84	7.39	0.15	6.28	0.03	0.97	6.87	1.01	6.57	7.31	714.62	456.54	133.00	2.10	0.97	10.29	0.15	0.98	0.14	1.07	2.02	1.08	1.12	7.07	747.54	460.15	123.50	2.08
Min	0.28	5.60	0.10	4.40	0.01	0.50	5.08	0.52	4.53	6.69	670.00	436.00	127.00	2.00	0.40	7.00	0.10	0.10	0.02	0.20	0.70	0.20	0.00	6.90	675.00	438.00	113.00	2.00
Max	1.52	11.00	1.00	12.00	0.12	1.90	9.70	1.92	12.02	7.63	785.00	490.00	137.00	4.00	1.90	18.60	6.60	6.46	1.00	2.00	7.56	2.00	6.86	7.20	830.00	492.00	130.00	4.00

Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

- a. The turbidity of the filter effluent shall not exceed any of the following:
 - 1) Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
 - 2) 5 NTU more than 5 percent of the time in any 24-hour period; and
 - 3) 10 NTU at any time.
- b. The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
- c. The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
- d. No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.

The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

- a. A total nitrogen concentration of 10 mg/L;
- b. The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
- c. The nitrite level shall not exceed 1 mg/L as nitrogen.

The pH of recycled water for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall at all times be within the range of 6 to 9 pH units.

For the first year of operation after project start-up, the weekly average total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L.

Bold signifies an exceedance of a limit in the Order.



Table 2-5
Inland Empire Utilities Agency
Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) Analysis

	Overall Effluent TDS Flow-weighted Average	Agency-wide TIN			
	12-Month Running Average	Discharge		Discharge Limit	
Mo-Yr	mg/L	Flow wt. mg/L	Total lbs/day	Flow wt. mg/L	Total lbs/day
Jan-05	492	7.3	3,780	12.2	6,260
Feb-05	494	8.4	4,020	12.3	5,870
Mar-05	501	7.5	3,260	12.5	5,410
Apr-05	509	6.9	2,820	12.5	5,120
May-05	510	6.7	2,980	12.3	5,520
Jun-05	510	7.0	3,080	12.3	5,450
Jul-05	503	5.4	2,370	12.4	5,410
Aug-05	497	5.9	2,350	12.6	5,030
Sep-05	494	5.4	2,240	12.5	5,160
Oct-05	491	5.5	2,430	12.3	5,470
Nov-05	489	5.5	2,470	12.3	5,500
Dec-05	488	8.4	3,830	12.3	5,640
12-Month Average	498.3	6.7	2,970	12.4	5,490
Minimum	488.4	5.4	2,240	12.2	5,030
Maximum	510.2	8.4	4,020	12.6	6,260

Table 2-6
Recycled Water Monitoring Results: Oil and Grease, Inorganic Chemicals, VOCs, SOCs,
Disinfection By-Products, Notification Levels, and Radionuclides

Chemical	Order Limit	3Q05 Result*	4Q05 Result*	Running Average	Units	Method
Oil & Grease (Total)		<1	<2	ND	mg/L	EPA 1664
Aluminum ²	1000	**	156/<70		µg/L	EPA 200.7
Antimony	6	<1	<1	ND	µg/L	EPA 200.8
Arsenic	10	<1	<1	ND	µg/L	EPA 200.8
Asbestos by TEM - >10 microns	7	<4.94	<1.98	ND	MFL	ML/EPA 100.2
Barium	1000	13	16	14.5	µg/L	EPA 200.7
Beryllium	4	<1	<1	ND	µg/L	EPA 200.7
Cadmium	5	<1	<1	ND	µg/L	EPA 200.7
Chromium	50	<1	1	0.75	µg/L	EPA 200.7
Cyanide	0.15	<0.005	<0.005	ND	mg/L	SM 4500-CN E
Fluoride	2	0.2	0.2	0.2	mg/L	SM 4500-F C
Mercury	2	0.2	<0.2	0.15	µg/L	EPA 245.2
Nickel	100	2	2	2	µg/L	EPA 200.7
Selenium	50	<5	<5	ND	µg/L	EPA 200.8
Thallium	2	<1	<1	ND	µg/L	EPA 200.8
Volatile Organic Compounds						
Benzene	1	<0.5	<0.5	ND	µg/L	EPA 524.2
Carbon tetrachloride	0.5	<0.3	<0.3	ND	µg/L	EPA 524.2
1,2-Dichlorobenzene	600	<0.5	<0.5	ND	µg/L	EPA 524.2
1,4-Dichlorobenzene	5	<0.5	<0.5	ND	µg/L	EPA 524.2
1,1-Dichloroethane	5	<0.5	<1	ND	µg/L	EPA 524.2
1,2-Dichloroethane	0.5	<0.3	<0.3	ND	µg/L	EPA 524.2
1,1-Dichloroethylene	6	<1	<1	ND	µg/L	EPA 524.2
cis-1,2-Dichloroethylene	6	<0.5	<0.5	ND	µg/L	EPA 524.2
trans-1,2-Dichloroethylene	10	<0.5	<0.5	ND	µg/L	EPA 524.2
Dichloromethane	5	<0.5	<0.5	ND	µg/L	EPA 524.2
1,2-Dichloropropane	5	<0.5	<0.5	ND	µg/L	EPA 524.2
1,3-Dichloropropane	0.5	<0.5	<0.5	ND	µg/L	EPA 524.2
Ethylbenzene	300	<0.5	<0.5	ND	µg/L	EPA 524.2
Monochlorobenzene	70	<0.5	<0.5	ND	µg/L	EPA 524.2
Methyl tert-butyl ether (MTBE)	13	<0.5	<0.5	ND	µg/L	EPA 524.2
Styrene	100	<0.5	<0.5	ND	µg/L	EPA 524.2
1,1,2,2-Tetrachloroethane	1	<0.5	<0.5	ND	µg/L	EPA 524.2
Tetrachloroethylene	5	<0.5	<0.5	ND	µg/L	EPA 524.2
Toluene	150	<0.5	<0.5	ND	µg/L	EPA 524.2
1,2,4-Trichlorobenzene	5	<0.5	<0.5	ND	µg/L	EPA 524.2
1,1,1-Trichloroethane	200	<0.5	<0.5	ND	µg/L	EPA 524.2
1,1,2-Trichloroethane	5	<0.5	<0.5	ND	µg/L	EPA 524.2
Trichloroethylene	5	<0.5	<0.5	ND	µg/L	EPA 524.2
Trichlorofluoromethane	150	<0.5	<0.5	ND	µg/L	EPA 524.2
Trichlorotrifluoroethane	1200	<0.5	<0.5	ND	µg/L	EPA 524.2
Vinyl chloride	0.5	<0.3	<0.3	ND	µg/L	EPA 524.2
m,p-Xylene	1750	<0.5	<0.5	ND	µg/L	EPA 524.2
o-Xylene	1750	<0.5	<0.5	ND	µg/L	EPA 524.2



Table 2-6
Recycled Water Monitoring Results: Oil and Grease, Inorganic Chemicals, VOCs, SOCs,
Disinfection By-Products, Notification Levels, and Radionuclides

Chemical	Order Limit	3Q05 Result*	4Q05 Result*	Running Average	Units	Method
Non-Volatile Synthetic Organic Chemicals (SOCs)						
Alachlor (Alanex)	2	<0.1	<0.1	ND	µg/L	EPA 505
Atrazine	1	<0.05	<0.05	ND	µg/L	EPA 525.2
Bentazon	18	<0.5	<0.5	ND	µg/L	EPA 515.4
Benzo(a)pyrene	0.2	<0.02	<0.02	ND	µg/L	EPA 525.2
Carbofuran (Furadan)	18	<0.5	<0.5	ND	µg/L	EPA 531.2
Chlordane	0.1	<0.1	<0.1	ND	µg/L	EPA 505
2,4-D	70	<0.1	<0.1	ND	µg/L	EPA 515.4
Dalapon	200	<1	<1	ND	µg/L	EPA 515.4
Dibromochloropropane (DBCP)	0.2	<0.01	0.029	0.017	µg/L	ML/EPA 504.1
Di-(2-Ethylhexyl)adipate	400	<0.6	<0.6	ND	µg/L	ML/EPA 525.2
Di(2-Ethylhexyl)phthalate	4	1.2	<0.6	0.75	µg/L	ML/EPA 525.2
Dinoseb	7	<0.2	<0.2	ND	µg/L	ML/EPA 515.4
Diquat	20	<0.4	<0.4	ND	µg/L	ML/EPA 549.2
Endothall	100	<20	<5	ND	µg/L	ML/EPA 548.1
Endrin	2	<0.01	<0.01	ND	µg/L	ML/EPA 505
Ethylene Dibromide (EDB)	0.05	<0.01	<0.01	ND	µg/L	ML/EPA 504.1
Glyphosate	700	<6	<6	ND	µg/L	ML/EPA 547
Heptachlor	0.01	<0.01	<0.01	ND	µg/L	ML/EPA 505
Heptachlor Epoxide	0.01	<0.01	<0.01	ND	µg/L	ML/EPA 505
Hexachlorobenzene	1	<0.05	<0.05	ND	µg/L	ML/EPA 525.2
Hexachlorocyclopentadiene	50	0.22	<0.085	0.13125	µg/L	ML/EPA 525.2
Lindane (gamma-BHC)	0.2	<0.01	<0.01	ND	µg/L	EPA 505
Methoxychlor	30	<0.05	<0.05	ND	µg/L	EPA 505
Molinate	20	<0.1	<0.1	ND	µg/L	ML/EPA 525.2
Oxamyl (Vydate)	50	<0.5	<0.5	ND	µg/L	ML/EPA 531.2
Pentachlorophenol	1	<0.04	<0.04	ND	µg/L	ML/EPA 515.4
Picloram	500	<0.1	<0.1	ND	µg/L	ML/EPA 515.4
PCB 1016	0.5	<0.07	<0.07	ND	µg/L	EPA 505
PCB 1221	0.5	<0.1	<0.1	ND	µg/L	EPA 505
PCB 1232	0.5	<0.1	<0.1	ND	µg/L	EPA 505
PCB 1242	0.5	<0.1	<0.1	ND	µg/L	EPA 505
PCB 1248	0.5	<0.1	<0.1	ND	µg/L	EPA 505
PCB 1254	0.5	<0.1	<0.1	ND	µg/L	EPA 505
PCP 1260	0.5	<0.1	<0.1	ND	µg/L	EPA 505
Simazine	4	<0.05	<0.05	ND	µg/L	ML/EPA 525.2
Thiobencarb	70	<0.2	<0.2	ND	µg/L	ML/EPA 525.2
Toxaphene	3	<0.5	<0.5	ND	µg/L	EPA 505
2,3,7,8-TCDD 1613 DW (subbed)	30	<5	<5	ND	pg/l	EPA 1613
2,4,5-TP (Silvex)	50	<0.2	<0.2	ND	µg/L	ML/EPA 515.4
Disinfection By-products						
Total Trihalomethanes	80	241	26 ⁽⁴⁾	RA	µg/L	EPA 524.2
Total Haloacetic Acids (HAA5)	60	200	<1 ⁽⁴⁾	RA	µg/L	ML/S6251B
Bromate	10	<5	<5	ND	µg/L	EPA 300.1
Chlorite by IC	1000	<0.04	<0.02	ND	mg/l	EPA 300.1



Table 2-6
Recycled Water Monitoring Results: Oil and Grease, Inorganic Chemicals, VOCs, SOCs,
Disinfection By-Products, Notification Levels, and Radionuclides

Chemical	Order Limit	3Q05 Result*	4Q05 Result*	Running Average	Units	Method
Notification Levels						
Copper	1300	5	DNR	IS	µg/L	EPA 200.7
Lead	15	<0.5	<0.5	ND	µg/L	EPA 200.8
Radionuclides						
Combined Radium-226 and Radium 228	5	<0.753	<1.04	ND	pCi/l	EPA 903.0
Gross Alpha particle activity (including Radium-226 but excluding Radon and Uranium)	15	<3.00	<3.00	ND	pCi/l	EPA 900.0
Tritium (Sub)	20,000	<294	<317	ND	pCi/l	EPA 906
Strontium 90	8	<0.590	<0.397	ND	pCi/l	EPA 905
Gross Beta particle activity	50	9.5	9.4	9.45	pCi/l	EPA 900.0
Uranium	20	<0.7	<0.7	ND	pCi/l	EPA 200.8

* Recycled water sample is a blend of RP1 and RP4 Effluents

** Aluminum was reanalyzed in November. 156 value is from 3Q05 and <70 is from 4Q05.

*** Limit is either for a single isomer or the sum of the isomers.

⁽⁴⁾ Representative sample location is the compliance point lysimeter.

IS: Insufficient Sample for Analytical Test

RA: Running average will be initiated as more data is obtained.

DNR: Have not received laboratory data as of the date of this report.

Averages are calculated when a detection above the method reporting limit occurs in one or more samples. Half the reporting limit is used for other samples not detected above the method reporting limit. As an example: $1 + (<0.5)/2 = 0.625$

Bold signifies an exceedance of a limit in the Order.



Table 2-7
Recycled Water* Monitoring Results: Remaining Priority Pollutants

Chemical	3Q05 Result*	4Q05 Result*	Running Average	Units	Method
Metals					
Trivalent Chromium	1 ug/L	1 ug/L	1 ug/L	1 ug/L	EPA 200.7
Volatile Organics					
Acrolein	<2	<2	ND	µg/L	EPA 624
Acrylonitrile	<2	<2	ND	µg/L	EPA 624
Bromoform	<0.5	<0.5	ND	µg/L	EPA 524.2
Dibromochloromethane	5.6	5.0	5.3	µg/L	EPA 524.2
Chloroethane	<0.5	<0.5	ND	µg/L	EPA 524.2
2-Chloroethyl Vinyl Ether	<1	<1	ND	µg/L	EPA 624
Chloroform	199	150	174.5	µg/L	EPA 524.2
Bromodichloromethane	36.6	31	33.8	µg/L	EPA 524.2
Bromomethane	<1	<1	ND	µg/L	EPA 524.2
Chloromethane	0.7	<0.5	0.48	µg/L	EPA 524.2
Acid Extractibles					
2-Chlorophenol	<100	<1	ND	µg/L	EPA 625
2,4-Dichlorophenol	<100	<2	ND	µg/L	EPA 625
2,4-Dimethylphenol	<100	<1	ND	µg/L	EPA 625
2-Methyl-4,6-Dinitrophenol	<100	<2	ND	µg/L	EPA 625
2,4-Dinitrophenol	<100	<3	ND	µg/L	EPA 625
2-Nitrophenol	<100	<1	ND	µg/L	EPA 625
4-Nitrophenol	<100	<3	ND	µg/L	EPA 625
4-Chloro-3-methylphenol	<100	<1	ND	µg/L	EPA 625
Phenol	<100	<1	ND	µg/L	EPA 625
2,4,6-Trichlorophenol	<100	<1	ND	µg/L	EPA 625
Base/Neutral Extractibles					
Acenaphthene	<100	<1	ND	µg/L	EPA 625
Acenaphthylene	<100	<1	ND	µg/L	EPA 625
Anthracene	<100	<1	ND	µg/L	EPA 625
Benzidine	<100	<5	ND	µg/L	EPA 625
Benzo(a)anthracene	<100	<5	ND	µg/L	EPA 625
Benzo(b)fluoranthene	<100	<1	ND	µg/L	EPA 625
Benzo(g,h,i)perylene	<100	<2	ND	µg/L	EPA 625
Benzo(k)fluoranthene	<100	<1	ND	µg/L	EPA 625
Bis (2-Chloroethoxy) Methane	<100	<2	ND	µg/L	EPA 625
Bis(2-Chloroethyl)ether	<100	<1	ND	µg/L	EPA 625
Bis (2-Chloroisopropyl) Ether	<100	<1	ND	µg/L	EPA 625
4-Bromophenyl Phenyl Ether	<100	<1	ND	µg/L	EPA 625
Butylbenzyl Phthalate	<100	<1	ND	µg/L	EPA 625
2-Chloronaphthalene	<100	<1	ND	µg/L	EPA 625
4-Chlorophenyl Phenyl Ether	<100	<1	ND	µg/L	EPA 625
Chrysene	<100	<1	ND	µg/L	EPA 625
Dibenzo(a,h)anthracene	<100	<1	ND	µg/L	EPA 625
1,3-Dichlorobenzene	<100	<1	ND	µg/L	EPA 625
3,3-Dichlorobenzidine	<100	<5	ND	µg/L	EPA 625



Table 2-7
Recycled Water* Monitoring Results: Remaining Priority Pollutants

Chemical	3Q05 Result*	4Q05 Result*	Running Average	Units	Method
Diethyl phthalate	<100	<2	ND	µg/L	EPA 625
Dimethyl Phthalate	<100	<1	ND	µg/L	EPA 625
Di-n-butyl phthalate	<100	<1	ND	µg/L	EPA 625
2,4-Dinitrotoluene	<100	<1	ND	µg/L	EPA 625
2,6-Dinitrotoluene	<100	<2	ND	µg/L	EPA 625
Di-n-octyl phthalate	<100	<1	ND	µg/L	EPA 625
1,2-Diphenylhydrazine	<100	<1	ND	µg/L	EPA 625
Fluoranthene	<100	<1	ND	µg/L	EPA 625
Fluorene	<100	<1	ND	µg/L	EPA 625
Hexachlorobutadiene	<100	<1	ND	µg/L	EPA 625
Hexachlorocyclopentadiene	<100	<5	ND	µg/L	EPA 625
Hexachloroethane	<100	<1	ND	µg/L	EPA 625
Indeno(1,2,3-cd)pyrene	<100	<2	ND	µg/L	EPA 625
Isophorone	<100	<1	ND	µg/L	EPA 625
Naphthalene	<100	<1	ND	µg/L	EPA 625
Nitrobenzene	<100	<1	ND	µg/L	EPA 625
N-Nitrosodi-N-Propylamine	<100	<1	ND	µg/L	EPA 625
N-Nitrosodiphenylamine	<100	<1	ND	µg/L	EPA 625
Phenanthrene	<100	<1	ND	µg/L	EPA 625
Pyrene	<100	<1	ND	µg/L	EPA 625
Pesticides					
Aldrin	<1	<0.005	ND	µg/L	EPA 608
Alpha-BHC	<1	<0.01	ND	µg/L	EPA 608
Beta-BHC	<1	<0.01	ND	µg/L	EPA 608
Delta-BHC	<1	<0.011	ND	µg/L	EPA 608
4,4' - DDT	<1	<0.02	ND	µg/L	EPA 608
4,4' - DDE	<1	<0.01	ND	µg/L	EPA 608
4,4' - DDD	<1	<0.01	ND	µg/L	EPA 608
Dieldrin	<1	<0.01	ND	µg/L	EPA 608
Endosulfan I	<1	<0.01	ND	µg/L	EPA 608
Endosulfan II	<1	<0.01	ND	µg/L	EPA 608
Endosulfan Sulfate	<1	<0.01	ND	µg/L	EPA 608
Endrin Aldehyde	<1	<0.01	ND	µg/L	EPA 608
Unregulated Chemicals					
Boron	0.3	0.31	0.3	mg/L	EPA 200.7
Chromium-6	0.7	0.6	0.7	µg/L	EPA 218.6
Dichlorodifluoromethane	<0.5	<0.5	ND	µg/L	EPA 524.2
Ethyl tert-butyl ether (ETBE)	<0.5	<0.5	ND	µg/L	EPA 524.2
N-Nitroso dimethylamine (NDMA)	8.8	7.3	8.0	ng/l	1625MOD
Perchlorate	6.1	<8	5.1	µg/L	EPA 314
tert-Amyl methyl ether (TAME)	<0.5	<0.5	ND	µg/L	EPA 524.2
tert-Butyl alcohol (TBA)	<2	<2	ND	µg/L	524.2MOD
Vanadium	3.9	3.7	3.8	µg/L	EPA 200.8



Table 2-7
Recycled Water* Monitoring Results: Remaining Priority Pollutants

Chemical	3Q05 Result*	4Q05 Result*	Running Average	Units	Method
1,4-Dioxane	<2	<2	ND	µg/L	8270MOD
1,2,3-Trichloropropane	<0.5	<0.5	ND	µg/L	EPA 524.2

* Recycled water sample is a blend of RP1 and RP4 Effluents

** Boron value is an average of July, August & September samples

ND: When analytical results are below method reporting limits for all samples in an average.

DNR: Have not received laboratory data as of the date of this report.

Averages are calculated when a detection above the method reporting limit occurs in one or more samples. Half the reporting limit is used for other samples not detected above the method reporting limit. As an example: $1 + (<0.5)/2 = 0.625$

Bold signifies an exceedance of a limit in the Order.



Table 2-8

**Recycled Water* Monitoring Results: Endocrine Disrupting Chemicals & Pharmaceuticals
Analyzed on an Annual Basis**

Chemicals	Date	RP-1 Effluent	RP-4 Effluent	Units	Method
Chemicals with State Notification Levels					
N-butylbenzene	2/14/2005	<0.2	<0.2	µg/L	524.2
sec-butylbenzene	2/14/2005	<0.2	<0.2	µg/L	524.2
tert-butylbenzene	2/14/2005	<0.2	<0.2	µg/L	524.2
Carbon disulfide	2/14/2005	<0.2	<0.2	µg/L	524.2
Chlorate	7/5/2005	440	870	µg/L	300.0
2-chlorotoluene	2/14/2005	<0.2	<0.2	µg/L	524.2
Diazinon	7/5/2005	<0.5	<0.5	µg/L	525.2
1,4-Dioxane	7/5/2005	<2	<2	µg/L	Purge and Trap-GC/MS
Formaldehyde	7/5/2005	54	141	µg/L	
Isopropylbenzene	2/14/2005	<0.2	<0.2	µg/L	
N-propylbenzene	2/14/2005	<0.2	<0.2	µg/L	524.2
1,2,4-trimethylbenzene	2/14/2005	<0.2	<0.2	µg/L	524.2
1,3,5-trimethylbenzene	2/14/2005	<0.2	<0.2	µg/L	524.2
Nitrosoamines					
N-Nitrosodiethylamine (NDEA)	7/5/2005	<2	<2	ng/L	525
N-Nitrosopyrrolidine	7/5/2005	2	<2	ng/L	525
Hormones					
Ethinyl estradiol	7/6/2005	<2	<2	ng/L	525
17-B estradiol	7/6/2005	<2	<2	ng/L	525
Estrone	7/6/2005	<1	<1	ng/L	525
"Industrial" Endocrine Disruptors					
Bisphenol A	7/6/2005	<10	<10	ng/L	No approved method
Nonylphenol and nonylphenol polyethoxylate		NA	NA		No approved method
Octylphenol and octylphenol polyethoxylate		NA	NA		No approved method
PolybromiNA	7/6/2005	<2.0	<2.1	ng/L	8270C SIM
PBDE 28	7/6/2005	<2.0	<2.1	ng/L	8270C SIM
PBDE 71	7/6/2005	<2.0	<2.1	ng/L	8270C SIM
PBDE 47	7/6/2005	3.1	3.4	ng/L	8270C SIM
PBDE 66	7/6/2005	<2.0	<2.1	ng/L	8270C SIM
PBDE 100	7/6/2005	<2.0	<2.1	ng/L	8270C SIM
PBDE 99	7/6/2005	<2.0	2.3	ng/L	8270C SIM
PBDE 85	7/6/2005	<2.0	<2.1	ng/L	8270C SIM
PBDE 154	7/6/2005	<2.0	<2.1	ng/L	8270C SIM



Table 2-8

**Recycled Water* Monitoring Results: Endocrine Disrupting Chemicals & Pharmaceuticals
Analyzed on an Annual Basis**

Chemicals	Date	RP-1 Effluent	RP-4 Effluent	Units	Method
PBDE 153	7/6/2005	<2.0	<2.1	ng/L	8270C SIM
PBDE 138	7/6/2005	<9.7	<11	ng/L	8270C SIM
PBDE 128	7/6/2005	<39	<42	ng/L	8270C SIM
PBDE 183	7/6/2005	<9.7	<11	ng/L	8270C SIM
PBDE 190	7/6/2005	<39	<42	ng/L	8270C SIM
PBDE 203	7/6/2005	<39	<42	ng/L	8270C SIM
PBDE 206	7/6/2005	<200	<210	ng/L	8270C SIM
PBDE 209	7/6/2005	<390	<210	ng/L	8270C SIM
Pharmaceuticals and Other Substances					
Acetaminophen		NA	NA		No approved method
Amoxicillin		NA	NA		No approved method
Azithromycin		NA	NA		No approved method
Caffeine	7/6/2005	<5	<5	ng/L	8270C SIM
Carbamazepine	7/6/2005	<0.5	<0.5	ng/L	8270C SIM
Ciprofloxacin		NA	NA		No approved method
Ethylenediamine tetra-acetic acid (EDTA)		NA	NA		No approved method
Gemfibrozil	7/6/2005	<1	<1	ng/L	8270C SIM
Ibuprofen		NA	NA		No approved method
Iodinated contrast media	7/6/2005	12	7.1	ng/L	8270C SIM
Lipitor		NA	NA		No approved method
Methadone		NA	NA		No approved method
Morphine		NA	NA		No approved method
Salicylic acid		NA	NA		No approved method
Triclosan	7/6/2005	5.2	7.0	ng/L	8270C SIM

* Recycled water sample is a blend of RP1 and RP4 Effluents

NA = Not Analyzed at this time, method development in process.

Bold signifies an exceedance of a limit in the Order.



Table 2-9
Recycled Water* Monitoring Results: Miscellaneous Compounds

Chemical	Order Limit	3Q05 Results	4Q05 Results	Running Average	Units	Method
Aluminum ²	200	**	156/	NT	µg/L	EPA 200.7
Corrosivity Index*	Non-corrosive	-0.6	0	-0.3	SI	SM 2330B
Surfactants (MBAS)	0.5	0.12	0.13	0.125	mg/L	S 5540C/E425.1
Fe	300	236	224	230	µg/L	EPA 200.7
Mn	50	10	4	7	µg/L	EPA 200.7
Odor	3 Units	8	4	6	TON	ML/S2150B
Ag	100	<2	<2	<2	µg/L	EPA 200.7
Thiobencarb	1	<0.2	<0.2	<0.2	µg/L	EPA 525.2
Zn	5000	53	60	56.5	µg/L	EPA 200.7

Refers to Permit Table 3, Compliance Determination B.3

* Recycled water sample is a blend of RP1 and RP4 Effluents

** Aluminum data unavailable at this time, due to laboratory QC problems, sample to be reanalyzed in November.

NT: Insufficient Sample for Analytical Test

DNR: Have not received laboratory data as of the date of this report.

Averages are calculated when a detection above the method reporting limit occurs in one or more samples. Half the reporting limit is used for other samples not detected above the method reporting limit. As an example: $1 + (<0.5)/2 = 0.625$

Bold signifies an exceedance of a limit in the Order.



Table 2-10
Diluent Water Monitoring Results: State Water Project Water*

Constituents	Units	October-05	November-05	December-05
Silica	mg/L	11.5	11.4	11.4
Calcium	mg/L	18	16	17
Magnesium	mg/L	11	10.5	11
Sodium	mg/L	39	39	45
Potassium	mg/L	2.5	2.4	4.0
Carbonate	mg/L	0	0	0
Bicarbonate	mg/L	88	88	87
Sulfate	mg/L	24	22	25
Chloride	mg/L	54	55	63
Nitrate	mg/L	1.4	2.0	2.8
Fluoride	mg/L	0.09	0.08	0.07
Boron	mg/L	0.12	--	--
Total Dissolved Solids	mg/L	205	202	223
Total Hardness (as CaCO ₃)	mg/L	90	83	88
Total Alkalinity (as CaCO ₃)	mg/L	72	72	71
Free Carbon Dioxide	mg/L	1.1	1.6	1.4
pH		8.12	7.97	8.02
Electrical Conductivity	µmho/cm	375	375	417
Turbidity	NTU	1.2	1.1	0.97
Temperature	C	21	17	13
Bromide	mg/L	0.15	0.17	0.20
Total Organic Carbon	mg/L	4.73	2.77	3.82

*Silverwood Lake at Devil Canyon

-- Not Provided

NA - Not analyzed

Source: Metropolitan Water District of Southern California



Table 2-11
Basin and Lysimeter Water Monitoring Results for Banana Basin: TOC

Station ID	Depth	Date	Result	Units
B-SW BANANA BASIN	0 ft	4-Oct-05	10.60	mg/L
B-5 BANANA BASIN	5 ft	4-Oct-05	4.04	mg/L
B-10 BANANA BASIN	10 ft	4-Oct-05	3.00	mg/L
B-15 BANANA BASIN	15 ft	4-Oct-05	2.80	mg/L
B-25 BANANA BASIN	25 ft	4-Oct-05	2.04	mg/L
B-SW BANANA BASIN	0 ft	13-Oct-05	9.26	mg/L
B-5 BANANA BASIN	5 ft	13-Oct-05	3.92	mg/L
B-10 BANANA BASIN	10 ft	13-Oct-05	2.65	mg/L
B-15 BANANA BASIN	15 ft	13-Oct-05	2.62	mg/L
B-25 BANANA BASIN	25 ft	13-Oct-05	1.98	mg/L
B-SW BANANA BASIN	0 ft	18-Oct-05	2.07	mg/L
B-5 BANANA BASIN	5 ft	18-Oct-05	4.24	mg/L
B-10 BANANA BASIN	10 ft	18-Oct-05	2.70	mg/L
B-15 BANANA BASIN	15 ft	18-Oct-05	2.30	mg/L
B-25 BANANA BASIN	25 ft	18-Oct-05	1.83	mg/L
B-SW BANANA BASIN	0 ft	25-Oct-05	8.30	mg/L
B-5 BANANA BASIN	5 ft	25-Oct-05	4.20	mg/L
B-10 BANANA BASIN	10 ft	25-Oct-05	2.72	mg/L
B-15 BANANA BASIN	15 ft	25-Oct-05	2.39	mg/L
B-25 BANANA BASIN	25 ft	25-Oct-05	1.76	mg/L
B-SW BANANA BASIN	0 ft	1-Nov-05	8.55	mg/L
B-5 BANANA BASIN	5 ft	1-Nov-05	3.79	mg/L
B-10 BANANA BASIN	10 ft	1-Nov-05	2.94	mg/L
B-15 BANANA BASIN	15 ft	1-Nov-05	2.69	mg/L
B-25 BANANA BASIN	25 ft	1-Nov-05	1.97	mg/L
B-SW BANANA BASIN	0 ft	8-Nov-05	8.18	mg/L
B-5 BANANA BASIN	5 ft	8-Nov-05	3.49	mg/L
B-10 BANANA BASIN	10 ft	8-Nov-05	2.63	mg/L
B-15 BANANA BASIN	15 ft	8-Nov-05	2.22	mg/L
B-25 BANANA BASIN	25 ft	8-Nov-05	2.44	mg/L
B-SW BANANA BASIN	0 ft	15-Nov-05	9.15	mg/L
B-5 BANANA BASIN	5 ft	15-Nov-05	3.52	mg/L
B-10 BANANA BASIN	10 ft	15-Nov-05	2.35	mg/L
B-15 BANANA BASIN	15 ft	15-Nov-05	2.11	mg/L
B-25 BANANA BASIN	25 ft	15-Nov-05	1.83	mg/L
B-SW BANANA BASIN	0 ft	22-Nov-05	7.41	mg/L
B-5 BANANA BASIN	5 ft	22-Nov-05	2.83	mg/L
B-10 BANANA BASIN	10 ft	22-Nov-05	1.89	mg/L
B-15 BANANA BASIN	15 ft	22-Nov-05	1.53	mg/L
B-25 BANANA BASIN	25 ft	22-Nov-05	2.26	mg/L
B-SW BANANA BASIN	0 ft	25-Nov-05	7.48	mg/L
B-5 BANANA BASIN	5 ft	25-Nov-05	2.91	mg/L
B-10 BANANA BASIN	10 ft	25-Nov-05	2.15	mg/L
B-15 BANANA BASIN	15 ft	25-Nov-05	1.60	mg/L
B-25 BANANA BASIN	25 ft	25-Nov-05	1.46	mg/L



Table 2-11
Basin and Lysimeter Water Monitoring Results for Banana Basin: TOC

Station ID	Depth	Date	Result	Units
B-SW BANANA BASIN	0 ft	29-Nov-05	7.50	mg/L
B-5 BANANA BASIN	5 ft	29-Nov-05	2.84	mg/L
B-10 BANANA BASIN	10 ft	29-Nov-05	2.09	mg/L
B-15 BANANA BASIN	15 ft	29-Nov-05	1.62	mg/L
B-25 BANANA BASIN	25 ft	29-Nov-05	1.59	mg/L
B-SW BANANA BASIN	0 ft	2-Dec-05	7.15	mg/L
B-5 BANANA BASIN	5 ft	2-Dec-05	2.70	mg/L
B-10 BANANA BASIN	10 ft	2-Dec-05	1.74	mg/L
B-15 BANANA BASIN	15 ft	2-Dec-05	1.48	mg/L
B-25 BANANA BASIN	25 ft	2-Dec-05	1.19	mg/L
B-SW BANANA BASIN	0 ft	6-Dec-05	7.19	mg/L
B-5 BANANA BASIN	5 ft	6-Dec-05	2.65	mg/L
B-10 BANANA BASIN	10 ft	6-Dec-05	1.71	mg/L
B-15 BANANA BASIN	15 ft	6-Dec-05	1.40	mg/L
B-25 BANANA BASIN	25 ft	6-Dec-05	1.05	mg/L
B-5 BANANA BASIN	5 ft	9-Dec-05	2.63	mg/L
B-10 BANANA BASIN	10 ft	9-Dec-05	1.57	mg/L
B-15 BANANA BASIN	15 ft	9-Dec-05	1.37	mg/L
B-25 BANANA BASIN	25 ft	9-Dec-05	1.02	mg/L
B-5 BANANA BASIN	5 ft	13-Dec-05	3.04	mg/L
B-10 BANANA BASIN	10 ft	13-Dec-05	1.90	mg/L
B-15 BANANA BASIN	15 ft	13-Dec-05	1.65	mg/L
B-25 BANANA BASIN	25 ft	13-Dec-05	1.23	mg/L
B-5 BANANA BASIN	5 ft	16-Dec-05	2.56	mg/L
B-10 BANANA BASIN	10 ft	16-Dec-05	1.57	mg/L
B-15 BANANA BASIN	15 ft	16-Dec-05	1.30	mg/L
B-25 BANANA BASIN	25 ft	16-Dec-05	1.17	mg/L
B-5 BANANA BASIN	5 ft	20-Dec-05	2.66	mg/L
B-10 BANANA BASIN	10 ft	20-Dec-05	1.63	mg/L
B-15 BANANA BASIN	15 ft	20-Dec-05	1.38	mg/L
B-25 BANANA BASIN	25 ft	20-Dec-05	1.11	mg/L
B-5 BANANA BASIN	5 ft	23-Dec-05	2.67	mg/L
B-10 BANANA BASIN	10 ft	23-Dec-05	1.74	mg/L
B-15 BANANA BASIN	15 ft	23-Dec-05	1.44	mg/L
B-25 BANANA BASIN	25 ft	23-Dec-05	11.72	mg/L
B-5 BANANA BASIN	5 ft	27-Dec-05	2.72	mg/L
B-10 BANANA BASIN	10 ft	27-Dec-05	1.89	mg/L
B-15 BANANA BASIN	15 ft	27-Dec-05	1.32	mg/L
B-25 BANANA BASIN	25 ft	27-Dec-05	1.07	mg/L
B-5 BANANA BASIN	5 ft	29-Dec-05	2.73	mg/L
B-10 BANANA BASIN	10 ft	29-Dec-05	1.60	mg/L
B-15 BANANA BASIN	15 ft	29-Dec-05	1.31	mg/L
B-25 BANANA BASIN	25 ft	29-Dec-05	0.93	mg/L

ND: Not Detected

NS-BD: Not Sampled-Basin Dry

IS: Insufficient Sample for Analytical Test



Table 2-12
Basin and Lysimeter Water Monitoring Results for Banana Basin:
Ammonia, Nitrite, Nitrate, TKN, and TN (mg/L)

Station ID	Depth	Date	NH ₃ -N	NO ₂ -N	NO ₃ -N	TKN	TN
B-SW BANANA BASIN	0 ft	10/4/2005	<0.1	<0.01	<0.1	1.4	1.4
B-5 BANANA BASIN	5 ft	10/4/2005	0.1	<0.01	0.2	4.3	4.5
B-10 BANANA BASIN	10 ft	10/4/2005	<0.1	<0.01	0.2	0.3	0.5
B-15 BANANA BASIN	15 ft	10/4/2005	0.1	<0.01	0.4	0.34	0.7
B-25 BANANA BASIN	25 ft	10/4/2005	<0.1	<0.01	0.6	0.26	0.8
B-SW BANANA BASIN	0 ft	10/7/2005	0.1	<0.01	<0.1	1.3	1.3
B-5 BANANA BASIN	5 ft	10/7/2005	<0.1	<0.01	0.2	0.45	0.7
B-10 BANANA BASIN	10 ft	10/7/2005	0.1	<0.01	0.3	0.41	0.7
B-15 BANANA BASIN	15 ft	10/7/2005	0.1	<0.01	0.4	0.36	0.8
B-25 BANANA BASIN	25 ft	10/7/2005	0.1	<0.01	0.6	0.29	0.9
B-SW BANANA BASIN	0 ft	10/13/2005	0.1	<0.01	0.7	1.3	2.0
B-5 BANANA BASIN	5 ft	10/13/2005	0.1	<0.01	0.2	0.52	0.7
B-10 BANANA BASIN	10 ft	10/13/2005	0.1	<0.01	0.5	0.33	0.8
B-15 BANANA BASIN	15 ft	10/13/2005	0.1	<0.01	0.7	0.38	1.1
B-25 BANANA BASIN	25 ft	10/13/2005	0.1	<0.01	0.6	0.32	0.9
B-SW BANANA BASIN	0 ft	10/14/2005	0.1	0.011	1.8	1.1	2.9
B-5 BANANA BASIN	5 ft	10/14/2005	0.1	<0.01	<0.1	0.54	0.5
B-10 BANANA BASIN	10 ft	10/14/2005	0.1	<0.01	0.7	0.57	1.2
B-15 BANANA BASIN	15 ft	10/14/2005	0.1	<0.01	0.9	0.83	1.7
B-25 BANANA BASIN	25 ft	10/14/2005	0.1	<0.01	0.7	<0.2	0.7
B-SW BANANA BASIN	0 ft	10/18/2005	0.2	0.047	0.9	2	3.0
B-5 BANANA BASIN	5 ft	10/18/2005	0.1	<0.01	<0.1	0.47	0.5
B-10 BANANA BASIN	10 ft	10/18/2005	0.1	0.01	0.5	0.28	0.8
B-15 BANANA BASIN	15 ft	10/18/2005	0.1	0.011	0.9	0.23	1.2
B-25 BANANA BASIN	25 ft	10/18/2005	0.1	<0.01	0.6	<0.2	0.6
B-SW BANANA BASIN	0 ft	10/21/2005	0.1	0.048	0.8	1.4	2.2
B-5 BANANA BASIN	5 ft	10/21/2005	<0.1	<0.01	<0.1	0.52	0.5
B-10 BANANA BASIN	10 ft	10/21/2005	<0.1	0.01	0.3	0.29	0.6
B-15 BANANA BASIN	15 ft	10/21/2005	<0.1	0.012	1.0	0.26	1.2
B-25 BANANA BASIN	25 ft	10/21/2005	<0.1	<0.01	0.7	0.46	1.1
B-SW BANANA BASIN	0 ft	10/25/2005	<0.1	0.039	0.3	1.3	1.6
B-5 BANANA BASIN	5 ft	10/25/2005	1.2	0.01	0.4	0.46	0.8
B-10 BANANA BASIN	10 ft	10/25/2005	0.2	<0.01	0.3	0.49	0.7
B-15 BANANA BASIN	15 ft	10/25/2005	0.2	0.011	0.8	0.32	1.2
B-25 BANANA BASIN	25 ft	10/25/2005	0.1	<0.01	0.6	0.3	0.9
B-SW BANANA BASIN	0 ft	10/28/2005	0.1	0.033	0.2	1.1	1.4
B-5 BANANA BASIN	5 ft	10/28/2005	0.1	<0.01	<0.1	0.97	1.0
B-10 BANANA BASIN	10 ft	10/28/2005	0.1	0.019	0.3	0.63	1.0
B-15 BANANA BASIN	15 ft	10/28/2005	0.1	0.01	0.3	<0.2	0.3
B-25 BANANA BASIN	25 ft	10/28/2005	0.1	<0.01	0.5	1.3	1.8
B-SW BANANA BASIN	0 ft	11/1/2005	0.2	0.02	0.1	1.3	1.4
B-5 BANANA BASIN	5 ft	11/1/2005	0.1	<0.01	<0.1	0.65	0.7
B-10 BANANA BASIN	10 ft	11/1/2005	0.1	<0.01	0.2	0.73	0.9
B-15 BANANA BASIN	15 ft	11/1/2005	0.1	<0.01	0.4	0.33	0.7
B-25 BANANA BASIN	25 ft	11/1/2005	0.1	<0.01	0.4	<0.2	0.4



Table 2-12
Basin and Lysimeter Water Monitoring Results for Banana Basin:
Ammonia, Nitrite, Nitrate, TKN, and TN (mg/L)

Station ID	Depth	Date	NH ₃ -N	NO ₂ -N	NO ₃ -N	TKN	TN
B-SW BANANA BASIN	0 ft	11/4/2005	0.2	0.01	0.1	1.1	1.2
B-5 BANANA BASIN	5 ft	11/4/2005	<0.1	<0.01	<0.1	<0.2	0.0
B-10 BANANA BASIN	10 ft	11/4/2005	<0.1	<0.01	0.2	0.33	0.5
B-15 BANANA BASIN	15 ft	11/4/2005	IS	IS	IS	0.35	IS
B-SW BANANA BASIN	0 ft	11/8/2005	0.1	EF	0.4	1.2	IS
B-5 BANANA BASIN	5 ft	11/8/2005	0.1	EF	<0.1	<0.2	IS
B-10 BANANA BASIN	10 ft	11/8/2005	0.1	EF	<0.1	0.39	IS
B-15 BANANA BASIN	15 ft	11/8/2005	0.1	EF	<0.1	0.55	IS
B-25 BANANA BASIN	25 ft	11/8/2005	0.1	EF	<0.1	0.54	IS
B-SW BANANA BASIN	0 ft	11/11/2005	0.1	<0.01	0.5	1.2	1.7
B-5 BANANA BASIN	5 ft	11/11/2005	0.1	0.011	0.5	0.34	0.8
B-10 BANANA BASIN	10 ft	11/11/2005	0.1	<0.01	<0.1	0.41	0.4
B-15 BANANA BASIN	15 ft	11/11/2005	0.1	<0.01	0.4	0.42	0.9
B-25 BANANA BASIN	25 ft	11/11/2005	0.1	<0.01	0.4	0.45	0.9
B-SW BANANA BASIN	0 ft	11/15/2005	<0.1	EF	EF	1.2	IS
B-5 BANANA BASIN	5 ft	11/15/2005	<0.1	EF	EF	<0.2	IS
B-10 BANANA BASIN	10 ft	11/15/2005	<0.1	EF	EF	0.4	IS
B-15 BANANA BASIN	15 ft	11/15/2005	<0.1	EF	EF	0.27	IS
B-25 BANANA BASIN	25 ft	11/15/2005	<0.1	EF	EF	0.23	IS
B-SW BANANA BASIN	0 ft	11/18/2005	0.1	<0.01	<0.1	2.3	2.3
B-5 BANANA BASIN	5 ft	11/18/2005	0.1	<0.01	0.1	0.43	0.5
B-10 BANANA BASIN	10 ft	11/18/2005	<0.1	<0.01	0.2	0.22	0.4
B-15 BANANA BASIN	15 ft	11/18/2005	0.1	<0.01	0.6	0.35	1.0
B-25 BANANA BASIN	25 ft	11/18/2005	<0.1	<0.01	0.5	1.7	2.2
B-SW BANANA BASIN	0 ft	11/22/2005	0.1	<0.01	<0.1	1.1	1.1
B-5 BANANA BASIN	5 ft	11/22/2005	0.1	0.101	<0.1	0.35	0.5
B-10 BANANA BASIN	10 ft	11/22/2005	0.1	<0.01	0.2	0.26	0.4
B-15 BANANA BASIN	15 ft	11/22/2005	0.1	0.013	0.6	0.37	0.9
B-25 BANANA BASIN	25 ft	11/22/2005	0.1	<0.01	0.5	0.22	0.7
B-SW BANANA BASIN	0 ft	11/25/2005	<0.1	<0.01	<0.1	1	1.0
B-5 BANANA BASIN	5 ft	11/25/2005	<0.1	<0.01	<0.1	0.31	0.3
B-10 BANANA BASIN	10 ft	11/25/2005	<0.1	<0.01	0.2	0.31	0.5
B-15 BANANA BASIN	15 ft	11/25/2005	0.1	<0.01	0.5	0.25	0.8
B-25 BANANA BASIN	25 ft	11/25/2005	<0.1	<0.01	0.6	0.25	0.8
B-SW BANANA BASIN	0 ft	11/29/2005	0.1	<0.01	<0.1	0.95	1.0
B-5 BANANA BASIN	5 ft	11/29/2005	0.2	<0.01	0.1	0.26	0.4
B-10 BANANA BASIN	10 ft	11/29/2005	0.1	0.016	0.4	<0.2	0.4
B-15 BANANA BASIN	15 ft	11/29/2005	0.2	<0.01	0.5	<0.2	0.5
B-25 BANANA BASIN	25 ft	11/29/2005	0.1	<0.01	<0.1	<0.2	<0.2
B-SW BANANA BASIN	0 ft	12/2/2005	<0.1	<0.01	<0.1	1.2	1.2
B-5 BANANA BASIN	5 ft	12/2/2005	<0.1	<0.01	0.1	0.45	0.6
B-10 BANANA BASIN	10 ft	12/2/2005	<0.1	<0.01	0.3	0.31	0.6
B-15 BANANA BASIN	15 ft	12/2/2005	<0.1	<0.01	0.4	0.3	0.7
B-25 BANANA BASIN	25 ft	12/2/2005	<0.1	<0.01	0.5	0.43	0.9



Table 2-12
Basin and Lysimeter Water Monitoring Results for Banana Basin:
Ammonia, Nitrite, Nitrate, TKN, and TN (mg/L)

Station ID	Depth	Date	NH ₃ -N	NO ₂ -N	NO ₃ -N	TKN	TN
B-SW BANANA BASIN	0 ft	12/6/2005	0.1	<0.01	<0.1	1.3	1.3
B-5 BANANA BASIN	5 ft	12/6/2005	0.1	<0.01	0.1	0.32	0.4
B-10 BANANA BASIN	10 ft	12/6/2005	0.1	<0.01	0.3	<0.2	0.3
B-15 BANANA BASIN	15 ft	12/6/2005	0.1	<0.01	0.5	0.21	0.7
B-25 BANANA BASIN	25 ft	12/6/2005	0.1	<0.01	0.4	<0.2	0.4
B-SW BANANA BASIN	0 ft	12/9/2005	0.1	<0.01	0.1	1.4	1.4
B-5 BANANA BASIN	5 ft	12/9/2005	0.1	0.08	0.1	0.88	1.1
B-10 BANANA BASIN	10 ft	12/9/2005	<0.1	0.01	0.5	0.22	0.7
B-15 BANANA BASIN	15 ft	12/9/2005	0.1	<0.01	0.6	0.37	1.0
B-25 BANANA BASIN	25 ft	12/9/2005	<0.1	<0.01	0.5	0.38	0.9
B-SW BANANA BASIN	0 ft	12/13/2005	0.2	<0.01	<0.1	1.4	1.4
B-5 BANANA BASIN	5 ft	12/13/2005	0.1	0.05	0.2	0.4	0.7
B-10 BANANA BASIN	10 ft	12/13/2005	0.1	0.03	0.6	0.29	0.9
B-15 BANANA BASIN	15 ft	12/13/2005	0.1	0.02	0.7	0.23	1.0
B-25 BANANA BASIN	25 ft	12/13/2005	0.1	0.01	0.5	<0.2	0.5
B-SW BANANA BASIN	0 ft	12/16/2005	0.1	<0.01	0.3	1.4	1.7
B-5 BANANA BASIN	5 ft	12/16/2005	0.1	<0.01	0.1	<0.2	0.1
B-10 BANANA BASIN	10 ft	12/16/2005	0.1	<0.01	0.7	0.51	1.2
B-15 BANANA BASIN	15 ft	12/16/2005	0.1	<0.01	0.8	0.44	1.2
B-25 BANANA BASIN	25 ft	12/16/2005	0.1	<0.01	0.5	0.25	0.8
B-SW BANANA BASIN	0 ft	12/20/2005	0.1	0.04	0.2	1.5	1.7
B-5 BANANA BASIN	5 ft	12/20/2005	<0.1	<0.01	0.1	0.34	0.4
B-10 BANANA BASIN	10 ft	12/20/2005	<0.1	0.01	0.8	0.36	1.2
B-15 BANANA BASIN	15 ft	12/20/2005	<0.1	<0.01	0.9	0.31	1.2
B-25 BANANA BASIN	25 ft	12/20/2005	<0.1	<0.01	0.6	<0.2	0.6
B-SW BANANA BASIN	0 ft	12/23/2005	0.2	<0.01	<0.1	1.9	1.9
B-5 BANANA BASIN	5 ft	12/23/2005	0.1	<0.01	0.4	0.31	0.7
B-10 BANANA BASIN	10 ft	12/23/2005	0.1	<0.01	0.9	0.49	1.4
B-15 BANANA BASIN	15 ft	12/23/2005	0.1	<0.01	1.1	0.3	1.4
B-25 BANANA BASIN	25 ft	12/23/2005	0.1	<0.01	0.4	0.42	0.8
B-SW BANANA BASIN	0 ft	12/27/2005	0.1	0.02	0.1	1.4	1.5
B-5 BANANA BASIN	5 ft	12/27/2005	0.1	<0.01	0.3	0.6	0.9
B-10 BANANA BASIN	10 ft	12/27/2005	0.1	0.02	0.9	0.23	1.2
B-15 BANANA BASIN	15 ft	12/27/2005	0.1	<0.01	1.1	0.26	1.4
B-25 BANANA BASIN	25 ft	12/27/2005	0.1	<0.01	0.6	0.41	1.0
B-SW BANANA BASIN	0 ft	12/29/2005	0.1	<0.01	<0.1	1.2	1.2
B-5 BANANA BASIN	5 ft	12/29/2005	0.1	<0.01	0.6	0.5	1.1
B-10 BANANA BASIN	10 ft	12/29/2005	0.1	<0.01	0.9	0.49	1.4
B-15 BANANA BASIN	15 ft	12/29/2005	0.1	<0.01	1.2	0.41	1.6
B-25 BANANA BASIN	25 ft	12/29/2005	0.1	<0.01	0.7	0.3	1.0

EF: Instrument failure.

ND: Not Detected

NS-BD: Not Sampled-Basin Dry

IS: Insufficient Sample for Analytical Test

IDC: Insufficient Data for Calculation



Table 2-13
Basin and Lysimeter Water Monitoring Results for Hickory Basin East Cell:
TOC

Station ID	Depth		Date	Result	Units
HE-SW	0	ft	4-Oct-05	19.80	mg/L
HE-5	5	ft	4-Oct-05	8.10	mg/L
HE-10	10	ft	4-Oct-05	4.02	mg/L
HE-15	15	ft	4-Oct-05	3.24	mg/L
HE-25	25	ft	4-Oct-05	2.84	mg/L
HE-SW	0	ft	13-Oct-05	9.04	mg/L
HE-5	5	ft	13-Oct-05	5.42	mg/L
HE-10	10	ft	13-Oct-05	4.13	mg/L
HE-15	15	ft	13-Oct-05	3.51	mg/L
HE-25	25	ft	13-Oct-05	2.26	mg/L
HE-SW	0	ft	18-Oct-05	10.60	mg/L
HE-5	5	ft	18-Oct-05	3.25	mg/L
HE-10	10	ft	18-Oct-05	2.89	mg/L
HE-15	15	ft	18-Oct-05	2.47	mg/L
HE-25	25	ft	18-Oct-05	2.29	mg/L
HE-SW	0	ft	25-Oct-05	11.50	mg/L
HE-5	5	ft	25-Oct-05	3.46	mg/L
HE-10	10	ft	25-Oct-05	2.50	mg/L
HE-15	15	ft	25-Oct-05	2.12	mg/L
HE-25	25	ft	25-Oct-05	3.24	mg/L
HE-SW	0	ft	1-Nov-05	8.33	mg/L
HE-5	5	ft	1-Nov-05	2.59	mg/L
HE-10	10	ft	1-Nov-05	2.07	mg/L
HE-15	15	ft	1-Nov-05	1.95	mg/L
HE-25	25	ft	1-Nov-05	2.00	mg/L
HE-SW	0	ft	8-Nov-05	7.89	mg/L
HE-5	5	ft	8-Nov-05	2.52	mg/L
HE-10	10	ft	8-Nov-05	2.13	mg/L
HE-15	15	ft	8-Nov-05	1.84	mg/L
HE-25	25	ft	8-Nov-05	1.66	mg/L
HE-SW	0	ft	15-Nov-05	10.50	mg/L
HE-5	5	ft	15-Nov-05	2.62	mg/L
HE-10	10	ft	15-Nov-05	5.26	mg/L
HE-15	15	ft	15-Nov-05	1.83	mg/L
HE-25	25	ft	15-Nov-05	2.09	mg/L
HE-SW	0	ft	22-Nov-05	7.91	mg/L
HE-5	5	ft	22-Nov-05	1.75	mg/L
HE-10	10	ft	22-Nov-05	1.43	mg/L
HE-15	15	ft	22-Nov-05	1.34	mg/L
HE-25	25	ft	22-Nov-05	1.37	mg/L
HE-SW	0	ft	25-Nov-05	7.58	mg/L
HE-5	5	ft	25-Nov-05	1.89	mg/L
HE-10	10	ft	25-Nov-05	1.50	mg/L
HE-15	15	ft	25-Nov-05	1.35	mg/L
HE-25	25	ft	25-Nov-05	1.31	mg/L



Table 2-13
Basin and Lysimeter Water Monitoring Results for Hickory Basin East Cell:
TOC

Station ID	Depth		Date	Result	Units
HE-SW	0	ft	29-Nov-05	7.77	mg/L
HE-5	5	ft	29-Nov-05	2.43	mg/L
HE-10	10	ft	29-Nov-05	1.57	mg/L
HE-15	15	ft	29-Nov-05	1.24	mg/L
HE-25	25	ft	29-Nov-05	1.56	mg/L
HE-SW	0	ft	2-Dec-05	7.77	mg/L
HE-5	5	ft	2-Dec-05	2.36	mg/L
HE-10	10	ft	2-Dec-05	1.89	mg/L
HE-15	15	ft	2-Dec-05	1.27	mg/L
HE-25	25	ft	2-Dec-05	1.32	mg/L
HE-SW	0	ft	6-Dec-05	9.99	mg/L
HE-5	5	ft	6-Dec-05	1.89	mg/L
HE-10	10	ft	6-Dec-05	1.72	mg/L
HE-15	15	ft	6-Dec-05	1.34	mg/L
HE-25	25	ft	6-Dec-05	1.24	mg/L
HE-SW	0	ft	9-Dec-05	9.88	mg/L
HE-5	5	ft	9-Dec-05	1.71	mg/L
HE-10	10	ft	9-Dec-05	1.40	mg/L
HE-15	15	ft	9-Dec-05	1.30	mg/L
HE-25	25	ft	9-Dec-05	1.27	mg/L
HE-SW	0	ft	13-Dec-15	11.70	mg/L
HE-5	5	ft	13-Dec-15	2.38	mg/L
HE-10	10	ft	13-Dec-15	1.53	mg/L
HE-15	15	ft	13-Dec-15	1.57	mg/L
HE-25	25	ft	13-Dec-15	1.49	mg/L
HE-SW	0	ft	16-Dec-05	9.30	mg/L
HE-5	5	ft	16-Dec-05	1.96	mg/L
HE-10	10	ft	16-Dec-05	1.27	mg/L
HE-15	15	ft	16-Dec-05	1.15	mg/L
HE-25	25	ft	16-Dec-05	1.10	mg/L
HE-SW	0	ft	20-Dec-05	9.29	mg/L
HE-5	5	ft	20-Dec-05	2.56	mg/L
HE-10	10	ft	20-Dec-05	1.41	mg/L
HE-15	15	ft	20-Dec-05	1.20	mg/L
HE-25	25	ft	20-Dec-05	1.21	mg/L
HE-SW	0	ft	23-Dec-05	10.20	mg/L
HE-10	10	ft	23-Dec-05	1.30	mg/L
HE-15	15	ft	23-Dec-05	1.18	mg/L
HE-25	25	ft	23-Dec-05	1.10	mg/L
HE-SW	0	ft	30-Dec-05	8.83	mg/L
HE-10	10	ft	30-Dec-05	1.60	mg/L
HE-15	15	ft	30-Dec-05	1.28	mg/L
HE-25	25	ft	30-Dec-05	1.19	mg/L

ND: Not Detected

NS-BD: Not Sampled-Basin Dry

IS: Insufficient Sample for Analytical Test

IDC: Insufficient Data for Calculation



Table 2-14
Basin and Lysimeter Water Monitoring Results for Hickory Basin East Cell:
Ammonia, Nitrite, Nitrate, TKN, and TN (mg/L)

Station ID	Depth	Date	NH ₃ -N	NO ₂ -N	NO ₃ -N	TKN	TN
HE-SW	0 ft	10/4/2005	0.1	<0.01	<0.1	2.2	2.2
HE-5	5 ft	10/4/2005	0.1	<0.01	<0.1	0.59	0.6
HE-10	10 ft	10/4/2005	<0.1	<0.01	0.6	0.36	1.0
HE-15	15 ft	10/4/2005	0.1	<0.01	0.8	0.33	1.1
HE-25	25 ft	10/4/2005	<0.1	<0.01	0.5	0.64	1.2
HE-SW	0 ft	10/7/2005	0.1	<0.01	0.7	1.3	2.0
HE-5	5 ft	10/7/2005	0.1	<0.01	<0.1	0.55	0.6
HE-10	10 ft	10/7/2005	0.1	<0.01	0.6	0.33	1.0
HE-15	15 ft	10/7/2005	0.1	<0.01	0.7	0.29	1.0
HE-25	25 ft	10/7/2005	0.1	<0.01	0.5	0.36	0.9
HE-SW	0 ft	10/13/2005	0.1	0.011	1.0	1.3	2.3
HE-5	5 ft	10/13/2005	0.1	<0.01	<0.1	0.63	0.6
HE-10	10 ft	10/13/2005	0.1	<0.01	0.3	0.64	0.9
HE-15	15 ft	10/13/2005	0.1	<0.01	0.5	0.36	0.8
HE-25	25 ft	10/13/2005	0.1	<0.01	5.7	0.49	6.2
HE-SW	0 ft	10/14/2005	0.1	<0.01	0.2	1.2	1.4
HE-5	5 ft	10/14/2005	0.1	<0.01	0.2	0.81	1.1
HE-10	10 ft	10/14/2005	0.1	<0.01	0.3	0.52	0.9
HE-15	15 ft	10/14/2005	0.2	<0.01	0.1	0.4	0.5
HE-25	25 ft	10/14/2005	0.1	<0.01	<0.1	0.45	0.5
HE-SW	0 ft	10/18/2005	0.2	0.038	1.1	3.8	4.9
HE-5	5 ft	10/18/2005	0.1	<0.01	0.2	0.35	0.6
HE-10	10 ft	10/18/2005	0.1	<0.01	0.3	0.29	0.6
HE-15	15 ft	10/18/2005	0.1	<0.01	0.5	0.34	0.8
HE-25	25 ft	10/18/2005	0.1	<0.01	0.5	0.2	0.7
HE-SW	0 ft	10/21/2005	0.1	0.05	0.8	1.7	2.5
HE-5	5 ft	10/21/2005	<0.1	<0.01	0.2	0.77	1.0
HE-10	10 ft	10/21/2005	<0.1	<0.01	1.2	0.59	1.8
HE-15	15 ft	10/21/2005	<0.1	<0.01	0.7	0.3	1.0
HE-25	25 ft	10/21/2005	<0.1	<0.01	0.3	0.3	0.6
HE-SW	0 ft	10/25/2005	0.7	0.03	0.2	1.8	2.0
HE-5	5 ft	10/25/2005	0.2	<0.01	0.6	0.32	0.9
HE-10	10 ft	10/25/2005	0.1	<0.01	0.6	0.38	0.9
HE-15	15 ft	10/25/2005	0.2	<0.01	0.4	0.29	0.7
HE-25	25 ft	10/25/2005	0.2	0.035	0.2	0.55	0.8
HE-5	5 ft	10/28/2005	IS	IS	IS	0.31	IDC
HE-10	10 ft	10/28/2005	0.1	<0.01	0.9	0.35	1.3
HE-15	15 ft	10/28/2005	0.1	<0.01	0.8	<0.2	0.8
HE-25	25 ft	10/28/2005	0.1	<0.01	0.4	<0.2	0.4
HE-SW	0 ft	11/1/2005	0.1	0.01	0.5	1.8	2.3
HE-5	5 ft	11/1/2005	0.1	<0.01	2.0	0.37	2.4
HE-10	10 ft	11/1/2005	0.1	<0.01	1.1	0.35	1.5
HE-15	15 ft	11/1/2005	0.1	<0.01	1.1	0.91	2.0
HE-25	25 ft	11/1/2005	0.2	0.01	0.5	0.99	1.5



Table 2-14
Basin and Lysimeter Water Monitoring Results for Hickory Basin East Cell:
Ammonia, Nitrite, Nitrate, TKN, and TN (mg/L)

Station ID	Depth	Date	NH ₃ -N	NO ₂ -N	NO ₃ -N	TKN	TN
HE-SW	0 ft	11/4/2005	0.1	<0.01	0.2	1.4	1.6
HE-5	5 ft	11/4/2005	<0.1	0.012	5.2	0.55	5.8
HE-10	10 ft	11/4/2005	<0.1	<0.01	1.2	0.35	1.6
HE-15	15 ft	11/4/2005	<0.1	<0.01	1.3	0.29	1.6
HE-25	25 ft	11/4/2005	IS	IS	IS	0.34	IS
HE-SW	0 ft	11/8/2005	0.1	EF	<0.1	1.1	IDC
HE-5	5 ft	11/8/2005	0.1	EF	1.0	0.63	IDC
HE-10	10 ft	11/8/2005	0.1	EF	1.3	<0.2	IDC
HE-15	15 ft	11/8/2005	0.1	EF	1.4	0.31	IDC
HE-25	25 ft	11/8/2005	0.1	EF	1.0	0.45	IDC
HE-SW	0 ft	11/11/2005	0.1	<0.01	0.2	1.5	1.7
HE-5	5 ft	11/11/2005	0.1	<0.01	1.1	0.31	1.4
HE-10	10 ft	11/11/2005	0.1	<0.01	1.4	0.25	1.6
HE-15	15 ft	11/11/2005	0.1	IS	IS	<0.2	IDC
HE-25	25 ft	11/11/2005	IS	IS	IS	0.29	IDC
HE-SW	0 ft	11/15/2005	<0.1	EF	EF	1.5	IDC
HE-5	5 ft	11/15/2005	<0.1	EF	EF	0.34	IDC
HE-10	10 ft	11/15/2005	<0.1	EF	EF	0.21	IDC
HE-15	15 ft	11/15/2005	<0.1	EF	EF	0.39	IDC
HE-SW	0 ft	11/18/2005	0.1	0.02	2.1	1.7	3.8
HE-5	5 ft	11/18/2005	<0.1	0.015	2.5	0.54	3.1
HE-10	10 ft	11/18/2005	<0.1	<0.01	1.0	0.26	1.3
HE-15	15 ft	11/18/2005	<0.1	<0.01	1.4	0.36	1.8
HE-25	25 ft	11/18/2005	0.1	0.016	1.8	0.49	2.3
HE-SW	0 ft	11/22/2005	0.1	<0.01	1.2	1.7	2.9
HE-5	5 ft	11/22/2005	IS	IS	IS	0.42	IDC
HE-10	10 ft	11/22/2005	0.1	0.01	0.2	0.36	0.6
HE-15	15 ft	11/22/2005	0.1	0.37	2.1	0.26	2.7
HE-25	25 ft	11/22/2005	IS	IS	IS	0.25	IDC
HE-SW	0 ft	11/25/2005	<0.1	<0.01	0.4	1.30	1.7
HE-5	5 ft	11/25/2005	<0.1	0.01	2.9	0.47	3.4
HE-10	10 ft	11/25/2005	<0.1	<0.01	0.9	0.39	1.3
HE-15	15 ft	11/25/2005	<0.1	<0.01	1.1	0.27	1.4
HE-25	25 ft	11/25/2005	IS	IS	IS	0.27	IDC
HE-SW	0 ft	11/29/2005	0.3	<0.01	0.3	1.30	1.6
HE-5	5 ft	11/29/2005	0.1	0.02	3.6	0.36	4.0
HE-10	10 ft	11/29/2005	0.1	<0.01	1.0	<0.2	1.0
HE-15	15 ft	11/29/2005	0.1	<0.01	1.1	<0.2	1.1
HE-25	25 ft	11/29/2005	IS	IS	IS	0.28	IDC
HE-SW	0 ft	12/2/2005	<0.1	<0.01	0.3	1.60	1.9
HE-5	5 ft	12/2/2005	<0.1	<0.01	1.5	0.42	1.9
HE-10	10 ft	12/2/2005	<0.1	<0.01	3.7	0.41	4.1
HE-15	15 ft	12/2/2005	<0.1	<0.01	1.0	0.25	1.3
HE-25	25 ft	12/2/2005	IS	IS	IS	0.33	IDC



Table 2-14
Basin and Lysimeter Water Monitoring Results for Hickory Basin East Cell:
Ammonia, Nitrite, Nitrate, TKN, and TN (mg/L)

Station ID	Depth	Date	NH ₃ -N	NO ₂ -N	NO ₃ -N	TKN	TN
HE-SW	0 ft	12/6/2005	0.2	<0.01	<0.1	1.60	1.6
HE-5	5 ft	12/6/2005	0.1	<0.01	1.2	0.30	1.5
HE-10	10 ft	12/6/2005	0.3	<0.01	4.3	0.29	4.6
HE-15	15 ft	12/6/2005	0.1	<0.01	1.3	0.29	1.6
HE-25	25 ft	12/6/2005	0.1	<0.01	1.4	<0.2	1.4
HE-SW	0 ft	12/9/2005	0.3	0.01	0.7	2.00	2.7
HE-5	5 ft	12/9/2005	0.1	<0.01	1.3	0.24	1.5
HE-10	10 ft	12/9/2005	0.1	<0.01	3.1	<0.2	3.1
HE-15	15 ft	12/9/2005	0.1	<0.01	1.6	0.57	2.2
HE-25	25 ft	12/9/2005	0.1	<0.01	1.2	0.69	1.9
HE-SW	0 ft	12/13/2005	0.1	0.01	0.7	1.60	2.3
HE-5	5 ft	12/13/2005	0.1	0.01	1.8	0.41	2.2
HE-10	10 ft	12/13/2005	0.1	0.01	3.1	0.34	3.4
HE-15	15 ft	12/13/2005	0.1	<0.01	1.9	0.36	2.3
HE-25	25 ft	12/13/2005	IS	IS	IS	0.26	IDC
HE-SW	0 ft	12/16/2005	0.1	0.01	0.9	1.80	2.7
HE-5	5 ft	12/16/2005	2.1	0.02	2.2	0.52	2.7
HE-10	10 ft	12/16/2005	0.2	<0.01	3.0	<0.2	3.0
HE-15	15 ft	12/16/2005	1.4	<0.01	2.2	0.28	2.5
HE-25	25 ft	12/16/2005	<0.1	<0.01	1.3	0.37	1.7
HE-SW	0 ft	12/20/2005	<0.1	<0.01	<0.1	1.50	1.5
HE-5	5 ft	12/20/2005	<0.1	<0.01	2.3	0.31	2.6
HE-10	10 ft	12/20/2005	<0.1	<0.01	2.8	<0.2	2.8
HE-15	15 ft	12/20/2005	<0.1	<0.01	2.6	0.29	2.9
HE-25	25 ft	12/20/2005	IS	IS	IS	<0.2	IDC
HE-SW	0 ft	12/23/2005	0.1	<0.01	<0.1	2.10	2.1
HE-5	5 ft	12/23/2005	0.1	<0.01	1.6	0.77	2.4
HE-10	10 ft	12/23/2005	0.1	<0.01	2.8	0.47	3.3
HE-15	15 ft	12/23/2005	0.1	<0.01	3.0	0.77	3.8
HE-25	25 ft	12/23/2005	IS	IS	IS	0.42	IDC
HE-SW	0 ft	12/27/2005	0.1	<0.01	<0.1	1.20	1.2
HE-5	5 ft	12/27/2005	0.1	<0.01	1.3	0.48	1.8
HE-10	10 ft	12/27/2005	0.1	<0.01	3.0	0.30	3.3
HE-15	15 ft	12/27/2005	0.1	<0.01	3.2	0.39	3.6
HE-25	25 ft	12/27/2005	IS	IS	IS	0.29	IDC
HE-SW	0 ft	12/30/2005	0.1	<0.01	<0.1	1.20	1.2
HE-5	5 ft	12/30/2005	0.2	<0.01	<0.1	0.70	0.7
HE-10	10 ft	12/30/2005	0.2	<0.01	<0.1	0.35	0.4
HE-15	15 ft	12/30/2005	0.2	<0.01	<0.1	0.25	0.3
HE-25	25 ft	12/30/2005	IS	IS	IS	0.27	IDC

ND: Not Detected

NS-BD: Not Sampled-Basin Dry

IS: Insufficient Sample for Analytical Test

IDC: Insufficient Data for Calculation

EF: Equipment Failure



Table 2-15
Basin and Lysimeter Water Monitoring Results for Hickory Basin West Cell: TOC

Station ID	Depth	Date	Result	Units
HW-SW	0 ft	4-Oct-05	98.40	mg/L
HW-5	5 ft	4-Oct-05	9.80	mg/L
HW-25	25 ft	4-Oct-05	7.20	mg/L
HW-SW	0 ft	13-Oct-05	10.70	mg/L
HW-5	5 ft	13-Oct-05	5.65	mg/L
HW-25	25 ft	13-Oct-05	4.26	mg/L
HW-SW	0 ft	18-Oct-05	10.50	mg/L
HW-5	5 ft	18-Oct-05	4.72	mg/L
HW-25	25 ft	18-Oct-05	3.91	mg/L
HW-SW	0 ft	25-Oct-05	11.80	mg/L
HW-25	25 ft	25-Oct-05	2.75	mg/L
HW-25	25 ft	1-Nov-05	2.32	mg/L
HW-25	25 ft	8-Nov-05	2.50	mg/L
HW-SW	0 ft	15-Nov-05	7.95	mg/L
HW-5	5 ft	15-Nov-05	6.13	mg/L
HW-10	10 ft	15-Nov-05	7.10	mg/L
HW-25	25 ft	15-Nov-05	5.02	mg/L
HW-SW	0 ft	22-Nov-05	7.09	mg/L
HW-5	5 ft	22-Nov-05	4.13	mg/L
HW-10	10 ft	22-Nov-05	5.51	mg/L
HW-15	15 ft	22-Nov-05	9.22	mg/L
HW-25	25 ft	22-Nov-05	3.36	mg/L
HW-SW	0 ft	25-Nov-05	8.01	mg/L
HW-5	5 ft	25-Nov-05	5.43	mg/L
HW-10	10 ft	25-Nov-05	5.39	mg/L
HW-15	15 ft	25-Nov-05	9.49	mg/L
HW-25	25 ft	25-Nov-05	3.46	mg/L
HW-SW	0 ft	29-Nov-05	8.30	mg/L
HW-5	5 ft	29-Nov-05	3.97	mg/L
HW-10	10 ft	29-Nov-05	4.78	mg/L
HW-15	15 ft	29-Nov-05	12.29	mg/L
HW-25	25 ft	29-Nov-05	3.76	mg/L
HW-SW	0 ft	2-Dec-05	7.37	mg/L
HW-5	5 ft	2-Dec-05	4.07	mg/L
HW-10	10 ft	2-Dec-05	3.66	mg/L
HW-15	15 ft	2-Dec-05	4.44	mg/L
HW-25	25 ft	2-Dec-05	3.46	mg/L
HW-SW	0 ft	6-Dec-05	7.40	mg/L
HW-5	5 ft	6-Dec-05	4.40	mg/L
HW-10	10 ft	6-Dec-05	3.72	mg/L
HW-15	15 ft	6-Dec-05	4.06	mg/L
HW-25	25 ft	6-Dec-05	3.29	mg/L
HW-SW	0 ft	9-Dec-05	9.10	mg/L
HW-5	5 ft	9-Dec-05	4.63	mg/L
HW-10	10 ft	9-Dec-05	3.66	mg/L
HW-15	15 ft	9-Dec-05	3.81	mg/L
HW-25	25 ft	9-Dec-05	3.56	mg/L



Table 2-15
Basin and Lysimeter Water Monitoring Results for Hickory Basin West Cell: TOC

Station ID	Depth	Date	Result	Units
HW-SW	0 ft	13-Dec-05	9.61	mg/L
HW-5	5 ft	13-Dec-05	5.52	mg/L
HW-10	10 ft	13-Dec-05	4.08	mg/L
HW-15	15 ft	13-Dec-05	4.52	mg/L
HW-25	25 ft	13-Dec-05	3.09	mg/L
HW-SW	0 ft	16-Dec-05	8.67	mg/L
HW-5	5 ft	16-Dec-05	4.59	mg/L
HW-10	10 ft	16-Dec-05	3.28	mg/L
HW-15	15 ft	16-Dec-05	3.72	mg/L
HW-25	25 ft	16-Dec-05	2.93	mg/L
HW-SW	0 ft	20-Dec-05	8.18	mg/L
HW-5	5 ft	20-Dec-05	4.96	mg/L
HW-10	10 ft	20-Dec-05	3.55	mg/L
HW-15	15 ft	20-Dec-05	3.73	mg/L
HW-25	25 ft	20-Dec-05	2.70	mg/L
HW-SW	0 ft	23-Dec-05	8.90	mg/L
HW-10	10 ft	23-Dec-05	3.36	mg/L
HW-15	15 ft	23-Dec-05	5.08	mg/L
HW-25	25 ft	23-Dec-05	2.56	mg/L
HW-SW	0 ft	30-Dec-05	8.41	mg/L
HW-10	10 ft	30-Dec-05	3.50	mg/L
HW-15	15 ft	30-Dec-05	3.49	mg/L
HW-25	25 ft	30-Dec-05	3.54	mg/L

ND: Not Detected

NS-BD: Not Sampled-Basin Dry

IS: Insufficient Sample for Analytical Test

IDC: Insufficient Data for Calculation



Table 2-16
Basin and Lysimeter Water Monitoring Results for Hickory Basin West Cell:
Ammonia, Nitrite, Nitrate, TKN, and TN (mg/L)

Station ID	Depth	Date	NH ₃ -N	NO ₂ -N	NO ₃ -N	TKN	TN
HW-SW	0 ft	10/4/2005	0.2	<0.01	<0.1	3.3	3.3
HW-5	5 ft	10/4/2005	0.1	<0.01	0.3	0.59	0.9
HW-25	25 ft	10/4/2005	<0.1	<0.01	<0.1	0.48	0.5
HW-SW	0 ft	10/7/2005	0.5	0.06	0.3	2.4	2.8
HW-5	5 ft	10/7/2005	0.1	<0.01	2.5	1.3	3.8
HW-25	25 ft	10/7/2005	0.1	<0.01	0.2	0.4	0.6
HW-SW	0 ft	10/13/2005	0.1	0.01	0.2	1.7	1.9
HW-5	5 ft	10/13/2005	IS	IS	IS	0.74	IDC
HW-25	25 ft	10/13/2005	0.1	<0.01	1.0	0.38	1.4
HW-SW	0 ft	10/14/2005	0.1	<0.01	<0.1	1.7	1.7
HW-5	5 ft	10/14/2005	0.1	<0.01	0.3	0.65	1.0
HW-25	25 ft	10/14/2005	0.1	0.0	0.8	0.32	1.1
HW-SW	0 ft	10/18/2005	0.2	0.03	1.0	1.3	2.3
HW-5	5 ft	10/18/2005	0.1	<0.01	0.8	0.43	1.3
HW-25	25 ft	10/18/2005	0.1	<0.01	0.6	0.4	1.0
HW-SW	0 ft	10/21/2005	0.8	0.01	<0.1	3.5	3.5
HW-5	5 ft	10/21/2005	0.1	0.02	0.4	0.34	0.7
HW-25	25 ft	10/21/2005	<0.1	<0.01	0.7	0.39	1.1
HW-SW	0 ft	10/25/2005	0.2	0.02	3.3	1.7	5.0
HW-25	25 ft	10/25/2005	0.2	0.01	1.2	0.37	1.6
HW-25	25 ft	11/1/2005	0.1	0.01	1.5	0.48	2.0
HW-25	25 ft	11/8/2005	0.1	EF	1.6	0.36	IDC
HW-SW	0 ft	11/11/2005	0.2	0.02	0.3	1.6	1.9
HW-25	25 ft	11/11/2005	0.1	<0.01	1.9	0.32	IDC
HW-SW	0 ft	11/15/2005	0.1	EF	EF	0.98	IDC
HW-5	5 ft	11/15/2005	0.1	EF	EF	0.75	IDC
HW-10	10 ft	11/15/2005	<0.1	EF	EF	0.71	IDC
HW-25	25 ft	11/15/2005	<0.1	EF	EF	0.68	IDC
HW-SW	0 ft	11/18/2005	0.1	0.01	2.1	1.3	3.4
HW-5	5 ft	11/18/2005	0.1	<0.01	0.2	0.67	0.9
HW-10	10 ft	11/18/2005	<0.1	<0.01	0.6	0.6	1.2
HW-15	15 ft	11/18/2005	IS	IS	IS	1.1	IDC
HW-25	25 ft	11/18/2005	<0.1	<0.01	1.2	0.57	1.8
HW-SW	0 ft	11/22/2005	0.1	<0.01	1.1	1.5	2.6
HW-5	5 ft	11/22/2005	0.1	<0.01	0.2	0.62	0.9
HW-10	10 ft	11/22/2005	0.2	<0.01	0.4	0.57	1.0
HW-15	15 ft	11/22/2005	0.1	IS	IS	1.2	IDC
HW-25	25 ft	11/22/2005	0.4	0.02	0.2	0.62	0.8
HW-SW	0 ft	11/25/2005	0.1	<0.01	0.1	1.9	2.0
HW-5	5 ft	11/25/2005	0.1	<0.01	0.3	0.72	1.0
HW-10	10 ft	11/25/2005	0.1	<0.01	0.4	0.73	1.2
HW-15	15 ft	11/25/2005	0.4	0.04	0.4	1.5	2.0
HW-25	25 ft	11/25/2005	0.1	<0.01	0.9	0.6	1.5
HW-SW	0 ft	11/29/2005	0.2	<0.01	0.1	1.3	1.4
HW-5	5 ft	11/29/2005	0.2	<0.01	0.3	0.78	1.1
HW-10	10 ft	11/29/2005	0.3	<0.01	0.3	0.98	1.3
HW-15	15 ft	11/29/2005	IS	IS	IS	1.3	IDC
HW-25	25 ft	11/29/2005	0.2	<0.01	0.3	0.49	0.8



Table 2-16
Basin and Lysimeter Water Monitoring Results for Hickory Basin West Cell:
Ammonia, Nitrite, Nitrate, TKN, and TN (mg/L)

Station ID	Depth	Date	NH ₃ -N	NO ₂ -N	NO ₃ -N	TKN	TN
HW-SW	0 ft	12/2/2005	<0.1	<0.01	<0.1	1.9	1.9
HW-5	5 ft	12/2/2005	0.3	<0.01	0.1	1	1.1
HW-10	10 ft	12/2/2005	0.2	<0.01	0.3	0.75	1.1
HW-15	15 ft	12/2/2005	0.3	0.11	0.3	1	1.4
HW-25	25 ft	12/2/2005	<0.1	<0.01	0.2	0.92	1.1
HW-SW	0 ft	12/6/2005	IS	<0.01	<0.1	1.2	1.2
HW-5	5 ft	12/6/2005	0.6	<0.01	<0.1	1	1.0
HW-10	10 ft	12/6/2005	0.2	<0.01	0.3	0.56	0.9
HW-15	15 ft	12/6/2005	0.3	0.12	0.3	0.8	1.2
HW-25	25 ft	12/6/2005	0.3	<0.01	0.3	0.4	0.7
HW-SW	0 ft	12/9/2005	0.1	<0.01	<0.1	2.2	2.2
HW-5	5 ft	12/9/2005	0.2	0.01	<0.1	0.94	0.9
HW-10	10 ft	12/9/2005	0.3	0.01	0.3	0.6	0.9
HW-15	15 ft	12/9/2005	0.1	0.11	0.3	0.87	1.3
HW-25	25 ft	12/9/2005	0.1	0.01	0.2	0.6	0.8
HW-SW	0 ft	12/13/2005	0.1	<0.01	<0.1	1.3	1.3
HW-5	5 ft	12/13/2005	0.3	0.01	<0.1	0.85	0.9
HW-10	10 ft	12/13/2005	0.2	0.01	0.3	0.63	0.9
HW-15	15 ft	12/13/2005	0.3	0.11	0.3	0.85	1.3
HW-25	25 ft	12/13/2005	0.1	<0.01	0.3	0.51	0.8
HW-SW	0 ft	12/16/2005	0.1	<0.01	<0.1	1.6	1.6
HW-5	5 ft	12/16/2005	0.3	<0.01	0.2	0.98	1.2
HW-10	10 ft	12/16/2005	0.2	0.01	0.3	0.68	1.0
HW-15	15 ft	12/16/2005	0.4	0.09	0.3	0.67	1.1
HW-25	25 ft	12/16/2005	0.1	<0.01	0.3	0.9	1.2
HW-SW	0 ft	12/20/2005	<0.1	<0.01	<0.1	1.5	1.5
HW-5	5 ft	12/20/2005	0.2	<0.01	0.2	0.96	1.2
HW-10	10 ft	12/20/2005	0.1	<0.01	0.3	0.51	0.8
HW-15	15 ft	12/20/2005	0.3	0.09	0.3	0.85	1.2
HW-25	25 ft	12/20/2005	<0.1	<0.01	0.4	0.59	1.0
HW-SW	0 ft	12/23/2005	0.1	<0.01	0.2	1.7	1.9
HW-5	5 ft	12/23/2005	0.2	<0.01	0.2	0.9	1.1
HW-10	10 ft	12/23/2005	0.1	0.01	0.4	0.85	1.3
HW-15	15 ft	12/23/2005	0.2	0.09	0.3	1.2	1.5
HW-25	25 ft	12/23/2005	0.1	<0.01	0.4	0.49	0.9
HW-SW	0 ft	12/27/2005	0.1	<0.01	<0.1	1.7	1.7
HW-5	5 ft	12/27/2005	0.2	<0.01	<0.1	1.1	1.1
HW-10	10 ft	12/27/2005	0.1	0.01	0.3	0.62	0.9
HW-15	15 ft	12/27/2005	0.1	0.06	0.4	1.4	1.9
HW-25	25 ft	12/27/2005	0.1	<0.01	0.4	0.47	0.9
HW-SW	0 ft	12/30/2005	0.2	<0.01	0.2	1.7	1.9
HW-5	5 ft	12/30/2005	0.2	<0.01	<0.1	0.75	0.8
HW-10	10 ft	12/30/2005	0.2	<0.01	<0.1	0.43	0.4
HW-15	15 ft	12/30/2005	0.3	<0.01	<0.1	0.66	0.7
HW-25	25 ft	12/30/2005	0.2	<0.01	<0.1	0.44	0.4

ND: Not Detected

NS-BD: Not Sampled-Basin Dry

IS: Insufficient Sample for Analytical Test

IDC: Insufficient Data for Calculation

EF: Lab had QC problems.



**Table 2-17
Groundwater Monitoring Results**

CBWM ID	Local Name	Quarter	Sample Date	Aluminum, Total (mg/L)	Ammonia (NH3-N) (mg/L)	Chloride, Dissolved (mg/L)	Color (APU)	Copper, Total (mg/L)	Corrosivity Index (SI)	Dissolved Oxygen (Field) (mg/L)	Foaming Agents (MBAS) (mg/L)	Hardness, Total (As CaCO3) (mg/L)	Iron, Total (mg/L)	Kjeldahl Nitrogen, Total (mg/L)	Manganese, Total (mg/L)	Methyl Tert-Butyl Ether (ug/L)	Nitrate-Nitrogen (NO3-N) (mg/L)	Nitrite-Nitrogen (NO2-N) (mg/L)	Odor Threshold @ 60 C (TON)	pH (Field) (Units)	pH (Laboratory) (Units)	Silver (mg/L)	Sodium (mg/L)	Specific Conductance (micromho)	Sulfate (mg/L)	Thiobencarb (mg/L)	Total Coliform Bacteria (MPN/100 mL)	Total Dissolved Solids (mg/L)	Total Nitrogen (mg/L)	Total Organic Carbon (mg/L)	Turbidity (Laboratory) (NTU)	Zinc (mg/L)
	Maximum Contaminant Level ▶			0.2	250*	15*	1	NC*	2**	0.5*		0.3*	0.05	5*	10	1	3*			0.1*		900*	250*	0.001*		500*			5*	5*		
3601364	Cal Speedway 1	3Q2005	8/8/05	1.11	<0.1	15	3	0.003	0.4		<0.5	177	0.334	<0.1	0.005	<0.5	8.0	<0.01	2		7.9	<0.002	19	410	17	<0.0002		274	8.0	<0.3	1.21	0.026
3602267	Ontario Well 20	3Q2005	8/5/05	1.05	<0.1	6	<3	<0.001	0.3		<0.5	140	0.107	0.2	<0.002	<0.5	1.8	<0.01	1		7.9	<0.002	13	300	6	<0.0002		212	2.0	<0.3	0.3	<0.002
3602267	Ontario Well 20	4Q2005	11/8/05	<0.07	0.1	4	<3	<0.001	0.3		<0.5	133	0.109	<0.1	<0.002		1.9	EF	1		7.9	<0.002	12	290	4	<0.0002	ND ¹	202		<0.3	0.4	<0.002
3602267	Ontario Well 20	4Q2005	11/15/05																							ND ¹						
3600371	SCE East Well	4Q2005	11/9/05	<0.07	0.1	5	<3	0.001	-0.1		<0.5	136	<0.015	<0.1	<0.002		5.1	<0.01	1		7.55	<0.002	17	335	14	<0.0002		232	5.1	<0.3	0.92	<0.002
3600573	Fontana F37A	3Q2005	8/5/05	1.1	0.2	14	<3	<0.001	0.6		<0.5	197	0.127	0.2	<0.002	<0.5	8.8	<0.01	2		7.95	<0.002	18	435	13	<0.0002		298	9.0	0.3	5	0.005
3600573	Fontana F37A	4Q2005	12/16/05	0.07	0.1	17	<3	0.007	0.5		<0.5	189	0.129	<0.1	0.003		10.7	<0.01	2		7.85	<0.002	16	430	14	<0.0002		284	10.7	0.13	0.4	0.003
300000	BH-1/2	3Q2005	7/19/05		0.1					5.17				0.2			14.0	0.03		7.61									14.2			
300000	BH-1/2	3Q2005	8/3/05		0.1					5.15				<0.1			14.0	<0.01		7.51									14.0			
300000	BH-1/2	3Q2005	8/17/05		<0.1					5				<0.1			14.1	<0.01		7.72									14.1			
300000	BH-1/2	3Q2005	9/1/05		0.5					4.52				<0.1			13.7	<0.01		7.37									13.7			
300000	BH-1/2	3Q2005	9/15/05		<0.1					4.59				0.1			13.0	<0.01		7.2									13.1	0.53		
300000	BH-1/2	3Q2005	9/29/05		<0.1					4.31				0.1			13.2	<0.01		7.3									13.3	0.69		
300000	BH-1/2	4Q2005	10/12/05		0.1					5.89				0.3			13.7	<0.01		7.29									14.0	0.3		
300000	BH-1/2	4Q2005	10/27/05		0.1					5.62				<0.1			14.5	<0.01		7.25									14.5	<0.3		
300000	BH-1/2	4Q2005	11/8/05	<0.07	0.1	62	<3	<0.001	0.3	6.07	<0.5	231	0.104	<0.1	0.013		13.3	<0.01	1	7.32	7.7	<0.002	22	560	19	<0.0002		450	13.3	<0.3	1.6	<0.002
300000	BH-1/2	4Q2005	11/23/05		0.1					5.61				<0.1			13.4	<0.01		7.43									13.4			
300000	BH-1/2	4Q2005	12/7/05		EF					6.90				<0.1		ND	13.7	<0.01		7.35									13.7			
300000	BH-1/2	4Q2005	12/27/05		0.1					6.43				0.28			12.7	<0.01		7.46									13.0			

NOTES:

¹ Sample Collected by the City of Ontario

* Secondary Maximum Contaminant Level

** Dissolved Oxygen May Not Fall Below 2 mg/L in Two Consecutive Samples

<0.01 Analyte Not Detected at or Above Indicated Detection Limit

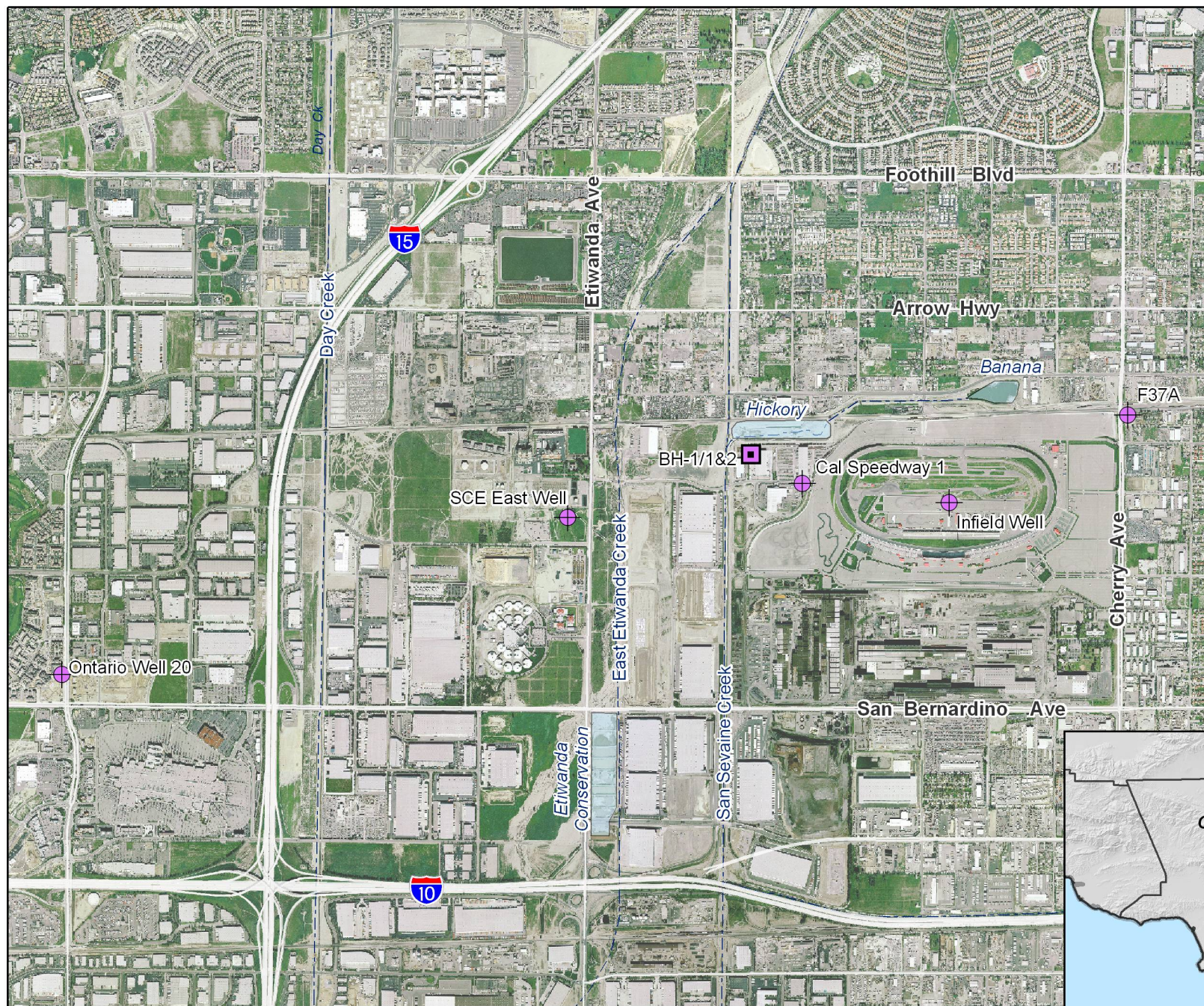
Bold Values in Bold Exceed Their Primary Maximum Contaminant Level

CBWM Chino Basin Watermaster

EF Lab had QC problems

NC Non-Corrosive

ND Not Detected



-  New Monitoring Well
-  Existing Monitoring Well
-  Recharge Basins

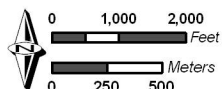


Monitoring Well Network
Hickory and Banana Basins

Figure 2-1



Recycled Water Recharge Program
Quarterly Monitoring Report – 3Q05



Author: AEM
Date: 20051115
File: Figure_2-1.mxd

Produced by:
 **WILDERMUTH**
ENVIRONMENTAL INC.

3. Recharge Operations

IEUA's Groundwater Recharge Coordinator recorded the daily volume of water delivered to or captured at Banana and Hickory Basins. No other basins received recycled water this quarter. Storms occurred on October 16th and 17th and in December on the 9th and 31st during the quarter and some storm water was captured. The volumes of storm water captured were calculated from a combination of infiltration rates and change in storage in the basin. Outflow of stormwater from the basin is not measured or estimated as these waters do not recharge. The volumes of recycled water delivered or storm water captured are listed in Table 3-1.

Banana Basin

Recycled water was delivered periodically from the Whittram force main. No imported water was delivered to Banana Basin; however, some storm water was captured.

Hickory Basin

Recycled water was delivered periodically from the Whittram force main to the East Cell of Hickory Basin. During the start-up period, recycled water was delivered directly to the East cell, where it can flow directly into the West cell. Based on the variety of possible supply routes, direct delivery via the Whittram force main to the East cell prevents mixing recycled water with local runoff in San Sevaine Channel, which can then be used to deliver recycled water to the West cell. Following the start-up period, local runoff will be captured from San Sevaine Channel.



Table 3-1
Volume of Diluent and Recycled Water Recharged

Date	Imported Water	MWD CB18 Water Routing		Local Runoff / Storm Flow		Recycled Water	
	MWD CB-18 (AF)	Hickory (AF)	Banana (AF)	Hickory (AF)	Banana (AF)	Hickory (AF)	Banana (AF)
10/01/05	0.0	0.0	0.0	0.0	0	0.0	0.0
10/02/05	0.0	0.0	0.0	0.0	0	0.0	0.0
10/03/05	0.0	0.0	0.0	0.0	0	0.0	0.0
10/04/05	0.0	0.0	0.0	0.0	0	0.0	0.0
10/05/05	0.0	0.0	0.0	0.0	0	6.9	0.0
10/06/05	0.0	0.0	0.0	0.0	0	10.1	0.0
10/07/05	0.0	0.0	0.0	0.0	0	10.1	0.0
10/08/05	0.0	0.0	0.0	0.0	0	6.9	0.0
10/09/05	0.0	0.0	0.0	0.0	0	6.9	0.0
10/10/05	0.0	0.0	0.0	0.0	0	6.4	4.0
10/11/05	0.0	0.0	0.0	0.0	0	7.4	4.0
10/12/05	0.0	0.0	0.0	0.0	0	7.4	4.0
10/13/05	0.0	0.0	0.0	0.0	0	7.9	4.0
10/14/05	0.0	0.0	0.0	0.0	0	7.7	4.0
10/15/05	0.0	0.0	0.0	0.0	0	6.9	4.0
10/16/05	0.0	0.0	0.0	0.0	0.0	4.5	1.5
10/17/05	0.0	0.0	0.0	10.9	10.9	0.0	0.0
10/18/05	0.0	0.0	0.0	10.9	17.9	0.0	0.0
10/19/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/20/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/21/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/22/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/23/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/24/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/25/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/26/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/28/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/29/05	0.0	0.0	0.0	0.0	0.0	1.0	0.0
10/30/05	0.0	0.0	0.0	0.0	0.0	1.3	0.0
10/31/05	0.0	0.0	0.0	0.0	0.0	1.0	0.0
11/01/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/02/05	0.0	0.0	0.0	0.0	0.0	1.6	0.0
11/03/05	0.0	0.0	0.0	0.0	0.0	3.5	1.2
11/04/05	0.0	0.0	0.0	0.0	0.0	3.5	0.4
11/05/05	0.0	0.0	0.0	0.0	0.0	2.9	0.3
11/06/05	0.0	0.0	0.0	0.0	0.0	5.7	0.6
11/07/05	0.0	0.0	0.0	0.0	0.0	1.3	0.1
11/08/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/09/05	0.0	0.0	0.0	0.0	0.0	4.2	0.5
11/10/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/11/05	0.0	0.0	0.0	0.0	0.0	4.9	0.5
11/12/05	0.0	0.0	0.0	0.0	0.0	9.2	1.0
11/13/05	0.0	0.0	0.0	0.0	0.0	8.0	0.9
11/14/05	0.0	0.0	0.0	0.0	0.0	1.4	0.2
11/15/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/16/05	0.0	0.0	0.0	0.0	0.0	2.9	0.3
11/17/05	0.0	0.0	0.0	0.0	0.0	4.2	0.5
11/18/05	0.0	0.0	0.0	0.0	0.0	7.1	0.8
11/19/05	0.0	0.0	0.0	0.0	0.0	2.9	0.3
11/20/05	0.0	0.0	0.0	0.0	0.0	2.6	0.3
11/21/05	0.0	0.0	0.0	0.0	0.0	0.9	0.1
11/22/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/23/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/24/05	0.0	0.0	0.0	0.0	0.0	5.0	0.0
11/25/05	0.0	0.0	0.0	0.0	0.0	5.3	0.0
11/26/05	0.0	0.0	0.0	0.0	0.0	5.3	0.0
11/27/05	0.0	0.0	0.0	0.0	0.0	5.6	0.0
11/28/05	0.0	0.0	0.0	0.0	0.0	4.5	0.0
11/29/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/30/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/01/05	0.0	0.0	0.0	0.0	0.0	3.0	0.0
12/02/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Table 3-1
Volume of Diluent and Recycled Water Recharged

Date	Imported Water	MWD CB18 Water Routing		Local Runoff / Storm Flow		Recycled Water	
	MWD CB-18 (AF)	Hickory (AF)	Banana (AF)	Hickory (AF)	Banana (AF)	Hickory (AF)	Banana (AF)
12/03/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/04/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/05/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/06/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/07/05	0.0	0.0	0.0	0.0	0.0	4.0	0.4
12/08/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/09/05	0.0	0.0	0.0	1.0	1.0	0.0	0.0
12/10/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/11/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/12/05	0.0	0.0	0.0	0.0	0.0	0.4	0.2
12/13/05	0.0	0.0	0.0	0.0	0.0	2.5	1.1
12/14/05	0.0	0.0	0.0	0.0	0.0	3.0	1.3
12/15/05	0.0	0.0	0.0	0.0	0.0	1.3	0.6
12/16/05	0.0	0.0	0.0	0.0	0.0	2.5	0.0
12/17/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/18/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/19/05	0.0	0.0	0.0	0.0	0.0	2.1	0.0
12/20/05	1.4	1.4	0.0	0.0	0.0	0.0	0.0
12/21/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/22/05	0.0	0.0	0.0	0.0	0.0	2.2	0.0
12/23/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/24/05	0.0	0.0	0.0	0.0	0.0	2.8	2.8
12/25/05	0.0	0.0	0.0	0.0	0.0	2.0	2.0
12/26/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/27/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/28/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/29/05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/30/05	0.0	0.0	0.0	0.0	0.0	1.9	0.6
12/31/05	0.0	0.0	0.0	18.0	6.8	4.0	1.3
4Q05 Totals	1.4	1.4	0.0	40.8	36.6	216.6	43.5



4. Operational Problems Encountered

4.1 Regional Plants RP-1 and RP-4

No operational problems encountered this quarter.

4.2 Recharge Operations

No operational problems encountered this quarter.

4.3 Lysimeter Sampling

After the first sampling event on June 10, 2005, the 10 and 15-foot lysimeters at Hickory West Cell stopped functioning. These lysimeters were replaced in November 2005. With the exception of these lysimeters and their replacement, no operational problems were encountered this quarter.

Limited sample recovery occurred on occasion from recharge basin lysimeters. Water monitoring result tables indicate where insufficient sample volume was present to conduct an analytical test with “IS”. Samples analyzed on November 15, 2005 for Nitrite and Nitrate were affected by an equipment failure. These samples are noted in the tables with “EF”. Total nitrogen values are based on concentrations of other nitrate ions. Where other nitrate ions were missing as a result of insufficient sample volume, insufficient data for calculation was noted by “IDC” in the tables.

4.4 Monitoring Well Sampling

No operational problems encountered this quarter.



5. Preventive and/or Corrective Actions

5.1 Regional Plants RP-1 and RP-4

No operational problems encountered this quarter. No corrective actions anticipated.

5.2 Recharge Operations

No operational problems encountered this quarter. No corrective actions anticipated.

5.3 Lysimeter Sampling

The 10 and 15-foot lysimeters at Hickory West Cell were replaced in November 2005.

5.4 Monitoring Well Sampling

No operational problems encountered this quarter. No corrective actions anticipated.



6. Certification of Non-Pumping in the Buffer Zones

The Chino Basin Watermaster has certified there has been no reported pumping of groundwater from the zone that extends 500 feet and 6 months underground travel time from Hickory and Banana Basins in 4Q05. In fact, there are no production wells within the buffer zones of these two basins. A letter stating this is included as Appendix A. IEUA is also working with the San Bernardino County Department of Environmental Health Services (SBCDEHS) to prevent the drilling and construction of new drinking water wells within the buffer zone. Following is proposed text for a letter from SBCDEHS to IEUA, DHS, and the RWQCB.

San Bernardino County Department of Environmental Health Services (SBCDEHS) has reviewed the recycled water use permit conditions placed on Inland Empire Utilities Agency (IEUA) by California Department of Health Services (DHS) and the Santa Ana Regional Water Quality Control Board (RWQCB). IEUA's use permit contains conditions that IEUA act to prevent the permitting of new drinking water wells within 500 feet of its recharge basin that will use recycled water. As the agency responsible for reviewing and issuing permits for construction of drinking water wells in San Bernardino County, SBCDEHS agrees to decline new well permits within 500 feet of IEUA recharge basins that will utilize recycled water for groundwater recharge.

SBCDEHS will add a review procedure for new well permit applications that will include checking the proposed location of a new drinking water well against a list of parcels that abut IEUA recharge basins and their 500-foot buffers. If a well falls within an abutting parcel, SBCDEHS will review the proposed well location using maps of the basins and buffers. SBCDEHS will not issue permits for wells falling inside the buffer. If the well falls too near the buffer boundary for SBCDEHS to determine the relationship of the proposed well location to the buffer boundary, SBCDEHS will defer to IEUA for a prompt review of the proposed well location utilizing a field review. The field review may include contacting and having the well applicant identify the exact location of the proposed well casing. To conduct a detailed field review, SBCDEHS will contact and provide the IEUA Groundwater Recharge Coordinator with a copy of the well permit application and a time line for completion of IEUA's review. Following its review, IEUA will notify SBCDEHS in writing of its findings. As desired by these agencies, IEUA will notify CDHS and RWQCB of well permit applications that it recommends be decline due to their location being determined to fall with a 500-foot buffer.

SBCDEHS will incorporate these outlined procedures upon receipt from IEUA of a list of parcels abutting each recharge basin and a series of the maps showing the recharge basins, buffers, and township / range / section parcels adjacent the basins and buffers.

Although this letter has not been finalized, SBCDEHS has initiated control over production well permitting within the buffer zones of all Phase 1 basins through the use of buffer zone maps that utilize the same land coordinate system (Township/Range-Section) used in the permitting process.



7. References

- California Regional Water Quality Control Board, Santa Ana Region. 2005a. Order No. R8-2005-0033. *Water Recycling Requirements for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.* Draft Order: April 2005.
- California Regional Water Quality Control Board, Santa Ana Region. 2005b. *Monitoring and Reporting Program No. R8-2005-0033 for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.*
- CH2M-Hill. 2003. *Title 22 Engineering Report. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project. Final Report.* Prepared for the Inland Empire Utilities Agency. November 2003.
- Metropolitan Water District of Southern California. 2005. *Table D. Monthly Analyses of the District Water Supplies – October 2005.*
- Metropolitan Water District of Southern California. 2005. *Table D. Monthly Analyses of the District Water Supplies – November 2005.*
- Metropolitan Water District of Southern California. 2005. *Table D. Monthly Analyses of the District Water Supplies – December 2005.*
- Wildermuth Environmental, Inc. 1999, *Chino Basin Optimum Basin Management Plan, Phase I Report.* Prepared for Chino Basin Watermaster. August 19, 1999.



Appendix A. Watermaster Certification of Non-Pumping in the Buffer Zones





CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, Ca 91730-4665
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

Kenneth Manning
CEO

February 15, 2006

Regional Water Quality Control Board, Santa Ana Region

Attention: Mr. Gerard Thibeault

3737 Main Street, Suite 500

Riverside, California 92501-3348

**Subject: Chino Basin Recycled Water Recharge Program
Certification of Non-Pumping in the Buffer Zones of Banana and Hickory Basins**

Dear Mr. Thibeault,

The Chino Basin Watermaster hereby certifies that, during the period October 2005 through December 2005, there has been no reported pumping for drinking water purposes in the buffer zones of Banana and Hickory Basins – 500 feet and 6 months underground travel time. In point of fact, there are no production wells in the buffer zones of these two basins.

If you have any questions, please do not hesitate to call me.

Best regards,

Kenneth Manning
Chief Executive Officer
