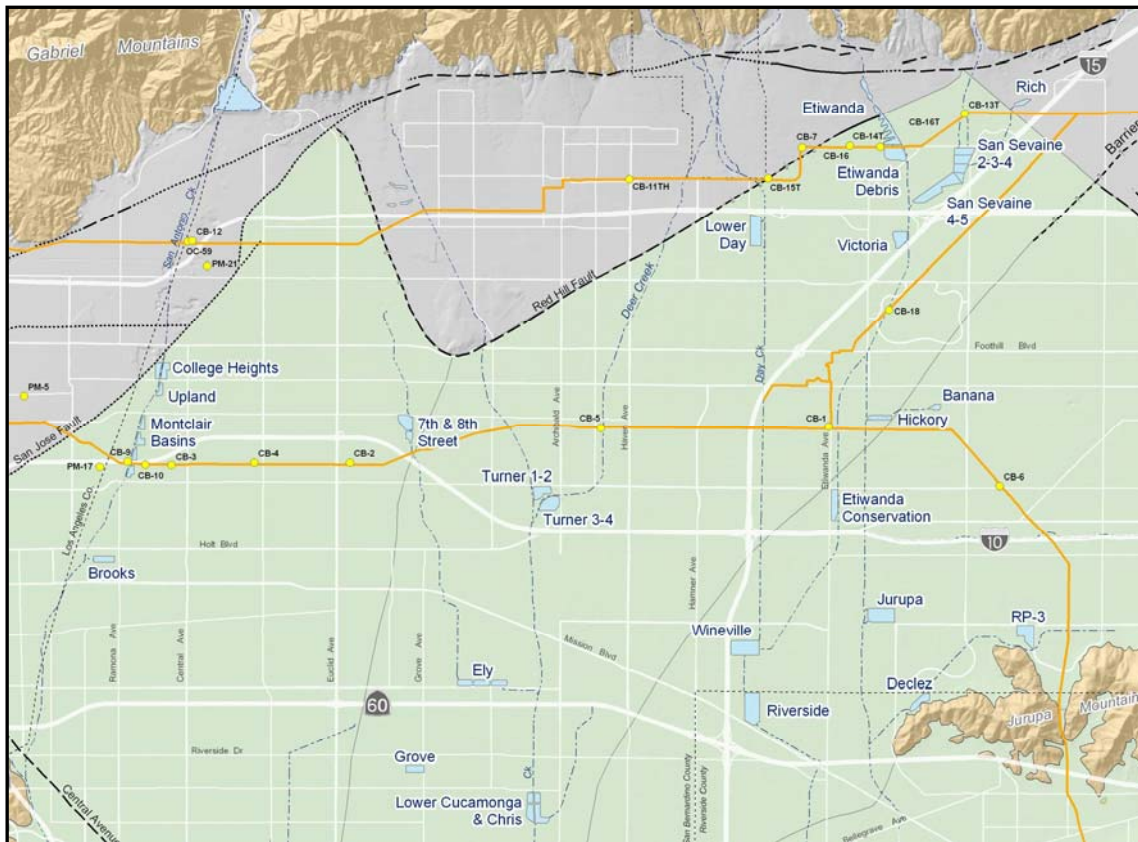


# Chino Basin Recycled Water Groundwater Recharge Program

## Quarterly Monitoring Report October through December 2006



*Prepared by:*



*and*



February 7, 2007



**Patrick O. Shields**  
Executive Manager of Operations

**Kenneth Manning**  
CEO

February 7, 2007

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 Groundwater Recharge Program  
Transmittal of the Quarterly Monitoring Report for October through December 2006**

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 2006 (4Q06), October through December 2006, for the *Recycled Water Groundwater Recharge Program* that is being implemented by the 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. Final 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.

## **DECLARATION**

*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments thereto; and that, based on my inquiry of the individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

Executed on the 15<sup>th</sup> day of February 2007 at IEUA's office in Chino, California

Patrick O. Shields  
*Executive Manager of Operations*

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# Chino Basin Recycled Water Groundwater Recharge Program

## Quarterly Monitoring Report

October through December 2007

*Prepared by:*



*and*



February 7, 2007

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## 1. Introduction

The 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 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 Program (OBMP).

### 1.1 Requirements of Order No. R8-2005-0033

The Recycled Water Groundwater Recharge Program being implemented by the 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, April 15, 2005.
- 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, April 15, 2005.

The M&RP (RWQCB, 2005b) describes the requirements for the quarterly monitoring reports. This document is the quarterly report for Fourth Quarter 2006 (4Q06). The following is an excerpt of Section VI of the M&RP, which details the requirements of quarterly monitoring reports:

#### 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 <sup>th</sup>
April – June	August 15 <sup>th</sup>
July – September	November 15 <sup>th</sup>
October – December	February 15 <sup>th</sup>

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 4Q06, the IEUA recharged recycled water at Banana Basin, Hickory Basin, and the Turner Basins. Recycled water was not recharged in the other Phase 1 basins during 4Q06; namely, RP3 and Declez Basins.

This quarterly report contains the monitoring results for Banana, Hickory, and Turner Basin operations through the completion of 4Q06. Because compliance monitoring points have not yet been established for the Banana, Hickory, and Turner Basins, all sampling data are presented in this report for that basin. In the 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, vadose zone water from lysimeters, and groundwater water from monitoring wells. Section 3 provides an overview of recharge operations, including the volume of diluent water and recycled water recharged. Section 4 describes any operational problems that were encountered. Section 5 provides any preventive and/or corrective actions taken. Finally, Section 6 contains the certification of non-pumping in the 500-foot buffer zones around each basin.



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## 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 list all of the requisite 4Q06 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 1Q06 through 4Q06 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.

In the process of selecting a recycled water sampling location that will be representative of the system blend of recycled water recharged, the IEUA has conducted sampling from the distribution pipeline at the turnout to Reliant Energy, an IEUA customer. 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 at the RP1 and RP4 blended recycled water have ranged between 26 and 241 mg/L from RP1 and have averaged approximately 126 mg/L. IEUA has also conducted sampling of the surface water and pore water in the 25-foot lysimeters at Hickory Basin East Cell. The samples that were collected at the basin provide more consistent and representative samples of the recharged water prior to reaching the groundwater table.

Of the numerous parameters tested at the distribution system location and the basins, only odor exceeded limits of the Order during 4Q06. Additional sampling of stormwater from the basin and lysimeters has indicated that a slight odor is common to the formation.

For 4Q06, samples for THMs and HAA5 were collected from the 25-foot lysimeter on November 7, 2006 at the Hickory Basin East Cell; the 25-foot lysimeter is considered the future compliance point for these constituents. The result for THMs from the 25-foot lysimeter sample was 66 µg/L, and the result for HAA5 was <1 µg/L and a summary of this data can be found in Table 2-6. Compliance for THMs was achieved prior to delivered recycled water reaching the groundwater table.

In addition to the limits listed in Tables I, II, and III of 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 4Q06, as summarized in Tables 2-1 through 2-3.

## 2.2 Diluent Water

In 4Q06, State Water Project (SWP) water and local runoff were delivered to Banana Basin, Hickory Basin, and the Turner. Table 3-1 lists the schedule of diluent water deliveries to these basins. Table 2-10 lists the water quality of the SWP water. These data were reported by the LaVerne laboratory of the Metropolitan Water District of Southern California.

## 2.3 Basin and Lysimeter Samples

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

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

Based on historical nitrogen analyses at the basin and lysimeters being significantly and consistently below the 10 mg/L compliance concentration, CDHS has communicated that nitrogen sampling and analysis can be reduced to weekly. Sampling of RP1 and RP4 plant effluent is also predominately less than 10 mg/L, but will remain at two times per week. The basin and lysimeter data are summarized in Tables 2-11 through 2-19. The tables include data for the Banana, Hickory, and Turner Basins and are organized by analyte group (TOC, Nitrogen Species).



## 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) down gradient of Hickory Basin (Figure 2-1). BH-1 is a nest of two casings: BH-1/1, from 366 – 406 feet below the top of the casing; and BH-1/2, from 437 – 477 feet below the top of the casing. BH-1/1 was constructed above the regional groundwater table in anticipation of a future water level rise and is not sampled at this time. Should the regional water table rise, sampling within BH-1/1 will replace the sampling of BH-1/2.

Groundwater quality within the vicinity of Turner Basin is monitored by sampling a network of five wells, including two nested wells (Figure 2-2). T-1 is a nest of two casings: T-1/1, from 340 – 360 feet below ground surface; and T-1/2, from 380 – 400 feet below ground surface. T-2 is nest of two casings: T-2/1, from 350-370 feet below ground surface; and T-2/2, from 392 – 412 feet below ground surface. T-1/1 and T-2/1 were constructed above the regional groundwater table in anticipation of a future water level rise, and are not sampled at this time. Should the regional water table rise, sampling within T-1/1 and T-2/1 will replace sampling of T-1/2 and T-2/2, respectively.

All constituents analyzed from the monitoring wells during 4Q06 were below the MCL. Groundwater monitoring results are presented in Table 2-20. Based on Title 22 Engineering Report (CH2M-Hill, 2003), the travel times to wells BH-1, T-1, and T-2 were all approximately 6 months. EC listed in Table 2-20 as Specific Conductance is used as an indicator of recycled water presence at the monitoring wells. The IEUA began recharging recycled water in Banana Basin, Hickory Basin, and Turner Basin in July 2005, September 2005, and July 2006, respectively. The 4Q05 increase in EC results indicated that BH-1 may have received some recycled water recharge indicating a travel time of 5 months to this location. However, the 1Q06 EC data for BH-1 showed a decrease in EC, and as such did not indicate continued recycled water at the well. Groundwater quality results for 4Q06 at BH-1/2, T-1, and T-2 show a background condition for EC as do the other area monitoring wells.



### 3. Recharge Operations

IEUA's Groundwater Recharge Coordinator recorded the daily volumes of water routed to the Banana, Hickory, and Turner Basins. The Banana, Hickory, and Turner Basins were the only Phase 1 recharge basins to receive recycled water this quarter. Table 3-1 lists the schedule of diluent water, recycled water, and/or local runoff captured at these basins.

#### **Banana Basin**

Recycled water was delivered periodically from the Whittram force main. Local runoff and imported water were also delivered to Banana Basin during 4Q06 by pumping from Hickory Basin.

#### **Hickory Basin**

Recycled water was delivered periodically from the Whittram force main. Perennial local runoff was captured in Hickory Basin from San Sevaine Channel during 4Q06. Imported water was delivered to Hickory Basin during 4Q06, some of which was pumped to Banana Basin.

#### **Turner Basin**

During 3Q06, the Start-Up Period for Turner Basin was initiated. Recycled water is delivered through the RP4 west extension recycled water pipeline. Local runoff was captured in Turner Basin from Deer Creek commingled with recycled water in Deer Creek en route to Turner Basin. During the start-up period, local runoff is only collected at Turner Basins when recycled water is routed to the basins to maximize the percentage of recycled water recharged.



## **4. Operational Problems Encountered**

### **4.1 Regional Plants RP-1 and RP-4**

No operational problems encountered this quarter.

### **4.2 Recharge Operations**

During 4Q06, Turner Basin recycled water delivery and its start-up period were interrupted by the need to clean and repair the RP-4 west extension recycled water pipeline.

### **4.3 Lysimeter Sampling**

No operational problems encountered this quarter.

### **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**

As no operational problems encountered this quarter, no corrective actions were necessary.

### **5.2 Recharge Operations**

The RP4 west extension recycled water pipeline was taken out of service for video inspection and to remove construction debris.

### **5.3 Lysimeter Sampling**

As no operational problems encountered this quarter, no corrective actions were necessary.

### **5.4 Monitoring Well Sampling**

As no operational problems encountered this quarter, no corrective actions were necessary.



## 6. Certification of Non-Pumping in the Buffer Zones

The Watermaster has certified that there was no reported pumping of groundwater for domestic or municipal use from the zones that extend 500 feet and 6 months underground travel time from the Hickory, Banana, and Turner Basins in 4Q06. In fact, there are no production wells within the buffer zones of these three basins. Appendix A provides a letter from Watermaster that certifies non-pumping in the buffer zones.

The IEUA will continue to work 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 zones.

SBCDEHS reviews new well permit applications in part by 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. Although this letter has not yet been finalized, the IEUA has provided SBCDEHS with 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. If a well falls within an abutting parcel, SBCDEHS will review the proposed well location using maps of the basins and buffers. 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. 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 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) that was 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. 2006. *Table D. Monthly Analyses of the District Water Supplies – April 2006.*
- Metropolitan Water District of Southern California. 2006. *Table D. Monthly Analyses of the District Water Supplies – May 2006.*
- Metropolitan Water District of Southern California. 2006. *Table D. Monthly Analyses of the District Water Supplies – June 2006.*
- Wildermuth Environmental, Inc. 1999. *Chino Basin Optimum Basin Management Program, Phase I Report.* Prepared for Chino Basin Watermaster. August 19, 1999.



**Table 2-1  
Results of Daily Recycled Water Monitoring for October 2006: Turbidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrite, TIN, pH, EC, TDS, Hardness, and Coliform**

Date	RP1 Effluent													RP4 Effluent															
	Turbidity <sup>1</sup>	TOC	NH <sub>3</sub> -N	NO <sub>3</sub> -N	NO <sub>2</sub> -N	TKN	TN	TKN-NO <sub>2</sub> -N	TIN	pH <sup>1</sup>	EC	TDS	Hardness	Coliform	Turbidity <sup>1</sup>	TOC	NH <sub>3</sub> -N	NO <sub>3</sub> -N	NO <sub>2</sub> -N	TKN	TN	TKN-NO <sub>2</sub> -N	TIN	pH <sup>1</sup>	EC	TDS	Hardness	Coliform	
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	6<pH<9	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	6<pH<9	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	µmho/cm	550		2, 2, 23, 240	
10/1/2006	0.4	5.1	<0.1	7.5	<0.01	0.8	8	0.8	7.5	8.07	700		<2	0.5	6.1	<0.1	0.8	<0.01	0.6	1.4	0.6	0.8	7.50	695					ns
10/2/2006	0.5	5.5								8.04	720		<2	0.5	6.0	<0.1	1.0	<0.01				1.0	7.50	715					<2
10/3/2006	0.4	5.3	<0.1	6.4	<0.01				6.4	8.07	705	440	146	<2	0.5	5.9	<0.1	1.6	<0.01			1.6	7.50	710	426	126			<2
10/4/2006	0.4	5.3								8.09	710		<2	0.5	5.5	<0.1	1.9	<0.01				1.9	7.50	695					<2
10/5/2006	0.6	6.5	<0.1	3.3	0.03	1.0	4.3	1.0	3.3	8.15	715		<2	0.5	6.1	<0.1	2.0	<0.01	0.8	2.8	0.8	2.0	7.50	705					<2
10/6/2006	0.7	6.4								8.16	725		<2	0.5	6.0	<0.1	1.9	<0.01				1.9	7.50	705					<2
10/7/2006	0.8	6.5								8.15	705		<2	0.6	6.2	<0.1	1.2	<0.01				1.2	7.50	710					<2
10/8/2006	0.6	6.2	<0.1	5.7	<0.01	1.4	7.1	1.4	5.7	8.12	730		4	0.6	6.3	<0.1	0.8	<0.01	0.5	1.3	0.5	0.8	7.50	730					<2
10/9/2006	0.6	6.2								8.08	725		2	0.7	6.4	<0.1	0.8	<0.01				0.8	7.60	720					<2
10/10/2006	0.5	6.0	<0.1	6.7	<0.01	1.0	7.7	1.0	6.7	8.07	715	452		0.6	6.0	<0.1	2.3	<0.01	0.7	3.0	0.7	2.3	7.50	715	432				<2
10/11/2006	0.4	5.4								8.07	700		<2	0.6	5.9	<0.1	4.3	<0.01				4.3	7.50	695					<2
10/12/2006	0.4	5.2	<0.1	6.5	<0.01				6.5	8.07	700		2	0.4	6.0	<0.1	6.6	<0.01				6.6	7.50	770					<2
10/13/2006	0.4	5.1								8.09	695		<2	0.4	6.3	<0.1	7.4	<0.01				7.4	7.50	695					<2
10/14/2006	0.4	5.0								8.07	700		<2	0.4	6.3	<0.1	5.4	<0.01				5.4	7.40	690					<2
10/15/2006	0.4	5.4	<0.1	7.1	<0.01	0.5	7.6	0.5	7.1	8.04	700		2	0.4	6.3	<0.1	2.9	<0.01	0.5	3.4	0.5	2.9	7.50	700					<2
10/16/2006	0.4	5.8								7.99	700		<2	0.3	6.4	<0.1	3.3	<0.01				3.3	7.50	695					ns
10/17/2006	0.5	5.7	<0.1							7.99	705	436		0.2	6.1	<0.1	5.3	<0.01				5.3	7.50	700	422				<2
10/18/2006	0.7	6.2								8.03	715		<2	0.4	6.3	<0.1	6.9	<0.01				6.9	7.50	705					<2
10/19/2006	0.9	6.4	<0.1	7.6	<0.01	1.0	8.6	1.0	7.6	8.01	715		<2	0.4	6.5	<0.1	7.7	<0.01	0.8	8.4	0.8	7.7	7.50	695					<2
10/20/2006	0.9	6.4								8.01	715		<2	0.3	6.6	<0.1	7.3	<0.01				7.3	7.50	705					<2
10/21/2006	0.9	6.5								8.03	710		<2	0.3	6.8	<0.1	5.5	<0.01				5.5	7.50	710					<2
10/22/2006	0.7	6.4	<0.1	7.1	0.01	0.9	7.9	0.9	7.1	8.02	705		2	0.5	7.1	<0.1	2.9	<0.01	0.6	3.6	3.6	2.9	7.50	710					<2
10/23/2006	0.6	5.9								7.98	715		<2	0.3	6.6	<0.1	2.6	<0.01				2.6	7.50	705					<2
10/24/2006	0.6	5.6	<0.1	8.8	<0.01				8.8	7.82	725	450		0.4	6.6	<0.1	3.7	<0.01				3.7	7.50	700	420				<2
10/25/2006	0.6	5.5								7.98	705		<2	0.7	7.1	<0.1	5.9	<0.01				5.9	7.60	695					<2
10/26/2006	0.5	5.6	<0.1	7.7	<0.01	0.9	8.6	0.9	7.7	7.98	705		8	0.4	6.4	<0.1	8.5	<0.01	0.9	9.4	0.9	8.5	7.40	705					<2
10/27/2006	0.5	5.4								7.96	710		2	0.4	6.5	<0.1	7.9	<0.01				7.9	7.40	715					<2
10/28/2006	0.5	5.4								8.02	705		<2	0.5	6.4	<0.1	4.8	<0.01				4.8	7.50	710					<2
10/29/2006	0.5	5.9	<0.1	6.9	<0.01	0.8	7.7	0.8	6.9	8.01	730		4	0.4	6.8	<0.1	2.4	<0.01	0.2	2.6	0.2	2.4	7.50	730					<2
10/30/2006	0.5	6.3								8.02	720		2	0.4	6.8	<0.1	1.6	<0.01				1.6	7.40	725					<2
10/31/2006	0.5	5.5	<0.1	7.0	<0.01	1.7	8.7	1.7	7.0	8.00	710	442		0.4	6.3	<0.1	2.8	<0.01				2.8	7.40	735	434				<2
<b>Average</b>	0.6	5.8	<0.1	6.8	<0.01	1.0	7.7	1.0	6.8	8.0	711	444		<2	0.5	6.3	<0.1	3.9	<0.01	0.61	4.0	1.0	3.9	7.5	709	427			<2
<b>Min</b>	0.4	5.0	<0.1	3.3	<0.01	0.5	4.3	0.5	3.3	7.8	695	436		<2	0.2	5.5	<0.1	0.8	<0.01	0.17	1.3	0.2	0.8	7.4	690	420			<2
<b>Max</b>	0.9	6.5	<0.1	8.8	0.03	1.7	8.7	1.7	8.8	8.2	730	452		8	0.7	7.1	<0.1	8.5	<0.01	0.87	9.4	3.6	8.5	7.6	770	434			<2

<sup>1</sup>Turbidity 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:

- 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.

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 2006: Turbidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrite, TIN, pH, EC, TDS, Hardness, and Coliform**

Date	RP1 Effluent													RP4 Effluent														
	Turbidity <sup>1</sup>	TOC	NH <sub>3</sub> -N	NO <sub>3</sub> -N	NO <sub>2</sub> -N	TKN	TN	TKN-NO <sub>2</sub> -N	TIN	pH <sup>1</sup>	EC	TDS	Hardness	Coliform	Turbidity <sup>1</sup>	TOC	NH <sub>3</sub> -N	NO <sub>3</sub> -N	NO <sub>2</sub> -N	TKN	TN	TKN-NO <sub>2</sub> -N	TIN	pH <sup>1</sup>	EC	TDS	Hardness	Coliform
	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	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
11/1/2006	0.5	5.3								8.02	715		<2	0.4	6.1	<0.1	2.3	<0.01					2.3	7.40	705			<2
11/2/2006	0.7									8.26			<2	0.7	5.9	<0.1	1.2	<0.01	1.2	2.4	1.2	1.2	7.40	695			<2	
11/3/2006	0.7	5.6								8.26	720		<2	0.5	5.4	<0.1	1.1	<0.01					1.1	7.40	675			<2
11/4/2006	0.6	6.1								8.00	715		<2	0.5	5.5	<0.1	1.7	<0.01					1.7	7.40	700			<2
11/5/2006	0.6	5.7	<0.1	5.7	<0.01				5.7	7.97	725		2	0.7	5.6	<0.1	1.4	<0.01	1.2	2.7	1.2	1.4	7.50	710			<2	
11/6/2006	0.6	5.8								7.95	715		<2															<2
11/7/2006	0.7	5.9	<0.1	6.1	0.01	1.4	7.5	1.4	6.1	7.99	720	450	134	<2														<2
11/8/2006	0.6	5.3								7.99	710		<2															<2
11/9/2006	0.6	5.2	<0.1	8.0	0.02	1.6	9.6	1.6	8.0	7.99	700		<2															<2
11/10/2006	0.5	5.3								8.01	700		<2		7.1	3.3	2.9	0.1	4.8	7.8	4.9	6.3	7.60	735				<2
11/11/2006	0.5	5.2								8.03	705		4	1.0	5.6	<0.1	1.7	<0.01					1.7	7.30	745			<2
11/12/2006	0.5	5.3	0.1	6.8	0.02	2.1	8.9	2.1	6.9	8.02	700		<2	1.1	5.2	<0.1	1.3	<0.01	1.3	2.5	1.3	1.3	7.30	700			<2	
11/13/2006	0.5	5.2								8.00	705		<2	1.1	5.4	<0.1	2.2	<0.01					2.2	7.50	710			13
11/14/2006	0.5	5.0	<0.1	7.3	0.02				7.3	8.00	710	436	<2	0.9	5.4	<0.1	4.7	<0.01					4.7	7.50	710	434		<2
11/15/2006	0.5	5.3								8.01	685		<2	0.8	5.3	<0.1	4.9	<0.01					4.9	7.40	695			<2
11/16/2006	0.4	5.8	<0.1	6.1	0.02	1.3	7.4	1.3	6.1	8.01	695		<2	0.8	5.3	<0.1	5.4	<0.01	1.2	6.6	1.2	5.4	7.40	685			<2	
11/17/2006	0.5	5.2								8.05	745		2	0.8	5.3	<0.1	3.4	<0.01					3.4	7.50	680			<2
11/18/2006	0.9	5.7								7.79	730		<2	0.6	5.4	<0.1	2.2	<0.01					2.2	7.40	685			<2
11/19/2006	0.7	6.0	<0.1	5.5	0.02	1.3	6.8	1.3	5.5	8.04	700		<2	0.6	5.2	<0.1	1.6	<0.01	0.5	2.1	0.5	1.6	7.40	680			<2	
11/20/2006	0.6	5.5								8.07	715		<2	0.8	5.3	<0.1	1.9	<0.01					1.9	7.50	690			<2
11/21/2006	0.7	5.7	<0.1	5.7	<0.01	1.1	6.8	1.1	5.7	8.06	715	446	<2	0.8	5.3	<0.1	2.3	<0.01	1.0	3.4	1.0	2.3	7.60	685	426	128	<2	
11/22/2006	0.7	5.9								8.07	725		<2	0.7	5.2	<0.1	2.2	<0.01					2.2	7.40	680			<2
11/23/2006	0.8	6.3								8.08	750		<2	0.8	5.3	<0.1	1.7	<0.01					1.7	7.50	675			<2
11/24/2006	0.7	5.8								8.07	740		<2	0.7	5.2	<0.1	1.9	<0.01					1.9	7.50	690			<2
11/25/2006	0.9	6.6	0.2							8.02	730		<2	0.9	5.3	<0.1	1.7	<0.01					1.7	7.50	675			<2
11/26/2006	1.1	7.2	<0.1	7.1	0.02	1.6	8.6	1.6	7.1	8.04	735		<2	0.9	5.5	<0.1	1.6	<0.01	0.7	2.3	0.7	1.6	7.50	705			<2	
11/27/2006	1.2	8.3	<0.1							8.06	720		2	0.8	5.5	<0.1	1.5	<0.01					1.5	7.60	710			<2
11/28/2006	1.2	7.4	<0.1	7.7	0.02				7.7	8.05	725	436	<2	0.8	5.1	<0.1	3.1	<0.01					3.1	7.60	695	408		<2
11/29/2006	1.3	7.7								8.05	715		<2	0.8	5.6	<0.1	4.3	<0.01					4.3	7.60	685			<2
11/30/2006	0.9	6.7	<0.1	8.2	0.03	1.3	9.4	1.3	8.2	8.07	704		<2	0.8	5.5	<0.1	6.9	<0.01	1.1	8.0	1.1	6.9	7.60	720			<2	
Average	0.7	5.9	0.1	6.7	<0.01	1.4	7.2	1.5	6.8	8.03	716	442	<2	0.8	5.5	3.3	2.6	<0.01	1.4	4.2	1.5	2.7	7.5	696.92	423			<2
Min	0.4	5.0	<0.1	5.5	<0.01	1.1	6.8	1.1	5.5	7.79	685	436	<2	0.4	5.1	<0.1	1.1	<0.01	0.5	2.1	0.5	1.1	7.3	675.00	408			<2
Max	1.3	8.3	0.2	8.2	<0.01	2.1	9.6	2.1	8.2	8.26	750	450	4	1.1	7.1	3.3	6.9	0.09	4.8	8.0	4.9	6.9	7.6	745.00	434			13

<sup>1</sup>Turbidity 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:

- 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 2-3  
Results of Daily Recycled Water Monitoring for December 2006: Turbidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrite, TIN, pH, EC, TDS, Hardness, and Coliform**

Date	RP1 Effluent													RP4 Effluent															
	Turbidity <sup>1</sup>	TOC	NH <sub>3</sub> -N	NO <sub>3</sub> -N	NO <sub>2</sub> -N	TKN	TN	TKN-NO <sub>2</sub> -N	TIN	pH <sup>1</sup>	EC	TDS	Hardness	Coliform	Turbidity <sup>1</sup>	TOC	NH <sub>3</sub> -N	NO <sub>3</sub> -N	NO <sub>2</sub> -N	TKN	TN	TKN-NO <sub>2</sub> -N	TIN	pH <sup>1</sup>	EC	TDS	Hardness	Coliform	
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	6-pH-9	µmho/cm	mg/L	mg/L	MPN	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	6-pH-9	µmho/cm	mg/L	mg/L	MPN	
Order Limit	2; 5; 10	16			1	10	5	8				550	2; 23; 240		2; 5; 10	16			1	10	5	8			550	2; 23; 240			
12/1/2006	1.0	6.8								8.0	710			4	0.7	6	<0.1	6.8	<0.01					6.8	7.5	705			<2
12/2/2006	1.1	6.9								8.0	735			<2	0.8	6	<0.1	4.8	<0.01				4.8	7.6	735			<2	
12/3/2006	1.1	4.5	<0.1	10.5	<0.01	1.5	12.0	1.5	10.5	8.0	830			<2	0.7	6	<0.1	2.5	<0.01	1.1	3.6	1.1	2.5	7.6	705			<2	
12/4/2006	1.1	8.2	<0.1							8.0	745			2	0.8	7	<0.1	1.9	<0.01				1.9	7.6	700			<2	
12/5/2006	1.2	7.6	<0.1	8.3	<0.01	2.2	10.5	2.2	8.3	8.0	765	548	134	<2	0.7	6	<0.1	2.1	<0.01	1.1	3.2	1.1	2.1	7.5	685	410	126	<2	
12/6/2006	1.1	6.8	<0.1							8.0	735			<2	0.8	6	<0.1	4.7	<0.01				4.7	7.5	690			<2	
12/7/2006	1.0	6.5	<0.1	3.1	0.18					8.0	725			2*	0.7	6	<0.1	6.3	<0.01				6.3	7.5	700			<2	
12/8/2006	1.0	6.7								8.0	715			<2	0.8	6	<0.1	6.6	<0.01				6.6	7.4	705			<2	
12/9/2006	1.0	6.7								8.0	720			<2	0.8	6	<0.1	6.1	<0.01				6.1	7.4	715			<2	
12/10/2006	1.0	7.6	<0.1	8.2	0.02					8.0	730			2	0.9	6	<0.1	3.5	<0.01				3.5	7.5	740			<2	
12/11/2006	1.0	7.5								8.0	730			<2	0.9	6	<0.1	3.8	<0.01				3.8	7.5	725			<2	
12/12/2006	0.9	7.1	<0.1	8.5	0.02	1.4	9.9	1.4	8.5	8.0	735	438		<2	0.7	6	<0.1	4.6	<0.01	1.0	5.5	1.0	4.6	7.4	730	414		<2	
12/13/2006	1.0	6.3								8.0	730			<2	0.6	6	<0.1	5.3	<0.01				5.3	7.4	715			<2	
12/14/2006	1.0	6.5	<0.1	8.7	0.02	1.4	10.1	1.4	8.7	8.0	720			<2	0.6	6	<0.1	6.0	<0.01	1.0	7.0	1.0	6.0	7.4	710			<2	
12/15/2006	1.0	6.5								8.0	725			<2	0.6	6	<0.1	5.5	<0.01				5.5	7.3	730			<2	
12/16/2006	0.9	6.6	<0.1							8.0	720			<2	0.6	6	<0.1	4.0	<0.01				4.0	7.4	725			<2	
12/17/2006	0.8	6.6	0.7	8.4	0.02	1.4	9.9	1.4	9.2	8.0	730			<2	0.6	6	<0.1	3.6	<0.01	0.8	4.4	0.8	3.6	7.5	745			<2	
12/18/2006	0.8	6.6								8.0	740			2	0.6	6	<0.1	2.9	<0.01				2.9	7.5	735			<2	
12/19/2006	0.8	6.5	<0.1	9.7	<0.01	1.1	10.8	1.1	9.7	8.0	745	452		<2	0.6	6	<0.1	2.5	<0.01	0.9	3.3	0.9	2.5	7.5	730	434		<2	
12/20/2006	0.8	6.0								8.0	745			2	0.4	6	<0.1	2.2	<0.01				2.2	7.5	740			<2	
12/21/2006	0.8	6.0	<0.1	8.4	0.03					8.0	740			<2	0.7	6	<0.1	2.6	<0.01				2.6	7.4	720			<2	
12/22/2006	0.8	6.3								8.0	740			<2	0.8	6	<0.1	2.1	<0.01				2.1	7.5	720			<2	
12/23/2006	0.8	6.4								8.1	740			<2	0.7	6	<0.1	1.3	<0.01				1.3	7.5	740			<2	
12/24/2006	0.9	6.8				1.6				8.1	740			<2	0.6	6	<0.1	0.6	<0.01	1.0	1.6	1.0	0.6	7.5	745			<2	
12/25/2006	0.9	6.1								8.1	740			2	0.7	6	<0.1	0.7	<0.01				0.7	7.5	955			<2	
12/26/2006	0.8	6.3	<0.1	7.0	<0.01				7.0	8.0	740	436		2	0.7	6	<0.1	0.6	<0.01				0.6	7.6	770	442		<2	
12/27/2006	0.9	6.9								8.1	745			<2	0.7	6	<0.1	0.6	<0.01				0.6	7.6	750			<2	
12/28/2006	0.8	7.0	<0.1	7.0	0.03	1.4	8.4	1.4	7.0	8.1	775			2	0.8	6	<0.1	1.0	<0.01	1.0	2.0	1.0	1.0	7.6	760			<2	
12/29/2006	0.9	7.2								8.1	765			<2	0.8	6	<0.1	1.7	<0.01				1.7	7.5	750			<2	
12/30/2006	1.2	7.7								8.1	770			2	0.8	6	<0.1	2.2	<0.01				2.2	7.5	745			<2	
12/31/2006	1.4	8.3	<0.1			1.8				8.0	795			<2	0.8	6	<0.1	2.4	<0.01	0.7	3.1	0.7	2.4	7.6	750			2	
Average	0.9	6.8	<0.1	8.0	0.04	1.5	10.2	1.5	8.1	8.0	743	469		<2	0.7	6.0	<0.1	3.3	<0.01	1.0	3.8	1.0	3.27	7.5	735	425		<2	
Min	0.8	4.5	<0.1	3.1	<0.01	1.1	8.4	1.1	3.3	8.0	710	436		<2	0.4	5.6	<0.1	<0.1	<0.01	0.7	1.6	0.7	0.57	7.3	685	410		<2	
Max	1.4	8.3	0.7	10.5	0.18	2.2	12.0	2.2	10.5	8.1	830	548		4	0.9	6.5	<0.1	6.8	<0.01	1.1	7.0	1.1	6.79	7.6	955	442		2	

<sup>1</sup> Turbidity 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:

- 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.

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+Nitrite, TIN, pH, EC, TDS, Hardness, and Coliform**

Date	RP1 Effluent														RP4 Effluent													
	Turbidity	TOC	NH <sub>3</sub> -N	NO <sub>3</sub> -N	NO <sub>2</sub> -N	TKN	TN	TKN-N O <sub>2</sub> -N	TIN	pH	EC	TDS	Hardness	Coliform	Turbidity	TOC	NH <sub>3</sub> -N	NO <sub>3</sub> -N	NO <sub>2</sub> -N	TKN	TN	TKN-N O <sub>2</sub> -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		
<b>Average 1Q06</b>	1.0	8.2	0.1	10.7	0.04	1.5	12.4	1.6	10.8	7.52	730	465	134	2	0.6	9.5	0.2	1.0	0.09	1.1	2.1	1.1	1.1	6.88	774	456	129	2
Min	0.6	4.1	0.1	7.8	0.01	1.1	10.0	1.1	8.0	7.33	180	424	127	2	0.1	4.5	0.1	0.1	0.01	0.6	0.8	0.6	<0.2	6.70	670	400	120	2
Max	1.3	11.3	0.4	12.9	0.12	2.0	14.9	2.0	13.0	7.65	800	494	145	4	1.6	15.3	2.1	3.2	0.16	2.9	4.6	2.9	5.1	7.00	900	512	140	2
<b>Average 2Q06</b>	0.9	6.3	0.1	8.3	0.04	1.0	8.9	1.0	8.2	7.73	704	446	123	2	0.8	7.9	0.1	4.6	<0.01	1.1	5.8	1.1	4.5	7.08	703	464	112	4
Min	0.7	5.3	0.1	1.2	0.03	0.1	3.0	0.1	1.3	7.20	650	432	122	2	0.3	6.0	0.1	0.2	<0.01	0.1	1.1	0.1	0.1	6.80	645	404	104	2
Max	1.4	9.1	0.4	12.7	0.05	1.8	11.9	1.8	11.4	7.90	740	460	125	4	2.7	11.7	0.8	17.2	<0.01	1.8	17.2	1.8	17.3	7.30	775	788	121	13
<b>Average 3Q06</b>	0.6	5.5	0.2	6.2	0.11	1.5	7.8	1.5	6.3	7.98	711	444	133	2	0.5	6.4	0.1	1.9	<0.01	1.2	3.1	1.2	1.9	7.42	723	448	113	<2
Min	0.4	4.8	0.1	4.2	0.04	0.5	5.8	0.5	4.5	7.17	685	344	123	<2	0.2	5.8	0.1	0.4	<0.01	0.2	1.4	0.4	0.4	7.10	690	422	104	<2
Max	1.1	7.3	0.3	8.4	0.23	2.7	10.6	2.7	8.4	8.43	735	466	146	4	0.9	7.8	0.1	5.6	<0.01	2.7	6.0	2.7	5.6	7.60	760	462	121	<2
<b>Average 4Q06</b>	0.7	6.2	0.3	7.1	<0.01	1.3	8.5	1.3	7.2	8.0	723	451	138	3	0.6	6.0	3.3	3.3	<0.01	1.0	4.0	1.1	3.3	7.5	715	425	127	8
Min	0.4	4.5	0.1	3.1	<0.01	0.5	4.3	0.5	3.3	7.8	685	436	134	2	0.2	5.1	3.3	0.6	<0.01	0.2	1.3	0.2	0.6	7.3	675	408	126	2
Max	1.4	8.3	0.7	10.5	0.2	2.2	12.0	2.2	10.5	8.3	830	548	146	8	1.1	7.1	3.3	8.5	0.09	4.8	9.4	4.9	8.5	7.6	955	442	128	13
<b>Running Average</b>	0.8	6.5	0.2	8.1	0.06	1.3	9.4	1.3	8.1	7.8	717	451	132	2	0.6	7.5	1.0	2.7	0.09	1.1	3.7	1.1	2.7	7.2	729	448	120	4
Min	0.4	4.1	<0.1	1.2	<0.01	0.1	3.0	0.1	1.3	7.2	180	344	122	<2	0.1	4.5	<0.1	0.1	<0.01	0.1	0.8	0.1	0.1	6.7	645	400	104	<2
Max	1.4	11.3	0.7	12.9	0.23	2.7	14.9	2.7	13.0	8.4	830	548	146	8	2.7	15.3	3.3	17.2	0.16	4.8	17.2	4.9	17.3	7.6	955	788	140	13

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  
IEUA's Agency-Wide Distribution System  
TDS and TIN Analyses**

	Agency-Wide Effluent TDS & TIN Flow-weighted Average	
	12-Month Running Average	
	Flow wt. TDS	Flow wt. TIN
Mo-Yr	mg/L	
Dec-05	488	7
Jan-06	488	7
Feb-06	486	7
Mar-06	482	7
Apr-06	476	7
May-06	471	7
Jun-06	468	7
Jul-06	469	7
Aug-06	470	7
Sep-06	470	7
Oct-06	469	8
Nov-06	468	8
Dec-06	467	8
12-Month Average	474	7
Minimum	467	7
Maximum	488	8

Notes:

The TDS and 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.



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

Chemical	Order Limit	1Q06 Result <sup>(1)</sup>	2Q06 Result <sup>(1)</sup>	3Q06 Result <sup>(1)</sup>	4Q06 Result <sup>(1)</sup>	4-Quarter Running Average	Units	Method
Oil & Grease (Total)		<2	<2	<2	<2	<2	mg/L	EPA 1664
Aluminum	1000	<25	39	<25	<25	<29	µg/L	EPA 200.7
Antimony	6	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 200.8
Arsenic	10	<2	<2	<2	<2	<2	µg/L	EPA 200.8
Asbestos by TEM - >10 microns	7	<1	<0.8	<1.1	<0.2	<1.2	MFL	ML/EPA 100.2
Barium	1000	18	13	14	12	14	µg/L	EPA 200.7
Beryllium	4	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 200.7
Cadmium	5	<0.25	<0.25	<0.25	<0.25	<0.25	µg/L	EPA 200.7
Chromium	50	8.8	0.6	1.7	1.1	3.1	µg/L	EPA 200.7
Cyanide	0.15	0.003	<0.005	0.004	<0.0006	<0.004	mg/L	SM 4500-CN E
Fluoride	2	0.2	0.3	0.3	0.3	0.3	mg/L	SM 4500-F C
Mercury	2	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	EPA 245.2
Nickel	100	2	2	2	2	2	µg/L	EPA 200.7
Selenium	50	2	<2	<2	<2	<2	µg/L	EPA 200.8
Thallium	2	<1	<1	<1	<1	<1	µg/L	EPA 200.8
<b>Volatile Organic Compounds</b>								
Benzene	1	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Carbon tetrachloride	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,2-Dichlorobenzene	600	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,4-Dichlorobenzene	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1-Dichloroethane	5	<0.5	<0.5	<0.5	<0.5	<0.6	µg/L	EPA 524.2
1,2-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1-Dichloroethylene	6	<0.5	<0.5	<0.5	<0.5	<0.6	µg/L	EPA 524.2
cis-1,2-Dichloroethylene	6	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
trans-1,2-Dichloroethylene	10	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Dichloromethane	5	<0.5	2.1	<0.5	<0.5	<0.9	µg/L	EPA 524.2
1,2-Dichloropropane	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,3-Dichloropropane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Ethylbenzene	300	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Monochlorobenzene	70	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Methyl tert-butyl ether (MTBE)	13	<1	<0.5	<0.5	<0.5	<0.6	µg/L	EPA 524.2
Styrene	100	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,1,2-Tetrachloroethane	1	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Tetrachloroethylene	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Toluene	150	<0.5	1.1	<0.5	<0.5	<0.7	µg/L	EPA 524.2
1,2,4-Trichlorobenzene	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,1-Trichloroethane	200	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,2-Trichloroethane	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Trichloroethylene	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Trichlorofluoromethane	150	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Trichlorotrifluoroethane	1200	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Vinyl chloride	0.5	<0.3	<0.3	<0.3	<0.3	<0.3	µg/L	EPA 524.2
m,p-Xylene <sup>(2)</sup>	1750	<0.5	<0.5	<0.5	<1	<0.6	µg/L	EPA 524.2
o-Xylene <sup>(2)</sup>	1750	<0.5	<0.5	<0.5	<0.5	<0.5	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	1Q06 Result <sup>(1)</sup>	2Q06 Result <sup>(1)</sup>	3Q06 Result <sup>(1)</sup>	4Q06 Result <sup>(1)</sup>	4-Quarter Running Average	Units	Method
<b>Non-Volatile Synthetic Organic Chemicals (SOCs)</b>								
Alachlor (Alanex)	2	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
Atrazine	1	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 525.2
Bentazon	18	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 515.4
Benzo(a)pyrene	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	µg/L	EPA 525.2
Carbofuran (Furadan)	18	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 531.2
Chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
2,4-D	70	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 515.4
Dalapon	200	<1	<1	5.1	3.5	<2.7	µg/L	EPA 515.4
Dibromochloropropane (DBCP)	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 504.1
Di-(2-Ethylhexyl)adipate	400	<0.6	<0.6	<0.6	<0.6	<0.6	µg/L	ML/EPA 525.2
Di(2-Ethylhexyl)phthalate	4	<0.6	<0.6	1.1	<0.6	<0.7	µg/L	ML/EPA 525.2
Dinoseb	7	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	ML/EPA 515.4
Diquat	20	<0.4	<0.4	<0.4	<0.4	<0.4	µg/L	ML/EPA 549.2
Endothall	100	<20	<5	<5	<5	<9	µg/L	ML/EPA 548.1
Endrin	2	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 505
Ethylene Dibromide (EDB)	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 504.1
Glyphosate	700	<6	<6	<6	<6	<6	µg/L	ML/EPA 547
Heptachlor	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 505
Heptachlor Epoxide	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 505
Hexachlorobenzene	1	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	ML/EPA 525.2
Hexachlorocyclopentadiene	50	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	ML/EPA 525.2
Lindane (gamma-BHC)	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 505
Methoxychlor	30	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 505
Molinate	20	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	ML/EPA 525.2
Oxamyl (Vydate)	50	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	ML/EPA 531.2
Pentachlorophenol	1	<0.04	<0.04	<0.04	<0.04	<0.04	µg/L	ML/EPA 515.4
Picloram	500	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	ML/EPA 515.4
PCB 1016	0.5	<0.07	<0.07	<0.07	<0.07	<0.07	µg/L	EPA 505
PCB 1221	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1232	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1242	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1248	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1254	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCP 1260	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
Simazine	4	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	ML/EPA 525.2
Thiobencarb	70	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	ML/EPA 525.2
Toxaphene	3	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 505
2,3,7,8-TCDD 1613 DW (subbed)	30	<5	<5	<5	<5	<5	pg/l	EPA 1613
2,4,5-TP (Silvex)	50	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	ML/EPA 515.4
<b>Disinfection By-products</b>								
<b>*Compliance Point Lysimeter Data</b>		<b>B-25</b>	<b>B-25</b>	<b>HE-25</b>	<b>HE-25</b>			
Total Trihalomethanes <sup>(4)</sup>	80	9.3	1	37	66	28.3	µg/L	EPA 200.7
Total Haloacetic Acids <sup>(4)</sup>	60	<1	<1	<1	<1	<1	µg/L	EPA 200.8



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

Chemical	Order Limit	1Q06 Result <sup>(1)</sup>	2Q06 Result <sup>(1)</sup>	3Q06 Result <sup>(1)</sup>	4Q06 Result <sup>(1)</sup>	4-Quarter Running Average	Units	Method
<b>Notification Levels</b>								
Copper	1300	12.1	5	5.4	3.7	6.6	µg/L	EPA 200.7
Lead	15	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 200.8
<b>Radionuclides</b>								
Combined Radium-226 and Radium 228	5	<0.486	<0.453	<0.754	<0.705	<0.6	pCi/l	EPA 903.0
Gross Alpha particle activity (including Radium-226 but excluding Radon and Uranium)	15	<3	<3	<3	<3	<3	pCi/l	EPA 900.0
Tritium (Sub)	20,000	<379	<202	<263	<178	<255	pCi/l	EPA 906
Strontium 90	8	<0.807	<0.871	1.07	<0.790	<0.885	pCi/l	EPA 905
Gross Beta particle activity	50	<3	7.1	12	10	7.7	pCi/l	EPA 900.0
Uranium	20	<0.7	<0.7	<0.7	<0.7	<0.7	pCi/l	EPA 200.8

<sup>(1)</sup> Recycled water sample is a blend of RP1 and RP4 Effluents

<sup>(2)</sup> Limit is either for a single isomer or the sum of the isomers.

<sup>(3)</sup> Results are from a blend for RP-1 and RP-4, which is not the compliance point for TTHM and HAA5.

<sup>(4)</sup> The compliance point for TTHM and HAA5 is the 25-foot Lysimeter.

IS: Insufficient Sample for Analytical Test

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

With only "<" value, 1/2 the reporting limit was used to calculate and report the average, if the average value is less than the detection limit, the the detection limit was used. With more that one "<" value the reported average is caluclated using the highest detection limit.

**Bold signifies an exceedance of a limit in the Order.**



**Table 2-7**  
**Recycled Water<sup>(1)</sup> Monitoring Results: Remaining Priority Pollutants and Unregulated Chemicals**

Chemical	1Q06 Result	2Q06 Result	3Q06 Result	4Q06 Result	4-Quarter Running Average	Units	Method
<b>Metals</b>							
Trivalent Chromium	0.23	<0.1	<0.1	1.1	<0.38	ug/L	EPA 200.7
<b>Volatile Organics</b>							
Acrolein	<2	4	<2	<2	<2.5	µg/L	EPA 624
Acrylonitrile	<2	<2	<2	<2	<2	µg/L	EPA 624
Bromoform	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Dibromochloromethane	3.7	4.1	4.1	3.1	3.8	µg/L	EPA 524.2
Chloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
2-Chloroethyl Vinyl Ether	<1	<1	<1	<1	<1	µg/L	EPA 624
Chloroform	78	87	87	98	88	µg/L	EPA 524.2
Bromodichloromethane	23	25	25	21	24	µg/L	EPA 524.2
Bromomethane	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Chloromethane	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
<b>Acid Extractibles</b>							
2-Chlorophenol	<1	<1	<1	<1	<1	µg/L	EPA 625
2,4-Dichlorophenol	<2	<2	<2	<2	<2	µg/L	EPA 625
2,4-Dimethylphenol	<1	<1	<1	<1	<1	µg/L	EPA 625
2-Methyl-4,6-Dinitrophenol	<2	<2	<2	<2	<2	µg/L	EPA 625
2,4-Dinitrophenol	<3	<3	<3	<3	<3	µg/L	EPA 625
2-Nitrophenol	<1	<1	<1	<1	<1	µg/L	EPA 625
4-Nitrophenol	<3	<3	<3	<3	<3	µg/L	EPA 625
4-Chloro-3-methylphenol	<1	<1	<1	<1	<1	µg/L	EPA 625
Phenol	<1	<1	<1	<1	<1	µg/L	EPA 625
2,4,6-Trichlorophenol	<1	<1	<1	<1	<1	µg/L	EPA 625
<b>Base/Neutral Extractibles</b>							
Acenaphthene	<1	<1	<1	<1	<1	µg/L	EPA 625
Acenaphthylene	<1	<1	<1	<1	<1	µg/L	EPA 625
Anthracene	<1	<1	<1	<1	<1	µg/L	EPA 625
Benzidine	<5	<5	<5	<5	<5	µg/L	EPA 625
Benzo(a)anthracene	<5	<5	<5	<5	<5	µg/L	EPA 625
Benzo(b)fluoranthene	<1	<1	<1	<1	<1	µg/L	EPA 625
Benzo(g,h,i)perylene	<2	<2	<2	<2	<2	µg/L	EPA 625
Benzo(k)fluoranthene	<1	<1	<1	<1	<1	µg/L	EPA 625
Bis (2-Chloroethoxy) Methane	<2	<2	<2	<2	<2	µg/L	EPA 625
Bis(2-Chloroethyl)ether	<1	<1	<1	<1	<1	µg/L	EPA 625
Bis (2-Chloroisopropyl) Ether	<1	<1	<1	<1	<1	µg/L	EPA 625
4-Bromophenyl Phenyl Ether	<1	<1	<1	<1	<1	µg/L	EPA 625
Butylbenzyl Phthalate	<1	<1	<1	<1	<1	µg/L	EPA 625
2-Chloronaphthalene	<1	<1	<1	<1	<1	µg/L	EPA 625
4-Chlorophenyl Phenyl Ether	<1	<1	<1	<1	<1	µg/L	EPA 625
Chrysene	<1	<1	<1	<1	<1	µg/L	EPA 625
Dibenzo(a,h)anthracene	<1	<1	<1	<1	<1	µg/L	EPA 625
1,3-Dichlorobenzene	<1	<1	<1	<1	<1	µg/L	EPA 625
3,3-Dichlorobenzidine	<5	<5	<5	<5	<5	µg/L	EPA 625
Diethyl phthalate	<2	<2	<2	<2	<2	µg/L	EPA 625
Dimethyl Phthalate	<1	<1	<1	<1	<1	µg/L	EPA 625
Di-n-butyl phthalate	<1	<1	<1	<1	<1	µg/L	EPA 625
2,4-Dinitrotoluene	<1	<1	<1	<1	<1	µg/L	EPA 625
2,6-Dinitrotoluene	<2	<2	<2	<2	<2	µg/L	EPA 625
Di-n-octyl phthalate	<1	<1	<1	<1	<1	µg/L	EPA 625
1,2-Diphenylhydrazine	<1	<1	<1	<1	<1	µg/L	EPA 625
Fluoranthene	<1	<1	<1	<1	<1	µg/L	EPA 625





**Table 2-7**  
**Recycled Water<sup>(1)</sup> Monitoring Results: Remaining Priority Pollutants and Unregulated Chemicals**

Chemical	1Q06 Result	2Q06 Result	3Q06 Result	4Q06 Result	4-Quarter Running Average	Units	Method
Fluorene	<1	<1	<1	<1	<1	µg/L	EPA 625
Hexachlorobutadiene	<1	<1	<1	<1	<1	µg/L	EPA 625
Hexachlorocyclopentadiene	<5	<5	<5	<5	<5	µg/L	EPA 625
Hexachloroethane	<1	<1	<1	<1	<1	µg/L	EPA 625
Indeno(1,2,3-cd)pyrene	<2	<2	<2	<2	<2	µg/L	EPA 625
Isophorone	<1	<1	<1	<1	<1	µg/L	EPA 625
Naphthalene	<1	<1	<1	<1	<1	µg/L	EPA 625
Nitrobenzene	<1	<1	<1	<1	<1	µg/L	EPA 625
N-Nitrosodi-N-Propylamine	<1	<1	<1	<1	<1	µg/L	EPA 625
N-Nitrosodiphenylamine	<1	<1	<1	<1	<1	µg/L	EPA 625
Phenanthrene	<1	<1	<1	<1	<1	µg/L	EPA 625
Pyrene	<1	<1	<1	<1	<1	µg/L	EPA 625
<b>Pesticides</b>							
Aldrin	<0.005	<0.005	<0.005	<0.005	<0.005	µg/L	EPA 608
Alpha-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
Beta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
Delta-BHC	<0.011	<0.011	<0.011	<0.007	<0.011	µg/L	EPA 608
4,4' - DDT	<0.02	<0.02	<0.02	<0.02	<0.02	µg/L	EPA 608
4,4' - DDE	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
4,4' - DDD	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
Dieldrin	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
Endosulfan I	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
Endosulfan II	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
Endosulfan Sulfate	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
Endrin Aldehyde	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 608
<b>Unregulated Chemicals</b>							
Boron	0.3	0.2	0.3	0.3	0.3	mg/L	EPA 200.7
Chromium-6	0.23	<0.1	0.28	0.25	0.20	µg/L	EPA 218.6
Dichlorodifluoromethane	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Ethyl tert-butyl ether (ETBE)	<3	<3	<3	<3	<3	µg/L	EPA 524.2
N-Nitroso dimethylamine (NDMA) <sup>(3)</sup>	4.8	5.8	15.5	5.5	7.9	ng/l	1625MOD
Perchlorate	<4	<4	<4	<4	<4	µg/L	EPA 314
tert-Amyl methyl ether (TAME)	<3	<3	<3	<3	<3	µg/L	EPA 524.2
tert-Butyl alcohol (TBA)	<2	<2	<2	3.7	<2.4	µg/L	524.2MOD
Vanadium	4.3	5.3	3.8	3.1	4.1	µg/L	EPA 200.8
1,4-Dioxane	<2	<2	<2	<2	<2	µg/L	8270MOD
1,2,3-Trichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2

<sup>(1)</sup>Recycled water sample is a blend of RP1 and RP4 Effluents

<sup>(2)</sup> Boron value is an average of July, August & September samples

<sup>(3)</sup> NDMA is an average of 6 sample results collected monthly from both RP1 and RP4

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.

Samples collected during the Third Quarter of 2005 for Acid Extractables and Base/Neutral Extractables were analyzed by an outside laboratory, which use a high detection limit within the EPA method 625.

With only "<" value, 1/2 the reporting limit was used to calculate and report the average, if the average value is less than the detection limit, the the detection limit was used. With more than one "<" value the reported average is calculated using the highest detection limit.

**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/RP-4 Blend	RP-1 Effluent	RP-4 Effluent	Units	Method
<b>Chemicals with State Notification Levels <sup>(1)</sup></b>						
N-butylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
sec-butylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
tert-butylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
Carbon disulfide	6/7/2006	<sup>(2)</sup>	--	--	µg/L	524.2
Chlorate	6/7/2006	1150	--	--	µg/L	300.0
2-chlorotoluene	6/7/2006	<0.5	--	--	µg/L	524.2
Diazinon	6/6/2006	<0.1	--	--	µg/L	525.2
1,4-Dioxane	6/7/2006	<2	--	--	µg/L	Purge and Trap-GC/MS
Formaldehyde	6/7/2006	75	--	--	µg/L	
Isopropylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
N-propylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
1,2,4-trimethylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
1,3,5-trimethylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
<b>Nitrosoamines <sup>(1)</sup></b>						
N-Nitrosodiethylamine (NDEA)	6/7/2006	<4	--	--	ng/L	525
N-Nitrosopyrrolidine	6/7/2006	5.3	--	--	ng/L	525
<b>Hormones</b>						
Ethinyl estradiol	5/3/2006	--	4.5	2.8	ng/L	HPLC/MS-SEDC
17-B estradiol	5/3/2006	--	<2	10	ng/L	HPLC/MS-SEDC
Estrone	5/3/2006	--	<1	1.3	ng/L	HPLC/MS-SEDC
<b>"Industrial" Endocrine Disruptors</b>						
Bisphenol A	5/3/2006	--	<10	<10	ng/L	HPLC/MS-SEDC
Nonylphenol and nonylphenol polyethoxylate	5/3/2006	--	810	5.1	ng/L	HPLC/MS-SEDC
Octylphenol and octylphenol polyethoxylate	5/3/2006	--	150	<1.5	ng/L	HPLC/MS-SEDC
PolybromiNA	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 28	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 71	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 47	5/3/2006	--	4	3.1	ng/L	8270C SIM
PBDE 66	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 100	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 99	5/3/2006	--	3	2.2	ng/L	8270C SIM
PBDE 85	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 154	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 153	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 138	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 128	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 183	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 190	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 203	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 206	5/3/2006	--	<97	<96	ng/L	8270C SIM
PBDE 209	5/3/2006	--	<97	<96	ng/L	8270C SIM



**Table 2-8**  
**Recycled Water Monitoring Results: Endocrine Disrupting Chemicals & Pharmaceuticals**  
**Analyzed on an Annual Basis**

Chemicals	Date	RP-1/RP-4 Blend	RP-1 Effluent	RP-4 Effluent	Units	Method
<b>Pharmaceuticals and Other Substances</b>						
Acetaminophen	5/3/2006	--	1400	300	ng/L	HPLC/MS-SEDC
Amoxicillin <sup>(3)</sup>						
Azithromycin <sup>(3)</sup>						
Caffeine	5/3/2006	--	67	<5	ng/L	HPLC/MS-SEDC
Carbamazepine	5/3/2006	--	480	<0.5	ng/L	HPLC/MS-SEDC
Ciprofloxacin <sup>(3)</sup>						
Ethylenediamine tetra-acetic acid (EDTA)		--	NA	NA		
Gemfibrozil	5/3/2006	--	18	<0.5	ng/L	HPLC/MS-SEDC
Ibuprofen	5/3/2006	--	<10	170	ng/L	HPLC/MS-SEDC
Iodinated contrast media	5/3/2006	--	460	110	ng/L	HPLC/MS-SEDC
Lipitor <sup>(3)</sup>						
Methadone	5/3/2006	--	<0.5	<0.5	ng/L	HPLC/MS-SEDC
Morphine <sup>(3)</sup>						
Salicylic acid	5/3/2006	--	27	35	ng/L	HPLC/MS-SEDC
Triclosan	5/3/2006	--	14	54.0	ng/L	HPLC/MS-SEDC

(1) Results are a blend from the Effluent of RP-1 and RP-4

(2) Contract lab does not include carbon disulfide in method 524.2. IEUA does include carbon disulfide in method 524.2 and will conduct this analysis for future annual sampling events.

(3) Method development is being refined to enhance recovery

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<sup>(1)</sup> Monitoring Results: Miscellaneous Analytes**

Chemical	Order Limit <sup>(2)</sup>	1Q06 Results	2Q06 Results	3Q06 Results	4Q06 Results	4-Quarter Running Average	Units	Method
Aluminum	200	<25	39	<25	<25	<29	µg/L	EPA 200.7
Corrosivity Index	Non-corrosive	-0.4	-0.4	0	-0.3	-0.3	SI	SM 2330B
Surfactants (MBAS)	0.5	0.12	0.16	0.1	<0.05	0.10	mg/L	S 5540C/E425.1
Fe	300	123	118	84	79	101	µg/L	EPA 200.7
Mn	50	5	6	3	5	5	µg/L	EPA 200.7
Odor	3 Units	<b>4</b>	<b>8</b>	3	<b>4</b>	<b>5</b>	TON	ML/S2150B
Ag	100	<0.25	<0.25	<0.25	<0.25	<0.25	µg/L	EPA 200.7
Thiobencarb	1	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	EPA 525.2
Zn	5000	72	29	43	31	44	µg/L	EPA 200.7

<sup>(1)</sup> Recycled water sample is a blend of RP1 and RP4 Effluents

<sup>(2)</sup> Refers to Permit Table 3, Compliance Determination B.3

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

With only "<" value, 1/2 the reporting limit was used to calculate and report the average, if the average value is less than the detection limit, the the detection limit was used. With more that one "<" value the reported average is calculated using the highest detection limit.

**Bold signifies an exceedance of a limit in the Order.**



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

Constituents	Units	Oct-06	Nov-06	Dec-06
Silica	mg/L	12.4	12.6	
Calcium	mg/L	15	15	
Magnesium	mg/L	9	9	
Sodium	mg/L	31	27	
Potassium	mg/L	2	1.8	
Carbonate	mg/L	0	0	
Bicarbonate	mg/L	81	83	
Sulfate	mg/L	21	18	
Chloride	mg/L	38	31	
Nitrate	mg/L	1.4	2.1	
Fluoride	mg/L	0.08	0.08	
Boron	mg/L	0.09	--	
Total Dissolved Solids	mg/L	170	158	
Total Hardness (as CaCO <sub>3</sub> )	mg/L	76	75	
Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	66	68	
Free Carbon Dioxide	mg/L	4	6.9	
pH		7.53	7.3	
Electrical Conductivity	µmho/cm	308	275	
Turbidity	NTU	0.95	0.97	
Temperature	C	21	18	
Bromide	mg/L	0.12	0.1	
Total Organic Carbon	mg/L	2.74	2.46	

\*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	Sample Date	Result	Units
BNA-0	0 ft	10/3/2006	5.54	mg/L
BNA-5	5 ft	10/3/2006	2.09	mg/L
BNA-10	10 ft	10/3/2006	2.22	mg/L
BNA-15	15 ft	10/3/2006	1.76	mg/L
BNA-25	25 ft	10/3/2006	1.58	mg/L
BNA-0	0 ft	10/10/2006	8.80	mg/L
BNA-5	5 ft	10/10/2006	2.16	mg/L
BNA-10	10 ft	10/10/2006	2.00	mg/L
BNA-15	15 ft	10/10/2006	1.71	mg/L
BNA-25	25 ft	10/10/2006	1.75	mg/L
BNA-0	0 ft	10/17/2006	4.05	mg/L
BNA-5	5 ft	10/17/2006	1.88	mg/L
BNA-10	10 ft	10/17/2006	1.88	mg/L
BNA-15	15 ft	10/17/2006	1.57	mg/L
BNA-25	25 ft	10/17/2006	1.44	mg/L
BNA-0	0 ft	12/28/2007	5.08	mg/L
BNA-25	5 ft	12/28/2007	1.25	mg/L

Notes:

ft: feet below the bottom of the basin

mg/L: milligrams per liter

TOC: Total Organic Carbon



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

Station ID	Depth	Sample Date	NH3-N	NO2-N	NO3-N	TKN	TN
BNA-0	0 ft	7/4/2006	<0.1	<0.01	2.6	2.6	5.2
BNA-5	5 ft	7/4/2006	<0.1	<0.01	<0.1	<0.5	<0.6
BNA-10	10 ft	7/4/2006	<0.1	<0.01	<0.1	<0.5	<0.6
BNA-15	15 ft	7/4/2006	<0.1	<0.01	0.2	0.5	0.7
BNA-25	25 ft	7/4/2006	<0.1	<0.01	0.4	1.3	1.7
BNA-0	0 ft	7/7/2006	<0.1	<0.01	3.8	1.3	5.1
BNA-5	5 ft	7/7/2006	<0.1	<0.01	0.3	1.2	1.5
BNA-10	10 ft	7/7/2006	<0.1	<0.01	<0.1	1.2	1.2
BNA-15	15 ft	7/7/2006	<0.1	<0.01	0.1	1.1	1.2
BNA-25	25 ft	7/7/2006	<0.1	<0.01	0.4	<0.5	0.4
BNA-0	0 ft	7/11/2006	<0.1	<0.01	1.7	2.3	4
BNA-5	5 ft	7/11/2006	<0.1	<0.01	<0.1	0.6	0.6
BNA-10	10 ft	7/11/2006	<0.1	<0.01	<0.1	0.7	0.7
BNA-15	15 ft	7/11/2006	<0.1	<0.01	<0.1	<0.5	<0.6
BNA-25	25 ft	7/11/2006	<0.1	<0.01	0.3	<0.5	0.3
BNA-0	0 ft	10/3/2006	<0.1	<0.01	3.8	0.7	4.5
BNA-5	5 ft	10/3/2006	<0.1	<0.01	4.4	<0.5	4.4
BNA-10	10 ft	10/3/2006	<0.1	<0.01	1.8	<0.5	1.8
BNA-15	15 ft	10/3/2006	<0.1	<0.01	3.4	<0.5	3.4
BNA-25	25 ft	10/3/2006	<0.1	<0.01	2.6	<0.5	2.6
BNA-0	0 ft	10/10/2006	<0.1	<0.01	<0.1	2.2	2.2
BNA-5	5 ft	10/10/2006	IV	IV	IV	IV	IDC
BNA-10	10 ft	10/10/2006	<0.1	<0.01	2	<0.5	2
BNA-15	15 ft	10/10/2006	<0.1	<0.01	2.1	<0.5	2.1
BNA-25	25 ft	10/10/2006	<0.1	IV	IV	<0.5	IDC
BNA-0	0 ft	10/17/2006	<0.1	<0.01	0.3	0.5	0.8
BNA-5	5 ft	10/17/2006	<0.1	<0.01	3.3	<0.5	3.3
BNA-10	10 ft	10/17/2006	<0.1	<0.01	2.9	<0.5	2.9
BNA-15	15 ft	10/17/2006	<0.1	<0.01	1.7	<0.5	1.7
BNA-25	25 ft	10/17/2006	<0.1	<0.01	2.2	<0.5	2.2
BNA-0	0 ft	12/28/2007	IV	IV	IV	IV	IV
BNA-25	25 ft	12/28/2007	IV	IV	IV	IV	IV

Notes:

ft: feet below the bottom of the basin  
mg/L: milligrams per liter  
TKN: Total Kjeldahl Nitrogen  
TN: Total Nitrogen  
DNR: Laboratory did not report data prior publishing this report  
IDC: Insufficient data to calculate  
IV: Insufficient volume for analysis



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

Station ID	Depth	Sample Date	Result	Units
HKE-0	0 ft	10/24/2006	6.43	mg/L
HKE-5	5 ft	10/24/2006	3.01	mg/L
HKE-10	10 ft	10/24/2006	2.95	mg/L
HKE-15	15 ft	10/24/2006	2.58	mg/L
HKE-25	25 ft	10/24/2006	1.09	mg/L
HKE-0	0 ft	10/31/2006	6.64	mg/L
HKE-5	5 ft	10/31/2006	2.69	mg/L
HKE-10	10 ft	10/31/2006	2.28	mg/L
HKE-15	15 ft	10/31/2006	1.12	mg/L
HKE-25	25 ft	10/31/2006	1.68	mg/L
HKE-0	0 ft	11/7/2006	6.24	mg/L
HKE-5	5 ft	11/7/2006	2.51	mg/L
HKE-10	10 ft	11/7/2006	1.98	mg/L
HKE-15	15 ft	11/7/2006	1.39	mg/L
HKE-25	25 ft	11/7/2006	1.27	mg/L
HKE-0	0 ft	11/14/2006	4.06	mg/L
HKE-5	5 ft	11/14/2006	2.26	mg/L
HKE-10	10 ft	11/14/2006	2.02	mg/L
HKE-15	15 ft	11/14/2006	1.57	mg/L
HKE-25	25 ft	11/14/2006	1.03	mg/L
HKE-0	0 ft	11/21/2006	1.32	mg/L
HKE-5	5 ft	11/21/2006	1.53	mg/L
HKE-10	10 ft	11/21/2006	1.61	mg/L
HKE-15	15 ft	11/21/2006	1.37	mg/L
HKE-25	25 ft	11/21/2006	1.27	mg/L

Notes:

ft: feet below the bottom of the basin  
mg/L: milligrams per liter  
TOC: Total Organic Carbon





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

Station ID	Depth	Sample Date	NH3-N	NO2-N	NO3-N	TKN	TN
HKE-0	0 ft	10/24/2006	<0.1	<0.01	3.1	1	4.1
HKE-5	5 ft	10/24/2006	<0.1	<0.01	2.6	<0.5	2.6
HKE-10	10 ft	10/24/2006	<0.1	<0.01	1.4	0.6	2.0
HKE-15	15 ft	10/24/2006	<0.1	<0.01	1.2	0.5	1.7
HKE-25	25 ft	10/24/2006	<0.1	<0.01	1.8	<0.5	1.8
HKE-0	0 ft	10/31/2006	<0.1	0.03	2.4	0.5	2.9
HKE-5	5 ft	10/31/2006	<0.1	<0.01	1.7	<0.5	1.7
HKE-10	10 ft	10/31/2006	<0.1	IV	IV	<0.5	IDC
HKE-15	15 ft	10/31/2006	<0.1	<0.01	1.7	<0.5	1.7
HKE-25	25 ft	10/31/2006	<0.1	0.04	3.7	0.5	4.2
HKE-0	0 ft	11/7/2006	<0.1	0.01	4.1	1.6	5.7
HKE-5	5 ft	11/7/2006	<0.1	IV	IV	<0.5	IDC
HKE-10	10 ft	11/7/2006	IV	IV	IV	IV	IDC
HKE-15	15 ft	11/7/2006	<0.1	<0.01	5.9	<0.5	6.0
HKE-25	25 ft	11/7/2006	<0.1	<0.01	5.1	0.5	5.6
HKE-0	0 ft	11/14/2006	<0.1	<0.01	<0.1	2.9	2.9
HKE-5	5 ft	11/14/2006	IV	IV	IV	IV	IDC
HKE-10	10 ft	11/14/2006	IV	IV	IV	IV	IDC
HKE-15	15 ft	11/14/2006	<0.1	<0.01	5.6	0.9	6.5
HKE-25	25 ft	11/14/2006	<0.1	<0.01	5.2	0.9	6.1
HKE-0	0 ft	11/21/2006	<0.1	<0.01	4.8	<0.5	4.8
HKE-5	5 ft	11/21/2006	<0.1	IV	IV	<0.5	IDC
HKE-10	10 ft	11/21/2006	<0.1	IV	IV	<0.5	IDC
HKE-15	15 ft	11/21/2006	<0.1	<0.01	5.4	<0.5	5.4
HKE-25	25 ft	11/21/2006	<0.1	<0.01	4.9	1.3	6.2

Notes:

ft: feet below the bottom of the basin

mg/L: milligrams per liter

TKN: Total Kjeldahl Nitrogen

TN: Total Nitrogen

DNR: Laboratory did not report data prior publishing this report

IDC: Insufficient data to calculate

IV: Insufficient volume for analysis



**Table 2-15  
Basin and Lysimeter Water Monitoring Results for Turner 1 Basin: TOC**

Station ID	Depth	Sample Date	Result	Units
TRN1-0	0 ft	10/3/2006	5.37	mg/L
TRN1-5	5 ft	10/3/2006	3.57	mg/L
TRN1-10	10 ft	10/3/2006	2.91	mg/L
TRN1-15	15 ft	10/3/2006	1.89	mg/L
TRN1-25	25 ft	10/3/2006	2.37	mg/L
TRN1-35	35 ft	10/3/2006	1.69	mg/L
TRN1-0	0 ft	10/10/2006	5.54	mg/L
TRN1-5	5 ft	10/10/2006	3.16	mg/L
TRN1-10	10 ft	10/10/2006	2.70	mg/L
TRN1-15	15 ft	10/10/2006	1.73	mg/L
TRN1-25	25 ft	10/10/2006	2.27	mg/L
TRN1-35	35 ft	10/10/2006	1.62	mg/L
TRN1-0	0 ft	10/17/2006	2.71	mg/L
TRN1-5	5 ft	10/17/2006	3.02	mg/L
TRN1-10	10 ft	10/17/2006	2.59	mg/L
TRN1-15	15 ft	10/17/2006	1.82	mg/L
TRN1-25	25 ft	10/17/2006	2.42	mg/L
TRN1-35	35 ft	10/17/2006	1.63	mg/L
TRN1-0	0 ft	10/24/2006	4.28	mg/L
TRN1-5	5 ft	10/24/2006	2.77	mg/L
TRN1-10	10 ft	10/24/2006	2.42	mg/L
TRN1-15	15 ft	10/24/2006	1.57	mg/L
TRN1-25	25 ft	10/24/2006	2.01	mg/L
TRN1-35	35 ft	10/24/2006	1.54	mg/L
TRN1-0	0 ft	10/31/2006	2.54	mg/L
TRN1-5	5 ft	10/31/2006	2.60	mg/L
TRN1-10	10 ft	10/31/2006	2.27	mg/L
TRN1-15	15 ft	10/31/2006	1.83	mg/L
TRN1-25	25 ft	10/31/2006	1.91	mg/L
TRN1-35	35 ft	10/31/2006	1.67	mg/L
TRN1-0	0 ft	11/7/2006	5.16	mg/L
TRN1-5	5 ft	11/7/2006	2.45	mg/L
TRN1-10	10 ft	11/7/2006	2.17	mg/L
TRN1-15	15 ft	11/7/2006	1.61	mg/L
TRN1-25	25 ft	11/7/2006	1.95	mg/L
TRN1-35	35 ft	11/7/2006	2.97	mg/L
TRN1-0	0 ft	11/14/2006	5.63	mg/L
TRN1-5	5 ft	11/14/2006	2.74	mg/L
TRN1-10	10 ft	11/14/2006	2.28	mg/L
TRN1-15	15 ft	11/14/2006	1.48	mg/L
TRN1-25	25 ft	11/14/2006	1.86	mg/L
TRN1-35	35 ft	11/14/2006	3.70	mg/L
TRN1-0	0 ft	11/21/2006	5.97	mg/L
TRN1-5	5 ft	11/21/2006	2.72	mg/L
TRN1-10	10 ft	11/21/2006	2.22	mg/L
TRN1-15	15 ft	11/21/2006	1.40	mg/L
TRN1-25	25 ft	11/21/2006	1.70	mg/L
TRN1-35	35 ft	11/21/2006	2.04	mg/L



**Table 2-15  
Basin and Lysimeter Water Monitoring Results for Turner 1 Basin: TOC**

Station ID	Depth	Sample Date	Result	Units
TRN1-0	0 ft	11/28/2006	8.02	mg/L
TRN1-5	5 ft	11/28/2006	2.92	mg/L
TRN1-10	10 ft	11/28/2006	2.20	mg/L
TRN1-15	15 ft	11/28/2006	1.37	mg/L
TRN1-25	25 ft	11/28/2006	1.65	mg/L
TRN1-35	35 ft	11/28/2006	2.20	mg/L
TRN1-0	0 ft	12/5/2006	9.05	mg/L
TRN1-5	5 ft	12/5/2006	3.61	mg/L
TRN1-10	10 ft	12/5/2006	2.51	mg/L
TRN1-15	15 ft	12/5/2006	1.37	mg/L
TRN1-25	25 ft	12/5/2006	1.76	mg/L
TRN1-35	35 ft	12/5/2006	1.65	mg/L
TRN1-0	0 ft	12/12/2006	6.83	mg/L
TRN1-5	5 ft	12/12/2006	3.45	mg/L
TRN1-10	10 ft	12/12/2006	2.69	mg/L
TRN1-15	15 ft	12/12/2006	3.58	mg/L
TRN1-25	25 ft	12/12/2006	1.91	mg/L
TRN1-35	35 ft	12/12/2006	1.49	mg/L
TRN1-0	0 ft	12/19/2006	<0.1	mg/L
TRN1-5	5 ft	12/19/2006	3.40	mg/L
TRN1-10	10 ft	12/19/2006	2.53	mg/L
TRN1-15	15 ft	12/19/2006	1.29	mg/L
TRN1-25	25 ft	12/19/2006	1.56	mg/L
TRN1-35	35 ft	12/19/2006	2.10	mg/L
TRN1-0	0 ft	12/28/2006	6.05	mg/L
TRN1-5	5 ft	12/28/2006	3.52	mg/L
TRN1-10	10 ft	12/28/2006	2.54	mg/L
TRN1-15	15 ft	12/28/2006	1.19	mg/L
TRN1-25	25 ft	12/28/2006	1.45	mg/L
TRN1-35	35 ft	12/28/2006	1.32	mg/L

Notes:

ft: feet below the bottom of the basin  
mg/L: milligrams per liter  
TOC: Total Organic Carbon  
IV: Insufficient volume for analysis



**Table 2-16**  
**Basin and Lysimeter Water Monitoring Results for Turner 1 Basin:**  
**Ammonia-N, Nitrite-N, Nitrate-N, TKN, and TN (mg/L)**

Station ID	Depth	Sample Date	NH3-N	NO2-N	NO3-N	TKN	TN
TRN1-0	0 ft	10/3/2006	<0.1	<0.01	0.1	1.7	1.8
TRN1-5	5 ft	10/3/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN1-10	10 ft	10/3/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-15	15 ft	10/3/2006	<0.1	IV	IV	<0.5	IDC
TRN1-25	25 ft	10/3/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-35	35 ft	10/3/2006	IV	IV	IV	IV	IDC
TRN1-0	0 ft	10/10/2006	<0.1	<0.01	<0.1	1.6	1.6
TRN1-5	5 ft	10/10/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN1-10	10 ft	10/10/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-15	15 ft	10/10/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-25	25 ft	10/10/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-35	35 ft	10/10/2006	IV	IV	IV	IV	IDC
TRN1-0	0 ft	10/17/2006	<0.1	<0.01	<0.1	2.0	2.0
TRN1-5	5 ft	10/17/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN1-10	10 ft	10/17/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-15	15 ft	10/17/2006	<0.1	IV	IV	<0.5	IDC
TRN1-25	25 ft	10/17/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-35	35 ft	10/17/2006	IV	IV	IV	IV	IDC
TRN1-0	0 ft	10/24/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-5	5 ft	10/24/2006	<0.1	<0.01	0.2	1.9	2.1
TRN1-10	10 ft	10/24/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-15	15 ft	10/24/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-25	25 ft	10/24/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-35	35 ft	10/24/2006	IV	IV	IV	IV	IDC
TRN1-0	0 ft	10/31/2006	<0.1	0.08	0.7	4.9	5.7
TRN1-5	5 ft	10/31/2006	<0.1	0.07	0.2	0.7	1.0
TRN1-10	10 ft	10/31/2006	<0.1	0.07	<0.1	0.9	1.0
TRN1-15	15 ft	10/31/2006	<0.1	0.06	<0.1	<0.5	0.1
TRN1-25	25 ft	10/31/2006	<0.1	0.06	<0.1	0.6	0.7
TRN1-35	35 ft	10/31/2006	<0.1	IV	IV	0.5	IDC
TRN1-0	0 ft	11/7/2006	0.2	0.02	0.8	1.8	2.6
TRN1-5	5 ft	11/7/2006	<0.1	<0.01	0.2	0.8	1.0
TRN1-10	10 ft	11/7/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-15	15 ft	11/7/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-25	25 ft	11/7/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-35	35 ft	11/7/2006	0.1	IV	IV	0.9	IDC
TRN1-0	0 ft	11/14/2006	0.2	0.45	0.3	2.2	3.0
TRN1-5	5 ft	11/14/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN1-10	10 ft	11/14/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-15	15 ft	11/14/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-25	25 ft	11/14/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-35	35 ft	11/14/2006	IV	IV	IV	IV	IDC
TRN1-0	0 ft	11/21/2006	<0.1	IV	IV	2.5	IDC
TRN1-5	5 ft	11/21/2006	<0.1	IV	IV	<0.5	IDC
TRN1-10	10 ft	11/21/2006	<0.1	IV	IV	<0.5	IDC
TRN1-15	15 ft	11/21/2006	<0.1	IV	IV	<0.5	IDC
TRN1-25	25 ft	11/21/2006	<0.1	IV	IV	<0.5	IDC
TRN1-35	35 ft	11/21/2006	<0.1	IV	IV	<0.5	IDC
TRN1-0	0 ft	11/28/2006	<0.1	IV	IV	1.9	IDC
TRN1-5	5 ft	11/28/2006	<0.1	IV	IV	<0.5	IDC
TRN1-10	10 ft	11/28/2006	<0.1	IV	IV	<0.5	IDC
TRN1-15	15 ft	11/28/2006	<0.1	IV	IV	<0.5	IDC
TRN1-25	25 ft	11/28/2006	<0.1	IV	IV	<0.5	IDC
TRN1-35	35 ft	11/28/2006	IV	IV	IV	IV	IDC



**Table 2-16**  
**Basin and Lysimeter Water Monitoring Results for Turner 1 Basin:**  
**Ammonia-N, Nitrite-N, Nitrate-N, TKN, and TN (mg/L)**

Station ID	Depth	Sample Date	NH3-N	NO2-N	NO3-N	TKN	TN
TRN1-0	0 ft	12/5/2006	<0.1	0.09	0.2	1.9	2.2
TRN1-5	5 ft	12/5/2006	<0.1	<0.01	0.3	<0.5	0.3
TRN1-10	10 ft	12/5/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-15	15 ft	12/5/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-25	25 ft	12/5/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN1-35	35 ft	12/5/2006	IV	IV	IV	IV	IDC
TRN1-0	0 ft	12/12/2006	<0.1	0.02	3.3	1.7	5.0
TRN1-5	5 ft	12/12/2006	0.1	<0.01	0.3	<0.5	0.3
TRN1-10	10 ft	12/12/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN1-15	15 ft	12/12/2006	<0.1	IV	0.2	IV	IDC
TRN1-25	25 ft	12/12/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN1-35	35 ft	12/12/2006	IV	IV	IV	IV	IDC
TRN1-0	0 ft	12/19/2006	<0.1	0.03	2.1	2.0	4.1
TRN1-5	5 ft	12/19/2006	<0.1	<0.01	0.4	<0.5	0.4
TRN1-10	10 ft	12/19/2006	<0.1	<0.01	0.1	<0.5	0.1
TRN1-15	15 ft	12/19/2006	<0.1	IV	IV	<0.5	IDC
TRN1-25	25 ft	12/19/2006	<0.1	<0.01	0.1	<0.5	0.1
TRN1-35	35 ft	12/19/2006	<0.1	IV	IV	<0.5	IDC
TRN1-0	0 ft	12/28/2006	0.1	<0.01	3.6	1.4	5.0
TRN1-5	5 ft	12/28/2006	<0.1	<0.01	1.0	<0.5	1.0
TRN1-10	10 ft	12/28/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN1-15	15 ft	12/28/2006	<0.1	<0.01	<0.1	<0.5	0.0
TRN1-25	25 ft	12/28/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN1-35	35 ft	12/28/2006	IV	IV	IV	IV	IDC

Notes:

- ft: feet below the bottom of the basin
- mg/L: milligrams per liter
- TKN: Total Kjeldahl Nitrogen
- TN: Total Nitrogen
- DNR: Laboratory did not report data prior publishing this report
- IDC: Insufficient data to calculate
- IV: Insufficient Volume for analysis



**Table 2-17  
Basin and Lysimeter Water Monitoring Results for Turner 4 Basin: TOC**

Station ID	Depth	Sample Date	Result	Units
TRN4-0	0 ft	10/3/2006	5.00	mg/L
TRN4-5	5 ft	10/3/2006	3.70	mg/L
TRN4-10	10 ft	10/3/2006	2.32	mg/L
TRN4-15	15 ft	10/3/2006	4.17	mg/L
TRN4-25	25 ft	10/3/2006	1.60	mg/L
TRN4-35	35 ft	10/3/2006	1.65	mg/L
TRN4-0	0 ft	10/10/2006	5.28	mg/L
TRN4-5	5 ft	10/10/2006	3.31	mg/L
TRN4-10	10 ft	10/10/2006	2.40	mg/L
TRN4-15	15 ft	10/10/2006	2.44	mg/L
TRN4-25	25 ft	10/10/2006	1.68	mg/L
TRN4-35	35 ft	10/10/2006	1.60	mg/L
TRN4-0	0 ft	10/17/2006	5.15	mg/L
TRN4-5	5 ft	10/17/2006	3.11	mg/L
TRN4-10	10 ft	10/17/2006	2.26	mg/L
TRN4-15	15 ft	10/17/2006	2.38	mg/L
TRN4-25	25 ft	10/17/2006	1.69	mg/L
TRN4-35	35 ft	10/17/2006	1.59	mg/L
TRN4-0	0 ft	10/24/2006	4.83	mg/L
TRN4-5	5 ft	10/24/2006	2.89	mg/L
TRN4-10	10 ft	10/24/2006	2.18	mg/L
TRN4-15	15 ft	10/24/2006	2.17	mg/L
TRN4-25	25 ft	10/24/2006	1.55	mg/L
TRN4-35	35 ft	10/24/2006	1.49	mg/L
TRN4-0	0 ft	10/31/2006	4.18	mg/L
TRN4-5	5 ft	10/31/2006	2.93	mg/L
TRN4-10	10 ft	10/31/2006	2.20	mg/L
TRN4-15	15 ft	10/31/2006	2.18	mg/L
TRN4-25	25 ft	10/31/2006	1.56	mg/L
TRN4-35	35 ft	10/31/2006	1.49	mg/L
TRN4-0	0 ft	11/7/2006	4.40	mg/L
TRN4-5	5 ft	11/7/2006	2.87	mg/L
TRN4-10	10 ft	11/7/2006	2.14	mg/L
TRN4-15	15 ft	11/7/2006	2.21	mg/L
TRN4-25	25 ft	11/7/2006	1.55	mg/L
TRN4-35	35 ft	11/7/2006	1.49	mg/L
TRN4-0	0 ft	11/14/2006	4.69	mg/L
TRN4-5	5 ft	11/14/2006	2.62	mg/L
TRN4-10	10 ft	11/14/2006	2.07	mg/L
TRN4-15	15 ft	11/14/2006	2.08	mg/L
TRN4-25	25 ft	11/14/2006	1.47	mg/L
TRN4-35	35 ft	11/14/2006	1.41	mg/L



**Table 2-17  
Basin and Lysimeter Water Monitoring Results for Turner 4 Basin: TOC**

Station ID	Depth	Sample Date	Result	Units
TRN4-0	0 ft	11/21/2006	3.01	mg/L
TRN4-5	5 ft	11/21/2006	2.68	mg/L
TRN4-10	10 ft	11/21/2006	2.11	mg/L
TRN4-15	15 ft	11/21/2006	2.03	mg/L
TRN4-25	25 ft	11/21/2006	1.67	mg/L
TRN4-35	35 ft	11/21/2006	1.38	mg/L
TRN4-0	0 ft	11/28/2006	4.76	mg/L
TRN4-5	5 ft	11/28/2006	2.52	mg/L
TRN4-10	10 ft	11/28/2006	1.99	mg/L
TRN4-15	15 ft	11/28/2006	1.93	mg/L
TRN4-25	25 ft	11/28/2006	1.38	mg/L
TRN4-35	35 ft	11/28/2006	1.35	mg/L
TRN4-0	0 ft	12/5/2006	5.29	mg/L
TRN4-5	5 ft	12/5/2006	2.71	mg/L
TRN4-10	10 ft	12/5/2006	2.14	mg/L
TRN4-15	15 ft	12/5/2006	2.15	mg/L
TRN4-25	25 ft	12/5/2006	3.01	mg/L
TRN4-35	35 ft	12/5/2006	1.40	mg/L
TRN4-0	0 ft	12/12/2006	5.23	mg/L
TRN4-5	5 ft	12/12/2006	2.65	mg/L
TRN4-10	10 ft	12/12/2006	2.03	mg/L
TRN4-15	15 ft	12/12/2006	2.04	mg/L
TRN4-25	25 ft	12/12/2006	1.37	mg/L
TRN4-35	35 ft	12/12/2006	1.40	mg/L
TRN4-0	0 ft	12/19/2006	5.17	mg/L
TRN4-5	5 ft	12/19/2006	2.49	mg/L
TRN4-10	10 ft	12/19/2006	1.92	mg/L
TRN4-15	15 ft	12/19/2006	1.93	mg/L
TRN4-25	25 ft	12/19/2006	1.28	mg/L
TRN4-35	35 ft	12/19/2006	1.32	mg/L
TRN4-0	0 ft	12/28/2006	6.46	mg/L
TRN4-5	5 ft	12/28/2006	2.55	mg/L
TRN4-10	10 ft	12/28/2006	1.85	mg/L
TRN4-15	15 ft	12/28/2006	1.84	mg/L
TRN4-25	25 ft	12/28/2006	1.26	mg/L
TRN4-35	35 ft	12/28/2006	1.30	mg/L

Notes:

ft: feet below the bottom of the basin

mg/L: milligrams per liter

TOC: Total Organic Carbon



**Table 2-18**  
**Basin and Lysimeter Water Monitoring Results for Turner 4 Basin:**  
**Ammonia-N, Nitrite-N, Nitrate-N, TKN, and TN (mg/L)**

Station ID	Depth	Sample Date	NH3-N	NO2-N	NO3-N	TKN	TN
TRN4-0	0 ft	10/3/2006	<0.1	<0.01	<0.1	0.9	0.9
TRN4-5	5 ft	10/3/2006	<0.1	<0.01	<0.1	0.8	0.8
TRN4-10	10 ft	10/3/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	10/3/2006	IV	IV	IV	IV	IDC
TRN4-25	25 ft	10/3/2006	<0.1	IV	IV	0.7	IDC
TRN4-35	35 ft	10/3/2006	<0.1	IV	IV	<0.5	IDC
TRN4-0	0 ft	10/10/2006	<0.1	<0.01	<0.1	0.7	0.7
TRN4-5	5 ft	10/10/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-10	10 ft	10/10/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	10/10/2006	IV	IV	IV	IV	IDC
TRN4-25	25 ft	10/10/2006	<0.1	IV	IV	<0.5	IDC
TRN4-35	35 ft	10/10/2006	<0.1	<0.01	0.4	<0.5	0.4
TRN4-0	0 ft	10/17/2006	<0.1	<0.01	<0.1	0.6	0.6
TRN4-5	5 ft	10/17/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-10	10 ft	10/17/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	10/17/2006	IV	IV	IV	IV	IDC
TRN4-25	25 ft	10/17/2006	<0.1	IV	IV	<0.5	IDC
TRN4-35	35 ft	10/17/2006	<0.1	<0.01	0.4	<0.5	0.4
TRN4-0	0 ft	10/24/2006	<0.1	<0.01	<0.1	1.2	1.2
TRN4-5	5 ft	10/24/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-10	10 ft	10/24/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	10/24/2006	IV	IV	IV	IV	IDC
TRN4-25	25 ft	10/24/2006	<0.1	IV	IV	<0.5	IDC
TRN4-35	35 ft	10/24/2006	<0.1	<0.01	0.4	<0.5	0.4
TRN4-0	0 ft	10/31/2006	<0.1	0.05	<0.1	1.0	1.1
TRN4-5	5 ft	10/31/2006	<0.1	0.05	<0.1	<0.5	0.1
TRN4-10	10 ft	10/31/2006	<0.1	0.05	<0.1	<0.5	0.1
TRN4-15	15 ft	10/31/2006	<0.1	IV	IV	<0.5	IDC
TRN4-25	25 ft	10/31/2006	<0.1	IV	IV	<0.5	IDC
TRN4-35	35 ft	10/31/2006	<0.1	0.05	0.4	<0.5	0.5
TRN4-0	0 ft	11/7/2006	<0.1	<0.01	<0.1	0.9	0.9
TRN4-5	5 ft	11/7/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-10	10 ft	11/7/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	11/7/2006	<0.1	IV	IV	<0.5	IDC
TRN4-25	25 ft	11/7/2006	<0.1	IV	IV	<0.5	IDC
TRN4-35	35 ft	11/7/2006	<0.1	<0.01	0.4	<0.5	0.4
TRN4-0	0 ft	11/14/2006	<0.1	<0.01	<0.1	0.8	0.8
TRN4-5	5 ft	11/14/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-10	10 ft	11/14/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	11/14/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-25	25 ft	11/14/2006	<0.1	IV	IV	<0.5	IDC
TRN4-35	35 ft	11/14/2006	<0.1	<0.01	0.4	<0.5	0.4
TRN4-0	0 ft	11/21/2006	<0.1	0.25	0.2	2.5	3.0
TRN4-5	5 ft	11/21/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN4-10	10 ft	11/21/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	11/21/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-25	25 ft	11/21/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-35	35 ft	11/21/2006	<0.1	IV	IV	<0.5	IDC
TRN4-0	0 ft	11/28/2006	<0.1	0.14	0.3	1.9	2.3
TRN4-5	5 ft	11/28/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN4-10	10 ft	11/28/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	11/28/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-25	25 ft	11/28/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-35	35 ft	11/28/2006	<0.1	IV	IV	<0.5	IDC





**Table 2-18**  
**Basin and Lysimeter Water Monitoring Results for Turner 4 Basin:**  
**Ammonia-N, Nitrite-N, Nitrate-N, TKN, and TN (mg/L)**

Station ID	Depth	Sample Date	NH3-N	NO2-N	NO3-N	TKN	TN
TRN4-0	0 ft	12/5/2006	<0.1	<0.01	<0.1	1.1	1.1
TRN4-5	5 ft	12/5/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-10	10 ft	12/5/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-15	15 ft	12/5/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-25	25 ft	12/5/2006	<0.1	IV	IV	<0.5	IDC
TRN4-35	35 ft	12/5/2006	<0.1	<0.01	0.4	<0.5	0.4
TRN4-0	0 ft	12/12/2006	<0.1	0.02	3.3	1.7	5.0
TRN4-5	5 ft	12/12/2006	0.1	<0.01	0.3	<0.5	0.3
TRN4-10	10 ft	12/12/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN4-15	15 ft	12/12/2006	<0.1	IV	0.2	IV	IDC
TRN4-25	25 ft	12/12/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN4-35	35 ft	12/12/2006	IV	IV	IV	<0.5	IDC
TRN4-0	0 ft	12/19/2006	<0.1	0.03	2.1	2.0	4.1
TRN4-5	5 ft	12/19/2006	<0.1	<0.01	0.4	<0.5	0.4
TRN4-10	10 ft	12/19/2006	<0.1	<0.01	0.1	<0.5	0.1
TRN4-15	15 ft	12/19/2006	<0.1	IV	IV	<0.5	IDC
TRN4-25	25 ft	12/19/2006	<0.1	<0.01	0.1	<0.5	0.1
TRN4-35	35 ft	12/19/2006	<0.1	IV	IV	<0.5	IDC
TRN4-0	0 ft	12/28/2006	0.1	<0.01	3.6	1.4	5.0
TRN4-5	5 ft	12/28/2006	<0.1	<0.01	1	<0.5	1.0
TRN4-10	10 ft	12/28/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN4-15	15 ft	12/28/2006	<0.1	<0.01	<0.1	<0.5	<0.6
TRN4-25	25 ft	12/28/2006	<0.1	<0.01	0.2	<0.5	0.2
TRN4-35	35 ft	12/28/2006	0.3	IV	IV	<0.5	IDC

Notes:

- ft: feet below the bottom of the basin
- mg/L: milligrams per liter
- TKN: Total Kjeldahl Nitrogen
- TN: Total Nitrogen
- DNR: Laboratory did not report data prior publishing this report
- IDC: Insufficient data to calculate
- IV: Insufficient volume for analysis



Table 2-19  
Groundwater Monitoring Results

Monitoring Area	CBWM ID	Local Name	Sample Date	Quarter	Maximum Contaminant Level ▶										FOAMING AGENTS(MG/L)	IRON(MG/L)	MANGANESE(MG/L)	Methyl Tert-Butyl Ether (µg/L)	NITRATE-NITROGEN(MG/L)	NITRITE-NITROGEN(MG/L)	ODOR THRESHOLD @ 60 C(TON)	PH (Field)	SILVER(µg/L)	SODIUM(MG/L)	SPECIFIC CONDUCTANCE(MICROMHO)	SULFATE(MG/L)	THIOBENCARB(µg/L)	Kjeldahl Nitrogen, Total (mg/L)	TOTAL COLIFORM (MPN/100 ML)	TOTAL DISSOLVED SOLIDS(MG/L)	TOTAL HARDNESS (AS CaCO3)(MG/L)	TOTAL ORGANIC CARBON(MG/L)	TOTAL NITROGEN (MG/L)	TURBIDITY(NTU)	ZINC(µg/L)
					ALUMINUM(MG/L)	AMMONIA-NITROGEN(MG/L)	CHLORIDE(MG/L)	COLOR(UNITS)	COPPER(µg/L)	CORROSIVITY INDEX(SI)	DO(Field Measurement; MG/L)	2**	0.5*	0.3*																					
Banana and Hickory Basins	600660	Infield Well	08-Aug-05	3Q2005	1.06	<0.1	10	<3	<1.0	0.1	NC	<0.050	0.100	<0.002	<0.5	5.5	<0.01	1	7.35	<2	19	429	13	<0.2	0.1		284.4	174	<0.3	5.6	0.14	<2			
	600660	Infield Well	16-Dec-05	4Q2005	0.157	0.10	10	<3	5.0	0.2	NC		0.042	<0.002	<1.0	6.2	<0.01	1	7.70	<2	17	395	15	<0.2	<0.2		262	169	0.15	6.2	0.3	<2			
	600660	Infield Well	10-Feb-06	1Q2006	<0.07	<0.1	13	<3	1.0	0.4	NC	<0.050	<0.015	<0.002	<0.5	8.2	0.04	2	7.9	<2	18	435	20	<0.5	<0.2	<1.1	276	181	<0.1	8.2	0.4	3			
	600660	Infield Well	15-Jun-06	2Q2006	<0.025	<0.1	12	<3	1.6	0.4	2.43	<0.050		0.002	<0.5	8.0	<0.01	1	7.31	<0.25	17	420	15	<0.5	<0.5	<1.1	290	175	<0.1	8	0.4	<1			
	600660	Infield Well	10-Aug-06	3Q2006	<0.025	<0.1	11	<3	3.3	0.2	9.74	<0.050	<0.015	<0.001	<0.5	6.7	<0.01	1	7.65	<0.25	16	405	17	0.2	1.1	<1.1	280	164	0.11	7.8	0.14	1			
	600660	Infield Well	09-Nov-06	4Q2006	<0.025	<0.1	12	<3	2.6		13.2	<0.050	<0.015	<0.001	<0.5	8.8	<0.01	1	7.64	<0.25	18	435	18	<0.2	<0.5	2.2	274		<0.1		0.32	2			
	601002	BH-1/2	07-Jun-05	2Q2005	0.524	0.20	22	10	2.0	0.4	NA	<0.050	0.652	0.040	<0.5	12.5	0.02	3	7.90	<2	21	430	15	<0.5	<0.1	<1.1	292	164	0.75	12.5	8.37	14			
	601002	BH-1/2	19-Jul-05	3Q2005		0.10						5.17				14.0	0.03		7.61													14.2			
	601002	BH-1/2	03-Aug-05	3Q2005		0.10						5.15				14.0	<0.01		7.51													14.0			
	601002	BH-1/2	17-Aug-05	3Q2005		<0.1						5.00				14.1	<0.01		7.72												14.1				
	601002	BH-1/2	01-Sep-05	3Q2005		0.54						4.52				13.7	<0.01		7.37												13.7				
	601002	BH-1/2	15-Sep-05	3Q2005		<0.1						4.59				13.0	<0.2		7.20												13.1				
	601002	BH-1/2	29-Sep-05	3Q2005		<0.1						4.31				13.2	<0.01						630							0.69	13.3				
	601002	BH-1/2	12-Oct-05	4Q2005		0.10						5.89				13.8	<0.01						614							0.3	14.1				
	601002	BH-1/2	27-Oct-05	4Q2005								5.62											600							<0.3	0.0				
	601002	BH-1/2	08-Nov-05	4Q2005		0.10	62	<3				6.07	<0.050			13.3	<0.01	1	7.70			22	560	19	<0.2			450	<0.6	13.3	1.65				
	601002	BH-1/2	23-Nov-05	4Q2005		0.10						5.61				13.4	<0.01						587			<0.2					13.4				
	601002	BH-1/2	07-Dec-05	4Q2005								6.90				13.7	<0.01								<0.2						13.7				
	601002	BH-1/2	27-Dec-05	4Q2005		0.10						6.43				12.7	<0.01		7.45				1170								13.0				
	601002	BH-1/2	04-Jan-06	1Q2006		0.10						6.44				11.9	<0.01														12.3				
	601002	BH-1/2	18-Jan-06	1Q2006		<0.1						6.14				8.7	<0.01								<0.2						8.7				
	601002	BH-1/2	02-Feb-06	1Q2006		0.10						NA				9.4	<0.01								<0.2						9.4				
	601002	BH-1/2	15-Feb-06	1Q2006	<0.07	<0.1	38	<3	<1.0	0.2	NA	<0.050	<0.015	<0.002	<0.5	12.2	<0.01	1	7.75	<2	20	475	26	<0.5	<0.2	<1.1	314	185	0.21	12.2	0.2	4			
	601002	BH-1/2	02-Mar-06	1Q2006		<0.1						5.40				9.6	<0.01		7.37						<0.2					<1	9.6				
	601002	BH-1/2	15-Mar-06	1Q2006		<0.1						NA				10.9	<0.01		7.52					<0.2						0.19	10.9				
	601002	BH-1/2	29-Mar-06	1Q2006		<0.1						4.43				7.9	<0.01		7.54					<0.2						0.41	7.9				
	601002	BH-1/2	13-Apr-06	2Q2006		<0.1	15			0.6		2.01		<0.001		7.2	<0.01		7.80	0.29	18		22	<0.2			274	161	0.42	7.2		7			
	601002	BH-1/2	27-Apr-06	2Q2006		<0.1	12			<0.5		NC		<0.001		6.4	<0.01		7.90	<0.25	18		22	<0.2			232	160	0.27	6.4		<1			
	601002	BH-1/2	11-May-06	2Q2006		<0.1	11					3.49				6.2	<0.01		7.65		18		21		0.3		248	150	0.23	6.5					
	601002	BH-1/2	24-May-06	2Q2006		<0.1	13			1.2		NC		<0.001		6.2	<0.01		7.80	<0.25	17		21	<0.5			246	154	0.37	6.2		3			
	601002	BH-1/2	09-Jun-06	2Q2006	<0.025	0.20	15	<3	<0.5	0.2	2.96	<0.050	<0.015	<0.001	<0.5	6.6	<0.01	1	7.80	<0.25	17	395	21	<0.5	<1.1	272	153	0.24	6.8	0.18	4				
	601002	BH-1/2	22-Jun-06	2Q2006	<0.025	<0.1	16			<0.5		3.86		<0.001		6.8	<0.01		7.75	<0.25		21		<0.5			282		0.45	6.8		5			
	601002	BH-1/2	05-Jul-06	3Q2006	<0.025	<0.1	20			0.6				<0.001		7.3	<0.01		7.95	<0.25		26	<0.5	<0.5				159	0.31		1				
	601002	BH-1/2	14-Jul-06	3Q2006	<0.025	<0.1	20			<0.5		3.61		<0.001		7.2	<0.01		7.8	<0.25		24		1.7				164	0.19		<1				
	601002	BH-1/2	27-Jul-06	3Q2006	<0.025	<0.1	15			<0.5		5.67		<0.001		6.2	<0.01		7.8	<0.25	17		22		0.9			163	0.25		<1				
	601002	BH-1/2	10-Aug-06	3Q2006	<0.025	<0.1	14	<3	<0.5	0.3	6.16	<0.050	<0.015	<0.001	<0.5	6.2	<0.01	1	7.8	<0.25	17	400	24	<0.2	<0.5	<1.1	272	161	0.14	6.2	0.12	<1			
	601002	BH-1/2	24-Aug-06	3Q2006	<0.025	<0.1	14			<0.5		6.66		<0.001		6.0	<0.01		7.9	<0.25	17		23		0.5			274	164	0.13		3			
	601002	BH-1/2	07-Sep-06	3Q2006		<0.1	11					7.47				5.3	<0.01		6.36				17		0.5			254	161	0.1					
	601002	BH-1/2	21-Sep-06	3Q2006		<0.1	12					6.50				5.4	<0.01		6.69				25		<0.5			256		0.13					
	601002	BH-1/2	05-Oct-06	4Q2006	<0.025	3.2	9			<0.5		7.51		<0.001		5	<0.01		7.66	<0.25	19	394	26	<0.5			246	166	0.18			<1			
601002	BH-1/2	19-Oct-06	4Q2006	<0.025	<0.1	11			0.8		8.08		<0.001		4.7	<0.01		7.65	<0.25	19	419	27	<0.5			254	159	0.1		<1					
601002	BH-1/2	02-Nov-06	4Q2006	<0.025	<0.1	9	<3	0.8	0.2	8.06	0.28	<0.015	<0.001	<0.5	4.9	<0.01	1	7.67	<0.25	18	370	27		0.6	<1.1	260	159	0.19		0.13	4				
601002	BH-1/2	16-Nov-06	4Q2006	<0.025	<0.1	8			<0.5		12.8			2	5.1	<0.01		7.6	<0.25	18	370	27	<0.5			252	156	0.14			4				
601002	BH-1/2	30-Nov-06	4Q2006	<0.025	<0.1	8			<0.5		12.5		<0.001		5	<0.01		7.65	<0.25	18	365	28	<0.5			246	157	0.16			2				
601002	BH-1/2	14-Dec-06	4Q2006		0.1	19					11.7				1	<0.01		7.79			18	375	20	<0.5			236		0.15						
601002	BH-1/2	27-Dec-06	4Q2006		<0.1	8									5	<0.01						370	28	<0.5			254		0.14						

Table 2-19  
Groundwater Monitoring Results

Monitoring Area	CBWM ID	Local Name	Sample Date	Quarter	ALUMINUM(MG/L)	AMMONIA-NITROGEN(MG/L)	CHLORIDE(MG/L)	COLOR(UNITS)	COPPER(µg/L)	CORROSIVITY INDEX(SI)	DO(Field Measurement; MG/L)	FOAMING AGENTS(MG/L)	IRON(MG/L)	MANGANESE(MG/L)	Methyl Tert-Butyl Ether (µg/L)	NITRATE-NITROGEN(MG/L)	NITRITE-NITROGEN(MG/L)	ODOR THRESHOLD @ 60 C(TON)	PH (Field)	SILVER(µg/L)	SODIUM(MG/L)	SPECIFIC CONDUCTANCE(MICROMHO)	SULFATE(MG/L)	THIOBENCARB(µg/L)	Kjeldahl Nitrogen, Total (mg/L)	TOTAL COLIFORM (MPN/100 ML)	TOTAL DISSOLVED SOLIDS(MG/L)	TOTAL HARDNESS (AS CaCO3)(MG/L)	TOTAL ORGANIC CARBON(MG/L)	TOTAL NITROGEN (MG/L)	TURBIDITY(NTU)	ZINC(µg/L)
	Maximum Contaminant Level ▶				0.2		250*	15*	1000	NC*	2**	0.5*	0.3*	0.05	5*	10	1	3*		0.1*		900*	250*	1*			500*				5*	5*
Banana and Hickory Basins	3600371	SCE East Well	05-Aug-05	3Q2005	1.03	0.10	13	<3	<1.0	NC	<0.050	0.098	<0.002		6.4	<0.01	1	7.70	<2	19	368	15		0.2		241.3	150	<0.3	6.6	0.1	2	
	3600371	SCE East Well	09-Nov-05	4Q2005	0.10	0.10	5	<3	<1.0	NC	<0.050				5.1	<0.01	1	7.55		17	335	15				232		<0.3	5.1	0.92		
	3600371	SCE East Well	16-Dec-05	4Q2005						NC			<1.0										<0.2									
	3600371	SCE East Well	10-Feb-06	1Q2006	<0.07	<0.1	18	<3	<1.0	-0.1	NC	<0.050	<0.015	<0.002	<0.5	8.5	<0.01	2	7.6	<2	16	340	20	<0.5	<0.2	<1.1	238	144	0.1	8.5	0.9	4
	3600371	SCE East Well	15-Jun-06	2Q2006	<0.025	<0.1	11	<3	4.5	0.0	2.42	<0.050	<0.005	<0.001	<0.5	4.8	<0.01	1	7.7	<0.25	17	335	15	<0.5	<0.5	<1.1	242	129	0.17	4.8	0.15	1
	3600371	SCE East Well	10-Aug-06	3Q2006	<0.025	<0.1	11	<3	3.8	-0.1	8.04	<0.050	<0.015	<0.001	<0.5	4.7	<0.01	1	7.6	<0.25	16	330	16	<0.2	0.9	<1.1	238	124	<0.1	5.6	0.18	3
	3600371	SCE East Well	09-Nov-06	4Q2006	<0.025	<0.1	13	<3	2.6		12.4	<0.050	0.02	0.001	<0.5	7.1	<0.01	1	7.47	<0.25	16	350	19	<0.2	<0.5	<1.1	226		<0.1		0.48	3
	3600573	F37A	05-Aug-05	3Q2005	1.10	0.20	14	<3	<1.0	NC	<0.050	0.127	<0.002	<0.5	8.8	<0.01	2	7.95	2	18	458	13	<0.2	0.2		298	197	<0.3	9.0	0.3	5	
	3600573	F37A	16-Dec-05	4Q2005	0.193	0.10	15	<3	9.0	0.5	NC	<0.050	0.174	0.004	<0.5	10.7	<0.01	2	7.85	2	17	430	13	<0.2	<0.2		292	188	0.13	10.7	0.5	5
	3600573	F37A	16-Feb-06	1Q2006	<0.07	<0.1	18	<3	4.0	0.4	NC	<0.050	0.097	0.004	<0.5	10.1	<0.01	1	7.85	<2	16	450	16	<0.5	0.4	<1.1	286	183	0.32	10.5	0.54	8
	3600573	F37A	20-Jun-06	2Q2006	0.036	<0.1	14		2.0	0.4	2.8		0.416	0.009	<0.5	9.9	<0.01	1	7.80	<0.25	16	445	13		2.6	<1.1	288	185	<0.1	12.5	0.3	4
	3600573	F37A	15-Aug-06	3Q2006	0.047	<0.1	14	<3	3.1	0.4	8.02	<0.050	0.049	0.004	<0.5	9.7	<0.01	1	7.8	<0.25	16	445	13	<0.2	0.7	<1.1	298	182	<0.1	10.4	0.48	4
	3600573	F37A	09-Nov-06	4Q2006	0.042	<0.1	14	<3	2.5		13.1	<0.050	0.065	0.006	<0.5	9.9	<0.01	1	7.77	<0.25	17	450	14	<0.2	<0.5	<1.1	284		<0.1		0.67	3
	3601364	Cal Speedway 1	08-Aug-05	3Q2005	1.11	<0.1	15	3	3.0		NC	<0.050	0.334	0.005		8.0	<0.01	2	7.90	<2	19	453	17	<0.2	<0.1		301.7	177	<0.3	8.0	1.21	26
	3601365	Cal Speedway 2	25-Aug-06	3Q2006	<0.025	<0.1	8	3	0.7	-0.2	8.68	<0.050	0.024	0.001	<0.5	3.6	<0.01	1	7.3	<0.25	16	365	13	<0.2	<0.5	<1.1	260	150	<0.1	4.0	0.38	8
	3601365	Cal Speedway 2	21-Nov-06	4Q2006	<0.025	<0.1	17	<3	0.9		12.6	<0.050		<0.001	<0.5			1	7.49	<0.25	19	425	26	<0.2	<0.5		236		0.1		0.23	8
	3602267	Ontario 20	05-Aug-05	3Q2005	1.05	<0.1	6	<3	<1.0		NC	<0.050	0.107	<0.002	<0.5	1.8	<0.01	1	7.90	<2	13	300	6	<0.2	0.2	ND <sup>1</sup>	212	140	<0.3	2.0	0.3	<2
	3602267	Ontario 20	08-Nov-05	4Q2005							NC	<0.050						1						<0.2		ND <sup>1</sup>			<0.3			
	3602267	Ontario 20	13-Feb-06	1Q2006	<0.07	0.10	10	<3	7.0	0.3	NC	<0.050	0.102	0.003	<0.5	2.7	<0.01	2	7.80	<2	14	355	9	<0.5	<0.2	ND <sup>1</sup>	214	157	<0.1	2.7	1	6
	3602267	Ontario 20	15-Jun-06	2Q2006	<0.025	<0.1	5	<3	3.1	0.3	2.52	<0.050	0.008	<0.001	<0.5	1.7	<0.01	1	7.51	0.35	12	295	4	<0.5	<0.5	<1.1	208	124	<0.1	1.7	0.1	<1
3602267	Ontario 20	10-Aug-06	3Q2006	<0.025	<0.1	5	<3	2.3		10.2	<0.050	<0.015	<0.001	<0.5	1.7	<0.01	2	7.9	<0.25	12	325	5	<0.2	1.4	<1.1	228	137	0.12		0.22	1	
3602267	Ontario 20	09-Nov-06	4Q2006	<0.025	<0.1	5	<3	2.2		13.6	<0.050	<0.015	<0.001	<0.5	1.3	<0.01	1	7.86	<0.25	13	325	5	<0.2	<0.5	<1.1	208		<0.1		0.19	2	
Turner Basin	600998	T-1/2	03-Jul-06	3Q2006	<0.025	<0.1	46		<0.5				<0.001		0.6	<0.01		7.5	<0.25		20	<0.5	1.2				162	0.73			<1	
	600998	T-1/2	14-Jul-06	3Q2006	<0.025	<0.1	49		<0.5		3.05		<0.001		0.6	0.03		7.65	<0.25		22		1.4				164	0.47			<1	
	600998	T-1/2	27-Jul-06	3Q2006	<0.025	<0.1	47		<0.5		6.58		<0.001		0.6	0.03		7.65	<0.25	20		21	0.7			163	0.5			<1		
	600998	T-1/2	10-Aug-06	3Q2006	<0.025	<0.1	47	3	<0.5	0.0	6.74	<0.050	<0.015	<0.001	<0.5	0.5	<0.01	1	7.55	<0.25	19	430	23	<0.2	<0.5	<1.1	274	157	0.42	0.5	0.19	2
	600998	T-1/2	24-Aug-06	3Q2006		0.10	45				6.79			<0.001		0.5	<0.01		7.89		20		22	0.6			298	163	0.48			
	600998	T-1/2	07-Sep-06	3Q2006	<0.025	<0.1	39		<0.5		7.73			<0.001		0.4	<0.01		7.29	<0.25	20		23				280		0.42			<1
	600998	T-1/2	21-Sep-06	3Q2006		<0.1	37				7.34				0.5	<0.01		7.43		20		23					278		0.44			
	600998	T-1/2	05-Oct-06	4Q2006	<0.025	<0.1	27		<0.5		7.46			<0.001		0.5	<0.01		7.45	<0.25	22	410	21		<0.5		256	167	0.43			<1
	600998	T-1/2	19-Oct-06	4Q2006	<0.025	<0.1	28		<0.5		7.35			<0.001		0.6	<0.01		7.43	<0.25	22	434	20		<0.5		254	166	0.44			<1
	600998	T-1/2	02-Nov-06	4Q2006	<0.025	<0.1	32		<0.5		7.16			<0.001		0.8	<0.01		7.42	<0.25	22	393	19		0.9		276	171	0.58			
	600998	T-1/2	16-Nov-06	4Q2006	<0.025	<0.1	40	<3	<0.5	0.1	11.2	<0.050	<0.015	<0.001	<0.5	0.9	<0.01	1	7.38	<0.25	22	410	18	<0.2	<0.5	<1.1	266	170	0.53		0.41	<1
	600998	T-1/2	30-Nov-06	4Q2006	<0.025	<0.1	54		<0.5		12			<0.001		1.0	<0.01		7.42	<0.25	23	440	17		2.3		274	177	0.61			2
	600998	T-1/2	14-Dec-06	4Q2006		0.1	66				6.51					1.1	<0.01		7.34		22	465	18		<0.5		727		0.67			
	600998	T-1/2	27-Dec-06	4Q2006		<0.1	75									1.0	<0.01				22	490	19		<0.5		312		0.72			

Table 2-19  
Groundwater Monitoring Results

Monitoring Area	CBWM ID	Local Name	Sample Date	Quarter	ALUMINUM(MG/L)	AMMONIA-NITROGEN(MG/L)	CHLORIDE(MG/L)	COLOR(UNITS)	COPPER(µg/L)	CORROSIVITY INDEX(SI)	DO(Field Measurement; MG/L)	FOAMING AGENTS(MG/L)	IRON(MG/L)	MANGANESE(MG/L)	Methyl Tert-Butyl Ether (µg/L)	NITRATE-NITROGEN(MG/L)	NITRITE-NITROGEN(MG/L)	ODOR THRESHOLD @ 60 C(TON)	PH (Field)	SILVER(µg/L)	SODIUM(MG/L)	SPECIFIC CONDUCTANCE(MICROMHO)	SULFATE(MG/L)	THIOBENCARB(µg/L)	Kjeldahl Nitrogen, Total (mg/L)	TOTAL COLIFORM (MPN/100 ML)	TOTAL DISSOLVED SOLIDS(MG/L)	TOTAL HARDNESS (AS CaCO3)(MG/L)	TOTAL ORGANIC CARBON(MG/L)	TOTAL NITROGEN (MG/L)	TURBIDITY(NTU)	ZINC(µg/L)
	Maximum Contaminant Level ▶				0.2	250*	15*	1000	NC*	2**	0.5*	0.3*	0.05	5*	10	1	3*			0.1*		900*	250*	1*	Kjeldahl Nitrogen, Total (mg/L)	500*					5*	5*
Turner Basin	600999	T-2/1	03-Jul-06	3Q2006	0.184	<0.1	22		1.1		3.01			0.004					7.65	0.41			22	<0.5	0.8			133	0.82			2
	600999	T-2/1	14-Jul-06	3Q2006	<0.025	<0.1	20		<0.5		3.87			<0.001	<0.1	0.7	<0.01		7.32	<0.25			22		1.9			125	0.65			<1
	600999	T-2/1	27-Jul-06	3Q2006	<0.025	<0.1	17		<0.5		7.7			<0.001		0.5	0.19		7.18	<0.25	16		18		0.8			115	0.75			<1
	600999	T-2/1	10-Aug-06	3Q2006	<0.025	<0.1	14	3	0.5	-0.1	6.8	DNR	<0.015	<0.001	<0.5	<0.01	1	7.7	<0.25	15	280	17	280	<0.2	<0.5	<1.1	182	111	0.55	0.5	0.2	<1
	600999	T-2/1	24-Aug-06	3Q2006		<0.1	14				6.04					0.4	<0.01		7.85		16		16		0.6		190	106	0.51			
	600999	T-2/1	07-Sep-06	3Q2006	<0.025	<0.1	14		<0.5		9.6			0.005		0.6	<0.01		7.7	<0.25	15		14		<0.5		164		0.45			<1
	600999	T-2/1	21-Sep-06	3Q2006		<0.1	13				8.75					0.5	<0.01		7.85				14		<0.5		172		0.48			
	600999	T-2/1	05-Oct-06	4Q2006	<0.025	<0.1	15		<0.5		7.51			<0.001		0.6	<0.01		7.53	<0.25	19	264	14		<0.5		170	97	0.57			<1
	600999	T-2/1	19-Oct-06	4Q2006	<0.025	<0.1	15		0.6		7.33			<0.001		1.5	<0.01		7.53	<0.25	19	281	15		<0.5		178	98	0.42			1
	600999	T-2/1	02-Nov-06	4Q2006	<0.025	<0.1	15		0.5		7.67			<0.001		0.6	<0.01		7.51	<0.25	18	240	14		1.2		184	98	0.5			1
	600999	T-2/1	16-Nov-06	4Q2006	<0.025	<0.1	16	< 3	<0.5	-0.2	11.8	<0.050	<0.015	<0.001	<0.5	0.5	<0.01	1	7.48	<0.25	19	255	14	<0.2	<0.5	<1.1	176	94	0.46		0.2	1
	600999	T-2/1	30-Nov-06	4Q2006	<0.025	<0.1	18		0.8		12.5			<0.001		0.4	<0.01		7.54	<0.25	20	260	14		<0.5		178	98	1.21			3
	600999	T-2/1	14-Dec-06	4Q2006		<0.1	21				5.51					0.3	<0.01		7.4	<0.25	19	265	13		<0.5		170		0.48			
	600999	T-2/1	27-Dec-06	4Q2006		<0.1	23									0.2	<0.01					270	13		<0.5		182		0.49			
	601000	T-2/2	03-Jul-06	3Q2006	<0.025	<0.1	26		0.5		3.46			<0.001		0.8	<0.01		7.65	<0.25			20	<0.5	1.0		133	0.75				<1
	601000	T-2/2	14-Jul-06	3Q2006	<0.025	<0.1	23		<0.5		3.51			<0.001		0.9	<0.01		7.39	<0.25			22		2.1		128	0.62				<1
	601000	T-2/2	27-Jul-06	3Q2006	<0.025	<0.1	17		<0.5		7.33			<0.001		0.7	0.19		7.19	<0.25	14		19		1.0		116	0.65				<1
	601000	T-2/2	10-Aug-06	3Q2006	<0.025	<0.1	13	<3	<0.5	-0.2	7.43	DNR	<0.015	<0.001	<0.5	0.6	<0.01	1	7.61	<0.25	13	275	17	<0.2	1.3	<1.1	184	102	0.68	1.9	0.3	<1
	601000	T-2/2	24-Aug-06	3Q2006		<0.1	13				6.47					0.6	<0.01		7.7		14		14		<0.5		184	107	0.56			
	601000	T-2/2	07-Sep-06	3Q2006	<0.025	<0.1	14		<0.5		7.92			<0.001		0.7	<0.01		7.65	<0.25	12		14		<0.5		160		0.42			2
	601000	T-2/2	21-Sep-06	3Q2006		<0.1	14				7.94					0.7	<0.01		7.75				14		<0.5		162		0.45			
	601000	T-2/2	05-Oct-06	4Q2006	<0.025	<0.1	20		<0.5		7.99			<0.001		0.9	<0.01		7.49	<0.25	14	272	18		<0.5		178	112	0.51			<1
	601000	T-2/2	19-Oct-06	4Q2006	<0.025	<0.1	20		<0.5		8.06			<0.001		0.7	<0.01		7.43	<0.25	14	296	16		<0.5		184	116	0.5			1
	601000	T-2/2	02-Nov-06	4Q2006	<0.025	<0.1	22		1.5		8.27			<0.001		0.7	<0.01		7.45	<0.25	13	278	15		<0.5		198	112	0.6			7
	601000	T-2/2	16-Nov-06	4Q2006	<0.025	<0.1	24	< 3	<0.5	-0.1	12.9	<0.050	<0.015	<0.001	<0.5	0.6	<0.01	1	7.45	<0.25	14	290	14	<0.2	<0.5	<1.1	186	121	0.43		0.13	<1
	601000	T-2/2	30-Nov-06	4Q2006	<0.025	<0.1	27		<0.5		12.5			<0.001		0.6	<0.01		7.47	<0.25	14	295	14		2.8		194	124	0.46			1
	601000	T-2/2	14-Dec-06	4Q2006		<0.1	156				5.66					<0.1	<0.01		7.34		14	300	120		<0.5		188		0.45			
	601000	T-2/2	27-Dec-06	4Q2006		<0.1	26									0.7	<0.01					295	14		<0.5		194		0.44			
	3600010	Ontario 25	10-Aug-06	3Q2006	<0.025	<0.1	8	<3	1.1		9.87	<0.050	<0.015	<0.001	<0.5	2.5	<0.01	1	7.9	<0.25	17	365	13	<0.2	0.6	<1.1	252	144	0.12	3.1	0.13	<1
	3600010	Ontario 25	09-Nov-06	4Q2006	<0.025	<0.1	12	<3	1.5		13.4	<0.050	<0.015	<0.001	<0.5	3.3	<0.01	2	7.74	<0.25	20	400	16	<0.2	<0.5	<1.1	258		0.1		0.19	<1
	600453	Ontario 29	25-Sep-06	3Q2006	<0.025	<0.1	8	<3	2.1	0.4	6.88	<0.050	<0.015	<0.001	<0.5	2.6	<0.01	1	7.82	<0.25	24	345	16	<0.2	DNR	<1.1	228	144	<0.1	DNR	0.19	1
	600453	Ontario 29	19-Dec-06	4Q2006		<0.1	15	3			9.94	<0.050			<0.5	6.8	<0.01	1	7.77			415	20	<0.2	<0.5	16.1	270		0.12		0.42	
600585	Ontario 38	25-Sep-06	3Q2006	<0.025	<0.1	4	<3	1.9	0.4	7.3	<0.050	<0.015	<0.001	<0.5	1.0	<0.01	1	7.89	<0.25	21	300	8	<0.2	DNR	<1.1	216	124	<0.1	DNR	0.15	<1	
600585	Ontario 38	19-Dec-06	4Q2006		<0.1	5	< 3			10.5	<0.050			<0.5	1.0	<0.01	1	7.56			325	9	<0.2	<0.5	<1.1	216		<0.1		0.25		

NOTES:  
 1 Collected by the City of Ontario  
 \* Maximum Contaminant Level  
 \*\* Not Fall Below 2 mg/L in Two Consecutive Samples  
 <0.01 Detected at or Above Indicated Detection Limit  
**Bold Federal Primary Maximum Contaminant Level**  
 CBWM Turn Basin Watermaster  
 NC Not Collected  
 ND Not Detected  
 DNR Reported by laboratory by the time of this report  
 NA Field data is not available

Table 3-1  
Volume of Diluent and Recycled Water Recharged

Date	Imported Water			Local Runoff / Storm Flow			Recycled Water		
	Hickory (AF)	Banana (AF)	Turner (AF)	Hickory <sup>(1)</sup> (AF)	Banana (AF)	Turner (AF)	Hickory (AF)	Banana (AF)	Turner (AF)
10/01/06	0.0	0.0	10.4	3.0	0.0	2.8	0.0	13.1	0.0
10/02/06	0.0	0.0	3.6	3.0	0.0	2.2	0.0	13.1	0.0
10/03/06	0.0	0.0	0.0	3.0	0.0	2.2	0.0	13.1	0.0
10/04/06	0.0	0.0	0.0	3.0	0.0	2.2	0.0	5.6	0.0
10/05/06	0.0	0.0	0.0	3.0	0.0	2.2	0.0	0.0	0.0
10/06/06	0.0	0.0	0.0	-11.0	11.0	2.2	0.0	0.0	0.0
10/07/06	0.0	0.0	0.0	1.0	0.0	2.2	0.0	0.0	0.0
10/08/06	0.0	0.0	0.0	1.0	0.0	2.2	0.0	0.0	0.0
10/09/06	0.0	0.0	0.0	1.0	0.0	2.2	0.0	0.0	0.0
10/10/06	4.7	2.5	8.5	1.0	0.0	2.2	0.0	0.0	0.0
10/11/06	4.9	11.9	12.0	1.0	0.0	2.2	0.0	0.0	0.0
10/12/06	1.4	5.0	6.6	1.0	0.0	1.1	0.0	0.0	0.0
10/13/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
10/14/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
10/15/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
10/16/06	3.5	6.0	0.0	1.0	0.0	1.3	0.0	0.0	0.0
10/17/06	0.0	14.3	9.7	1.0	0.0	1.3	11.9	0.0	0.0
10/18/06	0.0	11.5	13.5	1.0	0.0	1.3	13.1	0.0	0.0
10/19/06	0.0	9.0	13.1	1.0	0.0	1.3	14.5	0.0	0.0
10/20/06	0.0	3.0	10.8	1.0	0.0	1.3	8.3	0.0	0.0
10/21/06	0.0	0.0	9.3	1.0	0.0	1.3	3.8	0.0	0.0
10/22/06	0.0	0.0	9.5	1.0	0.0	1.3	3.8	0.0	0.0
10/23/06	0.0	0.0	8.9	1.0	0.0	1.3	2.4	0.0	0.0
10/24/06	0.0	0.0	9.0	1.0	0.0	1.3	3.6	0.0	0.0
10/25/06	0.0	0.0	7.3	1.0	0.0	1.3	4.9	1.0	0.0
10/26/06	0.0	0.0	7.3	1.0	0.0	1.3	6.1	3.6	0.0
10/27/06	0.0	0.0	8.2	1.0	0.0	1.3	14.3	0.0	0.0
10/28/06	0.0	0.0	9.0	1.0	0.0	1.3	15.7	0.0	0.0
10/29/06	0.0	0.0	9.8	1.0	0.0	1.3	16.1	0.0	0.0
10/30/06	0.0	0.0	10.9	1.0	0.0	1.3	11.9	0.0	0.0
10/31/06	0.0	0.0	5.4	1.0	0.0	1.3	13.5	0.0	0.0
11/01/06	0.0	0.0	0.0	1.0	0.0	2.8	6.5	6.5	0.0
11/02/06	0.0	0.0	0.0	1.0	0.0	2.8	7.2	0.0	0.0
11/03/06	0.0	0.0	0.0	1.0	0.0	2.8	0.0	0.0	0.0
11/04/06	0.0	0.0	0.0	1.0	0.0	2.0	6.7	0.0	0.0
11/05/06	0.0	0.0	0.0	1.0	0.0	2.0	9.9	0.0	0.0
11/06/06	7.1	0.0	0.0	1.0	0.0	2.0	4.4	0.0	0.0
11/07/06	8.6	7.6	0.0	1.0	0.0	1.4	0.7	0.7	0.0
11/08/06	8.2	6.7	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/09/06	2.8	8.7	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/10/06	-1.6	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/11/06	-1.6	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/12/06	-1.7	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/13/06	3.9	8.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/14/06	1.7	12.1	0.0	1.0	0.0	0.5	0.0	0.0	0.0
11/15/06	3.3	8.6	0.0	1.0	0.0	0.0	0.0	0.0	0.0
11/16/06	-1.7	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/17/06	-1.6	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/18/06	-1.4	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/19/06	-1.4	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/20/06	3.7	8.8	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/21/06	5.6	7.6	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/22/06	-1.7	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/23/06	-1.6	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0



**Table 3-1**  
**Volume of Diluent and Recycled Water Recharged**

Date	Imported Water			Local Runoff / Storm Flow			Recycled Water		
	Hickory (AF)	Banana (AF)	Turner (AF)	Hickory <sup>(1)</sup> (AF)	Banana (AF)	Turner (AF)	Hickory (AF)	Banana (AF)	Turner (AF)
11/24/06	-1.7	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/25/06	-1.6	12.1	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/26/06	-4.3	11.9	0.0	1.0	0.0	0.0	0.0	0.0	0.0
11/27/06	-4.4	4.4	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/28/06	1.1	3.5	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/29/06	2.7	8.7	0.0	1.0	0.0	1.4	0.0	0.0	0.0
11/30/06	5.9	5.0	0.0	1.0	0.0	1.4	0.0	0.0	0.0
12/01/06	4.5	7.9	0.0	1.0	0.0	1.4	0.0	0.0	0.0
12/02/06	2.7	11.9	0.0	1.0	0.0	1.4	0.0	0.0	0.0
12/03/06	6.8	5.5	0.0	1.0	0.0	1.4	0.0	0.0	0.0
12/04/06	2.0	8.4	0.0	1.0	0.0	2.9	0.0	0.0	0.0
12/05/06	-1.4	11.9	0.0	1.0	0.0	3.5	0.0	0.0	0.0
12/06/06	0.3	11.9	0.0	1.0	0.0	2.9	0.0	0.0	11.4
12/07/06	7.5	6.9	0.0	1.0	0.0	1.3	0.0	0.0	10.9
12/08/06	3.0	2.7	0.0	1.0	0.0	1.3	0.0	0.0	11.1
12/09/06	0.0	0.0	0.0	1.1	12.1	1.9	0.0	0.0	10.9
12/10/06	0.0	0.0	0.0	1.1	11.6	0.0	0.0	0.0	0.0
12/11/06	0.0	0.0	0.0	1.0	4.6	0.4	0.0	0.0	11.3
12/12/06	0.0	0.0	0.0	1.0	3.0	2.3	0.0	0.0	11.3
12/13/06	0.0	0.0	0.0	1.0	0.0	2.3	0.0	0.0	11.3
12/14/06	0.0	0.0	0.0	0.3	0.0	0.7	0.0	0.0	0.0
12/15/06	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
12/16/06	0.0	0.0	0.0	0.5	6.8	0.0	0.0	0.0	0.0
12/17/06	-1.7	6.4	0.0	0.5	6.8	0.0	0.0	0.0	0.0
12/18/06	5.4	11.9	0.0	1.0	0.0	0.0	0.0	0.0	0.0
12/19/06	2.0	11.9	0.0	1.0	0.0	0.0	0.0	1.4	0.0
12/20/06	-3.0	11.9	0.0	1.0	0.0	0.0	0.0	2.8	0.0
12/21/06	-0.9	9.9	0.0	1.0	0.0	1.3	0.0	9.7	1.5
12/22/06	0.0	9.9	0.0	1.4	0.1	2.1	0.0	9.7	9.9
12/23/06	0.0	9.9	0.0	1.0	0.0	2.1	0.0	9.3	11.9
12/24/06	0.0	9.9	0.0	1.0	0.0	2.1	0.0	9.3	11.6
12/25/06	0.0	6.6	0.0	1.0	0.0	2.1	0.0	7.3	10.9
12/26/06	0.0	0.0	0.0	1.0	0.0	2.2	0.0	0.0	9.0
12/27/06	0.0	0.0	0.0	1.2	0.3	0.0	0.0	0.0	0.0
12/28/06	0.0	0.0	0.0	1.0	0.0	2.1	0.0	0.0	6.1
12/29/06	1.3	4.5	0.0	1.0	0.0	2.1	0.0	0.0	10.0
12/30/06	3.0	8.4	0.0	1.0	0.0	2.1	0.0	0.0	9.9
12/31/06	7.9	3.0	0.0	1.0	0.0	2.0	0.0	0.0	9.9
<b>4Q06 Totals</b>	<b>82.1</b>	<b>469.3</b>	<b>182.6</b>	<b>88.1</b>	<b>56.2</b>	<b>134.7</b>	<b>179.0</b>	<b>106.2</b>	<b>169.0</b>

Notes:

(1) Negative values indicated more water pumped from the basin that was routed to the basin.



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

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**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 Groundwater Recharge Program  
Certification of Non-Pumping in the Buffer Zones of Banana, Hickory, and Turner Basins**

Dear Mr. Thibeault,

The Chino Basin Watermaster hereby certifies that, during the period of October 2006 through December 2006, there was no reported pumping for drinking water purposes in the buffer zones—zones that extend 500 feet and 6 months underground travel time—of the Banana, Hickory, and Turner Basins. In point of fact, there are no production wells in the buffer zones of these three basins.

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

Best regards,

Kenneth Manning  
Chief Executive Officer

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