APPENDIX F

PALMDALE WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT FOR 2004

PALMDALE WATER RECLAMATION PLANT

ANNUAL MONITORING REPORT

2004

RWQCB ORDER NO. 6-00-57, 6-00-57A01, & 6-00-57A02

MONITORING & REPORTING PROGRAM NO. 6-00-57-A01, 6-00-57-A02 & 6-00-57-A03

SANITATION DISTRICTS OF LOS ANGELES COUNTY

PALMDALE WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT

2004

RWQCB ORDER NO. 6-00-57, 6-00-57A01 & 6-00-57A02
MONITORING AND REPORTING PROGRAM
NO. 6-00-57-A01, 6-00-57-A02 & 6-00-57-A03

County Sanitation Districts
of Los Angeles County

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CHAPTER 1

PERMIT COMPLIANCE AND RECLAIMED WATER USE REPORT

CHAPTER 1

PERMIT COMPLIANCE AND RECLAIMED WATER USE REPORT

1.1 INTRODUCTION

This report contains the annual report for the Palmdale Water Reclamation Plant (WRP) for the year 2004.

1.2 PERMIT REQUIREMENTS

The Waste Discharge and Monitoring and Reporting Requirements for the Palmdale WRP are contained in the following documents:

1. Board Order No. 6-00-57 (Revised Waste Discharge Requirements), adopted June 14, 2000, Board Order No. 6-00-57-A01 (Amended Waste Discharge Requirements), adopted April 14, 2004, and Board Order No. 6-00-57-A02 (Amended Waste Discharge Requirements), adopted July 26, 2004, by the California Regional Water Quality Control Board - Lahontan Region (WQCB).

2. Revised Monitoring and Reporting Program No. 6-00-57-A01, adopted February 26, 2004, Amended Monitoring and Reporting Program No. 6-00-57-A02, adopted April 14, 2004, and Amended Monitoring and Reporting Program (MRP) No. 00-57-A03, adopted October 13, 2004 by the WQCB

3. Cleanup and Abatement Order No. R6V-2003-056 (CAO), issued on November 12, 2003.

4. Cease and Desist Order No. R6V-2004-0039 (CDO), issued on October 13, 2004.

1.3 WDR COMPLIANCE

Effluent BOD_5

On November 14, 2004 the soluble BOD_5 in the effluent exceeded the maximum daily limit of 45 mg/L with a value of 63 mg/L. The most probable cause of the BOD_5 exceedance was the presence of nitrifying bacteria in the samples. As a result of significant populations of nitrifying bacteria in the secondary effluent, higher BOD_5 values are measured due to the production of nitrogenous BOD_5 (from the oxidation of ammonia to nitrate). The 30-day average limit for BOD_5 for November was 25 mg/L, which is in compliance with the 30-day average limit for BOD_5 of 30 mg/L.

Agronomic Rates

Due to extremely heavy rainfall and the potential for reclaimed water runoff from the site (additional application of effluent to the land application and land application with a crop fields would have likely resulted in runoff leaving the site due to saturated soil conditions), the District was forced to apply effluent above agronomic rates on Pivots 1 and 2, in addition to the land application areas (with and without a crop) during the month of December. This resulted in non-compliance with Board Order No. 6-00-57-A01, which states that recycled water should be

applied at agronomic rates at the Palmdale effluent management site. This information was reported in the 4th Quarter Monitoring Report submitted on January 31, 2005, in compliance with the MRP. This information was not reported in the monthly monitoring report for December since the data was not available at the time of submittal.

1.4 MONITORING AND REPORTING

Recycled Water Treatment and Use Report

In accordance with Amended Monitoring and Reporting Program No. 00-57-A03, adopted in October 2004, a Recycled Water Treatment and Use Report for the Palmdale WRP is submitted on a monthly basis. A copy of this report is included in Appendix A.

Groundwater Monitoring

This report contains annual data for wells SW1, SW2, SW5, SW7, SW8, SW9, SW10, SW13, SWH2, MW2, MW4, MW15, MW16, MW18, MW20-29. Monitoring wells MW31, MW32, MW33, MW35, MW37, MW38, MW39, MW46, and MW51 were constructed between May and October 2004. Annual data was not obtained for these wells, due to scheduling issues associated with startup, but will be obtained in 2005. Quarterly data was obtained, and was presented in the quarterly reports, and is included herein as well.

Estimated groundwater flow direction at the sampled wells is shown in Figure 4-1.

2004 Title 22 MCL Exceedances

The following tables summarize groundwater quality data exceeding the primary or secondary Maximum Contaminant Levels (MCLs) of Title 22 of California Code of Regulations. Primary MCLs are based on human health, whereas secondary MCLs are based on aesthetic concerns.

Elevated Nitrate Levels at SW10, MW4, and MW20

Wells SW10, MW4, and MW20 had elevated concentrations of nitrate at various times through out the year, as shown in the table below:

	Nitrate (mg/L)		
Date	**SW 10**	**MW4**	**MW20**
March 4, 2004		10.7	13.5
March 11, 2004	13.3		
April 8, 2004	13.1		
June 24, 2004			11.6
September 7, 2004	12.9		
September 23, 2004		11.2	
December 1, 2004			14.2

These levels exceed the primary drinking water MCL of 10 mg/L.

Elevated Levels of Metals at SW7, SW10, MW2, MW15, MW16 and MW22

Wells SW7, SW10, MW2, MW15, MW16 and MW22 had elevated concentrations of iron or aluminum during 2004, which exceeded the secondary drinking water MCLs for these

constituents. The following table summarizes the levels of the constituents of concern at these wells.

	SW7	SW10	MW2	MW15	MW16	MW22	MCL (mg/l)
Iron (mg/l)	0.669	0.316	1.55	0.401	0.65	0.496	0.3
Aluminum (mg/l)			1.99				1

Lysimeter Data and Vadose Zone Monitoring Report

Lysimeters L1, L3, L4, L6, and L16 were sampled during 2004. On many occasions, complete analysis of lysimeter samples was not possible due to insufficient moisture, or no moisture, in the sample. The District attempted to sample the lysimeters several times during the year. An effort was made to obtain at least one result for each parameter included in the MRP.

The District submitted a draft Vadose Zone Monitoring Plan (VZMP) on March 31, 2004. The WQCB responded with comments in a letter dated June 24, 2004. The District addressed the WQCB's concerns in a letter dated July 22, 2004, and submitted an amended VZMP to the WQCB on August 20, 2004. A contract for installation of new lysimeters for the amended VZMP was awarded in late January 2005. In 2005, the District will install new lysimeters per the approved VZMP.

Monitoring and Reporting Deviations

Beginning April 1, 2004, Revised MRP No. 6-00-57-A01 became effective, which changed the sampling frequency for several constituents for the effluent and groundwater sampling. For example, the heavy metals sampling frequency was increased to quarterly from annually and several groundwater monitoring constituents were increased to quarterly from semiannually. Therefore, only the last three quarters of 2004 are reflective of the new requirements in Revised MRP No. 6-00-57-A01.

In an effort to better characterize the water quality in the influent and effluent at the Palmdale WRP, the District sampled more frequently than required in the MRP at these locations for a variety of parameters. These parameters were still reported based on their MRP sampling frequency. For example, monthly MRP requirements, sampled now on a more frequent basis, were reported in the "Monthly Parameters" table. This data is included in this report.

For groundwater sampling the MRP states that, "The depth to ground water in each well and the field parameters of pH, electrical conductivity, temperature, and dissolved oxygen shall be measured and recorded each time a well is sampled." The District does not have control over the operation of the supply wells therefore the District can only sample the supply wells when in operation by other parties. As a result, the depth of the supply wells cannot be obtained because depth can only be measured when the wells are not in operation. Other field parameters cannot be obtained at the supply wells because the sampling apparatus for the field parameters is not compatible with the various wellheads. The District will continue to investigate obtaining the appropriate fittings and/or modifying the wellheads in an effort to connect the sampling apparatus to the wellhead.

1st Quarter

Supply wells SW E and SW14 were not sampled during this quarter. SW14 is no longer in operation and SW E was not sampled due to access issues. The Districts will continue to attempt to obtain access to sample SW E for future sampling event. Monitoring wells MW1, MW17, and

MW19 were not sampled during this quarter due to pump malfunctions. The pumps for MW1 and MW19 were determined to be inoperable and MW17 is scheduled for maintenance and troubleshooting.

2nd Quarter

Supply wells SW E and SW14 were not sampled during this quarter. As stated earlier, SW14 is no longer in operation and SW E was not sampled due to access issues. Several constituents were not completed for SW H2 and were reported in future reports. Monitoring wells MW1, MW17, and MW19 were not sampled during this quarter due to pump malfunctions and possible dry conditions at MW 17.

The constituents MBAS and Total Organic Carbon (TOC) were inadvertently not analyzed at many of the supply and monitoring wells during the 2nd quarter 2004. This error occurred during implementation of the new MRP requirements. Many of the wells were re-sampled within the 2nd quarter and the remainder of the wells were re-sampled during the next quarter. Results were presented in quarterly reports as well as in this report.

New monitoring wells MW38 and MW39 were installed and preliminary sampling with contract equipment was conducted in the 2nd quarter. Sampling equipment was purchased by the District and these wells were added to the routine sampling schedule.

3rd Quarter

Supply wells SWE, SW1, SW9, SW13, and SW14 were not sampled during the third quarter. As stated earlier, SW14 is no longer in operation and SW E was not sampled due to it being inaccessible. SW 1, SW9 and SW13 were not in operation during the quarter. Two constituents (sulfate and chloride) were not completed in the 2nd quarter for SW H2. These constituents were included in the sampling done in the 3rd quarter, and the results were included in the quarterly reports and are included in this report. Monitoring wells MW1, MW17, and MW19 were not sampled during the third quarter due to pump malfunctions. The WQCB approved the use of low-flow purging and sampling procedures for groundwater monitoring in a letter dated August 6, 2004. These wells were fitted with pumps that were compatible with the new procedures and were added to the routine sampling schedule.

Eleven monitoring wells were equipped with transducers by Geomatrix to provide long term depth to groundwater data for compliance with the CAO. Depth to groundwater cannot be obtained by District personnel at these wells as long as the transducers are in place.

4th Quarter

Supply wells SWE, SW1, SW7, SW9, SW10, SW13, and SW14 were not sampled during the fourth quarter. As stated earlier, SW14 is no longer in operation and SW E was not sampled due to it being inaccessible. SW 1, SW7, SW9, SW10, and SW13 were not in operation during the quarter.

During the fourth quarter, new bladder pumps were installed on all monitoring wells, and low-flow purging and sampling procedures were implemented, as approved by the WQCB in a letter dated August 6, 2004. Monitoring wells MW31, 32, 33, 35, 37, and 46 were developed during the quarter and initial sampling was completed on all wells except MW31, which had insufficient yield. Monitoring wells MW1, MW17, MW19, MW25 and MW39 were not sampled during the

fourth quarter. MW1, MW25, and MW39 were unable to be sampled due to technical problems with the new bladder pumps, which are being investigated. MW17 was determined to be dry. Three attempts were made to sample MW19; on the first, farm equipment blocked access, on the second the well was buried in sand, and on the third, storm related mud blocked access.

Due to problems with the effluent pump station meter, the effluent flow data for December was calculated using the total of all meters instead of the pump station meter. Repairs were completed to the effluent pump station meter.

Corrections to 2004 Monthly Reports

May 2004
The influent ammonia and kjeldahl nitrogen (TKN) results for May 31, 2004, were inadvertently not included in the May monthly report. These results have been incorporated into this report.

June 2004
The influent TKN results for sample SJ09116 and SJ09446 were reported incorrectly and should have been reported as 39.9 mg/L and 47.6 mg/L, respectively. These values have been incorporated into this report.

September 2004
The effluent quarterly data for sample SJ12671 was reported incorrectly for several constituents and has since been revised and incorporated into this report (see Table 3.10).

1.5 BIOSOLIDS MANAGEMENT

During 2004, approximately 310 dry tons of biosolids were generated. Approximately 208 dry tons of biosolids were stockpiled during 2004. Approximately 872 dry tons of biosolids were reused in composting operations. This includes approximately 664 dry tons that were stockpiled during 2002 and 2003. No biosolids remain in stockpiles as of December 31, 2004. A copy of the Annual Federal Biosolids Report for 2004 for the Palmdale WRP is included as Appendix B.

1.6 OPERATIONAL AND MAINTENANCE ACTIVITIES

Palmdale WRP operates on-site oxidation ponds. Pond 1 has been out of service for over 5 years due to a damaged effluent pipeline. Pond 1 will remain off-line (out of service) until the need for additional oxidation capacity arises in the future.

Ponds 4 and 5 are aerated, which permits pond BOD loadings in excess of 60 lbs/acre/day, while maintaining the remaining ponds below the BOD limit.

1.7 EFFLUENT REUSE

Reclaimed water for reuse and land application was delivered to the Effluent Management Site (EMS) located on Los Angeles World Airports (LAWA) property during 2004. The reuse/land application areas are shown in Figure 1.1.

The EMS site is a 1,920-acre area located north and northeast of the Palmdale WRP. The District entered into a lease with LAWA for the use of this land. Only a portion of this area is currently

dedicated to agricultural reuse of reclaimed water. Reclaimed water that is not used for irrigation is discharged to other portions of the EMS site for land application. The areas used for reuse operations and the responsible operators are:

Harrington Farms	-	23 acres for growing pistachio trees
District (Tree Farm)	-	28 acres for growing afghan pines, 4 acres of tree barriers
Antelope Valley Farms, LLC	-	1,038 acres for growing livestock fodder (alfalfa hay, sudan grass, and winter grains)

In 2004, approximately 39.75 MG of recycled water were used by Harrington Farms, 41.64 MG by the District's tree farm and 9.27 MG for the District's tree barriers. Also in 2004, Antelope Valley Farming operated ten center-pivot irrigation systems for irrigation of forage crops, five of which were completed in fall 2004. Antelope Valley Farming began irrigating forage crops in March 2002. During 2004, Antelope Valley Farming used 1,076.51 MG.

In June 2003, the District purchased the tree nursery from Tree Mover Inc. The District continues the cultivation of afghan pines, which are used for wind barriers at the Palmdale WRP EMS.

NAME AND ADDRESS OF USERS

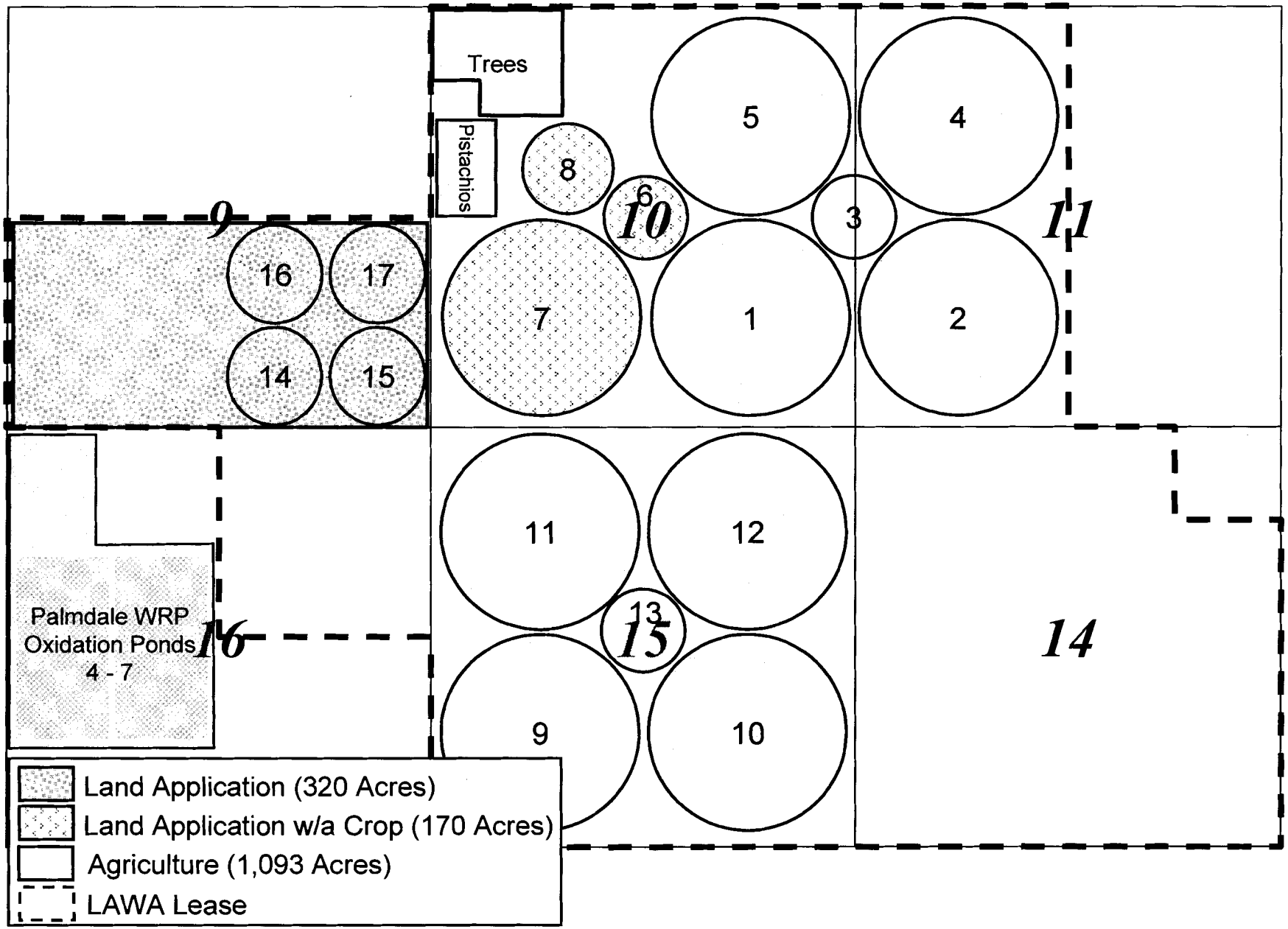
Harrington Farms
Mr. Lee Harrington
3380 Highway 33
Maricopa, CA 93252

Antelope Valley Farming, LCC
Mr. Craig Van Dam
9753 East Avenue F-8
Lancaster, CA 93535

TABLE 1.1
PALMDALE WATER RECLAMATION PLANT
RECLAIMED WATER USAGE MONITORING REPORT- 2004

User	Reclaimed water delivered		Use Area	Type of Use
	Daily Mean (MGD)	Annual Total (MG)	(Acres)	
Harrington Farms	0.11	39.75	23	Pistachio Orchard Irrigation
District's Tree Farm	0.11	41.64	28	Irrigation of afghan pines
District	0.03	9.27	4	Tree Barriers
Antelope Valley Farming	2.94	1076.51	1038	Livestock fodder Irrigation
TOTALS	3.19	1167.17	1093	

FIGURE 1.1
PALMDALE WRP EFFLUENT MANAGEMENT - OPERATIONS



PALMDALE WATER RECLAMATION PLANT

CHAPTER 2

WASTEWATER FACILITY, LABORATORY AND STAFF

CHAPTER 2

WASTEWATER FACILITY, LABORATORY AND STAFF

2.1 PALMDALE WATER RECLAMATION PLANT

The Palmdale WRP is located at 39300 30th Street East, Palmdale, California, 93550.

The Palmdale WRP has a design capacity of 15 mgd. The Palmdale WRP has waste discharge requirements for irrigation and land application of reclaimed water. Figure 2-1 shows the details of the plant (including both 30th and 40th street sites), the City of Los Angeles World Airports (LAWA) irrigation site, and the locations of the groundwater monitoring wells and lysimeters.

Process Description

Figure 2-2 is a process schematic of the plant that uses the following process sequence: comminution, primary sedimentation and oxidation ponds. Primary sludge and primary skimmings are anaerobically digested. The digested sludge is dried in drying beds and stockpiled on site.

Chronology

The chronology in Table 2-1 is provided as background in understanding how the plant evolved to its present state of development.

Facility Improvements in 2004

During 2004 the District implemented various interim treatment improvements to reduce effluent nitrogen concentrations. Digester supernatant treatment started September 9, 2004 and ferric chloride addition to enhance particulate nitrogen removal started September 24, 2004. An evaluation of the performance of these improvements was reported in the 4th Quarter Status Report in compliance with the CAO, which was submitted on January 14, 2005. The actual performance of interim measures to reduce effluent nitrogen concentrations has been less than expected.

In addition, during 2004 the District installed and operated temporary chlorination facilities to chlorinate the Palmdale WRP effluent. The permanent facilities are currently under construction and a Report of Wasted Discharge for this process change was submitted by the District during 2004.

The District continued to implement improvements in effluent reuse and land application practices at the effluent management site during 2004. The installation of five center pivot irrigation systems for reuse in Section 15 was completed in August 2004. In addition, the installation of four of the eight center pivots for land application in Section 9 (Pivots 14-17) was completed in December 2004.

TABLE 2-1
CHRONOLOGY
PALMDALE WATER RECLAMATION PLANT

Item	Contract Number	Date
District 20 formed		08/07/51
Palmdale Treatment Plant completed (0.75 MGD)	767	09/04/53
District 20 enlarged (0.75 TO 2.5 MGD)		1956
Oxidation Ponds 5 and 6	1122	09/22/57
Digester Tank No. 2	1135	01/08/58
Dike Lining Pond 6	1239	10/03/58
Percolation Ponds 1 and 2	1237	11/03/58
District 20 Effluent Line	1238	11/14/58
Dike Lining Pond 5	1255	01/27/59
Effluent use for irrigation began		05/01/59
Oxidation ponds 1-4 and percolation ponds 1-4 combined	1398	08/03/61
District 20 Stage I Expansion (2.5 MGD to 3.1 MGD)	1996	09/14/72
Interim disposal ponds 6-9		10/80
Effluent Relief Line (24-inch)	2671	01/09/84
DOA Effluent Delivery Line (18-inch)		01/20/84
Stage II Expansion (3.1 MGD to 6.5 MGD)	2883	02/22/89
Oxidation Ponds 4 and 5	2975	05/05/89
Primary Effluent Relief Line	3055	07/19/90
Stage III Expansion (6.5 MGD to 8 MGD)	3098	07/14/93
Pond Effluent System	3168	10/30/92
Fire Protection & Water Supply Improvements	3213	11/04/92
Stage IV Groundwater Monitoring Facilities	3340	12/29/95
Stage IV Expansion (8.0 MGD to 15.0 MGD)	3341	02/26/97*

* The treatment facilities for Stage IV expansion were placed in operation in July 1996.

Operators at the Palmdale WRP and their certifications are listed in Table 2-2.

TABLE 2-2

TREATMENT PLANT OPERATORS
PALMDALE WATER RECLAMATION PLANT
ANNUAL REPORT - 2004

Operator	Shift	Certification
Tim Linn, Supervisor	Day	Grade III
Roberto Martinez	Day	Grade III
William Zeller	Day	Grade II
James Barrick	Day	Grade II

2.2 PALMDALE WRP LABORATORY DATA

Laboratory Quality Assurance Activities

The Quality Assurance (QA) group of the Laboratory Section is responsible for monitoring the validity and quality of analytical data produced in the laboratory. In order to accomplish this goal, a quality assurance plan prepared by the QA Group is strictly adhered to. The plan includes routine QA activities that are performed in the laboratory in order to assure the defensibility of data reported.

In 2004, routine intra-laboratory and inter-laboratory QA activities that were performed included, but were not limited to, the following:

Intra-laboratory Quality Control

1. A routine practice of running laboratory control samples, duplicates and matrix spikes or duplicate spikes for every ten samples, or every analytical batch of less than ten samples, was maintained for most sample types. Control limits have been established for both precision and accuracy for most analytes, and quality control data were plotted on control charts for trend analyses. For situations where the data were outside of the control limits, corrective action was initiated and maintained at the bench level until the problems were solved.

2. A reagent or method blank was routinely run with each batch of samples as a contamination check.

3. Calibration standards were analyzed as required in the analytical methods. For some tests, a daily calibration verification standard was used to check the initial calibration curve. For other tests, a multi-point calibration curve was prepared on each day of analysis.

   For some organic procedures, surrogate standards were added to every sample, duplicate, spike, and blank to monitor the performance of the procedure. The results were

compared to established acceptance limits. When unacceptable QA results were obtained, corrective action was performed.

4. Instrument QA was also performed (e.g., for GC/MS, mass calibration and tuning were performed to meet ion abundance criteria required by the analytical procedure).

5. Chemical and bacteriological suitability testing was conducted monthly on the laboratory reagent water used for microbiological testing.

6. In the Microbiology groups, positive, negative, and sterility checks were performed on each batch of prepared media.

7. The Biology group performed routine toxicity bioassay QA by running a known toxicant with every batch of samples. They also performed other QA activities as required for a biology laboratory.

Inter-laboratory Quality Control

1. The laboratory participated in the California Department of Health Services' Environmental Laboratory Accreditation Program (ELAP) Performance Evaluation studies as part of re-certification for chemistry and microbiology. Overall performance was satisfactory.

2. Quality control samples in the form of QC check standards, either prepared in-house or purchased from commercial sources, were issued by the QA group to the laboratory. In situations where the results were not acceptable, the analysts and their supervisors were informed and error resolutions were performed. This consisted of checking calculations, data transcription, instrumentation, methodology, etc. Follow-up check samples were issued to verify that the analyses were back in control.

3. The QA Group also issued split samples collected from one of the water reclamation plants to assess analysis in a real environmental matrix. Results of these analyses were submitted to the QA group for statistical evaluation.

4. A sample for coliform testing and a multiple-analyst plate count was distributed to all the laboratories on a monthly basis.

5. The laboratory was site-visited and audited by ELAP personnel as part of the re-certification process of the laboratory.

Laboratory Data Organization

The monitoring programs at the Palmdale WRP can be rather complex; consequently, the following explanation is provided to aid in interpreting the data.

Data are maintained in two databases:

1. An **operational database** for data which normally are monitored daily or weekly and are used for the day-to-day operation of the plants. These include flow, BOD, suspended solids, etc. Many of the parameters included in the operational database must be monitored and reported in accordance with the requirements listed waste discharge requirements.

Monthly and annual averages are presented along with other descriptive statistics.

2. A **laboratory database** for data which normally are monitored monthly or less often. These include primarily metals and organic compounds. Separate data summaries are presented for:
   - **Influent monitoring**
   - **Effluent monitoring**

Laboratory Test Codes

The Palmdale WRP uses a unique 3-character code to identify each constituent in the laboratory database. Priority pollutants and other significant constituents are organized into the following groups:

Test Group	Test Code Series
Physical Properties and Solids	100
Nitrogens and Sulfurs	200
Miscellaneous	300
Carbons	400
Chlorinated Pesticides and PCBs	500
Volatile Organic Compounds	600
Metals	700
Base-Neutral/Acid Extractable Compounds	800
Dioxins	D00
Furans	F00

In the laboratory data summaries, the constituents are sorted in numerical order according to the test code. Both the constituent name and test code are given at the top of each column in the data summary. Table 2-3 is provided for assistance in finding specific constituents in the summaries. One can first look for the desired constituent in this table (arranged alphabetically) to find the test code. Then, knowing the test code, one can find the desired constituent and its data in the tables that follow Table 2-3 (arranged in numeric order).

Statistical summaries follow the influent and effluent data and effluent limits follow the effluent statistical summaries.

Detection Limits

Sample results below the method detection limits are indicated by the use of the less than symbol (<).

The laboratory analytical methods and detection limits are included in Appendix C.

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
1,1,1-TRICHLOROETHANE	603
1,1,2,2-TETRACHLOROETHANE	653
1,1,2-TRICHLOROETHANE	618
1,1-DICHLOROETHANE	616
1,1-DICHLOROETHENE	605
1,2,3,4,6,7,8-HEPTACHLORODIBENZFURAN	F23
1,2,3,4,6,7,8-HEPTACHLORODIBENZODIOXIN	D27
1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	F24
1,2,3,4,7,8-HEXACHLORODIBENZODIOXIN	D24
1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	F19
1,2,3,4-TETRACHLORODIBENZODIOXIN	D18
1,2,3,4-TETRAMETHYLBENZENE	686
1,2,3,6,7,8-HEXACHLORODIBENZODIOXIN	D25
1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	F20
1,2,3,7,8,9-HEXACHLORODIBENZODIOXIN	D26
1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	F22
1,2,3,7,8-PENTACHLORODIBENZODIOXIN	D22
1,2,3,7,8-PENTACHLORODIBENZOFURAN	F17
1,2,3-TRICHLOROBENZENE	889
1,2,3-TRICHLORODIBENZODIOXIN	D14
1,2,3-TRICHLORODIBENZOFURAN	F15
1,2,4,7,8-PENTACHLORODIBENZODIOXIN	D23
1,2,4-TRICHLOROBENZENE	846
1,2,7,8-TETRACHLORODIBENZODIOXIN	D19
1,2-4TRICHLORODIBENZODIOXIN	D15
1,2-DIBROMOETHANE	673
1,2-DICHLOROBENZENE	819
1,2-DICHLORODIBENZOFURAN	F13
1,2-DICHLOROETHANE	619
1,2-DICHLOROPROPANE	650
1,2-DIPHENYLHYDRAZINE	829
1,3,5-TRICHLOROBENZENE	899
1,3,7,8-TETRACHLORODIBENZODIOXIN	D20
1,3-BUTADIENE	675
1,3-DICHLOROBENZENE	820
1,4-DICHLOROBENZENE	821
1,4-DIOXANE	696
1,6-DICHLORODIBENZODIOXIN	D11
1,7,8-TRICHLORODIBENZODIOXIN	D16
1-CHLORODIBENZODIOXIN	D09
1-CHLORODIBENZOFURAN	F09
1-METHYLNAPHTHALENE	894
1-METHYLPHENANTHRENE	896
1-PROPANOL	671
2,3,4,5-TETRACHLOROPHENOL	687
2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	F21
2,3,4,7,8-PENTACHLORODIBENZOFURAN	F18
2,3,4-TRICHLOROPHENOL	693

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
2,3,5,6-TETRACHLOROPHENOL	688
2,3,5-TRICHLOROPHENOL	689
2,3,5-TRIMETHYLNAPHTHALENE	898
2,3,6-TRICHLOROPHENOL	690
2,3,7,8-TCDD	844
2,3,7,8-TETRACHLORODIBENZOFURAN	F16
2,3,7-TRICHLORODIBENZODIOXIN	D17
2,3-BENZOFLUORENE	884
2,3-DICHLORODIBENZODIOXIN	D12
2,3-DICHLORODIBENZOFURAN	F14
2,4,5-T	5C1
2,4,5-TP(SILVEX)	518
2,4,5-TRICHLOROPHENOL	691
2,4,6-TRICHLOROPHENOL	664
2,4,6-TRICHLOROPHENOL	856
2,4-D(ACID)	517
2,4-DB	5C2
2,4-DICHLOROPHENOL	658
2,4-DICHLOROPHENOL	847
2,4-DIMETHYLPHENOL	626
2,4-DIMETHYLPHENOL	848
2,4-DINITROPHENOL	659
2,4-DINITROPHENOL	849
2,4-DINITROTOLUENE	826
2,4-DP (DICHLORPROP)	5B7
2,6-DIMETHYLNAPHTHALENE	892
2,6-DINITROTOLUENE	827
2,7-DICHLORODIBENZODIOXIN	D13
2-BUTANONE	680
2-CHLORODIBENZODIOXIN	D10
2-CHLORODIBENZOFURAN	F10
2-CHLOROETHYLVINYLETHER	648
2-CHLORONAPHTHALENE	815
2-CHLOROPHENOL	657
2-CHLOROPHENOL	845
2-HEXANONE	699
2-METHYL FLUORANTHENE	887
2-METHYL-4,6DINITROPHENOL	660
2-METHYL-4,6DINITROPHENOL	850
2-METHYLNAPHTHALENE	895
2-NITROPHENOL	661
2-NITROPHENOL	851
2-PROPANOL	672
2378TETRACHLORODIBENZODIOXIN	D21
3,3'-DICHLOROBENZIDINE	822
3,4,5-TRICHLOROPHENOL	692
3,6-DIMETHYLPHENANTHRENE	893
3-CHLORODIBENZOFURAN	F11

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
4-BROMOPHENYL PHENYLETHER	813
4-CHLORO-3-METHYLPHENOL	656
4-CHLORO-3-METHYLPHENOL	853
4-CHLORODIBENZOFURAN	F12
4-CHLOROPHENYLPHENYLETHER	816
4-METHYL-2-PENTANONE	681
4-NITROPHENOL	662
4-NITROPHENOL	852
7,12DIMETHYLBENZ(A)ANTHRACENE	888
9,10-DIPHENYLANTHRACENE	883
ACENAPHTHENE	800
ACENAPHTHYLENE	801
ACETIC ACID	639
ACETONE	676
ACETONITRILE	665
ACIDITY	318
ACROLEIN	654
ACRYLONITRILE	655
ADA (ANTHRAQUINONE DSA)	329
ALDRIN	512
ALPHA-BHC	508
ALUMINUM	707
AMMONIA NITROGEN	201
ANTHRACENE	802
ANTIMONY	725
AROCLOR 1016	535
AROCLOR 1221	536
AROCLOR 1232	537
AROCLOR 1242	519
AROCLOR 1248	538
AROCLOR 1254	520
AROCLOR 1260	539
ARSENIC	705
ATRAZINE	550
AVAILABLE CALCIUM OXIDE	321
AVAILABLE PHOSPHORUS	339
BARIUM	706
BENZENE	620
BENZIDINE	803
BENZO(A)ANTHRACENE	804
BENZO(A)PYRENE	805
BENZO(B)FLUORANTHENE	806
BENZO(E)PYRENE	890
BENZO(G.H.I.)PERYLENE	807
BENZO(K)FLUORANTHENE	808
BENZYL CHLORIDE	678
BERYLLIUM	726
BETA-BHC	523

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
BICARBONATE ALKALINITY	306
BIPHENYL	891
BIS(2-CHLOROETHYL)ETHER	810
BIS(2-CL-ETHOXY)METHANE	809
BIS(2-CL-ISOPROPYL)ETHER	811
BISMUTH	727
BORON	314
BROMIDE	319
BROMODICHLOROMETHANE	608
BROMOETHANE	694
BROMOFORM	610
BROMOMETHANE	646
BUTANE	635
BUTYLBENZYL PHTHALATE	814
BUTYRIC ACID	642
C+T 1,3-DICHLOROPROPENE	6B6
CADMIUM	708
CALCIUM	703
CALCIUM-HARDNESS	701
CARBON DISULFIDE	285
CARBON DISULFIDE	698
CARBON TETRACHLORIDE	604
CARBONACEOUS BOD5 (CBOD5)	412
CARBONATE ALKALINITY	307
CARBONYL SULFIDE	284
CCL4 ACTIVITY (CARBON)	121
CERIUM	728
CESIUM	729
CHLORIDE	301
CHLORINATED PESTICIDES	5B0
CHLORINE DEMAND	303
CHLORINE RESIDUAL	302
CHLOROBENZENE	611
CHLOROETHANE	647
CHLOROFORM	602
CHLOROMETHANE	649
CHRYSENE	817
CIS-1,2-DICHLOROETHYLENE	677
CIS-1,3-DICHLOROPROPENE	651
CIS-CHLORDANE	526
CIS-CHLORDENE	541
CIS-NONACHLOR	543
CN AMENABLE TO CHLORINE	210
COBALT	711
COLOR, APPARENT	104
CONDUCTIVITY	102
COPPER	712
DALAPON	5B5

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
DELTA-BHC	524
DI-N-BUTYL PHTHALATE	825
DI-N-OCTYL PHTHALATE	828
DIBENZO(A,H)ANTHRACENE	818
DIBROMOCHLOROMETHANE	609
DICAMBA	5B6
DICHLORODIBENZODIOXINS	D02
DICHLORODIBENZOFURANS	F02
DICHLORVOS	5B1
DICYCLOPENTADIENE	6B5
DIELDRIN	513
DIETHYL PHTHALATE	823
DIETHYL SULFIDE	290
DIETHYLHEXYL PHTHALATE	812
DIMETHYL PHTHALATE	824
DIMETHYL SULFIDE	286
DIMETHYLDISULFIDE	291
DINOSEB	5C3
DISSOLVED OXYGEN	115
ECE (SOIL SALINITY)	E01
EDTA	327
EDTA-IRON(I)	347
ENDOSULFAN I	531
ENDOSULFAN II	532
ENDOSULFAN SULFATE	533
ENDRIN	514
ENDRIN ALDEHYDE	534
ETHANE	633
ETHANOL	623
ETHYL BENZENE	624
ETHYL MERCAPTAN	260
ETHYL MERCAPTAN	283
FLUORANTHENE	830
FLUORENE	831
FLUORIDE	313
FORMALDEHYDE	697
FREE ALKALI	345
FREE CYANIDE	207
FREON 11 (CCL3F)	669
FREON 12 (CCL2F2)	668
FREON 21 (CHCL2F)	670
FREON TF	617
GAMMA RADIATION	372
GOLD	370
GROSS ALPHA RADIOACTIVITY	371
GROSS BETA RADIOACTIVITY	510
HEPTACHLOR	511
HEPTACHLOR EPOXIDE	D07

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
HEPTACHLORODIBENZODIOXINS	F07
HEPTACHLORODIBENZOFURANS	730
HEXACHLOROBENZENE	832
HEXACHLOROBUTADIENE	833
HEXACHLOROCYCLOPENTADIENE	834
HEXACHLORODIBENZODIOXINS	D06
HEXACHLORODIBENZOFURANS	F06
HEXACHLOROETHANE	835
HEXANE	637
HEXAVALENT CHROMIUM	710
HYDROGEN CYANIDE	209
HYDROGEN SULFIDE	261
HYDROGEN SULFIDE	281
HYDROXIDE ALKALINITY	308
INDENO(1,2,3-C,D)PYRENE	836
IRON	713
ISOBUTYL MERCAPTAN	289
ISOBUTYRIC ACID	641
ISOPHORONE	837
ISOPROPYL MERCAPTAN	287
ISOPROPYLBENZENE	684
ISOVALERIC ACID	643
KEPONE	5C5
LANTHANUM	731
LEAD	714
LINDANE (GAMMA-BHC)	509
LITHIUM	715
M+P CRESOL	862
M+P-CRESOL	628
M+P-XYLENE	695
M-DICHLOROBENZENE	614
M-XYLENE	666
MAGNESIUM	704
MAGNESIUM-HARDNESS	702
MANGANESE	716
MBAS	315
MCPA	5B9
MCPP	5B8
MERCAPTANS	258
MERCURY	717
METHANE	632
METHANOL	622
METHOXYCLOR	516
METHYL MERCAPTAN	259
METHYL MERCAPTAN	282
METHYL PYRENE	886
METHYLENE CHLORIDE	601
MEVINPHOS	5B2

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
MIREX	552
MOLYBDENUM	732
MONOCHLORODIBENZODIOXINS	D01
MONOCHLORODIBENZOFURANS	F01
N-BUTYL MERCAPTAN	295
N-NITROSODI-N-PROPYLAMINE	841
N-NITROSODIMETHYLAMINE	840
N-NITROSODIPHENYLAMINE	857
N-PROPYL MERCAPTAN	293
N-PROPYLBENZENE	685
NALED (DIBROM)	5B3
NAPHTHALENE	838
NICKEL	718
NID	316
NITRATE NITROGEN	204
NITRITE NITROGEN	205
NITROBENZENE	839
NOX (AS NO2)	211
O+P DICHLOROBENZENE	674
O+P-XYLENE	667
O-CRESOL	627
O-CRESOL	861
O-DICHLOROBENZENE	613
O-XYLENE	629
OCTACHLORODIBENZODIOXIN	D08
OCTACHLORODIBENZOFURAN	F08
OIL & GREASE	408
OP'-DDD	503
OP'-DDE	501
OP'-DDT	505
ORGANIC LEAD	7A1
ORGANIC NITROGEN	202
ORTHO PHOSPHATE	311
OXYCHLORDANE	529
P-DICHLOROBENZENE	615
P-XYLENE	630
PENTACHLORODIBENZODIOXINS	D05
PENTACHLORODIBENZOFURANS	F05
PENTACHLOROPHENOL	663
PENTACHLOROPHENOL	854
PENTANE	636
PERYLENE	897
PH	101
PHENANTHRENE	842
PHENOL	855
PHENOL(BY GC)	631
PHENOLS	312
PHENYLACETIC ACID	860

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
PHTHALATE ESTERS	6B4
PICLORAM	5C4
PLUTONIUM	128
POLYCHLORINATED PHENOLS	6B1
POTASSIUM	325
POTASSIUM	719
POTASSIUM-40	131
PP'-DDD	504
PP'-DDE	502
PP'-DDT	506
PROPANE	634
PROPIONIC ACID	640
PYRENE	843
PYRIDINE	858
RADIUM 226+228	126
RADON	123
SALINITY	317
SAR	107
SEC-BUTYL MERCAPTAN	288
SELENIUM	720
SER	106
SETTLEABLE SOLIDS	156
SILICON	721
SILVER	722
SIMAZINE	551
SODIUM	723
SODIUM POTASSIUM TARTRATE	346
SOLUBLE BOD	402
SOLUBLE COD	404
SOLUBLE PHOSPHATE	320
SOLUBLE SULFIDE	252
SORBITOL	328
SPECIFIC GRAVITY	113
STRONTIUM	733
STRONTIUM-90	124
STYRENE	682
SULFATE	257
SULFITE	254
SULFUR DIOXIDE	292
SUSPENDED SOLIDS	151
TECHNICAL CHLORDANE	540
TEMPERATURE	111
TERT-BUTYL MERCAPTAN	294
TETRACHLORODIBENZODIOXINS	D04
TETRACHLORODIBENZOFURANS	F04
TETRACHLOROETHYLENE	607
TETRAHYDROFURAN	679
THALLIUM	734

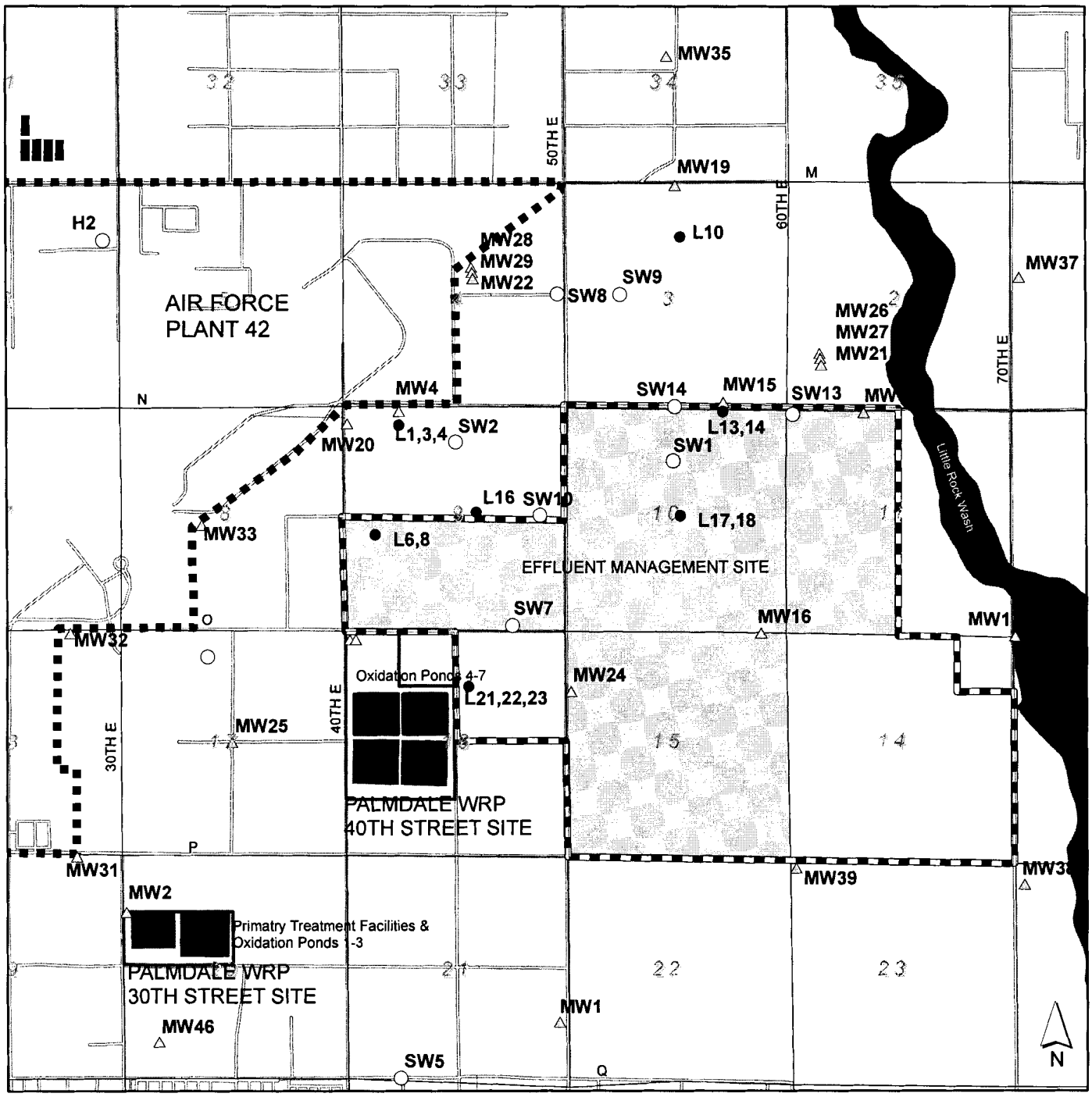
TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
THIOCYANATE	256
THIOSULFATE	253
THORIUM	129
TICH	522
TIN	735
TITANIUM	736
TOLUENE	621
TOTAL ALKALINITY	305
TOTAL BOD	401
TOTAL CARBAMATE PESTICIDE	5B4
TOTAL CHROMIUM	709
TOTAL COD	403
TOTAL CYANIDE	206
TOTAL DETECTABLE DDT	507
TOTAL DETECTABLE PCBS	521
TOTAL DETECTED CHLORDANES	530
TOTAL DETECTED PESTICIDES	549
TOTAL DISSOLVED SOLIDS	155
TOTAL HARDNESS	309
TOTAL HCH	525
TOTAL KJELDAHL NITROGEN	203
TOTAL NITROGEN	208
TOTAL NITROGEN	326
TOTAL ORGANIC CARBON	405
TOTAL ORGANIC HALOGEN (TOX)	410
TOTAL PHOSPHATE	310
TOTAL PHOSPHOROUS	324
TOTAL SOLIDS	153
TOTAL SULFIDE	251
TOTAL SULFUR	255
TOTAL XYLENE ISOMERS	6B7
TOXAPHENE	515
TRANS-1,2-DICHLOROETHYLENE	645
TRANS-1,3-DICHLOROPROPENE	652
TRANS-CHLORDANE	527
TRANS-CHLORDENE	542
TRANS-NONACHLOR	528
TRIBUTYLTIN	553
TRICHLORODIBENZODIOXINS	D03
TRICHLORODIBENZOFURANS	F03
TRICHLOROETHYLENE	606
TRIPHENYLENE	885
TRITIUM	122
TURBIDITY	103
URANIUM	125
VALERIC ACID	644
VANADIUM	737
VANADIUM-49	130

TABLE 2-3
LABORATORY DATABASE
CONSTITUENTS IN ALPHABETICAL ORDER

CONSTITUENTS	TEST CODE
VINYL ACETATE	625
VINYL CHLORIDE	612
VISCOSITY	114
VOLATILE ACIDS	638
VOLATILE SUSPENDED SOLIDS	152
VOLATILE TOTAL SOLIDS	154
ZINC	724

FIGURE 2.1
PALMDALE WATER RECLAMATION PLANT
Effluent Management Site, Wells and Lysimeters



- ● Lysimeter
- ○ Supply Well
- △ Monitoring Well
- Lease Area from Los Angeles World Airports (LAWA)
- Authorized EMS
- ■ ■ ■ ■ Air Force Plant 42

SANITATION DISTRICTS OF LOS ANGELES COUNTY

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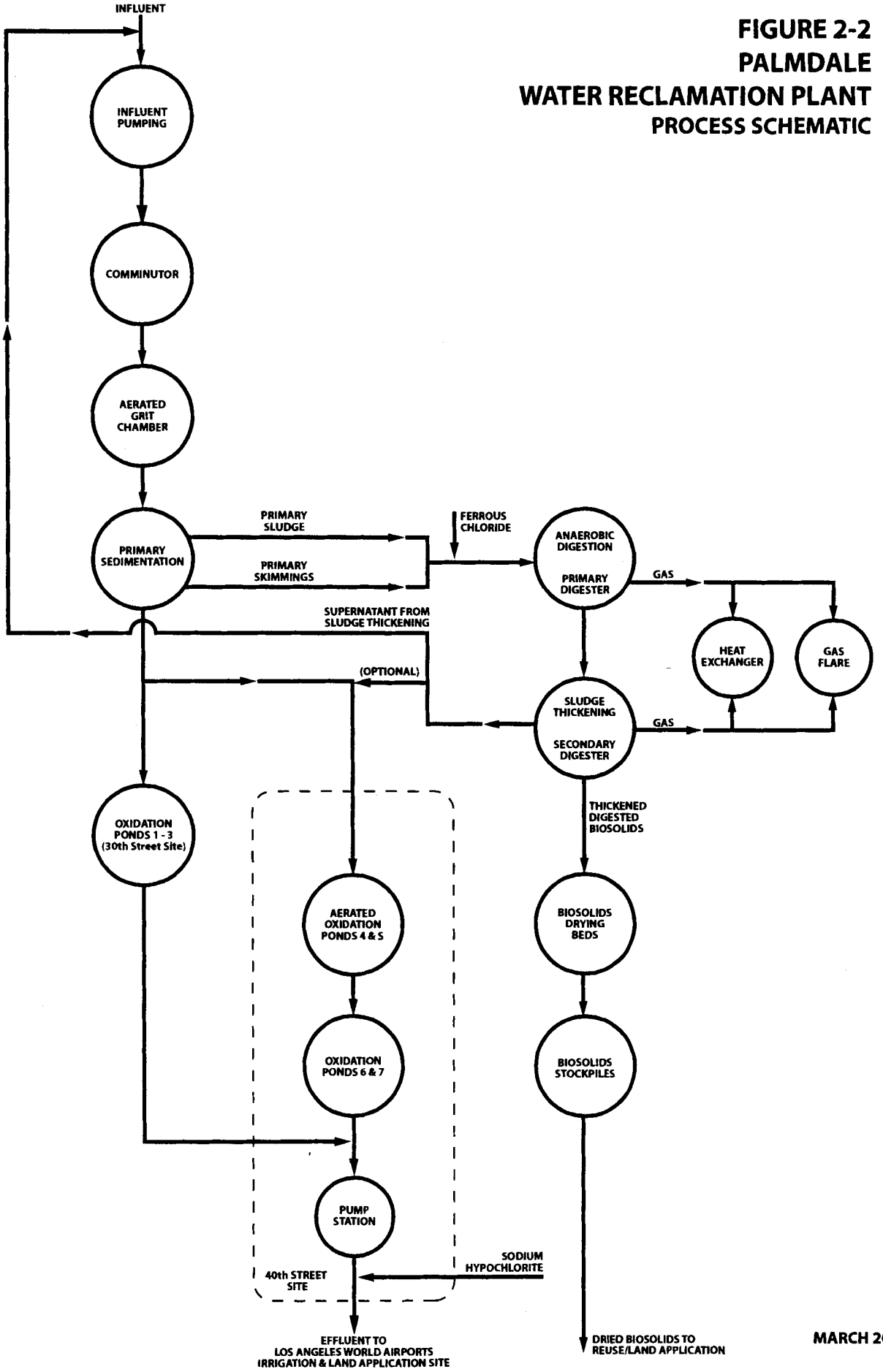
FIGURE 2-2
PALMDALE
WATER RECLAMATION PLANT
PROCESS SCHEMATIC



MARCH 2004

PALMDALE WATER RECLAMATION PLANT

CHAPTER 3

WASTEWATER MONITORING DATA

CHAPTER 3

WASTEWATER MONITORING DATA

3.1 INTRODUCTION

This chapter contains data that are related to the operation and performance of the treatment plant. The data are summarized in tables and are presented in the following order: flow data, freeboard data, influent water quality data, and effluent water quality data. All data are presented together with descriptive statistics and with WDR limits. For the purpose of calculating annual averages, data that are collected during the same month are averaged first, and the average level for that month is entered in the calculation along with the data taken during the remainder of the year. In calculating averages, levels below the Minimum Detection Limit (MDL), or Reporting Minimum Limit (RML) are assumed to be equal to the MDL or RML, and not zero. Additional data and follow-up samples are averaged and presented for the month these were collected, or for the month where compliance was assessed.

The data summaries may contain results that were not reported in monthly monitoring reports. Additional data can result from sampling conducted for purposes other than routine monitoring. The additional sampling may have been performed by other agencies (i.e., WQCB), or by the District for a special study, or as a sampling follow-up to a questionable sample.

3.2 TABULAR AND GRAPHICAL SUMMARIES

Data are summarized in Tables 3.1 - 3.10. The tables summarize and present the results for the month the samples were collected. Influent and effluent data are summarized in tables based on the location and frequency collected.

Selected data for 2004 are summarized in Figures 3.1 – 3.7. Levels below the MDL or RML are presented as the numerical levels of the MDL or RML.

TABLE 3.1

PALMDALE WATER RECLAMATION PLANT

2004 INFLUENT AND EFFLUENT FLOWS

2004	INFLUENT[1]			EFFLUENT										
				TO LAWA		REUSE			LAND APPLICATION with CROP			LAND APPLICATION		
Month	Monthly Mean (MGD)	Maximum Instantaneous (MGD)	Total Influent (MG)	Monthly Mean (MGD)	Total (MG)	Monthly Mean (MGD)	Total (MG)	% Flow (%)	Monthly Mean (MGD)	Total (MG)	% Flow (%)	Monthly Mean (MGD)	Total (MG)	% Flow (%)
January	9.2	10.0	284.9	9.1	282.2	1.4	42.8	15.1%	1.6	48.5	17.2%	6.2	191.0	67.7%
February	9.3	10.1	268.7	8.4	244.7	1.0	28.0	11.4%	0.6	18.6	7.6%	6.8	198.1	81.0%
March	9.1	10.1	283.0	8.9	274.6	2.2	67.3	24.5%	1.4	44.1	16.0%	5.3	163.3	59.5%
April	8.8	9.5	264.6	7.8	233.4	3.1	93.3	40.0%	1.5	44.5	19.1%	3.2	95.5	40.9%
May	8.9	10.3	276.8	7.8	241.4	2.8	87.6	36.3%	0.9	29.3	12.1%	4.0	124.5	51.6%
June	8.8	9.7	264.5	7.6	227.1	3.0	89.3	39.3%	0.8	23.2	10.2%	3.8	114.6	50.5%
July	8.9	9.4	274.9	7.4	228.4	3.4	105.3	46.1%	1.8	54.5	23.8%	2.2	68.6	30.0%
August	9.3	10.0	287.9	8.9	274.9	5.5	169.3	61.6%	1.3	41.1	15.0%	2.1	64.5	23.5%
September	10.0	11.3	298.8	7.3	220.2	6.1	181.6	82.4%	1.1	32.0	14.5%	0.2	6.6	3.0%
October	10.3	11.3	319.9	8.9	274.8	4.4	136.9	49.8%	1.2	36.4	13.3%	3.3	101.5	36.9%
November	10.2	11.8	306.4	8.6	256.5	2.1	62.0	24.2%	0.0	0.7	0.3%	6.5	193.9	75.6%
December	10.3	14.4	320.7	9.0	280.1	3.4	104.0	37.1%	0.2	4.7	1.7%	5.5	171.4	61.2%
Mean	9.4	10.7	287.6	8.3	253.2	3.2	97.3		1.0	31.5		4.1	124.5	
Max	10.3	14.4	320.7	9.1	282.2	6.1	181.6		1.8	54.5		6.8	198.1	
Min	8.8	9.4	264.5	7.3	220.2	1.0	28.0		0.0	0.7		0.2	6.6	
Total			3450.8		3038.3		1167.2	38.4%		377.7	12.4%		1493.5	49.2%
Limits	15.5	37.5												

[1] Represents influent to secondary treatment.

TABLE 3.2

PALMDALE WATER RECLAMATION PLANT

2004 OXIDATION POND FREEBOARD

Month	POND 2		POND 3		POND 4		POND 5		POND 6		POND 7	
	Mean (inches)	Min (inches)	Mean (inches)	Min (inches)	Mean (inches)	Min (inches)	Mean (inches)	Min (inches)	Mean (inches)	Min (inches)	Mean (inches)	Min (inches)
January	37	37	37	37	40	39	40	39	34	31	34	31
February	37	37	37	37	40	40	40	40	32	25	30	24
March	37	37	37	37	40	40	40	40	30	25	29	24
April	37	37	37	37	40	40	40	40	31	28	30	27
May	37	37	37	37	40	40	40	40	27	26	26	26
June	36	35	34	31	40	39	40	39	28	26	28	26
July	36	35	33	31	39	39	39	39	28	26	28	26
August	38	37	36	35	40	39	40	39	34	26	34	26
September	38	38	37	37	40	40	40	40	36	29	35	29
October	38	38	37	37	40	40	40	40	30	29	30	29
November	38	38	37	37	40	40	40	40	32	31	33	32
December	37	35	36	35	40	39	40	39	30	27	30	26
Mean	37	37	36	36	40	40	40	40	31	27	31	27
Maximum	38	38	37	37	40	40	40	40	36	31	35	32
Minimum	36	35	33	31	39	39	39	39	27	25	26	24
Limits Minimum		24		24		24		24		24		24

TABLE 3.3

PALMDALE WATER RECLAMATION PLANT

2004 INFLUENT WEEKLY DATA

		Annual	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Total BOD_5 (mg/l)	Mean	285	263	299	391	276	272	258	259	267	266	281	288	305
	Max.	768	272	363	768	306	318	404	305	276	302	287	316	331
	Min.	100	252	280	259	232	237	100	205	260	231	268	261	280
		Annual	**Jan.**	**Feb.**	**Mar.**	**Apr.**	**May**	**Jun.**	**Jul.**	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
Total COD (mg/l)	Mean	592	581	619	570	632	587	574	564	569	583	549	607	662
	Max.	809	701	774	607	711	626	732	593	602	640	605	647	809
	Min.	290	521	576	458	560	557	290	542	547	521	501	561	583

TABLE 3.4

PALMDALE WATER RECLAMATION PLANT

2004 INFLUENT MONTHLY DATA

TEST	INFLUENT	UNIT	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean	Max.	Min.
201	Ammonia	mg-N/L	24.5	27.3	27.4	28.4	29.0	28.6	27.6	29.1	25.5	24.4	26.0	26.2	27.0	29.1	24.4
203	Kjeldahl Nitrogen	mg-N/L	40.8	40.6	41.4	40.4	44.5	43.2	45.1	43.21	42.5	39.5	41.5	45.9	42.4	45.9	39.5
204	Nitrate	mg-N/L	< .04	< .04	< .04	< .04	< .04	< .04	< .04	< .04	< .04	< .04	< .04	< .04	< .04	< .04	< .04
205	Nitrite	mg-N/L	< .02	< .02	< .02	< .02	< .02	< .02	< .02	< .02	< .02	< .02	< .02	< .02	< .02	< .02	< .02
315	MBAS	mg/L	16	12.5	14.5	15.1	13.3	18.5	18.7	17.3	15.1	16.2	22.6	18.0	16.5	22.6	12.5

TABLE 3.5

PALMDALE WATER RECLAMATION PLANT

2004 INFLUENT QUARTERLY AND SEMI-ANNUAL DATA

TEST	INFLUENT QUARTERLY DATA	UNIT	1st Quarter	2nd Quarter		3rd Quarter	4th Quarter	Mean	Max.	Min.
			February	May		August	November			
C15	Total Petroleum Hydrocarbons	µg/l	12000	11000		7500	11200	10425	12000	7500
TEST	**INFLUENT SEMI-ANNUAL DATA**	**UNIT**	**March**	**April**	**May**	**August**		**Mean**	**Max.**	**Min.**
155	Total Dissolved Solids	mg/l	498	509	NA	474	NA	494	509	474
602	Chloroform	µg/l	NA	NA	8	3	NA	6	8	3
608	Bromodichloromethane	µg/l	NA	NA	5	2	NA	4	5	2
609	Dibromochloromethane	µg/l	NA	NA	4	2	NA	3	4	2
610	Bromoform	µg/l	NA	NA	1	1	NA	1	1	1

NA - Not Analyzed

TABLE 3.6

PALMDALE WATER RECLAMATION PLANT

2004 INFLUENT ANNUAL DATA

TEST	ANNUAL MISCELLANEOUS PARAMETERS	UNIT	AUGUST
206	Total Cyanides	µg/l	< 5
312	Total Phenols	µg/l	47
TEST	**ANNUAL METALS**	**UNIT**	**AUGUST**
703	Calcium	mg/l	24.0
704	Magnesium	mg/l	10.6
705	Arsenic	mg/l	< 0.001
706	Barium	mg/l	0.023
707	Aluminum	mg/l	0.58
708	Cadmium	mg/l	< 0.0004
709	Total Chromium	mg/l	< 0.01
711	Cobalt	mg/l	< 0.01
712	Copper	mg/l	0.037
713	Iron	mg/l	0.407
714	Lead	mg/l	< 0.002
716	Manganese	mg/l	0.016
717	Mercury	mg/l	0.00007
718	Nickel	mg/l	< 0.02
719	Potassium	mg/l	11.6
720	Selenium	mg/l	< 0.001
722	Silver	mg/l	< 0.025
723	Sodium	mg/l	122
724	Zinc	mg/l	0.263
725	Antimony	mg/l	< 0.0005
726	Beryllium	mg/l	< 0.0005
732	Molybdenum	mg/l	< 0.04
734	Thallium	mg/l	< 0.001
737	Vanadium	mg/l	< 0.02
TEST	**ANNUAL ACID EXTRACTIBLES**	**UNIT**	**AUGUST**
845	2-Chlorophenol	µg/l	< 50
847	2,4-Dichlorophenol	µg/l	< 50
848	2,4-Dimethylphenol	µg/l	< 20
849	2,4-Dinitrophenol	µg/l	< 50
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	< 50
851	2-Nitrophenol	µg/l	< 100
852	4-Nitrophenol	µg/l	< 100
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	< 10
854	Pentachlorophenol	µg/l	< 50
855	Phenol	µg/l	< 10
856	2,4,6-Trichlorophenol	µg/l	< 100

TABLE 3.6

PALMDALE WATER RECLAMATION PLANT

2004 INFLUENT ANNUAL DATA

TEST	ANNUAL PESTICIDES & PCBs	UNIT	AUGUST
502	PP'-DDE	µg/l	< 0.01
504	PP'-DDD	µg/l	< 0.01
506	PP'-DDT	µg/l	< 0.01
508	Alpha-BHC	µg/l	< 0.01
509	Lindane (Gamma-BHC)	µg/l	< 0.01
510	Heptachlor	µg/l	< 0.01
511	Heptachlor Epoxide	µg/l	< 0.01
512	Aldrin	µg/l	< 0.01
513	Dieldrin	µg/l	< 0.01
514	Endrin	µg/l	< 0.01
515	Toxaphene	µg/l	< 0.5
519	Aroclor 1242	µg/l	< 0.1
520	Aroclor 1254	µg/l	< 0.05
523	Beta-BHC	µg/l	< 0.01
524	Delta-BHC	µg/l	< 0.01
531	Endosulfan I	µg/l	< 0.01
532	Endosulfan II	µg/l	< 0.01
533	Endosulfan Sulfate	µg/l	< 0.01
534	Endrin Aldehyde	µg/l	< 0.04
535	Aroclor 1016	µg/l	< 0.1
536	Aroclor 1221	µg/l	< 0.3
537	Aroclor 1232	µg/l	< 0.1
538	Aroclor 1248	µg/l	< 0.1
539	Aroclor 1260	µg/l	< 0.1
540	Technical Chlordane	µg/l	< 0.05
TEST	ANNUAL VOLATILE ORGANICS	UNIT	AUGUST
601	Methylene Chloride	µg/l	0.8
602	Chloroform	µg/l	3
603	1,1,1-Trichloroethane	µg/l	< 0.5
604	Carbon Tetrachloride	µg/l	< 0.5
605	1,1-Dichloroethene	µg/l	< 0.5
606	Trichloroethylene	µg/l	< 0.5
607	Tetrachloroethylene	µg/l	< 0.5
608	Bromodichloromethane	µg/l	2
609	Dibromochloromethane	µg/l	2
610	Bromoform	µg/l	1
611	Chlorobenzene	µg/l	< 0.5
612	Vinyl Chloride	µg/l	< 0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	< 0.5
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	< 0.5
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	6
616	1,1-Dichloroethane	µg/l	< 0.5
618	1,1,2-Trichloroethane	µg/l	< 0.5
619	1,2-Dichloroethane	µg/l	< 0.5
620	Benzene	µg/l	< 0.5
621	Toluene	µg/l	0.7
624	Ethyl Benzene	µg/l	< 0.5
645	Trans-1,2-Dichloroethylene	µg/l	< 0.5
646	Bromomethane	µg/l	< 0.5
647	Chloroethane	µg/l	< 0.5
648	2-Chloroethylvinylether	µg/l	< 0.5
649	Chloromethane	µg/l	< 0.5
650	1,2-Dichloropropane	µg/l	< 0.5
651	Cis-1,3-Dichloropropene	µg/l	< 0.5
652	Trans-1,3-Dichloropropene	µg/l	< 0.5
653	1,1,2,2-Tetrachloroethane	µg/l	< 0.5
654	Acrolein	µg/l	< 10
655	Acrylonitrile	µg/l	< 5

TABLE 3.6

PALMDALE WATER RECLAMATION PLANT

2004 INFLUENT ANNUAL DATA

TEST	ANNUAL BASE/NEUTRAL EXTRACTIBLES	UNIT	AUGUST
800	Acenaphthene	µg/l	< 10
802	Anthracene	µg/l	< 100
803	Benzidine	µg/l	< 50
804	Benzoanthracene	µg/l	< 50
805	Benzopyrene	µg/l	< 0.04
806	Benzo(b)fluoranthene	µg/l	< 0.04
807	1,12-Benzoperylene	µg/l	< 50
808	Benzo(k)fluoranthene	µg/l	< 0.04
809	Bis(2-chloroethoxy)methane	µg/l	< 50
810	Bis(2-Chloroethyl)ether	µg/l	< 10
811	Bis(2-chloroisopropyl)ether	µg/l	< 20
812	Bis(2-diethylhexyl)phthalate	µg/l	32
813	4-Bromophenyl Phenyl Ether	µg/l	< 50
814	Butylbenzyl Phthalate	µg/l	< 100
815	2-Chloronaphthalene	µg/l	< 100
816	4-Chlorophenyl Phenyl Ether	µg/l	< 50
817	Chrysene	µg/l	< 0.02
818	1,2,5,6-Dibenzanthracene	µg/l	< 0.04
819	1,2-Dichlorobenzene	µg/l	< 20
820	1,3-Dichlorobenzene	µg/l	< 10
821	1,4-Dichlorobenzene	µg/l	< 10
822	3,3'-Dichlorobenzidine	µg/l	< 50
823	Diethyl Phthalate	µg/l	< 20
824	Dimethyl Phthalate	µg/l	< 20
825	Di-n-Butyl Phthalate	µg/l	< 100
826	2,4-Dinitrotoluene	µg/l	< 50
827	2,6-Dinitrotoluene	µg/l	< 50
828	Di-n-Octyl Phthalate	µg/l	< 100
829	1,2-Diphenylhydrazine	µg/l	< 10
830	Fluoranthene	µg/l	< 10
831	Fluorene	µg/l	< 100
832	Hexachlorobenzene	µg/l	< 10
833	Hexachlorobutadiene	µg/l	< 10
834	Hexachlorocyclopentadiene	µg/l	< 50
835	Hexachloroethane	µg/l	< 10
836	Indeno(1,2,3-c,d)pyrene	µg/l	< 0.04
837	Isophorone	µg/l	< 10
838	Naphthalene	µg/l	< 10
839	Nitrobenzene	µg/l	< 10
840	n-Nitrosodimethylamine	µg/l	< 50
841	n-Nitrosodi-n-propylamine	µg/l	< 50
842	Phenanthrene	µg/l	< 50
843	Pyrene	µg/l	< 100
846	1,2,4-Trichlorobenzene	µg/l	< 50
857	n-Nitrosodiphenylamine	µg/l	< 10

TABLE 3.7

PALMDALE WATER RECLAMATION PLANT

2004 EFFLUENT TO LAWA SITE (PONDS 2-7) WEEKLY DATA

Monthly Statistics	Suspended Solids mg/l	Soluble BOD_5 mg/l	Soluble COD mg/l	Soluble Carb. BOD_5 (SCBOD) mg/l	pH 0-14	Temp °C	Dissolved Oxygen mg/l
January							
Mean	63	17	84	8	7.9	7.6	1.3
Max.	82	19	91	12	8.1	8.9	1.6
Min.	50	14	78	6	7.8	5.3	1.1
February							
Mean	79	17	93	9	8.8	9.6	2.6
Max.	104	22	103	14	8.8	10.5	3.7
Min.	61	14	87	6	8.6	8.7	1.7
March							
Mean	78	17	107	>8	8.2	14.0	2.2
Max.	102	26	118	>16	8.8	17.6	3.1
Min.	56	8	100	5	7.8	10.5	1.2
April							
Mean	102	15	97	<6	8.4	16.0	1.8
Max.	141	30	108	10	8.6	16.5	1.9
Min.	78	4	87	<3	8.1	14.9	1.6
May							
Mean	73	11	88	5	8.7	16.7	1.6
Max.	94	28	96	>16	9.0	19.8	1.9
Min.	53	3	74	1	8.4	14.1	1.2
June							
Mean	83	10	85	<3	8.7	19.7	1.8
Max.	96	10	100	3	8.9	20.1	2.3
Min.	74	9	78	<3	8.3	18.9	1.4
July							
Mean	97	10	90	<5	8.0	22.0	2.5
Max.	112	11	100	7	8.8	23.0	3.0
Min.	75	10	78	<3	7.5	20.6	1.4
August							
Mean	67	14	85	5	7.7	20.9	1.5
Max.	78	16	93	6	7.9	22.0	2.3
Min.	52	9	75	3	7.5	19.5	1.0
September							
Mean	124	15	82	6	7.9	18.2	4.3
Max.	176	19	90	7	8.0	20.9	8.7
Min.	82	9	71	4	7.8	15.6	1.2
October							
Mean	83	12	94	<4	8.2	16.0	4.4
Max.	131	14	182	4	8.3	17.0	9.5
Min.	54	8	61	<3	7.9	15.0	2.3
November							
Mean	90	25	90	* 6 < 7 < 19	7.9	10.8	3.9
Max.	129	63	130	>16	8.2	12.5	5.0
Min.	57	8	67	<3	7.7	5.1	2.1
December							
Mean	63	13	75	7	8.0	7.1	7.9
Max.	71	15	80	9	8.1	8.9	9.4
Min.	58	11	73	5	8.0	5.1	6.5
Annual							
Mean	84	15	89	<6	8.2	14.9	3.0
Max.	176	63	182	>16	9.0	23.0	9.5
Min.	50	3	61	1	7.5	5.1	1.0
Limits							

The less than value of "< 6" was calculated using zero for the <3 and 16 for the > 16.

*The greater than value of "< 19" was calculated using 3 for the < 3 and 63 for the > 16, since the soluble carbonaceous BOD can't exceed the soluble BOD.

TABLE 3.8

PALMDALE WATER RECLAMATION PLANT

2004 EFFLUENT TO LAWA SITE (PONDS 2-7) MONTHLY DATA

TEST	MONTHLY PARAMETERS	UNIT	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean	Max.	Min.	LIMIT
155	Total Dissolved Solids	mg/l	490	514	499	522	530	562	557	558	531	501	489	492	520	562	489	
201	Ammonia	mg-N/l	26.6	24.1	24.0	22.3	22.6	20.4	20.8	21.3	19.5	20.1	20.2	21.8	22.0	26.6	19.5	
202	Organic Nitrogen	mg-N/l	13.4	15.1	12.8	12.55	15.0	12.5	14.9	10.0	14.0	11.9	14.0	12.1	13.2	15.1	10.0	
203	Kjeldahl Nitrogen	mg-N/l	40	39.2	36.8	34.8	37.6	32.9	35.7	31.4	33.5	32.0	34.2	33.9	35.2	40	31.4	
204	Nitrate	mg-N/l	<0.04	0.06	<0.07	<0.22	<0.18	0.20	0.16	0.08	<0.17	0.09	0.13	0.08	<0.12	<.22	<.04	
205	Nitrite	mg-N/l	<0.02	0.024	0.04	<0.13	0.21	0.23	0.20	0.15	0.14	0.13	0.07	<0.03	<0.11	0.27	<0.02	
257	Sulfate	mg/l	67	63	69.0	73	72.7	73.6	73.1	72.8	65.8	65.6	60.8	66.4	69	73.6	60.8	
301	Chloride	mg/l	107	101	102	112	113	118	122	123	114	119	116	115	113	123	101	
315	MBAS	mg/l	0.3	0.15	0.16	0.17	0.15	0.2	0.17	0.1	0.2	0.1	0.16	0.2	0.2	0.3	0.1	[1]
723	Sodium	mg/l	111	116	107	127	131	138	136	144	123	125	126	114	125	144	107	

[1] 30-day average=1.0 mg/l Maximum=2.0 mg/l

TABLE 3.9

PALMDALE WATER RECLAMATION PLANT

2004 EFFLUENT TO LAWA SITE (PONDS 2-7) QUARTERLY DATA

TEST	QUARTERLY COMPOSITE SAMPLES	UNIT	1st Quarter		2nd Quarter			3rd Quarter			4th Quarter			Mean	Max	Min
			Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
405	Total Organic Carbon	µg/l	120000	NA	26000	18000	21300	15600	21300	17100	17100	14500	18300	28920	120000	15600
703	Calcium	mg/l	26.7	25.2	28.2	27.8	32.3	29.7	30.4	52.5	30.0	29.5	29.3	31.1	52.5	25.2
704	Magnesium	mg/l	9.5	10.1	11.0	11.2	12.4	12.1	13.2	10.8	10.8	10.6	12.8	11.3	13.2	9.5
705	Arsenic	mg/l	NA	NA	NA	0.0020	NA	NA	<0.001	NA	NA	<0.001	NA	<0.001	0.002	<0.001
708	Cadmium	mg/l	NA	NA	NA	<0.0004	NA	NA	<0.0004	NA	NA	<0.0004	NA	<0.0004	<0.0004	<0.0004
709	Total Chromium	mg/l	NA	NA	NA	<0.010	NA	NA	<0.010	NA	NA	<0.010	NA	<0.010	<0.010	<0.010
714	Lead	mg/l	NA	NA	NA	<0.002	NA	NA	<0.002	NA	NA	<0.002	NA	<0.002	<0.002	<0.002
717	Mercury	mg/l	NA	NA	NA	<0.00004	NA	NA	<0.00004	NA	NA	<0.0004	NA	<0.00004	<0.00004	<0.00004
718	Nickel	mg/l	NA	NA	NA	<0.020	NA	NA	<0.020	NA	NA	<0.020	NA	<0.020	<0.020	<0.020
719	Potassium	mg/l	13.4	<10	12.9	15.9	16.3	13.4	13.8	15.9	16.0	14.2	13.1	<14.1	16.3	<10
722	Silver	mg/l	NA	NA	NA	0.00058	NA	NA	<0.0002	NA	NA	<0.00020	NA	<0.00033	0.00058	<0.00020
725	Antimony	mg/l	NA	NA	NA	<0.0005	NA	NA	<0.0005	NA	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005
726	Beryllium	mg/l	NA	NA	NA	<0.0005	NA	NA	<0.0005	NA	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005
734	Thallium	mg/l	NA	NA	NA	<0.001	NA	NA	<0.001	NA	NA	<0.001	NA	<0.001	<0.001	<0.001
TEST	**QUARTERLY GRAB SAMPLES**	**UNIT**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Mean**	**Max**	**Min**
C15	Total Petroleum Hydrocarbons	µg/l	460	NA	NA	<500	NA	NA	740	NA	NA	560	NA	<565	740	460
408	Oil and Grease	mg/l	6.8	NA	NA	<4	NA	NA	5.9	NA	NA	<4	NA	<5	6.8	<4
602	Chloroform	µg/l	<0.5	NA	NA	<0.5	NA	NA	<0.5	NA	NA	<1	NA	<0.6	<1	<0.5
608	Bromodichloromethane	µg/l	<0.5	NA	NA	<0.5	NA	NA	<0.5	NA	NA	<1	NA	<0.6	<1	<0.5
609	Dibromochloromethane	µg/l	<0.5	NA	NA	<0.5	NA	NA	<0.5	NA	NA	<1	NA	<0.6	<1	<0.5
610	Bromoform	µg/l	<0.5	NA	NA	<0.5	NA	NA	<0.5	NA	NA	<1	NA	<0.6	<1	<0.5

NA - Not Analyzed

TABLE 3.10

PALMDALE WATER RECLAMATION PLANT

2004 EFFLUENT TO LAWA SITES (PONDS 2-7) ANNUAL DATA

TEST	ANNUAL MISCELLANEOUS PARAMETERS	UNIT	DECEMBER
206	Total Cyanides	µg/l	<5
312	Total Phenols	µg/l	<12
TEST	**ANNUAL ACID EXTRACTIBLES**	**UNIT**	**DECEMBER**
845	2-Chlorophenol	µg/l	<5
847	2,4-Dichlorophenol	µg/l	<5
848	2,4-Dimethylphenol	µg/l	<2
849	2,4-Dinitrophenol	µg/l	<5
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5
851	2-Nitrophenol	µg/l	<10
852	4-Nitrophenol	µg/l	<10
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1
854	Pentachlorophenol	µg/l	<1
855	Phenol	µg/l	<1
856	2,4,6-Trichlorophenol	µg/l	<10
TEST	**ANNUAL PESTICIDES & PCBs**	**UNIT**	**DECEMBER**
502	PP'-DDE	µg/l	<0.01
504	PP'-DDD	µg/l	<0.01
506	PP'-DDT	µg/l	<0.01
508	Alpha-BHC	µg/l	<0.01
509	Lindane (Gamma-BHC)	µg/l	<0.01
510	Heptachlor	µg/l	<0.01
511	Heptachlor Epoxide	µg/l	<0.01
512	Aldrin	µg/l	<0.01
513	Dieldrin	µg/l	<0.01
514	Endrin	µg/l	<0.01
515	Toxaphene	µg/l	<0.5
519	Aroclor 1242	µg/l	<0.1
520	Aroclor 1254	µg/l	<0.05
523	Beta-BHC	µg/l	<0.01
524	Delta-BHC	µg/l	<0.01
531	Endosulfan I	µg/l	<0.01
532	Endosulfan II	µg/l	<0.01
533	Endosulfan Sulfate	µg/l	<0.01
534	Endrin Aldehyde	µg/l	<0.04
535	Aroclor 1016	µg/l	<0.1
536	Aroclor 1221	µg/l	<0.3
537	Aroclor 1232	µg/l	<0.1
538	Aroclor 1248	µg/l	<0.1
539	Aroclor 1260	µg/l	<0.1
540	Technical Chlordane	µg/l	<0.05

TABLE 3.10

PALMDALE WATER RECLAMATION PLANT

2004 EFFLUENT TO LAWA SITES (PONDS 2-7) ANNUAL DATA

TEST	ANNUAL VOLATILE ORGANICS	UNIT	DECEMBER
601	Methylene Chloride	µg/l	<0.5
602	Chloroform	µg/l	<0.5
603	1,1,1-Trichloroethane	µg/l	<0.5
604	Carbon Tetrachloride	µg/l	<0.5
605	1,1-Dichloroethene	µg/l	<0.5
606	Trichloroethylene	µg/l	<0.5
607	Tetrachloroethylene	µg/l	<0.5
608	Bromodichloromethane	µg/l	<0.5
609	Dibromochloromethane	µg/l	<0.5
610	Bromoform	µg/l	<0.5
611	Chlorobenzene	µg/l	<0.5
612	Vinyl Chloride	µg/l	<0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5
616	1,1-Dichloroethane	µg/l	<0.5
618	1,1,2-Trichloroethane	µg/l	<0.5
619	1,2-Dichloroethane	µg/l	<0.5
620	Benzene	µg/l	<0.5
621	Toluene	µg/l	<0.5
624	Ethyl Benzene	µg/l	<0.5
645	Trans-1,2-Dichloroethylene	µg/l	<0.5
646	Bromomethane	µg/l	<0.5
647	Chloroethane	µg/l	<0.5
648	2-Chloroethylvinylether	µg/l	<0.5
649	Chloromethane	µg/l	<0.5
650	1,2-Dichloropropane	µg/l	<0.5
651	Cis-1,3-Dichloropropene	µg/l	<0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5
654	Acrolein	µg/l	<2
655	Acrylonitrile	µg/l	<2
662	Methyl Tertiary Butyl Ether	µg/l	<0.5

TABLE 3.10

PALMDALE WATER RECLAMATION PLANT

2004 EFFLUENT TO LAWA SITES (PONDS 2-7) ANNUAL DATA

TEST	ANNUAL BASE/NEUTRAL EXTRACTIBLES	UNIT	DECEMBER
800	Acenaphthene	µg/l	<1
801	Acenaphthylene	µg/l	<10
802	Anthracene	µg/l	<10
803	Benzidine	µg/l	<5
804	Benzoanthracene	µg/l	<5
805	Benzopyrene	µg/l	<0.06
806	Benzo(b)fluoranthene	µg/l	<0.06
807	1,12-Benzoperylene	µg/l	<5
808	Benzo(k)fluoranthene	µg/l	<0.06
809	Bis(2-chloroethoxy)methane	µg/l	<5
810	Bis(2-Chloroethyl)ether	µg/l	<1
811	Bis(2-chloroisopropyl)ether	µg/l	<2
812	Bis(2-diethylhexyl)phthalate	µg/l	<10
813	4-Bromophenyl Phenyl Ether	µg/l	<5
814	Butylbenzyl Phthalate	µg/l	<10
815	2-Chloronaphthalene	µg/l	<10
816	4-Chlorophenyl Phenyl Ether	µg/l	<5
817	Chrysene	µg/l	<0.06
818	1,2,5,6-Dibenzanthracene	µg/l	<0.06
819	1,2-Dichlorobenzene	µg/l	<2
820	1,3-Dichlorobenzene	µg/l	<1
821	1,4-Dichlorobenzene	µg/l	<1
822	3,3'-Dichlorobenzidine	µg/l	<5
823	Diethyl Phthalate	µg/l	<2
824	Dimethyl Phthalate	µg/l	<2
825	Di-n-Butyl Phthalate	µg/l	<10
826	2,4-Dinitrotoluene	µg/l	<5
827	2,6-Dinitrotoluene	µg/l	<5
828	Di-n-Octyl Phthalate	µg/l	<10
829	1,2-Diphenylhydrazine	µg/l	<1
830	Fluoranthene	µg/l	<1
831	Fluorene	µg/l	<10
832	Hexachlorobenzene	µg/l	<1
833	Hexachlorobutadiene	µg/l	<1
834	Hexachlorocyclopentadiene	µg/l	<5
835	Hexachloroethane	µg/l	<1
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.06
837	Isophorone	µg/l	<1
838	Naphthalene	µg/l	<1
839	Nitrobenzene	µg/l	<1
840	n-Nitrosodimethylamine	µg/l	<5
841	n-Nitrosodi-n-propylamine	µg/l	<5
842	Phenanthrene	µg/l	<5
843	Pyrene	µg/l	<10
844	2,3,7,8-TCDD	µg/l	<4.4
846	1,2,4-Trichlorobenzene	µg/l	<5
857	n-Nitrosodiphenylamine	µg/l	<1

PALMDALE WATER RECLAMATION PLANT

FIGURE 3.1 – 3.7

GRAPHICAL SUMMARIES

FIGURE 3.1
PALMDALE WATER RECLAMATION PLANT

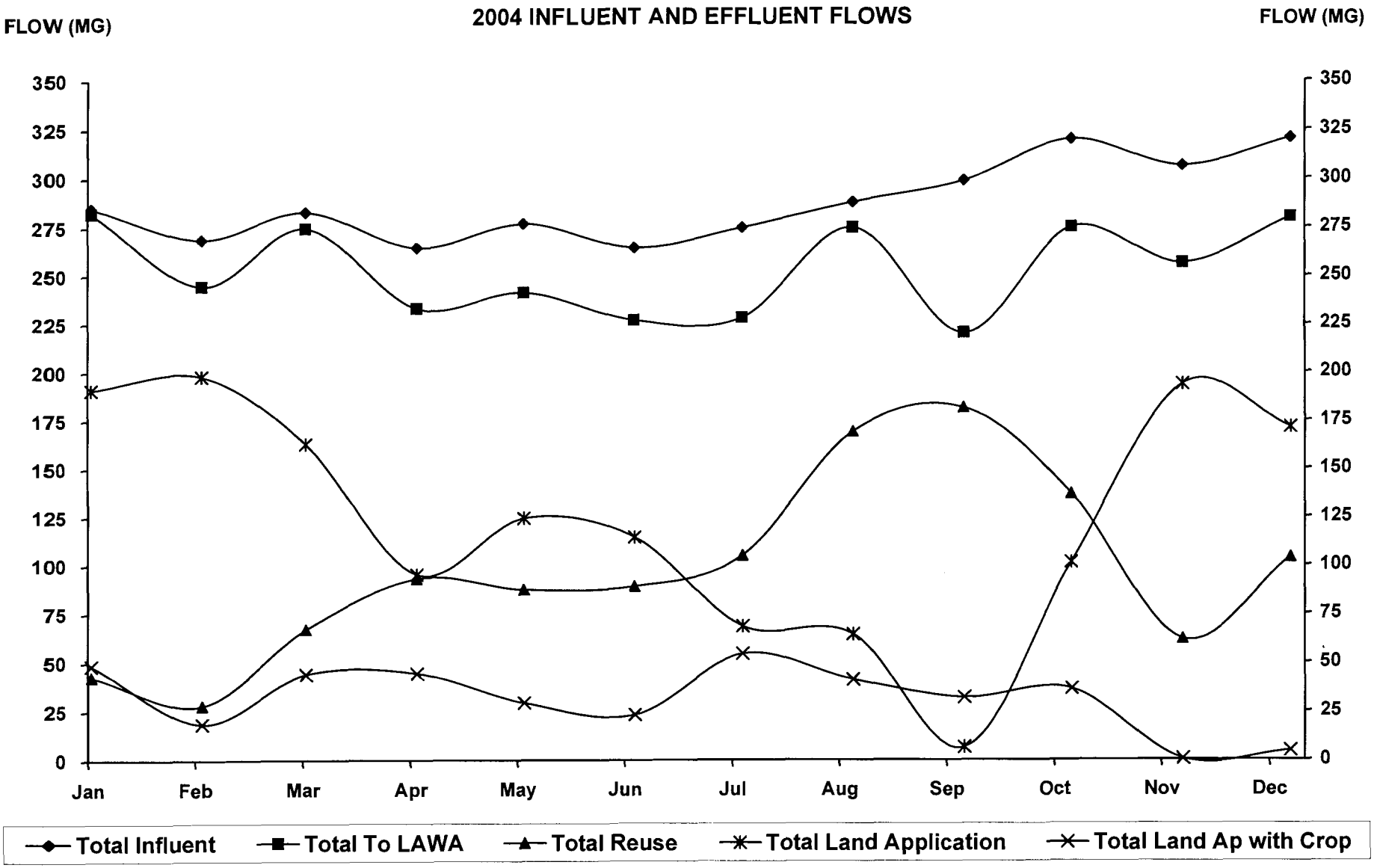


FIGURE 3.2
PALMDALE WATER RECLAMATION PLANT

2004 AVERAGE FREEBOARD

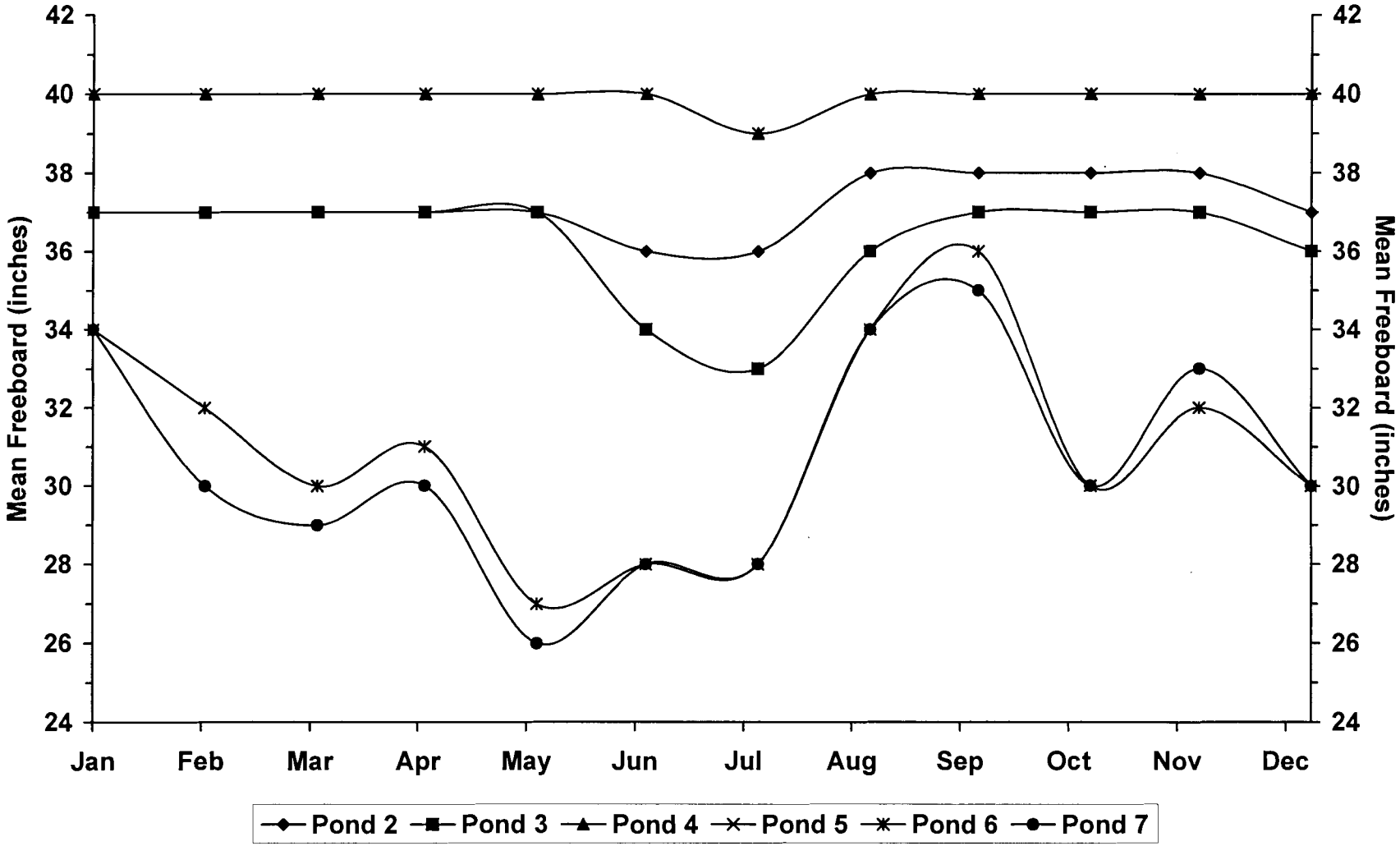


FIGURE 3.3
PALMDALE WATER RECLAMATION PLANT

2004 MINIMUM FREEBOARD

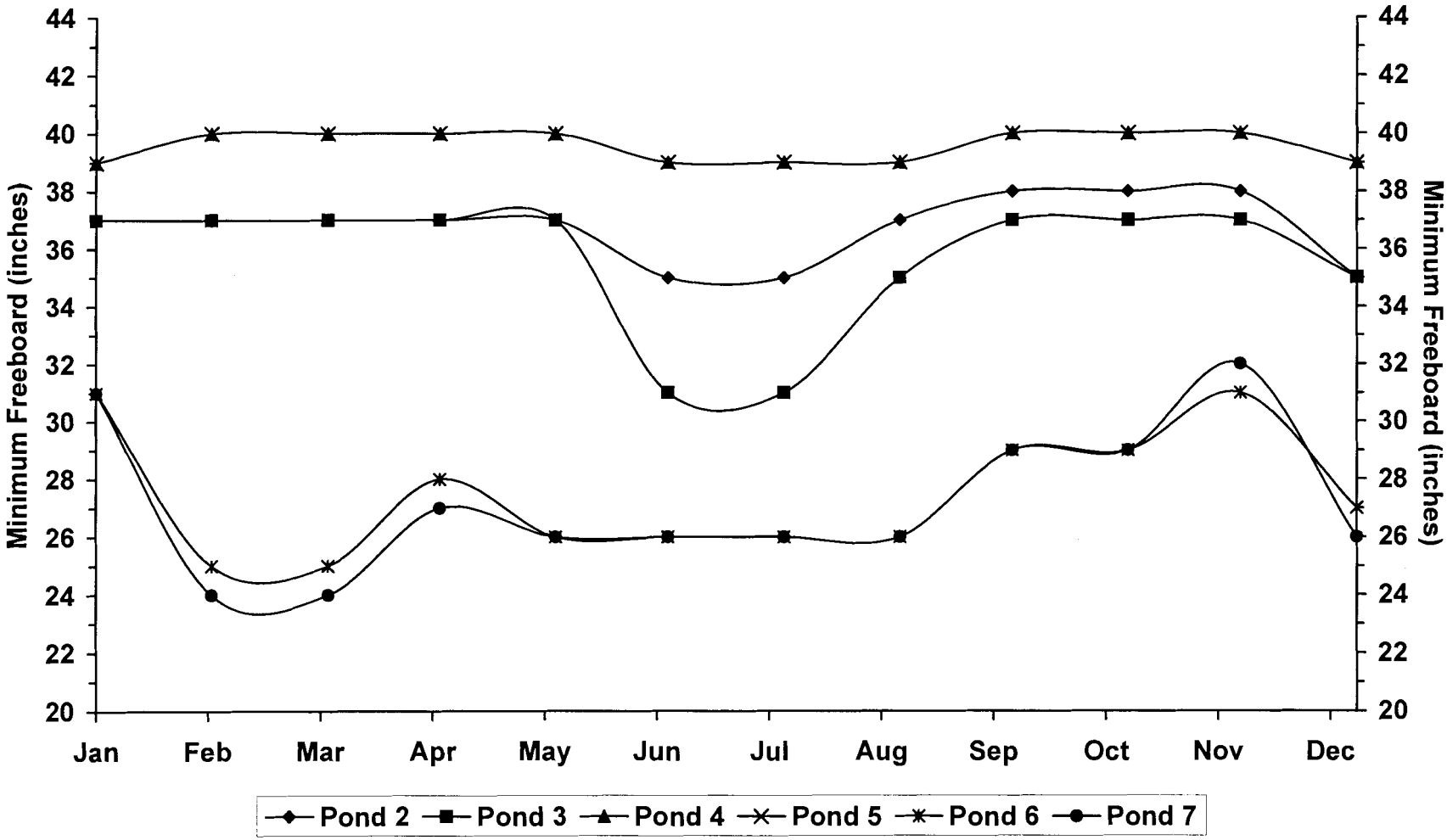


FIGURE 3.4
PALMDALE WATER RECLAMATION PLANT

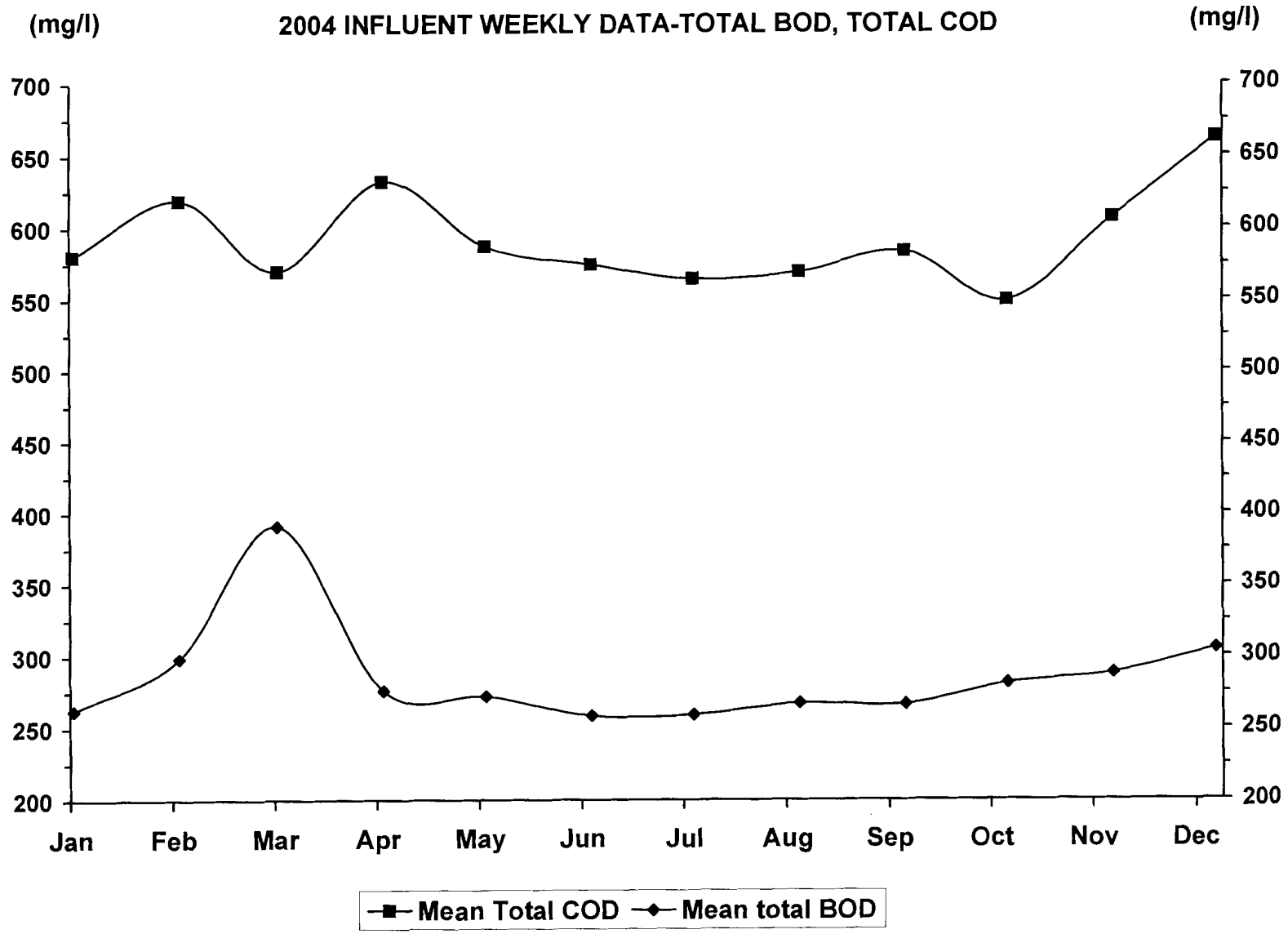


TABLE 3.5
PALMDALE WATER RECLAMATION PLANT

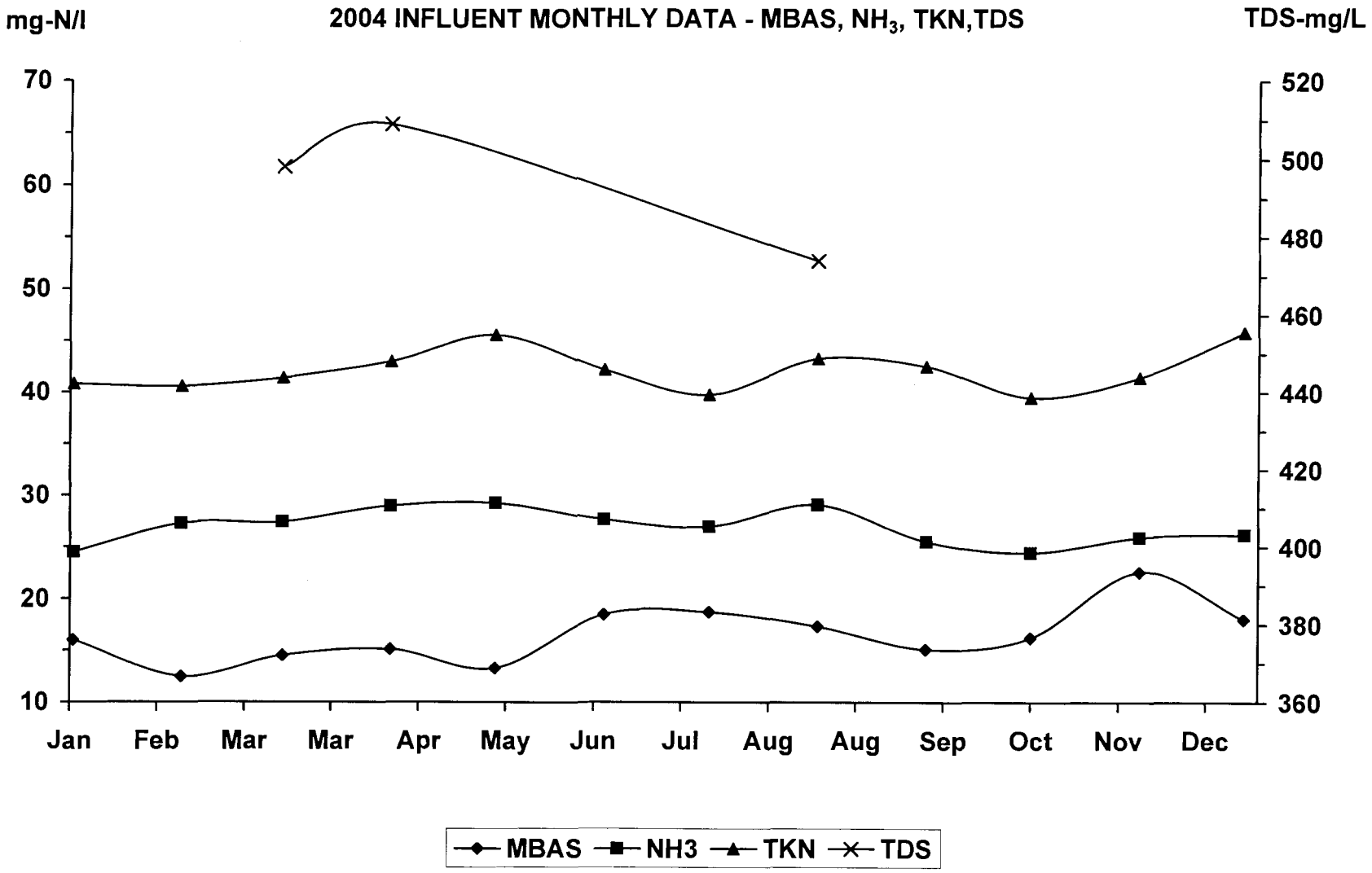


FIGURE 3.6
PALMDALE WATER RECLAMATION PLANT

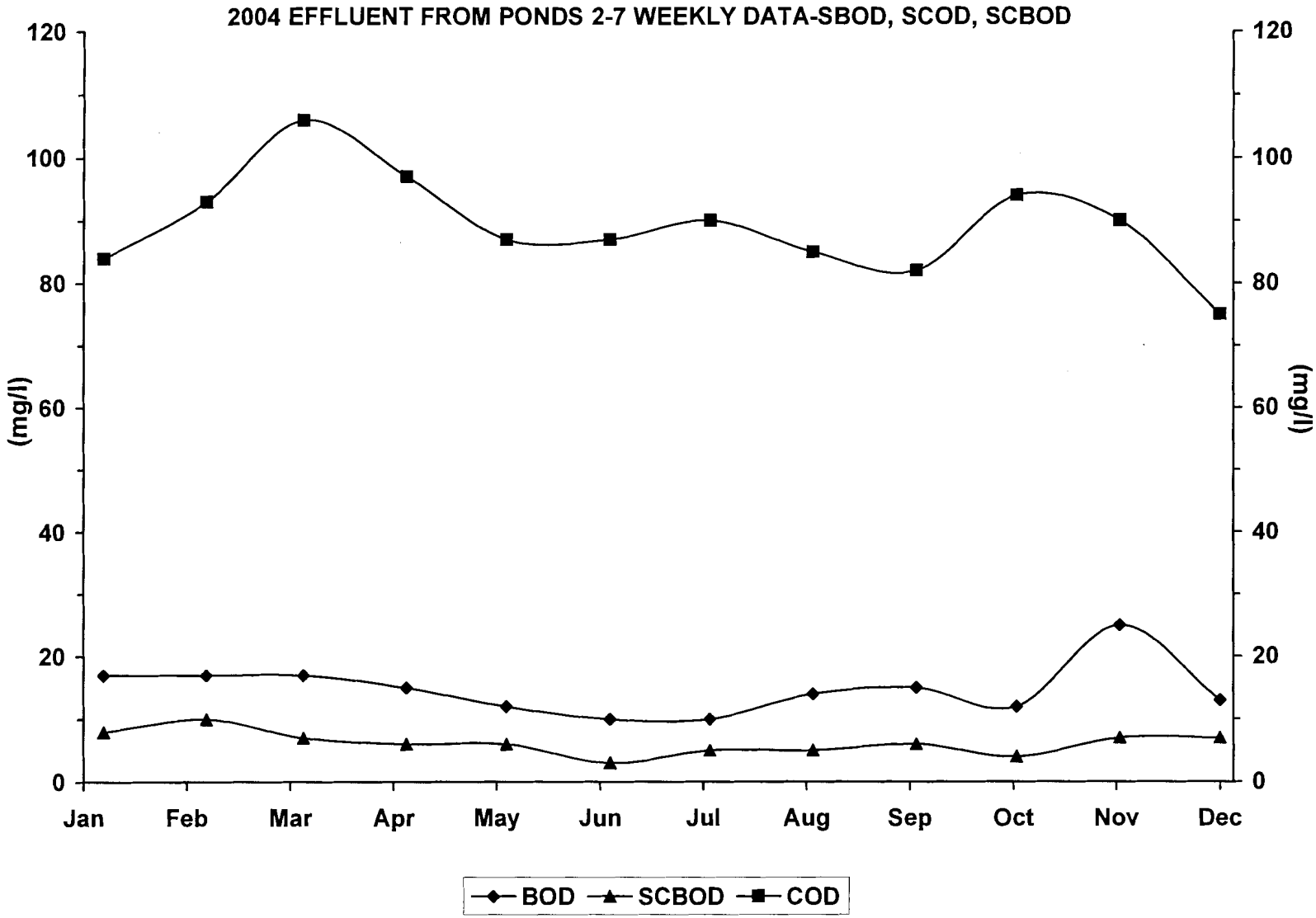
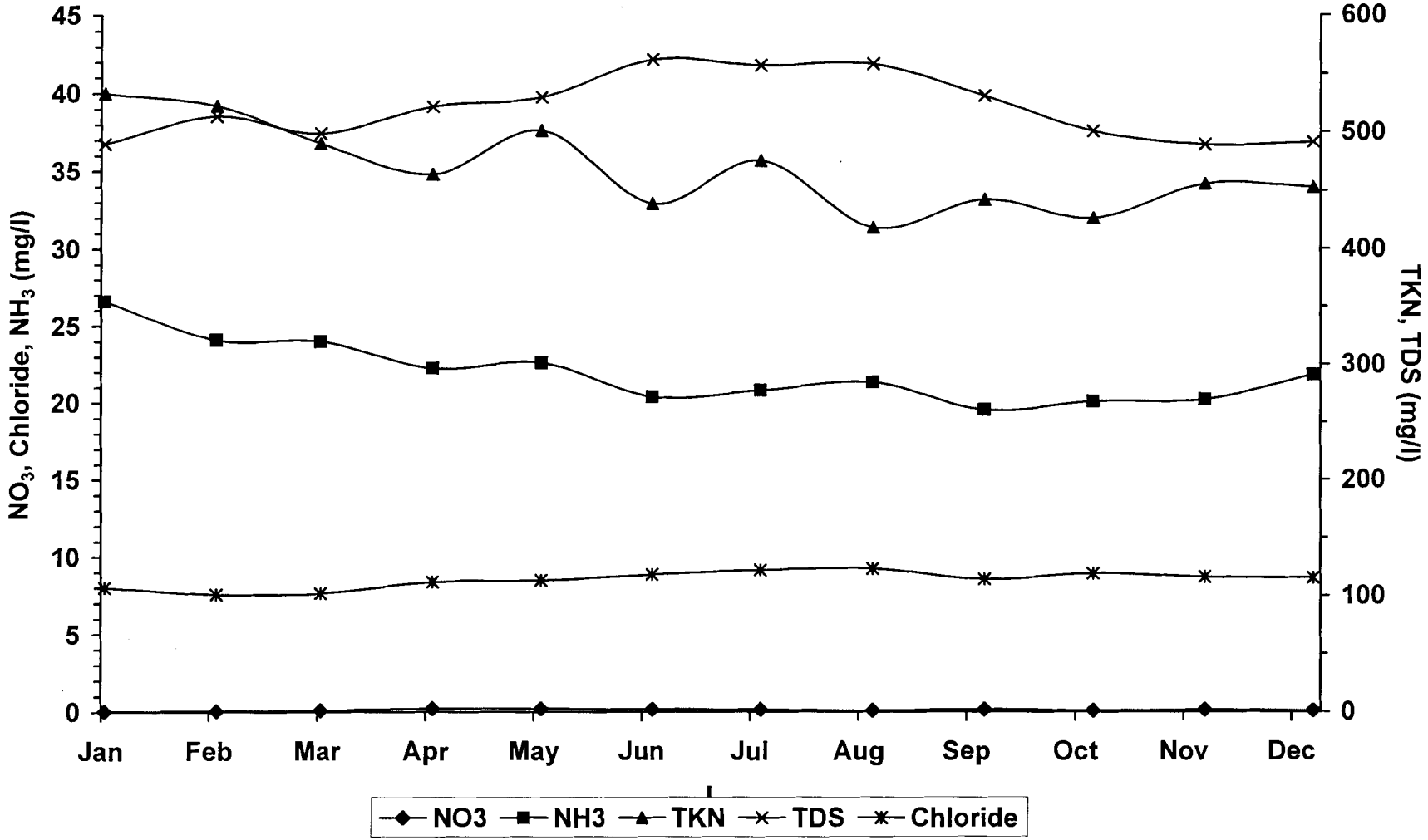


FIGURE 3.7
PALMDALE WATER RECLAMATION PLANT

2004 EFFLUENT FROM PONDS 2-7 MONTHLY DATA- TDS, CHLORIDE, NO_3^-, NH_3, TKN



PALMDALE WATER RECLAMATION PLANT

CHAPTER 4

GROUNDWATER AND LYSIMETER MONITORING DATA

CHAPTER 4

GROUNDWATER and LYSIMETER DATA

4.1 INTRODUCTION

This chapter contains water quality data for the monitoring and supply wells, and lysimeters at the Palmdale WRP EMS. The data are summarized in tables. Historical graphs of selected data are also presented in this chapter. All data are presented together with WDR limits. For the purpose of calculating annual averages, data that are collected during the same month are averaged first, and the average level for that month is entered in the calculation along with the data taken during the remainder of the year. In calculating averages, levels below the Minimum Detection Limit (MDL), or Reporting Minimum Limit (RML) are assumed to be equal to the MDL or RML, and not zero. Additional data for follow-up samples are presented for the month these were collected, or for the month where compliance was assessed.

The data summaries may contain results that were not reported in monthly monitoring reports. Additional data can result from sampling conducted for purposes other than routine monitoring. The additional sampling may have been performed by other agencies (i.e., WQCB), or by the District for a special study, or as a sampling follow-up to a questionable sample.

4.2 TABULAR AND GRAPHICAL SUMMARIES

Data are summarized in Tables 4.1 – 4.55. The Tables summarize and present the results for the month the samples were collected. Quarterly and Annual data are reported in separate Tables for each well. Annual data are separated into the following categories: miscellaneous parameters, metals, pesticides and PCBs, volatile organics, acid extractible organics and base/neutral extractible organics. The column with the header "LIMIT" contains primary or secondary standards from the California Code of Regulations Title 22.

Figure 4-1 shows the locations of the wells and lysimeters. Figure 4-2 shows the estimated groundwater elevation and groundwater flow direction. Historical, including 2004, data of selected parameters are summarized in Figures 4.3 – 4.74. Levels below the MDL or RML are presented as the numerical levels of the MDL or RML.

TABLE 4.1

2004 QUARTERLY DATA

SUPPLY WELL SW1

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	Average	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	µmhos/cm	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	186	184	185	186	184	1000 [2]
201	Ammonia	mg-N/l	<0.01	< 0.1	< 0.1	< 0.1	< 0.01	
203	Kjeldahl Nitrogen	mg-N/l	0.3	< 0.2	<0.3	0.3	< 0.2	
204	Nitrate	mg-N/l	1.11	1.22	1.17	1.22	1.11	10 [3]
205	Nitrite	mg-N/l	<0.02	< 0.02	< 0.02	< 0.02	< 0.02	10 [3]
257	Sulfate	mg/l	13	16.4	15	16.4	13.0	500 [4]
301	Chloride	mg/l	7	9.1	8	9.1	7	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	NA	<500	<500	<500	
723	Sodium	mg/l	23	13.0	18	23	13.0	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.2

2004 ANNUAL DATA

SUPPLY WELL SW1

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<10	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	25.6	
704	Magnesium	mg/l	5.7	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.038	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	<0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.018	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.2

2004 ANNUAL DATA

SUPPLY WELL SW1

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	mg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	mg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.2

2004 ANNUAL DATA

SUPPLY WELL SW1

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000011	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.3

2004 QUARTERLY DATA

SUPPLY WELL SW2

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	AUGUST	NOVEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	µmhos/cm	NA	NA	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	306	320	250	310	297	320	250	1000 [2]
201	Ammonia	mg-N/l	<0.1	< 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	< 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	5.23	5.45	5.21	5.53	5.36	5.53	5.21	10 [3]
205	Nitrite	mg-N/l	<0.02	< 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	40.5	43.6	39.7	41.3	41.3	43.6	39.7	500 [4]
301	Chloride	mg/l	39.2	38	35.4	37.9	37.6	39.2	35.4	500 [4]
315	MBAS	mg/l	<0.1	< 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	< 500	670	<500	<543	670	<500	
723	Sodium	mg/l	28.9	22.5	28.2	28.9	27.1	28.9	22.5	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed
* - Incomplete

TABLE 4.4

2004 ANNUAL DATA

SUPPLY WELL SW2

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	mg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	55.5	
704	Magnesium	mg/l	11.0	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.084	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	<0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.0001	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.016	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.4

2004 ANNUAL DATA

SUPPLY WELL SW2

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.4

2004 ANNUAL DATA

SUPPLY WELL SW2

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.000001	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.5

2004 QUARTERLY DATA

SUPPLY WELL SW5

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	SEPTEMBER	NOVEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	µmhos/cm	NA	NA	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	358	214	363	339	319	363.0	214	1000 [2]
201	Ammonia	mg-N/l	<0.01	0.1	<0.1	<0.1	<0.08	0.1	<0.01	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	< 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	3.98	4.35	4.58	4.64	4.39	4.64	3.98	10 [3]
205	Nitrite	mg-N/l	<0.02	< 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	48	51.4	50.7	51.2	50	51.4	48	500 [4]
301	Chloride	mg/l	64.3	63.7	62.9	63.9	63.7	64.3	62.9	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	NA	<500	500	<500	500	<500	
723	Sodium	mg/l	44.8	31	41.2	28.4	36.4	44.8	28.4	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.6

2004 ANNUAL DATA

SUPPLY WELL SW5

TEST	ANNUAL MRP PARAMETERS	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<10	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	57.7	
704	Magnesium	mg/l	11.6	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.091	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.119	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	0.0012	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.423	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.6

2004 ANNUAL DATA

SUPPLY WELL SW5

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.6

2004 ANNUAL DATA

SUPPLY WELL SW5

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.00000086	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.6

2004 QUARTERLY DATA

SUPPLY WELL SW7

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	SEPTEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	mmhos/cm	NA	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	238	236	271	248	271	236	1000 [2]
201	Ammonia	mg-N/l	<0.1	< 0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	< 0.2	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	3.34	3.01	3.68	3.34	3.68	3.01	10 [3]
205	Nitrite	mg-N/l	<0.02	< 0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	30.5	43.1	31.4	35.0	43.1	30.5	500 [4]
301	Chloride	mg/l	23.4	21.3	26.1	23.6	26.1	21.3	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	mg/l	<500	550	<500	517	550	<500	
723	Sodium	mg/l	21.8	15.3	23.1	20.1	23.1	15.3	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.7

2004 ANNUAL DATA

SUPPLY WELL SW7

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<12	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	42.4	
704	Magnesium	mg/l	9.3	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.066	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.669	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	0.005	0.05
717	Mercury	mg/l	<0.0001	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	<0.01	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.7

2004 ANNUAL DATA

SUPPLY WELL SW7

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	mg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.7

2004 ANNUAL DATA

SUPPLY WELL SW7

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.00000099	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.9

2004 QUARTERLY DATA

SUPPLY WELL SW8

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	AUGUST	NOVEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	µmhos/cm	NA	NA	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	224	238	320	202	246	320	202	1000 [2]
201	Ammonia	mg-N/l	<0.1	< 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	< 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	2.41	2.73	2.45	1.51	2.28	2.73	1.51	10 [3]
205	Nitrite	mg-N/l	<0.02	< 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	30.2	32.3	28.6	24.8	29.0	32.3	24.8	500 [4]
301	Chloride	mg/l	18.5	20.2	19.2	14	18	20.2	14	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	<500	<500	<500	<500	<500	<500	
723	Sodium	mg/l	23.5	17.6	22.2	21.4	21.2	23.5	17.6	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.10

2004 ANNUAL DATA

SUPPLY WELL SW8

TEST	ANNUAL MRP PARAMETERS	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<12	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	38.8	
704	Magnesium	mg/l	7.6	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.056	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	<0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.0001	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.012	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.10

2004 ANNUAL DATA

SUPPLY WELL SW8

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.10

2004 ANNUAL DATA

SUPPLY WELL SW8

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000011	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.11

2004 QUARTERLY DATA

SUPPLY WELL SW9

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	Average	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	µmhos/cm	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	229	375	302	375	229	1000 [2]
201	Ammonia	mg-N/l	<0.01	< 0.1	<0.06	< 0.1	<0.01	
203	Kjeldahl Nitrogen	mg-N/l	0.4	< 0.2	<0.3	0.4	< 0.2	
204	Nitrate	mg-N/l	2.58	2.86	2.72	2.86	2.58	10 [3]
205	Nitrite	mg-N/l	<0.02	< 0.02	< 0.02	< 0.02	< 0.02	10 [3]
257	Sulfate	mg/l	21	25.3	23	25.3	21	500 [4]
301	Chloride	mg/l	17.8	17.3	17.6	17.8	17.3	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	520	<510	520	<500	
723	Sodium	mg/l	26.2	12.9	19.6	26.2	12.9	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.12

2004 ANNUAL DATA

SUPPLY WELL SW9

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<10	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	41.3	
704	Magnesium	mg/l	8.5	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.053	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	<0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.015	5
725	Antimony	mg/l	0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.12

2004 ANNUAL DATA

SUPPLY WELL SW9

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.12

2004 ANNUAL DATA

SUPPLY WELL SW9

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.89	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.13

2004 QUARTERLY DATA

SUPPLY WELL SW10

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	AUGUST	SEPTEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	µmhos/cm	NA	NA	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	716	696	NA	714	709	716	696	1000 [2]
201	Ammonia	mg-N/l	<0.01	< 0.1	NA	<0.1	<0.06	< 0.1	<0.01	
203	Kjeldahl Nitrogen	mg-N/l	0.6	< 0.2	NA	<0.2	<0.3	0.6	< 0.2	
204	Nitrate	mg-N/l	13.3	13.1	NA	12.9	13.1	13.3	12.9	10 [3]
205	Nitrite	mg-N/l	<0.02	< 0.02	NA	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	114	92.7	NA	90.2	99.0	114	90.2	500 [4]
301	Chloride	mg/l	119	113.9	NA	105	113	119	105	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	750	NA	920	920	863	920	750	
723	Sodium	mg/l	45.9	36.0	NA	42	41	45.9	36.0	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.14

2004 ANNUAL DATA

SUPPLY WELL SW10

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<10	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	145	
704	Magnesium	mg/l	32.6	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.211	1
707	Aluminum	mg/l	0.11	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	0.015	1
713	Iron	mg/l	0.316	0.3
714	Lead	mg/l	0.003	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.061	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.14

2004 ANNUAL DATA

SUPPLY WELL SW10

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.14

2004 ANNUAL DATA

SUPPLY WELL SW10

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.00000079	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.15

2004 QUARTERLY DATA

SUPPLY WELL SW13

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	Average	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	µmhos/cm	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	188	228	208	228	188	1000 [2]
201	Ammonia	mg-N/l	<0.01	< 0.1	< 0.1	< 0.1	< 0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	< 0.2	< 0.2	< 0.2	< 0.2	
204	Nitrate	mg-N/l	2.4	2.93	2.7	2.93	2.4	10 [3]
205	Nitrite	mg-N/l	<0.02	< 0.02	< 0.02	< 0.02	< 0.02	10 [3]
257	Sulfate	mg/l	22	49.5	36	49.5	22	500 [4]
301	Chloride	mg/l	15.6	41.7	28.7	41.7	15.6	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	<500	<500	<500	<500	
723	Sodium	mg/l	24	11.2	18	24	11.2	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.16

2004 ANNUAL DATA

SUPPLY WELL SW13

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<13	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	36.3	
704	Magnesium	mg/l	7.2	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.051	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	0.012	1
713	Iron	mg/l	0.091	0.3
714	Lead	mg/l	0.003	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.02	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.16

2004 ANNUAL DATA

SUPPLY WELL SW13

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.16

2004 ANNUAL DATA

SUPPLY WELL SW13

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.00000071	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.17

2004 QUARTERLY DATA

SUPPLY WELL SWH2

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	SEPTEMBER	OCTOBER	DECEMBER	Mean	Max	Min	LIMIT
1S1	pH	0-14	NA	NA	NA	NA	NA	NA	NA	NA	
1S2	Temperature	°C	NA	NA	NA	NA	NA	NA	NA	NA	
1S3	Dissolved Oxygen	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	
1S4	Electrical Conductivity	µmhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	1600 [1]
900	Depth to Groundwater	ft	NA	NA	NA	NA	NA	NA	NA	NA	
155	Total Dissolved Solids	mg/l	121	154	154	NA	123	138	154	121	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	0.34	<0.2	NA	<0.2	<0.2	0.34	<0.2	
204	Nitrate	mg-N/l	0.87	0.64	0.58	NA	0.62	0.68	0.87	0.58	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	16.1	16.1	16.4	15.9	16.8	16.3	16.8	15.9	500 [4]
301	Chloride	mg/l	8.8	8.3	7.7	7.6	7.9	8.1	8.8	7.6	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	<500	<500	NA	<500	<500	<500	<500	
723	Sodium	mg/l	29.9	33.2	24.9	NA	37.7	31.4	37.7	24.9	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.18

2004 ANNUAL DATA

SUPPLY WELL SWH2

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	22.6	
704	Magnesium	mg/l	1.3	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.023	1
707	Aluminum	mg/l	0.06	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.012	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.18

2004 ANNUAL DATA

SUPPLY WELL SWH2

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	

TABLE 4.18

2004 ANNUAL DATA

SUPPLY WELL SWH2

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000047	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.19

2004 QUARTERLY DATA

MONITORING WELL MW2

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	JULY	SEPTEMBER	NOVEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	8.56	7.99	NA	8.93	7.96	8.36	8.93	7.96	
1S2	Temperature	°C	21.69	20.19	NA	19.6	19.1	20.1	21.69	19.05	
1S3	Dissolved Oxygen	mg/l	3.66	0.32	NA	0.85	7.05	3.0	7.05	0.32	
1S4	Electrical Conductivity	µmhos/cm	201	214	NA	189	193	199	214	189	1600 [1]
900	Depth to Groundwater	ft	504.35	510.74	507.65	510.08	506.66	507.90	510.74	504.35	
155	Total Dissolved Solids	mg/l	154	136	NA	118	125	133	154	118	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	0.8	NA	<0.2	<0.2	<0.4	0.8	<0.2	
204	Nitrate	mg-N/l	0.37	0.32	NA	<0.04	0.36	<0.3	0.37	<0.04	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	26	16.8	NA	4.6	16.5	16	26	4.6	500 [4]
301	Chloride	mg/l	2.5	4	NA	3.8	4.2	4	4.2	2.5	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	2500	NA	830	710	<500	<1135	2500	<500	
723	Sodium	mg/l	36.9	32.4	NA	33.3	39.8	35.6	39.8	32.4	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.20

2004 ANNUAL DATA

MONITORING WELL MW2

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	140	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	14.5	
704	Magnesium	mg/l	1.6	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.025	1
707	Aluminum	mg/l	1.99	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	0.015	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	1.55	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	0.035	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.032	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	0.027	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.20

2004 ANNUAL DATA

MONITORING WELL MW2

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.20

2004 ANNUAL DATA

MONITORING WELL MW2

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.00000077	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.21

2004 QUARTERLY DATA

MONITORING WELL MW4

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	MAY	JUNE	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.48	NA	7.43	7.53	7.29	7.43	7.53	7.43	
1S2	Temperature	°C	18.25	NA	17.68	18.25	14.3	17.11	18.25	14.3	
1S3	Dissolved Oxygen	mg/l	4.26	NA	2.52	6.73	8.53	5.51	8.53	4.26	
1S4	Electrical Conductivity	mmhos/cm	1099	NA	444	1040	989	893	1099	444	1600 [1]
900	Depth to Groundwater	ft	269.87	271.9	272.5	NA	269.85	271.0	272.5	269.85	
155	Total Dissolved Solids	mg/l	586	NA	626	637	664	628	664	586	1000 [2]
201	Ammonia	mg-N/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	NA	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	10.7	NA	7.57	11.2	5.51	8.75	11.2	5.51	10 [3]
205	Nitrite	mg-N/l	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	66	NA	74.8	73.6	37.1	63	74.8	37.1	500 [4]
301	Chloride	mg/l	107	NA	105	105	51.7	92.2	107	51.7	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	mg/l	760	NA	1260	1130	1070	1055	1260	760	
723	Sodium	mg/l	68.4	NA	65.7	63.8	68.5	66.6	68.5	63.8	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.22

2004 ANNUAL DATA

MONITORING WELL MW4

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	119	
704	Magnesium	mg/l	27.3	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.187	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	<0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	<0.01	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.22

2004 ANNUAL DATA

MONITORING WELL MW4

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.22

2004 ANNUAL DATA

MONITORING WELL MW4

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000011	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.23

2004 QUARTERLY DATA

MONITORING WELL MW15

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	JULY	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.37	7.78	NA	7.79	7.56	7.63	7.79	7.37	
1S2	Temperature	°C	17.29	17.04	NA	16.25	17.2	16.94	17.19	16.3	
1S3	Dissolved Oxygen	mg/l	2.74	2.65	NA	3.8	8.73	4.48	8.73	2.65	
1S4	Electrical Conductivity	µmhos/cm	379	356	NA	309.8	483	382	483	309.8	1600 [1]
900	Depth to Groundwater	ft	310	316.84	316.84	NA	315.20	315	316.84	310	
155	Total Dissolved Solids	mg/l	218	246	NA	243	301	252	301	218	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	<0.1	NA	<0.2	0.84	<0.3	0.84	<0.1	
204	Nitrate	mg-N/l	4.77	4.52	NA	3.73	8.88	5.48	8.88	3.73	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	23.5	22	NA	21.5	29.9	24	29.9	21.5	500 [4]
301	Chloride	mg/l	31.6	37.2	NA	39.4	60.2	42.1	60.2	31.6	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	560	NA	2700	2600	650	1628	2700	560	
723	Sodium	mg/l	19.4	13.3	NA	20.7	23.3	19.2	23.3	13.3	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.24

2004 ANNUAL DATA

MONITORING WELL MW15

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	42.2	
704	Magnesium	mg/l	9.2	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.059	1
707	Aluminum	mg/l	0.46	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	0.011	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.401	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	0.007	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.017	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.24

2004 ANNUAL DATA

MONITORING WELL MW15

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.24

2004 ANNUAL DATA

MONITORING WELL MW15

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000032	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.25

2004 QUARTERLY DATA

MONITORING WELL MW16

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	JULY	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.64	8.38	NA	7.93	7.77	7.93	8.38	7.64	
1S2	Temperature	°C	16.54	16.35	NA	16.12	16.8	16.5	16.81	16.1	
1S3	Dissolved Oxygen	mg/l	2.7	2.02	NA	2.8	8.38	4.0	8.38	2.02	
1S4	Electrical Conductivity	mmhos/cm	223.3	191	NA	201	229	211	223.3	191	1600 [1]
900	Depth to Groundwater	ft	310.03	312.84	312.84	NA	315.36	312.74	315.36	310	
155	Total Dissolved Solids	mg/l	113	142	NA	142	116	128	142	113	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	NA	<0.1	1	<0.3	1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	<0.2	NA	<0.2	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	1.03	0.72	NA	0.53	1.28	0.89	1.28	0.53	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	15.5	15.6	NA	15.6	15.5	15.6	15.6	15.5	500 [4]
301	Chloride	mg/l	6.11	4.7	NA	4	5.5	5	6	4	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	NA	970	1840	<500	<953	1840	<500	
723	Sodium	mg/l	16.9	10.1	NA	17.1	18.5	15.7	18.5	10.1	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.26

2004 ANNUAL DATA

MONITORING WELL MW16

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<50	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	24.5	
704	Magnesium	mg/l	5.8	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.04	1
707	Aluminum	mg/l	0.79	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.65	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	0.011	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.02	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.26

2004 ANNUAL DATA

MONITORING WELL MW16

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.26

2004 ANNUAL DATA

MONITORING WELL MW16

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000026	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.27

2004 QUARTERLY DATA

MONITORING WELL MW18

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	JULY	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.88	7.85	NA	7.57	7.87	7.79	7.88	7.57	
1S2	Temperature	°C	19.34	18.54	NA	17.14	15.9	17.72	19.34	15.9	
1S3	Dissolved Oxygen	mg/l	3.37	2.89	NA	0.79	8	4	8	0.79	
1S4	Electrical Conductivity	µmhos/cm	681.1	572	NA	568	589	603	681.1	568	1600 [1]
900	Depth to Groundwater	ft	318.65	321.95	321.95	NA	325.19	321.94	325.19	318.65	
155	Total Dissolved Solids	mg/l	405	369	NA	361	338	368	405	338	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.02	<0.2	NA	<0.2	0.39	<0.2	0.39	<0.02	
204	Nitrate	mg-N/l	8.87	6.08	NA	4.27	6.02	6.31	8.87	4.27	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	69.4	59.9	NA	63.1	65.8	64.6	69.4	59.9	500 [4]
301	Chloride	mg/l	53	44.5	NA	43.9	45.2	47	53	43.9	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	560	NA	1680	4610	710	1890	4610	560	
723	Sodium	mg/l	30.6	23.3	NA	29.6	24.3	27.0	30.6	23.3	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.28

2004 ANNUAL DATA

MONITORING WELL MW18

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<12	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	83.4	
704	Magnesium	mg/l	17.4	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.124	1
707	Aluminum	mg/l	0.09	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	0.011	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.143	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.018	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.28

2004 ANNUAL DATA

MONITORING WELL MW18

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.28

2004 ANNUAL DATA

MONITORING WELL MW18

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000031	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.29

2004 QUARTERLY DATA

MONITORING WELL MW20

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	8.56	7.58	8.01	7.46	7.90	8.56	7.46	
1S2	Temperature	°C	21.69	19.11	19.04	16.4	19.05	21.69	16.4	
1S3	Dissolved Oxygen	mg/l	3.66	3.16	7.02	8.4	5.6	8.4	3.16	
1S4	Electrical Conductivity	µmhos/cm	201	1093	1019	992	826	1093	201	1600 [1]
900	Depth to Groundwater	ft	265.6	265.9	265.6	264.83	265.5	265.9	264.83	
155	Total Dissolved Solids	mg/l	632	717	654	682	671	717	632	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	13.5	11.6	12.9	14.20	13.1	14.20	11.6	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	63	79.1	77.4	79.4	75	79.4	63	500 [4]
301	Chloride	mg/l	120	116	116	110	116	120	110	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	670	1240	1070	950	983	1070	670	
723	Sodium	mg/l	44.5	44.1	38.6	45	43	45	38.6	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.30

2004 ANNUAL DATA

MONITORING WELL MW20

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	129	
704	Magnesium	mg/l	28.6	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.18	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	<0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.01	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.30

2004 ANNUAL DATA

MONITORING WELL MW20

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.30

2004 ANNUAL DATA

MONITORING WELL MW20

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.00000086	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.31

2004 QUARTERLY DATA

MONITORING WELL MW21

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	AUGUST	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.49	7.00	NA	7.82	7.64	7.49	7.82	7.00	
1S2	Temperature	°C	17.19	17.17	NA	16.9	15.78	16.76	17.19	15.78	
1S3	Dissolved Oxygen	mg/l	3.22	3.43	NA	2.99	7.6	4.31	7.6	2.99	
1S4	Electrical Conductivity	µmhos/cm	500	568.1	NA	528	460	514	568.1	460	1600 [1]
900	Depth to Groundwater	ft	316.09	321.93	321.93	NA	322.16	320.53	322.16	316.09	
155	Total Dissolved Solids	mg/l	286	348	NA	334	278	312	348	278	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	<0.2	NA	<0.2	0.34	<0.2	0.34	<0.2	
204	Nitrate	mg-N/l	8.57	9.33	NA	8.08	7.13	8.28	9.33	7.13	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	43.3	48.9	NA	49.3	38.2	44.9	49.3	38.2	500 [4]
301	Chloride	mg/l	35.1	48	NA	39.8	29.6	38	48	29.6	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	NA	890	1450	540	<845	1450	<500	
723	Sodium	mg/l	23.3	18.9	NA	19.9	17.2	19.8	23.3	17.2	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.32

2004 ANNUAL DATA

MONITORING WELL MW21

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<12	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	58.8	
704	Magnesium	mg/l	12.3	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.078	1
707	Aluminum	mg/l	0.09	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.117	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.015	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.1	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.32

2004 ANNUAL DATA

MONITORING WELL MW21

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.32

2004 ANNUAL DATA

MONITORING WELL MW21

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000028	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.33

2004 QUARTERLY DATA

MONITORING WELL MW22

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	MAY	JUNE	SEPTEMBER	OCTOBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	6.95	NA	7.57	7.70	NA	7.30	7.38	7.70	6.95	
1S2	Temperature	°C	19.27	NA	19.11	18.82	NA	17.96	18.79	19.27	17.96	
1S3	Dissolved Oxygen	mg/l	3.71	NA	5.03	3.27	NA	9.31	5.33	9.31	3.27	
1S4	Electrical Conductivity	µmhos/cm	908.7	NA	872	830	NA	885	874	908.7	830	1600 [1]
900	Depth to Groundwater	ft	294.35	295.10	295.33	NA	NA	296.30	295.27	296.30	294.35	
155	Total Dissolved Solids	mg/l	551	NA	590	539	NA	501	545	590	501	1000 [2]
201	Ammonia	mg-N/l	<0.1	NA	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	NA	<0.2	<0.2	NA	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	9.87	NA	9.51	9.94	NA	3.05	8.09	9.94	3.05	10 [3]
205	Nitrite	mg-N/l	<0.02	NA	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	84.7	NA	72.8	72.1	NA	75.7	76.3	84.7	72.1	500 [4]
301	Chloride	mg/l	94.2	NA	91.6	89.1	NA	93.1	92.0	94.2	89.1	500 [4]
315	MBAS	mg/l	<0.1	NA	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	580	NA	NA	810	890	1100	845	1100	580	
723	Sodium	mg/l	34.6	NA	29.3	35.0	NA	34.4	33.3	35.0	29.3	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.34

2004 ANNUAL DATA

MONITORING WELL MW22

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	46	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	106	
704	Magnesium	mg/l	21	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.183	1
707	Aluminum	mg/l	0.52	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.496	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	0.008	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.016	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.34

2004 ANNUAL DATA

MONITORING WELL MW22

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.34

2004 ANNUAL DATA

MONITORING WELL MW22

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000026	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.35

2004 QUARTERLY DATA

MONITORING WELL MW23

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	SEPTEMBER	OCTOBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	8.18	8.41	7.55	NA	7.73	7.97	8.41	7.55	
1S2	Temperature	°C	20.40	20.57	20.45	NA	17.46	19.72	20.57	17.46	
1S3	Dissolved Oxygen	mg/l	2.58	2.65	3.51	NA	7.61	4.09	7.61	2.58	
1S4	Electrical Conductivity	µmhos/cm	417	423	404	NA	401	411	423	401	1600 [1]
900	Depth to Groundwater	ft	312.24	310.25	NA	NA	312.91	311.80	312.91	310.25	
155	Total Dissolved Solids	mg/l	261	256	228	NA	234	245	261	228	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	0.3	<0.2	NA	<0.2	<0.2	0.3	<0.2	
204	Nitrate	mg-N/l	4.16	3.64	4.02	NA	3.33	2.53	4.16	3.33	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	38.1	33.70	34.1	NA	31.5	34.4	38.1	31.5	500 [4]
301	Chloride	mg/l	36.6	40.9	40.9	NA	37.6	39.0	40.9	36.6	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	NA	520	510	<500	508	520	<500	
723	Sodium	mg/l	29.4	24.0	25.6	NA	23.6	25.7	29.4	23.6	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.36

2004 ANNUAL DATA

MONITORING WELL MW23

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<12	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	45	
704	Magnesium	mg/l	5.3	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.052	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	<0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.015	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.1	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.36

2004 ANNUAL DATA

MONITORING WELL MW23

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.36

2004 ANNUAL DATA

MONITORING WELL MW23

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000043	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.37

2004 QUARTERLY DATA

MONITORING WELL MW24

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	MAY	JUNE	JULY	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	8.07	NA	7.60	NA	7.94	7.81	7.86	8.07	7.60	
1S2	Temperature	°C	19.05	NA	19.07	NA	18.78	16.43	18.33	19.07	16.43	
1S3	Dissolved Oxygen	mg/l	2.39	NA	2.15	NA	2.99	9.21	4.19	9.21	2.15	
1S4	Electrical Conductivity	µmhos/cm	257	NA	262	NA	244	273	259.00	273	244	1600 [1]
900	Depth to Groundwater	ft	313.74	314.62	315.11	315.11	NA	319.15	315.55	319.15	313.74	
155	Total Dissolved Solids	mg/l	165	NA	177	NA	170	159	168	177	159	1000 [2]
201	Ammonia	mg-N/l	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	NA	<0.2	NA	<0.2	1.12	0.4	1.12	<0.2	
204	Nitrate	mg-N/l	0.90	NA	0.90	NA	0.65	1.00	0.86	1.00	0.65	10 [3]
205	Nitrite	mg-N/l	<0.02	NA	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	30.0	NA	27.1	NA	26.5	27.8	27.9	30.0	26.5	500 [4]
301	Chloride	mg/l	5	NA	7.2	NA	6.9	8.1	7	8.1	5	500 [4]
315	MBAS	mg/l	<0.1	NA	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	560	NA	NA	<500	1410	<500	<743	1410	<500	
723	Sodium	mg/l	19.0	NA	12.6	NA	19.9	21.4	18.2	21.4	12.6	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.38

2004 ANNUAL DATA

MONITORING WELL MW24

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<50	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	27.3	
704	Magnesium	mg/l	6.6	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.042	1
707	Aluminum	mg/l	0.31	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.303	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.013	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.1	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.38

2004 ANNUAL DATA

MONITORING WELL MW24

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.38

2004 ANNUAL DATA

MONITORING WELL MW24

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000049	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.39

2004 QUARTERLY DATA

MONITORING WELL MW25

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	SEPTEMBER	OCTOBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.69	8.18	7.75	N/A	7.87	8.18	7.69	
1S2	Temperature	°C	22.25	22.29	20.85	N/A	21.80	22.29	20.85	
1S3	Dissolved Oxygen	mg/l	2.65	2.21	2.70	N/A	2.52	2.70	2.21	
1S4	Electrical Conductivity	µmhos/cm	457.4	451	323	N/A	410	457.4	323	1600 [1]
900	Depth to Groundwater	ft	330.79	331.12	331.35	N/A	331.09	330.79	331.12	
155	Total Dissolved Solids	mg/l	275	278	262	N/A	272	278	262	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	N/A	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	0.2	<0.2	N/A	<0.2	0.2	<0.2	
204	Nitrate	mg-N/l	6.68	5.88	4.92	N/A	5.83	6.68	4.92	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	<0.02	N/A	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	33.5	30.4	28.7	N/A	30.9	33.5	28.7	500 [4]
301	Chloride	mg/l	34.1	32.2	29.7	N/A	32.0	34.1	29.7	500 [4]
315	MBAS	mg/l	<0.1	NA	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	1100	NA	3680	620	1800	3680	620	
723	Sodium	mg/l	40.6	34.3	40.9	N/A	38.6	40.9	34.3	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.40

2004 ANNUAL DATA

MONITORING WELL MW25

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	41	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	45.8	
704	Magnesium	mg/l	6.2	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.055	1
707	Aluminum	mg/l	0.18	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.169	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.016	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.1	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.40

2004 ANNUAL DATA

MONITORING WELL MW25

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	0.6	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.40

2004 ANNUAL DATA

MONITORING WELL MW25

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000033	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.41

2004 QUARTERLY DATA

MONITORING WELL MW26

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.31	7.32	7.44	7.51	7.40	7.51	7.31	
1S2	Temperature	°C	17.51	18.44	17.55	17.25	17.69	18.44	17.25	
1S3	Dissolved Oxygen	mg/l	2.33	4.39	3.19	6.30	4.05	6.30	2.33	
1S4	Electrical Conductivity	µmhos/cm	414.2	1107	465	314	575	1107	314	1600 [1]
900	Depth to Groundwater	ft	315.45	320.40	NA	320.42	318.76	320.42	315.45	
155	Total Dissolved Solids	mg/l	224	258	280	277	260	280	224	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	<0.2	<0.2	0.28	<0.2	0.28	<0.2	
204	Nitrate	mg-N/l	6.01	5.51	6.32	6.24	6.02	6.32	5.51	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	37.9	34.6	39.2	36.1	37.0	39.2	34.6	500 [4]
301	Chloride	mg/l	27.0	31.7	36.8	32.3	32.0	36.8	27.0	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	510	870	780	600	690	870	510	
723	Sodium	mg/l	22.2	19.4	20.4	17.9	20.0	22.2	17.9	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.42

2004 ANNUAL DATA

MONITORING WELL MW26

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	45.9	
704	Magnesium	mg/l	9.3	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.064	1
707	Aluminum	mg/l	0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	<0.05	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.015	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.1	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.42

2004 ANNUAL DATA

MONITORING WELL MW26

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.42

2004 ANNUAL DATA

MONITORING WELL MW26

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.000003	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.43

2004 QUARTERLY DATA

MONITORING WELL MW27

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	SEPTEMBER	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.52	7.49	7.76	7.57	7.59	7.76	7.49	
1S2	Temperature	°C	17.55	17.53	17.53	17.52	17.53	17.55	17.52	
1S3	Dissolved Oxygen	mg/l	3.01	2.98	1.59	8.51	4.02	8.51	1.59	
1S4	Electrical Conductivity	µmhos/cm	292.8	298	310	454	339	454	292.8	1600 [1]
900	Depth to Groundwater	ft	315.20	321.20	NA	321.14	319.18	321.20	315.20	
155	Total Dissolved Solids	mg/l	174	191	195	195	189	195	174	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	<0.2	<0.2	0.42	<0.3	0.42	<0.2	
204	Nitrate	mg-N/l	2.19	1.76	2.73	1.47	2.04	2.73	1.76	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	25.9	21.6	25.6	24.9	24.5	25.9	21.6	500 [4]
301	Chloride	mg/l	12.2	11.7	15.4	12.7	13.0	15.4	11.7	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	1470	580	570	<780	1470	<500	
723	Sodium	mg/l	20.3	14.8	17.3	15.7	17.0	20.3	14.8	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.44

2004 ANNUAL DATA

MONITORING WELL MW27

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<12	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	32.7	
704	Magnesium	mg/l	6.7	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.047	1
707	Aluminum	mg/l	0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.057	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	0.008	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	0.0012	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.021	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.1	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.44

2004 ANNUAL DATA

MONITORING WELL MW27

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.44

2004 ANNUAL DATA

MONITORING WELL MW27

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000026	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.45

2004 QUARTERLY DATA

MONITORING WELL MW28

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	JUNE	SEPTEMBER	NOVEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	8.21	7.56	7.97	7.18	7.73	8.21	7.18	
1S2	Temperature	°C	18.97	20.04	18.87	18.90	19.20	20.04	18.87	
1S3	Dissolved Oxygen	mg/l	4.43	1.32	3.90	4.04	3.42	4.43	1.32	
1S4	Electrical Conductivity	mmhos/cm	456.6	488	385	465	449	488	385	1600 [1]
900	Depth to Groundwater	ft	312.45	337.90	NA	309.32	319.89	337.90	309.32	
155	Total Dissolved Solids	mg/l	271	294	322	334	305	334	271	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
204	Nitrate	mg-N/l	5.49	5.56	6.82	9.99	6.97	9.99	5.49	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.2	<0.02	<0.02	<0.07	<0.2	<0.02	10 [3]
257	Sulfate	mg/l	45.5	44.8	43.6	46.4	45.1	46.4	43.6	500 [4]
301	Chloride	mg/l	43	45.0	44.5	47.5	45	47.5	43	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	mg/l	520	670	620	650	615	670	520	
723	Sodium	mg/l	31.5	31.6	32.6	20.4	29.0	32.6	20.4	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.46

2004 ANNUAL DATA

MONITORING WELL MW28

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<50	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	50.4	
704	Magnesium	mg/l	5.5	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.056	1
707	Aluminum	mg/l	<0.05	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.057	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	<0.005	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.019	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.46

2004 ANNUAL DATA

MONITORING WELL MW28

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.46

2004 ANNUAL DATA

MONITORING WELL MW28

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	2.4	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000032	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.47

2004 QUARTERLY DATA

MONITORING WELL MW29

TEST	QUARTERLY MRP PARAMETERS	UNIT	MARCH	APRIL	Average	Max	Min	LIMIT
1S1	pH	0-14	7.69	8.38	8.04	8.38	7.69	
1S2	Temperature	°C	21.01	21.20	21.11	21.20	21.01	
1S3	Dissolved Oxygen	mg/l	2.91	1.05	1.98	2.91	1.05	
1S4	Electrical Conductivity	µmhos/cm	206	195	201	206	195	1600 [1]
900	Depth to Groundwater	ft	310.25	317.70	313.98	317.70	310.25	
155	Total Dissolved Solids	mg/l	125	159	142	159	125	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	1.1	<0.2	<0.7	1.1	<0.2	
204	Nitrate	mg-N/l	0.42	0.37	0.40	0.42	0.37	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	17.7	17.3	17.5	17.7	17.3	500 [4]
301	Chloride	mg/l	1.0	4.4	2.7	4.4	1.0	500 [4]
315	MBAS	mg/l	<0.1	NA	NA	NA	NA	0.50
405	Total Organic Carbon	µg/l	<500	NA	NA	NA	NA	
723	Sodium	mg/l	26.6	16.9	21.8	26.6	16.9	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.48

2004 ANNUAL DATA

MONITORING WELL MW29

TEST	ANNUAL MRP PARAMETERS (MISCELLANEOUS)	UNIT	MARCH	LIMIT
C15	Total Petroleum Hydrocarbons	µg/l	<60	
206	Total Cyanides	µg/l	<5	200
312	Total Phenols	µg/l	<11	
TEST	**ANNUAL MRP PARAMETERS (METALS)**	**UNIT**	**MARCH**	**LIMIT**
703	Calcium	mg/l	19	
704	Magnesium	mg/l	1.7	
705	Arsenic	mg/l	<0.001	0.05
706	Barium	mg/l	0.027	1
707	Aluminum	mg/l	0.15	1
708	Cadmium	mg/l	<0.0004	0.005
709	Total Chromium	mg/l	<0.01	0.05
711	Cobalt	mg/l	<0.01	
712	Copper	mg/l	<0.008	1
713	Iron	mg/l	0.16	0.3
714	Lead	mg/l	<0.002	
716	Manganese	mg/l	0.016	0.05
717	Mercury	mg/l	<0.00004	0.002
718	Nickel	mg/l	<0.02	0.1
719	Potassium	mg/l	<10	
720	Selenium	mg/l	<0.001	0.05
722	Silver	mg/l	<0.0002	0.1
724	Zinc	mg/l	0.013	5
725	Antimony	mg/l	<0.0005	0.006
726	Beryllium	mg/l	<0.0005	0.004
732	Molybdenum	mg/l	<0.04	
734	Thallium	mg/l	<0.001	0.002
737	Vanadium	mg/l	<0.02	
TEST	**ANNUAL MRP PARAMETERS (PESTICIDES & PCBs)**	**UNIT**	**MARCH**	**LIMIT**
502	PP'-DDE	µg/l	<0.01	
504	PP'-DDD	µg/l	<0.01	
506	PP'-DDT	µg/l	<0.01	
508	Alpha-BHC	µg/l	<0.01	
509	Lindane (Gamma-BHC)	µg/l	<0.01	0.2
510	Heptachlor	µg/l	<0.01	0.01
511	Heptachlor Epoxide	µg/l	<0.01	0.01
512	Aldrin	µg/l	<0.01	
513	Dieldrin	µg/l	<0.01	
514	Endrin	µg/l	<0.01	2
515	Toxaphene	µg/l	<0.5	3
519	Aroclor 1242	µg/l	<0.1	
520	Aroclor 1254	µg/l	<0.05	
523	Beta-BHC	µg/l	<0.01	
524	Delta-BHC	µg/l	<0.01	
531	Endosulfan I	µg/l	<0.01	
532	Endosulfan II	µg/l	<0.01	
533	Endosulfan Sulfate	µg/l	<0.01	
534	Endrin Aldehyde	µg/l	<0.01	
535	Aroclor 1016	µg/l	<0.1	0.5
536	Aroclor 1221	µg/l	<0.1	0.5
537	Aroclor 1232	µg/l	<0.1	0.5
538	Aroclor 1248	µg/l	<0.1	0.5
539	Aroclor 1260	µg/l	<0.1	0.5
540	Technical Chlordane	µg/l	<0.05	0.1

TABLE 4.48

2004 ANNUAL DATA

MONITORING WELL MW29

TEST	ANNUAL MRP PARAMETERS (VOLATILE ORGANICS)	UNIT	MARCH	LIMIT
601	Methylene Chloride	µg/l	<0.5	
602	Chloroform	µg/l	<0.5	
603	1,1,1-Trichloroethane	µg/l	<0.5	200
604	Carbon Tetrachloride	µg/l	<0.5	0.5
605	1,1-Dichloroethene	µg/l	<0.5	6
606	Trichloroethylene	µg/l	<0.5	5
607	Tetrachloroethylene	µg/l	<0.5	5
608	Bromodichloromethane	µg/l	<0.5	
609	Dibromochloromethane	µg/l	<0.5	
610	Bromoform	µg/l	<0.5	
611	Chlorobenzene	µg/l	<0.5	70
612	Vinyl Chloride	µg/l	<0.5	0.5
613	o-Dichlorobenzene (1,2-Dichlorobenzene)	µg/l	<0.5	600
614	m-Dichlorobenzene (1,3-Dichlorobenzene)	µg/l	<0.5	
615	p-Dichlorobenzene (1,4-Dichlorobenzene)	µg/l	<0.5	5
616	1,1-Dichloroethane	µg/l	<0.5	5
618	1,1,2-Trichloroethane	µg/l	<0.5	5
619	1,2-Dichloroethane	µg/l	<0.5	0.5
620	Benzene	µg/l	<0.5	1
621	Toluene	µg/l	<0.5	150
624	Ethyl Benzene	µg/l	<0.5	700
645	Trans-1,2-Dichloroethylene	µg/l	<0.5	10
646	Bromomethane	µg/l	<0.5	
647	Chloroethane	µg/l	<0.5	
648	2-Chloroethylvinylether	µg/l	<0.5	
649	Chloromethane	µg/l	<0.5	
650	1,2-Dichloropropane	µg/l	<0.5	5
651	Cis-1,3-Dichloropropene	µg/l	<0.5	0.5
652	Trans-1,3-Dichloropropene	µg/l	<0.5	0.5
653	1,1,2,2-Tetrachloroethane	µg/l	<0.5	1
654	Acrolein	µg/l	<2	
655	Acrylonitrile	µg/l	<2	
662	Methyl Tertiary Butyl Ether	µg/l	<0.5	
TEST	**ANNUAL MRP PARAMETERS (ACID EXTRACTIBLES)**	**UNIT**	**MARCH**	**LIMIT**
845	2-Chlorophenol	µg/l	<5	
847	2,4-Dichlorophenol	µg/l	<5	
848	2,4-Dimethylphenol	µg/l	<2	
849	2,4-Dinitrophenol	µg/l	<5	
850	2-Methyl-4,6-Dinitrophenol (p-Chloro-m-Cresol)	µg/l	<5	
851	2-Nitrophenol	µg/l	<10	
852	4-Nitrophenol	µg/l	<10	
853	4-Chloro-3-Methylphenol (4,6-Dinitro-o-Cresol)	µg/l	<1	
854	Pentachlorophenol	µg/l	<5	1
855	Phenol	µg/l	<1	
856	2,4,6-Trichlorophenol	µg/l	<10	

TABLE 4.48

2004 ANNUAL DATA

MONITORING WELL MW29

TEST	ANNUAL MRP PARAMETERS (BASE/NEUTRAL EXTRACTIBLES)	UNIT	MARCH	LIMIT
800	Acenaphthene	µg/l	<1	
801	Acenaphthylene	µg/l	<10	
802	Anthracene	µg/l	<10	
803	Benzidine	µg/l	<5	
804	Benzoanthracene	µg/l	<5	
805	Benzopyrene	µg/l	<0.02	0.2
806	Benzo(b)fluoranthene	µg/l	<0.02	
807	1,12-Benzoperylene	µg/l	<5	
808	Benzo(k)fluoranthene	µg/l	<0.02	
809	Bis(2-chloroethoxy)methane	µg/l	<5	
810	Bis(2-Chloroethyl)ether	µg/l	<1	
811	Bis(2-chloroisopropyl)ether	µg/l	<2	
812	Bis(2-diethylhexyl)phthalate	µg/l	<2	4
813	4-Bromophenyl Phenyl Ether	µg/l	<5	
814	Butylbenzyl Phthalate	µg/l	<10	
815	2-Chloronaphthalene	µg/l	<10	
816	4-Chlorophenyl Phenyl Ether	µg/l	<5	
817	Chrysene	µg/l	<0.02	
818	1,2,5,6-Dibenzanthracene	µg/l	<0.02	
819	1,2-Dichlorobenzene	µg/l	<2	
820	1,3-Dichlorobenzene	µg/l	<1	
821	1,4-Dichlorobenzene	µg/l	<1	
822	3,3'-Dichlorobenzidine	µg/l	<5	
823	Diethyl Phthalate	µg/l	<2	
824	Dimethyl Phthalate	µg/l	<2	
825	Di-n-Butyl Phthalate	µg/l	<10	
826	2,4-Dinitrotoluene	µg/l	<5	
827	2,6-Dinitrotoluene	µg/l	<5	
828	Di-n-Octyl Phthalate	µg/l	<10	
829	1,2-Diphenylhydrazine	µg/l	<1	
830	Fluoranthene	µg/l	<1	
831	Fluorene	µg/l	<10	
832	Hexachlorobenzene	µg/l	<1	1
833	Hexachlorobutadiene	µg/l	<1	
834	Hexachlorocyclopentadiene	µg/l	<5	50
835	Hexachloroethane	µg/l	<1	
836	Indeno(1,2,3-c,d)pyrene	µg/l	<0.02	
837	Isophorone	µg/l	<1	
838	Naphthalene	µg/l	<1	
839	Nitrobenzene	µg/l	<1	
840	n-Nitrosodimethylamine	µg/l	<5	
841	n-Nitrosodi-n-propylamine	µg/l	<5	
842	Phenanthrene	µg/l	<5	
843	Pyrene	µg/l	<10	
844	2,3,7,8-TCDD	µg/l	<0.0000037	0.00003
846	1,2,4-Trichlorobenzene	µg/l	<5	70
857	n-Nitrosodiphenylamine	µg/l	<1	

TABLE 4.49

2004 QUARTERLY DATA

MONITORING WELL MW32

TEST	QUARTERLY MRP PARAMETERS	UNIT	DECEMBER	LIMIT
1S1	pH	0-14	7.69	
1S2	Temperature	°C	20.24	
1S3	Dissolved Oxygen	mg/l	7.74	
1S4	Electrical Conductivity	µmhos/cm	239	1600 [1]
900	Depth to Groundwater	ft	376.45	
155	Total Dissolved Solids	mg/l	127	1000 [2]
201	Ammonia	mg-N/l	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	
204	Nitrate	mg-N/l	0.44	10 [3]
205	Nitrite	mg-N/l	<0.02	10 [3]
257	Sulfate	mg/l	15.8	500 [4]
301	Chloride	mg/l	8.8	500 [4]
315	MBAS	mg/l	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	
723	Sodium	mg/l	37.8	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.50

2004 QUARTERLY DATA

MONITORING WELL MW33

TEST	QUARTERLY MRP PARAMETERS	UNIT	DECEMBER	LIMIT
1S1	pH	0-14	7.58	
1S2	Temperature	°C	18.95	
1S3	Dissolved Oxygen	mg/l	10.41	
1S4	Electrical Conductivity	µmhos/cm	663	1600 [1]
900	Depth to Groundwater	ft	340.14	
155	Total Dissolved Solids	mg/l	397	1000 [2]
201	Ammonia	mg-N/l	1.50	
203	Kjeldahl Nitrogen	mg-N/l	1.40	
204	Nitrate	mg-N/l	6.08	10 [3]
205	Nitrite	mg-N/l	<0.02	10 [3]
257	Sulfate	mg/l	54.2	500 [4]
301	Chloride	mg/l	82.4	500 [4]
315	MBAS	mg/l	<0.1	0.50
405	Total Organic Carbon	µg/l	950	
723	Sodium	mg/l	36.50	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.51

2004 QUARTERLY DATA

MONITORING WELL MW35

TEST	QUARTERLY MRP PARAMETERS	UNIT	DECEMBER	LIMIT
1S1	pH	0-14	7.73	
1S2	Temperature	°C	16.62	
1S3	Dissolved Oxygen	mg/l	10.21	
1S4	Electrical Conductivity	µmhos/cm	527	1600 [1]
900	Depth to Groundwater	ft	310.52	
155	Total Dissolved Solids	mg/l	300	1000 [2]
201	Ammonia	mg-N/l	1.13	
203	Kjeldahl Nitrogen	mg-N/l	0.84	
204	Nitrate	mg-N/l	2.59	10 [3]
205	Nitrite	mg-N/l	<0.02	10 [3]
257	Sulfate	mg/l	84.4	500 [4]
301	Chloride	mg/l	27.9	500 [4]
315	MBAS	mg/l	<0.1	0.50
405	Total Organic Carbon	µg/l	790	
723	Sodium	mg/l	30.1	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.52

2004 QUARTERLY DATA

MONITORING WELL MW37

TEST	QUARTERLY MRP PARAMETERS	UNIT	DECEMBER	LIMIT
1S1	pH	0-14	8.02	
1S2	Temperature	°C	17.87	
1S3	Dissolved Oxygen	mg/l	9.47	
1S4	Electrical Conductivity	µmhos/cm	279	1600 [1]
900	Depth to Groundwater	ft	332.56	
155	Total Dissolved Solids	mg/l	170	1000 [2]
201	Ammonia	mg-N/l	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	
204	Nitrate	mg-N/l	2.93	10 [3]
205	Nitrite	mg-N/l	<0.02	10 [3]
257	Sulfate	mg/l	20.8	500 [4]
301	Chloride	mg/l	10.9	500 [4]
315	MBAS	mg/l	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	
723	Sodium	mg/l	18.6	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.53

2004 QUARTERLY DATA

MONITORING WELL MW38

TEST	QUARTERLY MRP PARAMETERS	UNIT	JUNE	DECEMBER	Average	Max	Min	LIMIT
1S1	pH	0-14	7.84	7.93	7.89	7.93	7.84	
1S2	Temperature	°C	18.25	16.68	17.47	18.25	16.68	
1S3	Dissolved Oxygen	mg/l	7.76	8.24	8.00	8.24	7.76	
1S4	Electrical Conductivity	µmhos/cm	258	251	255	258	251	1600 [1]
900	Depth to Groundwater	ft	287.15	289.69	288.42	289.69	287.15	
155	Total Dissolved Solids	mg/l	143	134	139	143	134	1000 [2]
201	Ammonia	mg-N/l	<0.1	<0.1	<0.1	<0.1	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	0.28	<0.2	0.28	<0.2	
204	Nitrate	mg-N/l	0.64	5.31	2.98	5.31	0.64	10 [3]
205	Nitrite	mg-N/l	<0.02	<0.02	<0.02	<0.02	<0.02	10 [3]
257	Sulfate	mg/l	17.0	18.3	17.7	18.3	17.0	500 [4]
301	Chloride	mg/l	6.0	6.3	6.2	6.3	6.0	500 [4]
315	MBAS	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	0.50
405	Total Organic Carbon	µg/l	530	<500	<515	530	<500	
723	Sodium	mg/l	11.2	12.7	12.0	12.7	11.2	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.54

2004 QUARTERLY DATA

MONITORING WELL MW39

TEST	QUARTERLY MRP PARAMETERS	UNIT	JUNE	LIMIT
1S1	pH	0-14	7.74	
1S2	Temperature	°C	19.66	
1S3	Dissolved Oxygen	mg/l	8.21	
1S4	Electrical Conductivity	µmhos/cm	320	1600 [1]
900	Depth to Groundwater	ft	320.96	
155	Total Dissolved Solids	mg/l	186	1000 [2]
201	Ammonia	mg-N/l	<0.1	
203	Kjeldahl Nitrogen	mg-N/l	<0.2	
204	Nitrate	mg-N/l	1.5	10 [3]
205	Nitrite	mg-N/l	<0.02	10 [3]
257	Sulfate	mg/l	29.5	500 [4]
301	Chloride	mg/l	8.1	500 [4]
315	MBAS	mg/l	<0.1	0.50
405	Total Organic Carbon	µg/l	<500	
723	Sodium	mg/l	13.3	

[1] 900 recommended / 1600 upper / 2200 short term
[2] 500 recommended / 1000 upper / 1500 short term
[3] Nitrate+Nitrite = 10
[4] 250 recommended / 500 upper / 600 short term
NA - Not Analyzed

TABLE 4.55

PALMDALE WATER RECLAMATION PLANT

2004 LYSIMETER MONITORING DATA

			LYSIMETER LY1		LYSIMETER LY3			LYSIMETER LY4			LYSIMETER LY6	LYSIMETER LY16
TEST	CONSTITUENT	UNIT	FIRST QUARTER	SECOND QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	SECOND QUARTER	SECOND QUARTER
155	Total Dissolved Solids	mg/l	NA	1684	1535	NA	NA	949	NA	NA	985	NA
201	Ammonia	mg-N/l	NA	<0.1	<0.1	NA	<0.1	NA	NA	<0.1	NA	<0.1
203	Kjeldahl Nitrogen	mg-N/l	NA	1.12	2.24	NA	<0.2	NA	NA	<0.2	<0.2	1.68
204	Nitrate	mg-N/l	NA	37.7	35.1	NA	71	46.1	NA	NA	26.8	36.7
205	Nitrite	mg-N/l	NA	<0.02	<0.02	NA	<0.02	< 0.02	NA	NA	< 0.02	<0.02
257	Sulfate	mg/l	NA	498	332	NA	NA	NA	NA	32.1	169	140
301	Chloride	mg/l	NA	259.0	210.8	NA	NA	NA	NA	206	163.7	158.7
315	MBAS	mg/l	NA	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA
723	Sodium	mg/l	NA	248	NA	86.2	NA	NA	NA	NA	170	NA

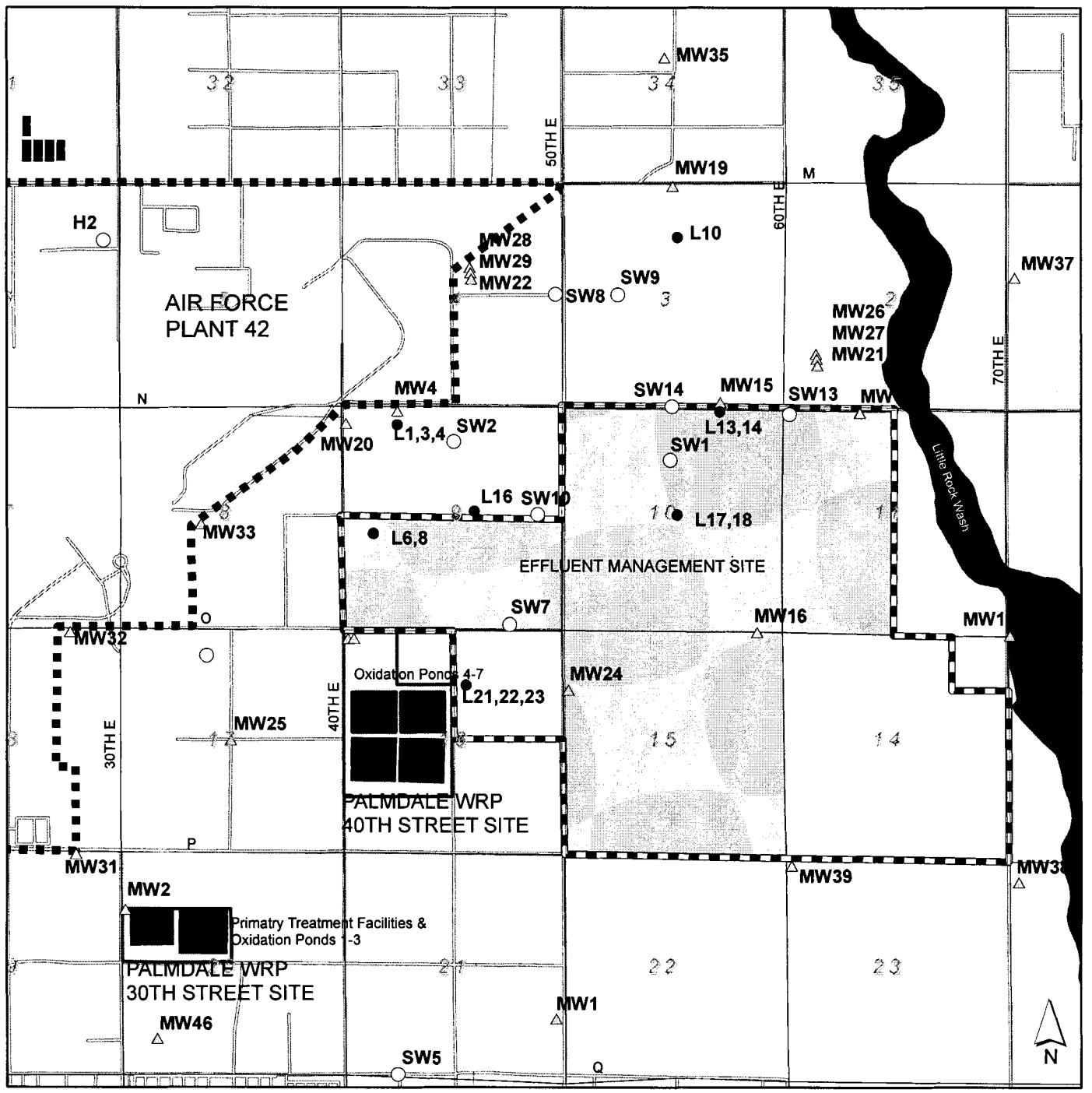
NA - Not Analyzed

PALMDALE WATER RECLAMATION PLANT

FIGURE 4.1

SITE MAP

FIGURE 4.1
PALMDALE WATER RECLAMATION PLANT
Effluent Management Site, Wells and Lysimeters



- Lysimeter
- Supply Well
- Monitoring Well
- Lease Area from Los Angeles World Airports (LAWA)
- Authorized EMS
- Air Force Plant 42

SANITATION DISTRICTS OF LOS ANGELES COUNTY

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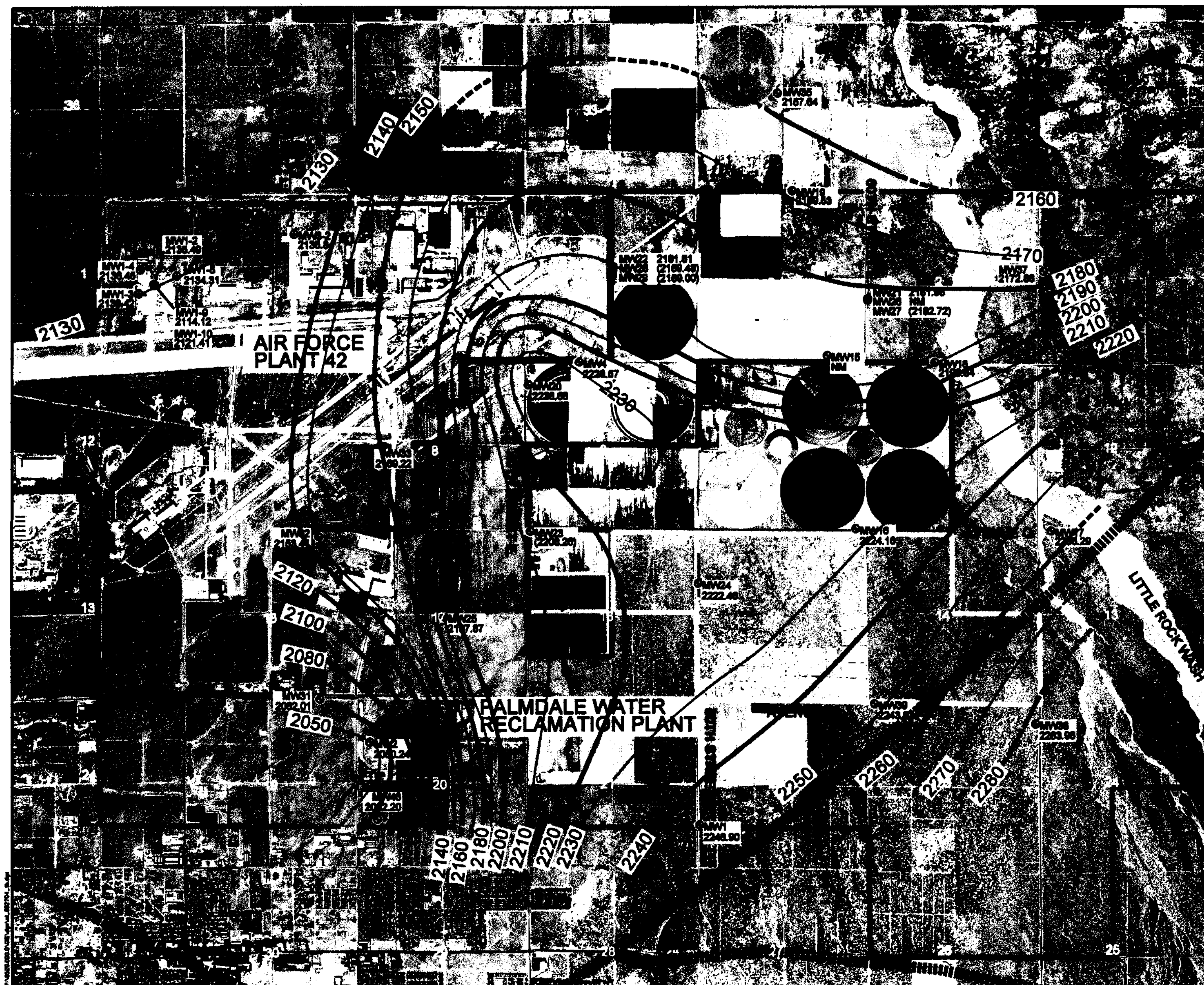
PALMDALE WATER RECLAMATION PLANT

FIGURE 4.2

ESTIMATED FLOW DIRECTIONS



EXPLANATION

MW15 ⊕ LOCATION AND DESIGNATION OF MONITORING WELL

EFFLUENT MANAGEMENT SITE

NEW AND PROPOSED EFFLUENT MANAGEMENT SITE

AIR FORCE PLANT 42 BOUNDARY

LOS ANGELES WORLD AIRPORTS BOUNDARY

2172.88 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL) IN SEPTEMBER 2004. (SEE NOTE 2 BELOW FOR SPECIFIC DATES) NM - NOT MEASURED

GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MSL; 20 FOOT CONTOUR; DASHED WHERE INFERRED

GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MSL; 10 FOOT CONTOUR; DASHED WHERE INFERRED

COINCIDENCE OF FAULT AND GROUNDWATER SUBBASIN, FAULTS APPROXIMATE WITH ANTELOPE VALLEY GROUNDWATER BASIN (BLOYD, 1967)

24 PUBLIC LAND SURVEY SECTION

NOTES:

1. DATA IN PARENTHESES ARE FROM WELLS COMPLETED BELOW THE WATER TABLE AND WERE NOT USED IN DEVELOPING GROUNDWATER ELEVATION CONTOURS.
2. WATER LEVELS AT AFP42 MONITORING WELLS WERE MEASURED ON SEPTEMBER 23, 2004. WATER LEVELS AT THE DISTRICT'S MONITORING WELLS WERE MEASURED ON SEPTEMBER 22, 2004. WATER LEVELS AT MW25 WERE MEASURED ON SEPTEMBER 27, 2004.

N

0 1000 2000

APPROXIMATE SCALE IN FEET

BASEMAP MODIFIED FROM AERIAL PHOTOGRAPH PROVIDED BY AIRPHOTO USA (MARCH 2004)

GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 2004

PALMDALE WRP
NITRATE DELINEATION PROGRAM
Palmdale, California

GEOMATRIX	Figure By	Project No.	Figure
	MWW	9520	4-2
	Date	Map No.	
	12/29/04	213	

PALMDALE WATER RECLAMATION PLANT

FIGURES 4.3 – 4.74

GRAPHICAL SUMMARIES

FIGURE 4.3
Palmdale Water Reclamation Plant SW1
Chloride and TDS

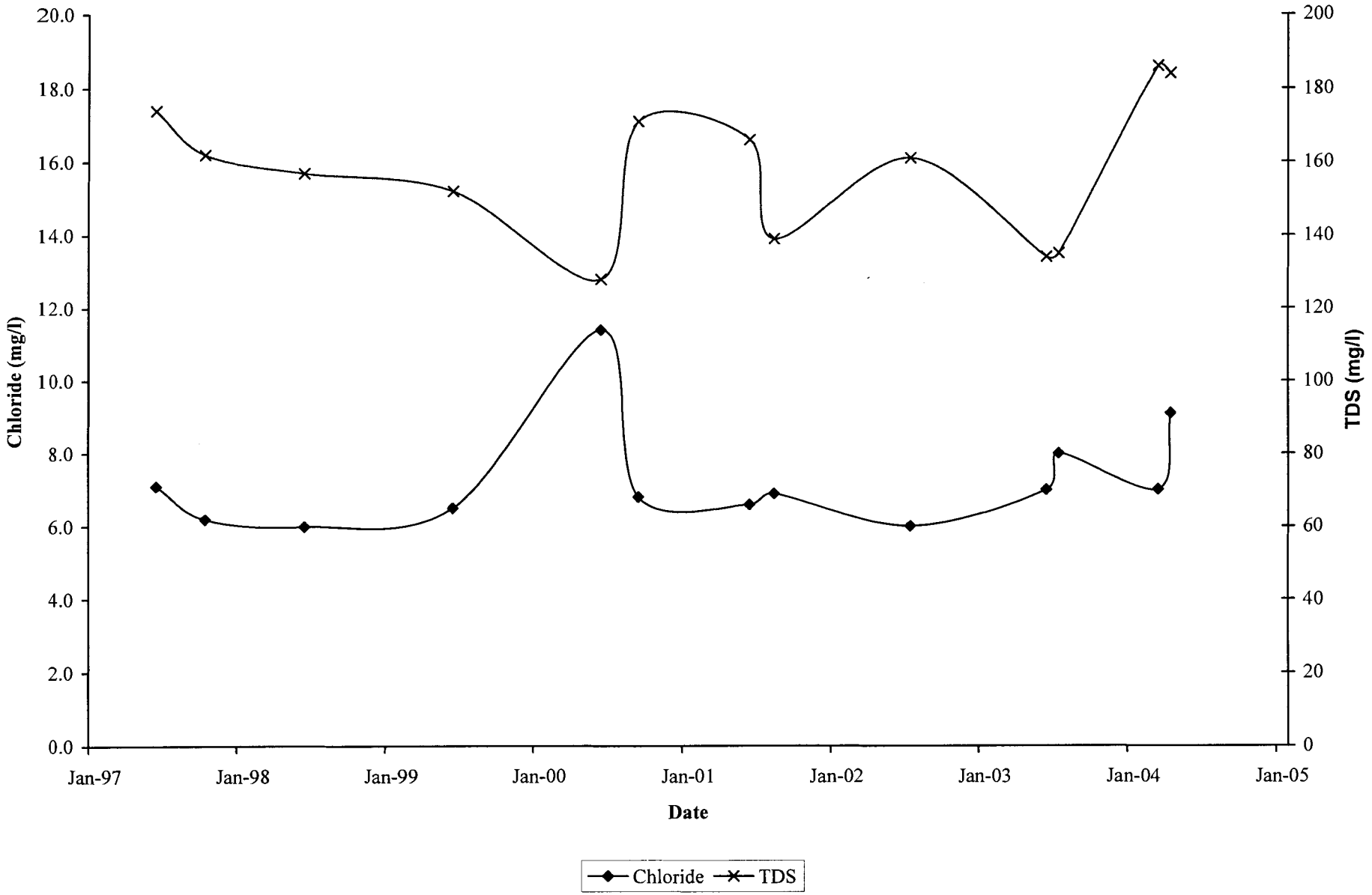


FIGURE 4.4
Palmdale Water Reclamation Plant SW1
MBAS, NH_3, TKN, NO_3^-

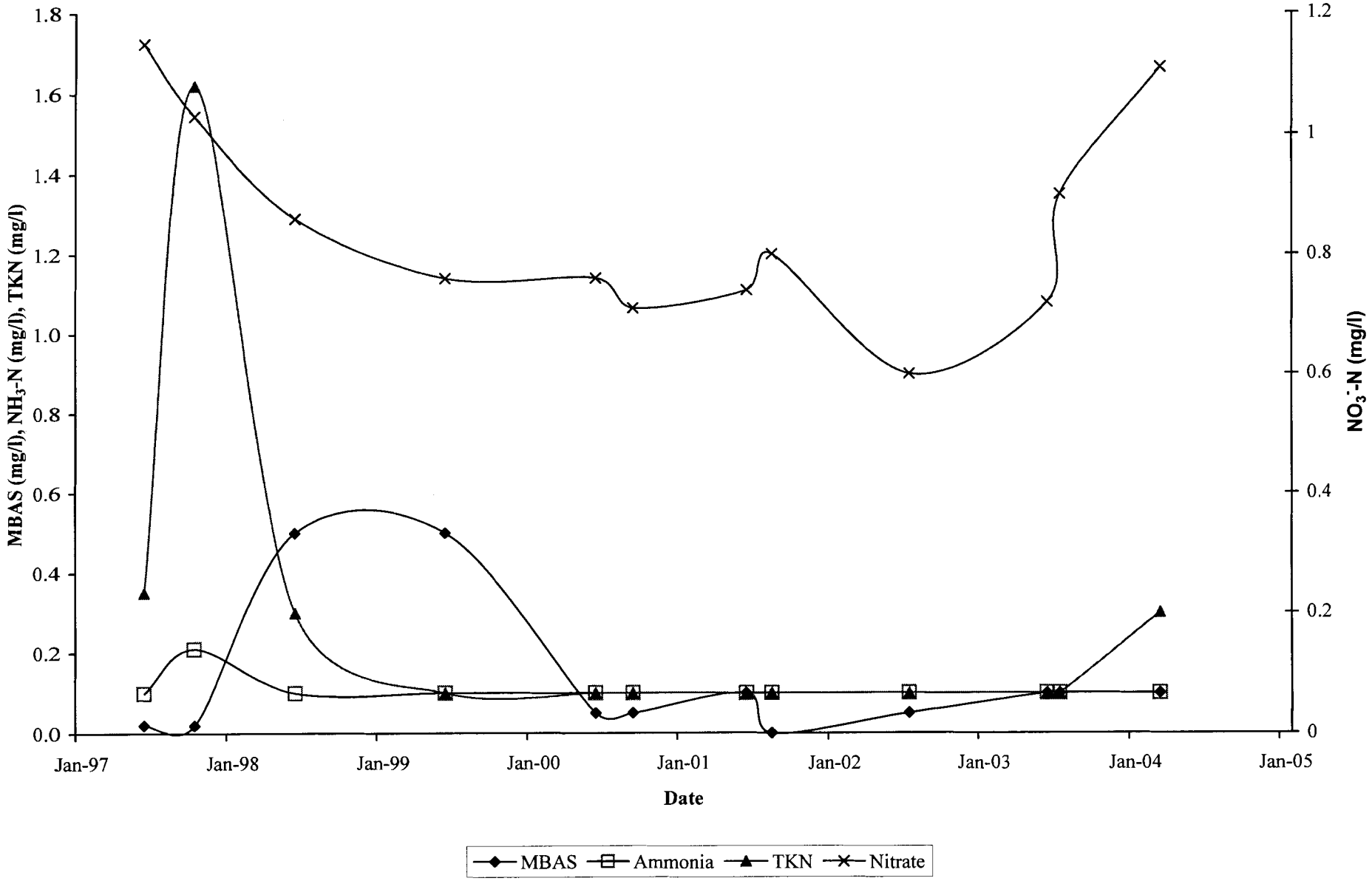


FIGURE 4.5

Palmdale Water Reclamation Plant SW2

Chloride and TDS

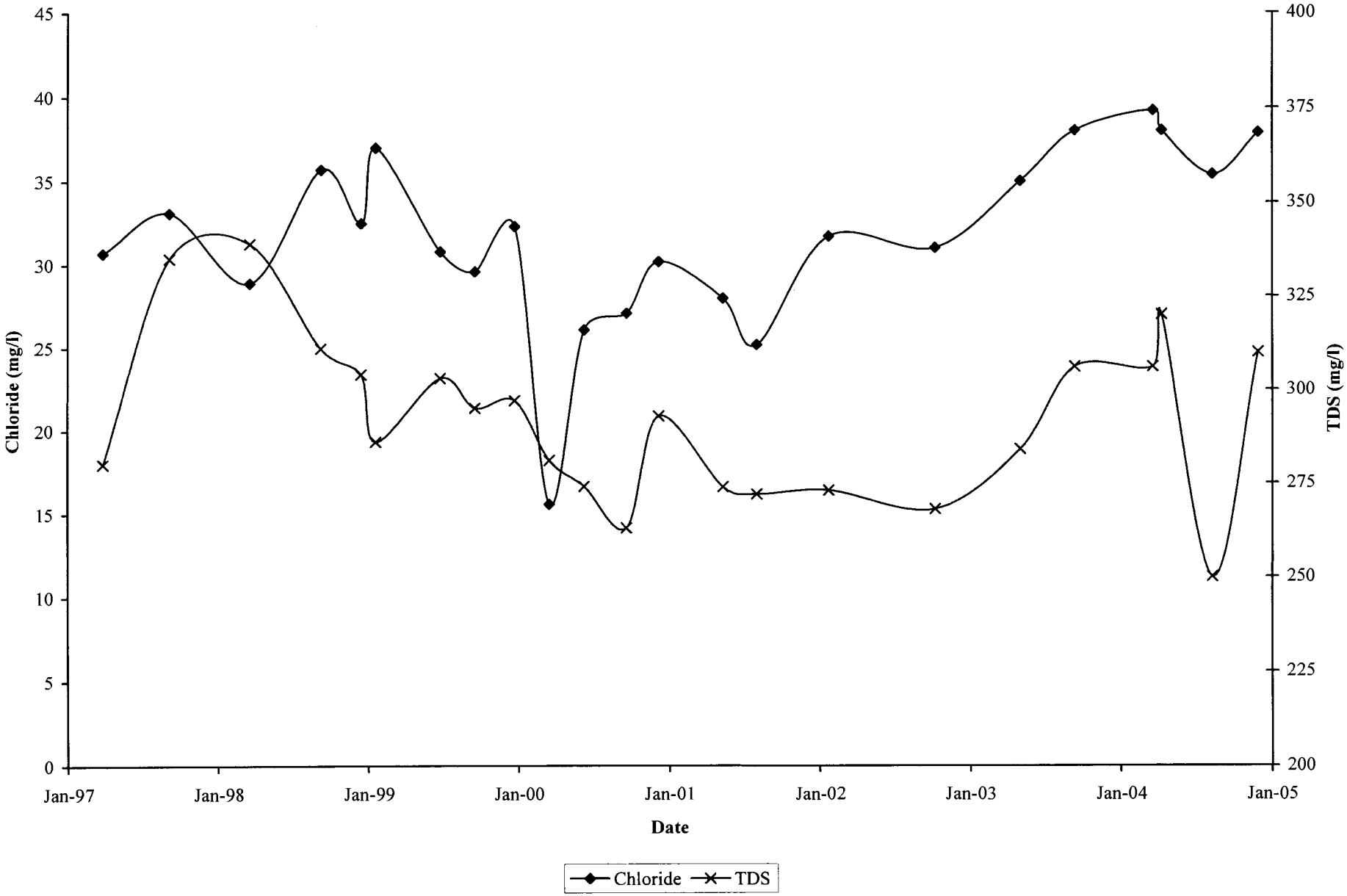


FIGURE 4.6

Palmdale Water Reclamation Plant SW2

MBAS, NH_3, TKN, NO_3^-

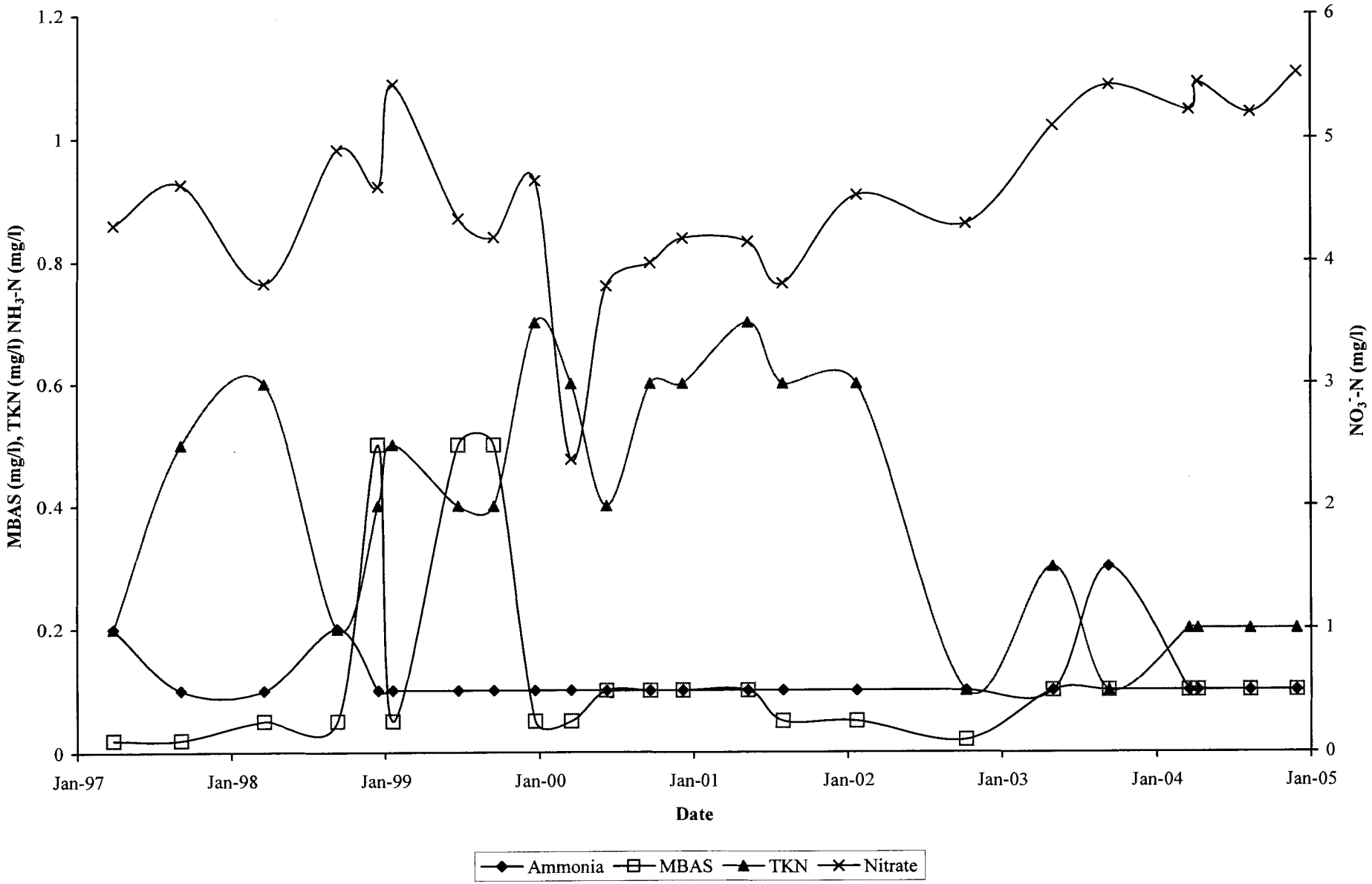


FIGURE 4.7
Palmdale Water Reclamation Plant, SW 5
Chloride and TDS

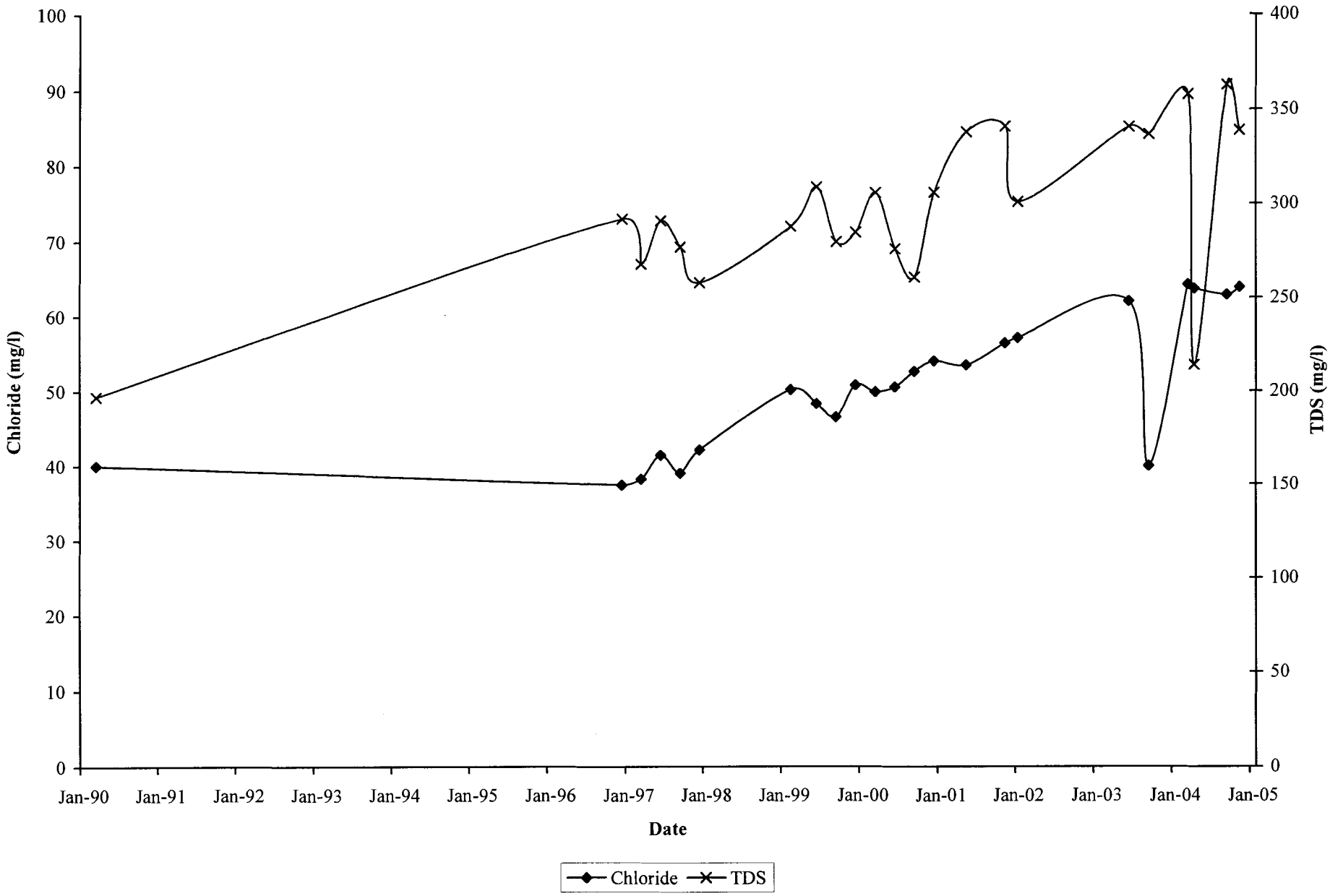


FIGURE 4.8
Palmdale Water Reclamation Plant, SW 5
MBAS, NH_3, TKN, NO_3^-

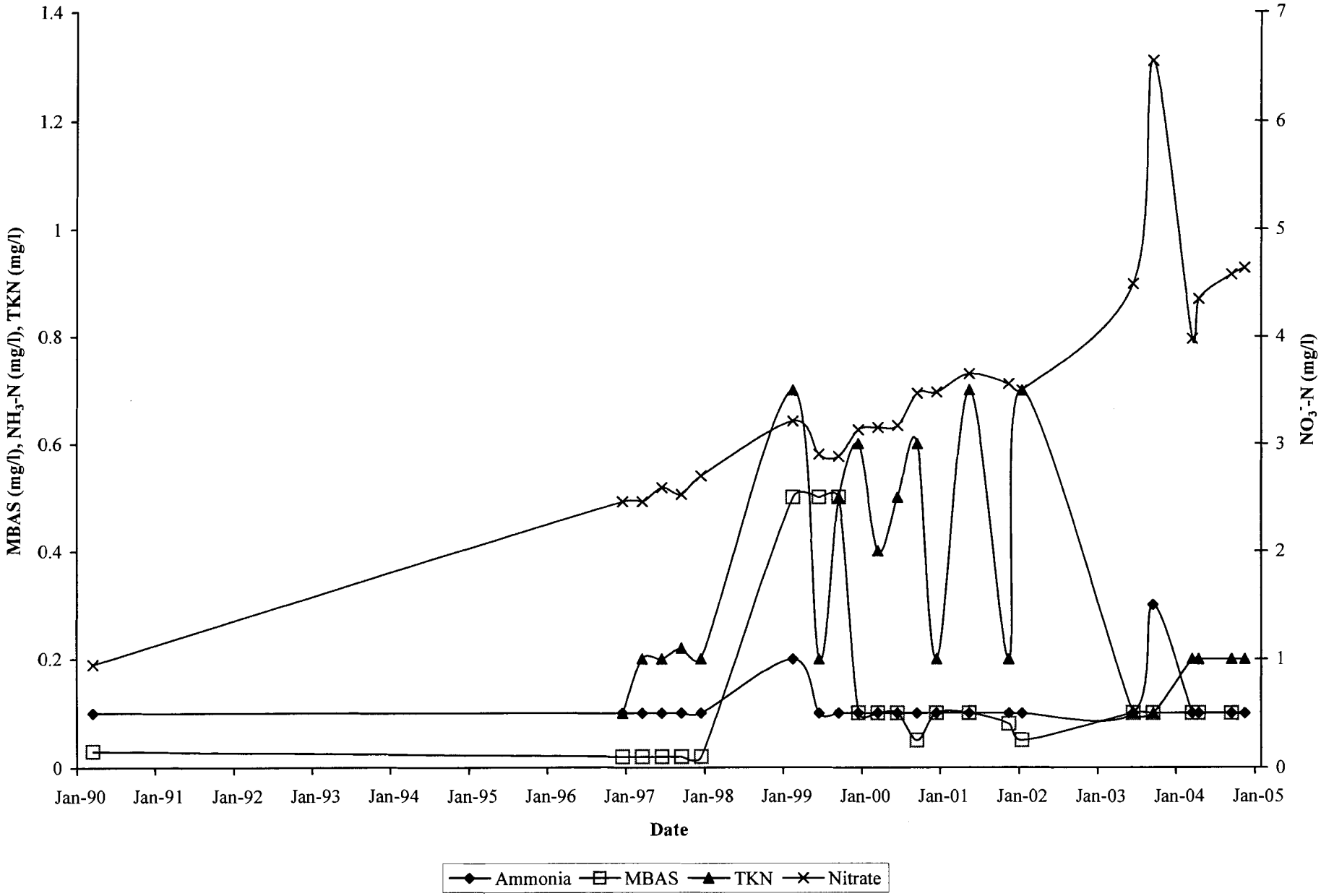


FIGURE 4.9
Palmdale Water Reclamation Plant, SW 7
Chloride and TDS

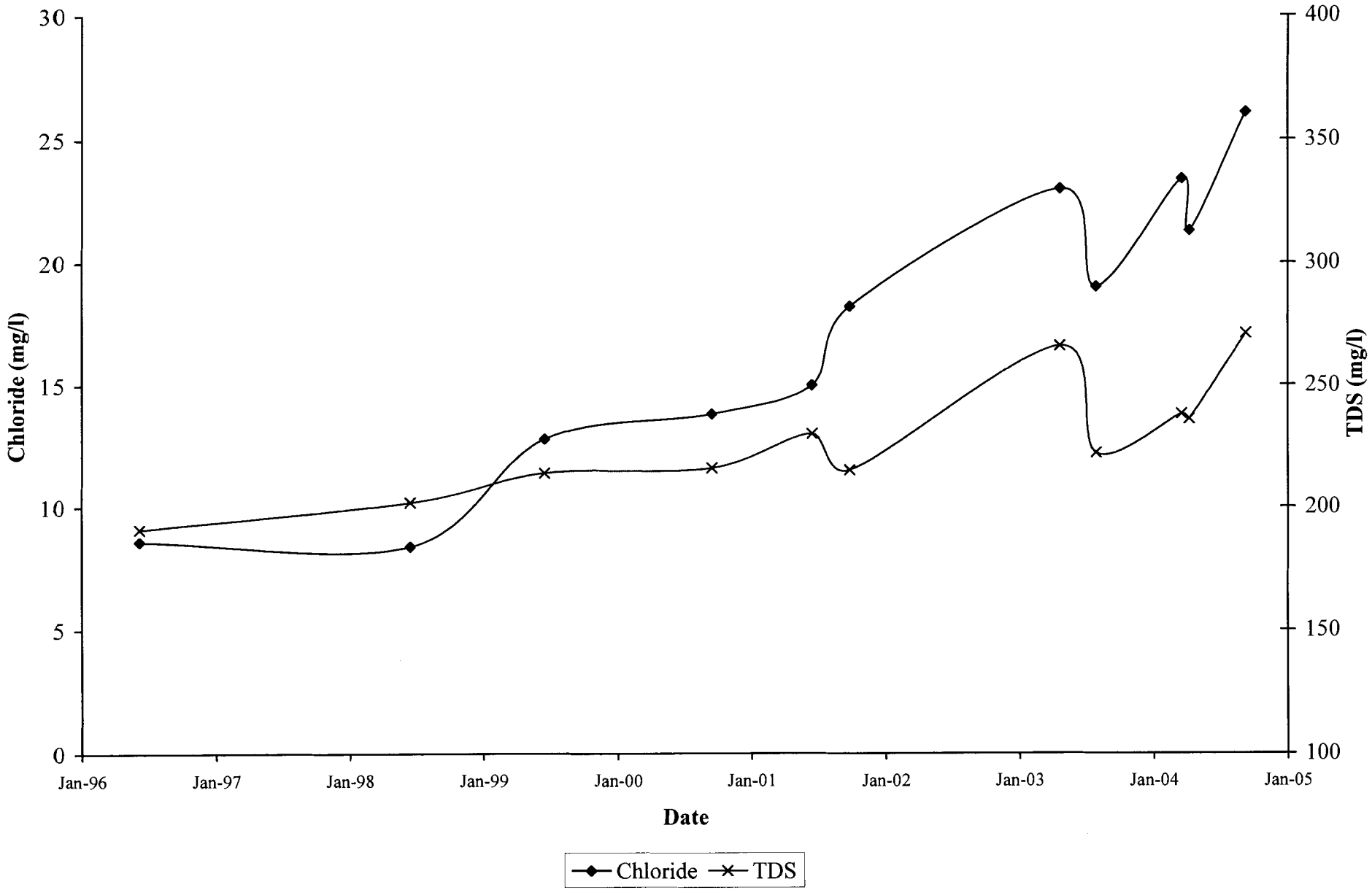


FIGURE 4.10

Palmdale Water Reclamation Plant, SW 7

MBAS, NH_3, TKN, NO_3^-

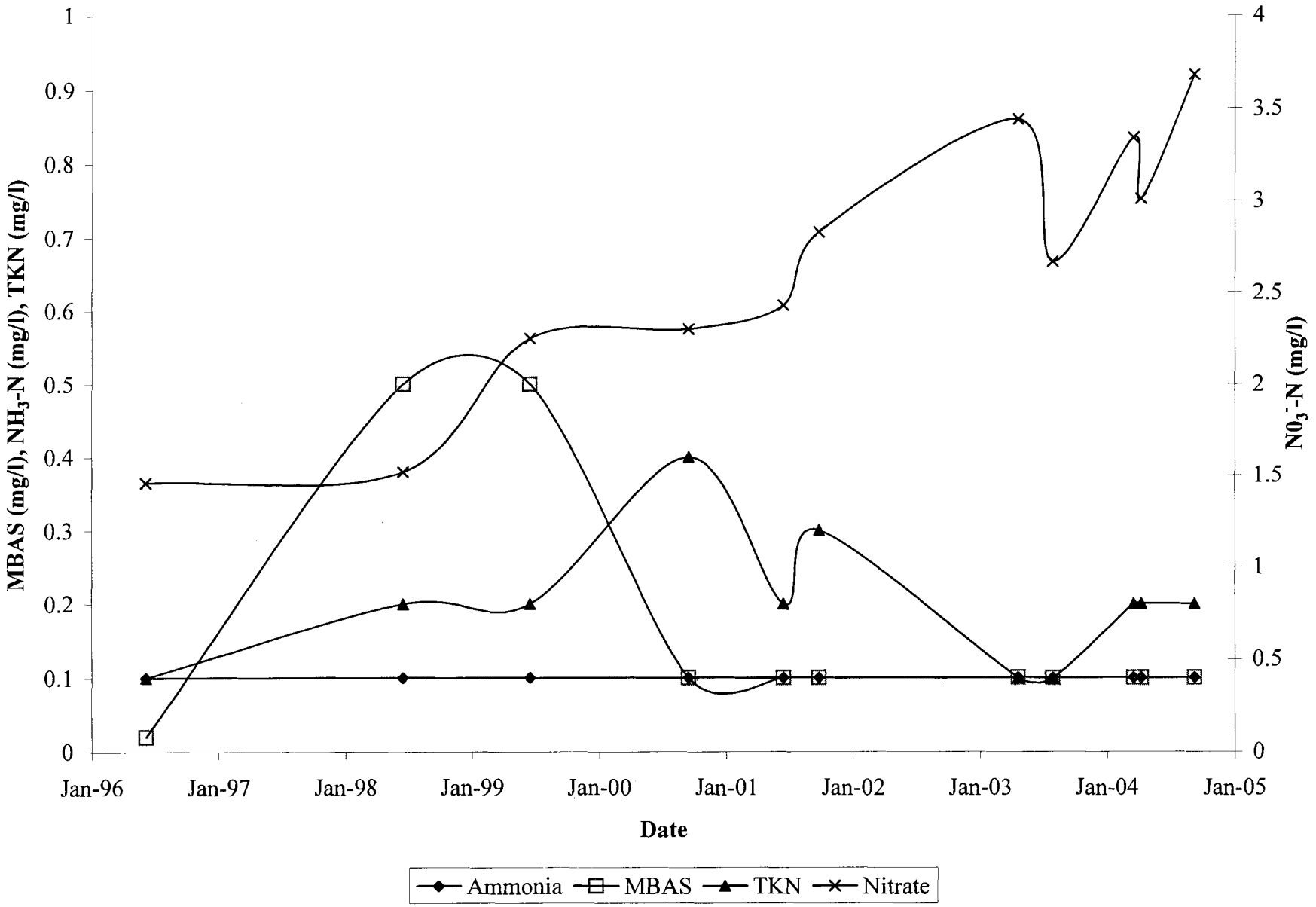


FIGURE 4.11
Palmdale Water Reclamation Plant, SW8
Chloride and TDS

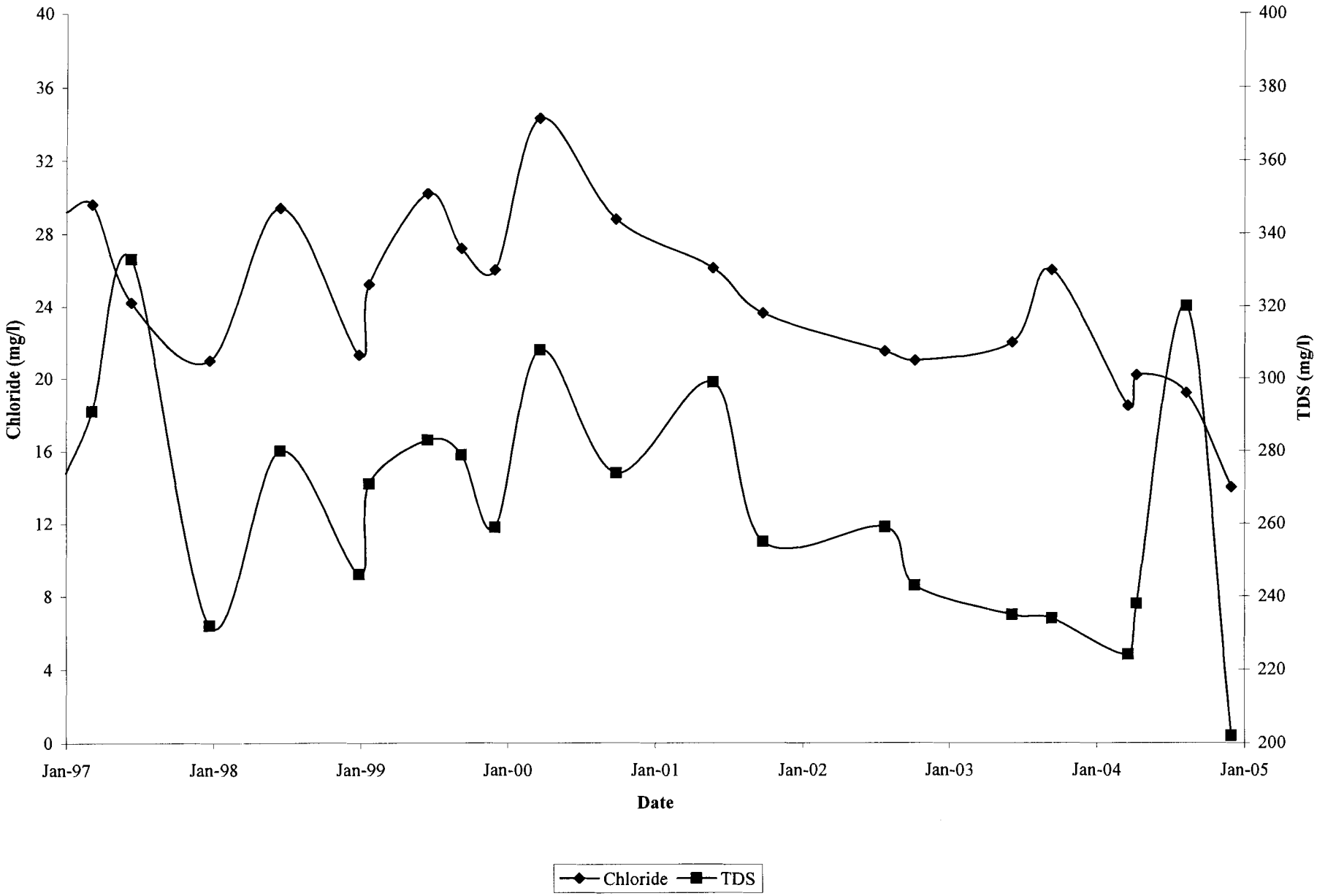


FIGURE 4.12
Palmdale Water Reclamation Plant, SW8
MBAS, TKN, NH_3, NO_3^-

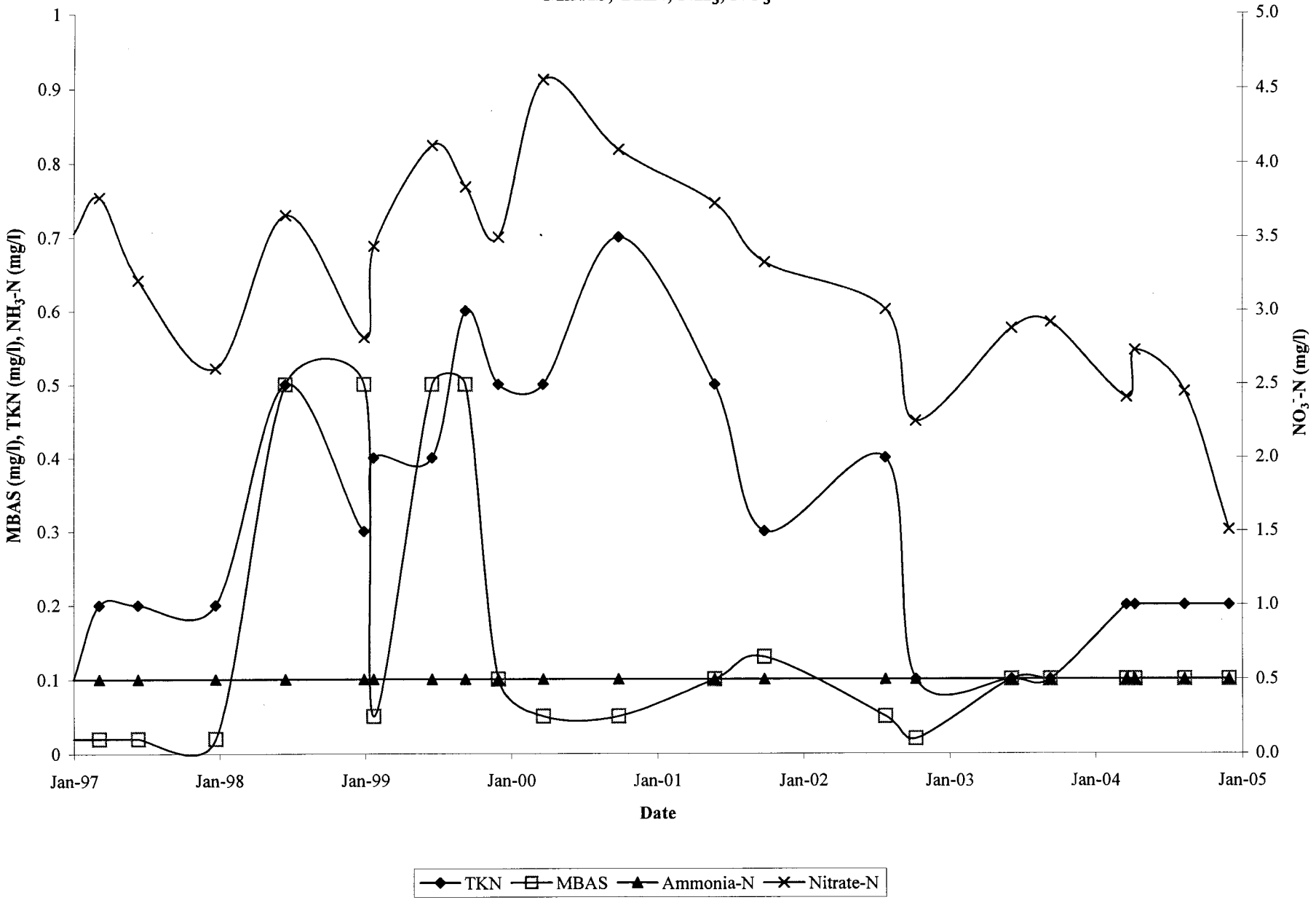


FIGURE 4.13

Palmdale Water Reclamation Plant, SW9

Chloride and TDS

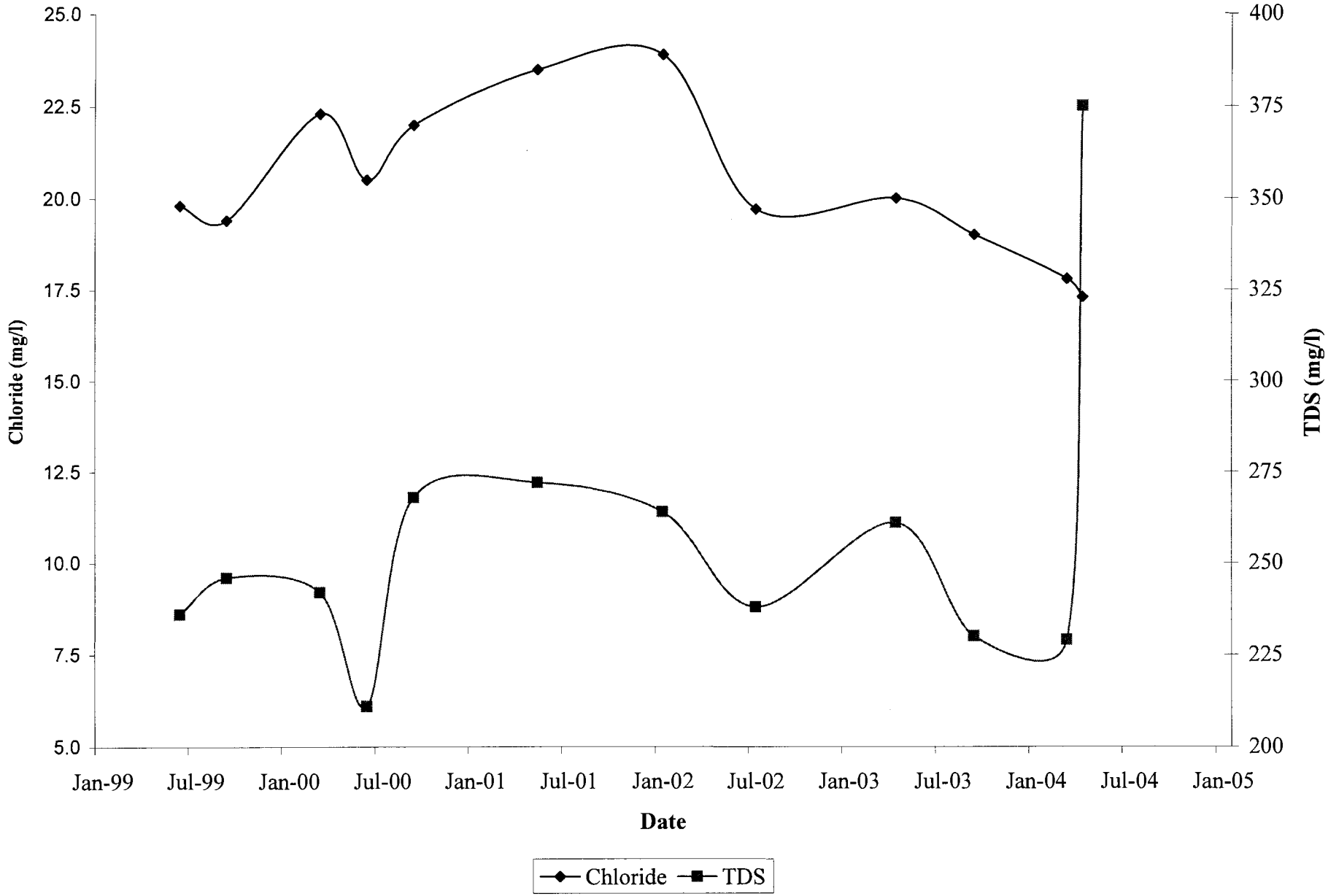


FIGURE 4.14

Palmdale Water Reclamation Plant, SW9

MBAS Nitrate TKN Ammonia

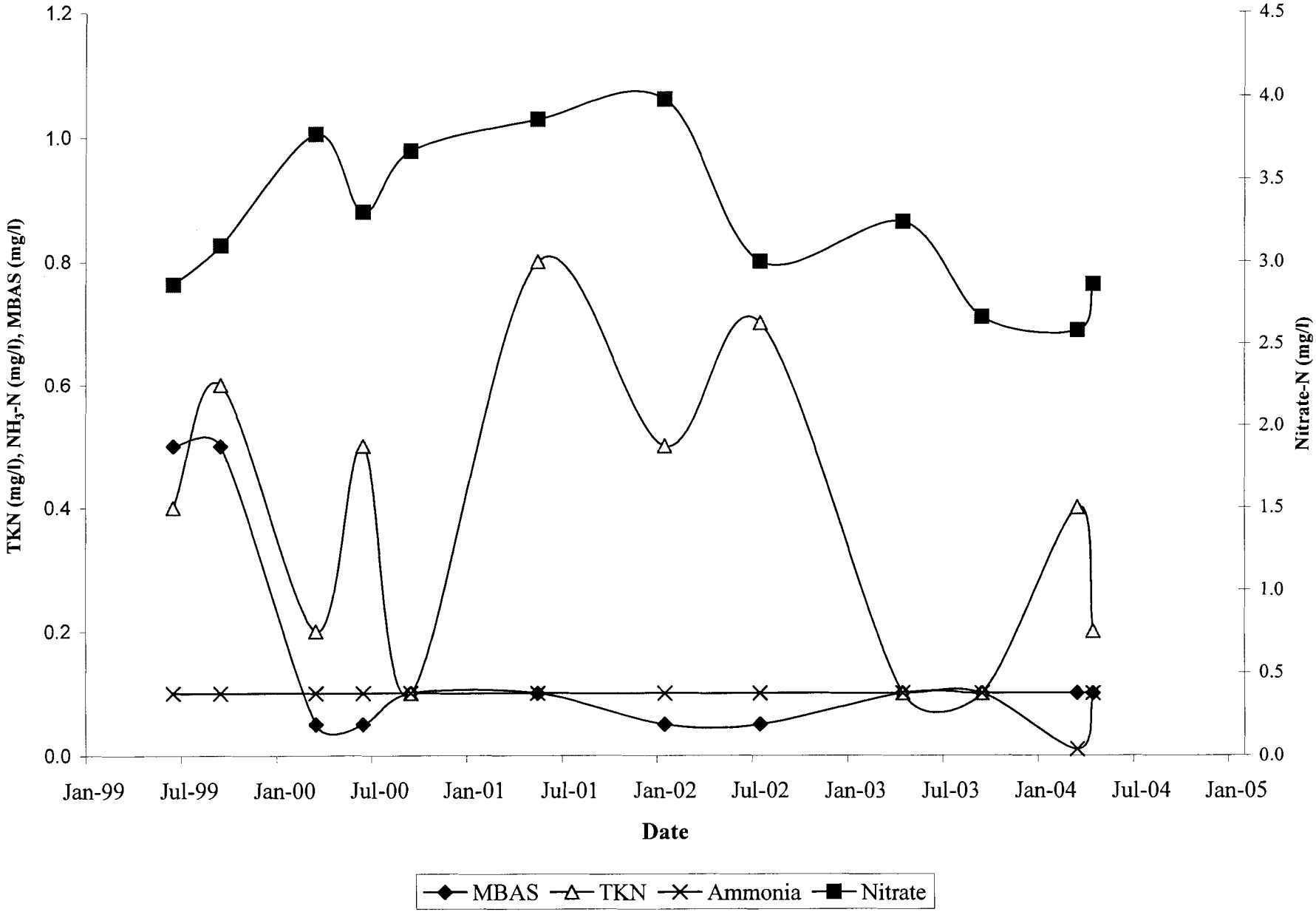


FIGURE 4.15
Palmdale Water Reclamation Plant SW 10
Chloride and TDS

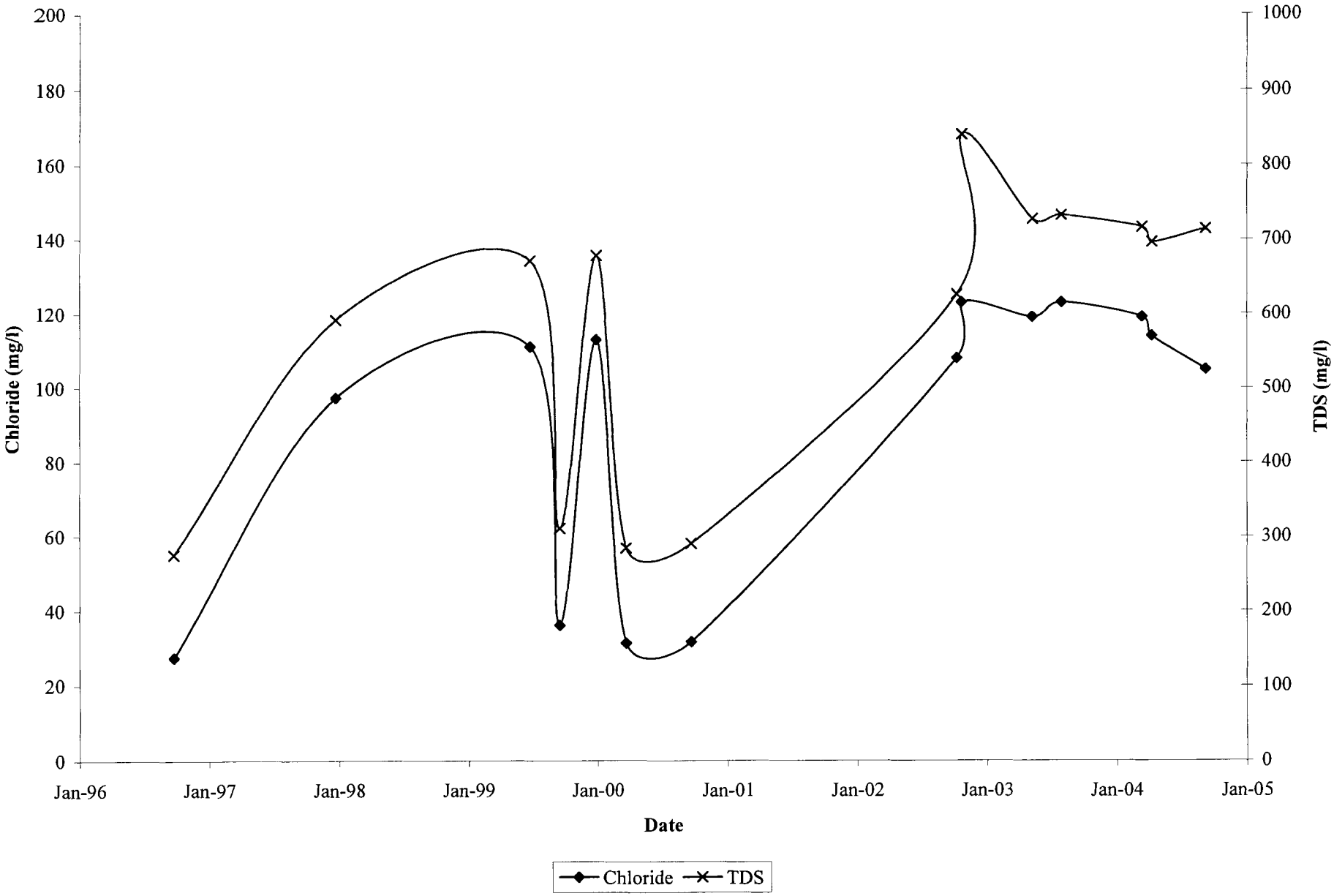


FIGURE 4.16
Palmdale Water Reclamation Plant SW 10
MBAS, NH_3, TKN, NO_3^-

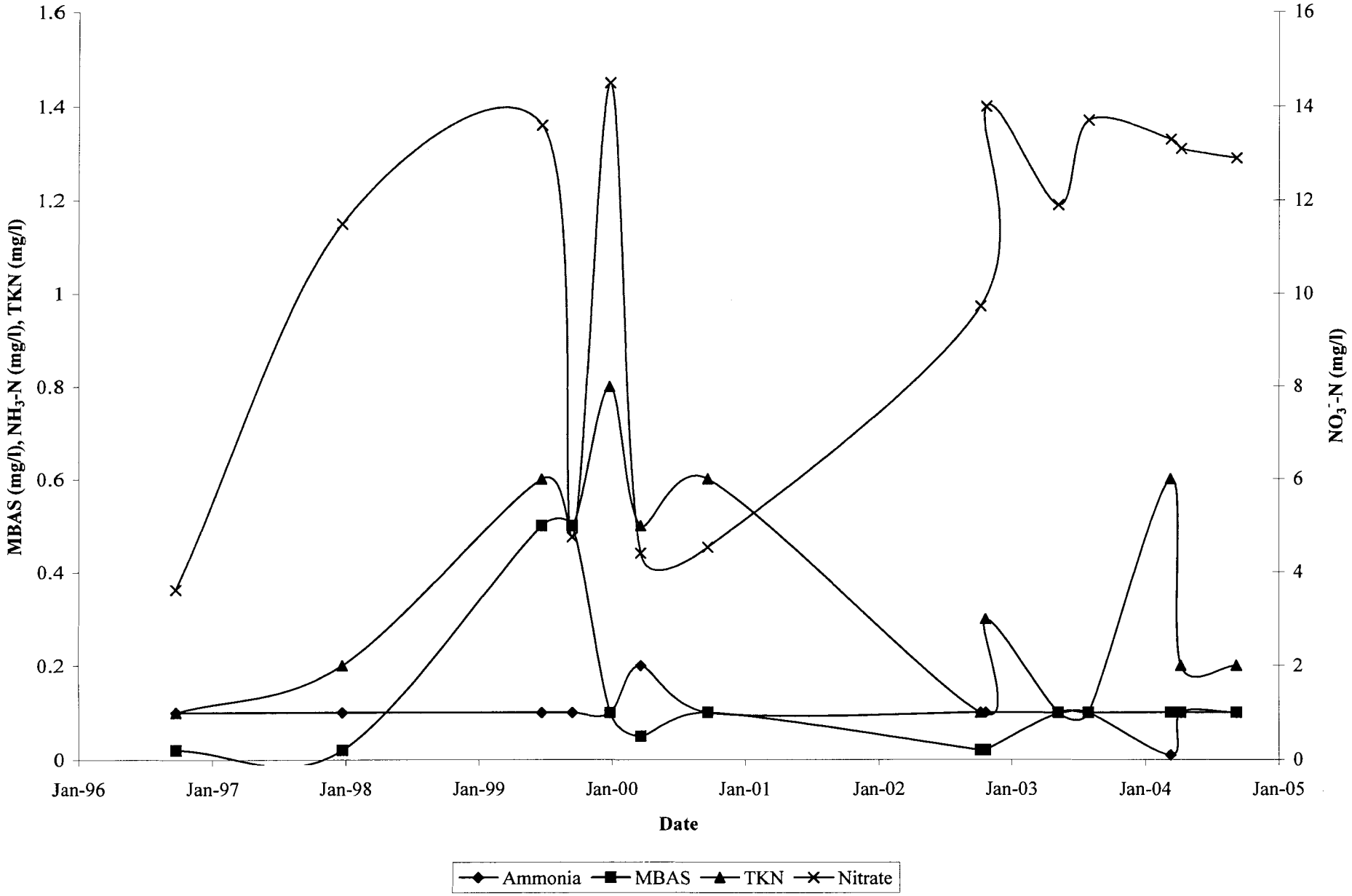


FIGURE 4.17

Palmdale Water Reclamation Plant SW13

Chloride and TDS

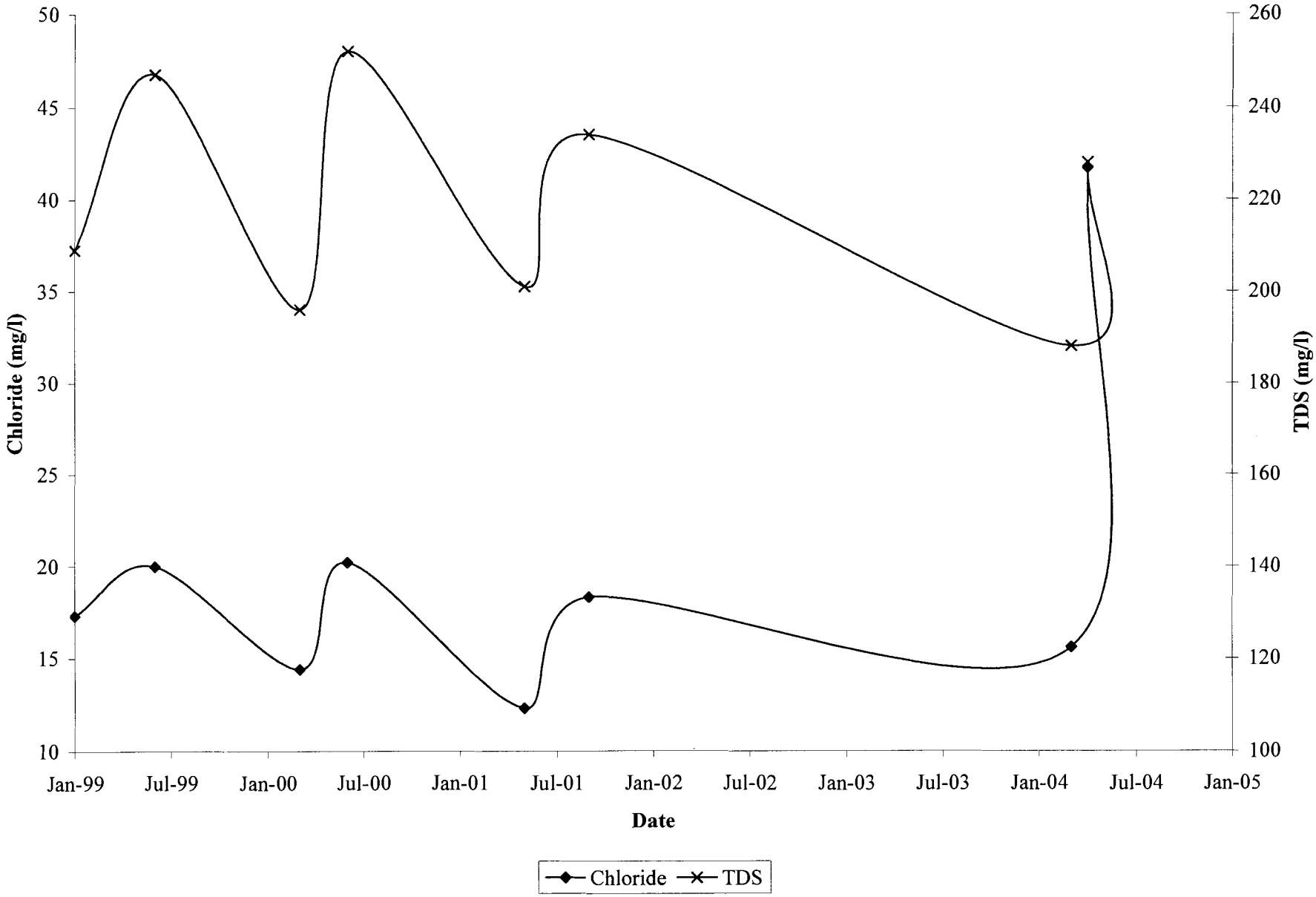


FIGURE 4.18

Palmdale Water Reclamation Plant SW13

MBAS, NH_3, TKN, NO_3^-

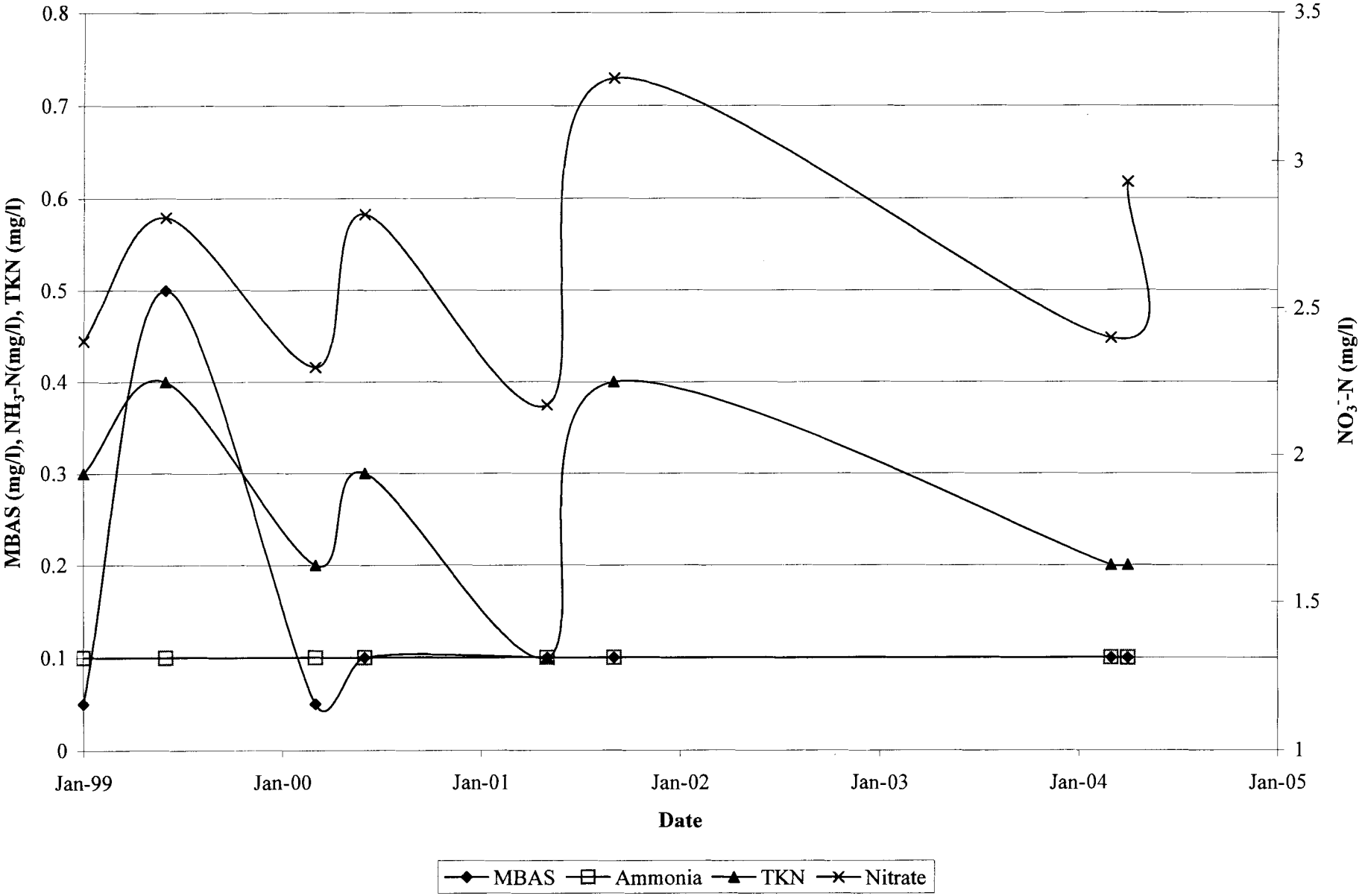


FIGURE 4.19

Palmdale Water Reclamation Plant SW 14

Chloride and TDS

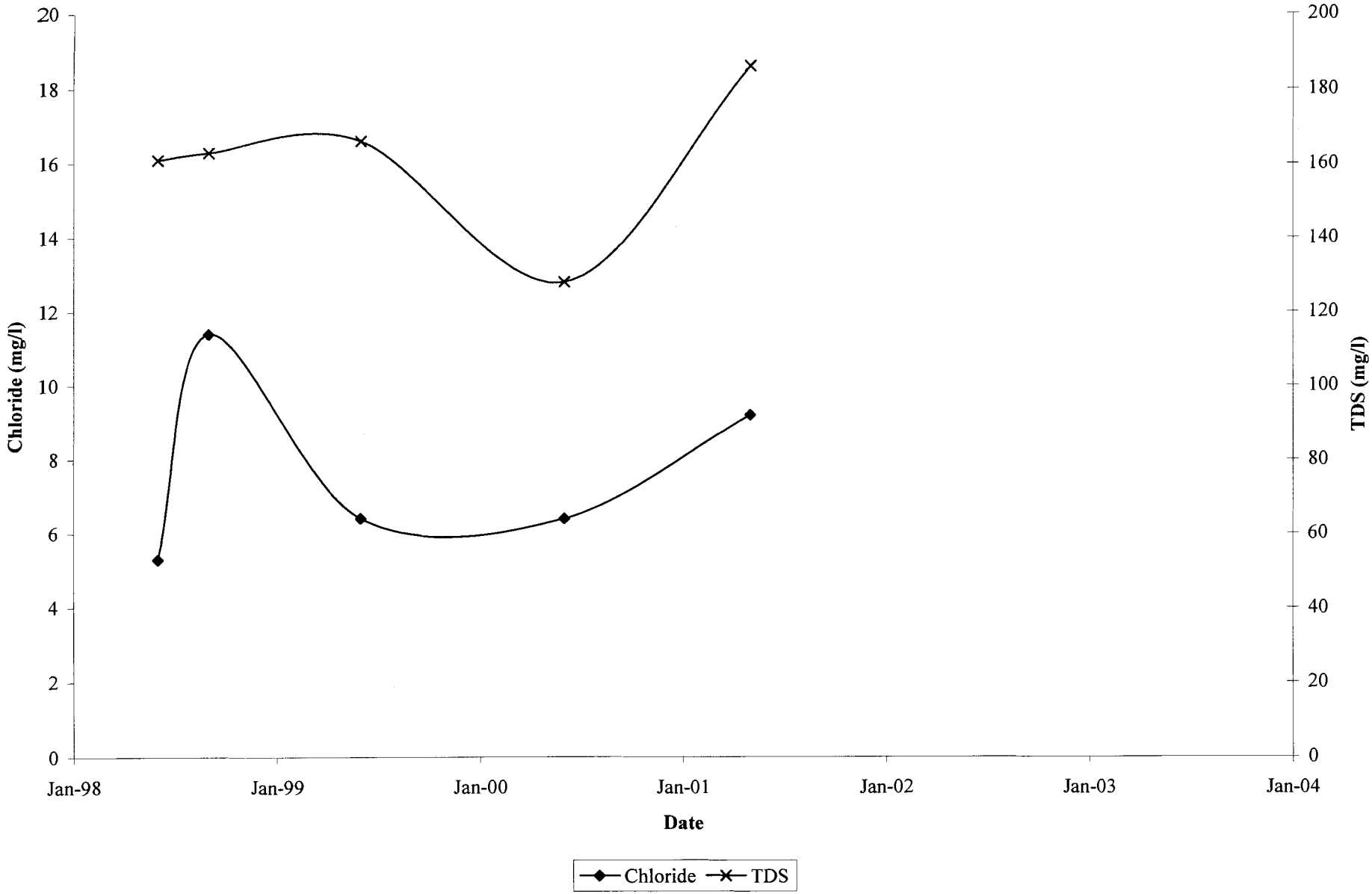


FIGURE 4.20

Palmdale Water Reclamation Plant SW 14

MBAS, NH_3, TKN, NO_3^-

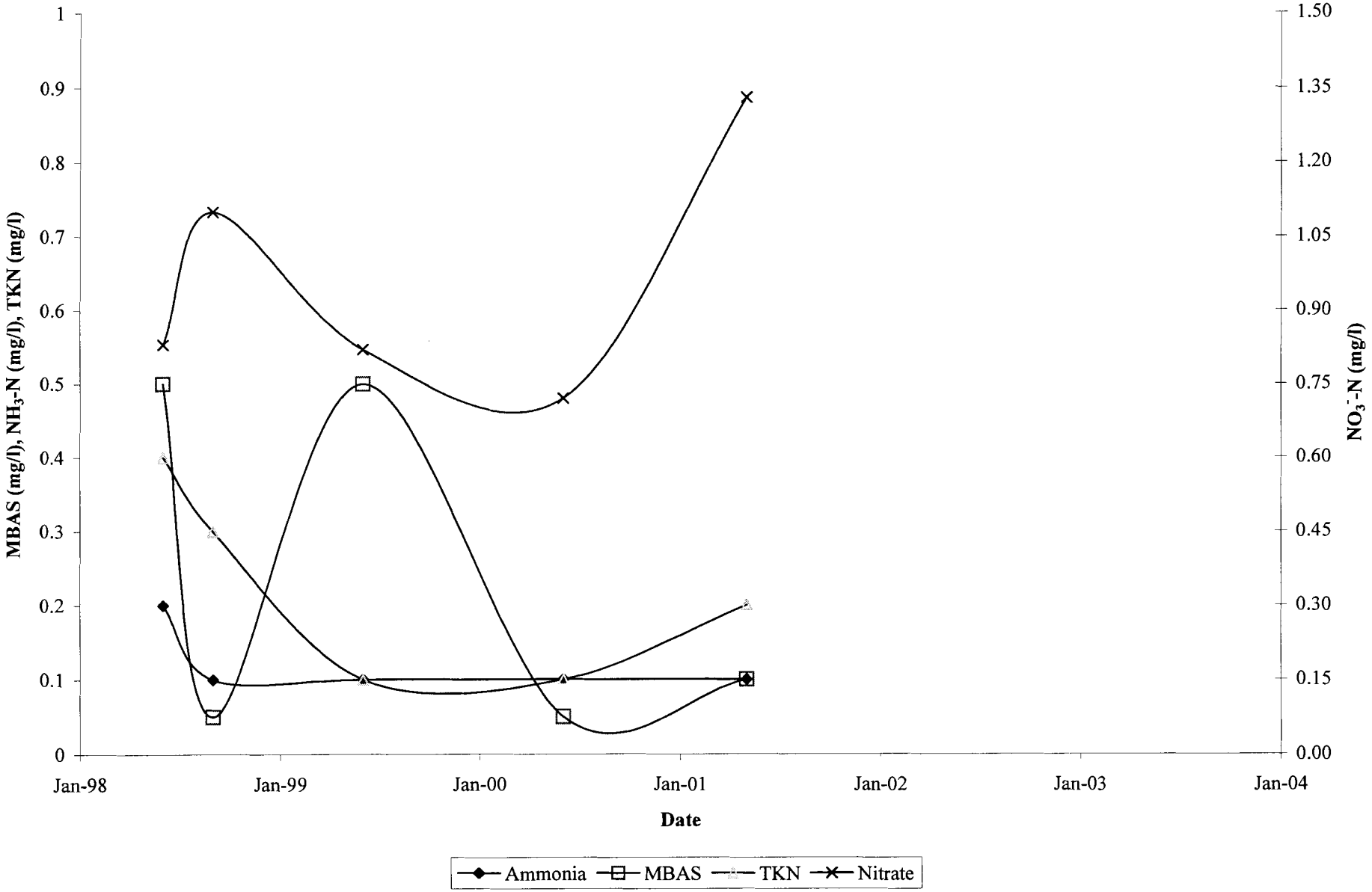


FIGURE 4.21

Palmdale Water Reclamation Plant SWE

Chloride and TDS

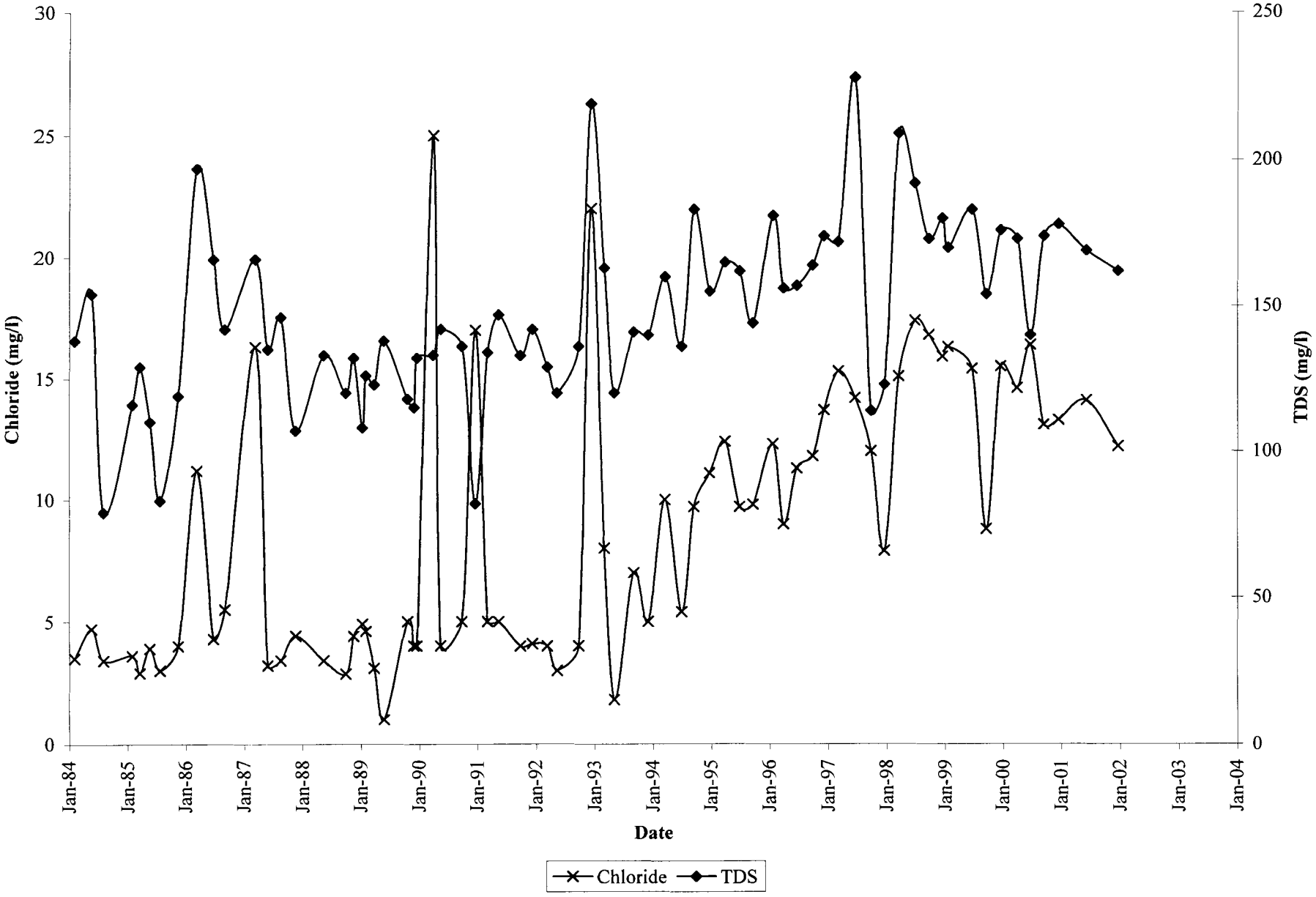


FIGURE 4.22

Palmdale Water Reclamation Plant SWE

MBAS, NH_3, TKN, NO_3^-

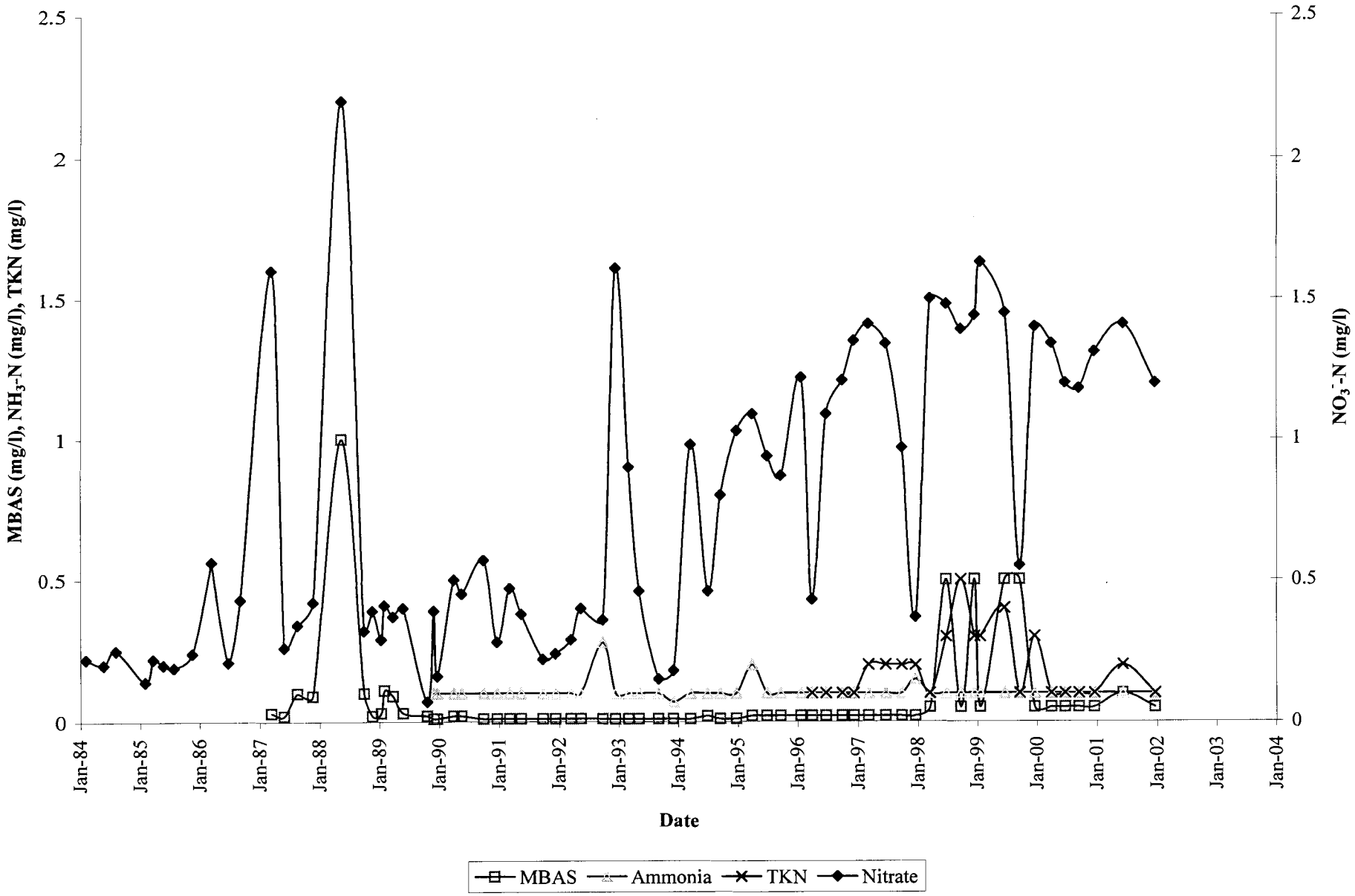


FIGURE 4.23

Palmdale Water Reclamation Plant SW H2

Chloride and TDS

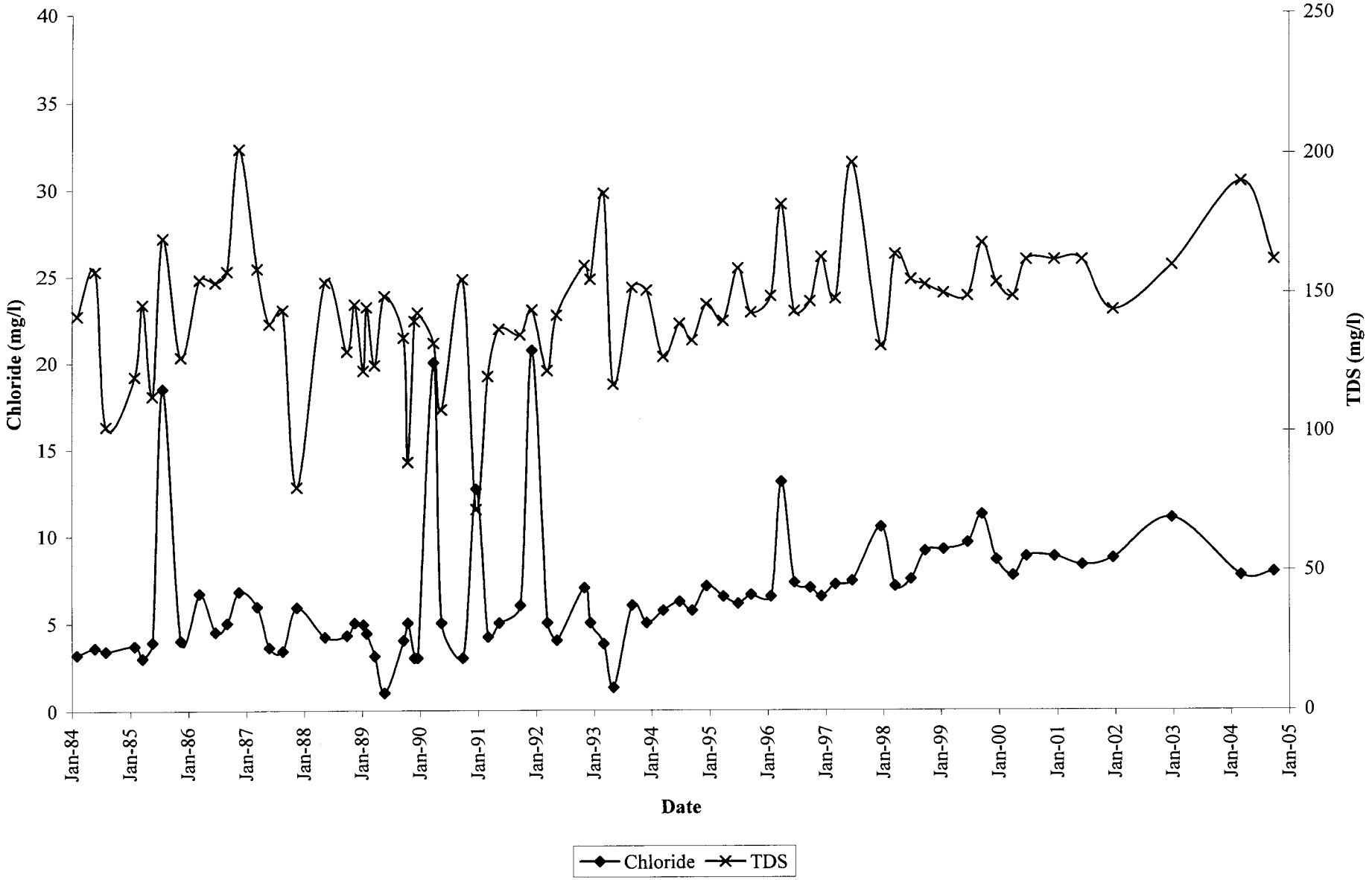


FIGURE 4.24

Palmdale Water Reclamation Plant SW H2

MBAS, NH_3, TKN, NO_3^-

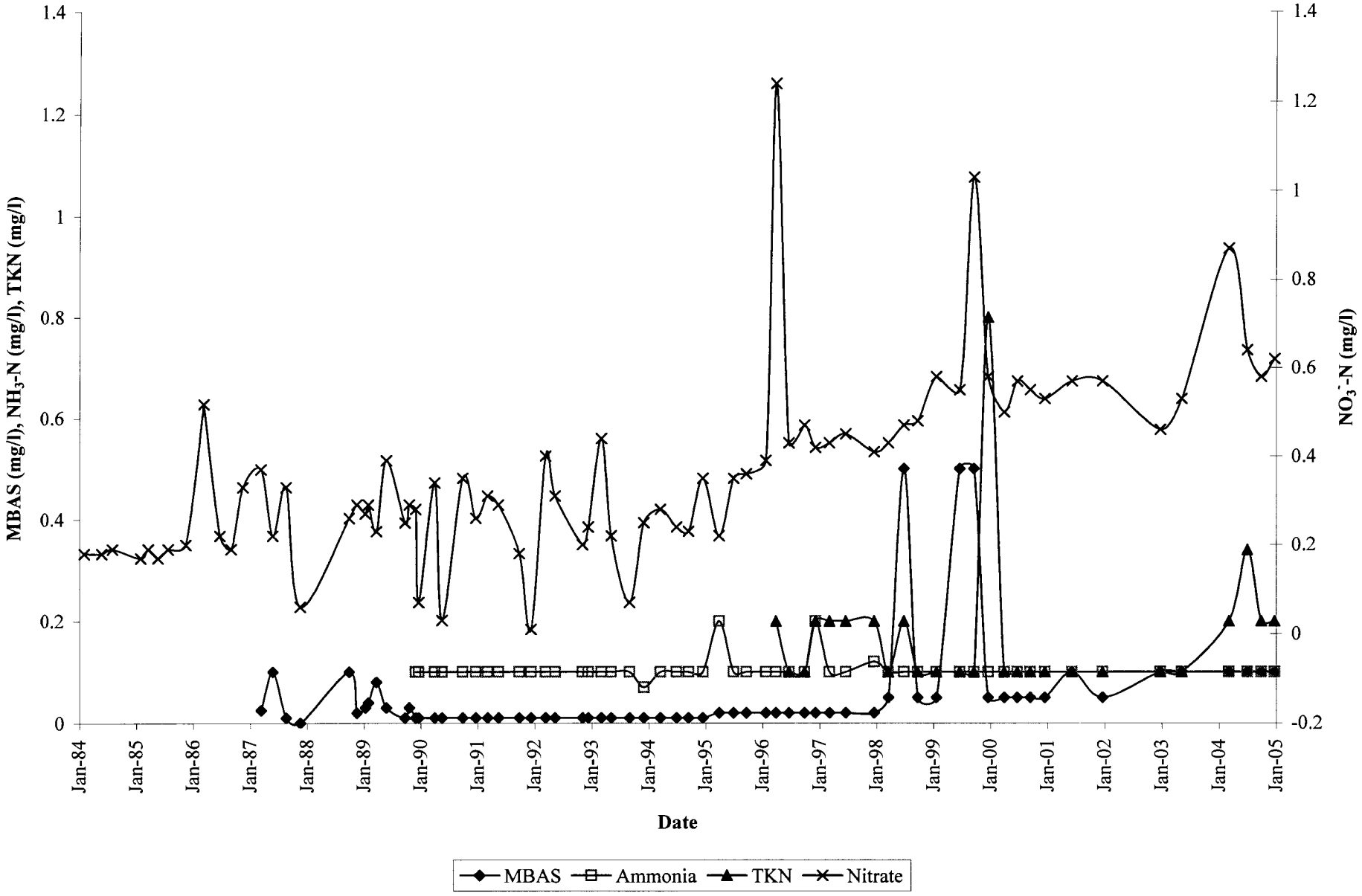


FIGURE 4.25
Palmdale Water Reclamation Plant MW 1
Chloride and TDS

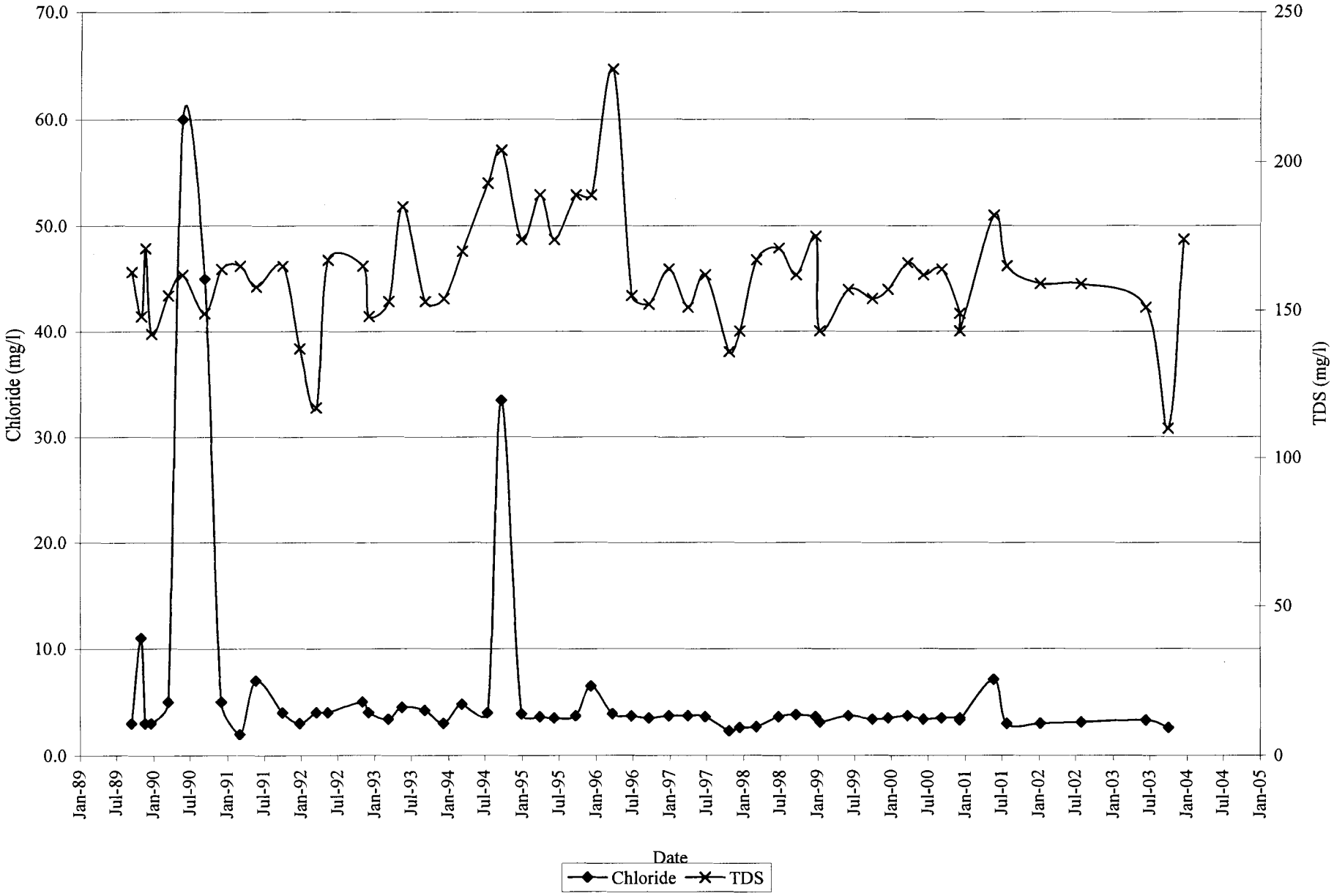


FIGURE 4.26
Palmdale Water Reclamation Plant MW 1
MBAS, NH_3, TKN, NO_3^-

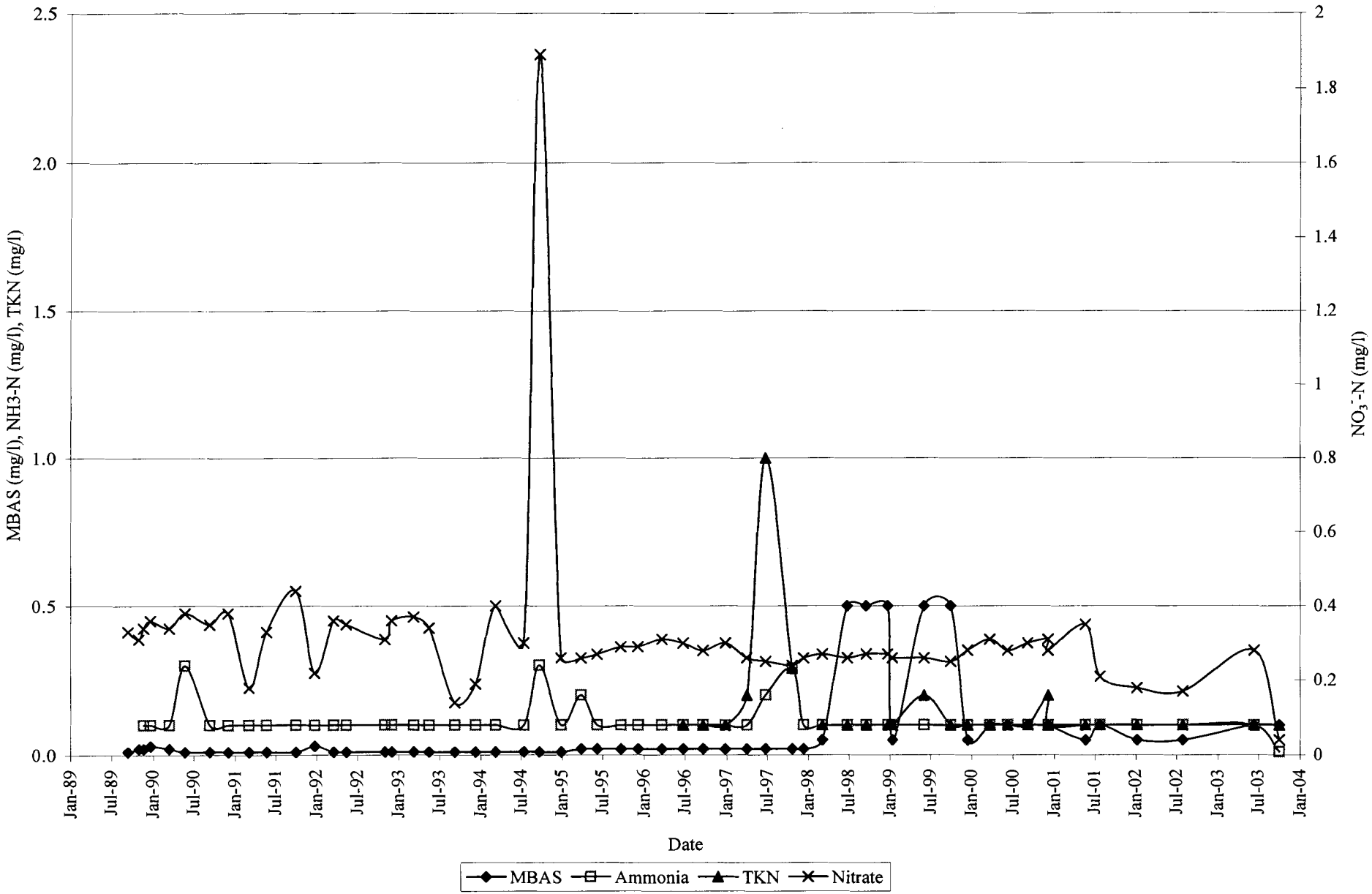


FIGURE 4.27
Palmdale Water Reclamation Plant MW 2
Chloride and TDS

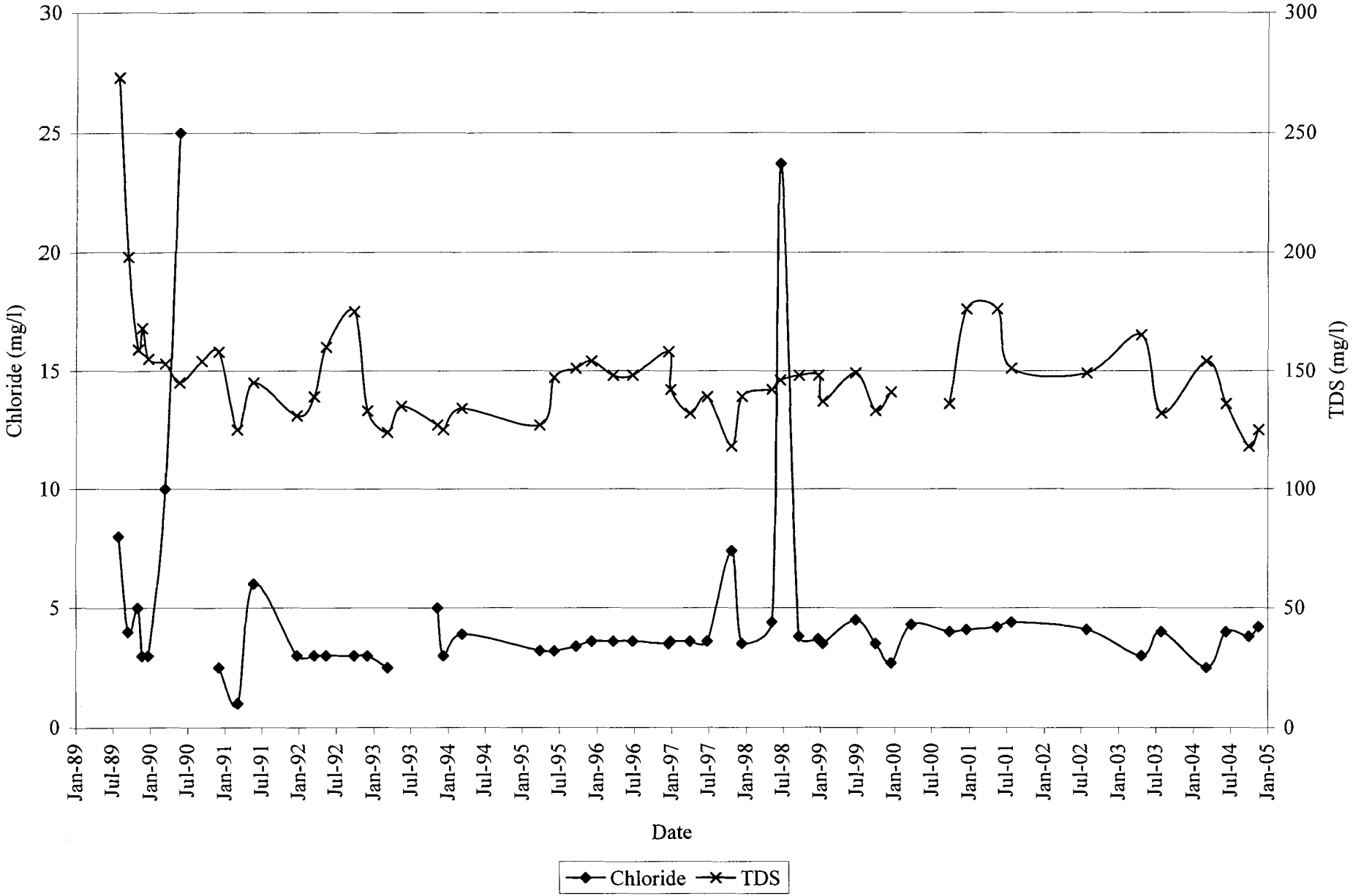


FIGURE 4.28
Palmdale Water Reclamation Plant MW 2
MBAS, NH_3, TKN, NO_3^-

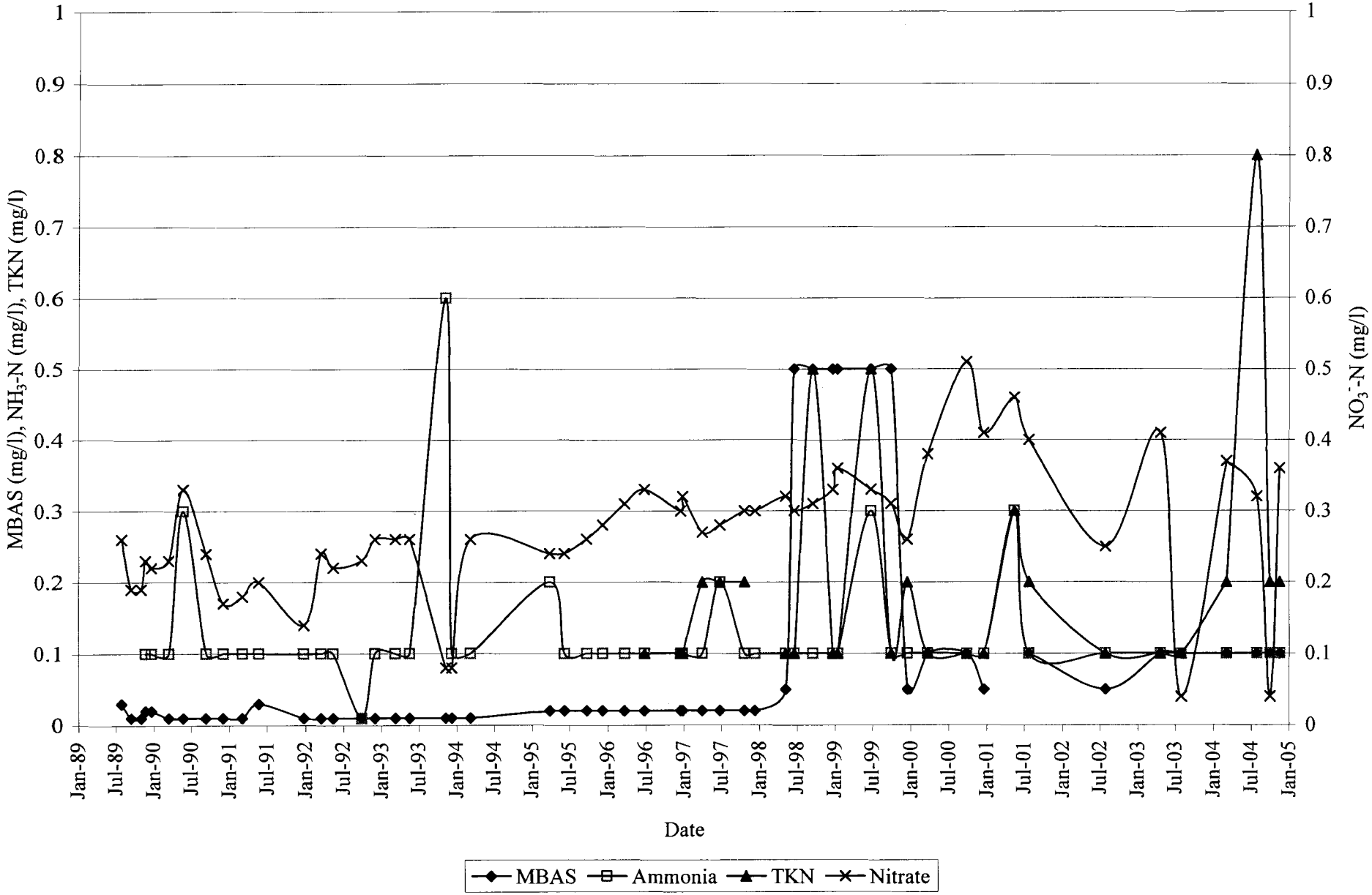


FIGURE 4.28a
Palmdale Water Reclamation Plant MW 2
Groundwater Elevation and Depth to Groundwater

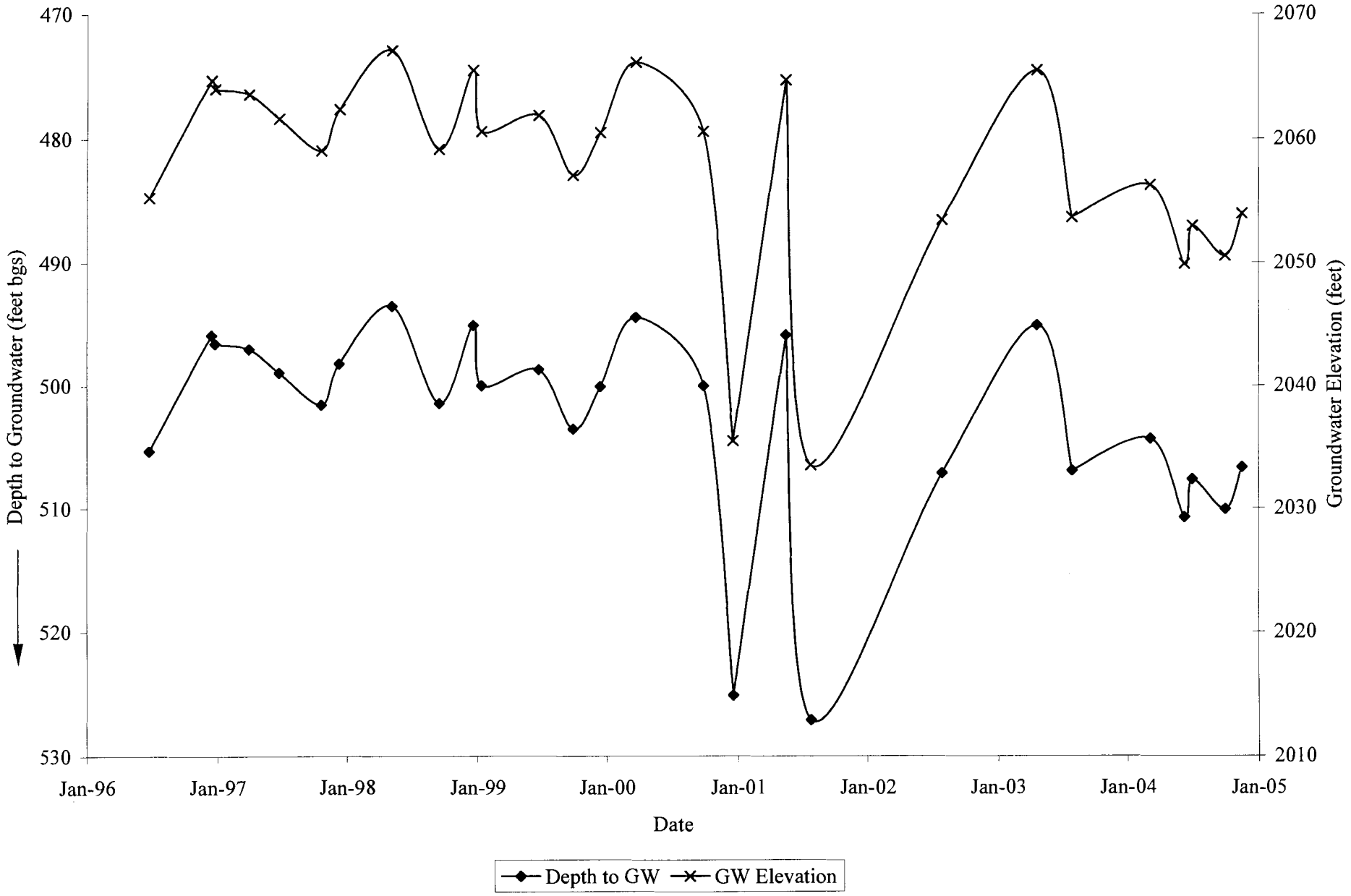


FIGURE 4.29
Palmdale Water Reclamation Plant MW 4
Chloride and TDS

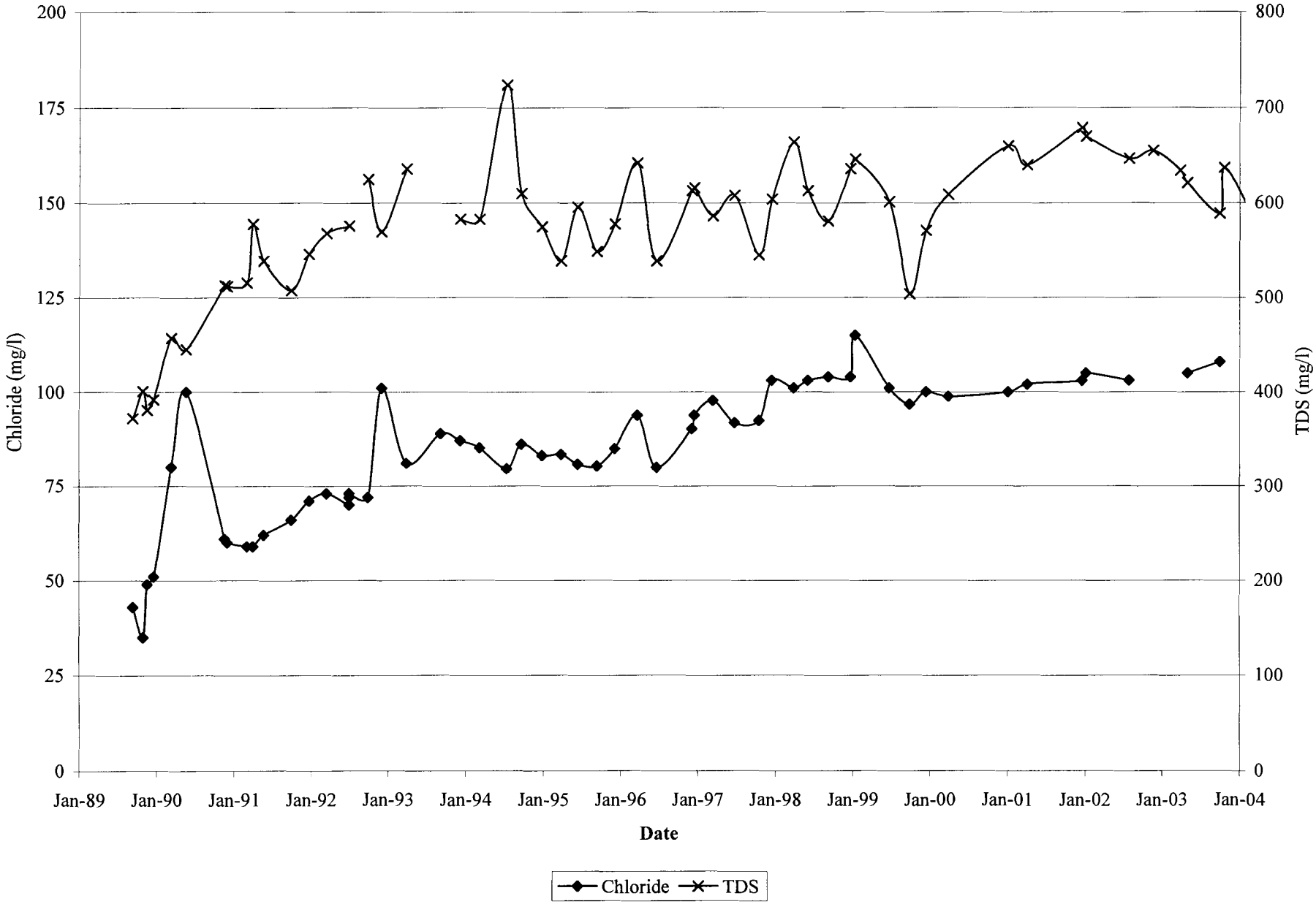


FIGURE 4.30
Palmdale Water Reclamation Plant MW 4
MBAS, NH_3, TKN, NO_3^-

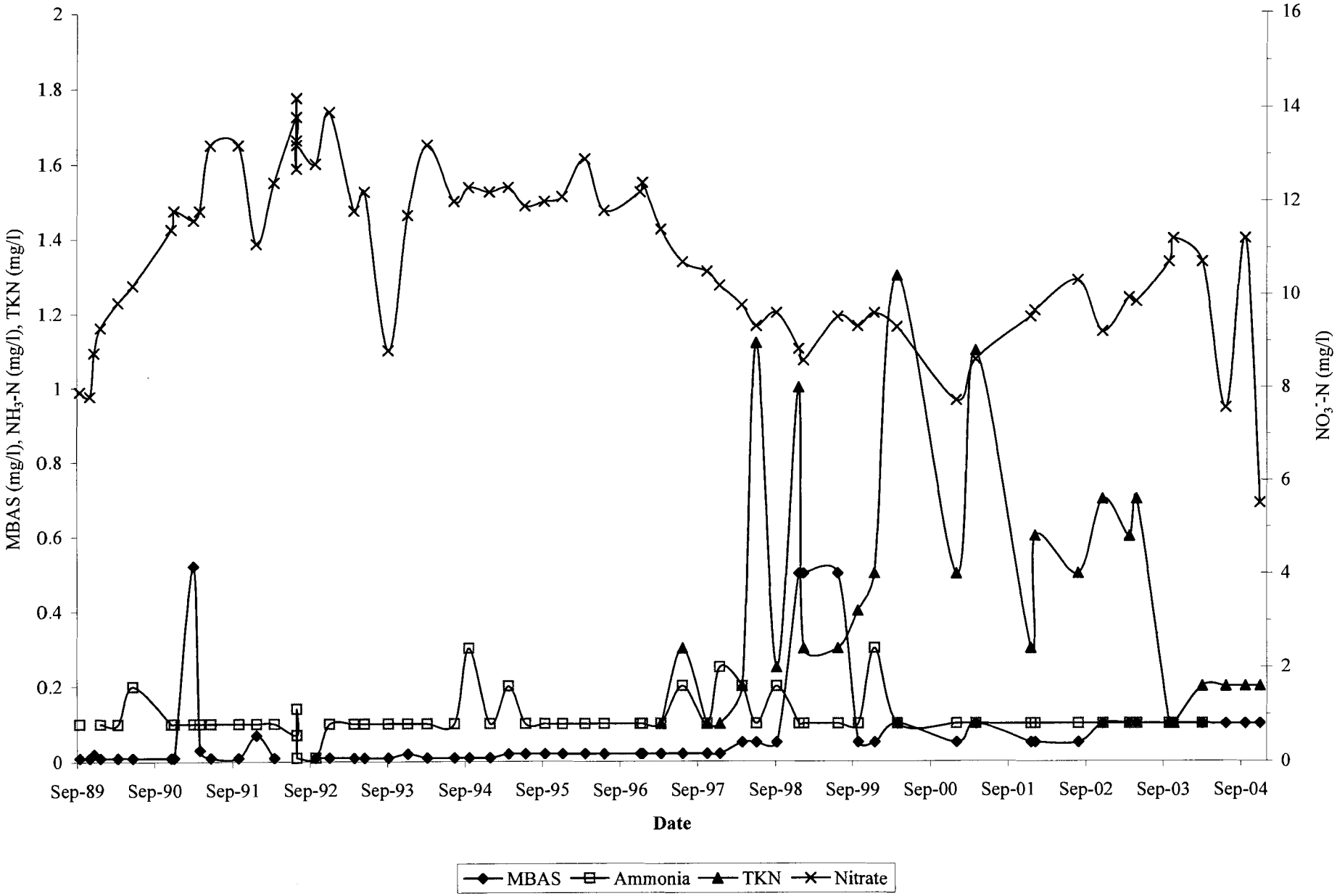


FIGURE 4.30a
Palmdale Water Reclamation Plant MW 4
Groundwater Elevation and Depth to Groundwater

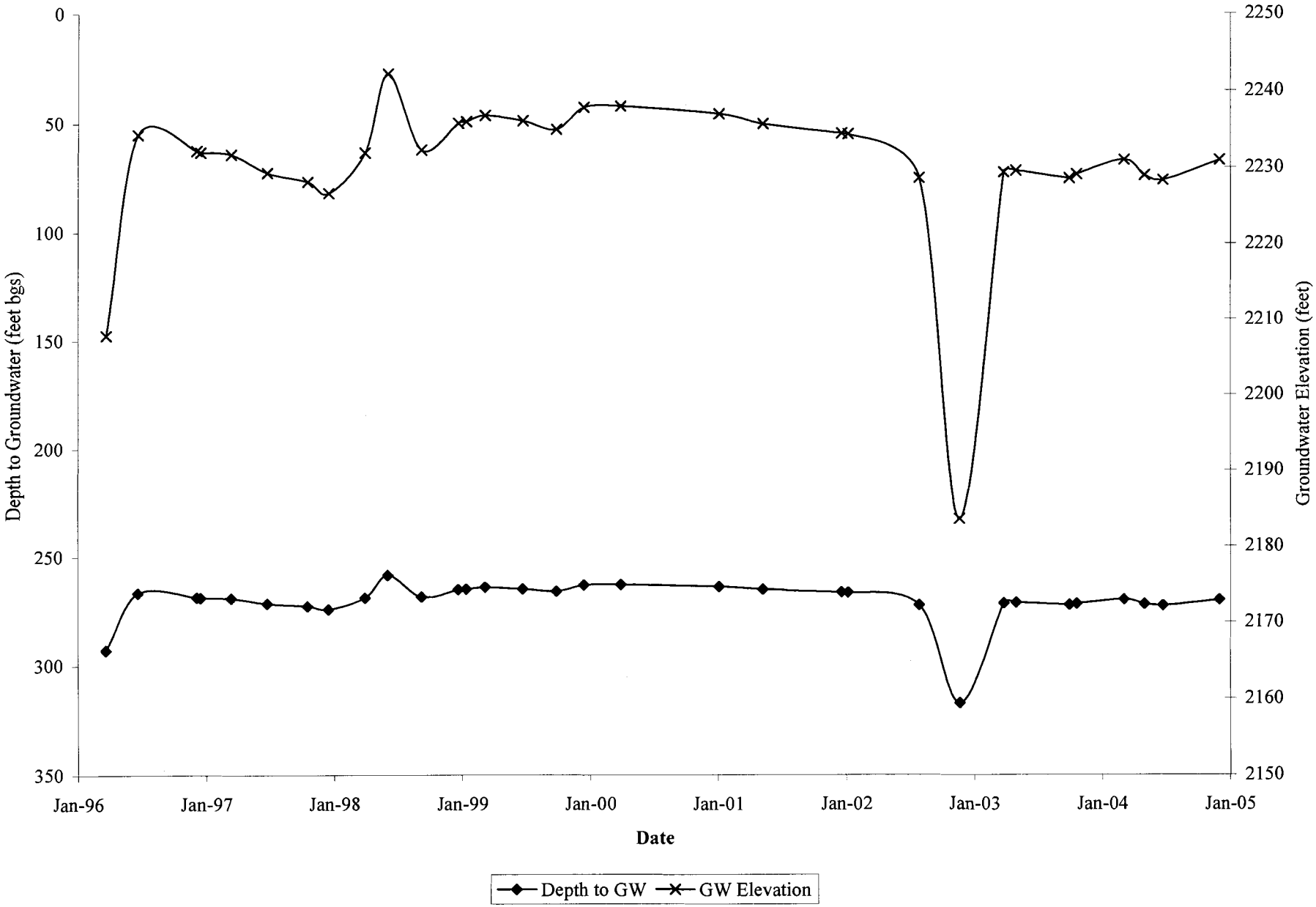


FIGURE 4.31

Palmdale Water Reclamation Plant MW 15

Chloride and TDS

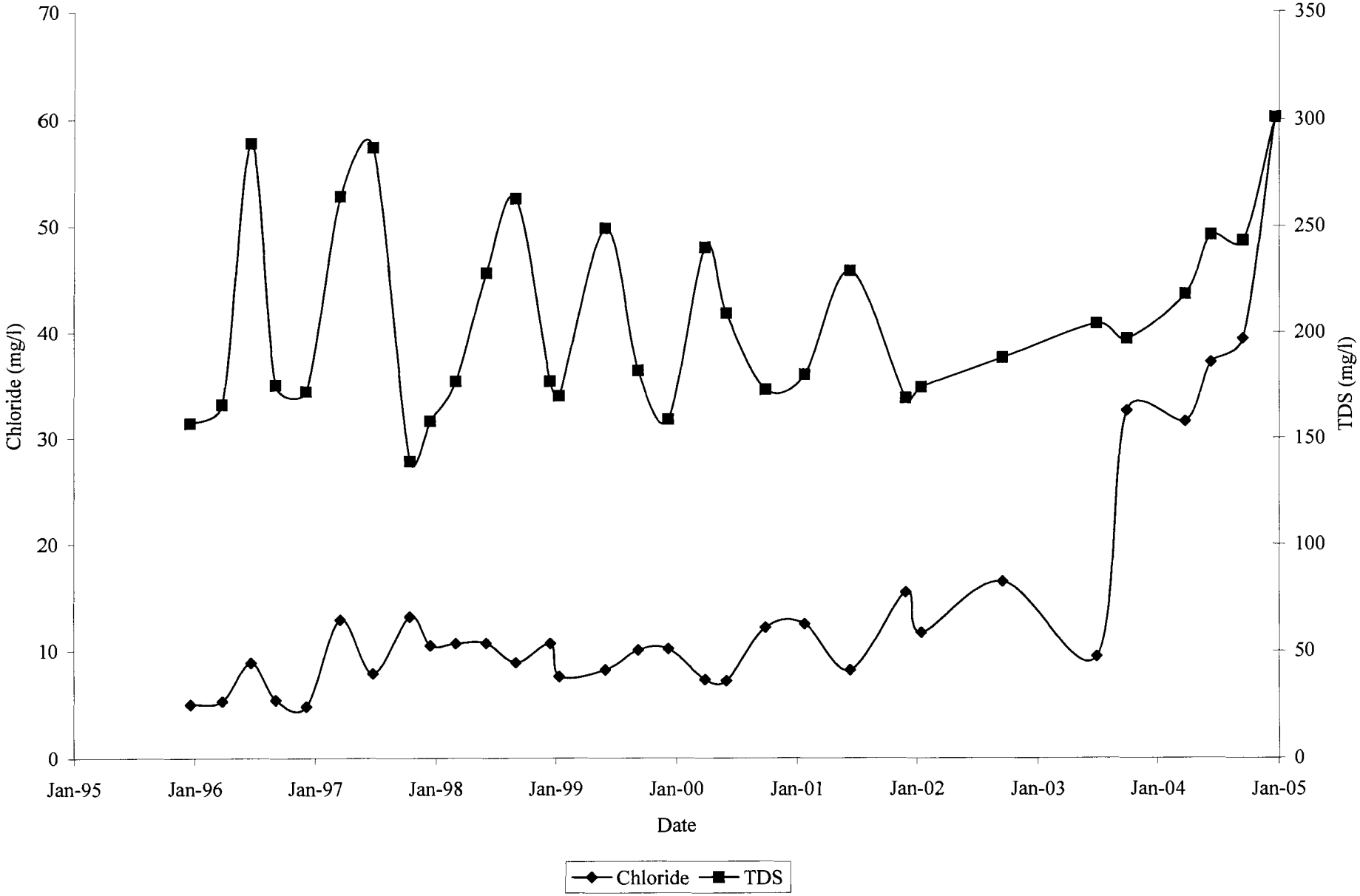


FIGURE 4.32

Palmdale Water Reclamation Plant MW 15

MBAS, NH_3, TKN, NO_3^-

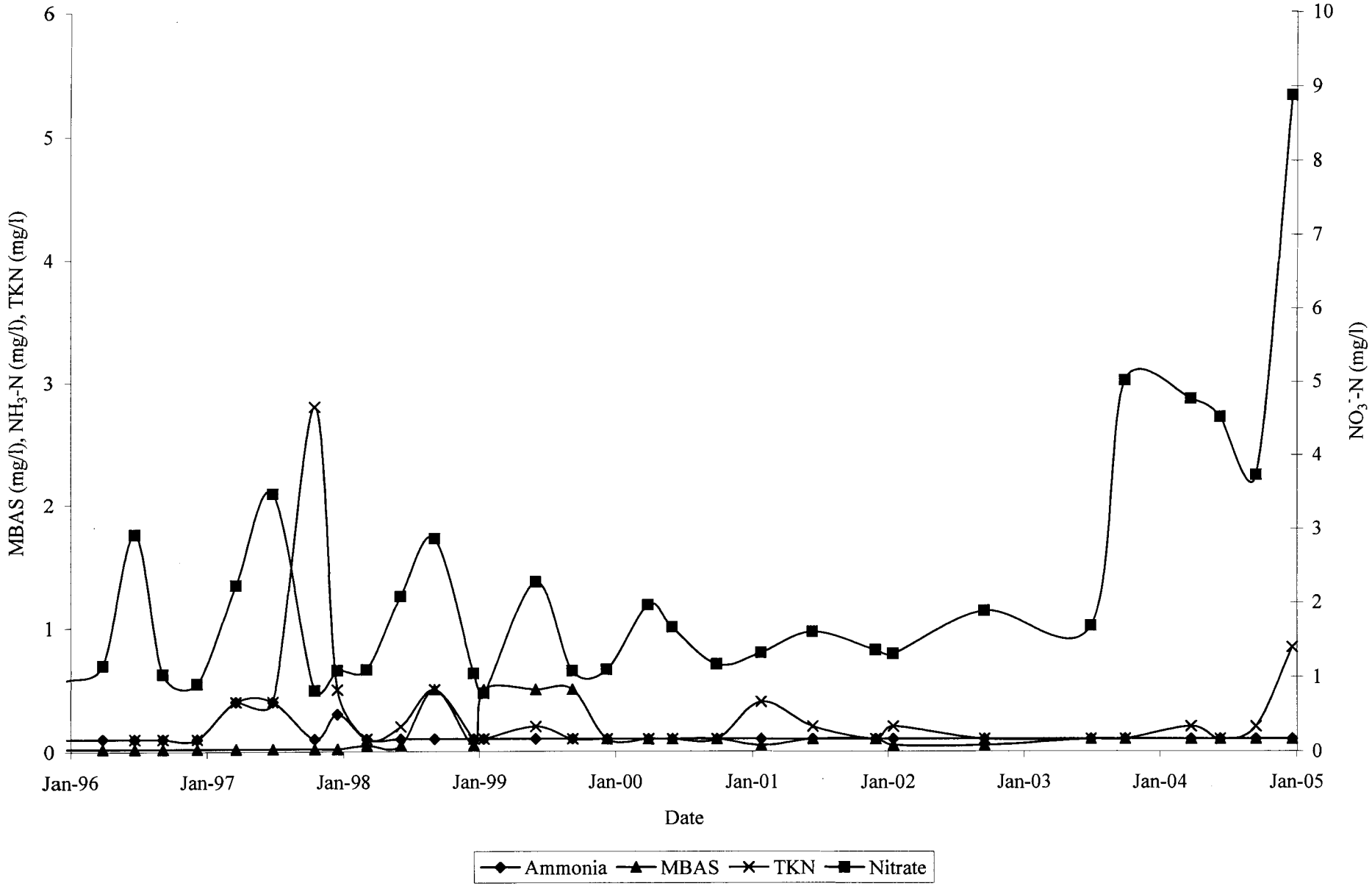


FIGURE 4.32a

Palmdale Water Reclamation Plant MW 15

Groundwater Elevation and Depth to Groundwater

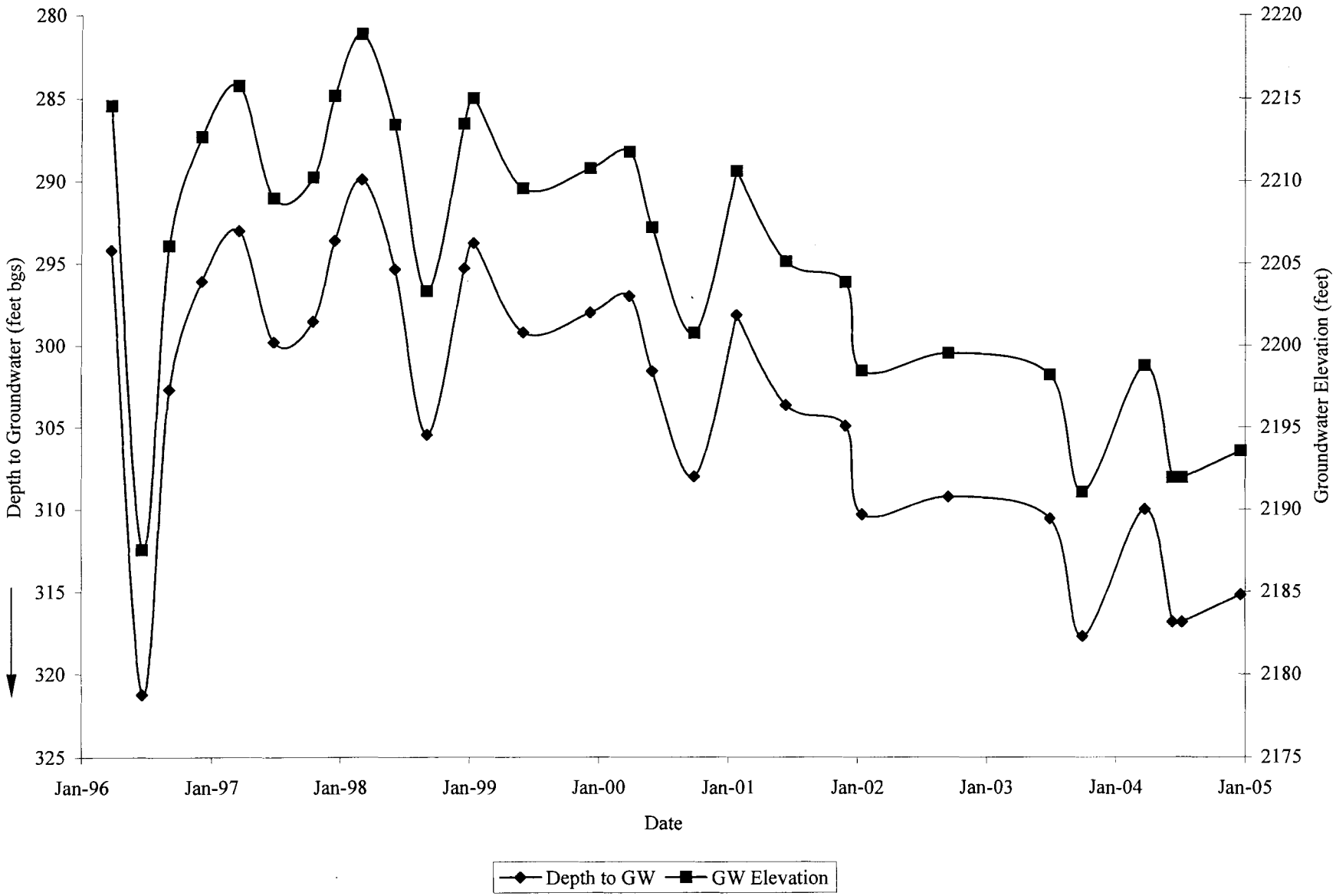


FIGURE 4.33

Palmdale Water Reclamation Plant MW 16

Chloride and TDS

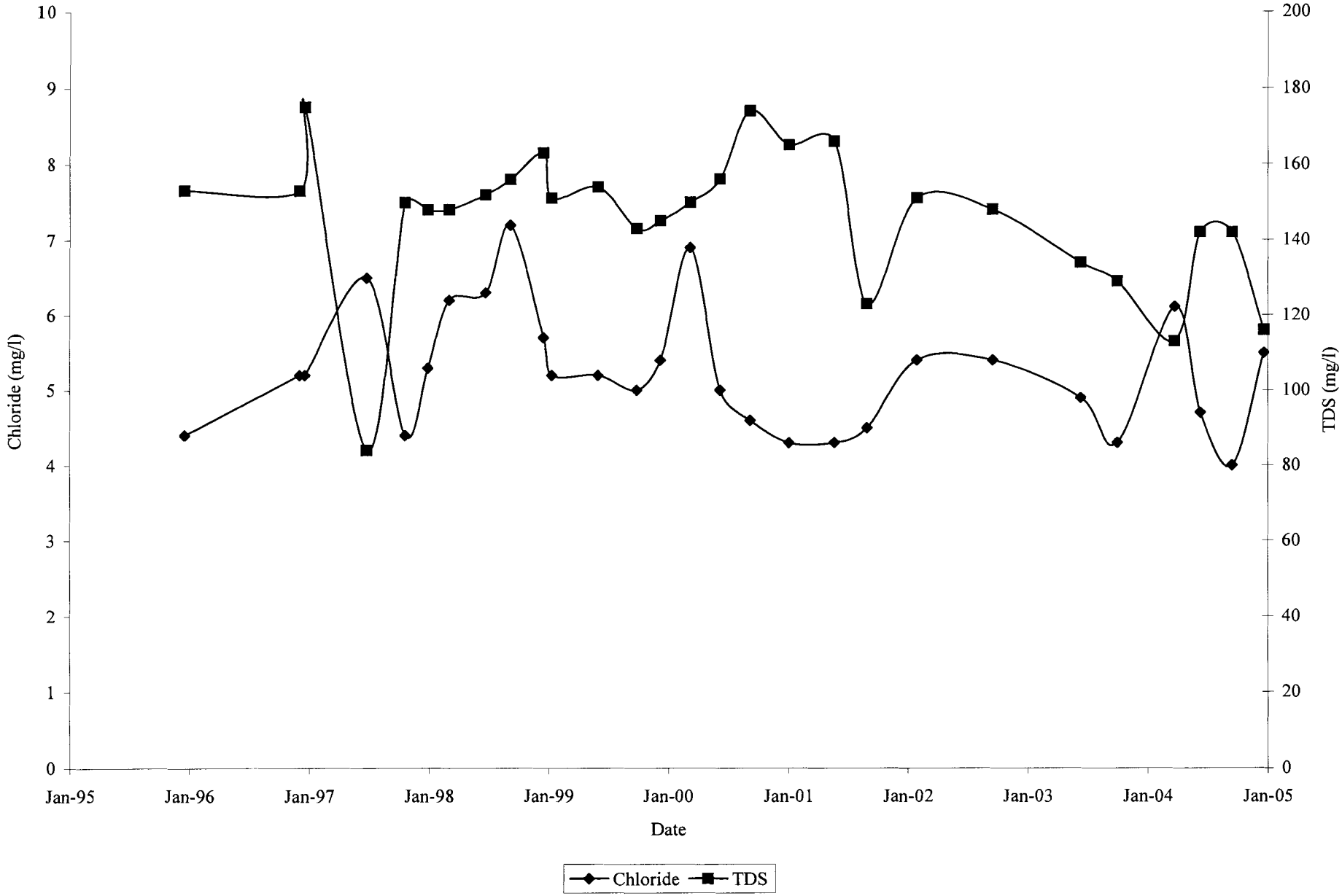


FIGURE 4.34
Palmdale Water Reclamation Plant MW 16
MBAS, NH_3, TKN, NO_3^-

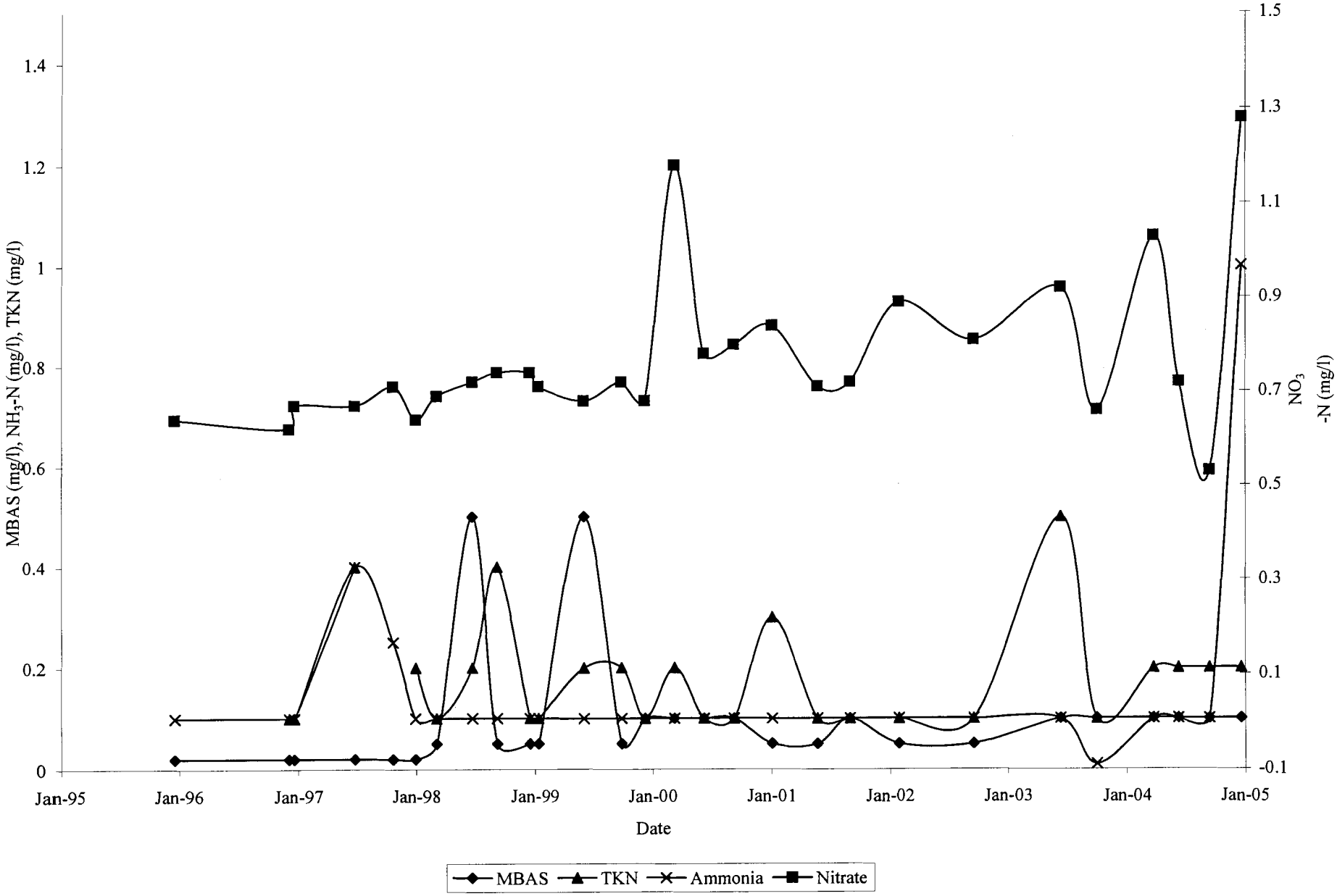


FIGURE 4.34a

Palmdale Water Reclamation Plant MW 16

Groundwater Elevation and Depth to Groundwater

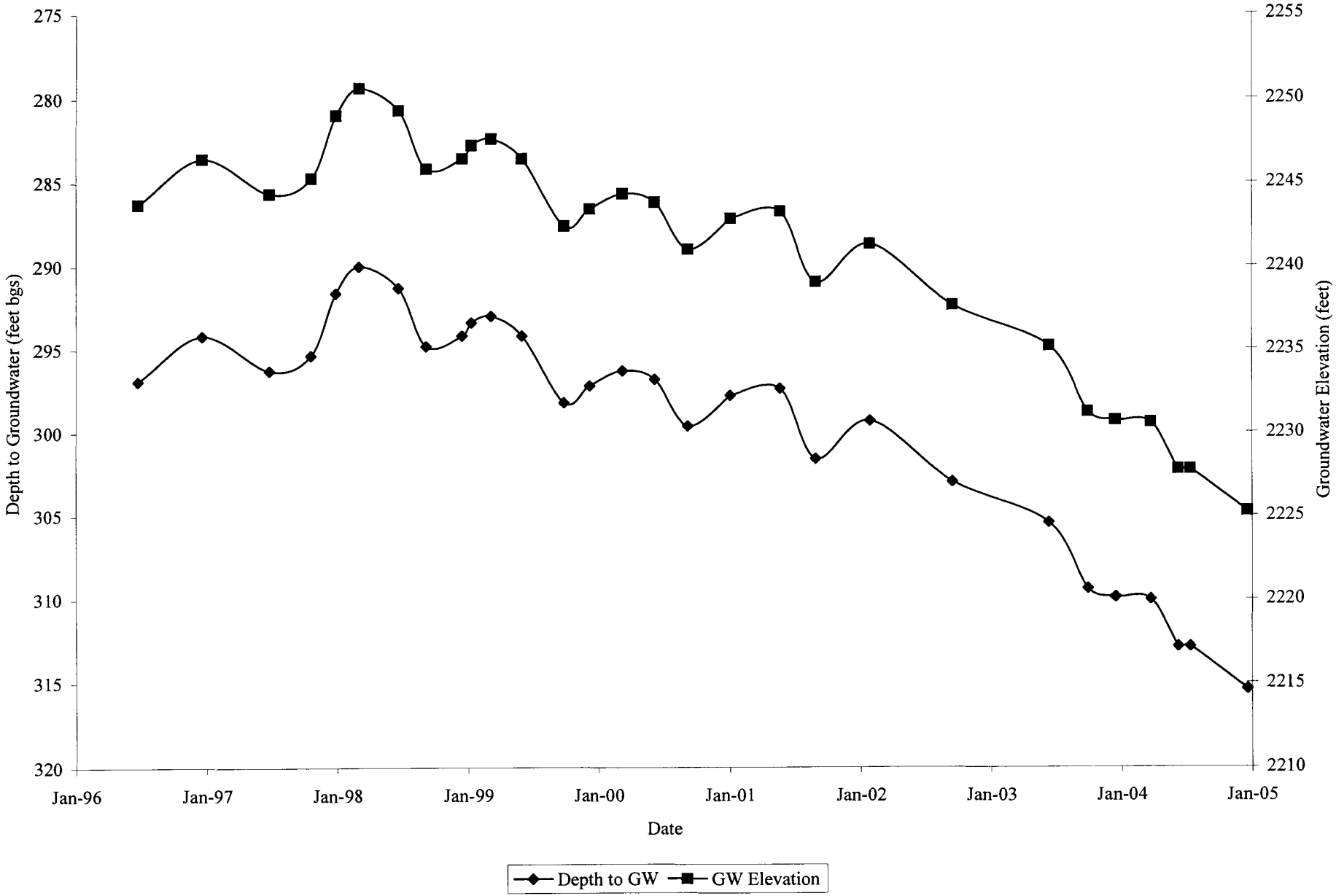


FIGURE 4.36

Palmdale Water Reclamation Plant MW 17

MBAS, NH_3, TKN, NO_3^-

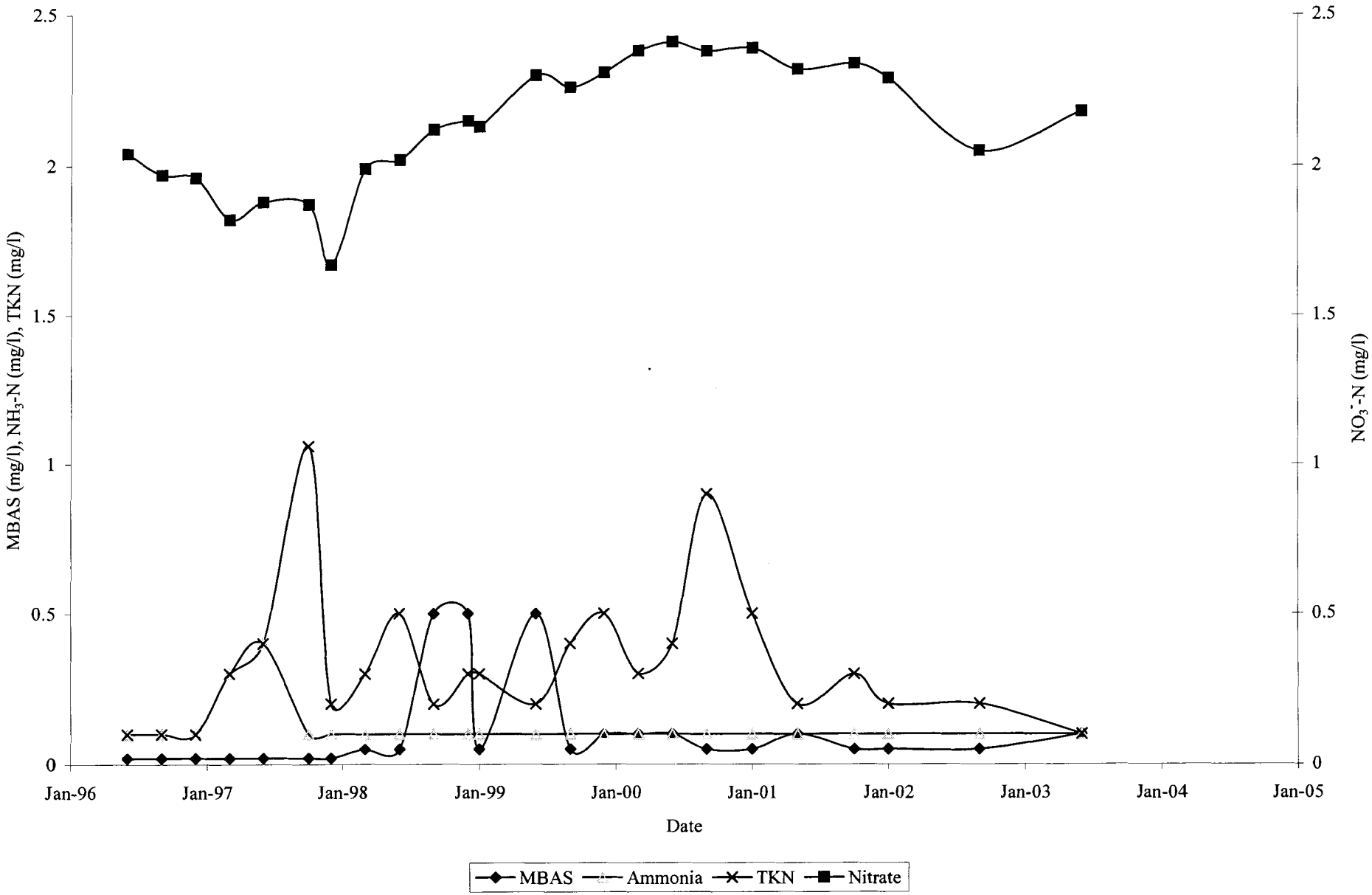


FIGURE 4.37
Palmdale Water Reclamation Plant MW 18
Chloride and TDS

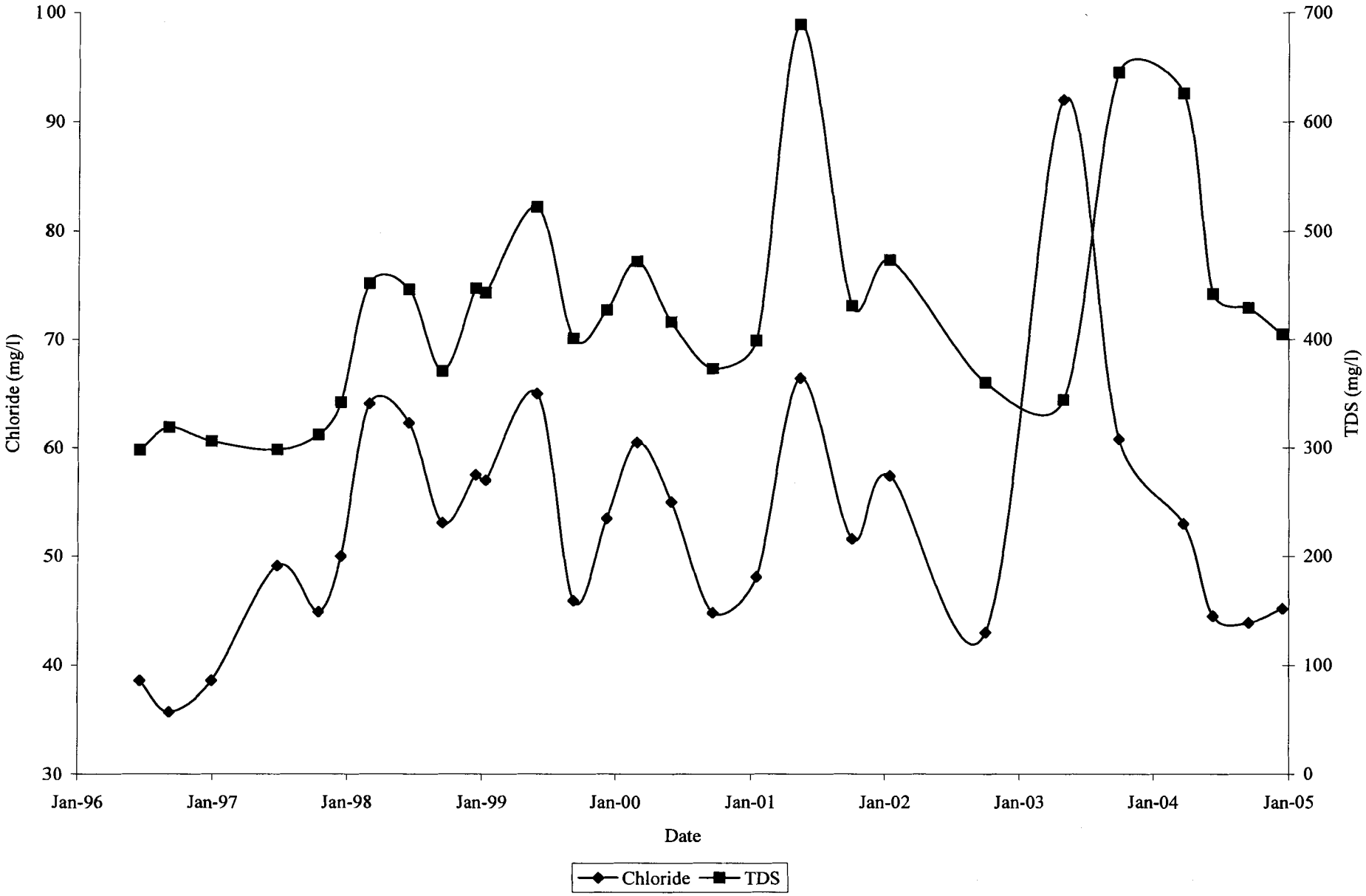


FIGURE 4.38

Palmdale Water Reclamation Plant MW 18

MBAS, NH_3, TKN, NO_3^-

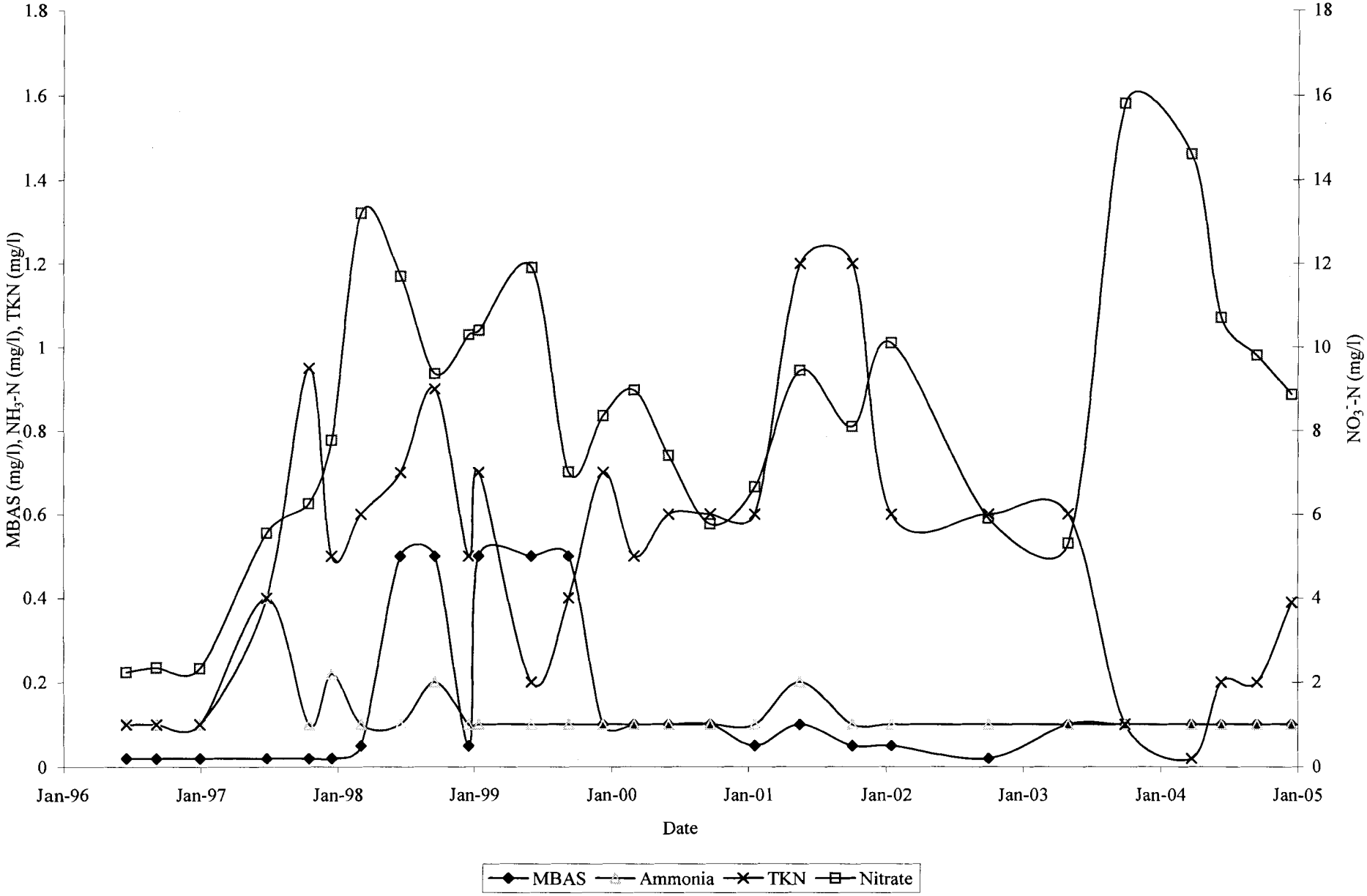


FIGURE 4.39

Palmdale Water Reclamation Plant MW 18

Groundwater Elevation and Depth to Groundwater

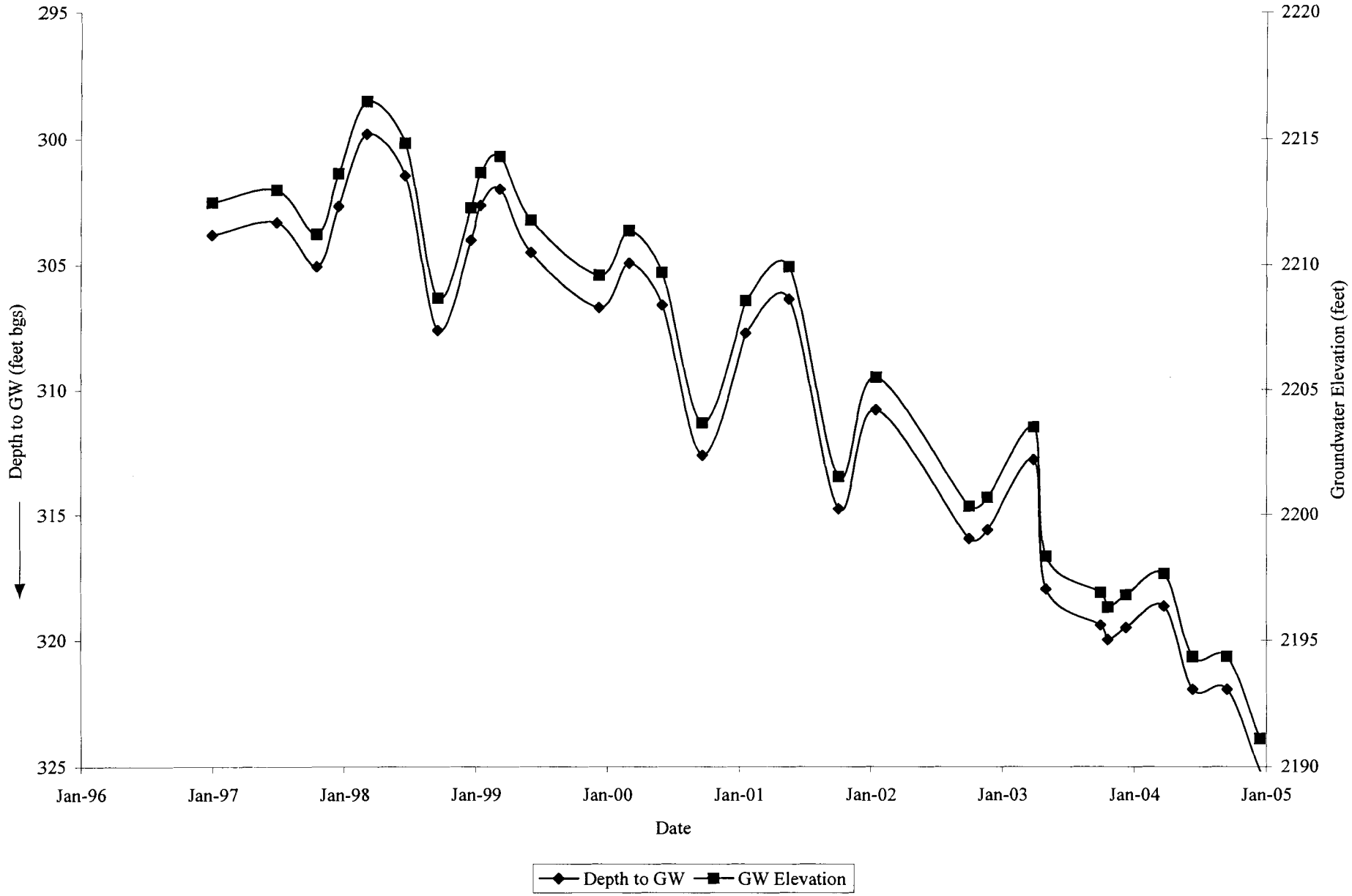


FIGURE 4.40

Palmdale Water Reclamation Plant MW19

Chloride and TDS

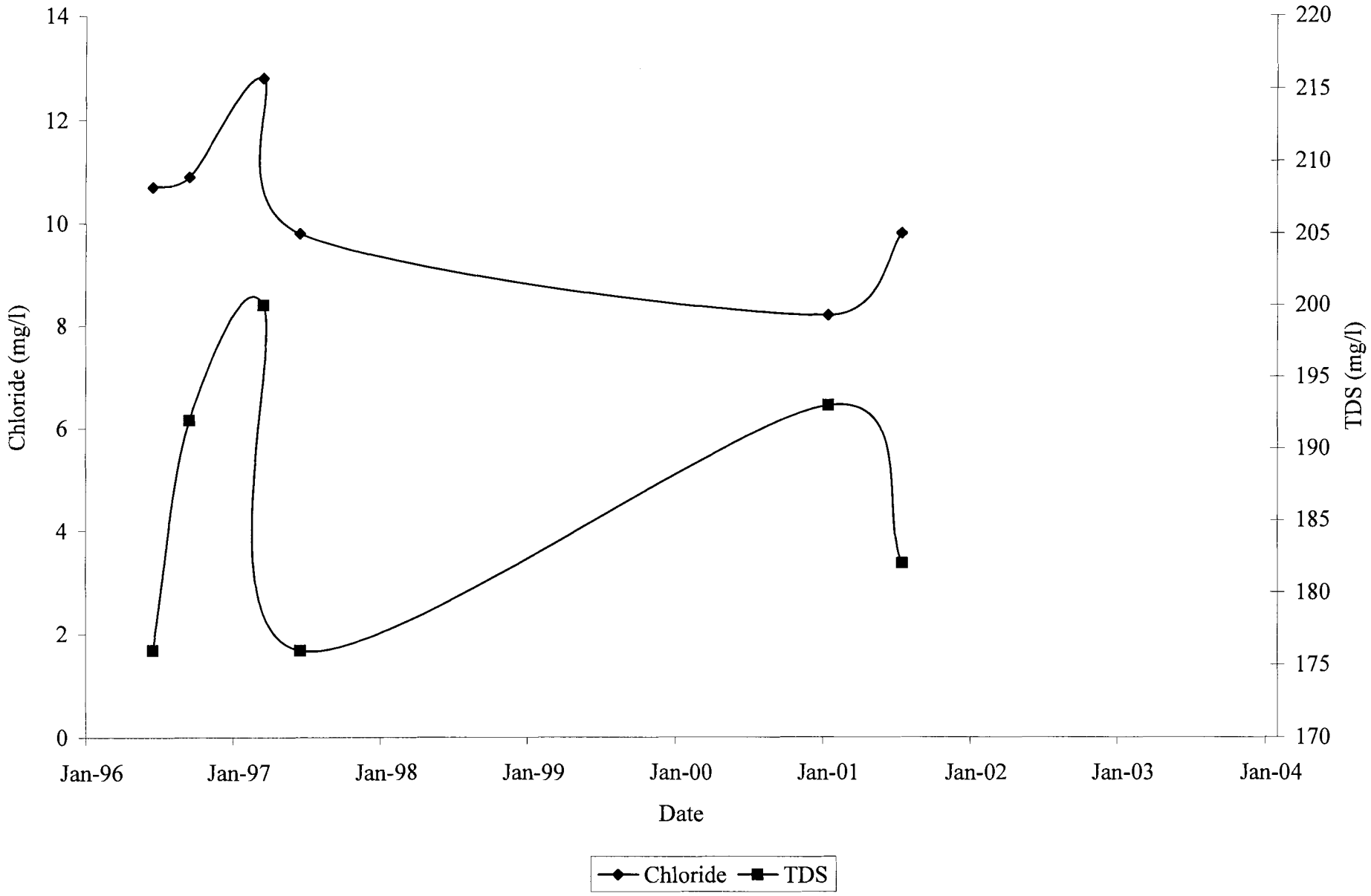


FIGURE 4.41

Palmdale Water Reclamation Plant MW19

MBAS, NH_3, TKN, NO_3^-

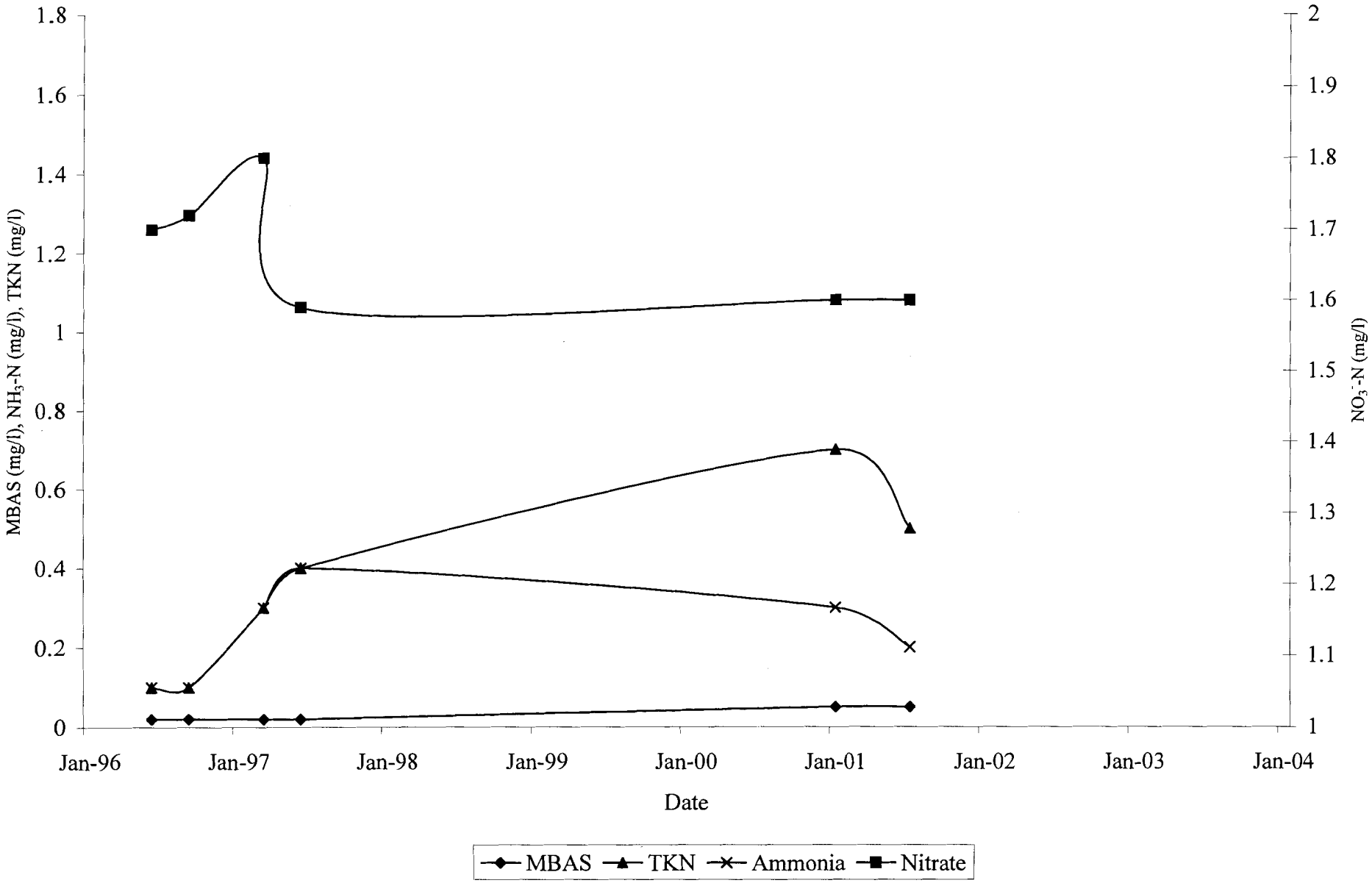


FIGURE 4.42
Palmdale Water Reclamation Plant MW 20
Chloride and TDS

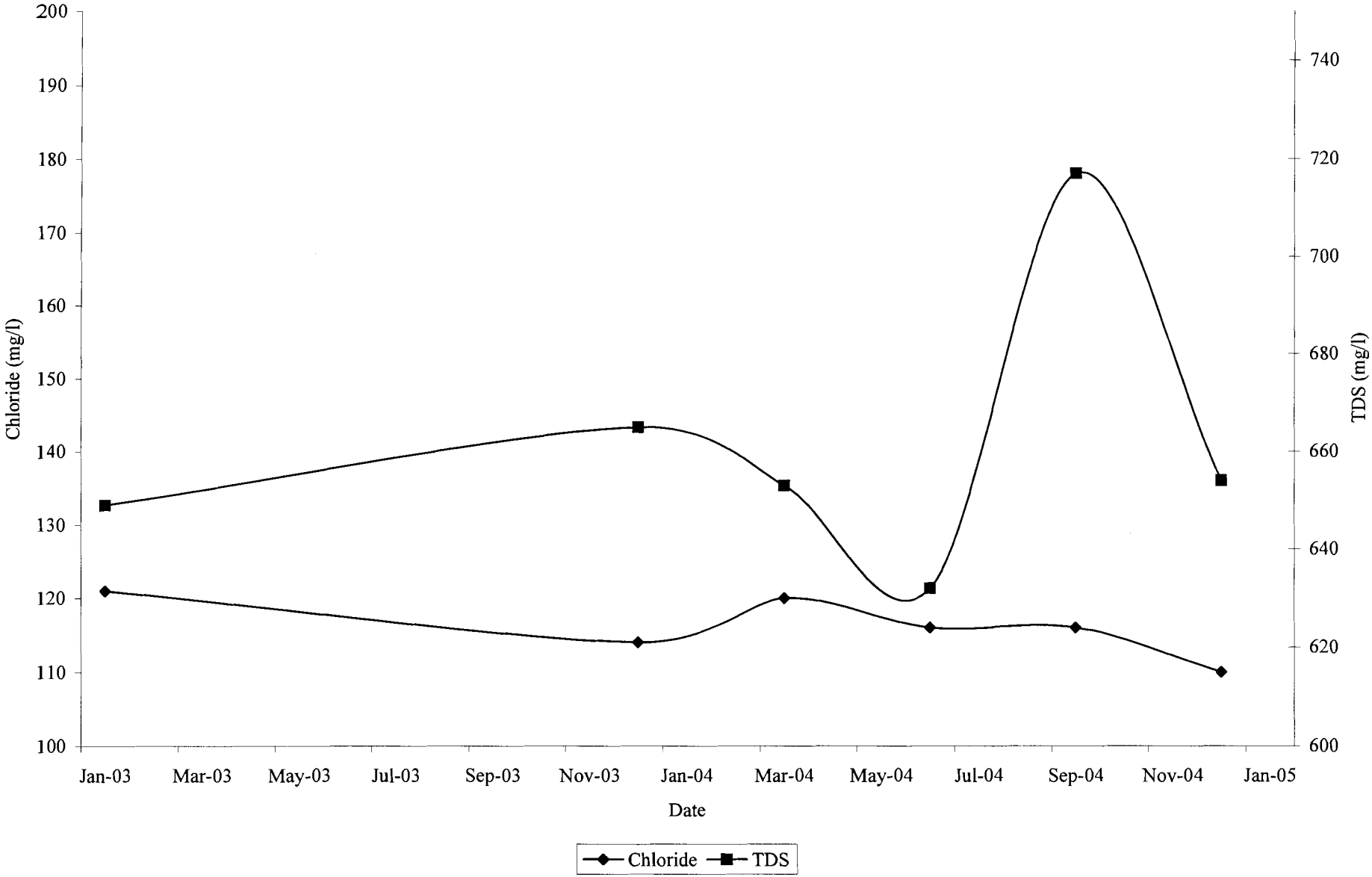


FIGURE 4.43
Palmdale Water Reclamation Plant MW 20
MBAS, NH_3, TKN, NO_3^-

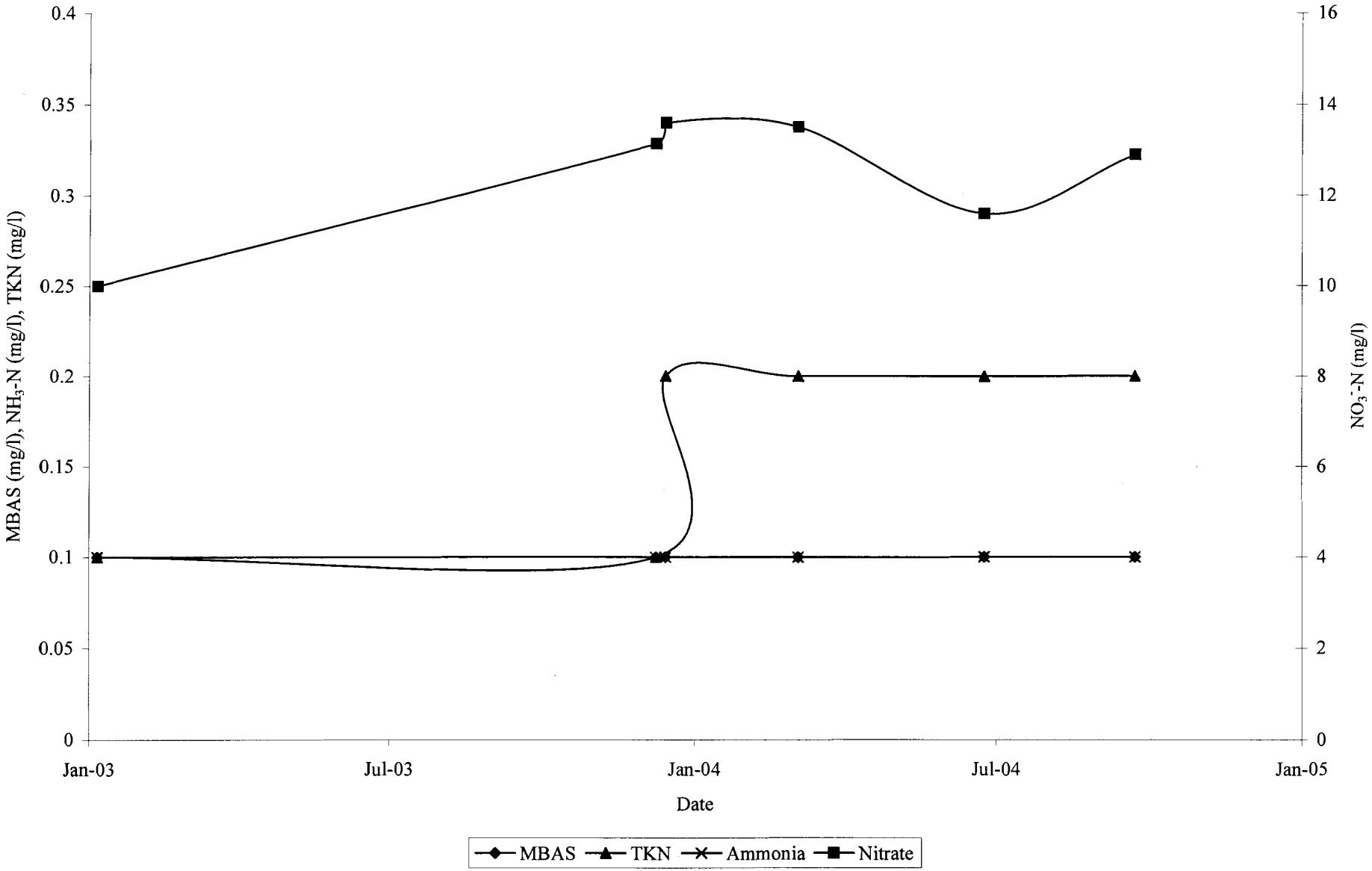


FIGURE 4.44

Palmdale Water Reclamation Plant MW 20

Groundwater Elevation and Depth to Groundwater

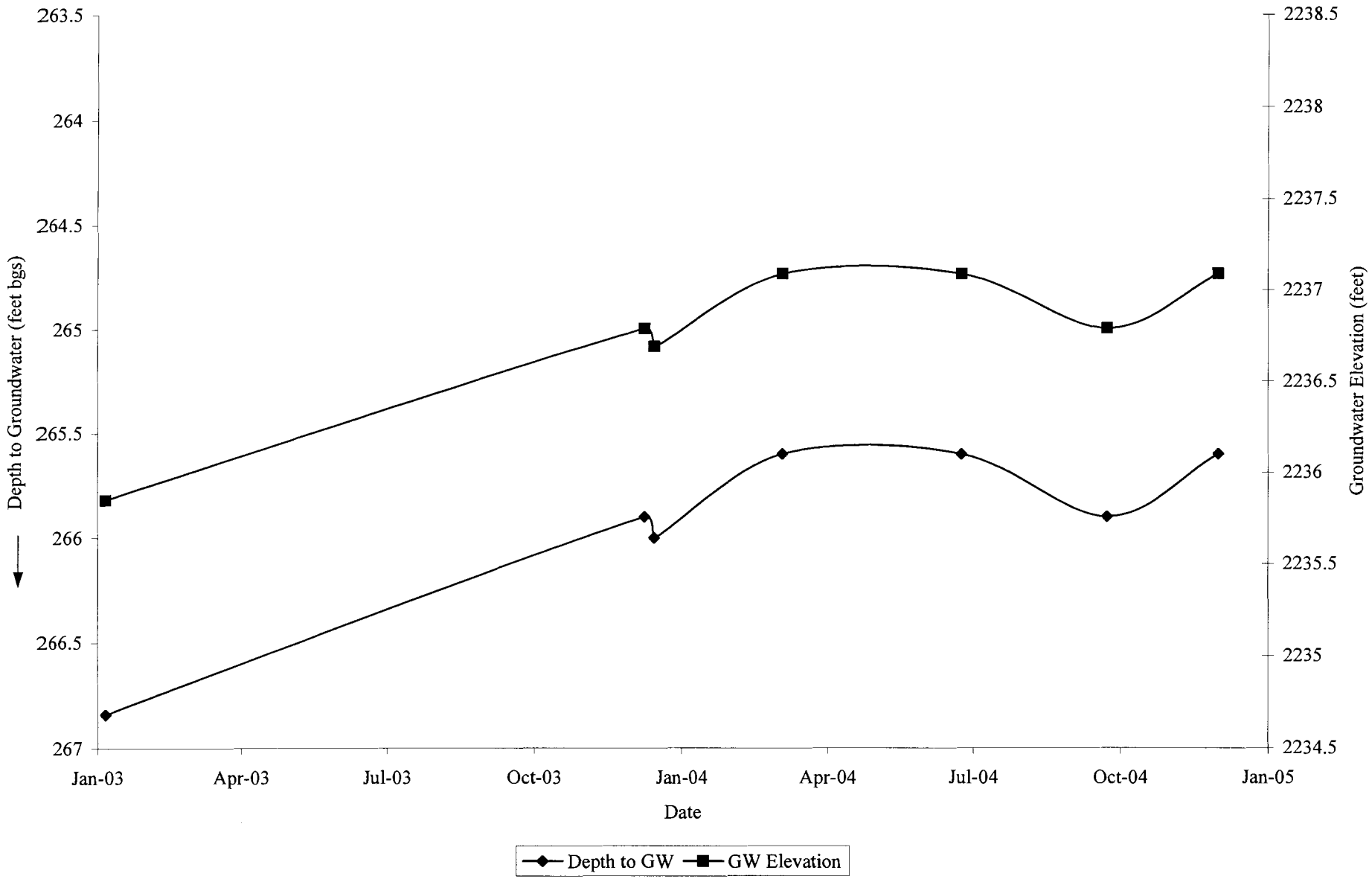


FIGURE 4.45
Palmdale Water Reclamation Plant MW 21
Chloride and TDS

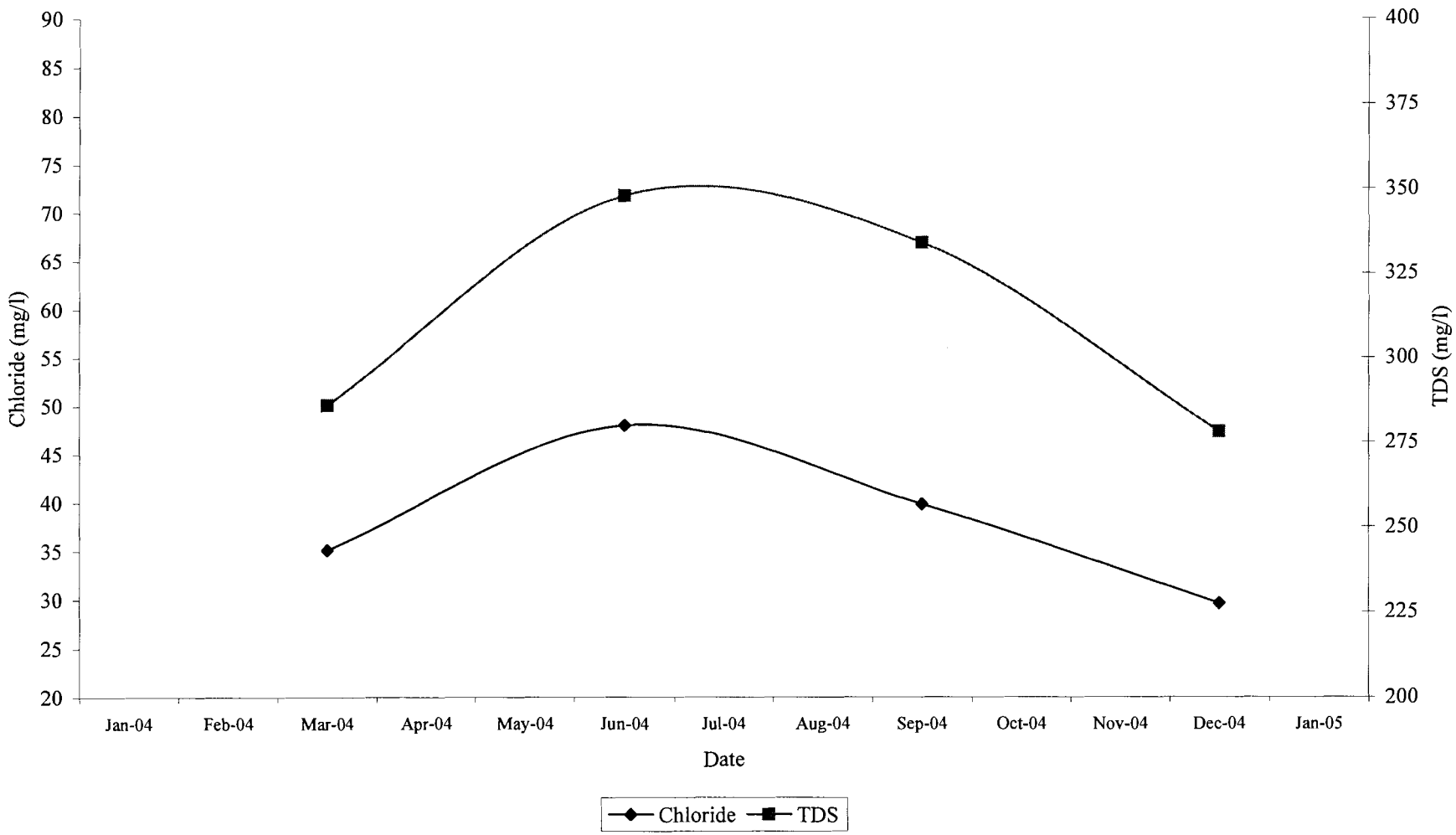


FIGURE 4.46
Palmdale Water Reclamation Plant MW 21
MBAS, NH_3, TKN, NO_3^-

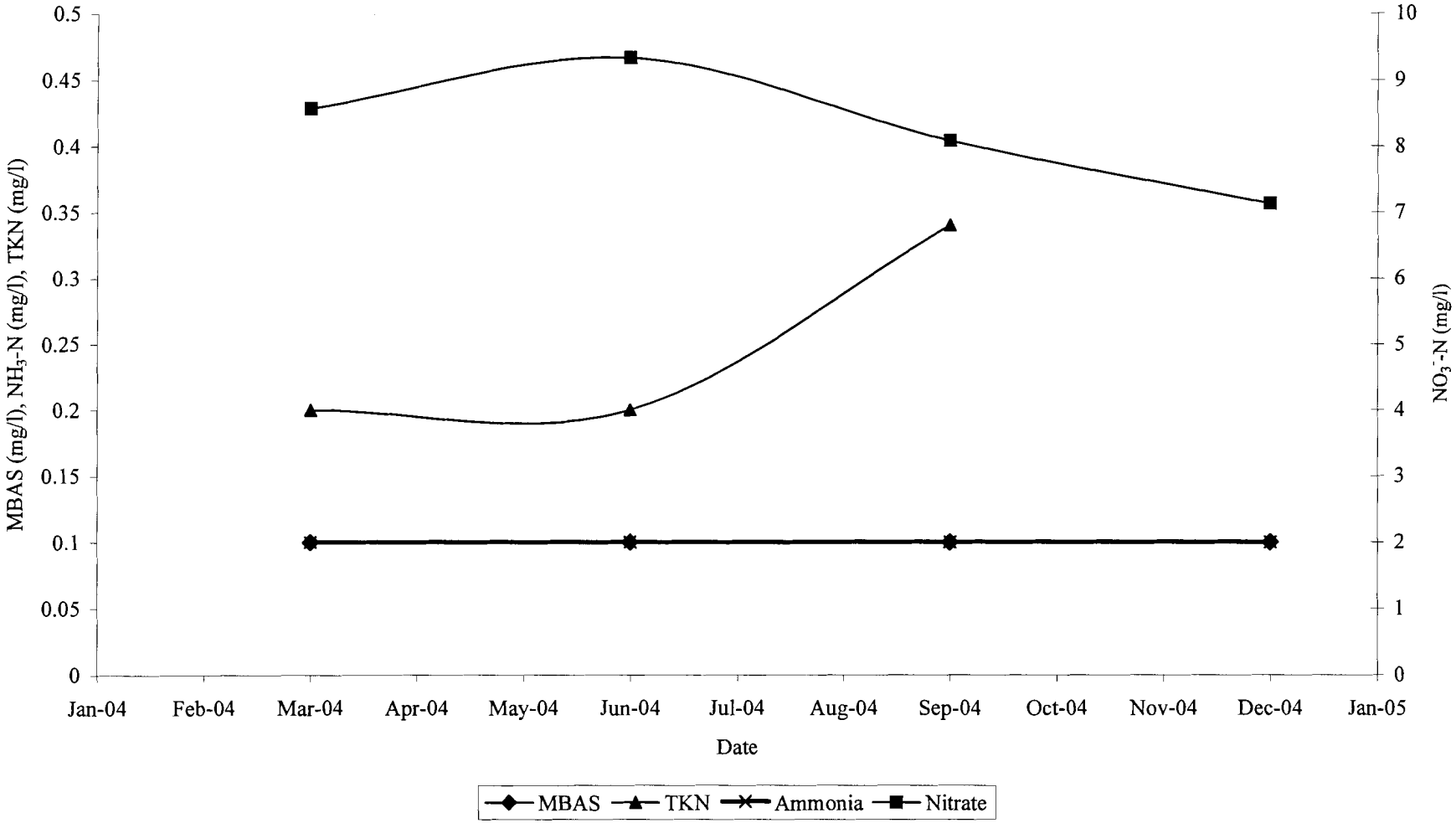


FIGURE 4.47

Palmdale Water Reclamation Plant MW 21

Groundwater Elevation and Depth to Groundwater

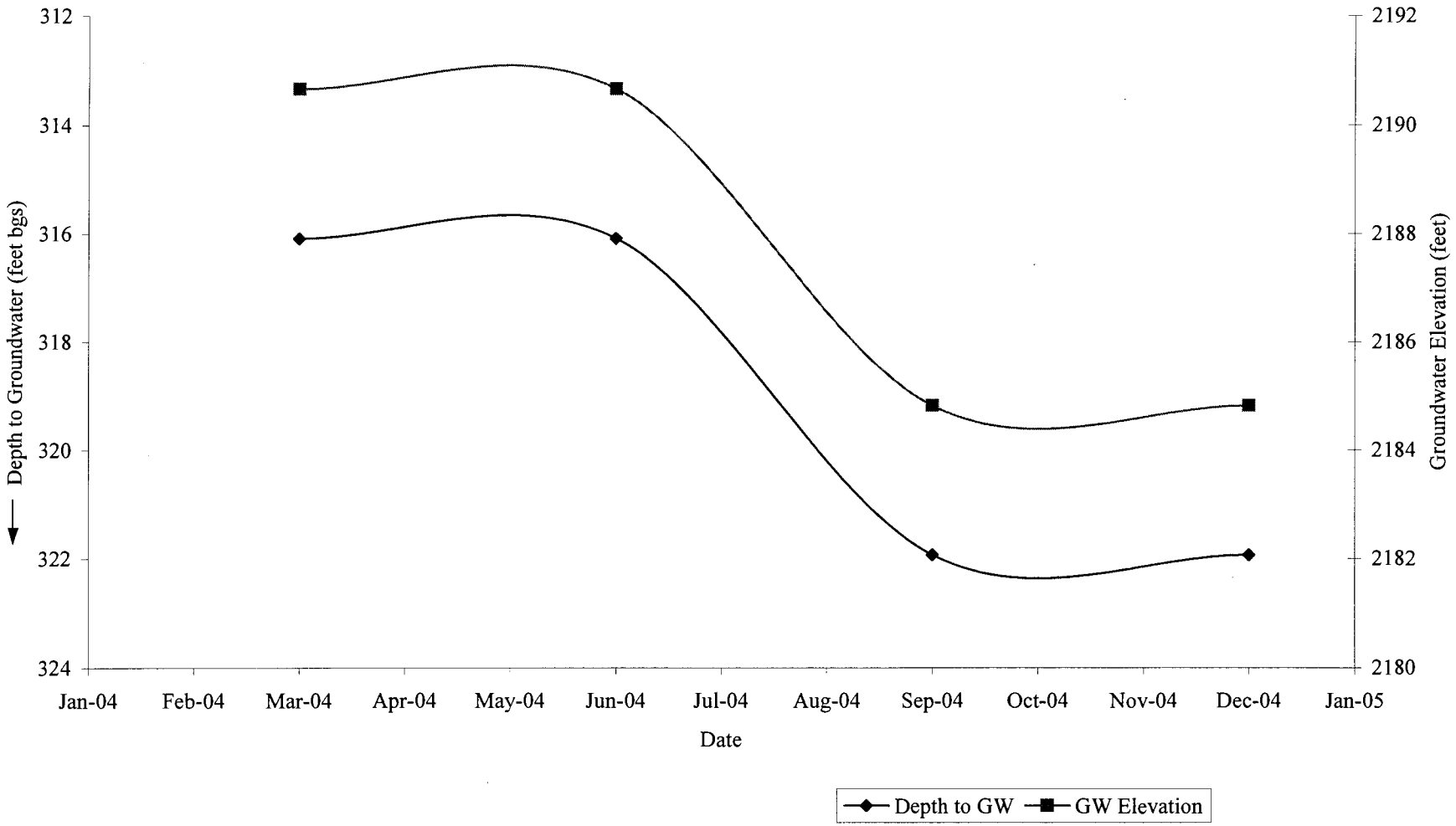


FIGURE 4.48
Palmdale Water Reclamation Plant MW 22
Chloride and TDS

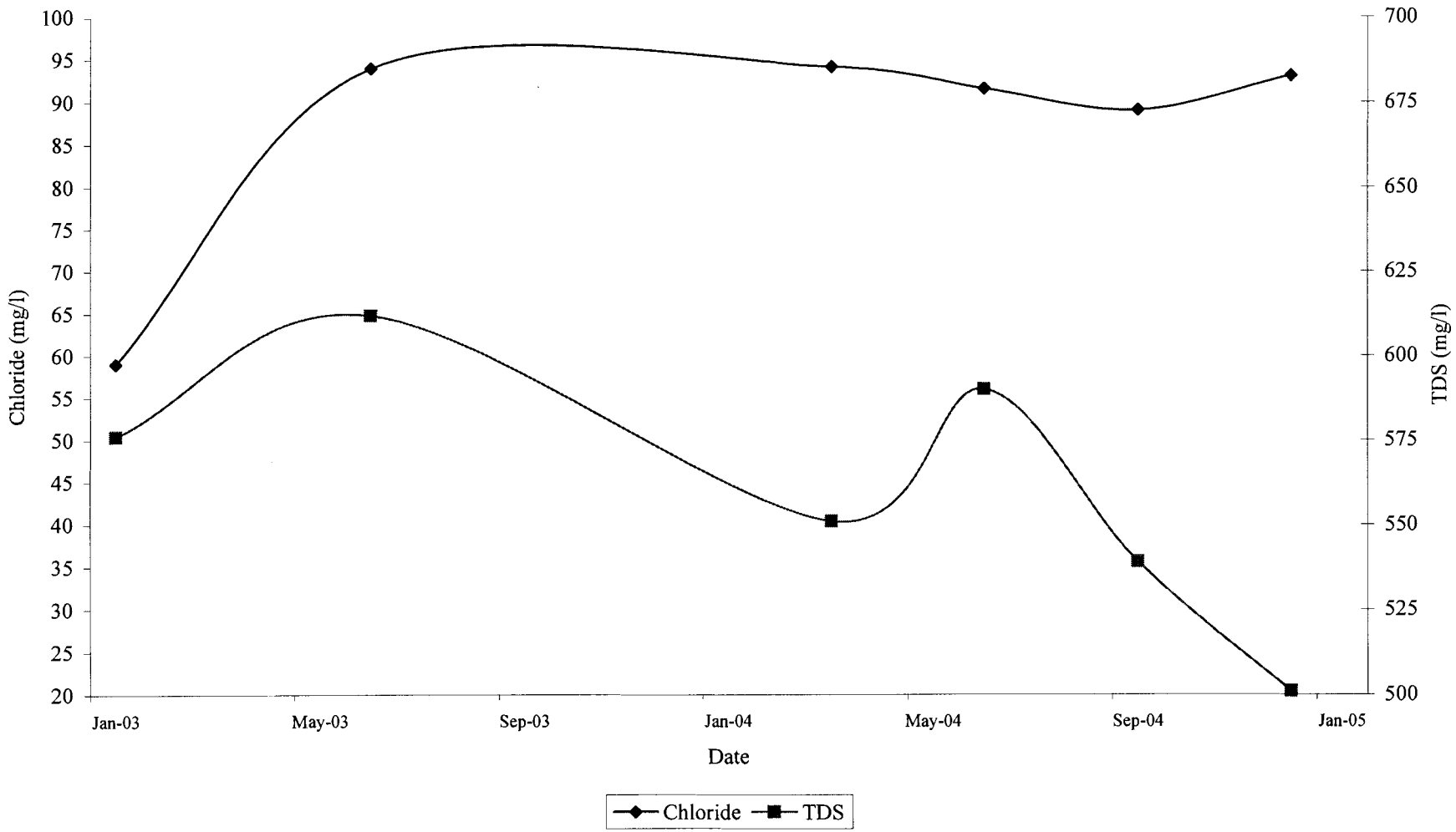


FIGURE 4.49
Palmdale Water Reclamation Plant MW 22
MBAS, NH_3, TKN, NO_3^-

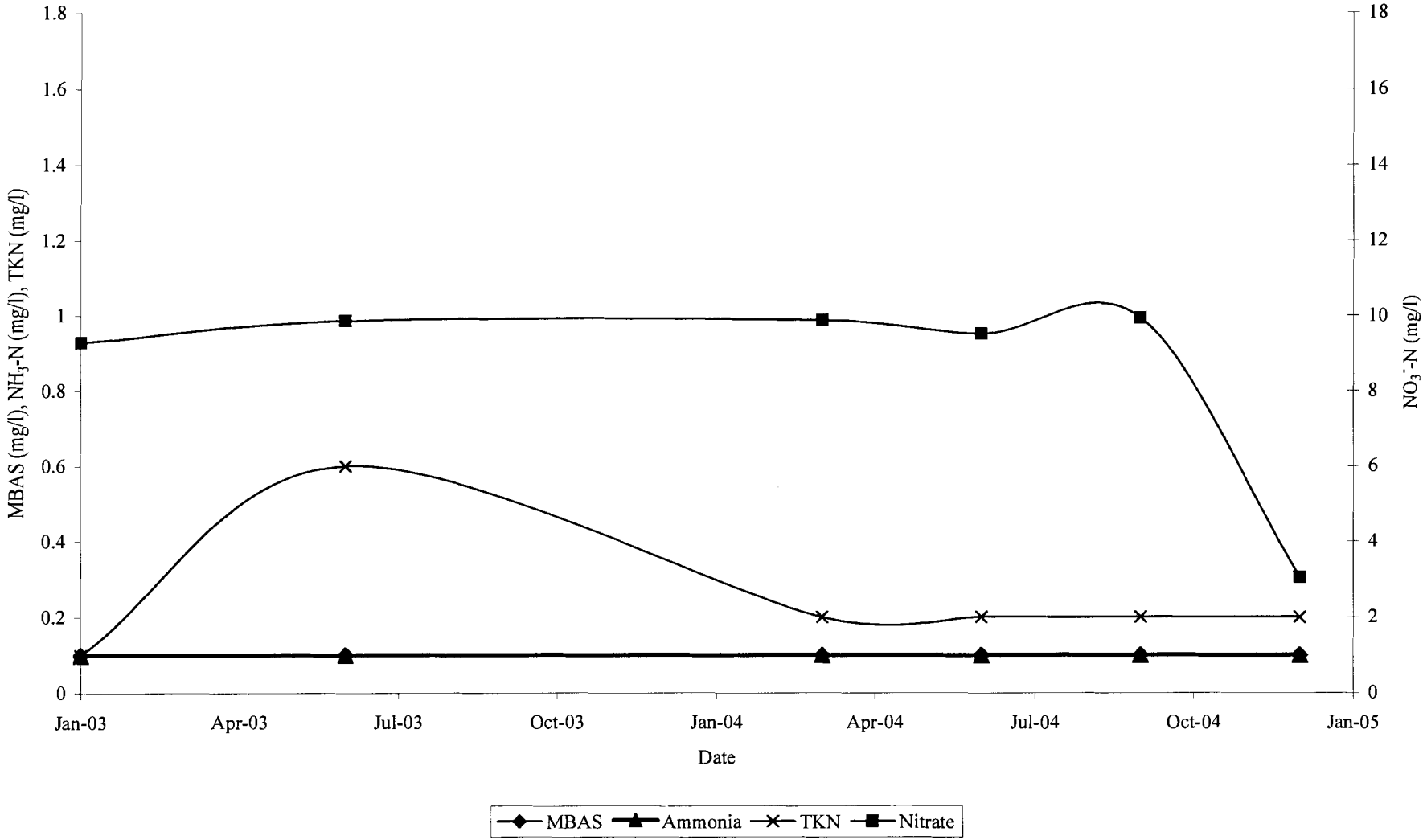


FIGURE 4.50
Palmdale Water Reclamation Plant MW 22
Groundwater Elevation and Depth to Groundwater

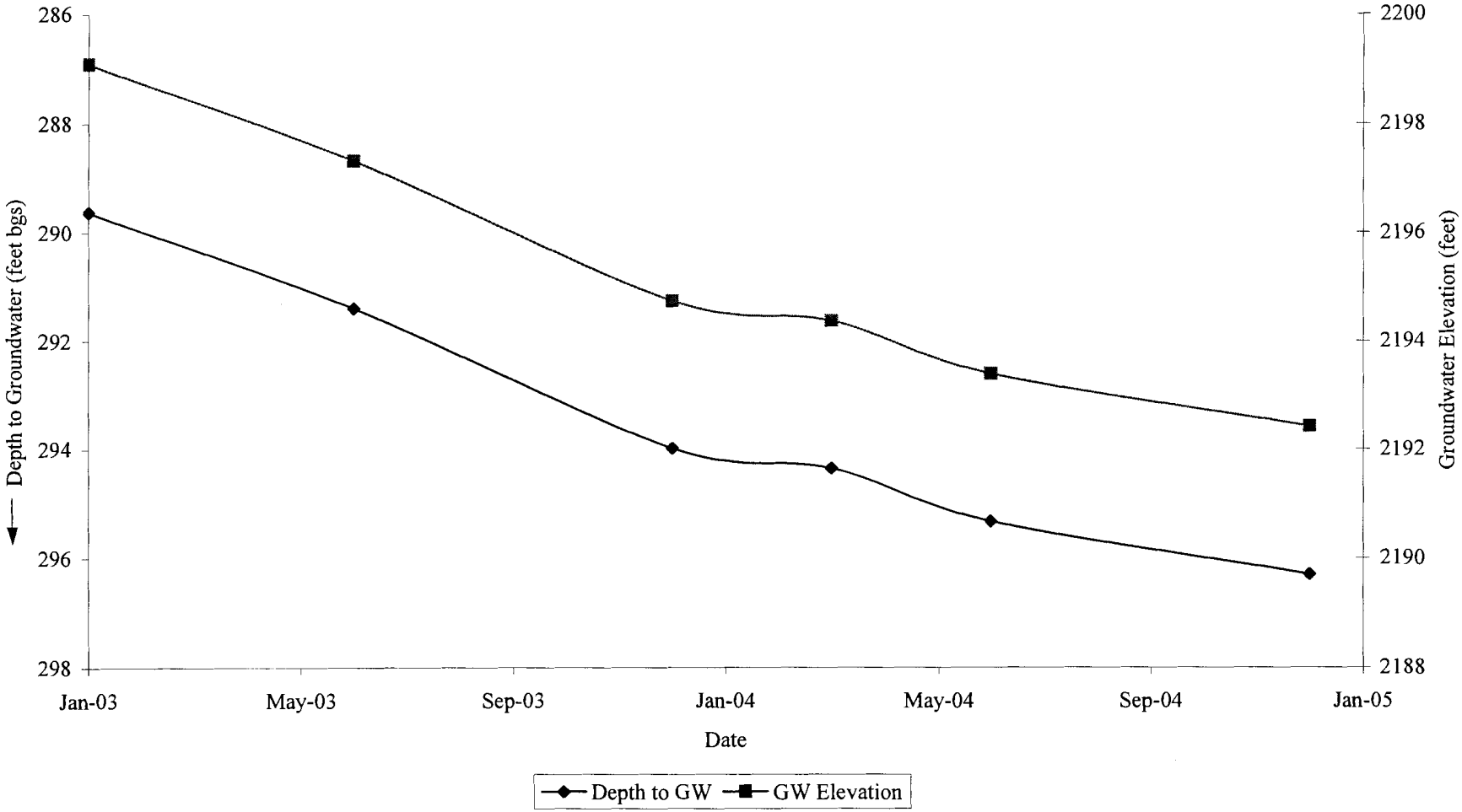


FIGURE 4.51
Palmdale Water Reclamation Plant MW 23
Chloride and TDS

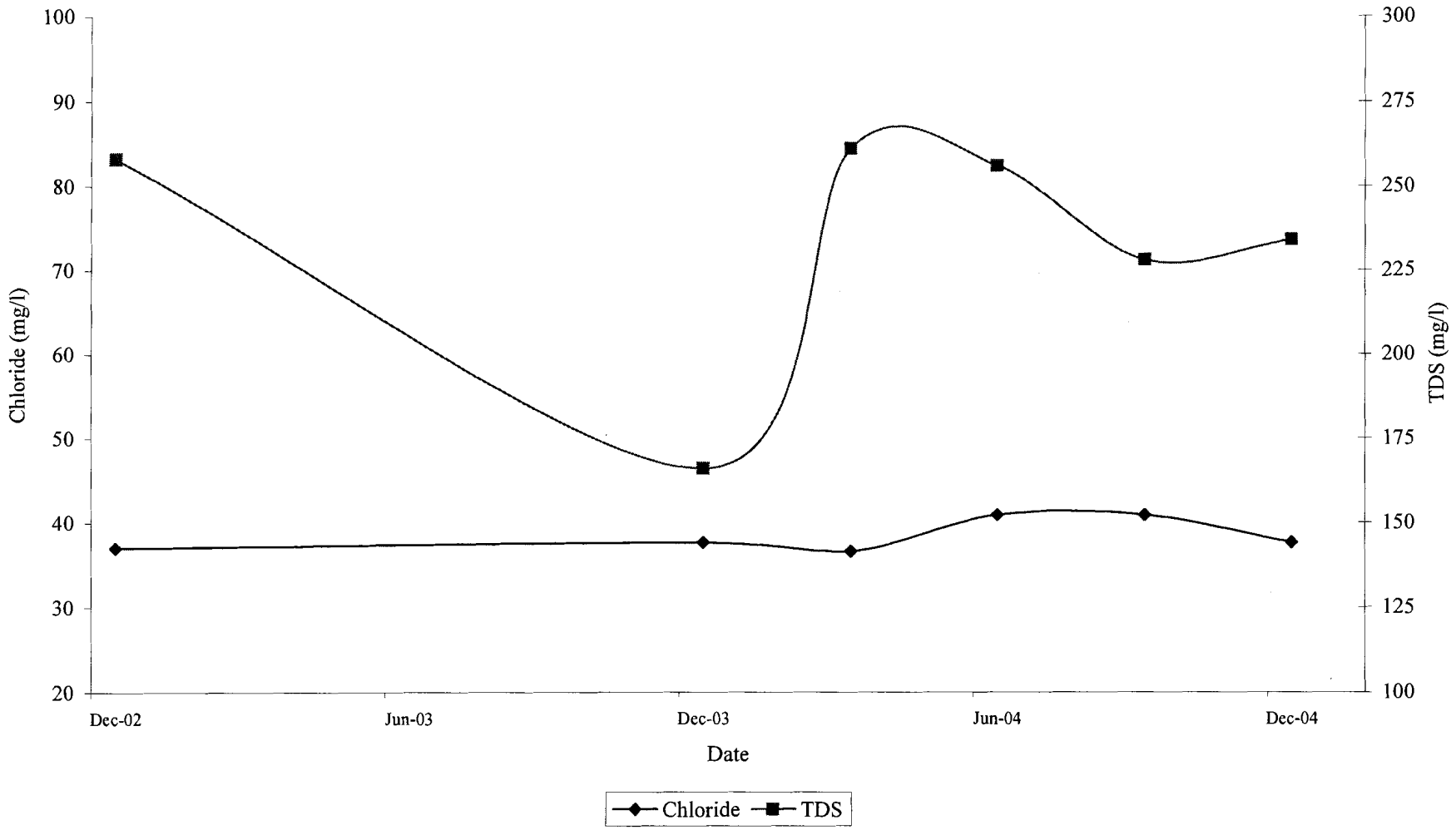


FIGURE 4.52
Palmdale Water Reclamation Plant MW 23
MBAS, NH_3, TKN, NO_3^-

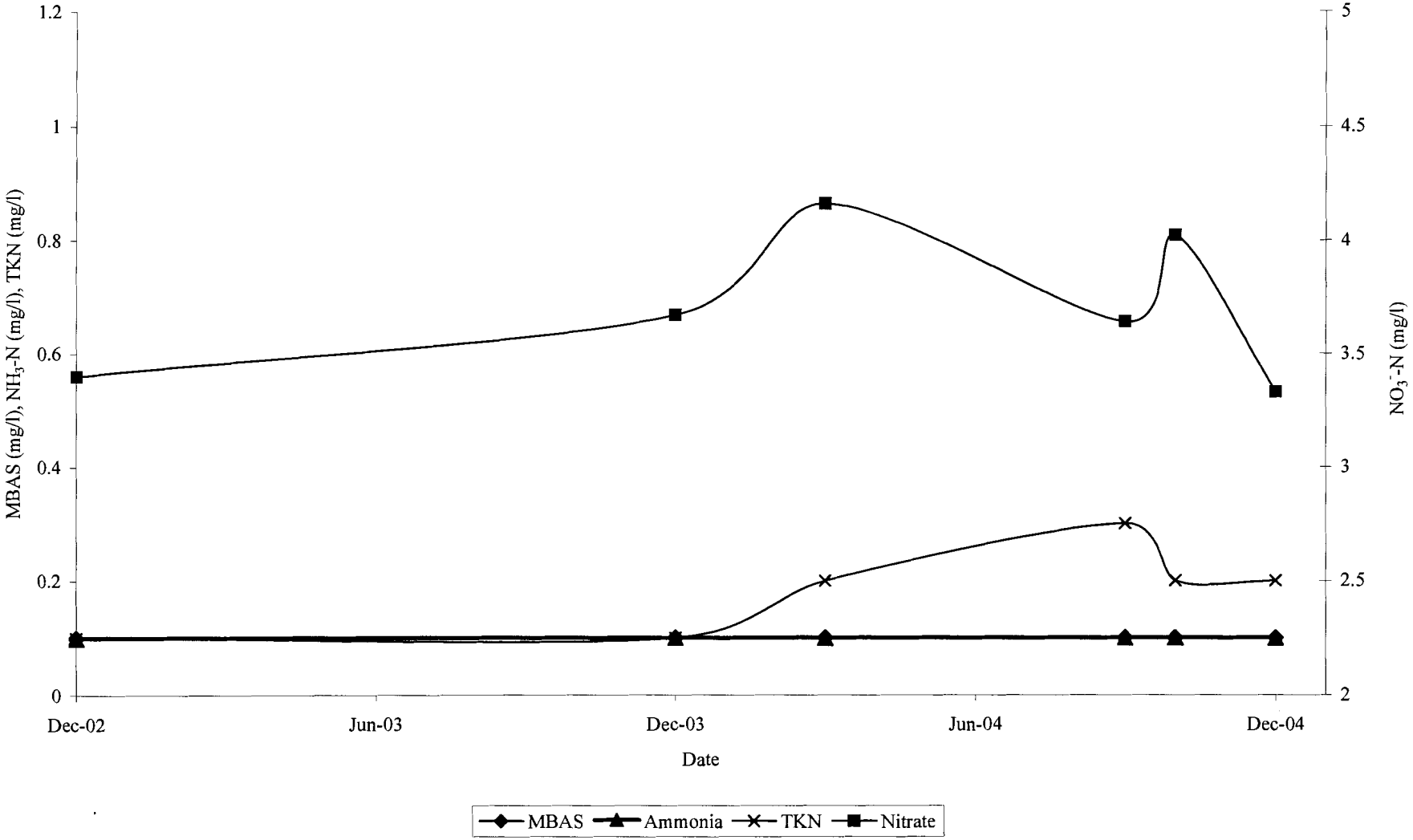


FIGURE 4.53

Palmdale Water Reclamation Plant MW 23

Groundwater Elevation and Depth to Groundwater

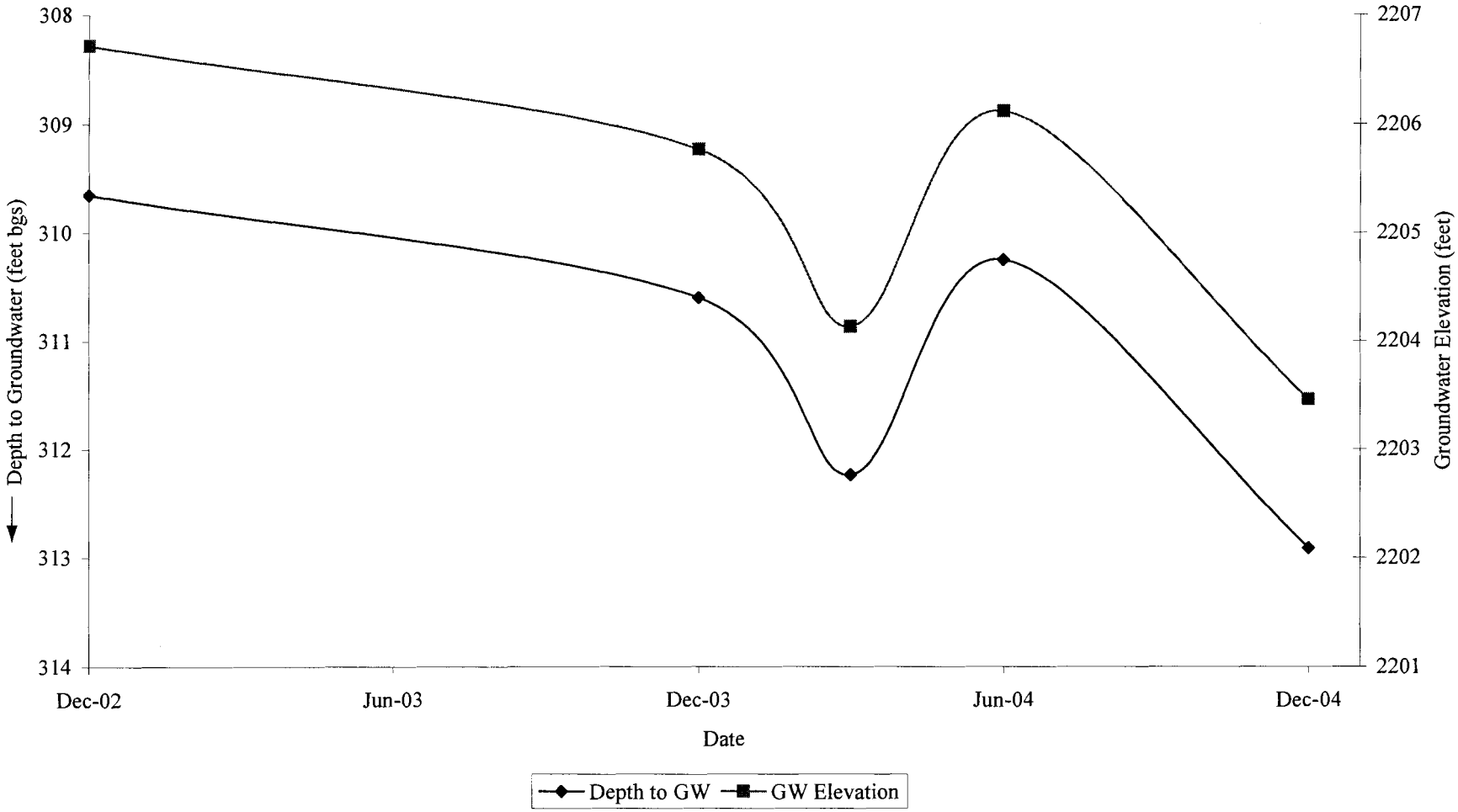


FIGURE 4.54
Palmdale Water Reclamation Plant MW 24
Chloride and TDS

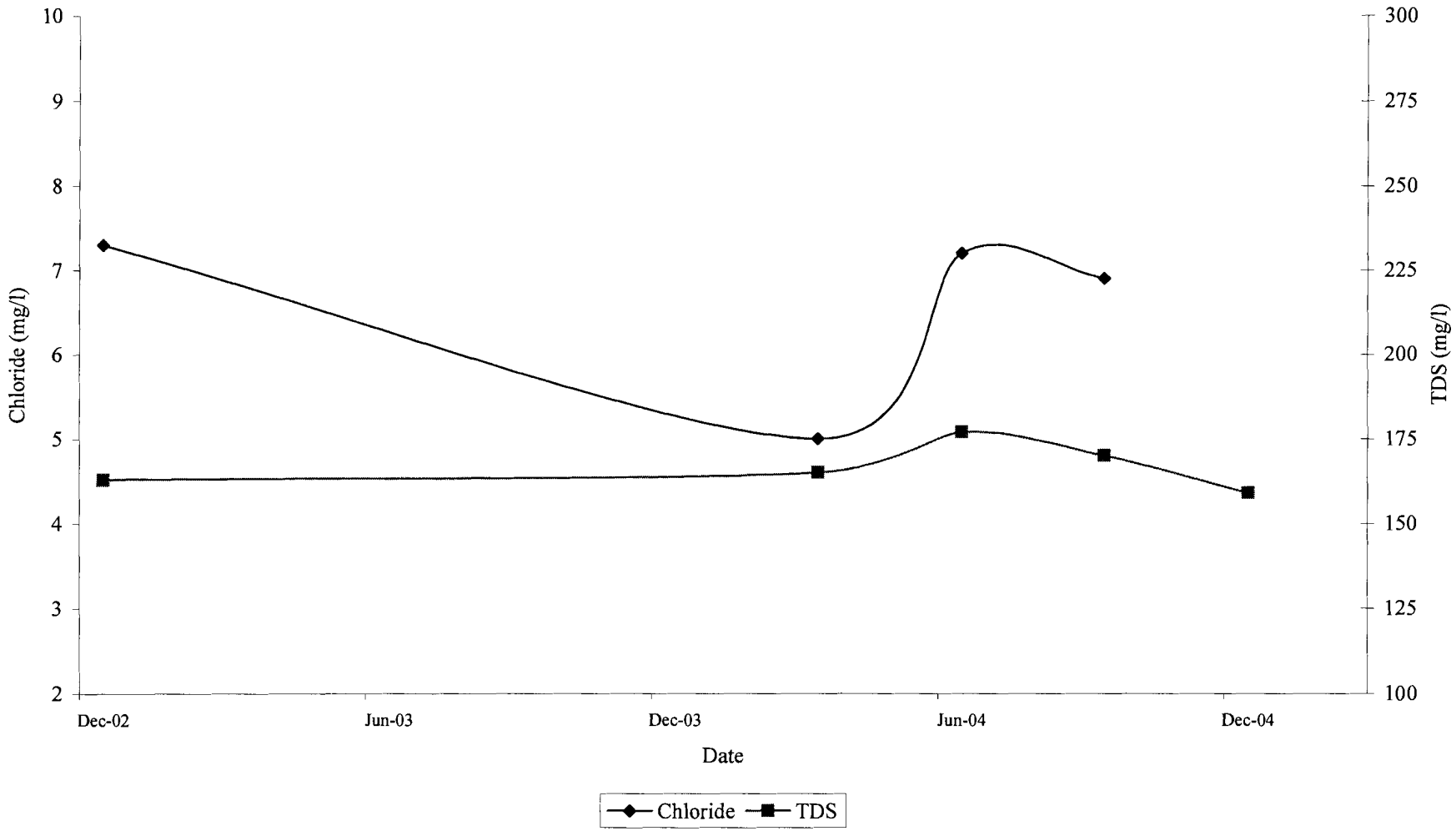


FIGURE 4.55
Palmdale Water Reclamation Plant MW 24
MBAS, NH_3, TKN, NO_3^-

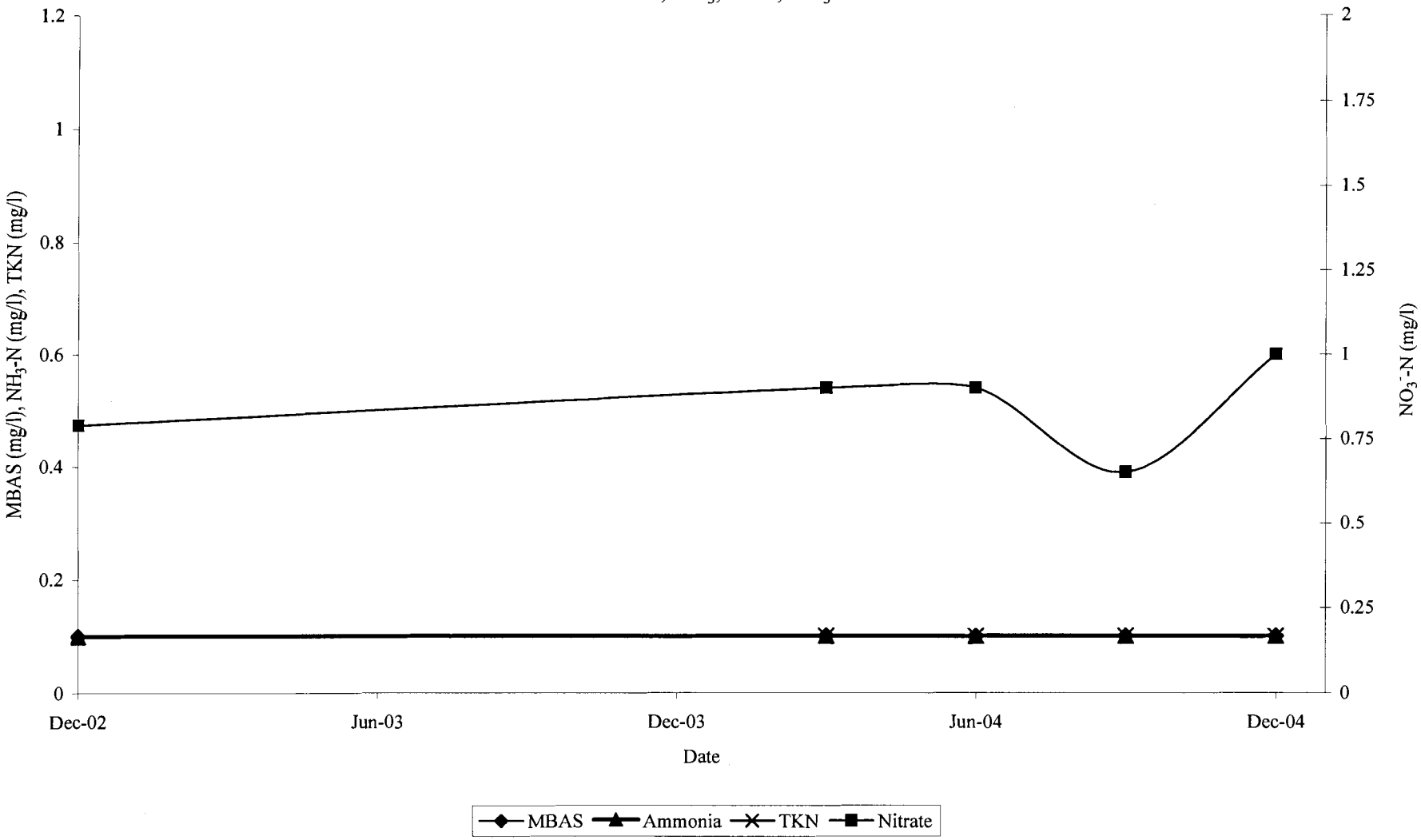


FIGURE 4.56

Palmdale Water Reclamation Plant MW 24

Groundwater Elevation and Depth to Groundwater

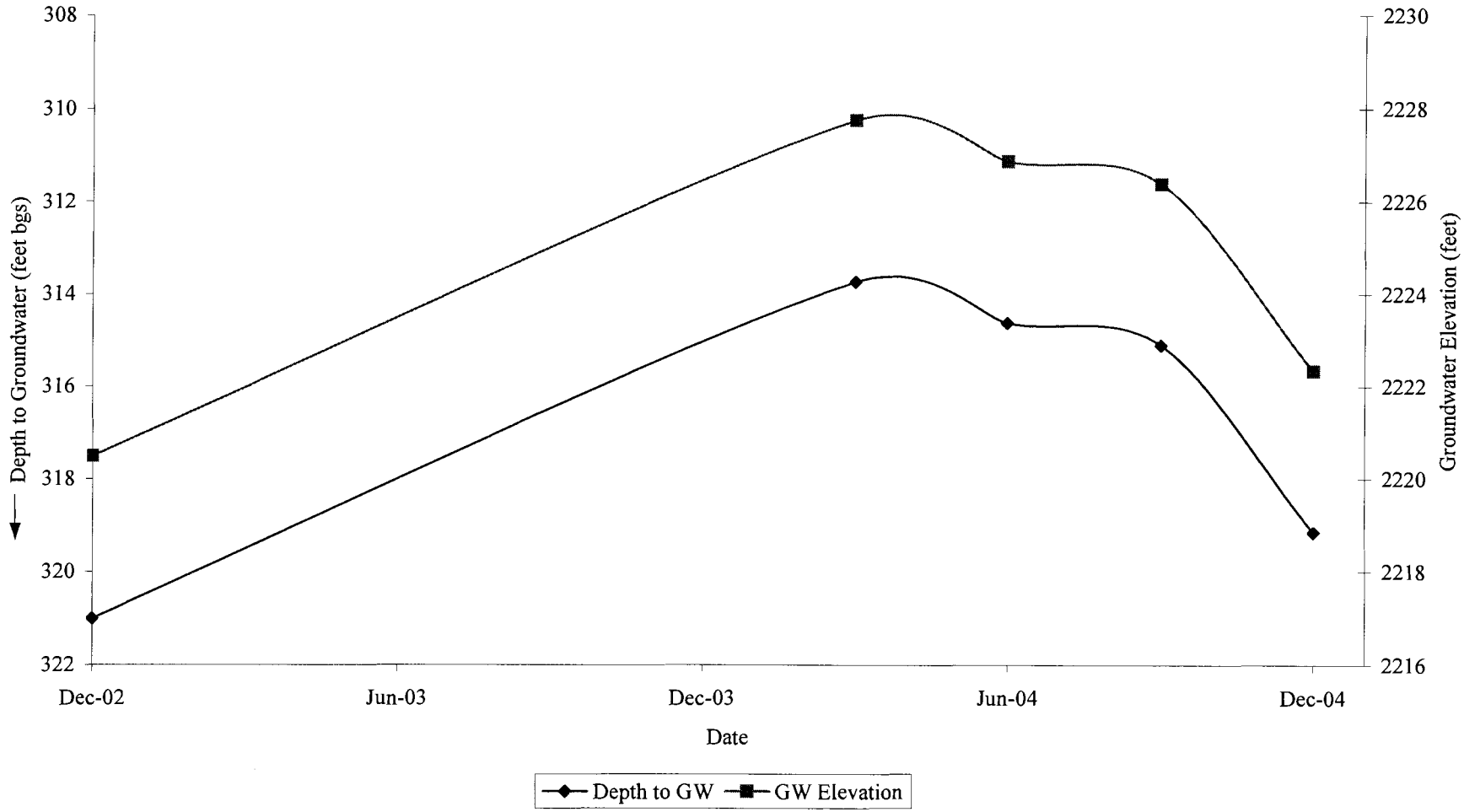


FIGURE 4.57
Palmdale Water Reclamation Plant MW 25
Chloride and TDS

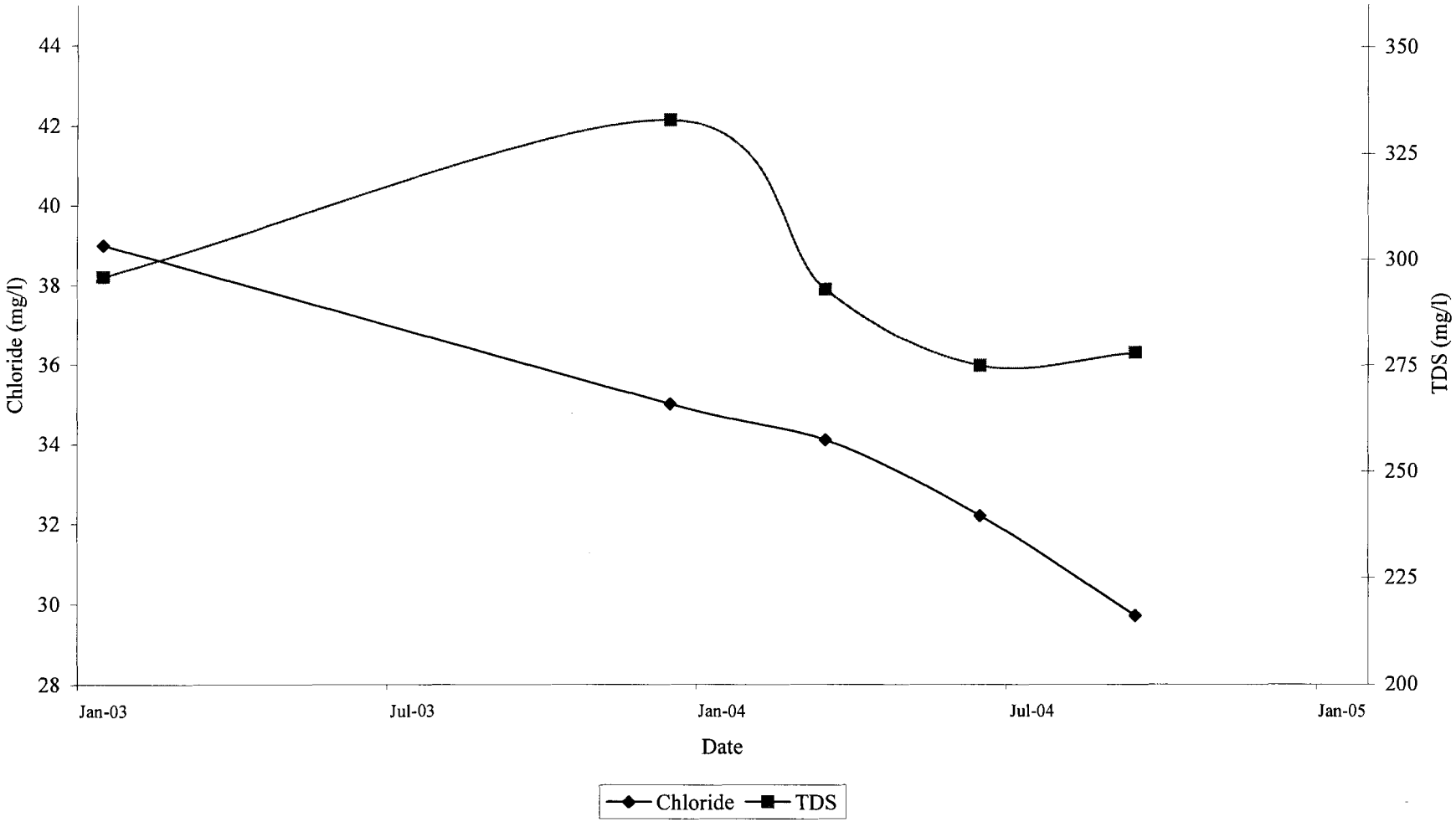


FIGURE 4.58
Palmdale Water Reclamation Plant MW 25
MBAS, NH_3, TKN, NO_3^-

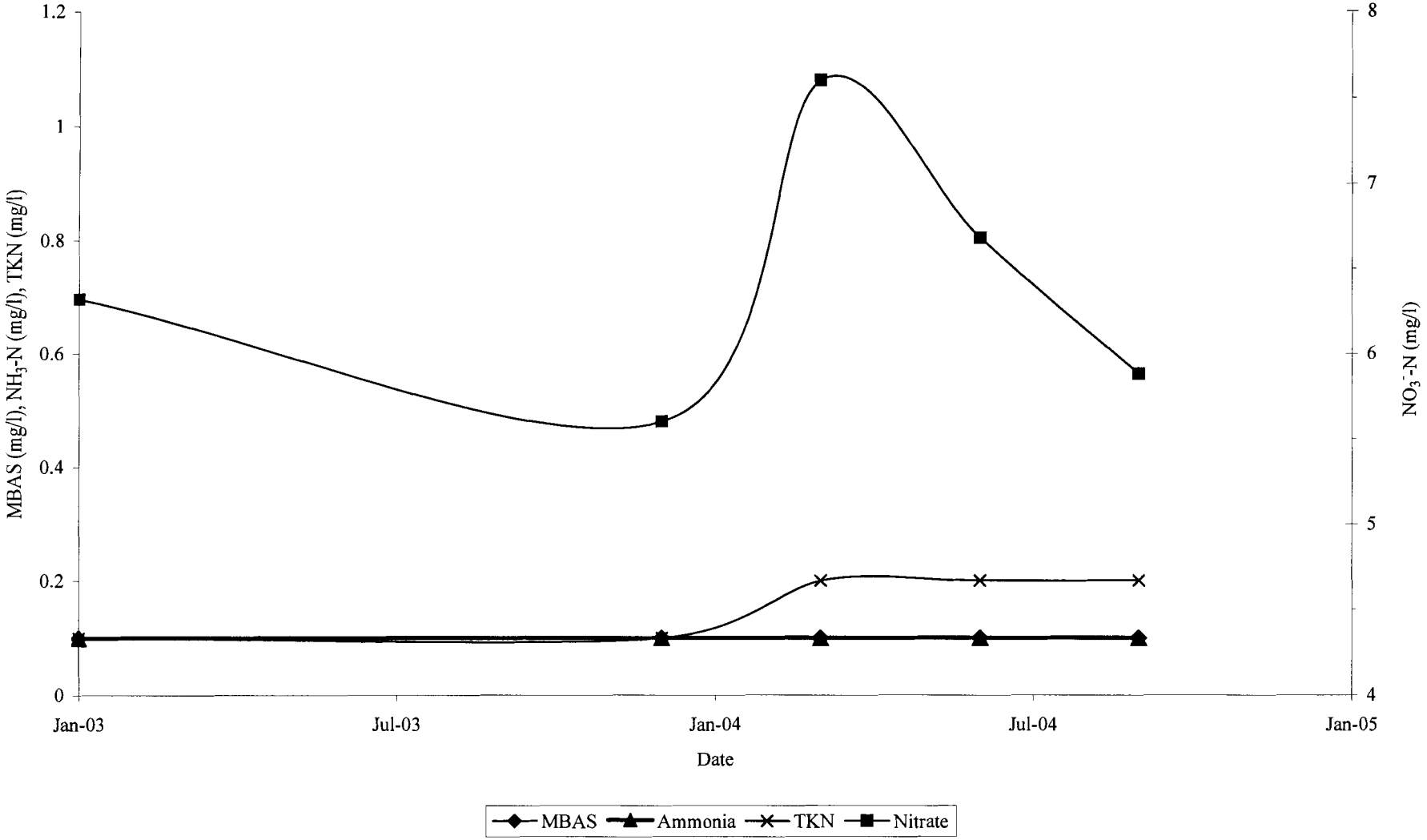


FIGURE 4.59

Palmdale Water Reclamation Plant MW 25

Groundwater Elevation and Depth to Groundwater

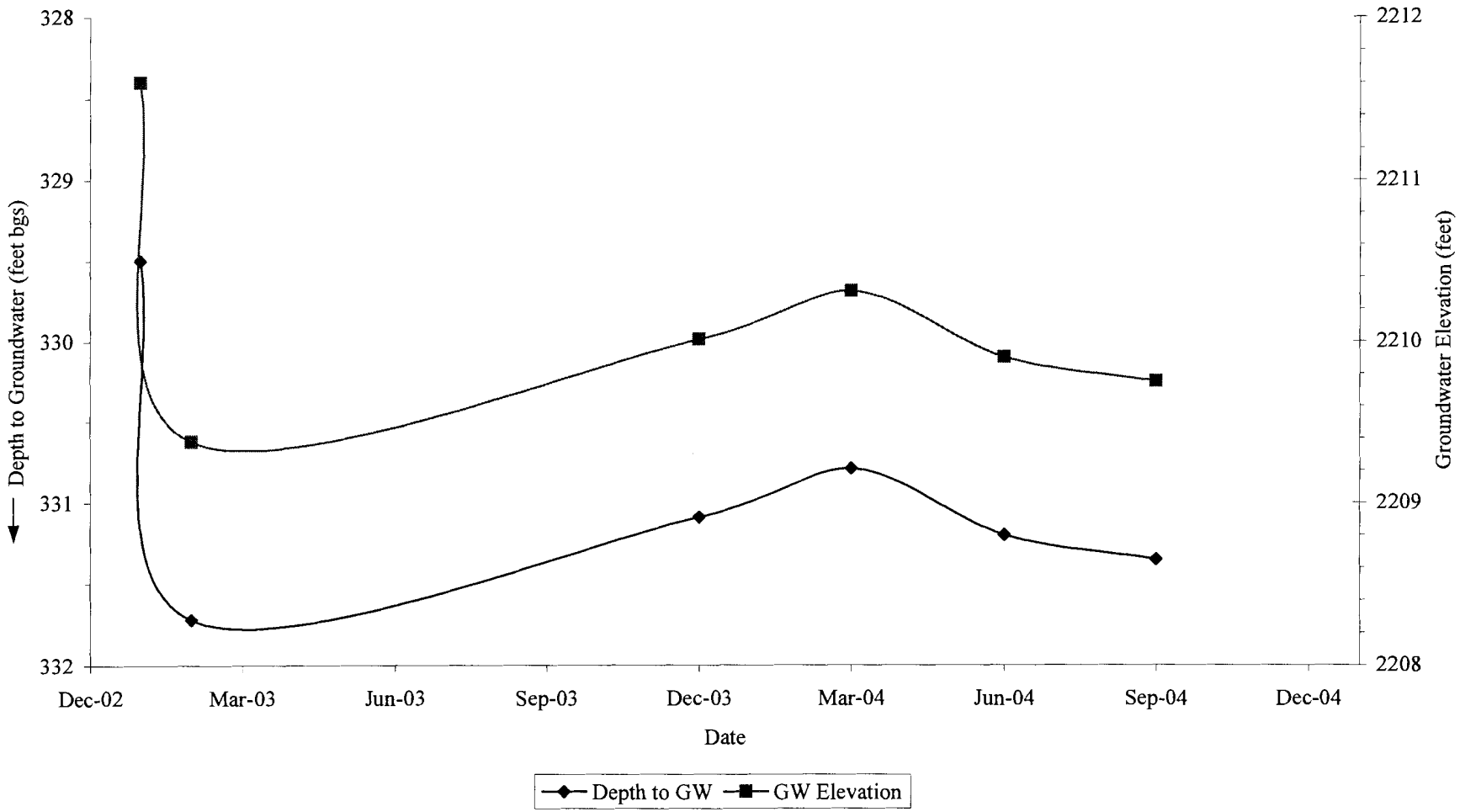


FIGURE 4.60
Palmdale Water Reclamation Plant MW 26
Chloride and TDS

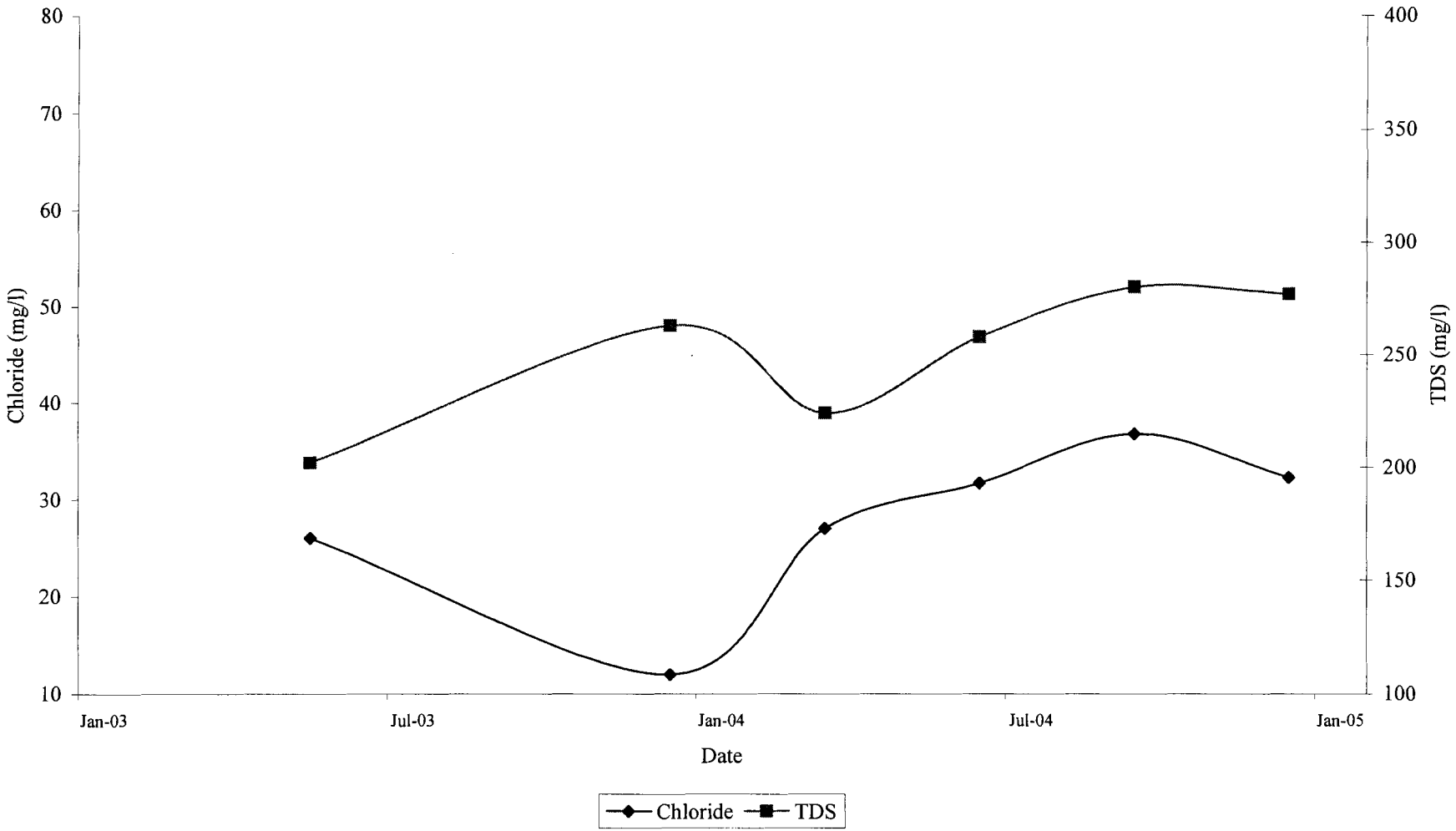


FIGURE 4.61
Palmdale Water Reclamation Plant MW 26
MBAS, NH_3, TKN, NO_3^-

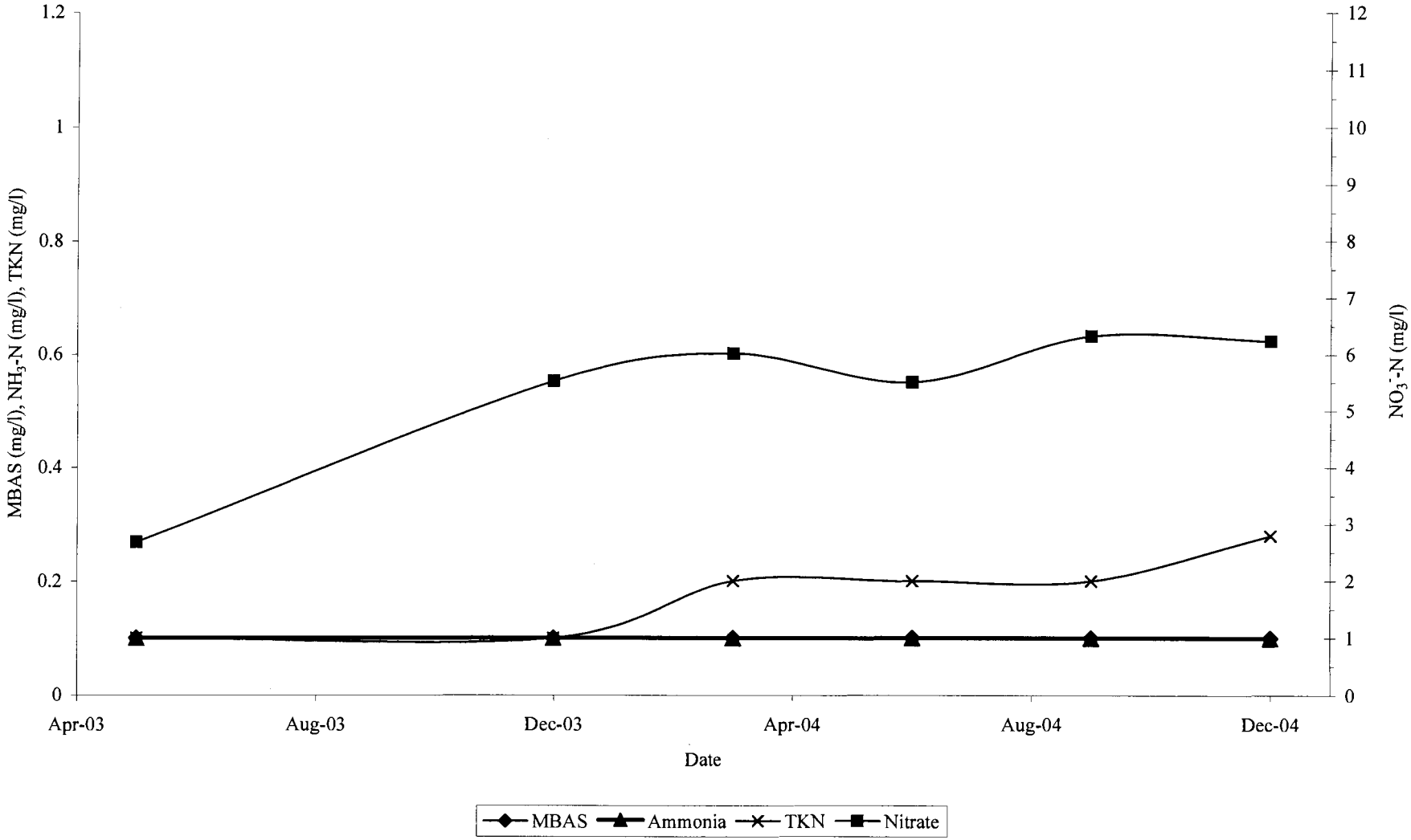


FIGURE 4.62

Palmdale Water Reclamation Plant MW 26

Groundwater Elevation and Depth to Groundwater

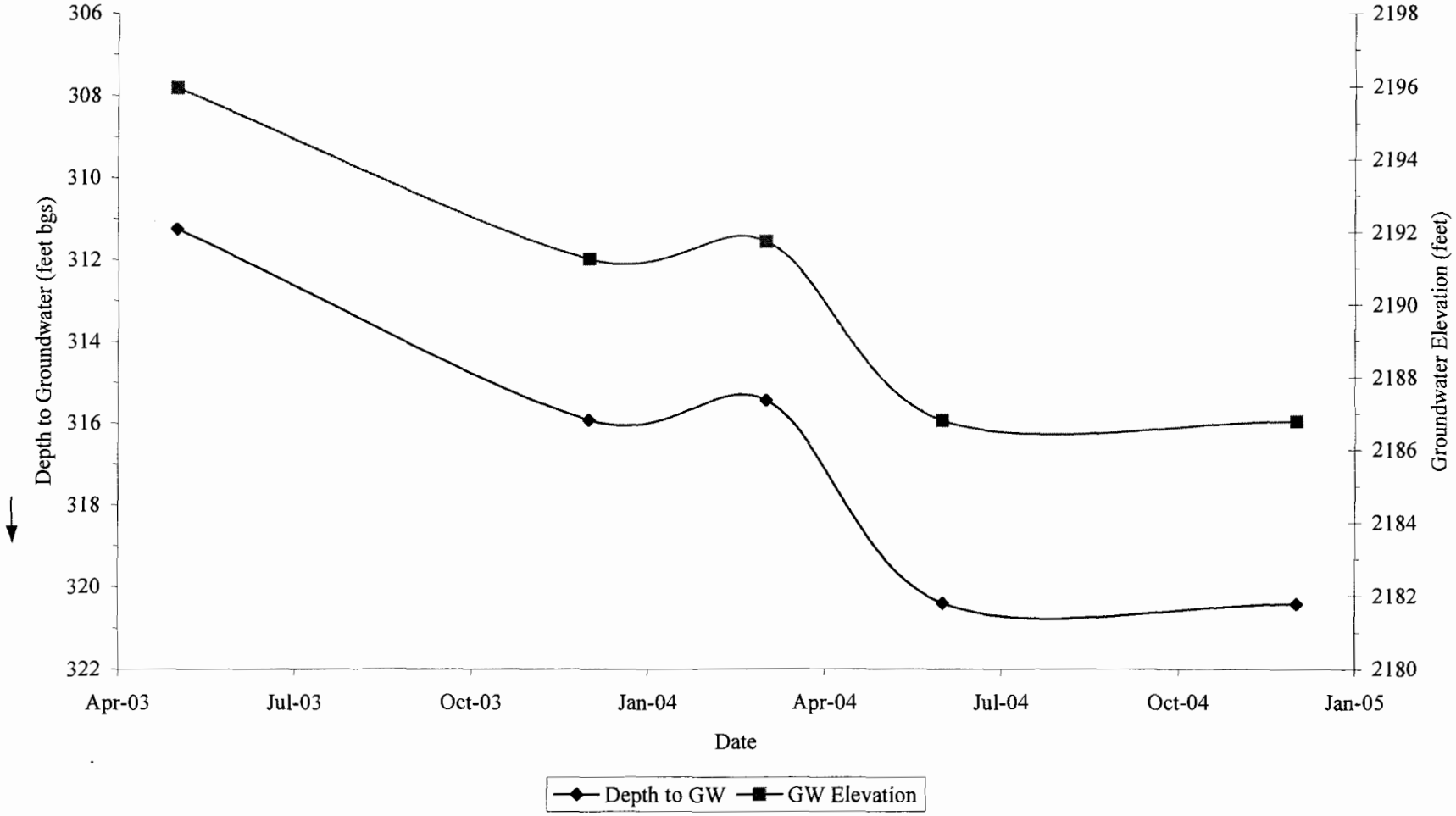


FIGURE 4.63
Palmdale Water Reclamation Plant MW 27
Chloride and TDS

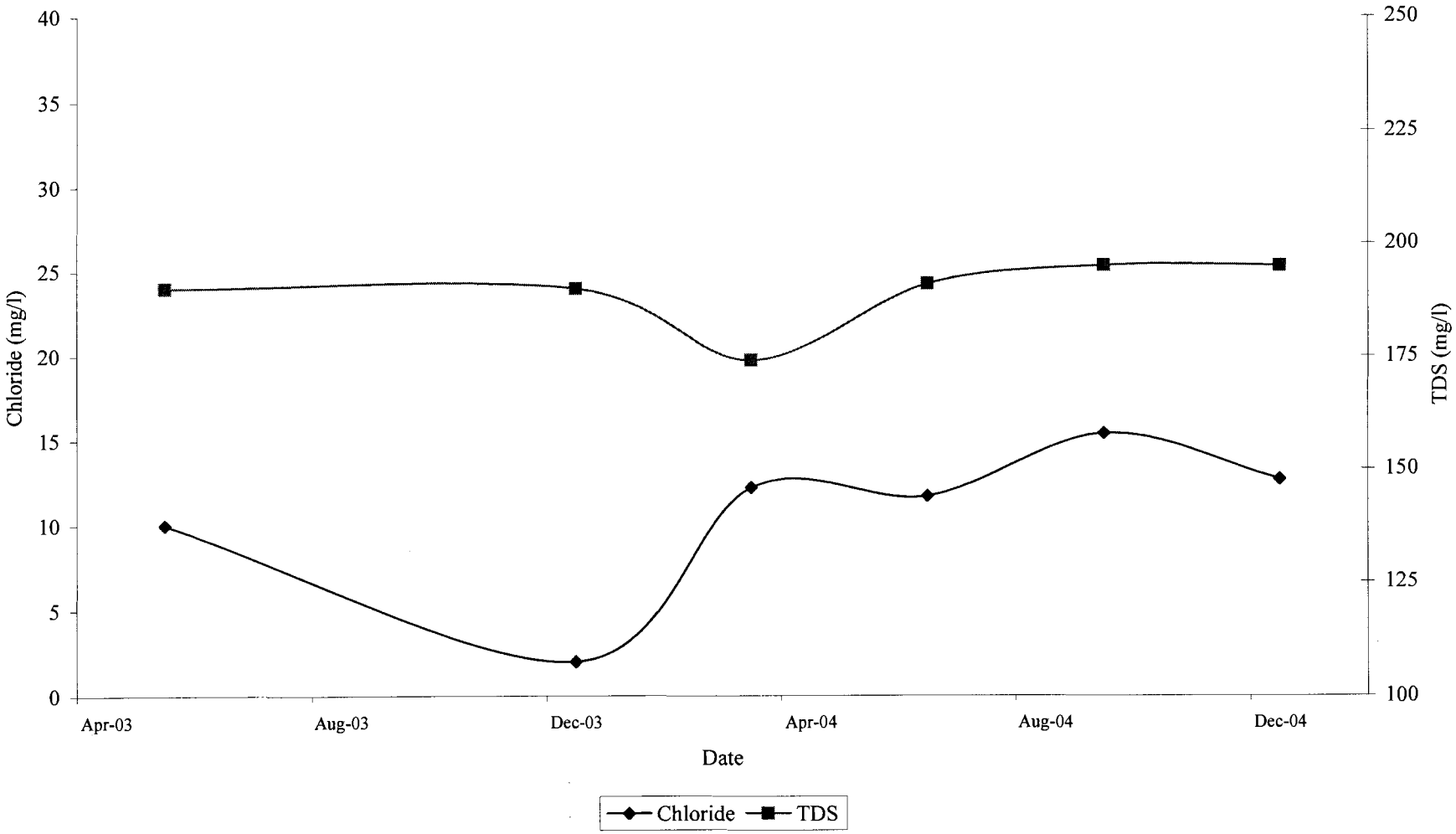


FIGURE 4.64
Palmdale Water Reclamation Plant MW 27
MBAS, NH_3, TKN, NO_3^-

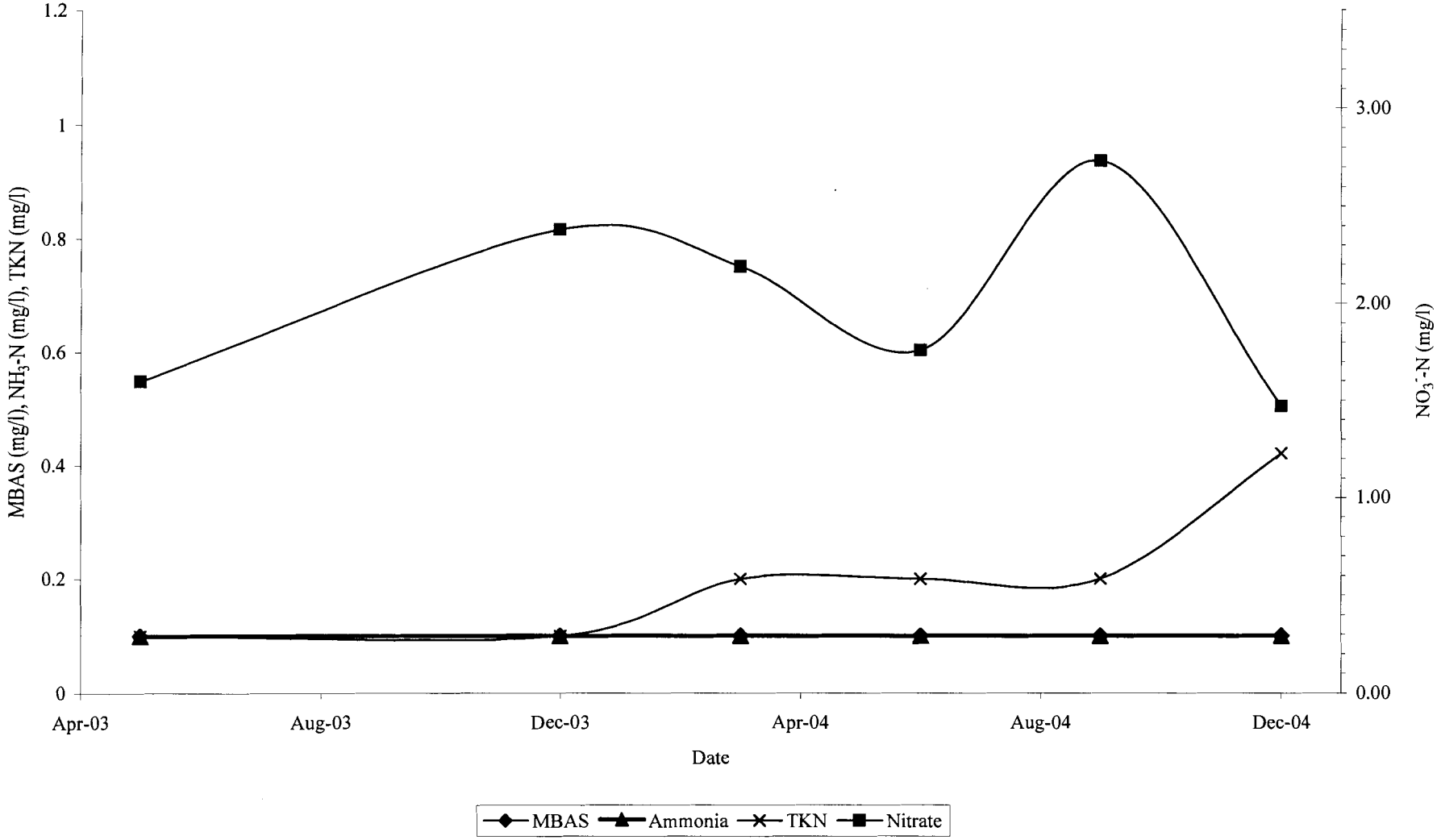


FIGURE 4.65

Palmdale Water Reclamation Plant MW 27

Groundwater Elevation and Depth to Groundwater

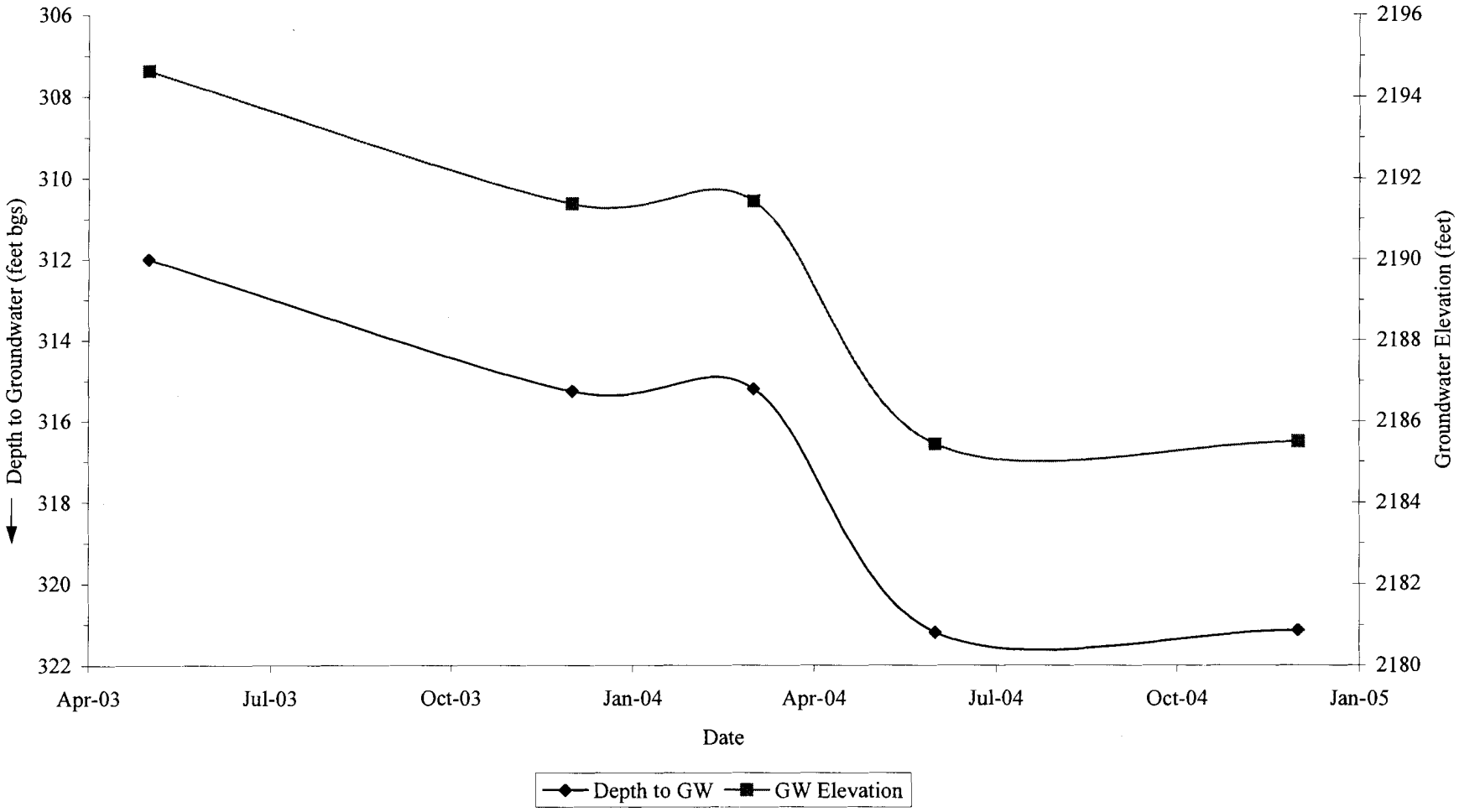


FIGURE 4.66
Palmdale Water Reclamation Plant MW 28
Chloride and TDS

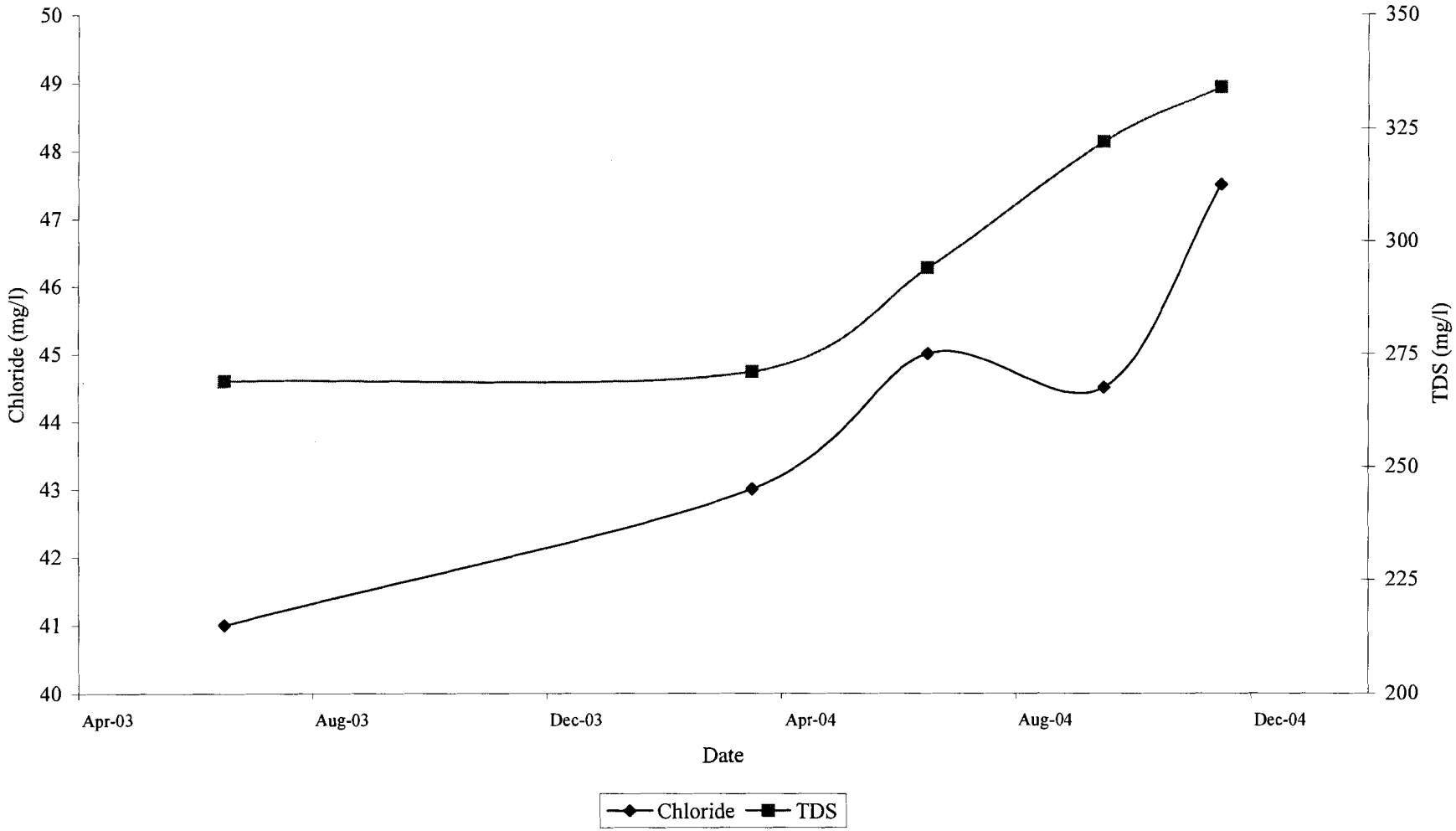


FIGURE 4.67
Palmdale Water Reclamation Plant MW 28
MBAS, NH_3, TKN, NO_3^-

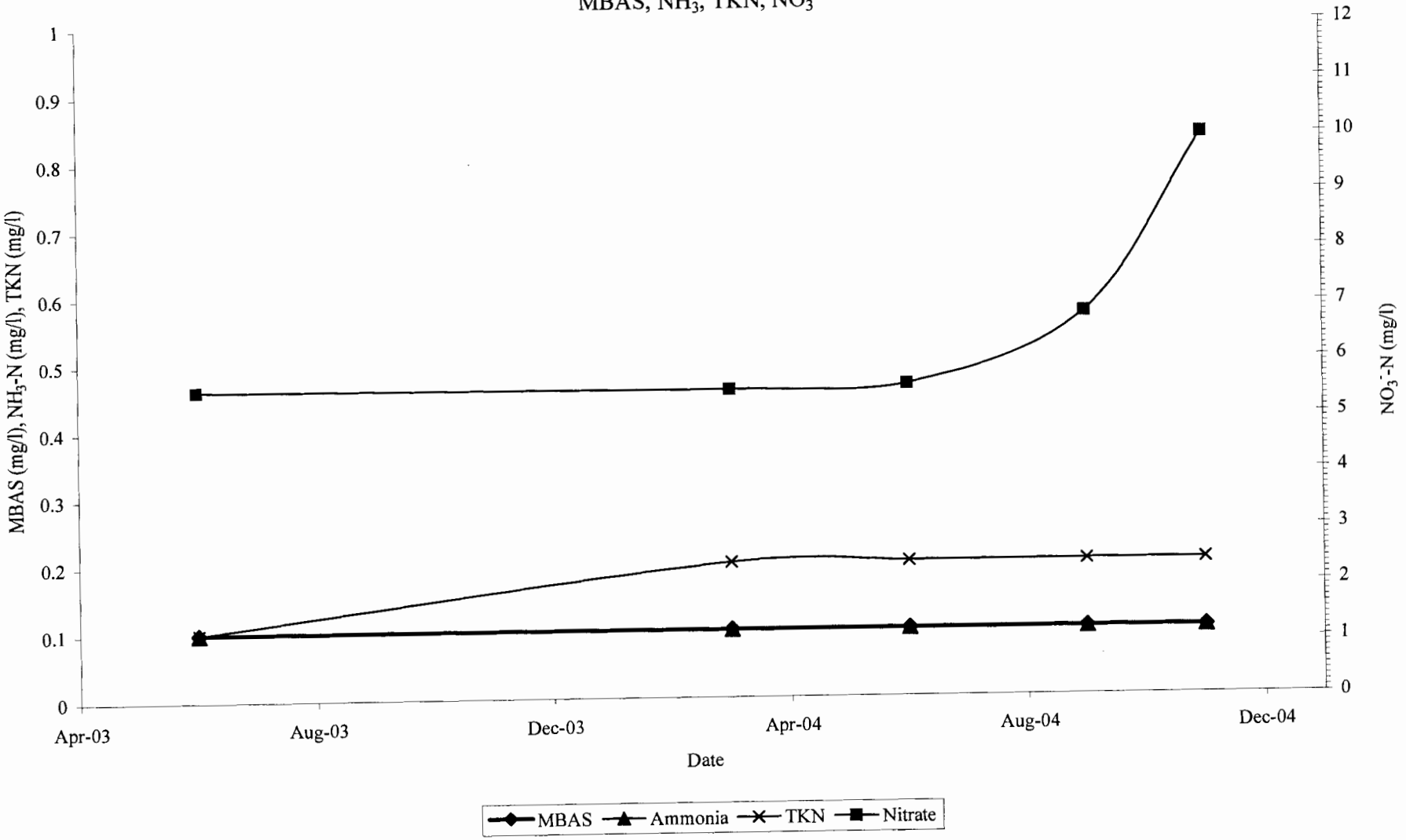


FIGURE 4.68

Palmdale Water Reclamation Plant MW 28

Groundwater Elevation and Depth to Groundwater

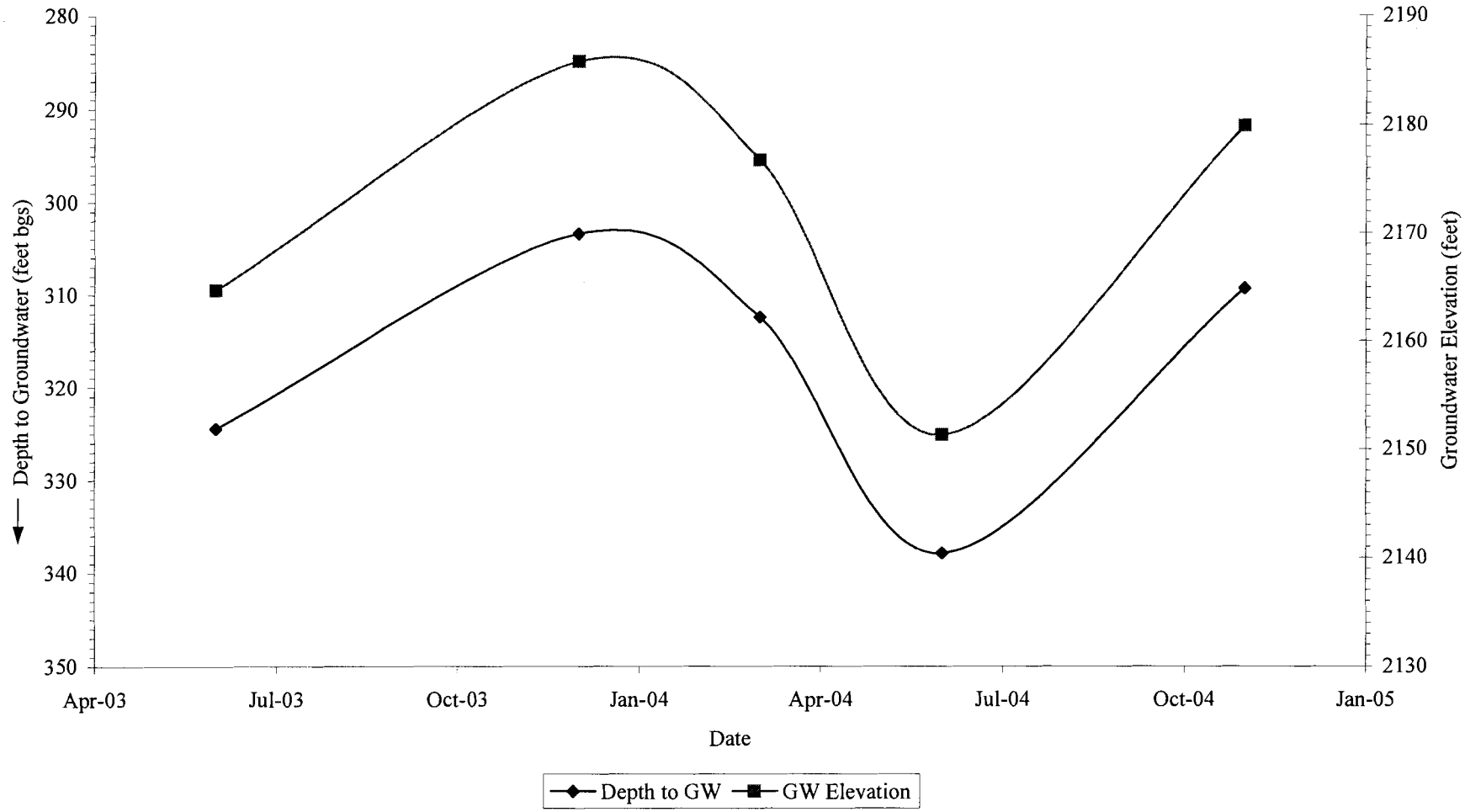


FIGURE 4.69
Palmdale Water Reclamation Plant MW 29
Chloride and TDS

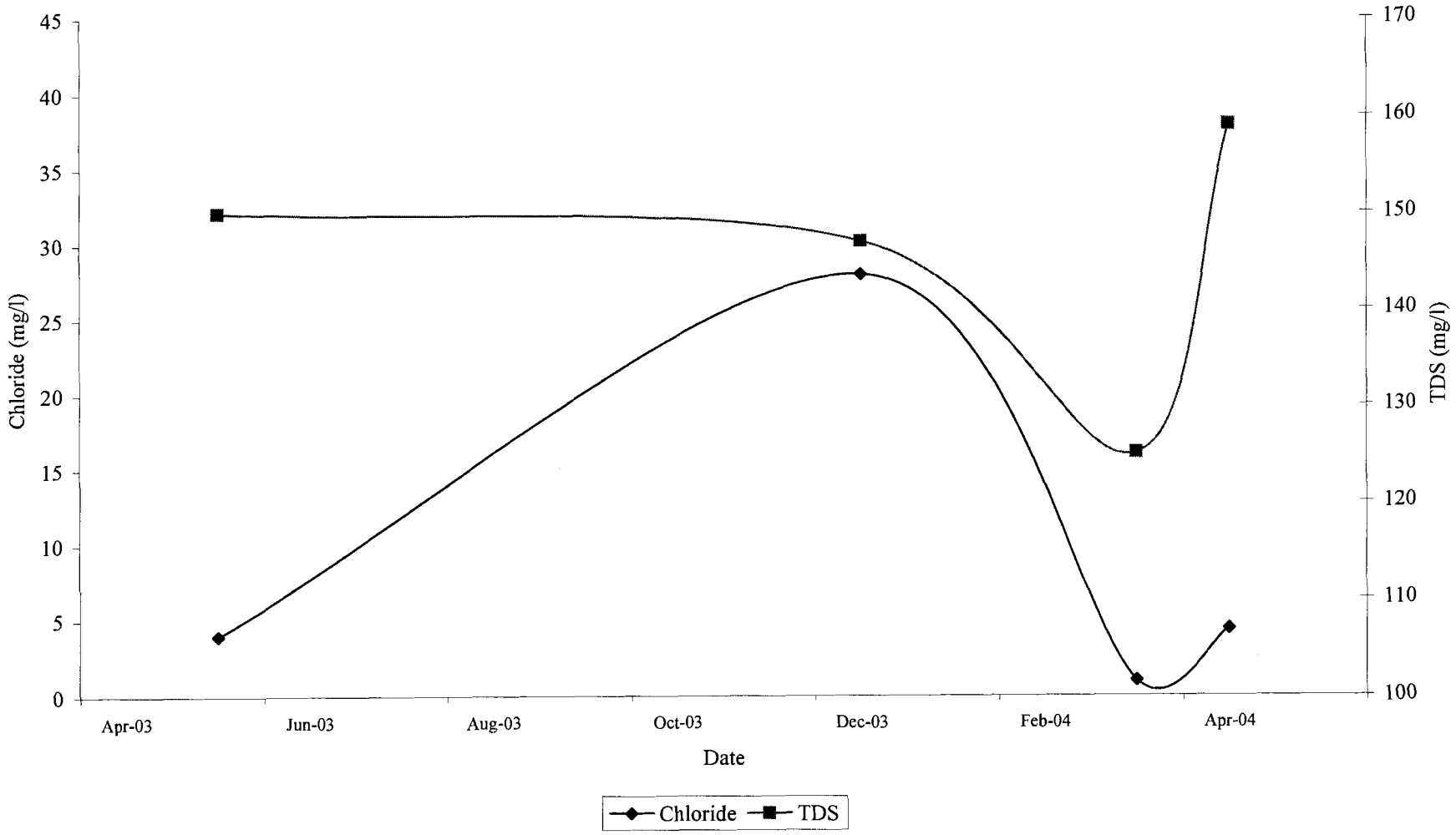


FIGURE 4.70
Palmdale Water Reclamation Plant MW 29
MBAS, NH_3, TKN, NO_3^-

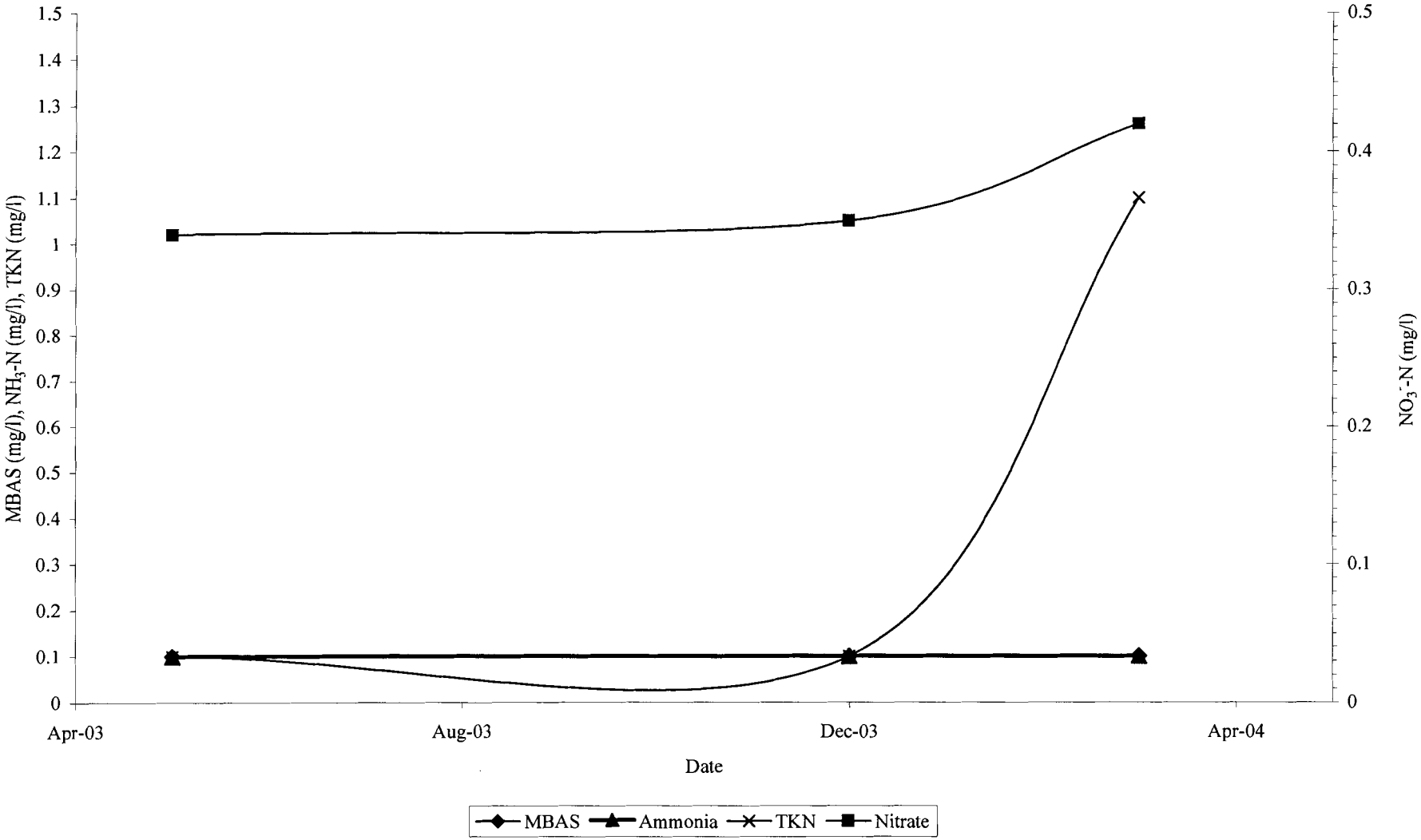


FIGURE 4.71

Palmdale Water Reclamation Plant MW 29

Groundwater Elevation and Depth to Groundwater

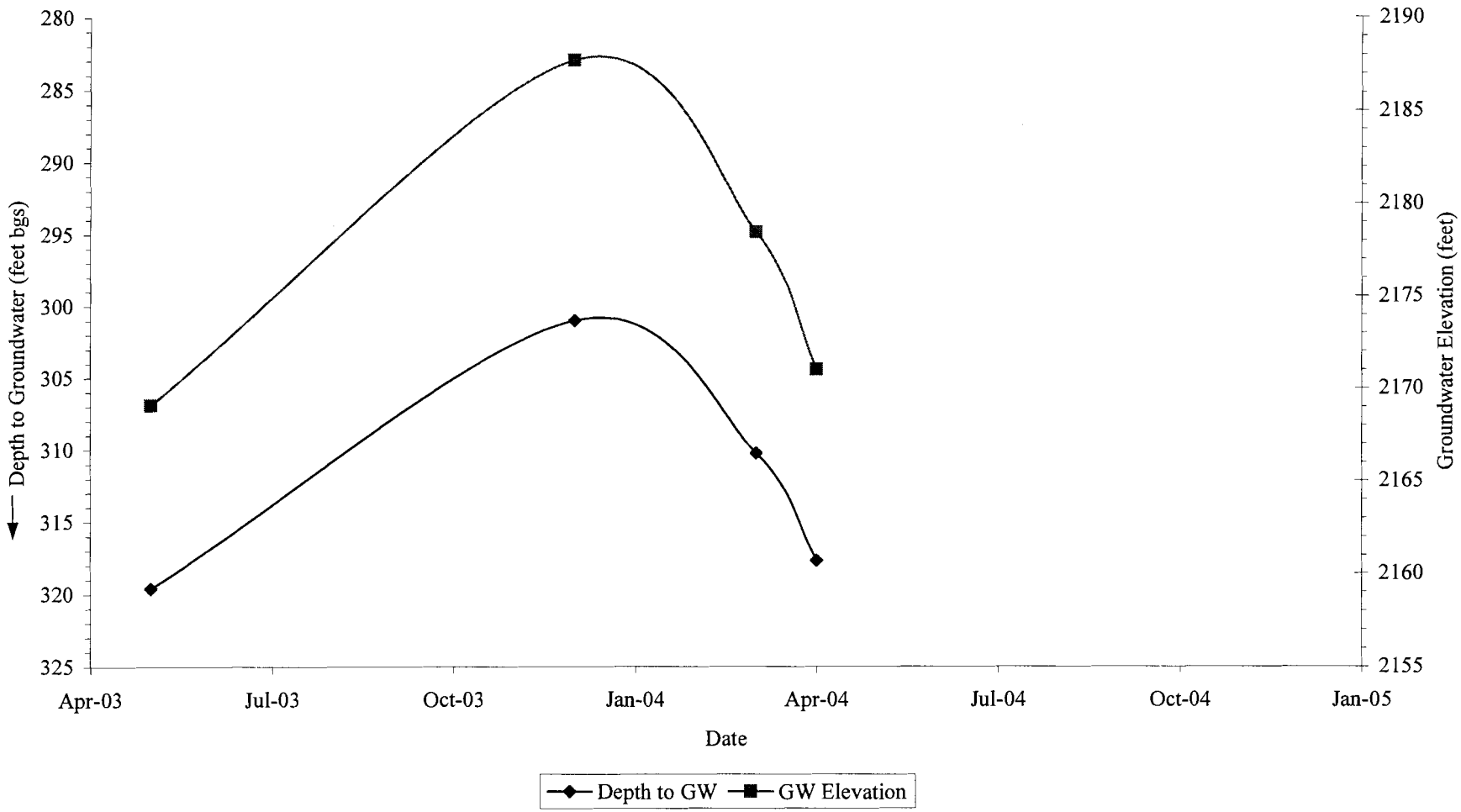


FIGURE 4.72
Palmdale Water Reclamation Plant MW 38
Chloride and TDS

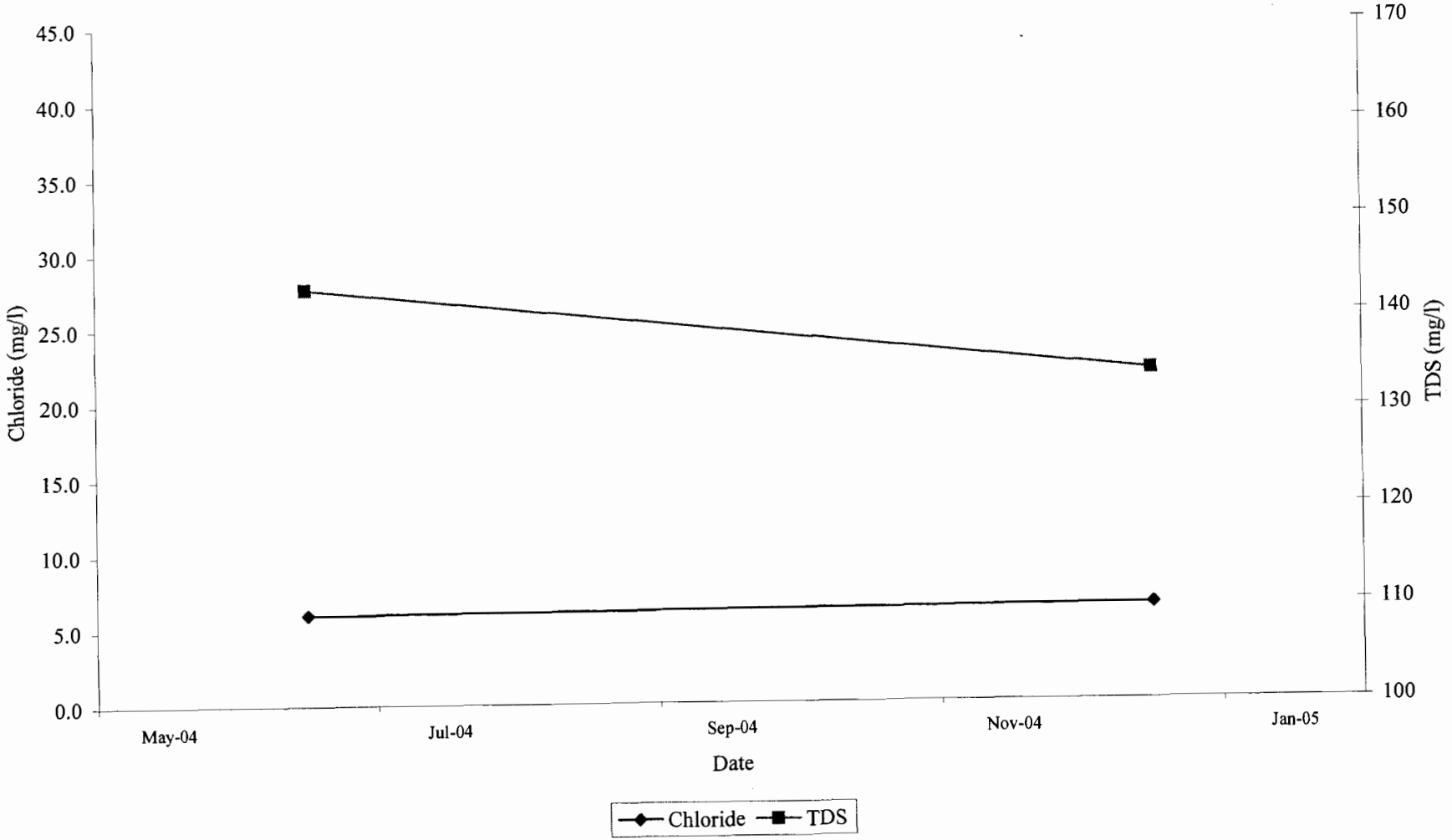


FIGURE 4.73
Palmdale Water Reclamation Plant MW 38
MBAS, NH_3, TKN, NO_3^-

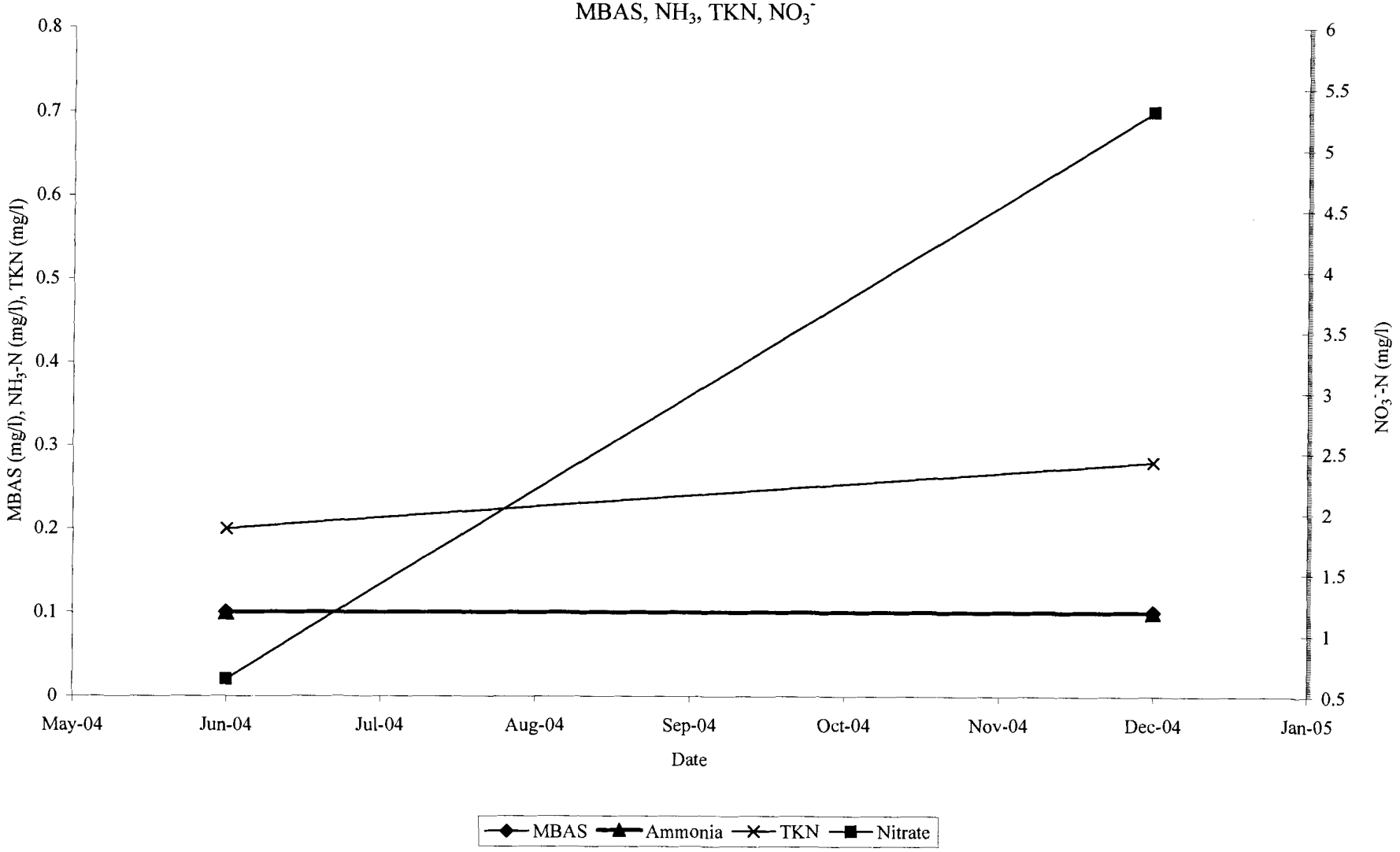
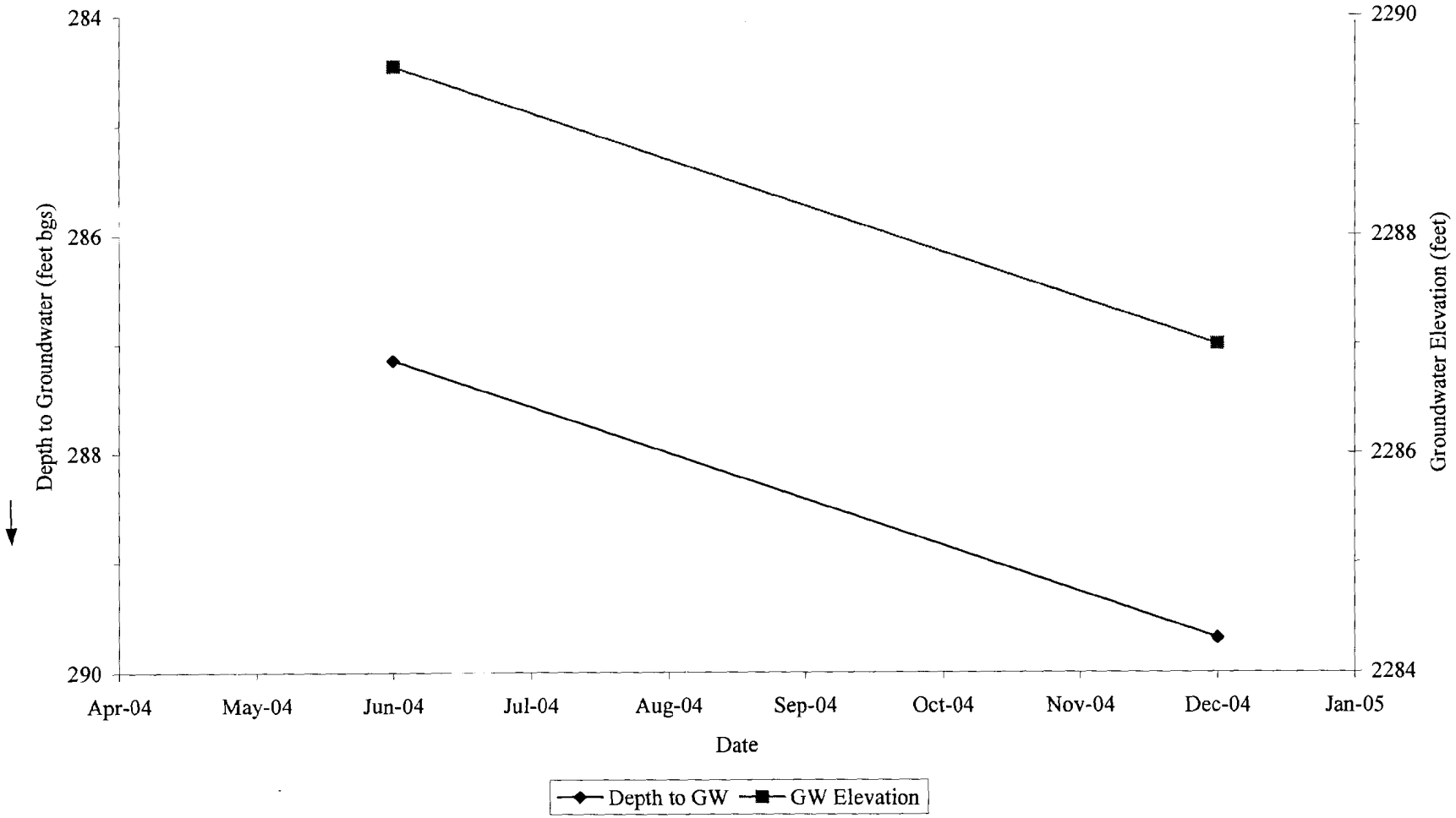


FIGURE 4.74

Palmdale Water Reclamation Plant MW 38

Groundwater Elevation and Depth to Groundwater



PALMDALE WATER RECLAMATION PLANT

CHAPTER 5

EFFLUENT MANAGEMENT SITE MONITORING, OPERATIONS AND CHEMICAL USE REPORT

CHAPTER 5

EFFLUENT MANAGEMENT SITE MONITORING, OPERATIONS AND CHEMICAL USE REPORT

5.1 INTRODUCTION

The Effluent Management Site Monitoring, Operations and Chemical Use Monitoring Reports were completed by the District's consultant, Dellavalle Laboratories, and are presented in this chapter as one report. The information provided in this report, along with the Palmdale WRP monthly reports submitted to the WQCB, demonstrates that all recycled water applied complies with the State Department of Health Services water recycling requirements specified in the Palmdale WRP WDRs.

As stated in MRP 6-00-57-A01, Section 1.G.2, the monthly summary of the amount of water and nitrogen supplied, and the recycled water balance for the quarter, should be compared to the values proposed in the Annual Cropping Plan and any significant differences must be addressed. However, since the Annual Cropping Plan was submitted on December 15, 2004, and covers the calendar year 2005, no comparisons were made during 2004. The comparisons will begin during the 1st quarter 2005.

CONSULTING AND MONITORING ACTIVITIES

ANNUAL 2004 REPORT

Prepared for

Palmdale Water Reclamation Plant
Effluent Management Site

February 16, 2005

Prepared by

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President

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Palmdale Water Reclamation Plant
Annual Effluent Management Site

May through December 2004 Monitoring Report

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May through December 2004

INTRODUCTION

County Sanitation District No. 20 of Los Angeles County (District) treats wastewater generated in the City of Palmdale and adjacent unincorporated areas at its Palmdale Water Reclamation Plant (PWRP). Reclaimed Water from the PWRP is used for agricultural irrigation or applied to land northeast of the PWRP. The Effluent Management Site (EMS) is depicted in **Figure 1: Palmdale Water Reclamation Plant Effluent Management Site.** Designations in the site correspond to effluent outlets.

The revised Monitoring and Reporting Program No. 6-00-57-A01 (MRP) issued by the Lahontan Regional Water Quality Control Board (Regional Board) on February 26, 2004 for the Palmdale WRP requires additional monitoring of the Effluent Management Site beginning May 1, 2004. The MRP also requires the District submit detailed quarterly and annual reports to the Regional Board. District has contracted with Dellavalle Laboratory, Inc. (Dellavalle) for fulfilling these monitoring and reporting requirements starting June 1, 2004.

This Annual report reflects all data and calculations generated during daily and monthly monitoring during the months of May through December 2004. Data was collected for the month of May by Franklin Gaudi with the Irrigation Training and Research Center (ITRC) at Cal Poly, San Luis Obispo, California and then by Abebe Gebrehiwet, Andrew Carlson and Lee Boydstun of Dellavalle Laboratory, Inc. during the months of June through December 2004. Nat Dellavalle with Dellavalle Laboratory analyzed the data and prepared the monthly, quarterly and annual reports. This report highlights any differences between actual operation and anticipated operations including any differences between the actual water applied, nitrogen applied, crop production, and total amount of nitrogen harvested to anticipated values.

EFFLUENT MANAGEMENT SITE MONITORING REPORT

Amounts of water applied to each field are presented in **Attachment A: Summary of Flows – January – December 2004** and annual totals are summarized in **Table 1.**

Water and Nitrogen Applied

The volume of water applied monthly to each field was based on daily individual meter readings collected by District personnel except for Section 9. Total water applied based on individual meters deviated from the amount based on the Pump Station Effluent Meter. In order to provide a conservative estimate of applied water, the amount of water applied to Section 9 is the difference between meter readings for all other fields and the Pump Station Effluent Meter.

The deviations are an indication that some meters may not have been working correctly. In June the meter at Outlet 1AKN in Section 9 was removed for maintenance for repair so the sum of individual readings may understate water delivered. In December a problem was identified with the Pump Station Effluent Meter. Repairs are underway. Where differences are persistent the District staff or one of its consultants shall investigate the situation to identify meters needing repair or maintenance, or if the differences are within the accuracy of the meters. In this report and all quarterly reports for 2004 all calculations have been based on individual meters except for Section 9. No adjustments to calculations are needed. Summaries are presented in **Table 1.** Data from the Pump Station Effluent Meter was used to identify meter problems that have or are being corrected.

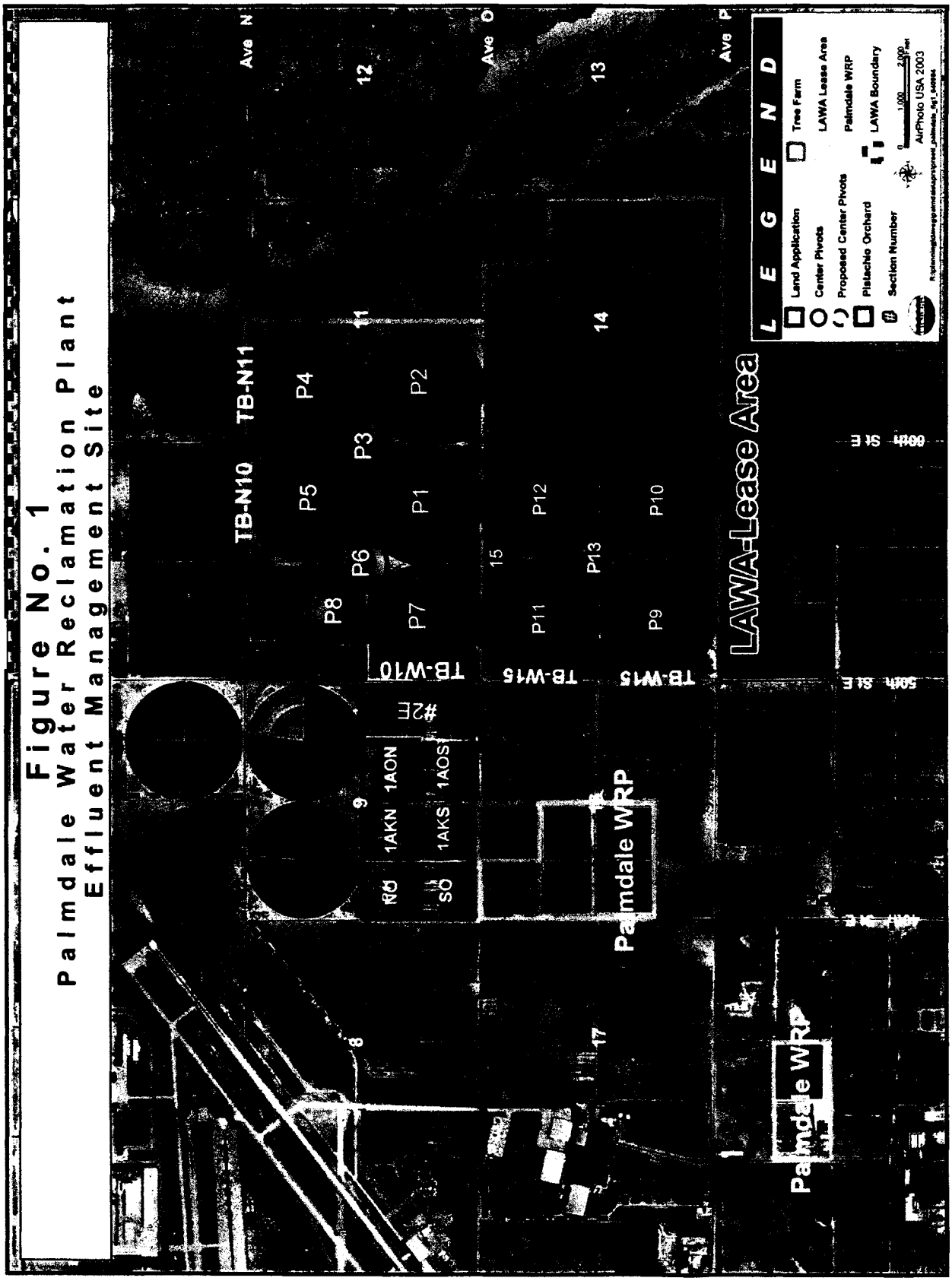
Figure No. 1
Palmdale Water Reclamation Plant
Effluent Management Site
LEGEND
Land Application
Center Pivots
Proposed Center Pivots
Pistachio Orchard
Section Number
Tree Farm
LAWA Lease Area
Palmdale WRP
LAWA Boundary
AirPhoto USA 2003
LAWA-Lease Area
Palmdale WRP
TB-N10
TB-N11
TB-W10
TB-W15
TB-W13
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
1AKN
1AON
1AKS
1AOS
#2E
Ave N
Ave O
Ave P
60th St E

The amount of nitrogen applied to each field is based on water applied, and the average ammonium and total nitrogen characteristics of effluent measured by the District. An assumption used in the March 30, 2004 Abatement Report for the Palmdale Water Reclamation Plant was used in the analysis to calculate the amount of nitrogen applied. In **Attachment B: Summary Nitrogen Balance Calculation Tables** total and ammonic nitrogen is calculated using

$$\text{Applied nitrogen} = \sum\left(\begin{matrix}N\\ mg/L\end{matrix}\right)\cdot\left(\begin{matrix}effluent\\ applied\\ MG\end{matrix}\right)\cdot\left(\frac{1L}{0.2642g}\right)\cdot\left(\frac{106}{1.0MG}\right)\cdot\left(\frac{1lb}{453.5924g}\right)\cdot\left(\frac{1g}{103mg}\right).$$

Amounts of nitrogen applied, including ammonium-nitrogen, at each location is presented in **Attachment B** under the heading **"Effluent Nitrogen Data."** It is assumed that 25% of applied ammonic nitrogen is volatilized. Amounts of Ammonic-nitrogen volatilized are shown separately in the same attachments under the heading **"25% NH_3."**

Table 1. Water Applied Summary

Location	Area *(Acres)*	Crop	Average Daily Volume Applied Effluent *MGD*	Total Volume Applied *MG*
Pivot #1 (P1)	125	Alfalfa	0.55	203.07
Pivot #2 (P2)	125	Alfalfa	0.54	197.24
Pivot #3 (P3)	21	Fallow/Alfalfa	0.07	24.62
Pivot #4 (P4)	125	Alfalfa	0.56	205.01
Pivot #5 (P5)	125	Fallow/Alfalfa	0.29	106.81
Pivot #6 (P6)	21	SG/Fallow	0.13	45.94
Pivot #7 (P7)	125	SG/Fallow/BOW	0.61	222.20
Pivot #8 (P8)	32	Sudan/Fallow	0.30	109.51
Pivot #9 (P9)*	125	Open/Alfalfa/BOW	0.45	68.84
Pivot #10 (P10)*	125	Open/Oats	0.47	72.53
Pivot #11 (P11)*	125	Open/BOW	0.59	89.81
Pivot #12 (P12)*	125	Open/Oats	0.61	93.97
Pivot #13 (P13)*	21	Open/BOW	0.10	14.61
Tree Farm	28	Trees	0.11	41.64
Tree Rows	4	Trees	0.03	9.27
Pistachios	23	Pistachios	0.11	39.75
Section 9	320	N/A	4.08	1,493.49
Average for Year*/Total			8.30*	**3,038.31**

*Average Daily Flow is since application of reclaimed water began on these fields. (Total average flow is based on entire year.)
BOW = Barley- Oat-Wheat mixture

Nitrogen Harvested

Amounts of nitrogen harvested are based on results of site-specific plant tissue analyses and total amount of dry matter harvested from each field using

$$N_h = dm \times N_c$$

where N_h is nitrogen harvested in pounds, dm is dry matter in pounds and N_c is percent nitrogen in dry matter harvested. Dry matter harvested is presented in **Attachment B: Summary Nitrogen Balance Calculation Tables** under the heading "**Harvest Data.**" is based on moisture content of tissue samples, bale weights and bale

counts with a few exceptions. Green chop forage is harvested and sampled with more moisture than hay, about 45% vs. about 10 %. Green chop yield is estimated based on hay yield of a comparable area and is expressed as 10% moisture equivalent.

Tissue analyses data are presented in **Attachment B: Summary Nitrogen Balance Calculation Tables** under the heading "Harvest Data." Amounts of nitrogen harvested during the year are summarized in **Table 2: Nitrogen Balance**. Positive nitrogen balance numbers indicate that more nitrogen was applied than harvested while negative values indicate that more nitrogen was harvested than applied. Applied nitrogen in excess of harvested nitrogen is available for deep percolation and other losses.

More nitrogen was harvested with alfalfa than applied with effluent. It was anticipated that alfalfa would harvest more nitrogen than applied with effluent. Alfalfa has the unique ability, in a symbiotic relationship with Rhizobium bacteria, to scavenge nitrogen from the soil solution and the ability to fix atmospheric nitrogen when none is available in the soil solution. This assures availability of healthy robust plant for nitrogen recovery and maximum protection of groundwater. Because the amount of nitrogen fixed by alfalfa is not easily quantified the nitrogen balance is not a good estimate of nitrogen available for deep percolation or other losses. Use of nitrogen concentration in deep samples is used in these situations.

Some winter forage harvested during 2004 was planted during late 2003 and some winter forage planted in late 2004 will not be harvested until 2004. Estimated nitrogen removal by winter forage is based on the calendar year.

No nitrogen site-specific uptake data is available at this time for tree barriers, or the tree farm. Literature values are used to estimate nitrogen harvested by tree barriers and at the tree farm. Limited information about nitrogen uptake of the tree barriers and nursery plants is available. Efforts will be made to obtain more information.

Table 2. Nitrogen Balance

Location	Crop	Total N Applied	Total NH_3 Volatilized	Total N Harvested	Balance
		tons	*tons*	*tons*	*tons*
Pivots					
Pivot #1 (P1)	Alfalfa	30.12	4.56	47.79	-22.24
Pivot #2 (P2)	Alfalfa	28.98	4.42	45.95	-21.39
Pivot #3 (P3)	Fallow/Alfalfa	3.62	0.56	1.52	1.54
Pivot #4 (P4)	Alfalfa	30.48	4.60	52.37	-26.49
Pivot #5 (P5)	Fallow/Alfalfa	15.70	2.44	8.05	5.21
Pivot #6 (P6)	SG/Fallow	6.64	1.02	3.30	2.33
Pivot #7 (P7)	SG/Fallow/BOW	33.70	5.18	16.43	12.09
Pivot #8 (P8)	Sudan	16.37	2.55	5.37	8.46
Pivot #9 (P9)	Open/Alfalfa/BOW	9.47	1.47	0.00	7.99
Pivot #10 (P10)	Open/Oats	10.08	1.56	0.00	8.52
Pivot #11 (P11)	Open/BOW	12.45	1.95	0.00	10.50
Pivot #12 (P12)	Open/Oats	13.05	1.99	0.00	11.06
Pivot #13 (P13)	Open/BOW	2.01	0.31	0.00	1.70

BOW is Barley-Oat-Wheat mixture, winter forage. "Open" designates the period prior to a crop.

Water Balance

The water balance is a comparison of applied water plus rainfall and the sum of water lost to crop evapotranspiration, evaporation from bare soil and deep percolation. Consideration is given to water added or removed from storage in the soil profile and water required to compensate for distribution uniformity and a leaching fraction. While water required for the leaching fraction and to compensate for distribution uniformity will result in deep percolation, it is considered beneficial use required in all irrigated agriculture. Water added to control wind erosion is also considered beneficial use. Another beneficial use is irrigation of transplants such as the pine trees recently planted in the windbreaks. Because root systems are disrupted, soil moisture must be maintained with frequent irrigations.

Applied-water quantities are taken from flows presented in **Attachment A**. Crop evapotranspiration is estimated using CIMIS data from the DWR CIMIS weather station at Victorville and crop factors taken from University of California data or provided by ITRC. The crop factor considers characteristics of individual crop species and stage of growth. Following application of water to bare soil, a factor of 0.2 is used for two days then decreased in a straight-line function over ten days. The crop factor for the tree barriers is 1.2 adjusted for the percent ground cover in each area.

Crop evapotranspiration and evaporation from bare soil is estimated using

$$ETc = ETo \times kc$$

where ETc is evapotranspiration of the crop in inches, ETo is reference ET from the Victorville CIMIS station and kc is the crop factor. Data from the onsite CIMIS station will be available in early 2005, please refer to the section "California Irrigation Management Information System Station" of this report for the status of the onsite CIMIS station. ETc values provided by ITRC are presented in **Attachment C: Deep Percolation Calculations.** Applied water, estimated ETc and water available for leaching are presented in **Table 3 - Water Balance.** Where more than one crop was grown in a pivot estimated ETc is for all crops grown during the year.

Less water was applied to alfalfa than predicted from CIMIS data during summer months. Considering that more nitrogen was harvested, water application rates could be increased without placing groundwater at risk and obtaining greater crop yield at the same time. During fall and winter applied water exceeded the ETc. Construction of pivots precluded effluent application in Section 9 so excess application was applied to pivots during fall and winter months.

The water balance overstates the amount of water available for deep percolation. During October and December of this year, the area experienced rainfall at heavier than normal levels. Rainfall occurred at a rate faster than the infiltration rate. Runoff from rainfall was observed on some fields. Runoff is included in the water balance even though it left the field and could not have percolated because it is not possible to measure or estimate the volume of runoff. Irrigation with reclaimed water did not occur during these periods of heavy rainfall, therefore, no effluent was observed running off fields.

Another impact of weather was desiccating impact of high winds that occurred in December. Additional water had to be applied to recently planted fields to maintain seed viability and young seedlings. Dry sand is more erodible than wet sand. Therefore, additional water was needed for fields that were being prepared for planting. Pivots impacted were P7, P9, P10, P11, P12 and P13. These types of water applications are beneficial use of water and are agronomic.

Table 3: Water Balance

Location	Crop	Acres	Water Applied	Estimated ET	Balance		Deep Percolation	
			Total	Total	Totals		Totals	
			ins	ins	ins	ac-ins	ins	ac-ins
Pivot #1 (P1)	Alfalfa	125	59.83	63.23	-3.40	-425.00	16.42	2052.5
Pivot #2 (P2)	Alfalfa	125	58.11	63.23	-5.12	-640.00	16.07	2008.75
Pivot #3 (P3)	Fallow/Alfalfa	21	43.17	28.43	14.74	309.54	26.68	560.28
Pivot #4 (P4)	Alfalfa	125	60.4	63.23	-2.83	-353.75	13.47	1683.75
Pivot #5 (P5)	Fallow/Alfalfa	125	31.47	28.43	3.04	380.00	17.71	2213.75
Pivot #6 (P6)	SG/Fallow	21	80.56	53.24	27.32	573.72	38.50	808.50
Pivot #7 (P7)	SG/Fallow/BOW	125	65.46	53.24	12.22	1527.5	28.46	3557.50
Pivot #8 (P8)	Sudan	32	126.03	53.24	72.79	2329.28	83.56	2673.92
Pivot #9 (P9)	Open/Alfalfa/BOW	125	13.81	2.75	11.06	1382.5	18.36	2295.00
Pivot #10 (P10)	Open/Oats	125	21.37	3.84	17.53	2191.25	24.83	3103.75
Pivot #11 (P11)	Open/BOW	125	26.46	4.05	22.41	2801.25	29.71	3713.75
Pivot #12 (P12)	Open/Oats	125	27.68	4.37	23.31	2913.75	30.61	3826.25
Pivot #13 (P13)	Open/BOW	21	25.62	4.50	21.12	443.52	28.42	596.82
S Side of Tree Farm (4A)	Pistachios	23	63.65	43.56	4.90	112.70	37.11	853.53

Deep Percolation of Water

Some deep percolation of water is typical of any farming operation as a result of the need to remove salts from the root zone and the need to overcome non-uniformity of irrigation methods. In addition, due to susceptibility of soils at the EMS to wind erosion, water must be applied to minimize erosion. The wind will also desiccate soil near the surface requiring extra water for seeds, seedlings and transplants. Where applied water equals or exceeds crop use, deep percolation occurs.

The amount of deep percolation is estimated per the methodology provided by ITRC described in the District's Abatement Report and Addendum. Because no irrigation system applies uniformly, water must be applied to assure that the part of a field that receives the least amount has sufficient water to meet ETc. Where applied water is equal to or greater than ETc, deep percolation is the difference between applied water and crop use. Where crops are under-irrigated, no deep percolation occurs in part of the field. The method provided by ITRC is used when fields are under-irrigated. Deep percolation estimates are calculated in **Attachment C: Deep Percolation Calculations** and summarized in **Table 3: Water Balance.**

Crop Cycle

Crops grown during 2004 are presented in **Table 3**. New alfalfa was planted in P3, P5 and P9 during the fall. Sudan grass was planted in P6, P7 and P8 during early summer. Winter forage, oats or a barley-oats-wheat mixture (BOW) was planted in P 7, P10, P11, P12 and P13. Growth is initiated on the day irrigation occurred after planting. Those dates are shown in Table 5 on page 9.

Eight alfalfa cuttings were harvested from pivots P1, P2, P4 and one from pivots P3 and P5 during 2004, a total of twenty-six harvests. In the fourth quarter, alfalfa growth rate slowed due to cooler temperatures and reduced yields. Also, rainfall interfered with harvest in addition to reducing yields. A longer time period was required for harvest, so effluent application was diverted to land application sites. Some alfalfa planted in P9 during September failed due to wind damage. The damaged area was replanted with a barley-oat-wheat mixture (BOW).

Winter forage was harvested from pivots P3, P5, P6, P7, P8 and the corners, for a total of 5 harvests. Three cuttings of Sudan grass hay was harvested from pivots P6, P7 and P8 for a total of nine harvests.

The annual pistachio harvest occurred during September.

Oleanders were planted in the tree barrier north of pivot 5 (North Section 10) on June 29. The objective was to determine if oleander would provide an adequate screen for drift. Thirty trees were harvested from the tree farm to replace existing wind barriers. One-hundred-forty-two were placed in the new tree barriers on the east side of Section 9. Ninety were used at the Lancaster Water Reclamation Plant and thirty were sold. No harvest occurred at tree barriers.

Crop production data is presented in **Attachment B: Summary Nitrogen Balance Calculation Tables** under the heading **"Harvest Data"**. Harvest data is summarized in **Table 4: Yield Summary**.

Water could not be applied to P6, P7 and P8, designated as land application with a crop during December, as it would interfere with seedbed preparation. Construction activities reduced the amount of water that could be applied to Section 9. Water was applied to P1 and P2. No harm to alfalfa resulted.

Table 4. Yield Summary

Location	Crop	March	May	June	July	Aug	Sept	Oct	Nov	Dec	Totals
		tons	*tons*	*tons*	*tons*	*tons*	*tons*	*tons*	*tons*	*tons*	*tons*
Pivot 1	Alfalfa	210	227	208	219	202	200		168		1434
Pivot 2	Alfalfa	209	209	210	219	199	202		80	29	1356
Pivot 3	WF/Alfalfa		67							14	81
Pivot 4	Alfalfa	194	237	207	222	197	196	142		58	1453
Pivot 5	WF/Alfalfa		393							85	478
Pivot 6	WF/SG			74		34	34	37			178
Pivot 7	WF/SG/WF			449		201	211		61		922
Pivot 8	WF/SG			107		51	52		49		259
S Side of Tree Farm	Pistachios						40				40

WF is winter forage.

California Irrigation Management Information System Station

The District has committed to the Regional Board to install a California Irrigation Management Information System (CIMIS) weather station at the EMS for future evaluation of wind speed and direction. The site was completed on October 14. California Department of Water Resources personnel installed the weather station during December 8 and 9. DWR is performing quality control checks and calibration activities. First usable data is expected in early February. Wind deposited sand on turf at the station on October 18 and November 26, depicted in **Figures 2 and 3.** Sand was removed with rakes and shovels following each event. Winter forage will be established around the station to help stabilize sand so that data from the station will be reliable.

Figure No. 2

Figure No. 3

EFFLUENT MANAGEMENT SITE OPERATIONS REPORT

Summary of Daily Wind Speed and Direction

Beginning December 21, 2004, daily wind speed and direction sheets are printed and kept on file at the PWRP. This data will continue to be stored at the site and reported in future quarterly reports. Wind speed and direction will be reported from the CIMIS station once testing is completed by DWR and the system is operational.

Report of Periods when Irrigation Ceased due to High Winds

There was no stoppage due to high winds during 2004.

Summary of the Evaluation of Wind Barriers

No drift was observed reaching the wind barriers; therefore, no evaluation could be made of their effectiveness.

Summary of Maintenance Activities

No farm maintenance activities were recorded during May. During June, following harvest of winter forage hay, three fields, P6, P7 and P8, were disced, planted with Sudan grass and irrigation resumed. Dates of first irrigations are presented in **Table 5**. Sudan grass was terminated following the final harvest. Seedbeds were prepared in pivots P6, P7 and P8 and winter forage was planted in P7.

Table 5: Dates of Irrigation Resumption Following Planting

Pivots	Crop	Date Irrigation Started
Pivot 1	Alfalfa	*
Pivot 2	Alfalfa	*
Pivot 3	WF/Alfalfa	9/3
Pivot 4	Alfalfa	*
Pivot 5	WF/Alfalfa	9/2
Pivot 6	WF/ SG	6/18
Pivot 7	WF/SG/WF	6/18 and 12-29
Pivot 8	WF/SG/Fallow	6/16
Pivot 9	Alfalfa/WF	12/1
Pivot 10	WF	11/23
Pivot 11	WF	11/29
Pivot 12	WF	11/2
Pivot 13	WF	11/22

* Established prior to 2004
WF is winter forage. SG is Sudan grass.

Following harvest of winter forage hay, sand was applied to areas of pivot P5 in an attempt to enhance infiltration in preparation for planting alfalfa. Alfalfa was planted in P3 and P5 following seedbed preparation.

Installation of irrigation systems in pivots P9, P10, P11, P12 and P13 in Section 15 was completed during 2004. Land grading in each new pivot area progressed. Alfalfa was planted in P9 for alfalfa. Winter forage was planted in the other Section 15 pivots.

A series of windstorms destroyed the alfalfa and in part of P9. The area was replanted with winter forage. After observing irrigation and precipitation events in Section 15, it is clear that pivots P11 and P12 will require additional grading before alfalfa is planted. The failed alfalfa stand and the need for additional grading may result in abandonment of alfalfa in pivot P9. It is advisable to delay planting multi-year crops like alfalfa in newly developed fields until several crops have been grown and all major grading has been completed.

Construction of a new distribution system was initiated in Section 9 where eight mini pivots are to be installed. Construction of pivots is complete in the southwest quarter of section 9 and planting of winter forage was completed.

Summary of Aerosol Reduction Measures

During May, drop tubes and coarse water droplet nozzles were installed on pivot irrigation systems in P4, P5 and P8 as aerosol reduction measures. There was visible reduction of aerosols from the lower drops and coarser droplets. In no case was any aerosol seen moving off-site from any pivot. While it may not have been necessary to lower and install coarser droplet nozzles to prevent off-site drift, they did provide a greater margin of safety. This small margin of safety occurred at the expense of reduced distribution uniformity as crop canopy blocked the spray.

Summary of Daily Inspections for Ponding, Off-site Flow and Off-site Drift

No ponding occurred during 2004. Standing water occurred intermittently in the area with solid set sprinklers between pivots P1 and P2 (solid set sprinklers were used to grow a cover crop in the corner to prevent blowing sand?). Accumulation of water occurred as a result of back flushing of filters located at the site. The district addressed the situation. Standing water was observed near the center of pivot 4. The area affected is about 1.1 acres. Prolonged wetness is indicated by death of the alfalfa and growth of grassy weeds. Standing water was observed at the next to the last tower in the wheel track on the northeast side of Pivot 6. Approximately forty feet of the wheel track is depressed two feet, causing the standing water. In both cases water is accumulating in depressions more rapidly than infiltration and evaporation dissipates the water. Accumulated water dissipated prior to harvests when applications are stopped. One way to remedy this problem is to deposit soil in the depressions so that water will not accumulate. Filling the depression may eliminate standing water or move it down slopes. Several adjustments over time may be required to minimize such areas. Adjustments can be made between crops like annual forages or during winter alfalfa dormancy. Adjustments during cropping periods are not feasible because different cultural practices are required for germination and crop establishment than for the established crop. Adjustments would also interfere with effluent reuse by the established crop. Due to the heavy rains this fall, adjustments have not been possible. Driving equipment over wet soils could damage crops. Should adding soil not be possible, an alternative measures will be taken. The farm operator, PWRP operations and project engineer were notified about this condition.

Periods of rapid rainfall resulted in observed runoff from the fields. Irrigation with reclaimed water did not occur during these periods and all runoff was due entirely to rainfall. No effluent ran off any field.

No off-site drift of effluent occurred during the period of May through December 2004.

CHEMICAL USE MONITORING REPORT

On July 9, Weedar 64 was applied to pivot P7 at the rate of one pint per acre to control broadleaf weeds. The active ingredient is 2,4-Dichlorophenoxyacetic acid and dimethylamine salt. A copy of the MSDS sheet and a specimen label was presented with the July monthly report. On August 6 and September 28, spraying was observed at the tree barrier at section 10 north of pivot P5. The driver reported using Roundup® for weed control. During October Raptor herbicide was applied to pivots P3 and P5 to control weeds in seedling alfalfa. A specimen label and MSDS sheet was submitted with the October monthly report. No other chemical fertilizers, herbicides or other pesticides were used on or around pivots during the May through December period.

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Attachment A
Summary of Flows – January – December 2004

DELLAVALLE Laboratory, Inc.
Chemists and Consultants

Attachment A
Summary of Flows - January - December 2004

Days	Flow in MG	Total Flow To LAWA (MG)	Pivot 1 (MG)	Pivot 2 (MG)	Pivot 3 (MG)	Pivot 4 (MG)	Pivot 5 (MG)	Pivot 6 (MG)	Pivot 7 (MG)	Pivot 8 (MG)	Pivot 9 (MG)	Pivot 10 (MG)	Pivot 11 (MG)	Pivot 12 (MG)	Pivot 13 (MG)	Tree Farm (MG)	Pistachios (MG)	Tree Rows (MG)	Section 9 (MG)
31	January	282.22	7.75	7.75	0.86	7.74	8.60	0.92	29.01	18.53	0	0	0	0	0	3.60	5.76	0.69	191.01
29	February	244.72	10.82	6.73	1.03	4.60	3.00	1.02	12.42	5.18	0	0	0	0	0	0.89	0.36	0.54	198.13
31	March	274.59	9.01	16.16	3.88	13.70	19.03	3.76	29.12	11.17	0	0	0	0	0	3.12	1.61	0.75	163.28
30	April	233.39	21.33	16.78	4.97	19.91	21.09	5.35	25.09	14.10	0	0	0	0	0	4.23	3.69	1.33	95.52
31	May	241.38	23.43	17.09	1.40	27.21	1.62	3.04	21.82	4.44	0	0	0	0	0	9.53	6.52	0.76	124.52
30	June	227.12	23.65	21.59	0	24.63	1.10	4.67	11.94	8.60	0	0	0	0	0	10.00	7.35	0.97	114.62
31	July	228.40	29.41	30.68	0	29.23	3.26	4.50	34.48	15.48	0	0	0	0	0	5.17	6.49	1.07	68.63
31	August	274.86	28.67	29.47	1.99	32.78	5.81	7.39	20.12	13.62	17.04	10.64	14.18	14.82	4.53	2.41	5.89	1.24	64.48
30	September	220.22	20.70	21.81	4.83	27.47	22.79	7.25	14.77	10.02	13.63	17.80	15.98	28.00	4.18	1.22	2.08	1.27	6.62
31	October	274.82	18.46	19.26	2.8	5.92	10.51	7.4	18.89	10.34	18.96	15.02	21.89	20.96	2.59	0.29	0	0.25	101.48
30	November	256.50	0	0	1.01	5.24	4.88	0.64	0	0.03	11.72	8.26	7.76	20.08	2.78	0.08	0	0.15	193.85
31	December	280.09	9.84	9.9	2.05	6.6	5.32	0	4.74	0	7.49	20.59	30.00	10.31	0.53	1.10	0	0.25	171.37
Days in Rpt Period	Total	3038.31	203.07	197.24	24.82	205.01	106.81	45.94	222.2	109.51	68.84	72.53	89.81	93.97	14.61	41.64	39.75	9.27	1493.49
366	Avg Flow (MGD)	8.30	0.55	0.54	0.07	0.56	0.29	0.13	0.61	0.30	0.45	0.47	0.59	0.61	0.10	0.11	0.11	0.03	4.08

Attachment B
Summary Nitrogen Balance Calculation Tables

Attachment B

Summary Nitrogen Balance Calculation Tables

Pivot 1			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	125	7.75	40.06	2,591	1.30										26.60	1,720	430	0.22	0.24	0.8	14.12	95	0.05	430	2161	1.08
February	125	10.82	39.26	3,547	1.77										24.10	2,176	544	0.27	3.21	10.9	14.12	1,284	0.64	544	3003	1.50
March	125	9.01	35.94	2,702	1.35	1	3508	420720	210.36	4.34	16433	8.22			23.50	1,767	442	0.22	0.00	0.0	14.12	0	0.00	16875	(14173)	-7.09
April	125	21.33	35.80	6,372	3.19										22.25	3,960	990	0.50	0.08	0.3	14.12	34	0.02	990	5382	2.69
May	125	23.43	43.27	8,460	4.23	1	4320	453600	226.80	3.87	15864	7.93			22.56	4,411	1,103	0.55	0.32	1.1	14.12	127	0.06	16987	(8506)	-4.25
June	125	23.65	33.21	6,554	3.28	1	3961	415905	207.95	3.66	13678	6.84			20.35	4,016	1,004	0.50	0.06	0.2	14.12	24	0.01	14680	(8125)	-4.06
July	125	29.41	36.00	8,836	4.42	1	4180	438900	219.45	3.15	12609	6.30			20.80	5,105	1,276	0.64	0.48	1.8	14.12	191	0.10	13885	(5049)	-2.52
August	125	28.87	31.59	7,557	3.78	1	4058	405800	202.90	3.41	12985	6.49			21.32	5,101	1,275	0.64	0.82	2.8	14.12	328	0.16	14260	(6703)	-3.35
September	125	20.70	33.93	5,860	2.93	1	3813	400365	200.18	3.44	12017	6.01			19.53	3,373	843	0.42	1.72	5.8	14.12	689	0.34	12860	(7000)	-3.50
October	125	18.46	32.18	4,957	2.48										20.08	3,093	773	0.39	5.20	17.6	14.12	2,079	1.04	773	4184	2.09
November	125	0.00	34.37	0	0.00	1	Grn Chp	336000	168.00	4.0	12005	6.00			20.23	0	0	0.00	0.00	0.0	14.12	0	0.00	12005	(12005)	-6.00
December	125	9.84	34.06	2,797	1.40										21.83	1,792	448	0.22	4.29	14.6	14.12	1,718	0.86	448	2349	1.17
	125	203.07		60,233	30.12				1435.6			47.79					9128	4.56				6,570	3.3	104718	(44483)	-22.24

Pivot 2			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	125	7.75	40.06	2,591	1.30										26.60	1,720	430	0.22	0.24	0.8	14.12	95	0.05	430	2161	1.08
February	125	8.73	39.26	2,206	1.10										24.10	1,353	338	0.17	2.00	6.6	14.12	802	0.40	338	1868	0.93
March	125	18.18	35.94	4,852	2.43	1	3480	417600	208.80	4.52	18968	8.49			23.50	3,173	793	0.40	0.40	1.4	14.12	160	0.08	17761	(12929)	-6.46
April	125	16.76	35.80	5,013	2.51										22.25	3,116	779	0.39	0.00	0.0	14.12	0	0.00	779	4234	2.12
May	125	17.09	43.27	6,171	3.09	1	3972	417060	208.53	3.57	13227	6.61			22.56	3,217	804	0.40	0.00	0.0	14.12	0	0.00	14032	(7861)	-3.93
June	125	21.59	33.21	5,983	2.99	1	2550*	420000	210.00	3.52	12958	6.48			20.35	3,666	917	0.46	0.00	0.0	14.12	0	0.00	13875	(7891)	-3.95
July	125	30.68	36.00	9,217	4.61	1	3600*	438000	219.00	3.4	13502	6.75			20.80	5,325	1,331	0.67	0.67	2.3	14.12	269	0.13	14834	(5616)	-2.81
August	125	29.47	31.59	7,788	3.88	1	3971	397100	198.55	3.6	12660	6.33			21.32	5,243	1,311	0.66	0.97	3.3	14.12	389	0.19	13970	(6202)	-3.10
September	125	21.81	33.93	6,174	3.09	1	3856	404880	202.44	3.9	14423	7.21			19.53	3,553	888	0.44	2.04	6.9	14.12	816	0.41	15312	(9137)	-4.57
October	125	19.26	32.18	5,172	2.59										20.08	3,227	807	0.40	5.43	18.4	14.12	2,174	1.09	807	4365	2.18
November	125	0.00	34.37	0	0.00	1	Grn Chp	160000	80.00	4.2	6026	3.01			20.23	0	0	0.00	0.00	0.0	14.12	0	0.00	6026	(6026)	-3.01
December	125	9.90	34.06	2,814	1.41	1	33 L	58000	29.00	4.1	2117	1.06			21.83	1,803	451	0.23	4.31	14.6	14.12	1,725	0.86	2567	246	0.12
	125	197.24		57,962	28.98				1356.3			45.95					8849	4.42				6,430	3.2	100751	(42789)	-21.39

*Note: June Harvest 2550 regular bales plus additional 76 tons of Green Chop (210 ton total); July 2600 bales + 39 tons Green Chop (219 Total)

Pivot 3			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	21	0.86	40.06	287	0.14										26.60	191	48	0.02	0.00	0.0	14.12	0	0.00	48	240	0.12
February	21	1.03	39.26	338	0.17										24.10	207	52	0.03	1.74	1.0	14.12	117	0.06	52	286	0.14
March	21	3.88	35.94	1,164	0.58										23.50	761	190	0.10	0.59	0.3	14.12	40	0.02	190	973	0.49
April	21	4.97	35.80	1,485	0.74										22.26	923	231	0.12	1.99	1.1	14.12	134	0.07	231	1254	0.63
May	21	1.40	43.27	506	0.25	1	1280	134400	67.20	1.74	2025	1.01			22.56	264	66	0.03	0.08	0.0	14.12	5	0.00	2091	(1585)	-0.79
June	21	0.00	33.21	0	0.00										20.35	0	0	0.00		0.0	14.12	0	0.00	0	0	0.00
July	21	0.00	36.00	0	0.00										20.80	0	0	0.00		0.0	14.12	0	0.00	0	0	0.00
August	21	1.99	31.59	525	0.26										21.32	354	89	0.04	3.49	2.0	14.12	235	0.12	89	436	0.22
September	21	4.63	33.93	1,311	0.66										19.53	754	189	0.09	6.79	3.9	14.12	456	0.23	189	1122	0.56
October	21	2.80	32.18	752	0.38										20.08	469	117	0.06	6.44	3.7	14.12	433	0.22	117	635	0.32
November	21	1.01	34.37	290	0.14										20.23	170	43	0.02	0.49	0.3	14.12	33	0.02	43	247	0.12
December	21	2.05	34.06	583	0.29	1	16 L	28000	14.00	4.1	1022	0.51			21.83	373	93	0.05	5.07	2.9	14.12	341	0.17	1115	(533)	-0.27
	21	24.62		7,238	3.62				81.2			1.52					1117	0.56				1,793	0.9	4163	3075	1.54

Attachment B

Summary Nitrogen Balance Calculation Tables

Pivot 4			Effluent Nitrogen Data			Harvest Data						10 lbs/acre/year				25% NH3		METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	125	7.74	40.06	2,587	1.29										26.60	1,718	430	0.21	0.24	0.8	14.12	95	0.05	430	2158	1.08
February	125	4.80	39.28	1,606	0.75										24.10	925	231	0.12	1.38	4.7	14.12	551	0.28	231	1277	0.64
March	125	13.70	35.94	4,109	2.05	1	3240	388800	194.40	4.84	15282	7.64			23.50	2,687	672	0.34	0.07	0.2	14.12	29	0.01	15954	(11845)	-5.92
April	125	19.91	35.80	5,948	2.97										22.25	3,697	924	0.46	0.01	0.0	14.12	4	0.00	924	5024	2.51
May	125	27.21	43.27	9,825	4.91	1	280L + 312R	474760	237.38	4.32	18649	9.32			22.56	5,122	1,281	0.64	0.95	3.2	14.12	382	0.19	19930	(10105)	-5.05
June	125	24.63	33.21	8,826	3.41	1	3936	413280	206.64	3.85	13598	6.80			20.35	4,182	1,046	0.52	0.13	0.4	14.12	53	0.03	14642	(7816)	-3.91
July	125	29.23	36.00	8,762	4.39	1	4231	444255	222.13	3.5	14304	7.15			20.80	5,073	1,268	0.63	0.45	1.5	14.12	181	0.09	15573	(6791)	-3.40
August	125	32.76	31.59	8,635	4.32	1	3936	393600	196.80	3.8	13748	6.87			21.32	5,826	1,457	0.73	1.68	5.7	14.12	671	0.34	15205	(6570)	-3.29
September	125	27.47	33.93	7,776	3.89	1	3739	392595	196.30	4.1	14686	7.34			19.53	4,476	1,119	0.56	3.70	12.6	14.12	1,482	0.74	15606	(8028)	-4.01
October	125	5.92	32.18	1,590	0.79	1	162 L	283500	141.75	4.0	10155	5.08			20.08	992	248	0.12	1.50	5.1	14.12	602	0.30	10403	(8813)	-4.41
November	125	5.24	34.37	1,503	0.75										20.23	884	221	0.11	0.01	0.0	14.12	3	0.00	221	1282	0.64
December	125	6.60	34.06	1,876	0.94	1	67 L	116000	58.00	4.1	4325	2.16			21.83	1,202	300	0.15	3.34	11.3	14.12	1,336	0.67	4625	(2749)	-1.37
	125	205.01		60,965	30.48				1453.4			52.37					9197	4.60				5,388	2.7	113943	(52978)	-26.49

Pivot 5			Effluent Nitrogen Data			Harvest Data						10 lbs/acre/year				25% NH3		METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	125	8.60	40.06	2,875	1.44										26.60	1,909	477	0.24	0.36	1.2	14.12	142	0.07	477	2398	1.20
February	125	3.00	39.28	983	0.49										24.10	603	151	0.08	0.82	2.8	14.12	327	0.16	151	833	0.42
March	125	19.03	35.94	5,707	2.85										23.50	3,732	933	0.47	0.07	0.2	14.12	26	0.01	933	4774	2.39
April	125	21.09	35.80	6,300	3.15										22.25	3,916	979	0.49	0.26	0.9	14.12	105	0.05	979	5321	2.66
May	125	1.62	43.27	585	0.29	1	7492	786660	393.33	1.36	9829	4.81			22.56	305	76	0.04	0.00	0.0	14.12	0	0.00	9705	(9120)	-4.56
June	125	1.10	33.21	305	0.15										20.35	187	47	0.02	0.32	1.1	14.12	130	0.06	47	258	0.13
July	125	3.26	36.00	979	0.49										20.80	566	141	0.07	0.96	3.3	14.12	384	0.19	141	838	0.42
August	125	5.81	31.59	1,479	0.74										21.32	998	250	0.12	1.65	5.6	14.12	661	0.33	250	1229	0.61
September	125	22.79	33.93	6,452	3.23										19.53	3,713	928	0.46	5.39	18.3	14.12	2,155	1.08	928	5523	2.76
October	125	10.51	32.18	2,822	1.41										20.08	1,761	440	0.22	4.63	15.7	14.12	1,851	0.93	440	2362	1.19
November	125	4.88	34.37	1,400	0.70										20.23	824	206	0.10	0.21	0.7	14.12	83	0.04	206	1194	0.60
December	125	5.32	34.06	1,512	0.76	1	97 L	170000	85.00	4.2	6472	3.24			21.83	999	242	0.12	3.05	10.3	14.12	1,219	0.61	6714	(5202)	-2.60
	125	106.81		31,399	15.70				478.3			8.05					4570	2.44				7,084	3.5	20971	10428	5.21

Pivot 6			Effluent Nitrogen Data			Harvest Data						10 lbs/acre/year				25% NH3		METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	21	0.92	40.06	308	0.15										26.60	204	51	0.03	0.00	0.0	40.00	0	0.00	51	256	0.13
February	21	1.02	39.28	334	0.17										24.10	205	51	0.03	1.72	1.0	40.00	328	0.16	51	283	0.14
March	21	3.78	35.94	1,128	0.56										23.50	737	184	0.09	0.47	0.3	40.00	90	0.04	184	943	0.47
April	21	5.35	35.80	1,598	0.80										22.25	993	248	0.12	2.59	1.5	40.00	494	0.25	248	1350	0.67
May	21	3.04	43.27	1,098	0.55										22.56	572	143	0.07	2.55	1.5	40.00	486	0.24	143	955	0.48
June	21	4.87	33.21	1,294	0.65	1	84 Large	147000	73.50	1.68	2320	1.16			20.35	793	198	0.10	7.16	4.1	40.00	1,362	0.68	2519	(1224)	-0.61
July	21	4.50	36.00	1,352	0.68										20.80	781	195	0.10	0.11	0.1	40.00	21	0.01	195	1157	0.58
August	21	7.39	31.59	1,948	0.97	1	342R+18L	68094	34.05	2.3	1357	0.68			21.32	1,315	329	0.16	4.27	2.4	40.00	814	0.41	1686	262	0.13
September	21	7.25	33.93	2,052	1.03	1	39 L	68250	34.13	2.6	1478	0.74			19.53	1,181	295	0.15	6.67	3.8	40.00	1,269	0.63	1773	280	0.14
October	21	7.40	32.18	1,987	0.99	1	42 L	73500	36.75	2.2	1439	0.72			20.08	1,240	310	0.15	12.86	7.3	40.00	2,447	1.22	1749	238	0.12
November	21	0.84	34.37	164	0.08										20.23	108	27	0.01	0.10	0.1	40.00	16	0.01	27	157	0.08
December	21	0.00	34.06	0	0.00										21.83	0	0	0.00	0.00	0.0	40.00	0	0.00	0	0	0.00
	21	45.94		13,283	6.64				178.4			3.30					2033	1.02				7,328	3.7	8627	4656	2.33

Attachment B

Summary Nitrogen Balance Calculation Tables

Pivot 7			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	125	29.01	40.06	9,896	4.85										26.60	6,439	1,610	0.80	6.26	21.3	40.00	7,097	3.55	1610	8088	4.04
February	125	12.42	39.28	4,071	2.04										24.10	2,496	624	0.31	3.59	12.2	40.00	4,070	2.03	624	3447	1.72
March	125	29.12	35.94	8,733	4.37										23.50	5,710	1,428	0.71	1.92	6.5	40.00	2,170	1.08	1428	7306	3.65
April	125	25.09	35.80	7,495	3.75										22.25	4,658	1,165	0.58	0.94	3.2	40.00	1,084	0.53	1165	6331	3.17
May	125	21.82	43.27	7,879	3.94										22.56	4,108	1,027	0.51	3.65	12.4	40.00	4,137	2.07	1027	6852	3.43
June	125	11.94	33.21	3,309	1.65	1	1526 R + 417L	897610	448.81	1.70	13948	8.97			20.35	2,028	507	0.25	2.48	8.4	40.00	2,814	1.41	14452	(11143)	-5.57
July	125	34.48	36.00	10,359	5.18										20.80	5,985	1,496	0.75	1.25	4.2	40.00	1,411	0.71	1496	8863	4.43
August	125	20.12	31.59	5,304	2.65	1	360R+208L	402520	201.26	2.0	7833	3.82			21.32	3,579	895	0.45	0.00	0.0	40.00	0	0.00	8528	(3224)	-1.61
September	125	14.77	33.93	4,181	2.09	1	2048R+118L	421540	210.77	2.2	7912	3.96			19.53	2,406	602	0.30	0.00	0.0	40.00	0	0.00	8513	(4332)	-2.17
October	125	18.89	32.18	5,019	2.51										20.06	3,132	783	0.39	5.38	18.3	40.00	6,100	3.05	783	4236	2.12
November	125	0.00	34.37	0	0.00	1	33L + Grn Chp	122000	61.00	3.1	3365	1.68			20.23	0	0	0.00	0.00	0.0	40.00	0	0.00	3365	(3365)	-1.68
December	125	4.74	34.06	1,347	0.67										21.83	863	216	0.11	2.98	10.1	40.00	3,382	1.69	216	1131	0.57
	125	222.20		67,395	33.70				921.8			16.43					10352	5.18				32,244	16.1	43207	24188	12.09

Pivot 8			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	32	18.53	40.06	6,194	3.10										26.60	4,113	1,028	0.51	19.04	16.5	40.00	5,523	2.76	1028	5166	2.58
February	32	5.16	39.28	1,696	0.85										24.10	1,042	260	0.13	5.89	5.1	40.00	1,710	0.85	260	1438	0.72
March	32	11.17	35.94	3,350	1.67										23.50	2,190	548	0.27	8.10	5.3	40.00	1,768	0.88	548	2802	1.40
April	32	14.10	35.80	4,212	2.11										22.25	2,618	654	0.33	9.41	6.2	40.00	2,730	1.37	654	3556	1.78
May	32	4.44	43.27	1,603	0.80										22.56	836	209	0.10	2.33	2.0	40.00	877	0.34	209	1394	0.70
June	32	8.60	33.21	1,829	0.91	1	980 R + 65 L	213500	106.75	2.05	3983	1.99			20.35	1,121	280	0.14	6.56	5.7	40.00	1,903	0.95	4263	(2434)	-1.22
July	32	15.48	36.00	4,651	2.33										20.80	2,687	672	0.34	8.38	7.3	40.00	2,430	1.21	672	3979	1.99
August	32	13.62	31.59	3,590	1.80	1	190R+47L	102580	51.29	2.1	1912	0.96			21.32	2,423	606	0.30	6.99	6.1	40.00	2,027	1.01	2518	1072	0.54
September	32	10.02	33.93	2,837	1.42	1	59L	103250	51.63	2.6	2334	1.17			19.53	1,633	408	0.20	5.49	4.8	40.00	1,591	0.80	2742	94	0.05
October	32	10.34	32.18	2,777	1.39										20.06	1,733	433	0.22	11.78	10.2	40.00	3,416	1.71	433	2344	1.17
November	32	0.03	34.37	9	0.00	1	58 L	98000	49.00	2.8	2505	1.25			20.23	5	1	0.00	0.00	0.0	40.00	0	0.00	2506	(2498)	-1.25
December	32	0.00	34.06	0	0.00										21.83	0	0	0.00	1.59	1.4	40.00	461	0.23	0	0	0.00
	32	109.51		32,749	16.37				258.7			5.37					5100	2.55				24,235	12.1	15834	16915	8.46

Tree Farm			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	28	3.60	40.06	1,203	0.60							0.05			26.60	799	200	0.10		0.0	40.00	0	0.00	200	1004	0.50
February	28	0.89	39.28	292	0.15							0.07			24.10	179	45	0.02		0.0	40.00	0	0.00	45	247	0.12
March	28	3.12	35.94	936	0.47							0.10			23.50	612	153	0.05		0.0	40.00	0	0.00	153	783	0.39
April	28	4.23	35.80	1,264	0.63							0.17			22.25	785	196	0.10		0.0	40.00	0	0.00	196	1067	0.53
May	28	9.53	43.27	3,441	1.72							0.19			22.56	1,794	449	0.22		0.0	40.00	0	0.00	449	2993	1.50
June	28	10.00	33.21	2,771	1.39							0.23			20.35	1,696	425	0.21		0.0	40.00	0	0.00	425	2347	1.17
July	28	5.17	36.00	1,553	0.78							0.23			20.80	897	224	0.11		0.0	40.00	0	0.00	224	1329	0.66
August	28	2.41	31.59	635	0.32							0.22			21.32	429	107	0.05		0.0	40.00	0	0.00	107	528	0.26
September	28	1.22	33.93	345	0.17							0.14			19.53	199	50	0.02		0.0	40.00	0	0.00	50	296	0.15
October	28	0.29	32.18	78	0.04							0.11			20.06	49	12	0.01		0.0	40.00	0	0.00	12	66	0.03
November	28	0.08	34.37	23	0.01							0.07			20.23	14	3	0.00		0.0	40.00	0	0.00	3	20	0.01
December	28	1.10	34.06	313	0.16							0.06			21.83	200	50	0.03		0.0	20.00	0	0.00	50	263	0.13
	28	41.84		12,854	6.43				0.00			1.64					1914	0.96				0	0.0	1914	10941	5.47

Attachment B

Summary Nitrogen Balance Calculation Tables

Tree Rows			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year				25% NH3		METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	4	0.69	40.06	231	0.12							0.01			26.60	153	38	0.02		0.0	40.00	0	0.00	38	192	0.10
February	4	0.54	39.28	177	0.09							0.01			24.10	109	27	0.01		0.0	40.00	0	0.00	27	150	0.07
March	4	0.75	35.94	225	0.11							0.01			23.50	147	37	0.02		0.0	40.00	0	0.00	37	188	0.09
April	4	1.33	35.80	397	0.20							0.02			22.25	247	62	0.03		0.0	40.00	0	0.00	62	336	0.17
May	4	0.76	43.27	274	0.14							0.03			22.56	143	36	0.02		0.0	40.00	0	0.00	36	239	0.12
June	4	0.97	33.21	269	0.13							0.03			20.35	165	41	0.02		0.0	40.00	0	0.00	41	228	0.11
July	4	1.07	36.00	321	0.16							0.03			20.80	186	46	0.02		0.0	40.00	0	0.00	46	275	0.14
August	4	1.24	31.59	327	0.16							0.03			21.32	221	55	0.03		0.0	40.00	0	0.00	55	272	0.14
September	4	1.27	33.93	360	0.18							0.02			19.53	207	52	0.03		0.0	40.00	0	0.00	52	308	0.15
October	4	0.25	32.18	67	0.03							0.00			20.08	42	10	0.01		0.0	40.00	0	0.00	10	57	0.03
November	4	0.15	34.37	43	0.02							0.00			20.23	25	6	0.00		0.0	40.00	0	0.00	6	37	0.02
December	4	0.25	34.06	71	0.04							0.00			21.83	46	11	0.01		0.0	20.00	0	0.00	11	60	0.03
	4	9.27		2,762	1.38				0.00			0.19					422	0.21				0	0.0	422	2340	1.17

Pistachios			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year				25% NH3		METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Harvest	Reported Crop Harvest	Reported Crop Harvest (lbs) (net green weight)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Lose Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	23	5.76	40.06	1,925	0.96										26.60	1,279	320	0.16		0.0	40.00	0	0.00	320	1606	0.80
February	23	0.36	39.28	118	0.06										24.10	72	18	0.01		0.0	40.00	0	0.00	18	100	0.05
March	23	1.61	35.94	483	0.24										23.50	316	79	0.04		0.0	40.00	0	0.00	79	404	0.20
April	23	3.69	35.80	1,102	0.55										22.25	685	171	0.09		0.0	40.00	0	0.00	171	931	0.47
May	23	6.52	43.27	2,354	1.18										22.56	1,227	307	0.15		0.0	40.00	0	0.00	307	2047	1.02
June	23	7.35	33.21	2,037	1.02										20.35	1,246	312	0.16		0.0	40.00	0	0.00	312	1725	0.86
July	23	6.49	36.00	1,950	0.97										20.80	1,126	282	0.14		0.0	40.00	0	0.00	282	1668	0.83
August	23	5.69	31.59	1,553	0.78										21.32	1,048	262	0.13		0.0	40.00	0	0.00	262	1291	0.65
September	23	2.06	33.93	589	0.29	1		79353	39.68	1.98	664	0.35			19.53	339	85	0.04		0.0	40.00	0	0.00	779	(190)	-0.10
October	23	0.00	32.18	0	0.00										20.08	0	0	0.00		0.0	40.00	0	0.00	0	0	0.00
November	23	0.00	34.37	0	0.00										20.23	0	0	0.00		0.0	40.00	0	0.00	0	0	0.00
December	23	0.00	34.06	0	0.00										21.83	0	0	0.00		0.0	20.00	0	0.00	0	0	0.00
	23	39.75		12,111	6.06				39.68			0.35					1635	0.92				0	0.0	2530	9582	4.79

Pivot 9			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year				25% NH3		METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January		0.00	40.06	0	0.00										26.60	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
February		0.00	39.28	0	0.00										24.10	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
March		0.00	35.94	0	0.00										23.50	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
April		0.00	35.80	0	0.00										22.25	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
May		0.00	43.27	0	0.00										22.56	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
June		0.00	33.21	0	0.00										20.35	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
July		0.00	36.00	0	0.00										20.80	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
August	125	17.04	31.59	4,492	2.25										21.32	3,032	758	0.38	0.00	0.0	14.12	0	0.00	758	3734	1.87
September	125	13.63	33.93	3,858	1.93										19.53	2,221	555	0.28	0.00	0.0	14.12	0	0.00	555	3303	1.65
October	125	16.96	32.18	5,092	2.55										20.08	3,177	794	0.40	0.00	0.0	14.12	0	0.00	794	4297	2.15
November	125	11.72	34.37	3,362	1.68										20.23	1,978	494	0.25	0.00	0.0	14.12	0	0.00	494	2867	1.43
December	125	7.49	34.06	2,129	1.06										21.83	1,364	341	0.17	0.00	0.0	14.12	0	0.00	341	1788	0.89
	125	66.84		18,932	9.47				0.00			0.0					2943	1.47				0	0.0	2943	15989	7.99

Attachment B

Summary Nitrogen Balance Calculation Tables

Pivot 10			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January		0.00	40.06	0	0.00										26.60	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
February		0.00	39.28	0	0.00										24.10	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
March		0.00	35.94	0	0.00										23.50	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
April		0.00	35.80	0	0.00										22.25	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
May		0.00	43.27	0	0.00										22.56	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
June		0.00	33.21	0	0.00										20.35	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
July		0.00	36.00	0	0.00										20.80	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
August	125	10.84	31.59	2,857	1.43										21.32	1,928	482	0.24	0.00	0.0	14.12	0	0.00	482	2375	1.19
September	125	17.80	33.93	5,039	2.52										19.53	2,900	725	0.36	0.00	0.0	14.12	0	0.00	725	4314	2.16
October	125	15.02	32.18	4,034	2.02										20.06	2,517	629	0.31	0.00	0.0	14.12	0	0.00	629	3404	1.70
November	125	8.26	34.37	2,375	1.19										20.23	1,397	349	0.17	0.00	0.0	14.12	0	0.00	349	2026	1.01
December	125	20.59	34.06	5,852	2.93										21.83	3,790	937	0.47	0.00	0.0	14.12	0	0.00	937	4915	2.46
	125	72.53		20,157	10.08				0.00			0.0					3123	1.56				0	0.0	3123	17034	8.52

Pivot 11			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January		0.00	40.06	0	0.00										26.60	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
February		0.00	39.28	0	0.00										24.10	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
March		0.00	35.94	0	0.00										23.50	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
April		0.00	35.80	0	0.00										22.25	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
May		0.00	43.27	0	0.00										22.56	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
June		0.00	33.21	0	0.00										20.35	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
July		0.00	36.00	0	0.00										20.80	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
August	125	14.16	31.59	3,738	1.87										21.32	2,523	631	0.32	0.00	0.0	14.12	0	0.00	631	3107	1.55
September	125	15.98	33.93	4,524	2.26										19.53	2,604	651	0.33	0.00	0.0	14.12	0	0.00	651	3873	1.94
October	125	21.89	32.18	5,878	2.94										20.06	3,668	917	0.46	0.00	0.0	14.12	0	0.00	917	4961	2.48
November	125	7.76	34.37	2,226	1.11										20.23	1,310	327	0.16	0.00	0.0	14.12	0	0.00	327	1898	0.95
December	125	30.00	34.06	8,527	4.26										21.83	5,464	1,366	0.68	0.00	0.0	14.12	0	0.00	1366	7161	3.58
	125	89.81		24,893	12.45				0.00			0.0					3892	1.95				0	0.0	3892	21001	10.50

Pivot 12			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year			25% NH3			METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January		0.00	40.06	0	0.00										26.60	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
February		0.00	39.28	0	0.00										24.10	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
March		0.00	35.94	0	0.00										23.50	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
April		0.00	35.80	0	0.00										22.25	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
May		0.00	43.27	0	0.00										22.56	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
June		0.00	33.21	0	0.00										20.35	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
July		0.00	36.00	0	0.00										20.80	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
August	125	14.62	31.59	3,854	1.93										21.32	2,601	650	0.33	0.00	0.0	14.12	0	0.00	650	3204	1.60
September	125	28.00	33.93	7,926	3.96										19.53	4,562	1,140	0.57	0.00	0.0	14.12	0	0.00	1140	6786	3.39
October	125	20.96	32.18	5,629	2.81										20.06	3,512	878	0.44	0.00	0.0	14.12	0	0.00	878	4751	2.38
November	125	20.08	34.37	5,759	2.88										20.23	3,389	847	0.42	0.00	0.0	14.12	0	0.00	847	4912	2.46
December	125	10.31	34.06	2,930	1.47										21.83	1,878	469	0.23	0.00	0.0	14.12	0	0.00	469	2461	1.23
	125	93.97		26,099	13.05				0.00			0.0					3985	1.99				0	0.0	3985	22113	11.06

Attachment B
Summary Nitrogen Balance Calculation Tables

Pivot 13			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year				25% NH3		METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January		0.00	40.06	0	0.00										26.60	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
February		0.00	39.28	0	0.00										24.10	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
March		0.00	35.94	0	0.00										23.50	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
April		0.00	35.80	0	0.00										22.25	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
May		0.00	43.27	0	0.00										22.56	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
June		0.00	33.21	0	0.00										20.35	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
July		0.00	36.00	0	0.00										20.80	0	0	0.00	0.00	0.0	14.12	0	0.00	0	0	0.00
August	21	4.53	31.59	1,194	0.60										21.32	806	201	0.10	0.00	0.0	14.12	0	0.00	201	993	0.50
September	21	4.18	33.93	1,183	0.59										19.53	681	170	0.09	0.00	0.0	14.12	0	0.00	170	1013	0.51
October	21	2.59	32.16	696	0.35										20.08	434	108	0.05	0.00	0.0	14.12	0	0.00	108	587	0.29
November	21	2.78	34.37	797	0.40										20.23	469	117	0.06	0.00	0.0	14.12	0	0.00	117	680	0.34
December	21	0.53	34.06	151	0.08										21.83	97	24	0.01	0.00	0.0	14.12	0	0.00	24	127	0.06
	21	14.61		4,021	2.01				0.00			0.0					622	0.31				0	0.0	622	3399	1.70

Section 9			Effluent Nitrogen Data			Harvest Data							10 lbs/acre/year				25% NH3		METHOD 2 Deep Percolation					METHOD 1 Nitrogen Removal		
Month	Acres	Irrigation Flow (MG)	Effluent N (mg/l)	Applied N (lbs)	Applied N (tons)	Cuttings	Reported Crop Harvest (bales)	Reported Crop Harvest (lbs)	Reported Crop Harvest (tons)	Tissue Analysis % N	Crop Nitrogen Content lbs-N	Crop Nitrogen Content tons-N	Loss Nitrogen Denitrification lbs	Loss Nitrogen Denitrification tons	Effluent Ammonia mg/l	Applied Ammonia lbs	Loss Nitrogen Ammonia lbs	Loss Nitrogen Ammonia tons	Deep Perc (in)	Deep Perc (MG)	N in Deep Perc (mg-N/L)	Nitrogen (lbs)	Nitrogen (tons)	Removed (lbs)	Net (lbs)	Net (tons)
January	320	191.01	40.06	63,851	31.93										26.60	42,397	10,599	5.30		0.0	49.00	0	0.00	10599	53252	26.63
February	320	198.13	39.28	64,948	32.47										24.10	39,845	9,961	4.98		0.0	49.00	0	0.00	9961	54987	27.49
March	320	163.26	35.94	48,962	24.48										23.50	32,015	8,004	4.00		0.0	49.00	0	0.00	8004	40958	20.48
April	320	95.52	35.80	28,535	14.27										22.25	17,735	4,434	2.22	0.00	0.0	49.00	0	0.00	4434	24101	12.05
May	320	124.52	43.27	44,962	22.48										22.56	23,441	5,860	2.93	0.00	0.0	49.00	0	0.00	5860	39101	19.55
June	320	114.62	33.21	31,766	15.88										20.35	19,464	4,866	2.43	0.00	0.0	49.00	0	0.00	4866	26900	13.45
July	320	68.63	36.00	20,619	10.31										20.80	11,912	2,978	1.49	0.00	0.0	49.00	0	0.00	2978	17641	8.82
August	320	64.48	31.59	16,997	8.50										21.32	11,471	2,868	1.43	0.00	0.0	49.00	0	0.00	2868	14129	7.06
September	320	6.62	33.93	1,874	0.94										19.53	1,079	270	0.13	0.00	0.0	49.00	0	0.00	270	1604	0.80
October	320	101.48	32.16	27,252	13.63										20.08	17,004	4,251	2.125	0.00	0.0	49.00	0	0.00	4251	23001	11.50
November	320	193.65	34.37	55,600	27.80										20.23	32,716	8,179	4.089	0.00	0.0	49.00	0	0.00	8179	47422	23.71
December	320	171.37	34.06	48,709	24.35										21.83	31,210	7,802	3.901	0.00	0.0	49.00	0	0.00	7802	40907	20.45
	320	1493.49		454,075	227.04												70072	35.04				0	0.0	70072	384003	192.00

Note 1: Data presented in "Deep Perc (in)" was developed using methods described in Section 3.2 of the Nitrogen Discharge Report.
Note 2:Data color coded Red in the "Nitrogen Removal" column ("Net (lbs)" and (Net (tons)") represent negative numbers indicating more nitrogen was removed by crops and other mechanism than was applied.

Attachment C
Deep Percolation Calculations

Attachment C
Deep Percolation Calculations

Pivot 1 Alfalfa 125 Acres

IRRIGATION WATER — IRRIGATION + RAINFALL

0.75

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	7.75	2.28	2.20	3.0	2.3	1.5	0.01	3.05	2.29	1.53	0.0	0.24
February	10.82	3.19	2.61	4.3	3.2	2.1	2.63	6.88	5.82	4.76	4.8	3.21
March	9.01	2.65	4.95	3.5	2.7	1.8	0.19	3.73	2.84	1.96	0.0	0.00
April	21.33	6.28	7.54	8.4	6.3	4.2	0.00	8.38	6.28	4.19	0.0	0.08
May	23.43	6.90	7.49	9.2	6.9	4.6	0.00	9.20	6.90	4.60	0.0	0.32
June	23.65	6.97	8.54	9.3	7.0	4.6	0.00	9.29	6.97	4.65	0.0	0.06
July	29.41	8.66	9.20	11.6	8.7	5.8	0.00	11.55	8.66	5.78	0.0	0.48
August	28.67	8.45	8.22	11.3	8.4	5.6	0.00	11.26	8.45	5.63	0.0	0.82
September	20.70	6.10	4.39	8.1	6.1	4.1	0.00	8.13	6.10	4.07	0.0	1.72
October	18.46	5.44	3.76	7.3	5.4	3.6	3.52	10.77	8.96	7.15	7.1	5.20
November	0.00	0.00	2.37	0.0	0.0	0.0	0.44	0.44	0.44	0.44	0.0	0.00
December	9.84	2.90	1.95	3.9	2.9	1.9	3.34	7.21	6.24	5.27	5.3	4.29
		59.83	63.23				10.13					16.42

Pivot 2 Alfalfa 125 Acres

IRRIGATION WATER — IRRIGATION + RAINFALL

0.75

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	7.75	2.28	2.20	3.0	2.3	1.5	0.01	3.05	2.29	1.53	0.0	0.24
February	6.73	1.98	2.61	2.6	2.0	1.3	2.63	5.27	4.61	3.95	4.0	2.00
March	16.18	4.77	4.95	6.4	4.8	3.2	0.19	6.55	4.96	3.37	0.0	0.40
April	16.78	4.94	7.54	6.6	4.9	3.3	0.00	6.59	4.94	3.30	0.0	0.00
May	17.09	5.03	7.49	6.7	5.0	3.4	0.00	6.71	5.03	3.36	0.0	0.00
June	21.59	6.36	8.54	8.5	6.4	4.2	0.00	8.48	6.36	4.24	0.0	0.00
July	30.68	9.04	9.20	12.1	9.0	6.0	0.00	12.05	9.04	6.03	0.0	0.67
August	29.47	8.68	8.22	11.6	8.7	5.8	0.00	11.58	8.68	5.79	0.0	0.97
September	21.81	6.43	4.39	8.6	6.4	4.3	0.00	8.57	6.43	4.28	0.0	2.04
October	19.26	5.67	3.76	7.6	5.7	3.8	3.52	11.09	9.19	7.30	7.3	5.43
November	0.00	0.00	2.37	0.0	0.0	0.0	0.44	0.44	0.44	0.44	0.0	0.00
December	9.90	2.92	1.95	3.9	2.9	1.9	3.34	7.23	6.26	5.28	5.3	4.31
		58.11	63.23				10.13					16.07

Pivot 3 Winter Forage/Alfalfa 21 Acres

IRRIGATION WATER — IRRIGATION + RAINFALL

0.75

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	0.86	1.51	2.29	2.0	1.5	1.0	0.01	2.02	1.52	1.02	0.0	0.00
February	1.03	1.81	2.70	2.4	1.8	1.2	2.63	5.04	4.44	3.83	3.8	1.74
March	3.88	6.80	6.95	9.1	6.8	4.5	0.19	9.26	6.99	4.73	0.0	0.59
April	4.97	8.72	6.81	11.6	8.7	5.8	0.00	11.62	8.72	5.81	0.0	1.99
May	1.40	2.46	2.78	3.3	2.5	1.6	0.00	3.27	2.46	1.84	0.0	0.08
June	0.00	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	
July	0.00	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	
August	1.99	3.49	0.00	4.7	3.5	2.3	0.00	4.65	3.49	2.33	2.3	3.49
September	4.63	8.12	1.33	10.8	8.1	5.4	0.00	10.83	8.12	5.41	5.4	6.79
October	2.80	4.91	1.99	6.5	4.9	3.3	3.52	10.07	8.43	6.79	6.8	6.44
November	1.01	1.77	1.73	2.4	1.8	1.2	0.44	2.80	2.21	1.62	0.0	0.49
December	2.05	3.59	1.86	4.8	3.6	2.4	3.34	8.13	6.93	5.74	5.7	5.07
		43.17	28.43				10.13					26.68

Attachment C
Deep Percolation Calculations

Pivot 4 Alfalfa 125 Acres

IRRIGATION WATER 0.75 IRRIGATION + RAINFALL

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	7.74	2.28	2.20	3.0	2.3	1.5	0.01	3.05	2.29	1.53	0.0	0.24
February	4.60	1.36	2.61	1.8	1.4	0.9	2.63	4.44	3.99	3.53	3.5	1.38
March	13.70	4.04	4.95	5.4	4.0	2.7	0.19	5.57	4.23	2.88	0.0	0.07
April	19.91	5.87	7.54	7.8	5.9	3.9	0.00	7.82	5.87	3.91	0.0	0.01
May	27.21	8.02	7.49	10.7	8.0	5.3	0.00	10.69	8.02	5.34	0.0	0.95
June	24.63	7.26	8.54	9.7	7.3	4.8	0.00	9.68	7.26	4.84	0.0	0.13
July	29.23	8.61	9.20	11.5	8.6	5.7	0.00	11.48	8.61	5.74	0.0	0.45
August	32.76	9.65	8.22	12.9	9.7	6.4	0.00	12.87	9.65	6.43	0.0	1.68
September	27.47	8.09	4.39	10.8	8.1	5.4	0.00	10.79	8.09	5.40	5.4	3.70
October	5.92	1.74	3.76	2.3	1.7	1.2	3.52	5.85	5.26	4.68	4.7	1.50
November	5.24	1.54	2.37	2.1	1.5	1.0	0.44	2.50	1.98	1.47	0.0	0.01
December	6.60	1.94	1.95	2.6	1.9	1.3	3.34	5.93	5.28	4.64	4.6	3.34
		60.40	63.23				10.13					13.47

Pivot 5 Winter Forage/Alfalfa 125 Acres

IRRIGATION WATER 0.75 IRRIGATION + RAINFALL

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	8.60	2.53	2.29	3.4	2.5	1.7	0.01	3.39	2.54	1.70	0.0	0.36
February	3.00	0.88	2.70	1.2	0.9	0.6	2.63	3.81	3.51	3.22	3.2	0.82
March	19.03	5.61	6.95	7.5	5.6	3.7	0.19	7.67	5.80	3.93	0.0	0.07
April	21.09	6.21	6.81	8.3	6.2	4.1	0.00	8.28	6.21	4.14	0.0	0.26
May	1.62	0.48	2.78	0.6	0.5	0.3	0.00	0.64	0.48	0.32	0.0	0.00
June	1.10	0.32	0.00	0.4	0.3	0.2	0.00	0.43	0.32	0.22	0.2	0.32
July	3.26	0.96	0.00	1.3	1.0	0.6	0.00	1.28	0.96	0.64	0.6	0.96
August	5.61	1.65	0.00	2.2	1.7	1.1	0.00	2.20	1.65	1.10	1.1	1.65
September	22.79	6.71	1.33	9.0	6.7	4.5	0.00	8.95	6.71	4.48	4.5	5.39
October	10.51	3.10	1.99	4.1	3.1	2.1	3.52	7.65	6.62	5.58	5.6	4.63
November	4.88	1.44	1.73	1.9	1.4	1.0	0.44	2.36	1.88	1.40	0.0	0.21
December	5.32	1.57	1.86	2.1	1.6	1.0	3.34	5.43	4.91	4.38	4.4	3.05
		31.47	28.43				10.13					17.71

Pivot 6 Winter Forage/Sudan Grass 21 Acres

IRRIGATION WATER 0.75 IRRIGATION + RAINFALL

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	0.92	1.61	2.29	2.2	1.6	1.1	0.01	2.16	1.62	1.09	0.0	0.00
February	1.02	1.79	2.70	2.4	1.8	1.2	2.63	5.01	4.42	3.82	3.8	1.72
March	3.76	6.59	6.95	8.8	6.6	4.4	0.19	8.98	6.78	4.59	0.0	0.47
April	5.35	9.38	6.81	12.5	9.4	6.3	0.00	12.51	9.38	6.25	0.0	2.59
May	3.04	5.33	2.78	7.1	5.3	3.6	0.00	7.11	5.33	3.55	3.6	2.55
June	4.67	8.19	1.03	10.9	8.2	5.5	0.00	10.92	8.19	5.46	5.5	7.16
July	4.50	7.89	9.44	10.5	7.9	5.3	0.00	10.52	7.89	5.26	0.0	0.11
August	7.39	12.96	8.69	17.3	13.0	8.6	0.00	17.28	12.96	8.64	0.0	4.27
September	7.25	12.71	6.05	17.0	12.7	8.5	0.00	16.95	12.71	8.48	8.5	6.67
October	7.40	12.98	3.64	17.3	13.0	8.7	3.52	20.82	16.50	12.17	12.2	12.86
November	0.64	1.12	1.12	1.5	1.1	0.7	0.00	1.50	1.12	0.75	0.0	0.10
December	0.00	0.00	1.75	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
		80.56	53.24				6.35					38.50

Attachment C
Deep Percolation Calculations

Pivot 7 — Sudan Grass/Winter Forage — 125 Acres

IRRIGATION WATER — 0.75 — IRRIGATION + RAINFALL

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	29.01	8.55	2.29	11.4	8.5	5.7	0.01	11.41	8.56	5.71	5.7	6.26
February	12.42	3.66	2.70	4.9	3.7	2.4	2.63	7.51	6.29	5.07	5.1	3.59
March	29.12	8.58	6.95	11.4	8.6	5.7	0.19	11.63	8.77	5.91	0.0	1.92
April	25.09	7.39	6.61	9.9	7.4	4.9	0.00	9.86	7.39	4.93	0.0	0.94
May	21.82	6.43	2.78	8.6	6.4	4.3	0.00	8.57	6.43	4.29	4.3	3.65
June	11.94	3.52	1.03	4.7	3.5	2.3	0.00	4.69	3.52	2.35	2.3	2.48
July	34.48	10.16	9.44	13.5	10.2	6.8	0.00	13.54	10.16	6.77	0.0	1.25
August	20.12	5.93	8.69	7.9	5.9	4.0	0.00	7.90	5.93	3.95	0.0	0.00
September	14.77	4.35	6.05	5.8	4.4	2.9	0.00	5.80	4.35	2.90	0.0	0.00
October	18.69	5.51	3.64	7.3	5.5	3.7	3.52	10.86	9.03	7.19	7.2	5.38
November	0.00	0.00	1.12	0.0	0.0	0.0	0.44	0.44	0.44	0.44	0.0	0.00
December	4.74	1.40	1.75	1.9	1.4	0.9	3.34	5.20	4.74	4.27	4.3	2.99
		65.46	53.24				10.13					28.46

Pivot 8 — Winter Forage/Sudan Grass — 32 Acres

IRRIGATION WATER — 0.75 — IRRIGATION + RAINFALL

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	18.53	21.32	2.29	28.4	21.3	14.2	0.01	28.44	21.33	14.23	14.2	19.04
February	5.18	5.96	2.70	7.9	6.0	4.0	2.63	10.58	8.59	6.60	6.6	5.89
March	11.17	12.85	6.95	17.1	12.9	8.6	0.19	17.33	13.04	8.76	8.8	6.10
April	14.10	16.23	6.81	21.6	16.2	10.8	0.00	21.64	16.23	10.82	10.8	9.41
May	4.44	5.11	2.78	6.8	5.1	3.4	0.00	6.81	5.11	3.41	3.4	2.33
June	6.60	7.60	1.03	10.1	7.6	5.1	0.00	10.13	7.60	5.06	5.1	6.56
July	15.48	17.81	9.44	23.8	17.8	11.9	0.00	23.75	17.81	11.88	11.9	8.38
August	13.62	15.67	8.89	20.9	15.7	10.4	0.00	20.90	15.67	10.45	10.4	6.99
September	10.02	11.53	6.05	15.4	11.5	7.7	0.00	15.38	11.53	7.69	7.7	5.49
October	10.34	11.90	3.64	15.9	11.9	7.9	3.52	19.39	15.42	11.45	11.5	11.78
November	0.03	0.03	1.12	0.0	0.0	0.0	0.44	0.49	0.47	0.46	0.0	0.00
December	0.00	0.00	1.75	0.0	0.0	0.0	3.34	3.34	3.34	3.34	3.3	1.59
		126.03	53.24				10.13					83.56

Pivot 9 — Open/Alfalfa/ BOW — 125 Acres

IRRIGATION WATER — 0.75 — IRRIGATION + RAINFALL

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	0.00	0.00		0.0	0.0	0.0	0.01	0.01	0.01	0.01	0.0	0.00
February	0.00	0.00		0.0	0.0	0.0	2.63	2.63	2.63	2.63	2.6	0.00
March	0.00	0.00		0.0	0.0	0.0	0.19	0.19	0.19	0.19	0.2	0.00
April	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
May	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
June	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
July	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
August	4.53	1.33	0.84	1.8	1.3	0.9	0.00	1.78	1.33	0.89	0.9	0.69
September	4.18	1.23	0.79	1.6	1.2	0.8	0.00	1.64	1.23	0.82	0.8	0.44
October	18.96	5.59	0.89	7.4	5.6	3.7	3.52	10.97	9.11	7.24	7.2	8.42
November	11.72	3.45	0.24	4.6	3.5	2.3	0.44	5.04	3.89	2.74	2.7	3.65
December	7.49	2.21	0.39	2.9	2.2	1.5	3.34	6.28	5.55	4.81	4.8	5.16
		13.81	2.75				10.13					18.36

Attachment C
Deep Percolation Calculations

Pivot 10 Open/Oats 125 Acres

IRRIGATION WATER — IRRIGATION + RAINFALL

0.75

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	0.00	0.00		0.0	0.0	0.0	0.01	0.01	0.01	0.01	0.0	0.00
February	0.00	0.00		0.0	0.0	0.0	2.63	2.63	2.63	2.63	2.6	0.00
March	0.00	0.00		0.0	0.0	0.0	0.19	0.19	0.19	0.19	0.2	0.00
April	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
May	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
June	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
July	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
August	10.84	3.19	0.74	4.3	3.2	2.1	0.00	4.26	3.19	2.13	2.1	2.45
September	17.80	5.24	0.92	7.0	5.2	3.5	0.00	6.99	5.24	3.50	3.5	4.32
October	15.02	4.43	0.79	5.9	4.4	3.0	3.52	9.42	7.95	6.47	6.5	7.16
November	8.28	2.44	0.29	3.3	2.4	1.6	0.44	3.69	2.88	2.07	2.1	2.59
December	20.59	6.07	1.10	8.1	6.1	4.0	3.34	11.43	9.41	7.38	7.4	8.31
		21.37	3.84				10.13					24.83

Pivot 11 Open/BOW 125 Acres

IRRIGATION WATER — IRRIGATION + RAINFALL

0.75

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	0.00	0.00		0.0	0.0	0.0	0.01	0.01	0.01	0.01	0.0	0.00
February	0.00	0.00		0.0	0.0	0.0	2.63	2.63	2.63	2.63	2.6	0.00
March	0.00	0.00		0.0	0.0	0.0	0.19	0.19	0.19	0.19	0.2	0.00
April	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
May	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
June	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
July	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
August	14.18	4.18	0.98	5.6	4.2	2.8	0.00	5.57	4.18	2.79	2.8	3.60
September	15.98	4.71	0.93	6.3	4.7	3.1	0.00	6.28	4.71	3.14	3.1	3.78
October	21.89	6.45	0.99	8.6	6.4	4.3	3.52	12.12	9.97	7.82	7.8	9.28
November	7.76	2.29	0.34	3.0	2.3	1.5	0.44	3.49	2.73	1.96	2.0	2.38
December	30.00	8.84	1.80	11.8	8.8	5.9	3.34	15.12	12.18	9.23	9.2	10.68
		26.46	4.05				10.13					29.71

Pivot 12 Open/Oats 125 Acres

IRRIGATION WATER — IRRIGATION + RAINFALL

0.75

Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	0.00	0.00		0.0	0.0	0.0	0.01	0.01	0.01	0.01	0.0	0.00
February	0.00	0.00		0.0	0.0	0.0	2.63	2.63	2.63	2.63	2.6	0.00
March	0.00	0.00		0.0	0.0	0.0	0.19	0.19	0.19	0.19	0.2	0.00
April	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
May	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
June	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
July	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
August	14.62	4.31	0.76	5.7	4.3	2.9	0.00	5.74	4.31	2.87	2.9	3.56
September	28.00	8.25	1.54	11.0	8.2	5.5	0.00	11.00	8.25	5.50	5.5	7.21
October	20.96	6.18	0.77	8.2	6.2	4.1	3.52	11.75	9.70	7.64	7.6	8.93
November	20.08	5.92	0.31	7.9	5.9	3.9	0.44	8.33	6.36	4.38	4.4	6.05
December	10.31	3.04	1.80	4.0	3.0	2.0	3.34	7.39	8.38	5.36	5.4	4.88
		27.68	4.37				10.13					30.61

Attachment C
Deep Percolation Calculations

Pivot 13	Open/BOW	21 Acres										
	IRRIGATION WATER						IRRIGATION + RAINFALL					
			0.75									
Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	0.00	0.00		0.0	0.0	0.0	0.01	0.01	0.01	0.01	0.0	0.00
February	0.00	0.00		0.0	0.0	0.0	2.63	2.63	2.63	2.63	2.6	0.00
March	0.00	0.00		0.0	0.0	0.0	0.19	0.19	0.19	0.19	0.2	0.00
April	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
May	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
June	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
July	0.00	0.00		0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.00
August	4.53	7.94	0.08	10.6	7.9	5.3	0.00	10.59	7.94	5.30	5.3	7.86
September	4.18	7.33	0.02	9.8	7.3	4.9	0.00	9.77	7.33	4.89	4.9	6.41
October	2.59	4.54	0.09	6.1	4.5	3.0	3.52	9.58	8.06	6.55	6.5	7.37
November	2.78	4.88	1.31	6.5	4.9	3.3	0.44	6.94	5.32	3.69	3.7	4.01
December	0.53	0.93	1.56	1.2	0.9	0.6	3.34	4.58	4.27	3.96	4.0	2.77
		25.62	4.50				10.13					28.42

Pistachios	Pistachios	23 Acres										
	IRRIGATION WATER						IRRIGATION + RAINFALL					
			0.75									
Month	Flow (MG)	Flow (in)	ET 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Precip 2004 (in)	0% of Field (in)	50% Field (in)	100% Field (in)	Over/Unde	Deep Perc (in)
January	5.76	9.22	2.29	12.3	9.2	6.1	0.01	12.31	9.23	6.16	6.2	6.94
February	0.36	0.58	2.70	0.8	0.6	0.4	2.63	3.40	3.21	3.01	3.0	0.51
March	1.61	2.58	6.95	3.4	2.6	1.7	0.19	3.63	2.77	1.91	0.0	0.00
April	3.69	5.91	6.81	7.9	5.9	3.9	0.00	7.88	5.91	3.94	0.0	0.14
May	6.52	10.44	2.78	13.9	10.4	7.0	0.00	13.92	10.44	6.96	7.0	7.66
June	7.35	11.77	1.03	15.7	11.8	7.8	0.00	15.69	11.77	7.85	7.8	10.73
July	6.49	10.39	9.44	13.9	10.4	6.9	0.00	13.86	10.39	6.93	0.0	1.41
August	5.89	9.43	7.07	12.6	9.4	6.3	0.00	12.57	9.43	6.29	0.0	2.41
September	2.08	3.33	4.49	4.4	3.3	2.2	0.00	4.44	3.33	2.22	0.0	0.00
October	0.00	0.00		0.0	0.0	0.0	3.52	3.52	3.52	3.52	3.5	3.52
November	0.00	0.00		0.0	0.0	0.0	0.44	0.44	0.44	0.44	0.4	0.44
December	0.00	0.00		0.0	0.0	0.0	3.34	3.34	3.34	3.34	3.3	3.34
		63.65	43.56				10.13					37.11

PALMDALE WATER RECLAMATION PLANT

APPENDIX A

RECYCLED WATER TREATMENT AND USE REPORT

PALMDALE WATER RECLAMATION PLANT
RECYCLED WATER TREATMENT AND USE REPORT

INTRODUCTION

The following sections provide information regarding recycled water use and treatment in compliance with Amended Monitoring and Reporting Program No. 00-57-A03, Section I.G.3.

Public and Worker Notification of Reclaimed Water Use

Public and worker notification is provided through the use of signs posted around the perimeter of the site. The signs are posted every 500 feet around the periphery of the reuse site, in compliance with California Code of Regulations, Title 22, Section 60310 (g). The signs read, "RECLAIMED WATER – DO NOT DRINK" in both English and Spanish. Public access is not permitted on the site.

Worker Training of Reclaimed Water Use

Worker training is provided and documented through the use of the attached "Fact Sheet" and "Documentation of Training" Checklist. All District's employees and contractors who will be visiting the site where undisinfected secondary effluent is used for irrigation are required to complete the checklist.

Training shall consist of the following items:

1. Explanation of the potential health hazards of undisinfected secondary effluent using the Topic Review Sheet "Hazards of Wastewater", available on the Districts web site (attached).
2. Going over the information on the "Fact Sheet" provided (attached).
3. Completion of the checklist (attached).

Copies of the completed and signed checklists are kept on site at the Palmdale Water Reclamation Plant (WRP), as well as at the District's Joint Administration Office in Whittier, CA.

A log showing when the use of recycled water was stopped at each pivot is located onsite at the Palmdale WRP. In addition, records of harvest dates and maintenance activities at each pivot are located onsite at the Palmdale WRP.

Special Equipment for Reclaimed Water Use

Proper personal protective equipment is located onsite for use by District's employees and contractors. This equipment consists of latex gloves, eye protection and respirators.

Worker Hygiene for Reclaimed Water Use

A portable toilet and hand washing station has been installed on site for use by District's employees and contractors. In addition, food and drink consumption is prohibited in areas of the site where center pivot sprinklers are in operation.

Use Area Inspection.

The use area site is monitored on a daily basis to ensure compliance with California Code of Regulations, Title 22, Sections 60304(d) and 60310. Currently, the District has an agreement with Dellavalle Laboratories, Inc. (Dellavalle) to perform a daily visual inspection of the use area for compliance with the above mentioned regulations and to identify any potential problems such as ponding, runoff, or overspray. Dellavalle is required to submit all findings to District staff as well as maintain a logbook onsite. In addition, District staff will provide oversight for the inspection and monitoring program.

Compliance with Water Recycling Requirements

Operating records and reports are maintained onsite at the Palmdale WRP in compliance with California Code of Regulations, Title 22, Sections 60329 and 60304(d). In addition, the results of the laboratory analyses are included in each monthly report under the Operations Data and Plant Effluent Data sections.

WORKER SAFETY WHEN USING UNDISINFECTED SECONDARY EFFLUENT PALMDALE WRP EFFLUENT MANAGEMENT SITE FACT SHEET

Undisinfected secondary effluent produced by the Sanitation Districts' Palmdale Water Reclamation Plant is used for agricultural irrigation and/or land application by means of center-pivot sprinklers and other irrigation systems. Because this water contains microorganisms, some of which may be pathogenic, the following Best Management Practices consisting of multiple barriers should be followed to avoid acute health impacts on workers who may be exposed to the water. The three layers of protection are: Control, Avoidance and Personal Protective Equipment & Hygiene.

CONTROL:

Worker exposure to mists or sprays is mitigated by the use of drop-tubes on center-pivot sprinklers, and by use of additional types of irrigation (hand lines, solid set, and furrow) that cause the secondary effluent to be released close to the ground. In addition, wide-orifice sprinkler heads are used to produce larger droplets of water, which results in less chance of atomization.

AVOIDANCE:

Workers are to avoid contact with the undisinfected secondary effluent as it is being sprayed on the agricultural fields. If maintenance needs to be conducted on any irrigation equipment, the flow of undisinfected secondary effluent must be stopped prior to worker access to the equipment.

Flow of the undisinfected secondary effluent must be stopped prior to harvesting of the crop.

PERSONAL PROTECTIVE EQUIPMENT & HYGIENE:

When working with undisinfected secondary effluent, workers must have on proper Personal Protective Equipment, which consists of eye protection (to guard against splashing) and rubber gloves (latex, vinyl or nitrile). If there is potential for exposure to spray or mists, workers are to wear an N100 particulate respirator mask (disposable).

Workers must immediately wash their hands after completing tasks involving the handling of secondary effluent, and they must avoid all contact with their eyes, ears, nose or mouth until their hands have been thoroughly cleaned.

Food and drink must not be consumed in or brought unprotected into an area where undisinfected secondary effluent is in use.

Tools and equipment used in the maintenance of irrigation equipment using undisinfected secondary effluent must be thoroughly washed off at the end of the work day.

EH&S Topic Review Sheets

Hazards of Wastewater

1. Prior to the Group Safety Meeting (GSM), the individual leading the discussion should take a few minutes and refamiliarize themselves with the health hazards of waste water.

2. Read the following:

> *The purpose of the GSM is to familiarize the Districts personnel with the potential health hazards associated with working in the field of wastewater collection, treatment and disposal. Studies have shown that the risk of acquiring diseases from the pathogens contained in wastewater is equal among wastewater professionals and non-wastewater professionals.*

3. Review the various types of waste water hazards (Pathogens) with employees including:

- Bacteria
- Viruses (Hepatitis A)
- Fungi
- Protozoan

4. Review the routes of infection with employees including:

- Ingestion; taken through the stomach and intestine and into the bloodstream.
- Inhalation; taken through the lungs and into the bloodstream.
- Direct contact.

5. Inform employees of the methods of reducing risk such as:

a. Personal Protective Measures:

- The first line of defense against wastewater-borne diseases is washing hands with soap and water and using latex gloves (light work) or reinforced gloves (heavy work).
- Leave work cloths, gloves and boots on site to prevent possible transmission to family or friends.
- Wear gloves whenever there is contact with wastewater or sludge.
- Never touch face, mouth, eyes, ears, or nose while working with wastewater or sludge.

b. Immunizations (Hepatitis A)

- The preventive effect of the vaccine immune serum globulin is short lived (3 weeks) therefore this vaccine is not recommended by physicians.

6. REMEMBER!!! WASH YOUR HANDS after handling potentially infectious substances.

7. Clean hands prior to eating, drinking, and smoking.

8. Eat only in designated areas.

9. Remind employees that appropriate personal protection must be used when coming to the aid of an injured person. Follow Universal Precautions.

Biological Hazards of Wastewater

Organism	Disease	Comments
BACTERIA		
Salmonella	Stomach and intestinal tract infections, Typhoid fever	Ingestion - Major cause of food poisoning. Symptoms are fever, abdominal cramps, and diarrhea.
Shigella	Bacillary dysentery	Ingestion - Primary cause of infectious diarrhea in the U.S. Symptoms are diarrhea, fever, nausea, vomiting, and cramps.
Vibrio Cholerae	Asiatic cholera	Ingestion - Bacteria produce toxin which causes vomiting, diarrhea, and loss of body fluids. Results from poor sanitation practices. Problem in developing countries.
Clostridium Tetani	Tetanus	Direct contact with open wound - Symptoms are muscle contraction of jaw, body muscle spasms, paralysis of throat muscle, which can lead to death from respiratory failure. Vaccines should be taken at least every 10 years.
Yersinia Entercolitica	Acute gastroenteritis	Ingestion - Symptoms are fever, diarrhea, and dehydration.
Leptospira	Affects, liver, kidneys, and CNS.	Contact with mucous membranes or open wound - Flu-like symptoms
VIRUS		
Norwalk Virus	Acute viral gastroenteritis	Ingestion - Symptoms are vomiting, diarrhea, low grade fever, and body aches. Also a problem in recreational water contact.
Rotavirus	Acute viral gastroenteritis	Ingestion - Found in raw wastewater and chlorinated effluents from activated sludge plants. Symptoms are vomiting, and diarrhea.
Adenovirus	Acute respiratory disease, conjunctivitis, and/or gastroenteritis	Inhalation - Symptoms are nausea, vomiting, diarrhea, abdominal pain, headache, and fever.
Coxsackievirus A & B	Upper respiratory tract infection, aseptic meningitis, conjunctivitis, common cold, myocarditis, Bornholm's disease	Ingestion and Inhalation - Symptoms are fever, congestion, sore throat, sores in mouth, cough, vomiting, diarrhea, abdominal pain, skin rash ("Hand, Foot & Mouth Disease").
Poliovirus	Poliomyelitis	Ingestion - Affects CNS. Symptoms are flu-like and lead to paralysis
Hepatitis A	Infectious Hepatitis	Ingestion - Affects liver. Symptoms are flu-like, cramps, vomiting, high fever, jaundice. New "2-series" vaccination lasts up to 30 years.
Hepatitis B	Blood-borne hepatitis	Infectious blood or body fluids must directly enter bloodstream - Symptoms are flu-like and lead to cirrhosis and/or liver cancer. Vaccination available upon potential exposure.
Human Immunodeficiency Virus (HIV)	Acquired Immune Deficiency Syndrome (AIDS)	Infectious blood or body fluids must directly enter bloodstream - The AIDS virus is a delicate virus that has a short survival outside of the human body.
PARASITE		
Giardia Lamblia	Giardiases	Ingestion - Symptom is diarrhea, lasting 2 weeks to numerous years.
Hookworms	Anemia, fatigue	Through cracks in bare skin and ingestion - Lay 50,000 eggs/day.
Tapeworms	Abdominal pains, weight loss	Ingestion - Adults lay eggs while in intestine, which are shed in stool.
Roundworms	Abdominal pains, weight loss	Ingestion - Lay 80,000 eggs/day.

WORKER SAFETY WHEN USING UNDISINFECTED SECONDARY EFFLUENT PALMDALE WRP EFFLEUNT MANAGEMENT SITE TRAINING CHECKLIST

Signature of trainee, below, indicates that trainee has been trained in the following elements of worker safety when using undisinfected secondary effluent:

DATE: _____

TRAINEE: _____ / _____
Print Name and affiliation Signature

TRAINER: _____ / _____
Print Name and affiliation Signature

Initial	Instruction Item
	The three layers of protection against exposure to undisinfected secondary effluent are: Control, Avoidance, and Personal Protective Equipment and Hygeine
	Flow of undisinfected secondary effluent must be stopped prior to worker access to the equipment for maintenance.
	Workers are to avoid contact with the undisinfected secondary effluent as it is being sprayed on the agricultural fields.
	Proper personal protective equipment consists of eye protection, rubber gloves, and, if there is potential for exposure to mists, an N100 particulate respirator mask (disposable).
	Workers must thoroughly wash their hands after completing tasks involving the handling of secondary effluent, and prior to consuming any food or drink.
	Food and drink must not be consumed in or brought unprotected into an area where undisinfected secondary effluent is in use.
	Tools and equipment used in the maintenance of irrigation equipment using undisinfected secondary effluent must be thoroughly washed off at the end of the work day.

Submit competed forms to Tim Linn at the Palmdale WRP, and send a copy to Frances Garrett at JAO, Water Quality and Soils Engineering Section.

PALMDALE WATER RECLAMATION PLANT

APPENDIX B

ANNUAL FEDERAL BIOSOLIDS REPORT FOR THE PALMDALE WRP

Lon1

WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

JAMES F. STAHL
Chief Engineer and General Manager

February 19, 2005
File No. 20-04.01.00

Ms. Lauren Fondahl
U.S. EPA - Region 9
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Ms. Fondahl:

Annual Biosolids Monitoring Report
Palmdale Water Reclamation Plant, WDID No. 6B190107069

Enclosed is the Annual Monitoring Report for 2004 as required under 40 CFR Part 503.

"I certify, under penalty of law, that the vector attraction reduction requirements in 503.33(b)(1) and the pathogen reduction requirements in 503.32(b)(3) were met for the entire year. These determinations have been made under my direction and supervision in accordance with the system designed to insure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Should you have any questions or require additional information, please contact me (562) 699-7411, extension 2824.

Very truly yours,

James F. Stahl

Mike Sullivan
Supervising Engineer
Monitoring Section

MS:bb
Enclosures

cc: Singer, Lahontan RWQCB
Harlow, Central Valley RWQCB

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
PALMDALE WATER RECLAMATION PLANT

2004 ANNUAL BIOSOLIDS MONITORING REPORT

GENERAL INFORMATION

Operator:	County Sanitation District No. 20 of Los Angeles County
Mailing Address:	1955 Workman Mill Road, P.O. Box 4998, Whittier, CA 90607
Telephone:	(562) 699-7411
Contact:	Mike Sullivan, extension 2824
Ownership Status:	Publicly Owned Treatment Works

FACILITY INFORMATION

Name:	Palmdale Water Reclamation Plant (WRP)
Location:	39300 30th Street East, Palmdale, CA 93550
Telephone:	(661) 947-6053
WDID Number:	6B190107069
Capacity/Influent Flow:	15.0/9.43 MGD

BIOSOLIDS INFORMATION

Treatment:	Primary sludge is anaerobically digested. In 2004, digestion temperature averaged 98 degrees Fahrenheit, detention time 45 days, and volatile solids destruction 71%. Digested biosolids are dewatered to approximately 80% total solids in concrete beds and are then stockpiled on-site. The stockpiled material is typically in excess of 90% total solids.
Quantities Generated:	Approximately 310 dry tons in 2004 = 281 dry metric tons in 2004
Quantity Stockpiled:	Approximately 208 dry tons (188 dry metric tons) were sent to the stockpiles for the year. Approximately 872 dry tons (789 dry metric tons) were reused in composting operations. This includes approximately 664 dry tons (601 dry metric tons) that were stockpiled in 2002 and 2003. No biosolids remain in stockpiles as of 12/31/04.
Monitoring/Frequency:	Quarterly composite samples for Table 1/Table 3 metals. Monthly average digester performance for Class B time/temperature criteria and VSD (using daily temperatures and weekly volatile solids percentages).
Sample Type:	Digested biosolids prior to dewatering and dried stockpiled biosolids.
Quality:	Metals are within Table 1 concentrations; Biosolids are Class B per anaerobic digestion time/temperature criteria; Volatile solids destruction is > 38%. Results for the reporting period are shown on page 2; additional data are in Attachment A.

PALMDALE WATER RECLAMATION PLANT

2004 DIGESTER PERFORMANCE			
Month	Temperature (degrees F)	Detention Time (days)	VSD (%)
Jan	98	50	81
Feb	98	47	76
Mar	98	47	78
Apr	97	45	77
May	98	42	64
Jun	98	48	66
Jul	98	57	71
Aug	98	40	69
Sep	98	38	64
Oct	98	42	61
Nov	97	42	65
Dec	97	43	74
Mean	98	45	71
Min	97	38	61

Individual digester performance data are attached.

2004 BIOSOLIDS CAKE - TABLE 1/TABLE 3 METALS CONCENTRATIONS									
	Mg/Kg Dry Weight								
	As	Cd	Cu	Pb	Hg	Mo	Ni	Se	Zn
Mar	3.08	2.08	372	< 10.9	3.4	15.4	27.3	8.12	2,780
Jul*	2.74	1.18	421	8.58	3.8	9.15	33.9	7.94	2,800
Sep	2.62	1.36	429	< 8.66	5.2	18.2	23.2	7.71	2,720
Nov	2.68	1.83	443	9.53	4.4	16.0	24.5	7.67	3,110
Average	2.78	1.61	416	9.06	4.2	14.7	27.2	7.86	2,850
Maximum	3.08	2.08	443	9.53	5.2	18.2	33.9	8.12	3,110
Table 1	75	85	4,300	840	57	75	420	100	7,500
Table 3	41	39	1,500	300	17	\	420	100	2,800

* Make up sample for June.

\ = No Limit

Additional data are presented in Attachment A.

MANAGEMENT PRACTICES

Land Application

Contract Company:	**McCarthy Family Farms, Inc.**
Contact:	Pat McCarthy
Address:	10095 Utica Avenue, P.O. Box 577, Corcoran, CA 93212
Telephone:	(661) 992-5178
Site Location:	San Joaquin Composting, Inc.; Kern County, CA Section 4, T26S, R20E, MDM; (163 acres)
Site Contact:	Gary J. Bruggeman
Address:	12421 Holloway Road, Lost Hills, CA
Reuse Process:	Bulk Land Applications of Material Derived via Composting
CA Permits:	California Integrated Waste Management Board Solid Waste Facility Permit No. 15-AA-0287, January 31, 1996 (revised May 3, 1999) Kern County Conditional Use Permit No. 5, April 24, 1995 (revised July 9, 1998) Central Valley Regional Water Quality Control Board Waste Discharge Requirements, No. 96-018, January 26, 1996 San Joaquin Valley Unified Air Pollution Control District No. S-2162-1-0 Expired October 31, 1998; Nos. S-360-1-2 & S-360-1-3 & S-360-2-0 (renewed October 31, 2000)
Biosolids Quantity:	872 dry tons = 789 dry metric tons
Pathogen Reduction:	Class B Biosolids Achieved by PSRP (anaerobic digestion) [503.32(b)(3)] Class A Compost Product
Vector Attr. Reduction:	≥ 38% volatile solids reduction [503.33(b)(1)]

ATTACHMENT A

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
PALMDALE WATER RECLAMATION PLANT

Metals
Nutrients
Digester Performance

2004 BIOSOLIDS ANALYSES
Palmdale Water Reclamation Plant
mg/kg Dry Weight (or as indicated)

Sample No.	Date	% TS	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn
SJ03311	3/2/2004	4.0	3.08	2.08	50.5	372	< 10.9	3.4	15.4	27.3	8.12	2,780
SJ10131	7/6/2004	6.6	2.74	1.18	58.7	421	8.58	3.8	9.15	33.9	7.94	2,800
SJ14800	9/28/2004	4.9	2.62	1.36	48.4	429	< 8.66	5.2	18.2	23.2	7.71	2,720
SJ16722	11/2/2004	6.6	2.68	1.83	52.6	443	9.53	4.4	16.0	24.5	7.67	3,110
MEAN			**2.78**	**1.61**	**52.6**	**416**	**9.06**	**4.2**	**14.7**	**27.2**	**7.86**	**2,850**
MAX			**3.08**	**2.08**	**58.7**	**443**	**9.53**	**5.2**	**18.2**	**33.9**	**8.12**	**3,110**
TABLE 1 LIMITS		****	**75**	**85**	****	**4,300**	**840**	**57**	**75**	**420**	**100**	**7,500**
TABLE 3 LIMITS		****	**41**	**39**	****	**1,500**	**300**	**17**	****	**420**	**100**	**2,800**

Sample No.	Date	% TS	Amm-N	Org-N	NO_3-N	NO_2-N	PO_4	K
SJ03311	3/2/2004	4.0	10,600	38,800	< 12.5	< 5.00	60,400	2,010
SJ10131	7/6/2004	6.6	7,560	35,300	< 7.58	< 3.03	171,000	1,710
SJ14800	9/28/2004	4.9	8,600	37,300	< 10.0	< 4.00	3,390	1,720
SJ16722	11/2/2004	6.6	10,500	32,600	< 7.00	< 0.30	52,300	1,830
MEAN			**9,300**	**36,000**	**ND**	**ND**	**71,800**	**1,820**
MAX			**10,600**	**38,800**	**ND**	**ND**	**171,000**	**2,010**

\ = No Limit
Statistics use detected values only.

PALMDALE WATER RECLAMATION PLANT STOCKPILES
2004 ANALYSIS

TEST	CONSTITUENTS	1/13/2004	
		SJ00685	SJ00686
		total conc.	soluble* conc.
		mg/kg dry wt.	mg/l
101	pH	7.01 pH	-
153	TOTAL SOLIDS	89.3%	-
201	AMMONIA - N	3,810	-
202	ORGANIC - N	30,300	-
204	NITRATE - N	174	-
205	NITRITE - N	2.01	-
351	FECAL COLIFORM	< 0.2 MPN/g	-
705	ARSENIC	2.52	0.0775
706	BARIUM	-	4.40
708	CADMIUM	1.45	< 0.20
709	TOTAL CHROMIUM	-	1.0
710	HEXAVALENT CHROMIUM	< 20	-
711	COBALT	-	< 0.40
712	COPPER	416	3.53
714	LEAD	16.7	< 5.00
717	MERCURY	5.1	0.0064
718	NICKEL	30.3	2
720	SELENIUM	6.32	0.0527
722	SILVER	-	< 2.5
724	ZINC	2,630	105
725	ANTIMONY	-	0.0794
726	BERYLLIUM	-	< 0.025
732	MOLYBDENUM	10.8	< 1.00
734	THALLIUM	-	< 0.02
737	VANADIUM	-	2.09

* STLC by California Title 22 Waste Extraction Test (WET)

PALMDALE WATER RECLAMATION PLANT

2004 Digester Performance Summary

		HDT (days)	Temperature (degrees F)	VSD (%)			HDT (days)	Temperature (degrees F)	VSD (%)
Jan	Dig 3	49	98		July	Dig 3	65	98	
	Dig 4	50	98			Dig 4	57	98	
	Dig 5	o/s	o/s			Dig 5	o/s	o/s	
	Dig 6	50	98			Dig 6	48	98	
	Avg	**50**	**98**	**81**		**Avg**	**57**	**98**	**71**
Feb	Dig 3	46	98		Aug	Dig 3	40	98	
	Dig 4	46	98			Dig 4	40	98	
	Dig 5	o/s	o/s			Dig 5	o/s	o/s	
	Dig 6	47	98			Dig 6	39	98	
	Avg	**47**	**98**	**76**		**Avg**	**40**	**98**	**69**
Mar	Dig 3	38	98		Sep	Dig 3	41	98	
	Dig 4	39	98			Dig 4	36	98	
	Dig 5	o/s	o/s			Dig 5	o/s	o/s	
	Dig 6	64	98			Dig 6	37	98	
	Avg	**47**	**98**	**78**		**Avg**	**38**	**98**	**64**
Apr	Dig 3	46	97		Oct	Dig 3	41	98	
	Dig 4	42	97			Dig 4	46	98	
	Dig 5	o/s	o/s			Dig 5	o/s	o/s	
	Dig 6	46	97			Dig 6	40	98	
	Avg	**45**	**97**	**77**		**Avg**	**42**	**98**	**61**
May	Dig 3	43	98		Nov	Dig 3	43	97	
	Dig 4	43	98			Dig 4	42	97	
	Dig 5	o/s	o/s			Dig 5	o/s	o/s	
	Dig 6	42	98			Dig 6	41	97	
	Avg	**42**	**98**	**64**		**Avg**	**42**	**97**	**65**
Jun	Dig 3	45	98		Dec	Dig 3	43	97	
	Dig 4	54	98			Dig 4	44	98	
	Dig 5	o/s	o/s			Dig 5	o/s	o/s	
	Dig 6	43	99			Dig 6	43	97	
	Avg	**48**	**98**	**66**		**Avg**	**43**	**97**	**74**

o/s = out of service

HDT = Hydraulic Detention Time

VSD = Volatile Solids Destruction

PALMDALE WATER RECLAMATION PLANT

APPENDIX C

LABORATORY ANALYTICAL METHODS AND DETECTION LIMITS

Analytical Methods and Detection Limits for Final Effluent

Test Code	Name of Constituent	Approved Method Used	ML	MDL	MDL2	RL	RL2	Units
101	pH	SM 4500-HB	*	*		*		pH unit
102	Conductivity	SM 2510B	*	*		*		us/cm
103	Turbidity	SM 2130B	*	0.1		0.1		NTU
111	Temperature	SM 2550B	*	*		*		°F
115	Dissolved Oxygen	SM 4500-OG	*	*		1		mg/L
122	Tritium	EPA 906/900.0	*	*		*		pCi/L
124	Strontium-90	EPA 905/900.0	*	*		*		pCi/L
125	Uranium	EPA 908.1	*	*		*		pCi/L
126	Radium 226+228	EPA 903.1/904.0	*	*		0.48 / 1.0		pCi/L
151	Suspended Solids	SM 2540D	*	0.4		1		mg/L
155	Total Dissolved Solids	SM 2540C	*	7		7		mg/L
156	Settleable Solids	SM 2540F	*	*		0.1		mL/L
201	Ammonia Nitrogen	SM 4500-NH3E	*	0.1		0.1		mg/L
202	Organic Nitrogen	SM 4500-NORGB	*	0.2		0.2		mg/L
203	Total Kjeldahl Nitrogen (TKN)	SM 4500-NORGB	*	0.2		0.2		mg/L
204	Nitrate Nitrogen	SM 4500-NO3-E	*	0.01		0.04		mg/L
204	Nitrate Nitrogen	SM 4500-NO3-E	*	0.009		0.1		mg/L
205	Nitrite Nitrogen	SM 4500-NO2B	*	0.001		0.02		mg/L
206	Cyanide(CN)	SM 4500CDE	5	1		5		ug/L
208	Total Nitrogen	BY CALCULATION	*	0.2		0.2		mg/L
257	Sulfate	EPA 375.4	*	1.1		5		mg/L
301	Chloride	SM 4500-CLB	*	0.2		0.2		mg/L
302	Chlorine Residual	SM 4500-CLC	*	0.05		0.05		mg/L
309	Total Hardness	SM 2340C	*	0.66		5		mg/L
310	Total phosphate	SM 4500-PBE	*	0.038		0.5		mg/L
311	Orthophosphate-P	SM 4500-PE	*	0.028		0.5		mg/L
312	Phenols	EPA 420.1	*	0.0007		0.01		mg/L
313	Fluoride	SM 4500-FC	*	0.01		0.1		mg/L
314	Boron	SM 4500-BB	*	0.04		0.2		mg/L
315	Surfactants (MBAS)	SM 5540C	*	0.05		0.1		mg/L
315	Surfactants (MBAS)	SM 5540C	*	0.023		0.05		mg/L
316	Surfactants (CTAS)	SM 5540D	*	0.05		0.1		mg/L
349	Total Coliform	SM 9222B	*	*		1		CFU/100mL
356	Fecal Coliform	SM 9222D	*	*		1		CFU/100mL
364	Chlorophyll A	EPA 445.0	*	0.01		0.022 - 0.22		ug/L
370	Gross Alpha Radioactivity	EPA 900.0	*	3.8		*		pCi/L
371	Gross Beta Radioactivity	EPA 900.0	*	2.8		*		pCi/L
3B2	Perchlorate	EPA 314.0	2.0	0.63		2.0		ug/L
401	Total BOD	SM 5210B	*	3		3		mg/L
403	Total COD	SM 5220B	*	2.4		10		mg/L
405	Total Organic Carbon	SM5310C	0.5	0.07		0.5		mg/L
408	Oil and Grease	EPA 1664A	*	1.05		4		mg/L
412	Total Carboneous BOD	SM 5210B	*	3		3		mg/L
502	4,4'-DDE	EPA 608	0.005	0.0003	0.001	0.01	0.01	ug/L
504	4,4'-DDD	EPA 608	0.005	0.0009	0.002	0.01	0.01	ug/L
506	4,4'-DDT	EPA 608	0.005	0.003	0.001	0.01	0.01	ug/L
508	Alpha-BHC	EPA 608	0.005	0.002	0.0007	0.01	0.01	ug/L
509	gamma-BHC	EPA 608	0.005	0.001	0.001	0.01	0.01	ug/L
510	Heptachlor	EPA 608	0.005	0.002	0.0009	0.01	0.01	ug/L
511	Heptachlor Epoxide	EPA 608	0.005	0.001	0.002	0.01	0.01	ug/L
512	Aldrin	EPA 608	0.005	0.003	0.002	0.01	0.01	ug/L
513	Dieldrin	EPA 608	0.005	0.002	0.001	0.01	0.01	ug/L
514	Endrin	EPA 608	0.005	0.002	0.002	0.01	0.01	ug/L
515	Toxaphene	EPA 608	0.2	0.05	0.06	0.5	0.5	ug/L
516	Methoxlchlor	EPA 608	0.005	0.001	0.004	0.01	0.01	ug/L
517	2,4-D	EPA 8151A	2	0.84		2		ug/L
518	2,4,5 -TP (Silvex)	EPA 8151A	0.5	0.34		0.5		ug/L
519	PCB 1242	EPA 608	0.08	0.02	0.02	0.1	0.1	ug/L
520	PCB 1254	EPA 608	0.05	0.009	0.02	0.05	0.05	ug/L
522	TICH	EPA 608	*	*	*	***	***	ug/L
523	beta-BHC	EPA 608	0.005	0.0008	0.005	0.01	0.01	ug/L
524	delta-BHC	EPA 608	0.005	0.002	0.002	0.01	0.01	ug/L
531	Alpha-Endosulfan	EPA 608	0.005	0.003	0.001	0.01	0.01	ug/L
532	Beta-Endosulfan	EPA 608	0.005	0.002	0.002	0.01	0.01	ug/L
533	Endosulfan Sulfate	EPA 608	0.005	0.01	0.003	0.1	0.01	ug/L
534	Endrin Aldehyde	EPA 608	0.005	0.0009	0.001	0.04**	0.04**	ug/L
535	PCB 1016	EPA 608	0.1	0.02	0.02	0.1	0.1	ug/L
536	PCB 1221	EPA 608	0.1	0.1	0.3	0.1	0.3	ug/L
537	PCB 1232	EPA 608	0.1	0.06	0.1	0.1	0.1	ug/L
538	PCB 1248	EPA 608	0.1	0.04	0.03	0.1	0.1	ug/L
539	PCB 1260	EPA 608	0.1	0.02	0.03	0.1	0.1	ug/L
540	Chlordane	EPA 608	0.04	0.007	0.02	0.05	0.05	ug/L
552	Mirex	EPA 608	0.01	0.001	0.002	0.01	0.05	ug/L

Analytical Methods and Detection Limits for Final Effluent

Test Code	Name of Constituent	Approved Method Used	ML	MDL	MDL2	RL	RL2	Units
5C1	2,4,5 -T	EPA 8151A	0.5	0.37		0.5		ug/L
5C9	Methyl Parathion	EPA 8141A	0.5	0.3		0.5		ug/L
5D1	Ethyl Parathion	EPA 8141A	0.2	0.15		0.2		ug/L
5D3	Demeton	EPA 8141A	0.5	0.32		0.5		ug/L
5D4	Guthion	EPA 8141A	2.0	1.1		2.0		ug/L
5D5	Malathion	EPA 8141A	0.2	0.15		0.2		ug/L
5D9	Diazinon	EPA 8141A	0.05	0.028		0.05		ug/L
601	Methylene Chloride	EPA 8260B	0.5	0.05		0.5		ug/L
602	Chloroform	EPA 8260B	0.5	0.05		0.5		ug/L
603	1,1,1 Trichloroethane	EPA 8260B	0.5	0.10		0.5		ug/L
604	Carbon Tetrachloride	EPA 8260B	0.5	0.13		0.5		ug/L
605	1,1 Dichloroethylene	EPA 8260B	0.5	0.07		0.5		ug/L
606	Trichloroethylene	EPA 8260B	0.5	0.10		0.5		ug/L
607	Tetrachloroethylene	EPA 8260B	0.5	0.15		0.5		ug/L
608	Dichlorobromomethane	EPA 8260B	0.5	0.06		0.5		ug/L
609	Chlorodibromomethane	EPA 8260B	0.5	0.09		0.5		ug/L
610	Bromoform	EPA 8260B	0.5	0.24		0.5		ug/L
611	Chlorobenzene	EPA 8260B	0.5	0.09		0.5		ug/L
612	Vinyl Chloride	EPA 8260B	0.5	0.05		0.5		ug/L
613	1,2 Dichlorobenzene	EPA 8260B	0.5	0.12		0.5		ug/L
614	1,3 Dichlorobenzene	EPA 8260B	0.5	0.19		0.5		ug/L
615	1,4 Dichlorobenzene	EPA 8260B	0.5	0.26		0.5		ug/L
616	1,1 Dichloroethane	EPA 8260B	0.5	0.07		0.5		ug/L
618	1,1,2 Trichloroethane	EPA 8260B	0.5	0.08		0.5		ug/L
619	1,2 Dichloroethane	EPA 8260B	0.5	0.08		0.5		ug/L
620	Benzene	EPA 8260B	0.5	0.06		0.5		ug/L
621	Toluene	EPA 8260B	0.5	0.06		0.5		ug/L
624	Ethylbenzene	EPA 8260B	0.5	0.06		0.5		ug/L
645	Trans 1,2-Dichloroethylene	EPA 8260B	0.5	0.07		0.5		ug/L
646	Methyl Bromide	EPA 8260B	0.5	0.07		0.5		ug/L
647	Chloroethane	EPA 8260B	0.5	0.13		0.5		ug/L
648	2-Chloroethyl vinyl ether	EPA 8260B	0.5	0.17		0.5		ug/L
649	Chloromethane	EPA 8260B	0.5	0.07		0.5		ug/L
650	1,2 Dichloropropane	EPA 8260B	0.5	0.08		0.5		ug/L
651	Cis-1,3 Dichloropropylene	EPA 8260B	0.5	0.06		0.5		ug/L
652	Trans-1,3-Dichloropropene	EPA 8260B	0.5	0.09		0.5		ug/L
653	1,1,2,2 Tetrachloroethane	EPA 8260B	0.5	0.14		0.5		ug/L
654	Acrolein	EPA 8260B	2	0.47		2		ug/L
655	Acrylonitrile	EPA 8260B	2	0.14		2		ug/L
662	Methyl-t-butyl ether	EPA 8260B	0.5	0.06		0.5		ug/L
696	1,4-Dioxane	EPA 8270 M	0.5	0.19		0.5		ug/L
6D6	1,2,3-Trichloropropane	EPA 524.2 M (SIM)	0.005	0.0015		0.005		ug/L
705	Total Arsenic	SM 3114B4d	1	0.4		1		ug/L
706	Barium	EPA 200.7	*	0.3		5		ug/L
708	Cadmium (Cd)	EPA 213.2	0.4	0.04		0.2		ug/L
709	Total Chromium	EPA 200.7	*	1.0		10		ug/L
710	Chromium VI (Cr-VI)	SM 3500 CrD	10	0.6		10		ug/L
710	Chromium VI (Cr-VI)	SM 3500 CrD	10	0.94		10		ug/L
710	Chromium VI (Cr-VI)	EPA 218.6	0.1	0.047		0.1		ug/L
712	Copper (Cu)	EPA 200.7	*	3.0		8		ug/L
713	Iron (Fe)	EPA 200.7	*	5.0		50		ug/L
714	Lead	EPA 239.2	2	0.16		2		ug/L
717	Mercury	EPA 245.1	0.025	0.03		0.04		ug/L
718	Nickel(Ni)	EPA 200.7	*	5.0		20		ug/L
720	Selenium(Se)	SM 3114B	1	0.1		1		ug/L
722	Silver(Ag)	EPA 200.8	*	0.059		0.2		ug/L
723	Sodium	EPA 200.7	*	0.27		0.8		mg/L
724	Zinc(Zn)	EPA 200.7	*	3.0		10		ug/L
725	Antimony (Sb)	EPA 7062	0.5	0.3		0.5		ug/L
726	Beryllium (Be)	EPA 210.2	0.5	0.06		0.25		ug/L
734	Thallium(Tl)	EPA 279.2	2	0.28		1		ug/L
800	Acenaphthene	EPA 625	1	0.56	0.37	1		ug/L
801	Acenaphthylene	EPA 625	10	0.74	0.39	10		ug/L
802	Anthracene	EPA 625	10	0.47	0.30	10		ug/L
803	Benzidine	EPA 625	5	4.06	4.28	5		ug/L
804	Benzo (a) Anthracene	EPA 625	5	0.55	0.30	5		ug/L
805	Benzo (a) Pyrene	EPA 610	0.02	0.0089		0.02		ug/L
806	Benzo (b) Fluoranthene	EPA 610	0.02	0.0082		0.02		ug/L
807	Benzo (g,h,i) Perylene	EPA 625	5	0.67	0.25	5		ug/L
808	Benzo (k) Fluoranthene	EPA 610	0.02	0.0084		0.02		ug/L
809	Bis (2-Chloroethoxyl) methane	EPA 625	5	0.80	0.40	5		ug/L
810	Bis(2-Chloroethyl) ether	EPA 625	1	0.74	0.41	1		ug/L
811	Bis(2-Chloroisopropyl) ether	EPA 625	2	0.54	0.42	2		ug/L
812	Bis(2-Ethylhexyl) phthalate	EPA 625	2	0.72	0.31	2		ug/L

Analytical Methods and Detection Limits for Final Effluent

Test Code	Name of Constituent	Approved Method Used	ML	MDL	MDL2	RL	RL2	Units
813	4-Bromophenyl phenyl ether	EPA 625	5	0.51	0.30	5		ug/L
814	Butyl benzyl phthalate	EPA 625	10	0.65	0.23	10		ug/L
815	2-Chloronaphthalene	EPA 625	10	0.53	0.42	10		ug/L
816	4-Chlorophenyl phenyl ether	EPA 625	5	0.52	0.34	5		ug/L
817	Chrysene	EPA 610	0.02	0.0093		0.02		ug/L
818	Dibenzo(a,h)-anthracene	EPA 610	0.02	0.0089		0.02		ug/L
819	1,2 Dichlorobenzene	EPA 625	2	0.71	0.42	2		ug/L
820	1,3 Dichlorobenzene	EPA 625	1	0.53	0.34	1		ug/L
821	1,4 Dichlorobenzene	EPA 625	1	0.63	0.40	1		ug/L
822	3,3' Dichlorobenzidine	EPA 625	5	1.07	2.78	5		ug/L
823	Diethyl phthalate	EPA 625	2	0.49	0.43	2		ug/L
824	Dimethyl phthalate	EPA 625	2	0.50	0.34	2		ug/L
825	di-n-Butyl phthalate	EPA 625	10	0.51	0.45	10		ug/L
826	2,4 Dinitrotoluene	EPA 625	5	0.37	0.20	5		ug/L
827	2,6 Dinitrotoluene	EPA 625	5	0.46	0.27	5		ug/L
828	di-n-Octyl phthalate	EPA 625	10	0.50	0.24	10		ug/L
829	1,2 Diphenylhydrazine	EPA 625	1	0.36	0.27	1		ug/L
830	Fluoranthene	EPA 625	1	0.53	0.37	1		ug/L
831	Fluorene	EPA 625	10	0.50	0.39	10		ug/L
832	Hexachlorobenzene	EPA 625	1	0.48	0.26	1		ug/L
833	Hexachlorobutadiene	EPA 625	1	0.54	0.31	1		ug/L
834	Hexachloro-cyclopentadiene	EPA 625	5	1.48	1.58	5		ug/L
835	Hexachloroethane	EPA 625	1	0.54	0.45	1		ug/L
836	Indeno(1,2,3,cd)-pyrene	EPA 610	0.02	0.0084		0.02		ug/L
837	Isophorone	EPA 625	1	0.67	0.35	1		ug/L
838	Naphthalene	EPA 625	1	0.55	0.34	1		ug/L
839	Nitrobenzene	EPA 625	1	0.64	0.68	1		ug/L
840	N-Nitrosodimethyl amine	EPA 625	5	0.70	0.29	5		ug/L
841	N-Nitroso-di-n-propyl amine	EPA 625	5	0.67	0.43	5		ug/L
842	Phenanthrene	EPA 625	5	0.49	0.29	5		ug/L
843	Pyrene	EPA 625	10	0.63	0.30	10		ug/L
845	2 Chlorophenol	EPA 625	5	0.55	0.42	5		ug/L
846	1,2,4 Trichlorobenzene	EPA 625	5	0.50	0.35	5		ug/L
847	2,4 Dichlorophenol	EPA 625	5	0.57	0.38	5		ug/L
848	2,4 Dimethylphenol	EPA 625	2	1.31	0.59	2		ug/L
849	2,4 Dinitrophenol	EPA 625	5	3.21	0.33	5		ug/L
850	2-Methyl-4,6-Dinitrophenol	EPA 625	5	2.74	0.32	5		ug/L
851	2-Nitrophenol	EPA 625	10	0.50	0.30	10		ug/L
852	4-Nitrophenol	EPA 625	10	0.56	0.48	10		ug/L
853	3-Methyl-4-Chlorophenol	EPA 625	1	0.53	0.40	1		ug/L
854	Pentachlorophenol	EPA 625	5	0.45	0.33	5		ug/L
854	Pentachlorophenol	EPA 8270- SIM	1	0.46		1		ug/L
855	Phenol	EPA 625	1	0.58	0.43	1		ug/L
856	2,4,6 Trichlorophenol	EPA 625	10	0.54	0.26	10		ug/L
857	N-Nitrosodiphenyl amine	EPA 625	1	0.45	0.47	1		ug/L
951	Nitrite-N + Nitrate-N	BY CALCULATION	*	0.01		0.04		mg/L
B50	Escherichia coli	SM 9221F	*	*		2.0		MPN/0.1L
C15	Hydrocarbons	EPA 418.1	*	0.3		1		mg/L
D08	octaCDD	EPA 8290	*	*		See Labdata		ng/L
D21	2,3,7,8-tetra CDD	EPA 8290	*	*		See Labdata		ng/L
D22	1,2,3,7,8-pentaCDD	EPA 8290	*	*		See Labdata		ng/L
D24	1,2,3,4,7,8-HexaCDD	EPA 8290	*	*		See Labdata		ng/L
D25	1,2,3,6,7,8-HexaCDD	EPA 8290	*	*		See Labdata		ng/L
D26	1,2,3,7,8,9-HexaCDD	EPA 8290	*	*		See Labdata		ng/L
D27	1,2,3,4,6,7,8-HeptaCDD	EPA 8290	*	*		See Labdata		ng/L
F08	octaCDF	EPA 8290	*	*		See Labdata		ng/L
F16	2,3,7,8-Tetra CDF	EPA 8290	*	*		See Labdata		ng/L
F17	1,2,3,7,8-PentaCDF	EPA 8290	*	*		See Labdata		ng/L
F18	2,3,4,7,8-PentaCDF	EPA 8290	*	*		See Labdata		ng/L
F19	1,2,3,4,7,8-HexaCDF	EPA 8290	*	*		See Labdata		ng/L
F20	1,2,3,6,7,8-HexaCDF	EPA 8290	*	*		See Labdata		ng/L
F21	2,3,4,6,7,8-HexaCDF	EPA 8290	*	*		See Labdata		ng/L
F22	1,2,3,7,8,9-HexaCDF	EPA 8290	*	*		See Labdata		ng/L
F23	1,2,3,4,6,7,8-HeptaCDF	EPA 8290	*	*		See Labdata		ng/L
F24	1,2,3,4,7,8,9-HeptaCDF	EPA 8290	*	*		See Labdata		ng/L

* Not applicable
** All final effluent samples are diluted 1 to 4
*** Determined by calculation

Analytical Methods and Detection Limits for Monitoring Well/Supply Well Samples

Test Code	Name of Constituent	Approved Method Used	ML	MDL	MDL2	RL	RL2	Units
101	pH	SM 4500-HB	*	0.02		1		pH unit
102	Conductivity	SM 2510B	*	0.08		1		us/cm
103	Turbidity	SM 2130B	*	0.1		0.1		NTU
111	Temperature	SM 2550B	*	*		*		°F
115	Dissolved Oxygen	SM 4500-OG	*	*		1		mg/L
122	Tritium	EPA 906/900.0	*	*		*		pCi/L
124	Strontium-90	EPA 905/900.0	*	*		*		pCi/L
125	Uranium	EPA 908.1	*	*		*		pCi/L
126	Radium 226+228	EPA 903.1/904.0	*	*		0.48 / 1.0		pCi/L
151	Suspended Solids	SM 2540D	*	0.52		1		mg/L
155	Total Dissolved Solids	SM 2540C	*	2.69		10		mg/L
156	Settleable Solids	SM 2540F	*	*		0.1		mL/L
201	Ammonia Nitrogen	SM 4500-NH3BE	*	0.04		0.1		mg/L
202	Organic Nitrogen	SM 4500-NORGB	*	0.05		0.1		mg/L
203	Total Kjeldahl Nitrogen (TKN)	SM 4500-NORGB	*	0.1		0.1		mg/L
204	Nitrate Nitrogen	EPA 300.0	*	0.027		0.05		mg/L
204	Nitrate Nitrogen	SM 4500-NO3-E	*	0.009		0.1		mg/L
205	Nitrite Nitrogen	SM 4500-NO2B	*	0.001		0.02		mg/L
206	Cyanide(CN)	SM 4500CDE	5	1		5		ug/L
208	Total Nitrogen	BY CALCULATION	*	0.1		0.1		mg/L
257	Sulfate	EPA 300.0	*	0.051		0.5		mg/L
301	Chloride	EPA 300.0	*	0.026		0.2		mg/L
302	Chlorine Residual	SM 4500-CLC	*	0.05		0.05		mg/L
309	Total Hardness	SM 2340C	*	0.66		5		mg/L
310	Total phosphate	SM 4500-PBE	*	0.038		0.5		mg/L
311	Orthophosphate-P	SM 4500-PE	*	0.028		0.5		mg/L
312	Phenols	EPA 420.1	*	0.0007		0.01		mg/L
313	Fluoride	SM 4500-FC	*	0.01		0.1		mg/L
314	Boron	SM 4500-BB	*	0.04		0.2		mg/L
315	Surfactants (MBAS)	SM 5540C	*	0.01		0.1		mg/L
315	Surfactants (MBAS)	SM 5540C	*	0.014		0.1		mg/L
315	Surfactants (MBAS)	SM 5540C	*	0.023		0.05		mg/L
316	Surfactants (CTAS)	SM 5540D	*	0.05		0.1		mg/L
350	Total Coliform	SM 9221B	*	*		2		MPN/100mL
351	Fecal Coliform	SM 9221E	*	*		2		MPN/100mL
364	Chlorophyll A	EPA 445.0	*	0.01		0.022 - 0.22		ug/L
370	Gross Alpha Radioactivity	EPA 900.0	*	1.4 - 3.8		*		pCi/L
371	Gross Beta Radioactivity	EPA 900.0	*	2.8		*		pCi/L
3B2	Perchlorate	EPA 314.0	2.0	0.63		2.0		ug/L
401	Total Bod	SM 5210B	*	0.61		2		mg/L
403	Total Cod	SM 5220B	*	1.87		10		mg/L
405	Total Organic Carbon	SM5310C	0.5	0.07		0.5		mg/L
408	Oil and Grease	EPA 1664A	*	1.05		4		mg/L
412	Total Carboneous BOD	SM 5210B	*	0.61		2		mg/L
502	4,4'-DDE	EPA 608	0.005	0.0003	0.001	0.01	0.01	ug/L
504	4,4'-DDD	EPA 608	0.005	0.0009	0.002	0.01	0.01	ug/L
506	4,4'-DDT	EPA 608	0.005	0.003	0.001	0.01	0.01	ug/L
508	Alpha-BHC	EPA 608	0.005	0.002	0.0007	0.01	0.01	ug/L
509	Lindane (Gamma-BHC)	EPA 608	0.005	0.001	0.001	0.01	0.01	ug/L
510	Heptachlor	EPA 608	0.005	0.002	0.0009	0.01	0.01	ug/L
511	Heptachlor Epoxide	EPA 608	0.005	0.001	0.002	0.01	0.01	ug/L
512	Aldrin	EPA 608	0.005	0.003	0.002	0.01	0.01	ug/L
513	Dieldrin	EPA 608	0.005	0.002	0.001	0.01	0.01	ug/L
514	Endrin	EPA 608	0.005	0.002	0.002	0.01	0.01	ug/L
515	Toxaphene	EPA 608	0.2	0.05	0.06	0.5	0.5	ug/L
516	Methoxychlor	EPA 608	0.005	0.001	0.004	0.01	0.01	ug/L
517	2,4-D	EPA 8151A	2	0.84		2		ug/L
518	2,4,5 -TP (Silvex)	EPA 8151A	0.5	0.34		0.5		ug/L
519	PCB 1242	EPA 608	0.08	0.02	0.02	0.1	0.1	ug/L
520	PCB 1254	EPA 608	0.05	0.009	0.02	0.05	0.05	ug/L
522	TICH	EPA 608	*	*	*	**	**	ug/L
523	beta-BHC	EPA 608	0.005	0.0008	0.005	0.01	0.01	ug/L
524	delta-BHC	EPA 608	0.005	0.002	0.002	0.01	0.01	ug/L
531	Alpha-Endosulfan	EPA 608	0.005	0.003	0.001	0.01	0.01	ug/L
532	Beta-Endosulfan	EPA 608	0.005	0.002	0.002	0.01	0.01	ug/L
533	Endosulfan Sulfate	EPA 608	0.005	0.01	0.003	0.1	0.01	ug/L
534	Endrin Aldehyde	EPA 608	0.005	0.0009	0.001	0.01	0.01	ug/L
535	PCB 1016	EPA 608	0.1	0.02	0.02	0.1	0.1	ug/L
536	PCB 1221	EPA 608	0.1	0.1	0.3	0.1	0.3	ug/L
537	PCB 1232	EPA 608	0.1	0.06	0.1	0.1	0.1	ug/L
538	PCB 1248	EPA 608	0.1	0.04	0.03	0.1	0.1	ug/L
539	PCB 1260	EPA 608	0.1	0.02	0.03	0.1	0.1	ug/L
540	Chlordane	EPA 608	0.04	0.007	0.02	0.05	0.05	ug/L
552	Mirex	EPA 608	0.01	0.001	0.002	0.01	0.05	ug/L
5C1	2,4,5 -T	EPA 8151A	0.5	0.37		0.5		ug/L
5C9	Methyl Parathion	EPA 8141A	0.5	0.3		0.5		ug/L

Analytical Methods and Detection Limits for Monitoring Well/Supply Well Samples

Test Code	Name of Constituent	Approved Method Used	ML	MDL	MDL2	RL	RL2	Units
5D1	Ethyl Parathion	EPA 8141A	0.2	0.15		0.2		ug/L
5D3	Demeton	EPA 8141A	0.5	0.32		0.5		ug/L
5D4	Guthion	EPA 8141A	2.0	1.1		2.0		ug/L
5D5	Malathion	EPA 8141A	0.2	0.15		0.2		ug/L
5D9	Diazinon	EPA 8141A	0.05	0.028		0.05		ug/L
601	Methylene Chloride	EPA 8260B	0.5	0.05		0.5		ug/L
602	Chloroform	EPA 8260B	0.5	0.05		0.5		ug/L
603	1,1,1 Trichloroethane	EPA 8260B	0.5	0.1		0.5		ug/L
604	Carbon Tetrachloride	EPA 8260B	0.5	0.13		0.5		ug/L
605	1,1 Dichloroethylene	EPA 8260B	0.5	0.07		0.5		ug/L
606	Trichloroethylene	EPA 8260B	0.5	0.1		0.5		ug/L
607	Tetrachloroethylene	EPA 8260B	0.5	0.15		0.5		ug/L
608	Dichlorobromomethane	EPA 8260B	0.5	0.06		0.5		ug/L
609	Chlorodibromomethane	EPA 8260B	0.5	0.09		0.5		ug/L
610	Bromoform	EPA 8260B	0.5	0.24		0.5		ug/L
611	Chlorobenzene	EPA 8260B	0.5	0.09		0.5		ug/L
612	Vinyl Chloride	EPA 8260B	0.5	0.05		0.5		ug/L
613	1,2 Dichlorobenzene	EPA 8260B	0.5	0.12		0.5		ug/L
614	1,3 Dichlorobenzene	EPA 8260B	0.5	0.19		0.5		ug/L
615	1,4 Dichlorobenzene	EPA 8260B	0.5	0.26		0.5		ug/L
616	1,1 Dichloroethane	EPA 8260B	0.5	0.07		0.5		ug/L
618	1,1,2 Trichloroethane	EPA 8260B	0.5	0.08		0.5		ug/L
619	1,2 Dichloroethane	EPA 8260B	0.5	0.08		0.5		ug/L
620	Benzene	EPA 8260B	0.5	0.06		0.5		ug/L
621	Toluene	EPA 8260B	0.5	0.06		0.5		ug/L
624	Ethylbenzene	EPA 8260B	0.5	0.06		0.5		ug/L
645	Trans 1,2- Dichloroethylene	EPA 8260B	0.5	0.07		0.5		ug/L
646	Methyl Bromide	EPA 8260B	0.5	0.07		0.5		ug/L
647	Chloroethane	EPA 8260B	0.5	0.13		0.5		ug/L
648	2-Chloroethyl vinyl ether	EPA 8260B	0.5	0.17		0.5		ug/L
649	Chloromethane	EPA 8260B	0.5	0.07		0.5		ug/L
650	1,2 Dichloropropane	EPA 8260B	0.5	0.08		0.5		ug/L
651	Cis-1,3 Dichloropropylene	EPA 8260B	0.5	0.06		0.5		ug/L
652	Trans-1,3-Dichloropropene	EPA 8260B	0.5	0.09		0.5		ug/L
653	1,1,2,2 Tetrachloroethane	EPA 8260B	0.5	0.14		0.5		ug/L
654	Acrolein	EPA 8260B	2	0.47		2		ug/L
655	Acrylonitrile	EPA 8260B	2	0.14		2		ug/L
662	Methyl-t-butyl ether (MTBE)	EPA 8260B	0.5	0.06		0.5		ug/L
696	1,4-Dioxane	EPA 8270 M	0.5	0.19		0.5		ug/L
6D6	1,2,3-Trichloropropane	EPA 524.2 M (SIM)	0.005	0.0015		0.005		ug/L
705	Total Arsenic	SM 3114B4d	1	0.4		1		ug/L
706	Barium	EPA 200.7	*	0.3		5		ug/L
708	Cadmium (Cd)	EPA 213.2	0.4	0.04		0.2		ug/L
709	Total Chromium	EPA 200.7	*	1.0		10		ug/L
710	Chromium VI (Cr-VI)	SM 3500 CrD	10	0.6		10		ug/L
710	Chromium VI (Cr-VI)	SM 3500 CrD	10	0.94		10		ug/L
710	Chromium VI (Cr-VI)	EPA 218.6	0.1	0.047		0.1		ug/L
712	Copper (Cu)	EPA 200.7	*	3.0		8		ug/L
713	Iron (Fe)	EPA 200.7	*	5.0		50		ug/L
714	Lead	EPA 239.2	2	0.16		2		ug/L
717	Mercury	EPA 245.1	0.025	0.03		0.04		ug/L
718	Nickel(Ni)	EPA 200.7	*	5.0		20		ug/L
720	Selenium(Se)	SM 3114B	1	0.1		1		ug/L
722	Silver(Ag)	EPA 200.8	*	0.059		0.2		ug/L
723	Sodium	EPA 200.7	*	0.27		0.8		mg/L
724	Zinc(Zn)	EPA 200.7	*	3.0		10		ug/L
725	Antimony (Sb)	EPA 7062	0.5	0.3		0.5		ug/L
726	Beryllium (Be)	EPA 210.2	0.5	0.06		0.25		ug/L
734	Thallium(Tl)	EPA 279.2	2	0.28		1		ug/L
800	Acenaphthene	EPA 625	1	0.56	0.37	1		ug/L
801	Acenaphthylene	EPA 625	10	0.74	0.39	10		ug/L
802	Anthracene	EPA 625	10	0.47	0.30	10		ug/L
803	Benzidine	EPA 625	5	4.06	4.28	5		ug/L
804	Benzo (a) Anthracene	EPA 625	5	0.55	0.30	5		ug/L
805	Benzo (a) Pyrene	EPA 610	0.02	0.0089		0.02		ug/L
806	Benzo (b) Fluoranthene	EPA 610	0.02	0.0082		0.02		ug/L
807	Benzo (g,h,i) Perylene	EPA 625	5	0.67	0.25	5		ug/L
808	Benzo (k) Fluoranthene	EPA 610	0.02	0.0084		0.02		ug/L
809	Bis (2-Chloroethoxyl) methane	EPA 625	5	0.80	0.40	5		ug/L
810	Bis(2-Chloroethyl) ether	EPA 625	1	0.74	0.41	1		ug/L
811	Bis(2-Chloroisopropyl) ether	EPA 625	2	0.54	0.42	2		ug/L
812	Bis(2-Ethylhexyl) phthalate	EPA 625	2	0.72	0.31	2		ug/L
813	4-Bromophenyl phenyl ether	EPA 625	5	0.51	0.30	5		ug/L
814	Butyl benzyl phthalate	EPA 625	10	0.65	0.23	10		ug/L
815	2-Chloronaphthalene	EPA 625	10	0.53	0.42	10		ug/L

Analytical Methods and Detection Limits for Monitoring Well/Supply Well Samples

Test Code	Name of Constituent	Approved Method Used	ML	MDL	MDL2	RL	RL2	Units
816	4-Chlorophenyl phenyl ether	EPA 625	5	0.52	0.34	5		ug/L
817	Chrysene	EPA 610	0.02	0.0093		0.02		ug/L
818	Dibenzo(a,h)-anthracene	EPA 610	0.02	0.0089		0.02		ug/L
819	1,2 Dichlorobenzene	EPA 625	2	0.71	0.42	2		ug/L
820	1,3 Dichlorobenzene	EPA 625	1	0.53	0.34	1		ug/L
821	1,4 Dichlorobenzene	EPA 625	1	0.63	0.40	1		ug/L
822	3,3' Dichlorobenzidine	EPA 625	5	1.07	2.78	5		ug/L
823	Diethyl phthalate	EPA 625	2	0.49	0.43	2		ug/L
824	Dimethyl phthalate	EPA 625	2	0.50	0.34	2		ug/L
825	di-n-Butyl phthalate	EPA 625	10	0.51	0.45	10		ug/L
826	2,4 Dinitrotoluene	EPA 625	5	0.37	0.20	5		ug/L
827	2,6 Dinitrotoluene	EPA 625	5	0.46	0.27	5		ug/L
828	di-n-Octyl phthalate	EPA 625	10	0.50	0.24	10		ug/L
829	1,2 Diphenylhydrazine	EPA 625	1	0.36	0.27	1		ug/L
830	Fluoranthene	EPA 625	1	0.53	0.37	1		ug/L
831	Fluorene	EPA 625	10	0.50	0.39	10		ug/L
832	Hexachlorobenzene	EPA 625	1	0.48	0.26	1		ug/L
833	Hexachlorobutadiene	EPA 625	1	0.54	0.31	1		ug/L
834	Hexachloro-cyclopentadiene	EPA 625	5	1.48	1.58	5		ug/L
835	Hexachloroethane	EPA 625	1	0.54	0.45	1		ug/L
836	Indeno(1,2,3,cd)-pyrene	EPA 610	0.02	0.0084		0.02		ug/L
837	Isophorone	EPA 625	1	0.67	0.35	1		ug/L
838	Naphthalene	EPA 625	1	0.55	0.34	1		ug/L
839	Nitrobenzene	EPA 625	1	0.64	0.68	1		ug/L
840	N-Nitrosodimethyl amine	EPA 625	5	0.70	0.29	5		ug/L
841	N-Nitroso-di-n-propyl amine	EPA 625	5	0.67	0.43	5		ug/L
842	Phenanthrene	EPA 625	5	0.49	0.29	5		ug/L
843	Pyrene	EPA 625	10	0.63	0.30	10		ug/L
845	2 Chlorophenol	EPA 625	5	0.55	0.42	5		ug/L
846	1,2,4 Trichlorobenzene	EPA 625	5	0.50	0.35	5		ug/L
847	2,4 Dichlorophenol	EPA 625	5	0.57	0.38	5		ug/L
848	2,4 Dimethylphenol	EPA 625	2	1.31	0.59	2		ug/L
849	2,4 Dinitrophenol	EPA 625	5	3.21	0.33	5		ug/L
850	2-Methyl-4,6-Dinitrophenol	EPA 625	5	2.74	0.32	5		ug/L
851	2-Nitrophenol	EPA 625	10	0.50	0.30	10		ug/L
852	4-Nitrophenol	EPA 625	10	0.56	0.48	10		ug/L
853	3-Methyl-4-Chlorophenol	EPA 625	1	0.53	0.40	1		ug/L
854	Pentachlorophenol	EPA 625	5	0.45	0.33	5		ug/L
855	Phenol	EPA 625	1	0.58	0.43	1		ug/L
856	2,4,6 Trichlorophenol	EPA 625	10	0.54	0.26	10		ug/L
857	N-Nitrosodiphenyl amine	EPA 625	1	0.45	0.47	1		ug/L
951	Nitrite-N + Nitrate-N	BY CALCULATION	*	0.01		0.04		mg/L
B50	Escherichia coli	SM 9221F	*	*		2.0		MPN/0.1L
C15	Hydrocarbons	EPA 418.1	*	0.3		1		mg/L
D08	octaCDD	EPA 8290	*	*		See Labdata		ng/L
D21	2,3,7,8-tetra CDD	EPA 8290	*	*		See Labdata		ng/L
D22	1,2,3,7,8-pentaCDD	EPA 8290	*	*		See Labdata		ng/L
D24	1,2,3,4,7,8-HexaCDD	EPA 8290	*	*		See Labdata		ng/L
D25	1,2,3,6,7,8-HexaCDD	EPA 8290	*	*		See Labdata		ng/L
D26	1,2,3,7,8,9-HexaCDD	EPA 8290	*	*		See Labdata		ng/L
D27	1,2,3,4,6,7,8-HeptaCDD	EPA 8290	*	*		See Labdata		ng/L
F08	octaCDF	EPA 8290	*	*		See Labdata		ng/L
F16	2,3,7,8-Tetra CDF	EPA 8290	*	*		See Labdata		ng/L
F17	1,2,3,7,8-PentaCDF	EPA 8290	*	*		See Labdata		ng/L
F18	2,3,4,7,8-PentaCDF	EPA 8290	*	*		See Labdata		ng/L
F19	1,2,3,4,7,8-HexaCDF	EPA 8290	*	*		See Labdata		ng/L
F20	1,2,3,6,7,8-HexaCDF	EPA 8290	*	*		See Labdata		ng/L
F21	2,3,4,6,7,8-HexaCDF	EPA 8290	*	*		See Labdata		ng/L
F22	1,2,3,7,8,9-HexaCDF	EPA 8290	*	*		See Labdata		ng/L
F23	1,2,3,4,6,7,8-HeptaCDF	EPA 8290	*	*		See Labdata		ng/L
F24	1,2,3,4,7,8,9-HeptaCDF	EPA 8290	*	*		See Labdata		ng/L

** Not applicable

** Determined by calculation