QUARTERLY MONITORING REPORT
APRIL 2004

City of Patterson Wastewater Treatment Plant
Groundwater Monitoring Program

Conducted in Accordance with
Waste Discharge Requirements Order No. 5-00-146

Prepared by:

LEE & RO, Inc.
11060 White Rock Road, Suite 100
Rancho Cordova, California 95670-6046

Prepared for:

City of Patterson
Department of Public Works
33 South Del Puerto Avenue
Patterson, CA 95363

April 2004

REPORT PREPARED BY:

4/21/04

Robert O. Godwin (DATE)
Registered Civil Engineer California No. C48045

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1. INTRODUCTION

This Quarterly Groundwater Monitoring Report has been prepared in accordance with the Waste Discharge Requirements for the City of Patterson Wastewater Treatment Plant in the City of Patterson, Stanislaus County, California. The wells were installed as part of the groundwater monitoring program developed to determine if groundwater has been, or has the potential to be, adversely impacted by wastewater treatment and disposal operations. The monitoring program will include an assessment of background conditions and a determination if there has been any impact from wastewater disposal. The groundwater monitoring program consists of the construction and quarterly sampling of five monitoring wells.

The wells were constructed in March 2001 and samples have been collected on a quarterly basis since April 2001. This report presents the results of the quarterly samples collected April 8, 2004. All of the wells were sampled on April 8, 2004.

2. GROUNDWATER MONITORING WELLS

Two upgradient wells (MW-1 and MW-2) and three downgradient wells (MW-3, MW-4, and MW-5) are located at the plant site.

The wells have 15 feet of screen per well. The total depths range from 28 to 30 feet below ground surface (bgs). A summary of well characteristics is provided in **Table 1**.

Table 1
Well Construction Summary

	MW-1	MW-2	MW-3	MW-4	MW-5
Well Depth (ft)	28	29	28	30	29
Completion Type	Below	Above	Above	Above	Above
Slot Size (inch)	0.01	0.02	0.02	0.01	0.02
Elevation of Slab Surface	55.58	57.93	52.18	56.99	53.79
Elevation of Top of Casing	54.93	59.68	53.80	58.58	55.21
Northing	63170.83	65646.16	63426.28	64632.54	65640.07
Easting	27600.60	26971.88	29651.79	28630.20	28819.87

3. GROUNDWATER ELEVATIONS

Groundwater elevations measured to date are summarized in **Figure 1**. Groundwater elevations measured in 2004 are presented in **Table 2** and contoured on the map presented in **Figure 2**.

Table 2
2004 Groundwater Elevations
Patterson WWTP Monitoring Wells

	MW-1	MW-2	MW-3	MW-4	MW-5
Water Elevation 4/8/04 (ft msl)	37.24	38.06	35.14	35.36	34.41

4. MONITORING WELL SAMPLING

The wells were purged and sampled according to the procedures specified in the workplan. Sampling was conducted by Richard Chrun of GeoAnalytical Laboratories under the general supervision of Tambrey Tosk, RG, of LEE & RO, Inc. Purge logs are presented in **Appendix A**.

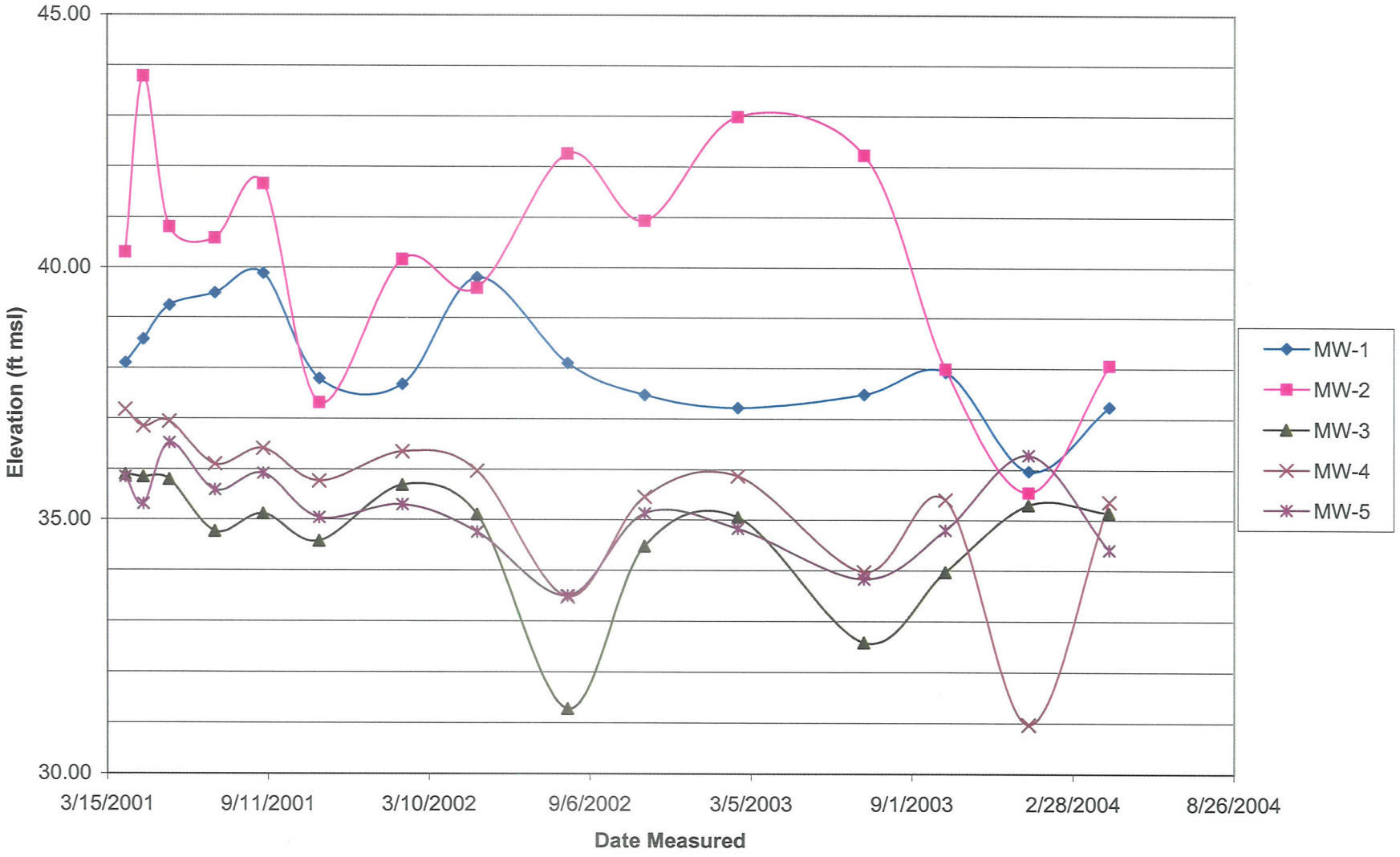
5. GROUNDWATER QUALITY RESULTS

The samples were analyzed by GeoAnalytical Laboratories, a state-certified environmental laboratory. Laboratory reports for the April 2004 quarterly samples are presented in **Appendix B**. Analytical results for the 2004 quarterly samples are presented in **Table 3**.

Table 3
Groundwater Analytical Results
April 2004

	Unit	MW-1	MW-2	MW-3	MW-4	MW-5
PH	Std. Units	7.2	7.1	7.1	6.9	6.7
Electrical Conductivity	Umhos/cm	2920	2690	3870	1920	2240
Total Dissolved Solids	Mg/L	1970	1690	2650	1420	1480
Nitrate as Nitrogen	Mg/L	23	6.5	14	0.45	14
Total Coliform Organisms	MPN/100	<2	<2	<2	<2	<2

Figure 1
Groundwater Elevations in Patterson WWTP Monitoring Wells



PLANT NORTH

SCALE: 1"=400'

0 100 200 300 400
SCALE IN FEET

34.41
MW-5

35

35

35.14
MW-3

POND 4

AIPS
TREATMENT
SYSTEM

35.36
MW-4

CHLORINE
CONTACT
TANK

SECONDARY
CLARIFIERS

ACTIVATED
SLUDGE

PERCOLATION PONDS

36

POND 3C & 3B

EFFLUENT
PUMPING
STATION

POND 3A

POND 5

POND 10

36

POND 11

POND 12

37

SLUDGE
DRYING
BEDS

POND 1

INFLUENT
PUMPING
STATION

SLUDGE
DRYING
BEDS

POND 6

POND 7

POND 8

POND 9

POND 2

38

MW-2
38.06

38

POPLAR AVE

37

WALNUT AVE

MW-1
37.24

FIGURE 2
GROUNDWATER ELEVATION MAP
April 8, 2004

APPENDIX A
PURGE LOGS

Measurement of Groundwater Levels

Project Name	Patterson WWTP	**Project No.**	721
		Recorded By	Richard Chrun/GeoAnalytical
Location	Monitoring Wells	**Date**	4/8/2004
Equipment Type	Solinst Water Level Meter	**Checked By**	Tambrey Tosk
Equipment No.	1	**Date**	4/8/2004

Well Number	Time	Reference Point	Reference Elevation	Depth to Water	Water Elevation	Product Thickness	Product Elevation	Adjusted Water Elevation	Depth to Well Bottom	Notes (add below)
MW-1	7:40 AM	TOC	54.93	17.69	37.24	-	-	-	27.52	
MW-2	7:50 AM	TOC	59.68	21.62	38.06	-	-	-	31.28	
MW-3	8:20 AM	TOC	53.80	18.66	35.14	-	-	-	30.88	
MW-4	8:10 AM	TOC	58.58	23.22	35.36	-	-	-	31.64	
MW-5	8:00 AM	TOC	55.21	20.80	34.41	-	-	-	30.50	

Notes:

Report # 0099.1 **Field Log / Groundwater Sampling Form** Date 4/08/04

Client City of Patterson **Well Name** MW-1

Project Name Quarterly Monitoring Wells Well Type: ☑ Monitor ☐ Extraction ☐ Other

Consultant

Proj. Manager Richard Chrun **Sampler** Rich Chrun

WELL PURGING

Purge Method

- ☐ Bailer - Type
- ☒ Pump - Type 2"
- ☐ Other

Multiplier

Well Casing I.D. (in.)	Gal/Ft.
2.0	0.1632
4.0	0.6527
6.0	1.4686

Purge Volume

Well Casing Diameter: ☐ 2 - inch ☒ 4 - inch ☐ other

Well Volume Purged: ☒ 3 volumes ☐ 4 volumes ☐ other

Total Well Depth 27.5

Depth to Water 17.69

Water Column Length 9.81

9.81 (Water column length) X 0.6527 (Multiplier) X 3 (No. Volumes) = 19.2 (CALCULATED. Purge Vol.)

19.2 (Purge Vol) / 2.5 (Purge Rate) = 7.68 (TOTAL PURGE TIME)

7.68 (Total Purge Time) / 3 (# Volumes) = 2.56 (PURGE TIME/VOL.)

Actual Values

Purge Time /Vol.	3
X No. Volumes	3
= Total Purge Time	9
X Purge Rate	2.5
= Actual Purge Vol.	22.5

GROUNDWATER PARAMATER MEASUSREMENTS

	Time	Gallons	pH	Conductivity µmhos/cm	Temp. ☒ deg C ☐ deg F	DO	ORP	Color / Odor
Start	8:25Am	-	-	-	-	-	-	-
Vol 1	8:27Am	7.5	7.18	2.85	19.9			clear / no odor
Vol 2	8:29Am	15	7.25	2.94	20.3			" "
Vol 3	8:31Am	22.5	7.24	2.96	20.3			" "
Vol 4								
Vol 5								

Meter Type IQ Scientific

Purge Water Storage / Disposal

- ☒ Drummed onsite
- ☐ Onsite Treatment System
- ☐ Other

COMMENTS/purge:

WELL SAMPLING

Sampling Method

- ☐ Bailer - Type
- ☒ Pump - Type
- ☐ Other

Time	Sample ID	Org	Dup	Split	Blank	Container Type	Number of Containers	Preservative
8:31Am	MW-1	X				Pl Litre	1	4°C
8:31Am	MW-1	X				100ml sterile	1	4°C

COMMENTS/sampling:

1405 Kansas Ave.
Modesto, CA 95351

GeoAnalytical Laboratories, Inc.
Cert# 1157

Phone: (209) 572-0900
Fax: : (209) 572-0916

Report # Q099-11 **Field Log / Groundwater Sampling Form** Date 4/08/04

Client City of Patterson **Well Name** MW-2

Project Name Quarterly Monitoring Wells Well Type: ☑ Monitor ☐ Extraction ☐ Other

Consultant

Proj. Manager Richard Chrun **Sampler** Rich Chrun

WELL PURGING

Purge Method

- ☐ Bailer - Type
- ☒ Pump - Type 2"
- ☐ Other

Total Well Depth 31.4

Depth to Water 21.62

Water Column Length 9.78

Multiplier

Well Casing I.D. (in.)	Gal/Ft.
2.0	0.1632
4.0	0.6527
6.0	1.4686

Purge Volume

Well Casing Diameter
- ☐ 2 - inch
- ☒ 4 - inch
- ☐ other

Well Volume Purged
- ☒ 3 volumes
- ☐ 4 volumes
- ☐ other

9.78 (Water column length) x 0.6527 (Multiplier) x 3 (No. Volumes) = 19.1 (CALCULATED. Purge Vol.)

19.1 (Purge Vol) / 2.5 (Purge Rate) = 7.64 (TOTAL PURGE TIME)

7.64 (Total Purge Time) / 3 (# Volumes) = 3 (PURGE TIME/VOL.)

Actual Values

Purge Time /Vol.	3
X No. Volumes	3
= Total Purge Time	9
X Purge Rate	2.5
= Actual Purge Vol.	22.5

GROUNDWATER PARAMATER MEASUREMENTS

	Time	Gallons	pH	Conductivity µmhos/cm	Temp. ☒ deg C ☐ deg F	DO	ORP	Color / Odor
Start	8:46am	-	-	-	-	-	-	-
Vol 1	8:49am	7.5	7.02	2.68	20.3			clear/No odor
Vol 2	8:52am	15	7.10	2.76	20.3			" "
Vol 3	8:55am	22.5	7.07	2.74	20.7			Brownish "
Vol 4								
Vol 5								

Meter Type IQ Scientific

Purge Water Storage / Disposal
- ☒ Drummed onsite
- ☐ Onsite Treatment System
- ☐ Other

COMMENTS/purge:

WELL SAMPLING

Sampling Method

- ☐ Bailer - Type
- ☒ Pump - Type
- ☐ Other

Time	Sample ID	Org	Dup	Split	Blank	Container Type	Number of Containers	Preservative
8:55am	MW-2	X				Pl Litre	1	4°C
8:55am	MW-2	X				100ml sterile	1	4°C

COMMENTS/sampling:

1405 Kansas Ave.
Modesto, CA 95351

GeoAnalytical Laboratories, Inc.
Cert# 1157

Phone: (209) 572-0900
Fax: (209) 572-0916

Report # Q099-11 **Field Log / Groundwater Sampling Form** Date 4/08/04

Client City of Patterson **Well Name** MW-3

Project Name Quarterly Monitoring Wells Well Type: ☒ Monitor ☐ Extraction ☐ Other

Consultant

Proj. Manager Richard Chrun **Sampler** Rich Chrun

WELL PURGING

Purge Method

- ☐ Bailer - Type
- ☒ Pump - Type 2"
- ☐ Other

Multiplier

Well Casing I.D. (in.)	Gal/Ft.
2.0	0.1632
4.0	0.6527
6.0	1.4686

Purge Volume

Well Casing Diameter
- ☐ 2 - inch
- ☒ 4 - inch
- ☐ other

Well Volume Purged
- ☒ 3 volumes
- ☐ 4 volumes
- ☐ other

Total Well Depth 31.0

Depth to Water 18.66

= Water Column Length 12.34

12.34 (Water column length) x 0.6527 (Multiplier) x 3 (No. Volumes) = 24.2 CALCULATED. Purge Vol.

24.2 (Purge Vol) / 2.5 (Purge Rate) = 9.66 TOTAL PURGE TIME

9.66 (Total Purge Time) / 3 (# Volumes) = 3 PURGE TIME/VOL.

Actual Values

Purge Time /Vol.	3
X No. Volumes	3
= Total Purge Time	9
X Purge Rate	2.5
= Actual Purge Vol.	22.5

GROUNDWATER PARAMETER MEASUREMENTS

	Time	Gallons	pH	Conductivity µmhos/cm	Temp. ☒ deg C ☐ deg F	DO	ORP	Color / Odor
Start	9:51 Am	-	-	-	-	-	-	-
Vol 1	9:54 Am	7.5	6.94	3.73	20.9			Clear / odor less
Vol 2	9:57 Am	15	6.99	3.75	21.0			" "
Vol 3	10:00 Am	22.5	6.99	3.76	21.2			
Vol 4								
Vol 5								

Meter Type IQ Scientific

Purge Water Storage / Disposal
- ☒ Drummed onsite
- ☐ Onsite Treatment System
- ☐ Other

COMMENTS/purge:

WELL SAMPLING

Sampling Method

- ☐ Bailer - Type
- ☒ Pump - Type
- ☐ Other

Time	Sample ID	Org	Dup	Split	Blank	Container Type	Number of Containers	Preservative
10:Am	MW-3	X				Pl Litre	1	4°C
10:00 Am	MW-3	X				100ml sterile	1	4°C

COMMENTS/sampling:

1405 Kansas Ave.
Modesto, CA 95351

GeoAnalytical Laboratories, Inc.
Cert# 1157

Phone: (209) 572-0900
Fax: : (209) 572-0916

Report # Q099-11 **Field Log / Groundwater Sampling Form** Date 4/08/04

Client City of Patterson **Well Name** MW-4

Project Name Quarterly Monitoring Wells Well Type: ☒ Monitor ☐ Extraction ☐ Other

Consultant

Proj. Manager Richard Chrun **Sampler** Rich Chrun

WELL PURGING

Purge Method

- ☐ Bailer - Type
- ☒ Pump - Type 2"
- ☐ Other

Total Well Depth 31.0

Depth to Water 23.22

= Water Column Length 7.78

Multiplier

Well Casing I.D. (in.)	Gal/Ft.
2.0	0.1632
4.0	0.6527
6.0	1.4686

Purge Volume

Well Casing Diameter
- ☐ 2 - inch
- ☒ 4 - inch
- ☐ other

Well Volume Purged
- ☒ 3 volumes
- ☐ 4 volumes
- ☐ other

7.78 (Water column length) x 0.6527 (Multiplier) x 3 (No. Volumes) = 15.2 (CALCULATED, Purge Vol.)

15.2 (Purge Vol) / 2.5 (Purge Rate) = ~~15.2~~ 6.09 (TOTAL PURGE TIME)

6.09 (Total Purge Time) / 3 (# Volumes) = 2 (PURGE TIME/VOL.)

Actual Values

Purge Time /Vol.	2
X No. Volumes	3
= Total Purge Time	6
X Purge Rate	2.5
= Actual Purge Vol.	15

GROUNDWATER PARAMETER MEASUSREMENTS

	Time	Gallons	pH	Conductivity µmhos/cm	Temp. ☒ deg C ☐ deg F	DO	ORP	Color / Odor
Start	9:31AM	-	-	-	-	-	-	-
Vol 1	9:33AM	5	6.84	1839	19.7			clear lodorless
Vol 2	9:35AM	10	6.82	1949	19.6			" "
Vol 3	9:37AM	15	6.83	1900	19.6			" "
Vol 4								
Vol 5								

Meter Type IQ Scientific

Purge Water Storage / Disposal
- ☒ Drummed onsite
- ☐ Onsite Treatment System
- ☐ Other

COMMENTS/purge:

WELL SAMPLING

Sampling Method

- ☐ Bailer - Type
- ☒ Pump - Type
- ☐ Other

Time	Sample ID	Org	Dup	Split	Blank	Container Type	Number of Containers	Preservative
9:37AM	MW-4	X				Pl Litre	1	4°C
9:37AM	MW-4	X				100ml sterile	1	4°C

COMMENTS/sampling:

1405 Kansas Ave.
Modesto, CA 95351

GeoAnalytical Laboratories, Inc.
Cert# 1157

Phone: (209) 572-0900
Fax: (209) 572-0916

Report # 2099-11 **Field Log / Groundwater Sampling Form** Date 4/08/04

Client City of Patterson **Well Name** MW-5

Project Name Quarterly Monitoring Wells Well Type: ☒ Monitor ☐ Extraction ☐ Other

Consultant

Proj. Manager Richard Chrun **Sampler** Rich Chrun

WELL PURGING

Purge Method

- ☐ Bailer - Type
- ☒ Pump - Type 2"
- ☐ Other

Total Well Depth 31.0

Depth to Water 20.80

= Water Column Length 10.2

Multiplier

Well Casing I.D. (in.)	Gal/Ft.
2.0	0.1632
4.0	0.6527
6.0	1.4686

Purge Volume

Well Casing Diameter
- ☐ 2 - inch
- ☒ 4 - inch
- ☐ other

Well Volume Purged
- ☒ 3 volumes
- ☐ 4 volumes
- ☐ other

10.2 (Water column length) x 0.6527 (Multiplier) x 3 (No. Volumes) = 19.9 CALCULATED. Purge Vol.

19.9 (Purge Vol) / 2.5 (Purge Rate) = 7.96 TOTAL PURGE TIME

7.96 (Total Purge Time) / 3 (# Volumes) = 3 PURGE TIME/VOL.

Actual Values

Purge Time /Vol.	3
X No. Volumes	3
= Total Purge Time	9
X Purge Rate	2.5
= Actual Purge Vol.	22.5

GROUNDWATER PARAMATER MEASUREMENTS

	Time	Gallons	pH	Conductivity µmhos/cm	Temp. ☒ deg C ☐ deg F	DO	ORP	Color / Odor
Start	9:10Am	-	-	-	-	-	-	-
Vol 1	9:13Am	7.5	6.56	2.41	21.3			Clear/Odorless
Vol 2	9:16Am	15	6.54	2.44	21.1			" "
Vol 3	9:19Am	22.15	6.55	2.44	21.1			" "
Vol 4								
Vol 5								

Meter Type IQ Scientific

Purge Water Storage / Disposal
- ☒ Drummed onsite
- ☐ Onsite Treatment System
- ☐ Other

COMMENTS/purge:

SAMPLING

Sampling Method

- ☐ Bailer - Type
- ☒ Pump - Type
- ☐ Other

Time	Sample ID	Org	Dup	Split	Blank	Container Type	Number of Containers	Preservative
9:19Am	MW-5	X				Pl Litre	1	4°C
9:19Am	MW-5	X				100ml sterile	1	4°C

COMMENTS/sampling:

1405 Kansas Ave.
Modesto, CA 95351

GeoAnalytical Laboratories, Inc.
Cert# 1157

Phone: (209) 572-0900
Fax: (209) 572-0916

APPENDIX B
LABORATORY ANALYTICAL REPORT

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # Q099-11

Date: 4/12/04

City of Patterson
33 So. Del Puerto Ave.
Patterson CA 95363

Project:

PO#

Date Rec'd: 4/08/04
Date Started: 4/08/04
Date Completed: 4/10/04

Date Sampled: 4/08/04
Sampler: R. Chrun (Geo)

Sample ID	Lab ID	Time	RL	Method	Analyte	Results	Units
MW - 1	Q302437	8:31am	2	9221B,C	Total Coliform	<2	MPN/100ml
MW - 2	Q302438	8:55am	2	9221B,C	Total Coliform	<2	MPN/100ml
MW - 3	Q302439	10:00am	2	9221B,C	Total Coliform	<2	MPN/100ml
MW - 4	Q302440	9:37am	2	9221B,C	Total Coliform	<2	MPN/100ml
MW - 5	Q302441	9:19am	2	9221B,C	Total Coliform	<2	MPN/100ml
Mitigation Well	Q302442	10:15am	1.1	9221B,C	Total Coliform	<2	MPN/100ml

Kanti Gandhi
Chemist

Certification # 1157

Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # Q099-11 **Date:** 4/14/04

City of Patterson
33 So. Del Puerto Ave.
Patterson CA 95363

Project:

PO#

Date Rec'd: 4/08/04
Date Started: 4/08/04
Date Completed: 4/12/04

Date Sampled: 4/08/04
Time:
Sampler: R. Chrun (Geo)

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
MW - 1	Q302437	NA	150.1	pH	7.2	Std. Units
		1.0	120.1	Specific Conductance (EC)	2920	µmhos/cm
		10	160.1	TDS (Filterable Residue)	1970	mg/L
		0.25	300.0	Nitrate as N	23	mg/L
MW - 2	Q302438	NA	150.1	pH	7.1	Std. Units
		1.0	120.1	Specific Conductance (EC)	2690	µmhos/cm
		10	160.1	TDS (Filterable Residue)	1690	mg/L
		0.25	300.0	Nitrate as N	6.5	mg/L
MW - 3	Q302439	NA	150.1	pH	7.1	Std. Units
		1.0	120.1	Specific Conductance (EC)	3870	µmhos/cm
		10	160.1	TDS (Filterable Residue)	2650	mg/L
		0.25	300.0	Nitrate as N	14	mg/L
MW - 4	Q302440	NA	150.1	pH	6.9	Std. Units
		1.0	120.1	Specific Conductance (EC)	1920	µmhos/cm
		10	160.1	TDS (Filterable Residue)	1420	mg/L
		0.25	300.0	Nitrate as N	0.45	mg/L
MW - 5	Q302441	NA	150.1	pH	6.7	Std. Units
		1.0	120.1	Specific Conductance (EC)	2240	µmhos/cm
		10	160.1	TDS (Filterable Residue)	1480	mg/L
		0.25	300.0	Nitrate as N	17	mg/L

Rohit Bombaywala
Inorganic Supervisor

Certification # 1157

Donna Keller

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # Q099-11 **Date:** 4/14/04

City of Patterson
33 So. Del Puerto Ave.
Patterson CA 95363

Project:

PO#

Date Rec'd: 4/08/04
Date Started: 4/08/04
Date Completed: 4/12/04

Date Sampled: 4/08/04
Time:
Sampler: R. Chrun (Geo)

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
Mitigation Well	Q302442	NA	150.1	pH	7.1	Std. Units
		1.0	120.1	Specific Conductance (EC)	2220	µmhos/cm
		10	160.1	TDS (Filterable Residue)	1550	mg/L
		0.25	300.0	Nitrate as N	4.5	mg/L

Rohit Bombaywala
Inorganic Supervisor

Certification # 1157

Donna Keller

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

Report# Q099-11

QC REPORT

City of Patterson
33 So. Del Puerto Ave.
Patterson CA 95363

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Total Coliform	9221B,C	B00177	4/08/04-4/10/04	<2	<2			0.0		<2	

LCS/LCSD (see comments)

Kanti Gandhi
Chemist

Certification # 1157

Donna Keller MD
Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

QC REPORT

Report# Q099-11

City of Patterson
3 So. Del Puerto Ave.
Patterson CA 95363

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
	150.1	I01925	4/08/04	7.2	7.2			0.0		NA	
ific Conductance (EC)	120.1	I01898	4/8/04	110	110			0.0		NA	
(Filterable Residue)	160.1	I01948	4/8/04	1960	1970			0.5		ND	
ate as N	300.0	I01955	4/9/04			92.0	92.0	0.0	90.0	ND	

LCS/LCSD (see comments)

Rohit Bombaywala
Inorganic Supervisor

Certification # 1157

Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916

Lab Report # Q099-11
Regulatory ☐ Yes ☐ No CC: ☐ Yes ☐ No
Regulator:
Phone: (209) 892-8886
Fax: (209) 892-8993
Original To: Joel Cockrell
C.C To: Bob Goodwin

Client: City of Patterson
Address: 33 S. Del Puerto Ave.
City Patterson, CA Zip 95363

CHAIN OF CUSTODY

☐ EDF ☐ EDT
☒ FIELD LOGS

Project ID Quarterly Monitoring Wells

Sampled By (Print Name) Richard Chaun
(Signature) Richard Chaun

Date	Time	Sample type: Grab	Sample type: Comp	Matrix	Sample ID	Container: Type	Container: Size	No. Of Containers	ANALYSIS: Total Coliform (MPN)	ANALYSIS: pH, EC, TDS	ANALYSIS: Nitrate as N	Remarks	Lab Use Only: Lab ID #	Lab Use Only: Preservative
4-8-04	8:31am	✓		WW	MW-1	G/P	Assor	2	X	X	X		Q302437	
	8:55am				MW-2	G/P		2	X	X	X		Q302438	
	10:00am				MW-3	G/P		2	X	X	X		Q302439	
	9:37am				MW-4	G/P		2	X	X	X		Q302440	
	9:19am				MW-5	G/P		2	X	X	X		Q302441	
	10:15am			DW	Mitigation well	G/P		2	X	X	X		Q302442	

Remarks: Fax results to Bob Goodwin (916) 631-0292

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Richard Chaun	4-8-04	11:00am			
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
				4/8/04	11:00

Preservative: 1 4°C 2 HCL 3 NaOH 4 $Na_2S_2O_3$ 5 HNO_3 6 H_2SO_4 7 Other

Matrix: DW Drinking Water WW Waste Water HWW Hazardous Waste (Water) S Soil/Solid

Bailers ____ 55 Gallon Drums ____ Pump Truck ☒ Time .5 Mileage 37

Approved By: ____

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916

Lab Report # Q099-11
Regulatory ☐ Yes ☐ No CC: ☐ Yes ☐ No
Regulator: _____

Phone: (209) 892-8886
Fax: (209) 892-8993
Original To: Joel Cockrell
C.C To: Bob Goodwin

Client: City of Patterson
Address: 33 S. Del Puerto Ave.
City Patterson, CA Zip 95363

CHAIN OF CUSTODY

☐ EDF ☐ EDT
☒ FIELD LOGS

Project ID

Sampled By (Print Name) Richard Chuan
(Signature) Richard Chuan

Date	Time	Sample type: Grab	Sample type: Comp	Matrix	Sample ID	Container: Type	Container: Size	No. Of Containers	ANALYSIS: Total Nitrate (MPN)	ANALYSIS: pH, EC, TDS	ANALYSIS: Nitrate as N	Remarks	Lab Use Only: Lab ID #	Lab Use Only: Preservative
4-8-04		✓		WW	MW-1	G/P	Assor	2	X	X	X		Q302437	
					MW-2	G/P		2	X	X	X		Q302438	
					MW-3	G/P		2	X	X	X		Q302439	
					MW-4	G/P		2	X	X	X		Q302440	
					MW-5	G/P		2	X	X	X		Q302441	
				DW	Mitigation well	G/P		2	X	X	X		Q302442	

Remarks: FAX results to Bob Goodwin (916) 631-0292

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Richard Chuan	4-8-04	11:00 AM	[signature]	4/8/04	11:00
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

Preservative: 1 4°C 2 HCL 3 NaOH 4 $Na_2S_2O_3$ 5 HNO_3 6 H_2SO_4 7 Other _____

Matrix: DW Drinking Water WW Waste Water HWW Hazardous Waste (Water) S Soil/Solid

Bailers _____ 55 Gallon Drums _____

Pump Truck ☒ Time .5 Mileage 37

Turnaround Time ☐ Standard ☐ Silver Rush ☐ Gold Rush ☐ Platinum Rush ☐ Other

Approved By: _____

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916

Lab Report # Q099-11
Regulatory ☐ Yes ☐ No CC: ☐ Yes ☐ No
Regulator:
Phone: (209) 892-8886
Fax: (209) 892-8993
Original To: Joel Cockrell
C.C To: Bob Goodwin

Client: City of Patterson
Address: 33 S. Del Puerto Ave.
City Patterson, CA Zip 95363

CHAIN OF CUSTODY

☐ EDF ☐ EDT
☒ FIELD LOGS

Project ID Quarterly Monitoring Wells

Sampled By (Print Name) Richard Chavez
(Signature) Richard Chavez

Date	Time	Sample type: Grab	Sample type: Comp	Matrix	Sample ID	Container: Type	Container: Size	No. Of Containers	ANALYSIS: Total Coliform (MPN)	ANALYSIS: pH, EC, TDS	ANALYSIS: Nitrate as N	Remarks	Lab Use Only: Lab ID #	Lab Use Only: Preservative
4-8-04	8:31am	✓		WW	MW-1	G/P	Assor	2	X	X	X		Q302437	
	8:55am				MW-2	G/P		2	X	X	X		Q302438	
	10:00am				MW-3	G/P		2	X	X	X		Q302439	
	9:37am				MW-4	G/P		2	X	X	X		Q302440	
	9:19am				MW-5	G/P		2	X	X	X		Q302441	
	10:15am			DW	Mitigation well	G/P		2	X	X	X		Q302442	

Remarks: Fax results to Bob Goodwin (916) 631-0292

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Richard Chavez	4-8-04	11:00am	[signature]	4/8/04	11:00
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

Preservative: 1 4°C 2 HCL 3 NaOH 4 $Na_2S_2O_3$ 5 HNO_3 6 H_2SO_4 7 Other

Matrix: DW Drinking Water WW Waste Water HWW Hazardous Waste (Water) S Soil/Solid

Bailers 55 Gallon Drums

Pump Truck ☒ Time 2 men .5 each Mileage 37

Approved By: