

**ExxonMobil**  
**Refining & Supply Company**  
Global Remediation

2300 Clayton Road, Suite 1250  
Concord, CA 94520  
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**Gene N. Ortega**  
Territory Manager  
Global Remediation – US Retail

RO 390

March 24, 2003

**ExxonMobil**  
**Refining & Supply**

Mr. Barney Chan  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Room 250  
Alameda, California 94502-6577

**RE: Former Exxon RAS #7-0238/2200 East 12th Street, Oakland, California.**

Dear Mr. Chan:

Attached for your review and comment is a letter report entitled *Quarterly Groundwater Monitoring Report, First Quarter 2003*, dated March 24, 2003, for the above-referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details quarterly groundwater monitoring and sampling activities at the subject site.

If you have any questions or comments, please contact me at (925) 246-8747.

Sincerely,



Gene N. Ortega  
Territory Manager

Attachment: ERI's Quarterly Groundwater Monitoring Report, First Quarter 2003, dated March 24, 2003

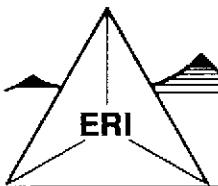
cc: w/ attachment  
Mr. Chuck Headlee, California Regional Water Quality Control Board, San Francisco Bay Region  
Mr. Joseph A. Aldridge, Valero Energy Corporation

w/o attachment  
Ms. Paula A. Sime, Environmental Resolutions, Inc.

**Alameda County**

**MAR 27 2003**

**Environmental Health**



## ENVIRONMENTAL RESOLUTIONS, INC.

March 24, 2003  
ERI 229313.R19

Mr. Gene N. Ortega  
ExxonMobil Oil Corporation  
2300 Clayton Road, Suite 1250  
Concord, California 94520

Subject: Quarterly Groundwater Monitoring Report, First Quarter 2003, Former Exxon Service Station 7-0238, 2200 East 12th Street, Oakland, California.

Mr. Ortega:

At the request of ExxonMobil Oil Corporation (ExxonMobil), Environmental Resolutions, Inc. (ERI) performed first quarter 2003 groundwater monitoring and sampling at the subject site. The purpose of quarterly monitoring and sampling is to evaluate concentrations of dissolved hydrocarbons in groundwater and the groundwater flow direction and hydraulic gradient. The location of the site is shown on the Site Vicinity Map (Plate 1). The configuration of the site and the locations of select site features are shown on the Generalized Site Plan (Plate 2).

### GROUNDWATER MONITORING AND SAMPLING

On January 10, 2003, ERI measured depth to water (DTW) in select wells and collected groundwater samples from these wells for laboratory analysis. Work was performed in accordance with ERI's groundwater sampling protocol (Attachment A). The calculated hydraulic gradient and groundwater flow direction are shown on Plate 2. Historical and recent monitoring data are summarized in Table 1.

### Laboratory Analyses and Results

ERI submitted groundwater samples to Test America Incorporated (Test America), a California state-certified laboratory, under Chain-of-Custody protocol. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl tertiary butyl ether (MTBE) using the methods listed in the notes in Table 1. The laboratory analysis report and Chain-of-Custody record are attached (Attachment B). Cumulative analytical laboratory results of groundwater samples are summarized in Table 1. Analytical results of groundwater samples collected during the recent sampling event are shown on Plate 2.

## FUTURE ACTIVITIES

### **Corrective and Remedial Actions**

ERI conducted a dual-phase extraction (DPE) feasibility test at the subject site in March 2001. The purpose of the test was to evaluate the effectiveness of DPE as a remedial alternative. Test methods and results of the investigation are presented in ERI's *Dual-Phase Extraction Feasibility Test Report and Conceptual Corrective Action Plan* (CAP), dated September 19, 2001. ERI's CAP was approved by the Alameda County Health Care Services Agency (the County) in a letter dated June 3, 2002.

ERI has designed a DPE system to remediate hydrocarbon-impacted groundwater and soil vapors. ERI is currently in the process of obtaining the required permits for system installation and operation. System installation is planned for spring 2003. The DPE system will use a liquid-ring pump (LRP) to extract groundwater and soil vapor from four proposed DPE wells (DPE1 through DPE4). Extracted liquid and vapor streams will be separated by an air-water separator and directed to the liquid and vapor abatement systems. The vapor stream will be abated using a catalytic oxidizer and discharged into the atmosphere under permit from the Bay Area Air Quality Management District (BAAQMD). The liquid stream will be abated with granular activated carbon (GAC) and discharged to the sanitary sewer under permit from the East Bay Municipal Utility District (EBMUD).

### **Quarterly Monitoring and Sampling**

Groundwater monitoring and sampling occurs quarterly at this site. The second quarter 2003 monitoring and sampling event is scheduled for April 2003.

## DOCUMENT DISTRIBUTION

ERI recommends forwarding copies of this report to:

Mr. Barney Chan  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Room 250  
Alameda, California 94502-6577

Mr. Chuck Headlee  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

Mr. Joseph A. Aldridge  
Valero Energy Corporation  
685 West Third Street  
Hanford, California 93230

## LIMITATIONS

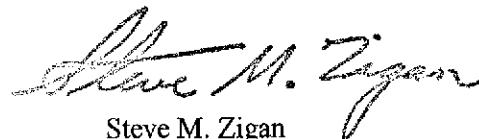
This report was prepared in accordance with generally accepted standards of environmental practice in California at the time this investigation was performed. This report has been prepared for ExxonMobil, and any reliance on this report by third parties shall be at such party's sole risk.

Please call Ms. Paula Sime, ERI's senior staff geologist for this site, at (415) 382-4324, with any questions regarding this report.

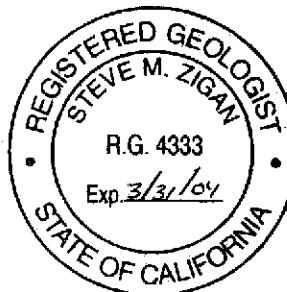
Sincerely,  
Environmental Resolutions, Inc.



Paula Sime  
Senior Staff Geologist



Steve M. Zigan  
R.G. 4333  
H.G. 133



Attachments: Table 1: Cumulative Groundwater Monitoring and Sampling Data

Plate 1: Site Vicinity Map  
Plate 2: Generalized Site Plan

Attachment A: Groundwater Sampling Protocol

Attachment B: Laboratory Analysis Report and Chain-of-Custody Record









**TABLE 1**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
Former Exxon Service Station 7-0238  
2200 East 12th Street  
Oakland, California  
(Page 5 of 8)

Well ID # (TOC)	Sampling Date	SUBJ	DTW <.....feet.....>	Elev.	TPHg	MTBE	B µg/L.	T	E	X	Oxygenates
MW9G (cont.)	02/24/97	NLPH	5.30	4.65	<50	240	<0.5	0.57	<0.5	0.62	---
(9.95)	03/16/98	---	---	---	---	---	---	---	---	---	---
	04/21/98	---	---	---	---	---	---	---	---	---	---
(12.99)	07/22/98	---	---	---	---	---	---	---	---	---	---
	12/22/98	NLPH	5.28	7.71	<50	1,100	<0.5	<0.5	<0.5	<0.5	---
	02/26/99	NLPH	5.31	7.68	<50	50	<0.5	<0.5	<0.5	<0.5	---
	05/18/99	NLPH	5.18	7.81	<1,000	3,990	<10	<10	<10	<10	---
	08/03/99	NLPH	6.00	6.99	<50	1,340	<0.5	<0.5	<0.5	<0.5	---
	12/03/99	NLPH	5.27	7.72	<50	<2	<0.5	<0.5	<0.5	0.55 c	---
	02/29/00	NLPH	4.60	8.39	<50	7,900	<0.5	<0.5	<0.5	<0.5	---
	05/18/00	NLPH	5.16	7.83	<50	2,400	<0.5	<0.5	<0.5	<0.5	---
	07/24/00	NLPH	5.20	7.79	<50	1,000	<0.5	<0.5	<0.5	<0.5	---
	10/09/00	NLPH	5.26	7.73	<50	180	<0.5	<0.5	<0.5	<0.5	---
	01/10/01	NLPH	5.18	7.81	<50	1,200	<0.5	<0.5	<0.5	<0.5	---
	04/10/01	NLPH	5.08	7.91	<50	9,100	<0.5	<0.5	<0.5	<0.5	---
	07/12/01	NLPH	--	--	<50	3,000	<0.5	<0.5	<0.5	<0.5	---
	8/17/01 e	---	---	---	---	---	---	---	---	---	---
	10/11/01	NLPH	5.48	7.51	<50	1,600	<0.5	<0.5	<0.5	<0.5	---
(12.98)	Nov-01	Well surveyed in compliance with AB2886 requirements.									
	01/11/02	NLPH	4.97	8.01	419 f	945 f	<0.50	<0.50	<0.50	<0.50	---
	04/12/02	NLPH	5.12	7.86	10,700	11,000	<0.50	<0.50	<0.50	<0.50	---
	07/12/02	NLPH	5.31	7.67	2,310	3,140	<0.5	<0.5	<0.5	<0.5	---
	10/11/02	NLPH	5.39	7.59	1,630	2,040/2,090 a	<0.5	<0.5	<0.5	<0.5	ND
	01/10/03	NLPH	4.90	8.08	367	566	<0.5	<0.5	<0.5	<0.5	---
MW9H	11/02/95	NLPH	8.40	0.18	<50	<10	<0.5	<0.5	<0.5	<0.5	---
(8.58)	04/26/96	NLPH	8.05	0.53	---	---	---	---	---	---	---
	08/22/96	NLPH	8.17	0.41	---	---	---	---	---	---	---
	02/24/97	---	---	---	---	---	---	---	---	---	---
	03/16/98	---	---	---	---	---	---	---	---	---	---
	04/21/98	---	---	---	---	---	---	---	---	---	---
(11.61)	07/22/98	---	---	---	---	---	---	---	---	---	---
	12/22/98	NLPH	7.81	3.80	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---
	02/26/99	NLPH	7.61	4.00	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---



**TABLE 1**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**  
 Former Exxon Service Station 7-0238  
 2200 East 12th Street  
 Oakland, California  
 (Page 7 of 8)

Well ID # (TOC)	Sampling Date	SUBJ	DTW <.....feet.....>	Elev.	TPHg	MTBE	B µg/L.	T	E	X	Oxygenates
MW9I (cont.)	04/10/01	NLPH	4.84	8.30	<50	4,800	<0.5	<0.5	<0.5	<0.5	---
(13.14)	07/12/01	NLPH	---	---	<50	8,400	<0.5	<0.5	<0.5	<0.5	---
	08/17/01	---	6.49	6.65	---	---	---	---	---	---	---
	10/11/01	NLPH	5.64	7.50	<250	38,000	<2.5	<2.5	<2.5	<2.5	---
(13.13)	Nov-01	Well surveyed in compliance with AB2886 requirements.									
	01/11/02	NLPH	4.80	8.33	1,330 f	5,400 f	4.80 f	<0.50	<0.50	<0.50	---
	04/12/02	NLPH	5.22	7.91	1,460	1,480	<0.50	<0.50	<0.50	<0.50	---
	07/12/02	NLPH	5.50	7.63	4,460	6,490	<0.5	<0.5	<0.5	<0.5	---
	10/11/02	NLPH	5.35	7.78	31,300	37,700/51,000 a	<5.0	<5.0	<5.0	<5.0	24.1 h
	01/10/03	NLPH	4.75	8.38	4,820	6,180	9.4	0.7	1.1	1.3	---

**TABLE 1**  
**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA**

Former Exxon Service Station 7-0238  
2200 East 12th Street  
Oakland, California  
(Page 8 of 8)

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Notes:

SUBJ	=	Results of subjective evaluation.
NLPH	=	No liquid-phase hydrocarbons present in well.
TOC	=	Elevation of top of well casing; relative to mean sea level.
DTW	=	Depth to water.
Elev.	=	Elevation of groundwater surface; relative to mean sea level.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8021B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
Oxygenates	=	1,2-dibromoethane, 1,2-dichloroethane, di-isopropyl ether, tertiary butyl alcohol, tertiary amyl methyl ether, and tertiary butyl ethyl ether analyzed using Method 8260B.
<	=	Less than the indicated detection limit shown by the laboratory.
ND	=	Not detected at or above the laboratory reporting limit. See laboratory analytical report for specific reporting limits.
---	=	Not measured or sampled.
µg/L	=	Micrograms per liter.
a	=	MTBE analyzed using EPA Method 8260B.
b	=	Miscalculation in field. Field technician may have inadvertently monitored and sampled the wrong well. Resampled 5/27/99.
c	=	Analyte detected in the trip blank and/or bailer blank.
d	=	Due to measurement error during initial sampling event, DTW was re-measured on August 17, 2001. No samples were taken.
e	=	Well inaccessible due to uncontrollable traffic conditions.
f	=	Samples collected after fourth quarter 2001 analyzed by Test America, Inc. Reported concentrations may be affected by differing laboratory quantitation methods.
g	=	Sample erroneously labeled MA9B on Chain-of-Custody form and laboratory report.
h	=	Tertiary amyl methyl ether.
i	=	Insufficient sample volume to perform oxygenate analyses.



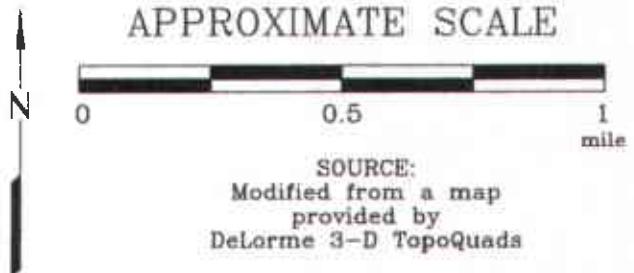
FN 2293TOPO

### EXPLANATION



1/2-mile radius circle

### APPROXIMATE SCALE



SOURCE:  
Modified from a map  
provided by  
DeLorme 3-D TopoQuads



### SITE VICINITY MAP

FORMER EXXON SERVICE STATION 7-0238  
2200 East 12th Street  
Oakland, California

PROJECT NO.

2293

PLATE

1

Analyte Concentrations in ug/L

Sampled January 10, 2003

40,600 Total Petroleum Hydrocarbons

as gasoline

55,500 Methyl Tertiary Butyl Ether

<0.5 Benzene

<0.5 Toluene

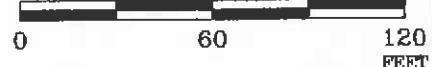
<0.5 Ethylbenzene

<0.5 Total Xylenes

< Less Than the Stated Laboratory  
Reporting Limit  
ug/L Micrograms per Liter



APPROXIMATE SCALE



SOURCE:  
Modified from a map  
provided by  
Morrow Surveying

FN: 22930005

EXPLANATION

MW9I

Groundwater Monitoring Well



**GENERALIZED SITE PLAN**  
FORMER EXXON SERVICE STATION 7-0238  
2200 East 12th Street  
Oakland, California

PROJECT NO.

2293

PLATE

2  
Feb. 7, 2003

**ATTACHMENT A**

**GROUNDWATER SAMPLING PROTOCOL**

## GROUNDWATER SAMPLING PROTOCOL

The static water level and separate-phase product level, if present, in each well that contains water and/or separate-phase product are measured with an ORS Interface Probe, which is accurate to the nearest 0.01 foot. To calculate groundwater elevations and evaluate groundwater gradient, depth to water (DTW) levels are subtracted from top of casing elevations.

Groundwater samples collected for subjective evaluation are collected by gently lowering approximately half the length of a clean Teflon® or polypropylene bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples are checked for measurable free-phase hydrocarbons or sheen. If appropriate, free-phase hydrocarbons are removed from the well.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until a minimum of three well casing volumes is purged and stabilization of the temperature, pH, and conductivity is obtained. Water samples from the wells that do not obtain stability of the temperature, pH, and conductivity are considered to be "grab samples". The quantity of water purged from each well is calculated as follows:

$$1 \text{ well casing volume} = \pi r^2 h (7.48) \text{ where:}$$

r	=	radius of the well casing in feet.
h	=	column of water in the well in feet (depth to bottom - depth to water)
7.48	=	conversion constant from cubic feet to gallons
$\pi$	=	ratio of the circumference of a circle to its diameter

Gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

After purging, each well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples". Water samples are collected with a new, disposable Teflon® or polypropylene bailer. The groundwater is carefully poured into selected sample containers (40-milliliter (ml) glass vials, 1,000 ml glass amber bottles, etc.), which are filled so as to produce a positive meniscus.

Depending on the required analysis, each sample container is preserved with hydrochloric acid, nitric acid, etc., or it is preservative free. The type of preservative used for each sample is specified on the chain of custody form.

Each vial and glass amber bottle is sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace, which would allow volatilization to occur. The samples are promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain-of-Custody Record, to a California state-certified laboratory.

**ATTACHMENT B**

**LABORATORY ANALYSIS REPORT  
AND CHAIN-OF-CUSTODY RECORD**

# TestAmerica

INCORPORATED

REPORT  
JAN 22 2003

1/21/03

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project 229313X EXXONMOBIL 7-0238. The Laboratory Project number is 316336.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report.

Page 1

Sample Identification	Lab Number	Collection Date
MW9A	03-A4682	1/10/03
MA9B	03-A4683	1/10/03
MW9C	03-A4684	1/10/03
MW9D	03-A4685	1/10/03
MW9F	03-A4686	1/10/03
MW9G	03-A4687	1/10/03
MW9H	03-A4688	1/10/03
MW9I	03-A4689	1/10/03

These results relate only to the items tested.  
This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

*Roxanne L Connor*

Report Date: 1/21/03

Paul E. Lane, Jr., Lab Director  
Michael H. Dunn, M.S., Technical Director  
Johnny A. Mitchell, Dir. Technical Serv.  
Eric S. Smith, Assistant Technical Director  
Roxanne L. Connor, Technical Services

Gail A. Lage, Technical Serv.  
Glenn L. Norton, Technical Serv.  
Kelly S. Comstock, Technical Serv.  
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: 01168CA

# TestAmerica

INCORPORATED

## ANALYTICAL REPORT

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

Lab Number: 03-A4682  
Sample ID: MW9A  
Sample Type: Water  
Site ID: 7-0238

Project: 229313X  
Project Name: EXXONMOBIL 7-0238  
Sampler: MARTY MORELLI

Date Collected: 1/10/03  
Time Collected: 14:24  
Date Received: 1/14/03  
Time Received: 9:00  
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Date	Analysis Time	Analyst	Method	Batch
<hr/>									
*ORGANIC PARAMETERS*									
Benzene	103.	ug/L	5.0	10.0	1/16/03	18:32	D.Ramey	8021B	8573
Ethylbenzene	ND	ug/L	5.0	10.0	1/16/03	18:32	D.Ramey	8021B	8573
Toluene	15.0	ug/L	5.0	10.0	1/16/03	18:32	D.Ramey	8021B	8573
Xylenes (Total)	13.0	ug/L	5.0	10.0	1/16/03	18:32	D.Ramey	8021B	8573
Methyl-t-butylether	51900	ug/L	250.	500.	1/18/03	3:28	D.Ramey	8021B	8582
TPH (Gasoline Range)	38800	ug/L	25000	500.	1/18/03	3:28	D.Ramey	8015B	8582

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	105.	69. - 132.

### LABORATORY COMMENTS:

- ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

# TestAmerica

INCORPORATED

## ANALYTICAL REPORT

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

Lab Number: 03-A4683  
Sample ID: MA9B  
Sample Type: Water  
Site ID: 7-0238

Project: 229313X  
Project Name: EXXONMOBIL 7-0238  
Sampler: MARTY MORELLI

Date Collected: 1/10/03  
Time Collected: 14:31  
Date Received: 1/14/03  
Time Received: 9:00  
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Date	Analysis Time	Analyst	Method	Batch
<hr/>									
*ORGANIC PARAMETERS*									
Benzene	118.	ug/L	0.5	1.0	1/15/03	19:34	D.Ramey	8021B	4890
Ethylbenzene	6.5	ug/L	0.5	1.0	1/15/03	19:34	D.Ramey	8021B	4890
Toluene	1.0	ug/L	0.5	1.0	1/15/03	19:34	D.Ramey	8021B	4890
Xylenes (Total)	3.6	ug/L	0.5	1.0	1/15/03	19:34	D.Ramey	8021B	4890
Methyl-t-butylether	18600	ug/L	100.	200.	1/16/03	19:36	D.Ramey	8021B	8573
TPH (Gasoline Range)	14900	ug/L	10000	200.	1/16/03	19:36	D.Ramey	8015B	8573

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	103.	69. - 132.

### LABORATORY COMMENTS:

- ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

# TestAmerica

INCORPORATED

## ANALYTICAL REPORT

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

Lab Number: 03-A4684  
Sample ID: MW9C  
Sample Type: Water  
Site ID: 7-0238

Project: 229313X  
Project Name: EXXONMOBIL 7-0238  
Sampler: MARTY MORELLI

Date Collected: 1/10/03  
Time Collected: 14:49  
Date Received: 1/14/03  
Time Received: 9:00  
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
*ORGANIC PARAMETERS*									
Benzene	ND	ug/L	0.5	1.0	1/16/03	11:39	D.Ramey	8021B	6869
Ethylbenzene	ND	ug/L	0.5	1.0	1/16/03	11:39	D.Ramey	8021B	6869
Toluene	ND	ug/L	0.5	1.0	1/16/03	11:39	D.Ramey	8021B	6869
Xylenes (Total)	ND	ug/L	0.5	1.0	1/16/03	11:39	D.Ramey	8021B	6869
Methyl-t-butylether	55500	ug/L	250.	500.	1/18/03	14:04	D.Ramey	8021B	8149
TPH (Gasoline Range)	40600	ug/L	2500	50.0	1/18/03	5:35	D.Ramey	8015B	8146

Surrogate	% Recovery	Target Range
-----	-----	-----
BTEX/GRO Surr., a,a,a-TFT	104.	69. - 132.

### LABORATORY COMMENTS:

- ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

# TestAmerica

INCORPORATED

## ANALYTICAL REPORT

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

Lab Number: 03-A4685  
Sample ID: MW9D  
Sample Type: Water  
Site ID: 7-0238

Project: 229313X  
Project Name: EXXONMOBIL 7-0238  
Sampler: MARTY MORELLI

Date Collected: 1/10/03  
Time Collected: 14:11  
Date Received: 1/14/03  
Time Received: 9:00  
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Benzene	4.1	ug/L	0.5	1.0	1/18/03	6:06	D.Ramey	8021B	8146
Ethylbenzene	ND	ug/L	0.5	1.0	1/18/03	6:06	D.Ramey	8021B	8146
Toluene	ND	ug/L	0.5	1.0	1/18/03	6:06	D.Ramey	8021B	8146
Xylenes (Total)	ND	ug/L	0.5	1.0	1/18/03	6:06	D.Ramey	8021B	8146
Methyl-t-butylether	132.	ug/L	0.5	1.0	1/18/03	6:06	D.Ramey	8021B	8146
TPH (Gasoline Range)	386.	ug/L	50.0	1.0	1/18/03	6:06	D.Ramey	8015B	8146

Surrogate	% Recovery	Target Range
BTEX/GRO Surrogate, a,a,a-TFT	108.	69. - 132.

### LABORATORY COMMENTS:

ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

# TestAmerica

INCORPORATED

## ANALYTICAL REPORT

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

Lab Number: 03-A4686  
Sample ID: MW9F  
Sample Type: Water  
Site ID: 7-0238

Project: 229313X  
Project Name: EXXONMOBIL 7-0238  
Sampler: MARTY MORELLI

Date Collected: 1/10/03  
Time Collected: 11:41  
Date Received: 1/14/03  
Time Received: 9:00  
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
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\*ORGANIC PARAMETERS\*

Benzene	ND	ug/L	0.5	1.0	1/16/03	15:28	D.Ramey	8021B	6869
Ethylbenzene	ND	ug/L	0.5	1.0	1/16/03	15:28	D.Ramey	8021B	6869
Toluene	ND	ug/L	0.5	1.0	1/16/03	15:28	D.Ramey	8021B	6869
Xylenes (Total)	ND	ug/L	0.5	1.0	1/16/03	15:28	D.Ramey	8021B	6869
Methyl-t-butylether	45.5	ug/L	0.5	1.0	1/16/03	15:28	D.Ramey	8021B	6869
TPH (Gasoline Range)	ND	ug/L	50.0	1.0	1/16/03	15:28	D.Ramey	8015B	6869

Surrogate	% Recovery	Target Range
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BTEX/GRO Surr., a,a,a-TFT 104. 69. - 132.

LABORATORY COMMENTS:

ND = Not detected at the report limit.

B = Analyte was detected in the method blank.

J = Estimated Value below Report Limit.

E = Estimated Value above the calibration limit of the instrument.

# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

# TestAmerica

INCORPORATED

## ANALYTICAL REPORT

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

Lab Number: 03-A4687  
Sample ID: MW9G  
Sample Type: Water  
Site ID: 7-0238

Project: 229313X  
Project Name: EXXONMOBIL 7-0238  
Sampler: MARTY MORELLI

Date Collected: 1/10/03  
Time Collected: 11:17  
Date Received: 1/14/03  
Time Received: 9:00  
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Date	Analysis Time	Analyst	Method	Batch
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<b>*ORGANIC PARAMETERS*</b>									
Benzene	ND	ug/L	0.5	1.0	1/16/03	16:00	D.Ramey	8021B	6869
Ethylbenzene	ND	ug/L	0.5	1.0	1/16/03	16:00	D.Ramey	8021B	6869
Toluene	ND	ug/L	0.5	1.0	1/16/03	16:00	D.Ramey	8021B	6869
Xylenes (Total)	ND	ug/L	0.5	1.0	1/16/03	16:00	D.Ramey	8021B	6869
Methyl-t-butylether	566.	ug/L	2.5	5.0	1/18/03	6:37	D.Ramey	8021B	8146
TPH (Gasoline Range)	367.	ug/L	50.0	1.0	1/16/03	16:00	D.Ramey	8015B	6869

Surrogate	% Recovery	Target Range
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BTEX/GRO Surr., a,a,a-TFT	105.	69. - 132.

### LABORATORY COMMENTS:

- ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

# TestAmerica

INCORPORATED

## ANALYTICAL REPORT

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

Lab Number: 03-A4688  
Sample ID: MW9H  
Sample Type: Water  
Site ID: 7-0238

Project: 229313X  
Project Name: EXXONMOBIL 7-0238  
Sampler: MARTY MORELLI

Date Collected: 1/10/03  
Time Collected: 12:17  
Date Received: 1/14/03  
Time Received: 9:00  
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
<hr/>									
*ORGANIC PARAMETERS*									
Benzene	0.5	ug/L	0.5	1.0	1/16/03	16:35	D.Ramey	8021B	6869
Ethylbenzene	0.6	ug/L	0.5	1.0	1/16/03	16:35	D.Ramey	8021B	6869
Toluene	0.8	ug/L	0.5	1.0	1/16/03	16:35	D.Ramey	8021B	6869
Xylenes (Total)	1.8	ug/L	0.5	1.0	1/16/03	16:35	D.Ramey	8021B	6869
Methyl-t-butylether	16.0	ug/L	0.5	1.0	1/16/03	16:35	D.Ramey	8021B	6869
TPH (Gasoline Range)	ND	ug/L	50.0	1.0	1/16/03	16:35	D.Ramey	8015B	6869

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	105.	69. - 132.

### LABORATORY COMMENTS:

ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

# TestAmerica

INCORPORATED

## ANALYTICAL REPORT

ERI - NORTHERN CA 3876  
PAULA SIME  
73 DIGITAL DRIVE, SUITE 100  
NOVATO, CA 94949

Lab Number: 03-A4689  
Sample ID: MW9I  
Sample Type: Water  
Site ID: 7-0238

Project: 229313X  
Project Name: EXXONMOBIL 7-0238  
Sampler: MARTY MORELLI

Date Collected: 1/10/03  
Time Collected: 14:41  
Date Received: 1/14/03  
Time Received: 9:00  
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Date	Analysis Time	Analyst	Method	Batch
<hr/>									
*ORGANIC PARAMETERS*									
Benzene	9.4	ug/L	0.5	1.0	1/16/03	17:18	D.Ramey	8021B	6869
Ethylbenzene	1.1	ug/L	0.5	1.0	1/16/03	17:18	D.Ramey	8021B	6869
Toluene	0.7	ug/L	0.5	1.0	1/16/03	17:18	D.Ramey	8021B	6869
Xylenes (Total)	1.3	ug/L	0.5	1.0	1/16/03	17:18	D.Ramey	8021B	6869
Methyl-t-butylether	6180	ug/L	25.0	50.0	1/18/03	14:35	D.Ramey	8021B	8149
TPH (Gasoline Range)	4820	ug/L	1000	20.0	1/18/03	8:11	D.Ramey	8015B	8146

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TPT	104.	69. - 132.

### LABORATORY COMMENTS:

- ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

# TestAmerica

INCORPORATED

## PROJECT QUALITY CONTROL DATA

Project Number: 229313X

Project Name: EXXONMOBIL 7-0238

Page: 1

Laboratory Receipt Date: 1/14/03

### Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for MS/MSD analysis for that method and the method requirements for MS/MSD analysis could not be met.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C.	Batch	Spike Sample
<b>**UST ANALYSIS**</b>									
Benzene	mg/l	< 0.0005	0.0516	0.0500	103	74. - 129.	6869	03-A4687	
Benzene	mg/l	< 0.0005	0.0446	0.0500	89	74. - 129.	8573	BLANK	
Benzene	mg/l	< 0.0005	0.0418	0.0500	84	74. - 129.	8146	BLANK	
Toluene	mg/l	< 0.0005	0.0520	0.0500	104	74. - 128.	6869	03-A4687	
Toluene	mg/l	< 0.0005	0.0444	0.0500	89	74. - 128.	8573	BLANK	
Toluene	mg/l	< 0.0005	0.0418	0.0500	84	74. - 128.	8146	BLANK	
Ethylbenzene	mg/l	< 0.0005	0.0512	0.0500	102	75. - 128.	6869	03-A4687	
Ethylbenzene	mg/l	< 0.0005	0.0443	0.0500	89	75. - 128.	8573	BLANK	
Ethylbenzene	mg/l	< 0.0005	0.0414	0.0500	83	75. - 128.	8146	BLANK	
Xylenes (Total)	mg/l	< 0.0005	0.0991	0.100	99	72. - 126.	6869	03-A4687	
Xylenes (Total)	mg/l	< 0.0005	0.0902	0.100	90	72. - 126.	8573	BLANK	
Xylenes (Total)	mg/l	< 0.0005	0.0845	0.100	84	72. - 126.	8146	BLANK	
Methyl-t-butylether	mg/l	< 0.0005	0.0429	0.0500	86	64. - 133.	8573	BLANK	
Methyl-t-butylether	mg/l	< 0.0005	0.0410	0.0500	82	64. - 133.	8146	BLANK	
TPH (Gasoline Range)	mg/l	< 0.0500	0.966	1.00	97	59. - 128.	6869	blank	
TPH (Gasoline Range)	mg/l	< 0.0500	0.995	1.00	100	59. - 128.	8573	BLANK	
TPH (Gasoline Range)	mg/l	< 0.0500	0.979	1.00	98	59. - 128.	8146	BLANK	
BTEX/GRO Surr., a,a,a-TFT	% Recovery				100	69 - 132	6869		
BTEX/GRO Surr., a,a,a-TFT	% Recovery				99	69 - 132	8573		
BTEX/GRO Surr., a,a,a-TFT	% Recovery				99	69 - 132	8146		

### Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C.	Batch
<b>**UST PARAMETERS**</b>							
Benzene	mg/l	0.0786	0.0783	0.38	15.	4890	

Project QC continued . . .

# TestAmerica

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**PROJECT QUALITY CONTROL DATA**

Project Number: 229313X

Project Name: EXXONMOBIL 7-0238

Page: 2

Laboratory Receipt Date: 1/14/03

**Matrix Spike Duplicate**

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
Benzene	mg/l	0.0516	0.0523	1.35	15.	6869
Benzene	mg/l	0.0446	0.0469	5.03	15.	8573
Benzene	mg/l	0.0418	0.0437	4.44	15.	8146
Toluene	mg/l	0.0304	0.0309	1.63	15.	4890
Toluene	mg/l	0.0520	0.0531	2.09	15.	6869
Toluene	mg/l	0.0444	0.0465	4.62	15.	8573
Toluene	mg/l	0.0418	0.0437	4.44	15.	8146
Ethylbenzene	mg/l	0.0238	0.0240	0.84	15.	4890
Ethylbenzene	mg/l	0.0512	0.0528	3.08	15.	6869
Ethylbenzene	mg/l	0.0443	0.0465	4.85	15.	8573
Ethylbenzene	mg/l	0.0414	0.0432	4.26	15.	8146
Xylenes (Total)	mg/l	0.0539	0.0545	1.11	19.	4890
Xylenes (Total)	mg/l	0.0991	0.101	1.90	19.	6869
Xylenes (Total)	mg/l	0.0902	0.0940	4.13	19.	8573
Xylenes (Total)	mg/l	0.0845	0.0883	4.40	19.	8146
Methyl-t-butylether	mg/l	0.0429	0.0436	1.62	23.	8573
Methyl-t-butylether	mg/l	0.0410	0.0415	1.21	23.	8146
TPH (Gasoline Range)	mg/l	0.966	0.945	2.20	22.	6869
TPH (Gasoline Range)	mg/l	0.995	0.928	6.97	22.	8573
TPH (Gasoline Range)	mg/l	0.979	0.959	2.06	22.	8146
BTEX/GRO Surr., a,a,a-TFT	% Recovery	100.				6869
BTEX/GRO Surr., a,a,a-TFT	% Recovery	97.				8573
BTEX/GRO Surr., a,a,a-TFT	% Recovery	98.				8146

**Laboratory Control Data**

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch

**\*\*UST PARAMETERS\*\***

Benzene	mg/l	0.100	0.0854	85	74 - 124	4890
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Project QC continued . . .

# TestAmerica

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**PROJECT QUALITY CONTROL DATA**

Project Number: 229313X

Project Name: EXXONMOBIL 7-0238

Page: 3

Laboratory Receipt Date: 1/14/03

**Laboratory Control Data**

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
Benzene	mg/l	0.100	0.0899	90	74 - 124	6869
Benzene	mg/l	0.100	0.0815	82	74 - 124	8573
Benzene	mg/l	0.100	0.0831	83	74 - 124	8146
Toluene	mg/l	0.100	0.0835	84	74 - 121	4890
Toluene	mg/l	0.100	0.0908	91	74 - 121	6869
Toluene	mg/l	0.100	0.0798	80	74 - 121	8573
Toluene	mg/l	0.100	0.0815	82	74 - 121	8146
Ethylbenzene	mg/l	0.100	0.0834	83	75 - 123	4890
Ethylbenzene	mg/l	0.100	0.0900	90	75 - 123	6869
Ethylbenzene	mg/l	0.100	0.0798	80	75 - 123	8573
Ethylbenzene	mg/l	0.100	0.0813	81	75 - 123	8146
Xylenes (Total)	mg/l	0.200	0.168	84	72 - 120	4890
Xylenes (Total)	mg/l	0.200	0.175	88	72 - 120	6869
Xylenes (Total)	mg/l	0.200	0.161	80	72 - 120	8573
Xylenes (Total)	mg/l	0.200	0.163	82	72 - 120	8146
Methyl-t-butylether	mg/l	0.100	0.0885	88	64 - 128	6869
Methyl-t-butylether	mg/l	0.100	0.0756	76	64 - 128	8573
Methyl-t-butylether	mg/l	0.100	0.0757	76	64 - 128	8146
Methyl-t-butylether	mg/l	0.100	0.0722	72	64 - 128	8149
Methyl-t-butylether	mg/l	0.100	0.0757	76	64 - 128	8582
TPH (Gasoline Range)	mg/l	1.00	0.966	97	61 - 139	6869
TPH (Gasoline Range)	mg/l	1.00	0.995	100	61 - 139	8573
TPH (Gasoline Range)	mg/l	1.00	0.979	98	61 - 139	8146
TPH (Gasoline Range)	mg/l	1.00	0.979	98	61 - 139	8582
BTEX/GRO Surr., a,a,a-TFT	% Recovery			101	69 - 132	6869
BTEX/GRO Surr., a,a,a-TFT	% Recovery			91	69 - 132	8573
BTEX/GRO Surr., a,a,a-TFT	% Recovery			91	69 - 132	8146
BTEX/GRO Surr., a,a,a-TFT	% Recovery			92	69 - 132	8149
BTEX/GRO Surr., a,a,a-TFT	% Recovery			91	69 - 132	8582

Project QC continued . . .

# TestAmerica

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**PROJECT QUALITY CONTROL DATA****Project Number:** 229313X**Project Name:** EXXONMOBIL 7-0238**Page:** 4**Laboratory Receipt Date:** 1/14/03**Blank Data**

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
<hr/>					
**UST PARAMETERS**					
Benzene	< 0.0005	mg/l	4890	1/15/03	18:31
Benzene	< 0.0005	mg/l	6869	1/15/03	18:16
Benzene	< 0.0005	mg/l	8573	1/16/03	18:00
Benzene	< 0.0005	mg/l	8146	1/18/03	2:57
Toluene	< 0.0005	mg/l	4890	1/15/03	18:31
Toluene	< 0.0005	mg/l	6869	1/15/03	18:16
Toluene	< 0.0005	mg/l	8573	1/16/03	18:00
Toluene	< 0.0005	mg/l	8146	1/18/03	2:57
Ethylbenzene	< 0.0005	mg/l	4890	1/15/03	18:31
Ethylbenzene	< 0.0005	mg/l	6869	1/15/03	18:16
Ethylbenzene	< 0.0005	mg/l	8573	1/16/03	18:00
Ethylbenzene	< 0.0005	mg/l	8146	1/18/03	2:57
Xylenes (Total)	< 0.0005	mg/l	4890	1/15/03	18:31
Xylenes (Total)	< 0.0005	mg/l	6869	1/15/03	18:16
Xylenes (Total)	< 0.0005	mg/l	8573	1/16/03	18:00
Xylenes (Total)	< 0.0005	mg/l	8146	1/18/03	2:57
Methyl-t-butylether	< 0.0005	mg/l	6869	1/15/03	18:16
Methyl-t-butylether	< 0.0005	mg/l	8573	1/16/03	18:00
Methyl-t-butylether	< 0.0005	mg/l	8146	1/18/03	2:57
Methyl-t-butylether	< 0.0005	mg/l	8149	1/18/03	7:40
Methyl-t-butylether	< 0.0005	mg/l	8582	1/18/03	2:57
TPH (Gasoline Range)	< 0.0500	mg/l	6869	1/15/03	18:16
TPH (Gasoline Range)	< 0.0500	mg/l	8573	1/16/03	18:00
TPH (Gasoline Range)	< 0.0500	mg/l	8146	1/18/03	2:57
TPH (Gasoline Range)	< 0.0500	mg/l	8582	1/18/03	2:57

Project QC continued . . .

# TestAmerica

INCORPORATED

**PROJECT QUALITY CONTROL DATA**

Project Number: 229313X

Project Name: EXXONMOBIL 7-0238

Page: 5

Laboratory Receipt Date: 1/14/03

## Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
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**\*\*UST PARAMETERS\*\***

BTEX/GRO Surr., a,a,a-TFT	105.	% Recovery	6869	1/15/03	18:16
BTEX/GRO Surr., a,a,a-TFT	103.	% Recovery	8573	1/16/03	18:00
BTEX/GRO Surr., a,a,a-TFT	104.	% Recovery	8146	1/18/03	2:57
BTEX/GRO Surr., a,a,a-TFT	105.	% Recovery	8149	1/18/03	7:40
BTEX/GRO Surr., a,a,a-TFT	104.	% Recovery	8582	1/18/03	2:57

# = Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 316336

# TESTAMERICA, INC.-NASHVILLE

## COOLER RECEIPT FORM

Client: ER1 (3076) BC# 316336

Cooler Received On: 1/14/03 And Opened On: 1/14/03 By: Ben Wright

  
(Signature)

1. Temperature of Cooler when opened 20 Degrees Celsius
2. Were custody seals on outside of cooler?.....  YES  NO  N/A
  - a. If yes, how many, what kind and where: 1 - TAPE FRONT
  - b. Were the seals intact, signed, and dated correctly?.....  YES  NO  N/A
3. Were custody seals on containers and intact?.....  NO  YES  N/A
4. Were custody papers inside cooler?.....  YES  NO  N/A
5. Were custody papers properly filled out (ink,signed,etc)?.....  YES  NO  N/A
6. Did you sign the custody papers in the appropriate place?.....  YES  NO  N/A
7. What kind of packing material used? Bubblewrap Peanuts Vermiculite Other None
8. Was sufficient ice used (if appropriate)?.....  YES  NO  N/A
9. Did all bottles arrive in good condition( unbroken)?.....  YES  NO  N/A
10. Were all bottle labels complete (#,date,signed,pres,etc)?.....  YES  NO  N/A
11. Did all bottle labels and tags agree with custody papers?.....  YES  NO  N/A
12. Were correct bottles used for the analysis requested?.....  YES  NO  N/A
13. a. Were VOA vials received?.....  YES  NO  N/A  
b. Was there any observable head space present in any VOA vial?...  NO  YES  N/A
14. Was sufficient amount of sample sent in each bottle?.....  YES  NO  N/A
15. Were correct preservatives used?.....  YES  NO  N/A  
If not, record standard ID of preservative used here \_\_\_\_\_
16. Was residual chlorine present?.....  NO  YES  N/A
17. Corrective action taken, if necessary:

See attached for resolution

