Kennedy/Jenks Consultants

Engineers & Scientists

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22 October 2001

Mr. Robert Neal
Environmental Manager
Owens Brockway
3600 Alameda Avenue
Oakland, CA 94601

Subject: Groundwater Monitoring Data from Well MW-20
Owens Brockway, 3600 Alameda Avenue, Oakland, California
K/J 950007.30

Dear Bob:

In response to your request, Kennedy/Jenks measured the water level elevation and collected a groundwater sample from the recently installed Monitoring Well MW-20 at the Owens Brockway facility located at 3600 Alameda Avenue in Oakland. The sampling event was performed on 19 September 2001.

The samples were collected using a new disposable bailer. Three well volumes were purged from the well prior to collecting the groundwater sample. Purge water from the sampling event was discharged to the onsite oil/water separator. A copy of the purge and sample form is attached.

The sample was submitted under chain-of-custody to Curtis & Tompkins in Berkeley for analysis. The sample was analyzed for purgeable and extractable total petroleum hydrocarbons using EPA Method 8015M and for BTEX using EPA Method 8021B.

The analytical results are presented in the attached table, which also includes historical results from sampling of the onsite groundwater monitoring wells. No analytes were detected in the trip blank or method blank. Copies of the analytical data reports are attached.

Monitoring Well MW-20 was constructed and initially sampled in December 2000. The analytical results from this fourth sampling event are consistent with those from the prior three sampling events.

If you have any questions regarding this sampling event, or the analytical results, please call me at (415) 243-2534.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Meredith G. Durant

Meredith G. Durant, P.E.
Project Manager

Attachments

Table 1: Summary of Groundwater Analytical Results

Well Number	Date Sampled	TPPH [a] (µg/l) [h]	TEPH [b] (mg/l)	O&G [c] (mg/l)	B [d] (µg/l)	T [e] (µg/l)	E [f] (µg/l)	X [g] (µg/l)
MW-1	9/23/86	<0.01 [i]	NA [j]	25	<10	<10	NA	<10
	4/9/87	BDL [k]	NA	NA	BDL	BDL	NA	BDL
	9/16/87 [l]	–	–	–	–	–	–	–
	12/1/87 [l]	–	–	–	–	–	–	–
	3/7/88 [l]	–	–	–	–	–	–	–
	6/8/88 [l]	–	–	–	–	–	–	–
	9/14/88 [l]	–	–	–	–	–	–	–
	9/16/97	<50	0.190	<0.300	<0.5	<0.5	<0.5	<0.5
	11/2/98	<50	0.160	NA	<0.5	<0.5	<0.5	<0.5
MW-2	4/9/87 [m]	–	–	–	–	–	–	–
	9/16/87 [m]	–	–	–	–	–	–	–
	12/1/87 [m]	–	–	–	–	–	–	–
	3/7/88 [l]	–	–	–	–	–	–	–
	6/8/88 [l]	–	–	–	–	–	–	–
	9/14/88 [l]	–	–	–	–	–	–	–
	9/16/97 [m]	–	–	–	–	–	–	–
	11/2/98 [m]	–	–	–	–	–	–	–
MW-3 [n]	9/23/86	<10	NA	18	<10	<10	NA	<10
	4/9/87	370	NA	NA	BDL	BDL	NA	BDL
	9/16/87 [m]	–	–	–	–	–	–	–
	12/1/87 [m]	–	–	–	–	–	–	–
	3/7/88	NA	190	NA	NA	NA	NA	NA
	6/9/88	NA	16	NA	NA	NA	NA	NA
	9/14/88 [m]	–	–	–	–	–	–	–
MW-4	10/3/86	20	NA	7.2	<5	<5	NA	<5
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	1.3	0.66	NA	BDL	BDL	NA	BDL
	12/1/87	BDL	0.100	NA	BDL	BDL	NA	8.9
	3/7/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	6/8/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	9/14/88	BDL	0.100	NA	BDL	BDL	NA	BDL
MW-5	10/3/86	1,400	NA	24	<5	<5	NA	6.6
	4/9/87	54	NA	NA	BDL	BDL	NA	BDL
	9/16/87	NA	96	NA	NA	NA	NA	NA
	12/1/87	NA	2	NA	NA	NA	NA	NA
	3/9/88	NA	BDL	NA	NA	NA	NA	NA
	6/9/88	NA	12	NA	NA	NA	NA	NA
	9/14/88	NA	6.3	NA	NA	NA	NA	NA
	9/16/97	<50	7.5	4.1	<0.5	<0.5	<0.5	<0.5
	11/2/98 [m]	–	–	–	–	–	–	–
	12/6/00	1,000	7.7	NA	<0.5	<0.5	<0.5	<0.5

Table 1: Summary of Groundwater Analytical Results

Well Number	Date Sampled	TPPH [a] (µg/l) [h]	TEPH [b] (mg/l)	O&G [c] (mg/l)	B [d] (µg/l)	T [e] (µg/l)	E [f] (µg/l)	X [g] (µg/l)
MW-6	4/9/87[m]	–	–	–	–	–	–	–
	9/16/87	NA	400	NA	NA	NA	NA	NA
	12/1/87	NA	30	NA	NA	NA	NA	NA
	3/9/88	NA	9.8	NA	NA	NA	NA	NA
	6/9/88	NA	63	NA	NA	NA	NA	NA
FP	9/14/88	NA	140	NA	NA	NA	NA	NA
	9/16/97[m]	–	–	–	–	–	–	–
	11/2/98 [m]	–	–	–	–	–	–	–
MW-7	10/3/86	260	NA	8	<5	<5	NA	<5
	4/9/87[m]	–	–	–	–	–	–	–
	9/16/87	NA	790	NA	NA	NA	NA	NA
	12/1/87	NA	5.3	NA	NA	NA	NA	NA
	3/9/88	NA	BDL	NA	NA	NA	NA	NA
	6/9/88	NA	12	NA	NA	NA	NA	NA
	9/14/88	NA	67	NA	NA	NA	NA	NA
	9/16/97	850	26	11	<0.5	<0.5	<0.5	<0.5
	11/2/98 [m]	–	–	–	–	–	–	–
	12/6/00	540	2.6	NA	<0.5	<0.5	<0.5	1.9
MW-8	10/23/86	1,300	NA	14	<0.2	<0.2	NA	<1
	4/9/87	73	NA	NA	BDL	BDL	NA	BDL
	9/16/87[m]	–	–	–	–	–	–	–
	12/1/87	NA	0.630	NA	NA	NA	NA	NA
	3/9/88	NA	2.6	NA	NA	NA	NA	NA
	6/9/88	NA	1.7	NA	NA	NA	NA	NA
	9/14/88	NA	0.150	NA	NA	NA	NA	NA
	8/12/97[m]	–	–	–	–	–	–	–
	9/16/97	<50	0.29	<0.300	<0.5	<0.5	<0.5	<0.5
	11/2/98	<50	1.3	NA	<0.5	<0.5	<0.5	<0.5
	12/6/00	<50	0.160	NA	<0.5	<0.5	<0.5	<0.5
MW-9	4/9/87[m]	–	–	–	–	–	–	–
	9/16/87	NA	1.3	NA	NA	NA	NA	NA
	12/1/87	NA	18	NA	NA	NA	NA	NA
	3/9/88	NA	47	NA	NA	NA	NA	NA
	6/8/88[m]	–	–	–	–	–	–	–
	9/14/88[m]	–	–	–	–	–	–	–
FP	9/16/97	6,000	19	9	<13	<13	<13	18
	11/2/98 [m]	–	–	–	–	–	–	–
	12/6/00	790	69	~~NA~~ 33	<0.5	<0.5	<0.5	<0.5
MW-10	10/23/86	380	NA	7.2	<0.2	<0.2	NA	<0.2
	4/9/87	300	NA	NA	BDL	BDL	NA	BDL
	9/16/87	NA	3.8	NA	NA	NA	NA	NA
	12/1/87	NA	0.59	NA	NA	NA	NA	NA
	3/8/88	NA	BDL	NA	NA	NA	NA	NA
	6/8/88	NA	3.8	NA	NA	NA	NA	NA
	9/14/88	NA	0.570	NA	NA	NA	NA	NA

Table 1: Summary of Groundwater Analytical Results

Well Number	Date Sampled	TPPH [a] (µg/l) [h]	TEPH [b] (mg/l)	O&G [c] (mg/l)	B [d] (µg/l)	T [e] (µg/l)	E [f] (µg/l)	X [g] (µg/l)
MW-10	9/16/97	<50	1.3	<0.300	<0.5	<0.5	<0.5	<0.5
Cont'd	11/2/98	<50	1.4	NA	<0.5	<0.5	<0.5	<0.5
	12/6/00	150	0.730	NA	<0.5	<0.5	<0.5	0.70
	12/6/00 (dup)	160	0.810	NA	<0.5	<0.5	<0.5	0.71
MW-11	12/5/86	<8	NA	1.2	<0.4	<0.4	NA	1.4
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	BDL	NA	NA	BDL	BDL	NA	BDL
	12/1/87	BDL	NA	NA	0.8	BDL	NA	10
	3/7/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	6/8/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	9/14/88	BDL	100	NA	BDL	BDL	NA	BDL
MW-12	12/5/86	100	NA	2.5	0.49	1	NA	1.3
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	BDL	NA	NA	BDL	BDL	NA	BDL
	12/1/87	BDL	NA	NA	BDL	BDL	NA	13
	3/7/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	6/8/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	9/14/88	BDL	0.120	NA	BDL	BDL	NA	BDL
MW-13	12/24/86	<10	NA	57	<0.2	<0.9	NA	<0.9
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	BDL	NA	NA	BDL	BDL	NA	BDL
	12/1/87	BDL	NA	NA	1.6	BDL	NA	12
	3/8/88	7.7	BDL	NA	BDL	BDL	NA	BDL
	6/8/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	9/14/88	BDL	0.130	NA	BDL	BDL	NA	BDL
	9/16/97	<50	0.120	<0.300	<0.5	<0.5	<0.5	<0.5
	11/2/98	<50	0.120	NA	<0.5	<0.5	<0.5	<0.5
	12/6/00	<50	0.200	NA	<0.5	<0.5	<0.5	<0.5
MW-14[n]	12/5/86 [o]	<8	NA	3.2	<0.4	<0.2	NA	<0.2
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	1.7	0.056	NA	BDL	BDL	NA	BDL
	12/1/87	BDL	0.066	NA	1.2	4	NA	10
	3/7/88	20	BDL	NA	BDL	BDL	NA	BDL
	6/8/88[l]	–	–	–	–	–	–	–
	9/14/88[l]	–	–	–	–	–	–	–
MW-15	12/24/86	120	NA	1.6	<0.2	<0.9	NA	9.2
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	8.4	BDL	NA	BDL	BDL	NA	BDL
	12/1/87	BDL	NA	NA	3.3	0.84	NA	14
	3/8/88	90	BDL	NA	0.8	BDL	NA	BDL
	6/9/88	53	BDL	NA	BDL	BDL	NA	BDL
	9/14/88	NA	0.100	NA	NA	NA	NA	NA
	9/16/97	<50	0.890	0.380	<0.5	<0.5	<0.5	<0.5
	11/2/98	<50	0.340	NA	<0.5	<0.5	<0.5	<0.5
	12/6/00	<50	0.400	NA	<0.5	<0.5	<0.5	<0.5

Table 1: Summary of Groundwater Analytical Results

Well Number	Date Sampled	TPPH [a] (µg/l) [h]	TEPH [b] (mg/l)	O&G [c] (mg/l)	B [d] (µg/l)	T [e] (µg/l)	E [f] (µg/l)	X [g] (µg/l)
MW-16	12/24/86	<10	NA	1.2	<0.2	<0.9	NA	<0.9
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	BDL	0.064	NA	BDL	BDL	NA	BDL
	12/1/87	120	0.150	NA	1	0.37	NA	9.1
	3/7/88	10	BDL	NA	0.5	BDL	NA	BDL
	6/8/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	9/14/88	BDL	0.190	NA	BDL	BDL	NA	BDL
	9/16/97[m]	–	–	–	–	–	–	–
	12/6/00	<50	0.097	NA	<0.5	<0.5	<0.5	<0.5
MW-17	12/24/86	240	NA	2.4	5	1.2	NA	14
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	44	0.680	NA	BDL	BDL	NA	0.55
	12/1/87	540	1.3	NA	7.8	2.4	NA	28
	3/8/88	4,300	3.8	NA	83	BDL	NA	46
	6/8/88[l]	–	–	–	–	–	–	–
	9/14/88	54,000	64	NA	BDL	BDL	NA	BDL
	9/16/97	1,900	110	9.6	<0.5	<0.5	<0.5	<0.5
	11/2/98	<50	16	NA	<0.5	<0.5	<0.5	0.6
	12/6/00[p]	340	42	NA	<0.5	<0.5	<0.5	<0.5
MW-18[n]	12/24/86	<20	NA	1.6	<0.3	<0.3	NA	0.99
	4/9/87	BDL	NA	NA	BDL	BDL	NA	BDL
	9/16/87	BDL	0.480	NA	BDL	BDL	NA	BDL
	12/1/87	BDL	0.18	NA	BDL	BDL	NA	6.6
	3/7/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	6/8/88	BDL	BDL	NA	BDL	BDL	NA	BDL
	9/14/88	BDL	0.190	NA	BDL	BDL	NA	BDL
MW-20	12/11/00	<50	0.110	NA	<0.5	<0.5	<0.5	<0.5
	4/6/01[q]	<50	0.057	NA	<0.5	<0.5	<0.5	<0.5
	7/6/01	<50	0.120	NA	<0.5	<0.5	<0.5	<0.5
	9/19/01	<50	0.160	NA	<0.5	<0.5	<0.5	<0.5

(a) TPPH = total purgeable petroleum hydrocarbons using EPA Method 8015 modified.
(b) TEPH = total extractable petroleum hydrocarbons using EPA Method 8015 modified. Value listed for samples collected in December 2000 is value reported by lab as TPH diesel. Sample chromatographic patterns did not match lab standard for diesel.
(c) O&G = total oil and grease.
(d) B = benzene using EPA Method 8020
(e) T = toluene using EPA Method 8020
(f) E = ethylbenzene using EPA Method 8020
(g) X = total xylenes using EPA Method 8020
(h) (µg/l) = micrograms per liter; (mg/l) = milligrams per liter
(i) < = analyte not present in the sample at or above the indicated detection limit
(j) NA = not analyzed
(k) BDL = below detection limit; actual limit not available for compilation of this table.
(l) Not sampled; well inaccessible.
(m) Not sampled; separate-phase petroleum product present.
(n) Well destroyed.

Table 1: Summary of Groundwater Analytical Results

(o) Other volatile organic compounds were detected in the 12/5/86 sample collected from Well MW-14 using EPA Method 8010 (the sum of 1,1,2,2-tetrachloroethane, 1,1,1,2-tetrachloroethane and perchloroethene was 190 µg/l).
(p) Sample collected from MW-17 on 12/6/00 was also analyzed for MtBE. MtBE was not detected, with a detection limit of 25 µg/l (raised due to interference from non-target compounds).
(q) Sample collected from MW-20 on 4/6/01 was also analyzed for MtBE. MtBE was not detected, with a detection limit of 5 µg/l.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Kennedy/Jenks Consultants
622 Folsom Street
San Francisco, CA 94107

Date: 12-OCT-01
Lab Job Number: 154221
Project ID: 950007.00
Location: Owens-Brockway

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

CHAIN OF CUSTODY FORM

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

C&T LOGIN # 154721

Sampler: J Farrell
Report To: Meredith Durant
Company: Kennedy Jenks Consultants
Telephone: 415 243 2534
Fax: 415 896 0999

Project No: 9500007.00
Project Name: Owens Breakaway
Project P.O.:
Turnaround Time: Rush w/w Due 9/21

Laboratory Number	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO	Preservative: HNO_3	Preservative: ICE	Field Notes	Analyses: O/G AND GREASE 1664	Analyses: TPH BTEX, TPH, TEPH
-1	MW-20	9/19/01 1025		X		5	X				3 VOAS 2 liter		X
-2	W/W	9/19/01 1000		X	X	1	X				1 Liter **RUSH**	X	
-3	TRIP					3	X						X

For Laboratory Use Only

Received: ☑ On Ice ☐ Cold ☐ Ambient ☑ Intact

Preservation Correct? ☑ Yes ☐ No ☐ N/A

Notes:

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
J Farrell 1116	9/19/01		9/19/01 1116
	DATE/TIME		DATE/TIME
	DATE/TIME		DATE/TIME

Signature

Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Prep:	EPA 5030B
Project#:	950007.00	Analysis:	8015B(M)
Matrix:	Water	Sampled:	09/19/01
Units:	ug/L	Received:	09/19/01
Diln Fac:	1.000	Analyzed:	09/20/01
Batch#:	66531		

Field ID: MW-20 Lab ID: 154221-001
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	59-135
Bromofluorobenzene (FID)	103	60-140

Field ID: TRIP Lab ID: 154221-003
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	59-135
Bromofluorobenzene (FID)	103	60-140

Type: BLANK Lab ID: QC156558

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	59-135
Bromofluorobenzene (FID)	97	60-140

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Prep:	EPA 5030B
Project#:	950007.00	Analysis:	EPA 8021B
Matrix:	Water	Sampled:	09/19/01
Units:	ug/L	Received:	09/19/01
Diln Fac:	1.000	Analyzed:	09/20/01
Batch#:	66531		

Field ID: MW-20 Lab ID: 154221-001
Type: SAMPLE

Analyte	Result	RL
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	118	56-142
Bromofluorobenzene (PID)	127	55-149

Field ID: TRIP Lab ID: 154221-003
Type: SAMPLE

Analyte	Result	RL
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	118	56-142
Bromofluorobenzene (PID)	128	55-149

Type: BLANK Lab ID: QC156558

Analyte	Result	RL
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	117	56-142
Bromofluorobenzene (PID)	120	55-149

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Prep:	EPA 5030B
Project#:	950007.00	Analysis:	8015B(M)
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC156559	Batch#:	66531
Matrix:	Water	Analyzed:	09/20/01
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,099	105	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	59-135
Bromofluorobenzene (FID)	103	60-140

Curtis & Tompkins, Ltd.

Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Prep:	EPA 5030B
Project#:	950007.00	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC156562	Batch#:	66531
Matrix:	Water	Analyzed:	09/20/01
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Benzene	20.00	18.22	91	67-117
Toluene	20.00	17.03	85	69-117
Ethylbenzene	20.00	18.88	94	68-124
m,p-Xylenes	40.00	38.56	96	70-125
o-Xylene	20.00	18.81	94	65-129

Surrogate	%REC	Limits
Trifluorotoluene (PID)	120	56-142
Bromofluorobenzene (PID)	123	55-149

Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Prep:	EPA 5030B
Project#:	950007.00	Analysis:	8015B(M)
Field ID:	MW-20	Batch#:	66531
MSS Lab ID:	154221-001	Sampled:	09/19/01
Matrix:	Water	Received:	09/19/01
Units:	ug/L	Analyzed:	09/20/01
Diln Fac:	1.000		

Type: MS Lab ID: QC156560

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<24.00	2,000	2,036	102	65-131

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	59-135
Bromofluorobenzene (FID)	107	60-140

Type: MSD Lab ID: QC156561

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,077	104	65-131	2	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	114	59-135
Bromofluorobenzene (FID)	107	60-140

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Prep:	EPA 3520C
Project#:	950007.00	Analysis:	8015B(M)
Field ID:	MW-20	Sampled:	09/19/01
Matrix:	Water	Received:	09/19/01
Units:	ug/L	Prepared:	09/28/01
Diln Fac:	1.000	Analyzed:	10/01/01
Batch#:	66748		

Type: SAMPLE Lab ID: 154221-001

Analyte	Result	RL
Diesel C10-C24	160 H Y	50

Surrogate	%REC	Limits
Hexacosane	103	44-121

Type: BLANK Lab ID: QC157365

Analyte	Result	RL
Diesel C10-C24	ND	50

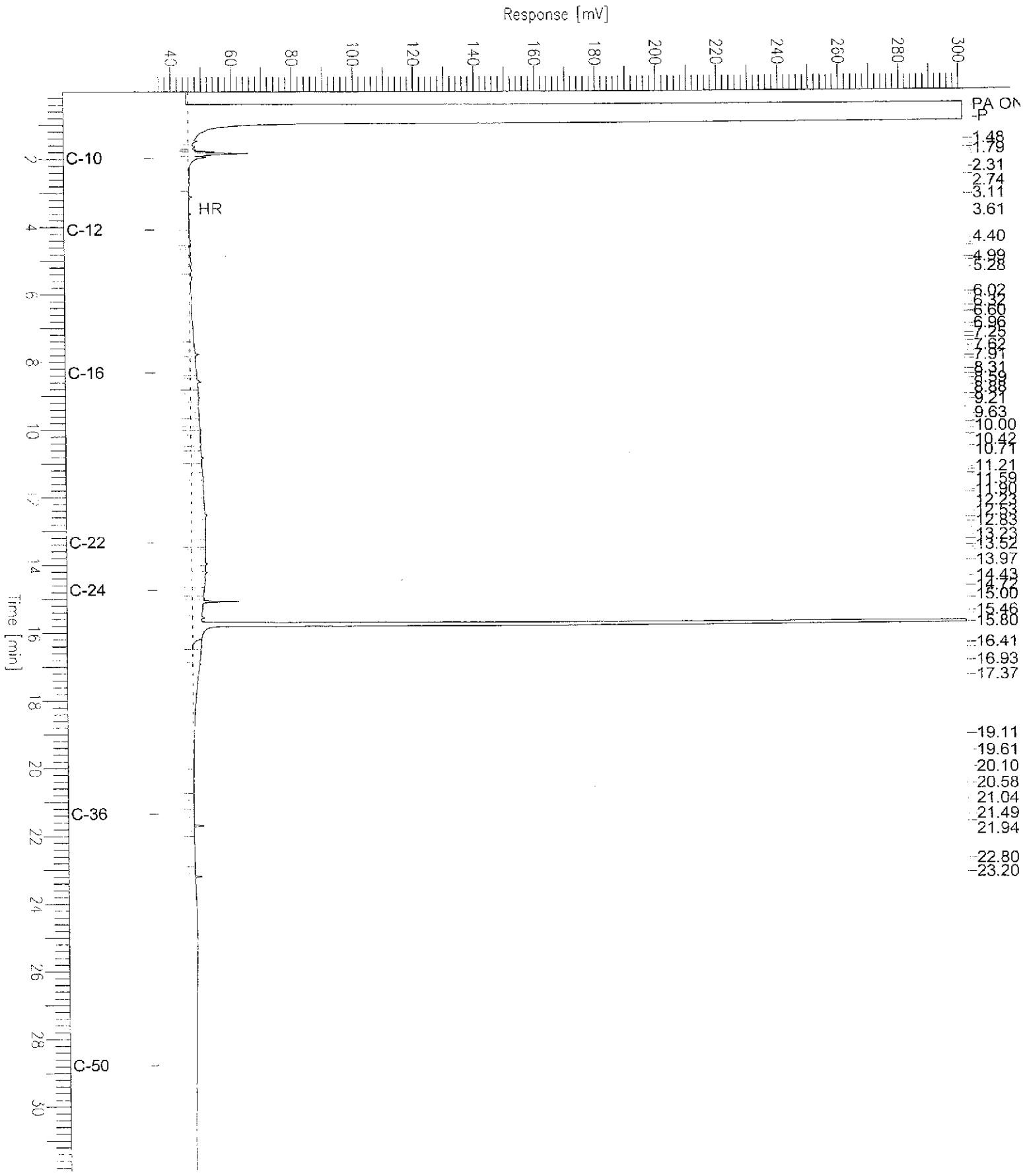
Surrogate	%REC	Limits
Hexacosane	119	44-121

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits fuel pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Chromatogram

Sample Name : 154221-001,66748
FileName : G:\GC11\CHA\273A029.RAW
Method : ATEH212.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 34 mV

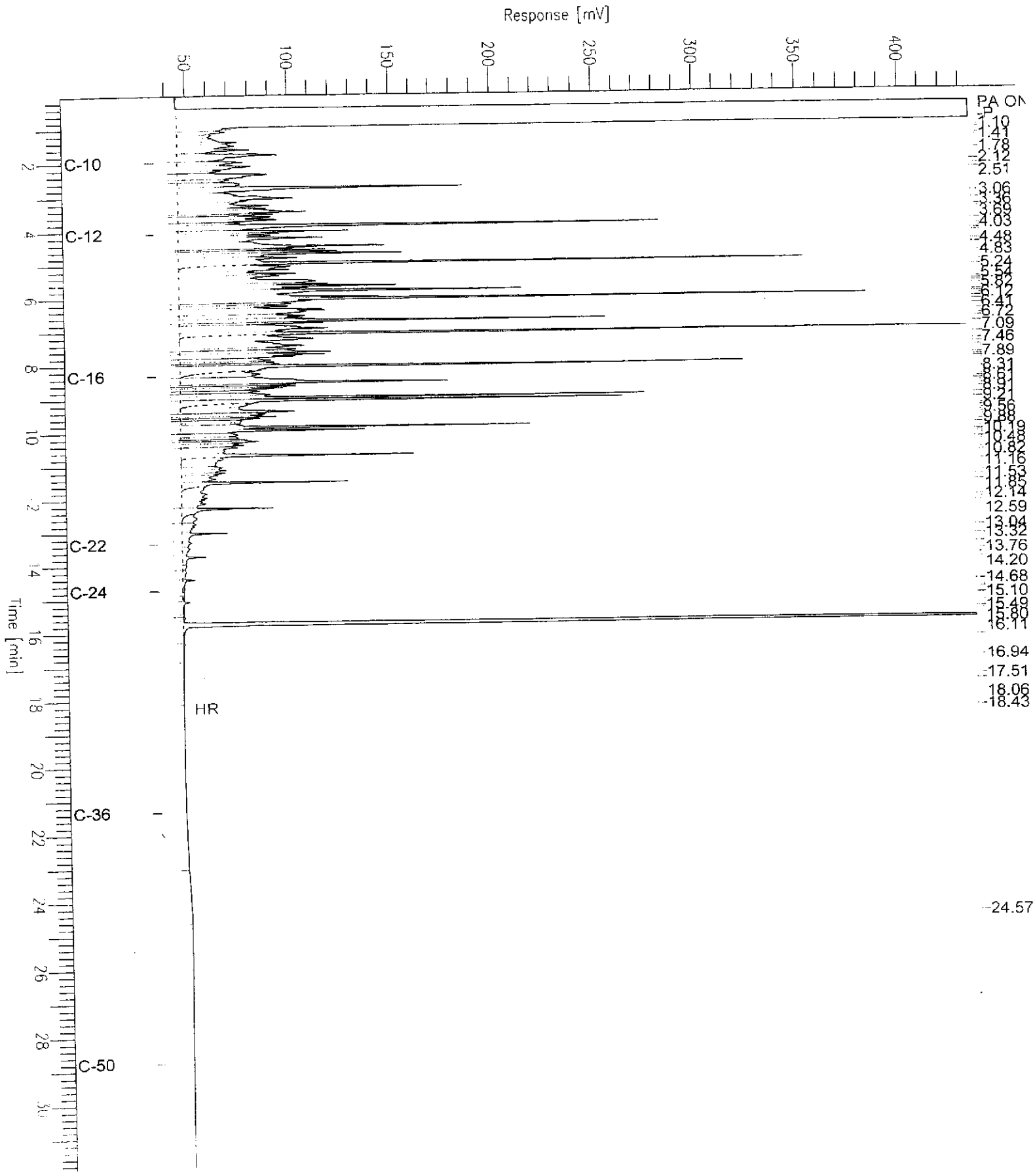
Sample #: 66748
Date : 10/1/01 10:48 AM
Time of Injection: 10/1/01 10:06 AM
Low Point : 34.35 mV High Point : 301.27 mV
Plot Scale: 266.9 mV



Chromatogram

Sample Name : ccv,01ws1731,dsl
FileName : G:\GC11\CHA\273A002.RAW
Method : ATEH212.MTH
Start Time : 0.01 min
End Time : 31.91 min
Scale Factor: 0.0
Plot Offset: 35 mV

Sample #: 500mg/L
Date : 9/30/01 03:17 PM
Time of Injection: 9/30/01 02:40 PM
Low Point : 34.70 mV
High Point : 434.83 mV
Plot Scale: 400.1 mV



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Prep:	EPA 3520C
Project#:	950007.00	Analysis:	8015B(M)
Matrix:	Water	Batch#:	66748
Units:	ug/L	Prepared:	09/28/01
Diln Fac:	1.000	Analyzed:	10/01/01

Type: BS Lab ID: QC157366

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,639	106	45-110

Surrogate	%REC	Limits
Hexacosane	112	44-121

Type: BSD Lab ID: QC157367

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,363	95	45-110	11	22

Surrogate	%REC	Limits
Hexacosane	106	44-121

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Oil & Grease (HEM)

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Analysis:	EPA 1664A
Project#:	950007.00		
Analyte:	Oil & Grease (HEM)	Batch#:	66562
Field ID:	W/W	Sampled:	09/19/01
Matrix:	Water	Received:	09/19/01
Units:	mg/L	Analyzed:	09/20/01

Type	Lab ID	Result	RL	Diln Fac
SAMPLE	154221-002	96	5.0	1.000
BLANK	QC156682	ND	5.6	1.120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Oil & Grease (HEM)

Lab #:	154221	Location:	Owens-Brockway
Client:	Kennedy/Jenks Consultants	Analysis:	EPA 1664A
Project#:	950007.00		
Analyte:	Oil & Grease (HEM)	Diln Fac:	1.120
Matrix:	Water	Batch#:	66562
Units:	mg/L	Analyzed:	09/20/01

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC156683	40.00	38.00	85	78-114		
BSD	QC156684	40.00	37.20	84	78-114	2	20

RPD= Relative Percent Difference

Groundwater Purge and Sample Form Date: 9/19/01 **Kennedy/Jenks Consultants**

PROJECT NAME: Owens Brockway WELL NUMBER: MW-20

PROJECT NUMBER: 950007.00 PERSONNEL: JF

STATIC WATER LEVEL (FT): 9.84 MEASURING POINT DESCRIPTION: TOC

WATER LEVEL MEASUREMENT METHOD: Solinist PURGE METHOD: Bailer

TIME START PURGE: 1005 PURGE DEPTH (FT) 22

TIME END PURGE: 1025

TIME SAMPLED: 1025

COMMENTS: 2 Sample kits for SW needed staples

w/w sample collected @ 1000 w/ bailer

WELL VOLUME CALCULATION (FILL IN BEFORE PURGING)	TOTAL DEPTH (FT)	-	DEPTH TO WATER (FT)	=	WATER COLUMN (FT)	X	MULTIPLIER FOR CASING DIAMETER (IN) 2	4	6	=	CASING VOLUME (GAL)
	22		9.84		12.16		0.16	0.64	1.44		1.9x3=5.7

TIME	Prior	1005	1015	1020			
VOLUME PURGED (GAL)		1.5	3.0	5.0			
PURGE RATE (GPM)	N/A						
TEMPERATURE (°C)	7.31	7.11	7.10	7.19			
pH	7.41	7.69	7.59	7.60			
SPECIFIC CONDUCTIVITY (micromhos/cm) (uncorrected)	925	950	928	930			
DISSOLVED OXYGEN (mg/L)	NM	→	→	→			
eH(MV)Pt-AgCl ref.	NM	→	→	→			
TURBIDITY/COLOR	tan	tan	Lt yellow	Lt yellow			
ODOR	None	→	→	→			
DEPTH OF PURGE INTAKE (FT)	NM						
DEPTH TO WATER DURING PURGE (FT)	NM						
NUMBER OF CASING VOLUMES REMOVED							
DEWATERED?	NO	→	→	→			

Groundwater Purge and Sample Form Date: 9/19/01 **Kennedy/Jenks Consultants**

PROJECT NAME: Owens Brockway WELL NUMBER: MW-20

PROJECT NUMBER: 950007.00 PERSONNEL: JF

SAMPLE DATA:

TIME SAMPLED: 1025 COMMENTS:

DEPTH SAMPLED (FT): 21

SAMPLING EQUIPMENT: Disposable Bailer

SAMPLE NO.	NO. OF CONTAINERS	CONTAINER TYPE	PRESERVATIVE	FIELD FILTRATION	VOLUME FILLED (ml or L)	TURBIDITY	COLOR	SHIPPED UNDER CHAIN-OF-CUSTODY AT 4°C?	ANALYSIS REQUEST (METHOD)	COMMENTS
MW-20	3	3 VOAs	HCl	-	40	tan	-	Y	TPH BTEX	Delivered to Curtis / Tharp Mins
MW-20	2	1L Amber	N	-	2L	tan	-	Y	TEPH TPH	

PURGE WATER DISPOSAL NOTES:

TOTAL DISCHARGE (GAL): 6 COMMENTS:

DISPOSAL METHOD: B12 / Workers Sep

DRUM DESIGNATION(S)/VOLUME PER (GAL):

WELL HEAD CONDITIONS CHECKLIST (CIRCLE YES OR NO - IF NO, ADD COMMENTS):

WELL SECURITY DEVICES OK (BOLLARDS, CHRISTY LID, CASING LID AND LOCK)?: YES (NO) No Lock

INSIDE OF WELL HEAD AND OUTER CASING DRY?: (YES) NO

WELL CASING OK?: (YES) NO

COMMENTS:

GENERAL:

WEATHER CONDITIONS: Overcast

TEMPERATURE (SPECIFY °C OR °F): 75 F

PROBLEMS ENCOUNTERED DURING PURGING OR SAMPLING? None

cc: Project Manager:
Job File:
Other: