



Seneca Environmental Services

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Doc # 10547

Mr. Bob Drustrup
Contaminated Sites Section
Iowa Dept. of Natural Resources
Wallace State Office Building
Des Moines, IA 50319

December 22, 2003

Subject: Submittal of the Quarterly Status Report for Free Product Recovery
Former MacMillan Oil Site, 4306 NW 2nd Avenue, Des Moines, Iowa

Dear Mr. Drustrup:

Seneca Environmental Services is pleased to submit the Quarterly Status Report for the above referenced project for the 3rd Quarter of 2003. This report is meant to satisfy the reporting requirements as described in the Addendum to the Final Work Plan dated August 20, 2002, and IDNR response letter to the Addendum dated September 16, 2002. The active free product recovery system at this site has been temporarily shut down as of August 22, 2002. Free product recovery by hand bailing has been performed since this time, and on-site monitoring wells and nearby Wafley Creek are visually monitored. A revised monitoring schedule was approved and has been initiated in the 3rd Quarter of 2003, which includes: monthly product recovery, monthly inspection of Wafley Creek, quarterly creek samples, and quarterly reporting.

Free product has not previously been detected leaching from bank of Wafley Creek during visual inspections. Monthly product recovery by hand bailing during July through September 2003 yielded approximately 7.15 gallons of product. Free product is normally recovered from monitoring wells MW2 and MW3, and recovery wells RW2, RW3, and RW4. Due to the discovery of product in MW1, MW7 and MW9 in July 2003 during the annual groundwater sampling event, these wells will be added to the monthly recovery protocol.

Soak Ease adsorbent socks have been used for free product recovery from all regularly monitored wells. Installation entails tying nylon string to one end of the soak ease and lowering it into the well until the wick is within the product. The nylon line is secured and the manway is closed. Recovery entails recovering the Soak Ease from the well, removing the adsorbed product from the Soak Ease, and recovering the liquid for volume measurement. If additional free product is found during scheduled free product checks, manual bailing or skimming procedures will be used.

Surface water samples are collected from three monitoring points along Wafley Creek and sent to a certified laboratory for OA1 (BTEX) analysis. One sample is taken on the subject property downgradient from the area containing free product (Stream A). Two upgradient samples are taken as control samples to the west of the site where two forks in the creek meet. The Stream B sample is collected from the north fork of the creek (flowing from a commercial area) and Stream C sample is collected from the east fork (flowing from a residential area). Quarterly surface water samples were collected on August 29, 2003, and analytical results are

Des Moines

P.O. Box 3360
4140 N.E. 14th Street
Des Moines, Iowa 50316-0360
515-262-3500
800-369-3500
515-262-2469 FAX

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17851 244th Avenue
Bettendorf, Iowa 52722
563-332-2272
800-728-6900
563-332-9465 FAX

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included as an attachment. Results indicate the samples collected from Wafley Creek at Sample points A, B, and C, did not contain BTEX parameters above minimum detection limits.

The entire length of Wafley Creek is inspected from the downgradient monitoring location (Stream A) to the fork; then the east fork is inspected about 30 feet upstream, and the north fork is inspected to where it flows under 2nd Avenue on the east side of the road, and where it reappears on the west side of the road north of Hoffman Lane. The non-storm water discharge first visible upstream during the August 30, 2002 monitoring event was apparent during monthly inspections in during the 3rd Quarter of 2003, concentrated in the north fork of the creek. The amount of visible sheen on the surface varies with precipitation, wind conditions, and accumulation of biological material.

If you have any questions concerning this report, please do not hesitate to contact me at 515-261-7720.

Sincerely,
Seneca Environmental Services

Beth Curnes, E.I.T.
Chemical Engineer

Enc. Attachments

cc: Mr. George Milligan, MacMillan Oil Company, 500 Locust Avenue, Des Moines, IA 50309
Mr. Charles Becker, Belin Law Firm, 2000 Financial Center, Des Moines, IA 50309
Seneca Project File 6213004



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FREE PRODUCT RECOVERY

Free product recovery was performed mechanically by pumping from recovery wells and treating groundwater until August 22, 2002, when the treatment system was temporarily shut down to attempt recovery by hand bailing. Based on monthly flow meter readings and estimates of free product entering the building, approximately 5 gallons of free product per month were collected by the treatment system excluding hand bailing. Approximately 40 gallons were collected over the eight-month period that the system was operating.

The attached free product recovery totals include free product recovered by hand bailing only. Site totals indicate that approximately 7.15 gallons of free product were manually recovered during the period from July through September 2003.

Free Product Recovery Information

Tabulate the free product and groundwater volumes removed from each well. List each extraction event chronologically with the oldest data first. The results for all events must be provided. Give all elevations as feet Above Sea Level (ASL). Ground surface elevation must be reported to the nearest 0.1 foot. Top of casing elevation, static water elevations, and free product thickness must be reported to the nearest 0.01 foot. Volume of free product and groundwater removed must be reported to the nearest 0.1 gallon. A separate sheet should be used for each recovery well.

Well Number: MW-1

Ground Surface Elevation: 816.21

Top of Casing Elevation: 815.97

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*Adjusted for FP

*Adjusted for FP DNR Form 542-1424

Free Product Recovery Information

Tabulate the free product and groundwater volumes removed from each well. List each extraction event chronologically with the oldest data first. The results for all events must be provided. Give all elevations as feet Above Sea Level (ASL). Ground surface elevation must be reported to the nearest 0.1 foot. Top of casing elevation, static water elevations, and free product thickness must be reported to the nearest 0.01 foot. Volume of free product and groundwater removed must be reported to the nearest 0.1 gallon. A separate sheet should be used for each recovery well.

Well Number: MW-2

Ground Surface Elevation: 814.48

Top of Casing Elevation: 817.80

Date Sampled	Static Groundwater Level (feet ASL)	Free Product Thickness (feet)	Volume of Free Product Removed (gallons)	Volume of Groundwater Removed (gallons)
4/22/02	806.02*	0.03	0.05	0.15
7/1/02	805.74*	0.20	--	--
8/30/02	806.58*	0.18	0.01	0.68
9/6/02	806.07*	0.15	<0.01	0.69
9/13/02	805.82*	0.16	<0.01	0.66
9/21/02	806.15*	0.08	<0.01	0.54
9/28/02	805.82*	0.11	<0.01	0.44
10/4/02	806.81	0.00	0.00	0.00
10/11/02	806.30*	0.04	0.00	0.47
10/18/02	805.95*	0.07	0.00	0.05
10/25/02	807.98*	0.01	0.00	0.31
11/1/02	806.57*	0.01	0.00	0.33
11/11/02	805.84*	0.05	0.00	0.37
11/18/02	805.82*	0.04	0.00	0.36
11/24/02	805.46	Sheen	0.00	0.00
12/6/02	805.41	Sheen	0.00	0.01
12/13/02	805.34	0.00	0.00	0.01
12/20/02	805.28	0.00	0.00	0.00
12/27/02	805.24	0.00	Sheen	0.01
1/3/03	805.23	0.00	0.00	0.00
1/10/03	805.17	0.00	0.001	0.00
1/24/03	805.08	0.00	0.001	0.02
2/10/03	805.04	0.00	0.00	0.00
2/24/03	805.57	0.00	0.00	0.00
3/11/03	805.41	0.00	0.00	0.16
3/21/03	806.03	0.00	0.00	0.02
4/3/03	805.79	0.00	0.00	0.02
4/17/03	805.97	0.00	0.00	0.01

*Adjusted for FP

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Free Product Recovery Information

Well Number: MW-2	Ground Surface Elevation: 814.48	Top of Casing Elevation: 817.80
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Top of Casing Elevation: 817.80

[illegible]

*Adjusted for FP

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Free Product Recovery Information

Tabulate the free product and groundwater volumes removed from each well. List each extraction event chronologically with the oldest data first. The results for all events must be provided. Give all elevations as feet Above Sea Level (ASL). Ground surface elevation must be reported to the nearest 0.1 foot. Top of casing elevation, static water elevations, and free product thickness must be reported to the nearest 0.01 foot. Volume of free product and groundwater removed must be reported to the nearest 0.1 gallon. A separate sheet should be used for each recovery well.

Well Number: MW-3

Ground Surface Elevation: 814.44

Top of Casing Elevation: 814.01

Date Sampled	Static Groundwater Level (feet ASL)	Free Product Thickness (feet)	Volume of Free Product Removed (gallons)	Volume of Groundwater Removed (gallons)
3/20/02	806.34*	0.31	0.06	1.95
4/22/02	804.88*	0.52	0.14	0.31
7/1/02	803.94*	0.75	--	--
8/30/02	805.04*	0.66	0.08	0.87
9/6/02	804.64*	0.52	0.03	1.84
9/13/02	804.84*	0.43	0.01	1.68
9/21/02	804.44*	0.38	0.02	1.48
9/28/02	804.36*	0.30	0.01	1.47
10/4/02	805.20*	0.38	0.03	1.42
10/11/02	804.83*	0.33	0.01	1.25
10/18/02	804.56*	0.33	0.01	0.72
10/25/02	805.02*	0.30	0.01	1.27
11/1/02	804.91*	0.34	0.02	1.25
11/11/02	804.25*	0.33	0.02	1.43
11/18/02	804.46*	0.27	0.01	1.09
11/24/02	803.89	sheen	0.06	0.00
12/6/02	803.77	0.00	0.03	0.00
12/13/02	803.89	0.00	0.04	0.00
12/20/02	803.95	0.00	0.02	0.00
12/27/02	803.88	0.00	0.01	0.00
1/3/03	803.97	0.00	0.02	0.00
1/10/03	803.82	0.00	0.02	0.00
1/24/03	803.70	0.00	0.03	0.00
2/10/03	803.67	0.00	0.03	0.00
2/24/03	803.60	0.00	0.05	0.00
3/11/03	803.77	0.00	0.03	0.00
3/21/03	804.10	0.00	0.02	0.00
4/3/03	804.27	0.00	0.01	0.01
4/17/03	804.13	0.00	0.01	0.00

*Adjusted for FP

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[illegible]

*Adjusted for FP

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Free Product Recovery Information

Tabulate the free product and groundwater volumes removed from each well. List each extraction event chronologically with the oldest data first. The results for all events must be provided. Give all elevations as feet Above Sea Level (ASL). Ground surface elevation must be reported to the nearest 0.1 foot. Top of casing elevation, static water elevations, and free product thickness must be reported to the nearest 0.01 foot. Volume of free product and groundwater removed must be reported to the nearest 0.1 gallon. A separate sheet should be used for each recovery well.

Well Number: MW-9	Ground Surface Elevation: 817.74	Top of Casing Elevation: 817.37
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Well Number: MW-9	Ground Surface Elevation: 817.74	Top of Casing Elevation: 817.37
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Well Number: MW-9	Ground Surface Elevation: 817.74	Top of Casing Elevation: 817.37
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[illegible]

*Adjusted for FP

*Adjusted for FP DNR Form 542-1424

Free Product Recovery Information

Tabulate the free product and groundwater volumes removed from each well. List each extraction event chronologically with the oldest data first. The results for all events must be provided. Give all elevations as feet Above Sea Level (ASL). Ground surface elevation must be reported to the nearest 0.1 foot. Top of casing elevation, static water elevations, and free product thickness must be reported to the nearest 0.01 foot. Volume of free product and groundwater removed must be reported to the nearest 0.1 gallon. A separate sheet should be used for each recovery well.

Well Number: RW-2		Ground Surface Elevation: 814.63		Top of Casing Elevation: 814.64	
Date Sampled	Static Groundwater Level (feet ASL)	Free Product Thickness (feet)	Volume of Free Product Removed (gallons)	Volume of Groundwater Removed (gallons)	
3/20/02	799.72*	3.30	1.90	0.44	
4/22/02	799.78*	3.40	1.20	0.0	
7/1/02	799.92*	3.41	--	--	
8/30/02	806.51*	1.31	0.98	2.63	
9/6/02	805.62*	2.01	4.20	0.0	
9/13/02	805.34*	0.39	2.10	0.0	
9/21/02	805.47*	0.13	0.83	0.0	
9/28/02	805.44*	0.02	0.23	0.0	
10/4/02	805.88*	0.02	0.27	0.0	
10/11/02	805.97*	0.03	0.24	0.0	
10/18/02	805.49*	0.02	0.17	0.0	
10/25/02	805.79*	0.02	0.00	0.0	
11/1/02	806.11*	0.01	0.12	0.0	
11/11/02	805.62*	0.01	0.09	0.0	
11/18/02	805.31*	0.02	0.12	0.03	
11/24/02	805.10	sheen	0.00	0.00	
12/6/02	804.89	0.00	0.02	0.00	
12/13/02	804.86	0.00	0.04	0.00	
12/20/02	804.79	0.00	0.03	0.00	
12/27/02	804.71	0.00	0.02	0.00	
1/3/03	804.67	0.00	0.01	0.00	
1/10/03	804.65	0.00	0.02	0.00	
1/24/03	804.56	0.00	0.02	0.00	
2/10/03	804.58	0.00	0.02	0.00	
2/24/03	805.05	0.00	0.02	0.00	
3/11/03	804.96	0.00	0.02	0.00	
3/21/03	805.55	0.00	0.02	0.00	
4/3/03	805.57	0.00	0.01	0.00	
4/17/03	805.79	0.00	0.03	0.00	

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*Adjusted for FP

Free Product Recovery Information

Tabulate the free product and groundwater volumes removed from each well. List each extraction event chronologically with the oldest data first. The results for all events must be provided. Give all elevations as feet Above Sea Level (ASL). Ground surface elevation must be reported to the nearest 0.1 foot. Top of casing elevation, static water elevations, and free product thickness must be reported to the nearest 0.01 foot. Volume of free product and groundwater removed must be reported to the nearest 0.1 gallon. A separate sheet should be used for each recovery well.

Well Number: RW-2

Ground Surface Elevation: 814.63

Top of Casing Elevation: 814.64

[illegible]

*Adjusted for FP

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Free Product Recovery Information

Tabulate the free product and groundwater volumes removed from each well. List each extraction event chronologically with the oldest data first. The results for all events must be provided. Give all elevations as feet Above Sea Level (ASL). Ground surface elevation must be reported to the nearest 0.1 foot. Top of casing elevation, static water elevations, and free product thickness must be reported to the nearest 0.01 foot. Volume of free product and groundwater removed must be reported to the nearest 0.1 gallon. A separate sheet should be used for each recovery well.

Well Number: RW-3		Ground Surface Elevation: 814.56		Top of Casing Elevation: 814.85	
Date Sampled	Static Groundwater Level (feet ASL)	Free Product Thickness (feet)	Volume of Free Product Removed (gallons)	Volume of Groundwater Removed (gallons)	
3/20/02	805.25*	0.59	0.18	2.03	
4/22/02	805.87*	0.53	0.19	0.23	
7/1/02	799.13*	0.82	--	--	
8/30/02	805.83*	0.48	0.23	1.21	
9/6/02	805.67*	0.42	3.15	0.0	
9/13/02	805.35*	0.29	2.10	0.0	
9/21/02	805.65*	0.11	0.99	0.0	
9/28/02	805.35*	0.06	0.50	0.0	
10/4/02	806.65*	0.03	0.37	0.0	
10/11/02	805.95*	0.01	0.10	0.0	
10/18/02	805.52*	0.01	0.05	0.0	
10/25/02	806.07*	0.03	0.00	0.0	
11/1/02	806.13*	0.04	0.37	0.0	
11/11/02	805.34*	0.02	0.32	0.0	
11/18/02	805.36*	0.03	0.19	0.0	
11/24/02	805.03	sheen	0.04	0.0	
12/6/02	804.96	0.06	0.43	0.00	
12/13/02	804.90	0.00	0.09	0.00	
12/20/02	804.83	0.00	0.07	0.00	
12/27/02	804.75	0.00	0.03	0.00	
1/3/03	804.74	0.00	0.03	0.00	
1/10/03	804.68	0.00	0.03	0.00	
1/24/03	804.63*	0.02	0.25	0.00	
2/10/03	804.62*	0.02	0.13	0.00	
2/24/03	804.90*	0.01	0.09	0.00	
3/11/03	804.92	0.00	0.04	0.00	
3/21/03	805.58	0.00	0.05	0.00	
4/3/03	805.57	0.00	0.03	0.00	
4/17/03	805.71	0.00	0.03	0.00	

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*Adjusted for FP

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Free Product Recovery Information

Tabulate the free product and groundwater volumes removed from each well. List each extraction event chronologically with the oldest data first. The results for all events must be provided. Give all elevations as feet Above Sea Level (ASL). Ground surface elevation must be reported to the nearest 0.1 foot. Top of casing elevation, static water elevations, and free product thickness must be reported to the nearest 0.01 foot. Volume of free product and groundwater removed must be reported to the nearest 0.1 gallon. A separate sheet should be used for each recovery well.

Well Number: RW-4		Ground Surface Elevation: 812.06		Top of Casing Elevation: 812.10	
Date Sampled	Static Groundwater Level (feet ASL)	Free Product Thickness (feet)	Volume of Free Product Removed (gallons)	Volume of Groundwater Removed (gallons)	
3/20/02	7.16* from TOC	0.65	0.71	5.59	
7/1/02	7.28* from TOC	0.74	--	--	
9/6/02	7.15* from TOC	0.59	3.57	0.0	
9/13/02	7.35* from TOC	0.19	1.05	0.0	
9/21/02	7.17* from TOC	0.09	0.66	0.0	
9/28/02	7.33* from TOC	0.04	0.39	0.0	
10/4/02	805.17*	0.01	0.05	0.0	
10/11/02	805.03*	0.03	0.24	0.0	
10/18/02	804.84*	0.02	0.08	0.0	
10/25/02	805.06	0.00	0.00	0.0	
11/1/02	805.13	0.00	0.00	0.0	
11/11/02	804.89*	0.01	0.04	0.0	
11/18/02	804.77*	0.02	0.03	0.13	
11/24/02	804.69	sheen	0.02	0.0	
12/6/02	804.64	0.00	0.01	0.00	
12/13/02	804.60	0.00	0.01	0.00	
12/20/02	804.61	0.00	0.01	0.00	
12/27/02	804.57	0.00	0.16	0.00	
1/3/03	804.53*	0.08	0.72	0.00	
1/10/03	804.58*	0.06	0.51	0.00	
1/24/03	804.52	0.00	0.01	0.00	
2/10/03	804.48*	0.28	2.46	0.00	
2/24/03	804.83*	0.06	0.36	0.00	
3/11/03	804.66*	0.04	0.32	0.00	
3/22/03	805.01	0.00	0.07	0.00	
4/3/03	804.86	0.00	0.03	0.01	
4/17/03	805.02	0.00	0.06	0.00	

*Adjusted for FP

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Free Product Recovery - Site Totals

Tabulate the total groundwater volume and total free product volume removed from all the recovery wells at the site. Volume of free product and groundwater recovered must be reported to the nearest 0.1 gallon. List the site totals starting with the first month the recovery was initiated. The results for all events must be provided.

Volume of Water Recovered

Month / Year - Gallons	Month / Year - Gallons	Month / Year - Gallons
3/02 - 10.01	7/03 - 2.55	-
4/02 - 0.69	8/03 - 1.5	-
7/02 - 0.0	9/03 - 0.46	-
8/02 - 5.39	-	-
9/02 - 8.80	-	-
10/02 - 5.49	-	-
11/02 - 4.99	-	-
12/02 - 0.03	-	-
1/03 - 0.02	-	-
2/03 - 0.0	-	-
3/03 - 0.18	-	-
4/03 - 0.05	-	-
5/03 - 0.16	-	-
6/03 - 0.01	-	-

Volume of Free Product Recovered

Month / Year - Gallons	Month / Year - Gallons	Month / Year - Gallons
3/02 - 2.85	7/03 - 1.24	-
4/02 - 1.58	8/03 - 5.2	-
7/02 - 0.0	9/03 - 0.71	-
8/02 - 1.30	-	-
9/02 - 19.84	-	-
10/02 - 1.63	-	-
11/02 - 1.45	-	-
12/02 - 1.02	-	-
1/03 - 1.67	-	-
2/03 - 3.16	-	-
3/03 - 0.57	-	-
4/03 - 0.21	-	-
5/03 - 3.75	-	-
6/03 - 0.41	-	-

ANALYTICAL REPORT

Beth Curnes
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
800-369-3500

09/05/2003

Job Number: 03.11283

Sample Number: 754068

Collected by: R. Brummel

Collectors Phone No.: 800-369-3500

Job Description: MACMILLIAN OIL, 2ND AVENUE
DES MOINES, IOWA

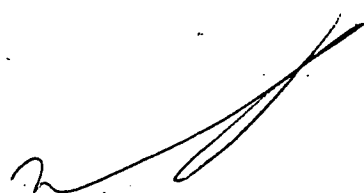
Date Taken: 08/29/2003

Sample ID: Stream A #6213004

Date Received: 08/29/2003

<u>Analyte</u>	<u>Result</u>	<u>Result</u>		<u>Analyst</u>	<u>Date</u>	<u>Method</u>	<u>Quantitation</u>	
		<u>Units</u>	<u>Flag</u>		<u>Analyzed</u>		<u>Limit</u>	<u>Matrix</u>
VOLATILES - BTEX (WATER)								
Benzene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Toluene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Ethylbenzene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Xylenes, Total	<3.0	ug/L		mmk	09/03/2003	IA-OA1	3.0	WATER
VOA Preservation pH	<2	units		dmd	09/04/2003	SW 9041A		WATER

All results are calculated on a wet weight basis.



R. L. Bindert
Operations Manager
IA UST LAB CERTIFICATION NO. 0007

ANALYTICAL REPORT

Beth Curnes
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
800-369-3500

09/05/2003

Job Number: 03.11283

Sample Number: 754069

Collected by: R. Brummel

Collectors Phone No.: 800-369-3500

Job Description: MACMILLIAN OIL, 2ND AVENUE
DES MOINES, IOWA

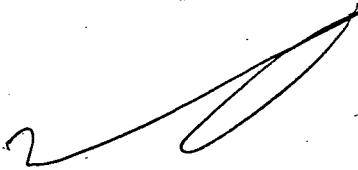
Date Taken: 08/29/2003

Sample ID: Stream B #6213004

Date Received: 08/29/2003

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Flag</u>	<u>Analyst</u>	<u>Date Analyzed</u>	<u>Method</u>	<u>Quantitation Limit</u>	<u>Matrix</u>
VOLATILES - BTEX (WATER)								
Benzene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Toluene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Ethylbenzene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Xylenes, Total	<3.0	ug/L		mmk	09/03/2003	IA-OA1	3.0	WATER
VOA Preservation pH	<2	units		dmd	09/04/2003	SW 9041A		WATER

All results are calculated on a wet weight basis.


R. L. Bindert
Operations Manager
IA UST LAB CERTIFICATION NO. 0007

ANALYTICAL REPORT

Beth Curnes
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
800-369-3500

09/05/2003

Job Number: 03.11283

Sample Number: 754070

Collected by: R. Brummel

Collectors Phone No.: 800-369-3500

Job Description: MACMILLIAN OIL, 2ND AVENUE
DES MOINES, IOWA

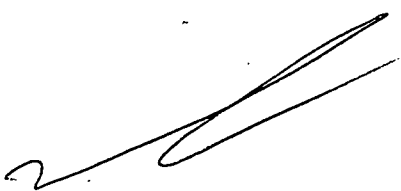
Date Taken: 08/29/2003

Sample ID: Stream C #6213004

Date Received: 08/29/2003

<u>Analyte</u>	<u>Result</u>	<u>Result</u>		<u>Analyst</u>	<u>Date</u>	<u>Method</u>	<u>Quantitation</u>	
		<u>Units</u>	<u>Flag</u>		<u>Analyzed</u>		<u>Limit</u>	<u>Matrix</u>
VOLATILES - BTEX (WATER)								
Benzene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Toluene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Ethylbenzene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Xylenes, Total	<3.0	ug/L		mmk	09/03/2003	IA-OA1	3.0	WATER
VOA Preservation pH	<2	units		dmd	09/04/2003	SW 9041A		WATER

All results are calculated on a wet weight basis.


R. L. Bindert
Operations Manager
IA UST LAB CERTIFICATION NO. 0007

ANALYTICAL REPORT

Beth Curnes
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
800-369-3500

09/05/2003

Job Number: 03.11283

Sample Number: 754071

Collected by: R. Brummel

Collectors Phone No.: 800-369-3500

Job Description: MACMILLIAN OIL, 2ND AVENUE
DES MOINES, IOWA

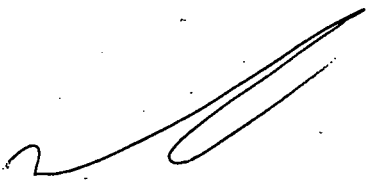
Date Taken: 08/29/2003

Sample ID: MW4 #6213004

Date Received: 08/29/2003

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Result		Date		Quantitation	
			<u>Flag</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Method</u>	<u>Limit</u>	<u>Matrix</u>
VOLATILES - BTEX (WATER)								
Benzene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Toluene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Ethylbenzene	<2.0	ug/L		mmk	09/03/2003	IA-OA1	2.0	WATER
Xylenes, Total	<3.0	ug/L		mmk	09/03/2003	IA-OA1	3.0	WATER
VOA Preservation pH	<2	units		dmd	09/04/2003	SW 9041A		WATER

All results are calculated on a wet weight basis.



R. L. Bindert
Operations Manager
IA UST LAB CERTIFICATION NO. 0007

QUALITY CONTROL REPORT

SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
Beth Curnes

09/05/2003

Job Number: 03.11283

Enclosed is the Quality Control data for the following samples submitted to TestAmerica, Inc. - Cedar Falls for analysis:

Sample Number	Sample Description	Date Taken	Date Received
754068	Stream A #6213004	08/29/2003	08/29/2003
754069	Stream B #6213004	08/29/2003	08/29/2003
754070	Stream C #6213004	08/29/2003	08/29/2003
754071	MW4 #6213004	08/29/2003	08/29/2003

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Iowa Laboratory Certification number - 7

QUALITY CONTROL REPORT

SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
Beth Curnes

09/05/2003

Job Number: 03.11283

Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
754068 Stream A #6213004 08/29/2003						
VOLATILES - BTEX (WATER)						
Benzene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Toluene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Ethylbenzene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Xylenes, Total	<3.0	ug/L	09/03/2003	9420	IA-OA1	3.0
4-Bromofluorobenzene (surr.)	85.7	%	09/03/2003	9420	IA-OA1	1
VOA Preservation pH	<2	units	09/04/2003	779	SW 9041A	
754069 Stream B #6213004 08/29/2003						
VOLATILES - BTEX (WATER)						
Benzene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Toluene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Ethylbenzene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Xylenes, Total	<3.0	ug/L	09/03/2003	9420	IA-OA1	3.0
4-Bromofluorobenzene (surr.)	85.4	%	09/03/2003	9420	IA-OA1	1
VOA Preservation pH	<2	units	09/04/2003	779	SW 9041A	
754070 Stream C #6213004 08/29/2003						
VOLATILES - BTEX (WATER)						
Benzene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Toluene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Ethylbenzene	<2.0	ug/L	09/03/2003	9420	IA-OA1	2.0
Xylenes, Total	<3.0	ug/L	09/03/2003	9420	IA-OA1	3.0
4-Bromofluorobenzene (surr.)	85.5	%	09/03/2003	9420	IA-OA1	1
VOA Preservation pH	<2	units	09/04/2003	779	SW 9041A	

QUALITY CONTROL REPORT

SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
Beth Curnes

09/05/2003

Job Number: 03.11283

			Date	Prep Batch	Run Batch		Quantitation
	Result	Units	Analyzed	Number	Number	Analysis Method	Limit
754071	MW4	#6213004	08/29/2003				
VOLATILES - BTEX (WATER)							
Benzene	<2.0	ug/L	09/03/2003		9420	IA-OA1	2.0
Toluene	<2.0	ug/L	09/03/2003		9420	IA-OA1	2.0
Ethylbenzene	<2.0	ug/L	09/03/2003		9420	IA-OA1	2.0
Xylenes, Total	<3.0	ug/L	09/03/2003		9420	IA-OA1	3.0
4-Bromofluorobenzene (surr.)	85.6	%	09/03/2003		9420	IA-OA1	1
VOA Preservation pH	<2	units	09/04/2003		779	SW 9041A	

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
Beth Curnes

09/05/2003

Job Number: 03.11283

Analyte	Prep	Run	CCV	Concentration Found	Percent Recovery
	Batch Number	Batch Number	True Concentration		
VOLATILES - BTEX (WATER)					
Benzene		9420	50.0	48.4	96.8
Toluene		9420	50.0	48.6	97.2
Ethylbenzene		9420	50.0	49.0	98.0
Xylenes, Total		9420	100	98.3	98.3
4-Bromofluorobenzene (surr.)		9420	100.0	97.6	97.6

CCV - Continuing Calibration Verification

QUALITY CONTROL REPORT BLANKS

SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313
Beth Curnes

09/05/2003

Job Number: 03.11283

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
VOLATILES - BTEX (WATER)				
Benzene		9420	<2.0	ug/L
Toluene		9420	<2.0	ug/L
Ethylbenzene		9420	<2.0	ug/L
Xylenes, Total		9420	<3.0	ug/L

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Beth Curnes
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

09/05/2003

Job Number: 03.11283

Analyte	Prep	Run	Sample Result	Units	MS Spike		MSD Spike			RPD	Flag(s)	
	Batch	Batch			Conc.	MS	MS	Conc.	MSD			MSD
	No.	No.			Added	Result	%Rec.	Added	Result			% Rec.
VOLATILES - BTEX (WATER)												
Benzene		9420	<2.0	ug/L	100.	68.7	69	100.	68.8	69	0.1	
Toluene		9420	<2.0	ug/L	100.	78.8	79	100.	78.9	79	0.1	
Ethylbenzene		9420	<2.0	ug/L	100.	84.2	84	100.	84.2	84	0.0	
Xylenes, Total		9420	<3.0	ug/L	200.	169	84	200	169	84	0.0	

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

09/05/2003

Job No: 03.11283

Beth Curnes
SENECA ENVIRONMENTAL
SERVICES, INC.
4140 N.E. 14th St.
Des Moines, IA 50313

Analyte	Prep	Run	LCS		LCS	LCS	LCS	LCS	Control	RPD Max.	
	Batch	Batch	Amount	Units	Result	Result	% Rec	% Rec	Limits	RPD	Limit
VOLATILES - BTEX (WATER)											
Benzene		9420	100	ug/L	68.7		68.7		47 - 114		20
Toluene		9420	100.	ug/L	78.0		78.0		69 - 113		20
Ethylbenzene		9420	100.	ug/L	83.7		83.7		74 - 121		20
Xylenes, Total		9420	200	ug/L	168		84.0		72 - 114		20
4-Bromofluorobenzene (surr		9420	100.0	%	87.1		87.1		78 - 124		20

TestAmerica Job Number: 03.11283

ATTACHMENTS

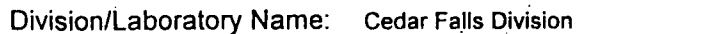
Following are the sample receipt log and the chain of custody applicable to this analytical report.

Any abnormalities or departures from sample acceptance policy shall be documented on the "Sample Receipt and Temperature Log Form" and Sample Non-Conformance Form" (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility please visit our website at www.TestAmericaInc.com.

This report shall not be reproduced, except in full, without written approval of the laboratory.

For questions regarding this report, please contact the individual who signed the analytical report.



Client Name Seneca Environmental Client #: 40200

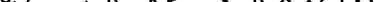
Address: 4140 NE 14th Street

City/State/Zip Code: Des Moines, IA 50313

Project Manager: Beth Curnes

Telephone Number: 515-262-3500 Fax: 515-262-2469

Sampler Name: (Print Name) Ben Brumme

Sampler Signature: 

Project Name: Middleton Co - 2 Ave

Project #: 0213004

Site/Location ID: OSM State: TX

Report To: Seneca Environmental

Invoice To: Seneca Environmental

Quote #: PO#: 109479

[illegible]