

**DES Waste Management Division  
29 Hazen Drive; PO Box 95  
Concord, NH 03302-0095**

**November 2022 Groundwater Data Submittal  
DMS FUELS, LLC (FORMER GARY'S FUELS)  
2830 Dartmouth College Highway  
North Haverhill, NH 03774**

**NHDES Site #: 199209012  
MOST Project Number: 15770  
LUST Project Number: 3896**

Prepared For:  
DMS Fuels, LLC.  
2830 Dartmouth College Highway  
North Haverhill, NH 03774  
Phone Number (603) 787-9941  
RP Contact Name: Glen Meder  
RP Contact Email: [glenmeder@gmail.com](mailto:glenmeder@gmail.com)

Prepared By:  
Horizons Engineering, Inc.  
34 School Street  
Littleton, NH 03561  
Phone Number: (603) 444-4111  
Contact Name: Valerie J. Carr  
Contact Email: [vcarr@horizonsengineering.com](mailto:vcarr@horizonsengineering.com)

March 20,2023

# Groundwater Monitoring Report Cover Sheet

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Site Name: **DMS Fuels, LLC (Former Gary's Fuels)**

Town: North Haverhill, NH

Permit #: 199209012-H-001

## Type of Submittal (*Check all that apply*)

- Periodic Summary Report (year):  
 Data Submittal (*month and year per Condition #7 of Permit*): November 2022

Check each box where the answer to any of the following questions is "YES"

## Sampling Results

- During the most recent monitoring event, were any new compounds detected at any sampling point?  
Well/Compound:
- Are there any detections of contamination in drinking water that is untreated prior to use?  
Well/Compound:  
 Do compounds detected exceed AGQS?
- Was free product detected for the first time in any monitoring point?  
 Surface Water (*visible sheen*)  
 Groundwater (*1/8" or greater thickness*)  
Location/Thickness:

## Contaminant Trends

- Do sampling results show an increasing concentration trend in any source area monitoring well?  
Well/Compound:
- Do sampling results indicate an AGQS violation in any of the GMZ boundary wells?  
Well/Compound: Multiple – See GW Tables appended to Data Submittal

## Recommendations

- Does the report include any recommendations requiring DES action? (*Do not check this box if the only recommendation is to continue with existing permit conditions.*)

This form is to be completed for groundwater monitoring data submittals and periodic summary reports submitted to the New Hampshire Department of Environmental Services Waste Management Division.



34 SCHOOL STREET • LITTLETON, NH 03561 • PHONE 603-444-4111 • FAX 603-444-1343 • [www.horizonsengineering.com](http://www.horizonsengineering.com)

Project No. 220063

March 20, 2023

Renée S. Strondak, P.G.  
NHDES – Waste Management Division  
Oil Remediation and Compliance Bureau  
29 Hazen Drive, Post Office Box 95  
Concord, New Hampshire 03302-0095

**Subject:      November 2022 Sampling**  
**North Haverhill Convenience (Former Gary's Fuels)**  
**2830 Dartmouth College Highway, North Haverhill, New Hampshire**  
**NHDES Site#199209012, LUST Project #3896 / MOST Project #15770 /**  
**HAZWASTE Project #38737**

Dear Ms. Strondak:

Horizons Engineering Inc. (HEI) has completed the November 2022 groundwater sampling at the Former Gary's Fuel property located at 2830 Dartmouth College Highway in North Haverhill, New Hampshire (the "Site"). This work has been completed for the responsible party of the Site, Mr. Glen Meder or DMS Fuels, LLC, of Woodsville, New Hampshire. The groundwater sampling event was performed in general accordance with Conditions #1 and #2 of the expired Groundwater Management Permit 199209012-H-001, issued on May 2, 2017, and the approved Change Order (CO) dated November 22, 2022.

All activities have been conducted in accordance with the requirements outlined in the New Hampshire Code of Administrative Rules, Sections Env-Or 610.01 through Env-Or 610.04, the *NHDES Field Sampling Procedures Guidance*, and the requirements outlined in the associated GMP.

### **Groundwater Sampling Summary**

The sampling event was completed on November 23, 2022. Groundwater samples were attempted to be collected from the LUST affiliated sampling points; RW-1, RW-2, MW-1, MW-6, MW-7, MW-9, MW-10, MW-12, MW-16-29, and MW-16-34. Monitoring wells MW-6, MW-9, MW-10, MW-12, and RW-2 were not sampled because the wells were found to contain measurable light non-aqueous phase liquid (LNAPL).

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During the sampling event, field measurements of static water levels were recorded at each sampling GMP sampling point prior to the collection of groundwater samples. An interface probe was used to measure LNAPL thickness in the wells with a history of free product.

Approximately three well volumes of water were purged from each of the GMP monitoring wells prior to collection of the groundwater samples using dedicated PVC bailers. Samples were placed in laboratory prepared containers, placed on ice, and transported to Eastern Analytical, Inc. under chain of custody documentation for analysis of Volatile Organic Compounds (VOCs) by EPA Method 8260C.

### **November 2022 Groundwater Sampling Results - LUST Affiliated Sampling Points**

Concentrations of VOCs exceeding the NHDES Ambient Groundwater Quality Standards (AGQS) were reported for the groundwater samples collected from GMP monitoring wells MW-7, MW-16-29, MW 16-34, and RW-1.

- Benzene
  - Benzene was reported at MW-7 (74 µg/L), MW-16-29 (38 µg/L), and MW-16-34 (14 µg/L), exceeding the AGQS of 5 µg/L.
- Toluene
  - Toluene was reported at MW 16-34 at a concentration of 6,900 µg/L; exceeding the AGQS of 1,000 µg/L.
- Ethylbenzene
  - Ethylbenzene was reported at MW 16-34 at a concentration of 1,300 µg/L; exceeding the AGQS of 700 µg/L.
- 1,2,4-Trimethylbenzene
  - 1,2,4-Trimethylbenzene was reported at MW 16-34 (660 µg/L); exceeding the AGQS of 330 µg/L.
- 1,2-dibromoethane (EDB)
  - EDB was reported at MW-7 at a concentration of 0.65 µg/L; exceeding the AGQS of 0.05 µg/L.
- Bromomethane
  - Bromomethane was reported at MW-16-34 at a concentration of 23 µg/L; exceeding the AGQS of 10 µg/L.
- Naphthalene
  - Naphthalene was reported at MW-16-34 at a concentration of 130 µg/L; exceeding the AGQS of 100 µg/L.

Acetone, toluene, ethylbenzene, xylenes, styrene, isopropylbenzene, n-propylbenzene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene, p-isopropyltoluene, n-butylbenzene, and naphthalene were reported below AGQS standards in one or more of the remaining sampling points.

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## **LNAPL**

Light non-aqueous phase liquid (LNAPL) was detected and observed in monitoring wells MW-6 (0.06'), MW-9 (0.10'), MW-10 (0.15'), MW-12 (2.60'), and RW-2 (2.15'). LNAPL has been observed at these locations during past monitoring events.

## **Conceptual Hydrogeologic Model**

Groundwater has consistently been documented to generally flow west towards the Connecticut River, which is located approximately 1,300 feet west of the Site. Although a clear westerly flow has been noted for the Site, some groundwater flow may also be towards Clark Brook, which is located approximately 600 feet to the east, and may be occurring at certain times of the year based on elevations and contaminant concentrations observed in the past. Depth to groundwater, within the monitoring well network, has ranged from approximately 20 to 55 feet below grade, with increasing depths towards the Connecticut River.

The source of subsurface petroleum impact at and in the vicinity of the Site is attributed to the release of gasoline from a former UST at the Site, which was first reported to the NHDES in 1992. The source of chlorinated VOCs in the subsurface is from the former waste oil tank near the garage and/or the leach field.

Based on the groundwater analytical data collected from the monitoring well network over time, it appears the core of the petroleum impacts beneath the Site are predominantly located near the western portion of the Subject Site. The dissolved phase petroleum VOC plume has been documented to have migrated at least 510 feet to the west (MW16-28), and most likely extends beyond the monitoring well network. The core of the chlorinated VOC plume is predominantly near MW-3 and MW-8, and also appears to have impacts west of the well network. Both petroleum and chlorinated plumes appear to be well defined, by the existing well network to the north and south.

## **Discussion/Conclusions**

Based on groundwater elevation contours constructed from water level measurements collected during the November 2022 groundwater sampling event, the groundwater flow direction at the Site is inferred to be generally to the west at an average gradient of 0.036 feet/foot. Groundwater elevation contours are shown on the **Site Plans** attached to this report. Groundwater elevation data and historical analytical results are summarized on the **Groundwater Quality Tables**.

Consistent with historical results, contaminants of concern continue to be reported at greater than applicable NHDES Ambient Groundwater Quality Standards (AGQSS) and light non-aqueous phase liquid (LNAPL) continues to be measured in multiple monitoring wells. Current and historical data indicates dissolved phase VOCs continue to fluctuate over time, but generally remain steady. Graphical summaries of groundwater quality data showing trends in contaminant concentrations are attached for reference.

Dissolved Phase Petroleum VOC Plume

In general, total petroleum VOC concentrations have remained steady since the previous sampling rounds. An overall decreasing trend is evident at MW-1, MW16-29, and MW16-34, which are located farther away from the source area/LNAPL. LNAPL was again observed at MW-9, which is located close to the source area. The presence of LNAPL at MW-6, MW-10, MW-12, and RW-2 will continue to contribute to the off-site migration of the dissolved phase petroleum VOC plume.

Recommendations

With regard to the NHDES request for additional PFAs sampling, the RP has declined to complete that sampling at this time as it is not covered by the Oil Fund and the initial screening was not completed with his or the former RP's permission. To date, there has been no established source of the PFAs and no link between the onsite contaminants of concern and PFAs have been established. On behalf of the RP, HEI continues to request that additional PFAs sampling be tabled at this time.

Based on the results of the most current and previous groundwater sampling, Horizons recommends the following:

- The GMP expired in mid-May and HEI has prepared a GMP renewal application which will be submitted under separate cover.
- With recent detections within the GMZ boundary well MW-16-32, HEI has proposed that this well be sampled each year in May. HEI is also proposing that all wells (sampled and non-sampled) be gauged for static water level during each sampling event.

HEI proposes the following sampling schedule / parameters:

Monitoring Locations	Sampling Frequency	Parameters
MW-1, MW-6*, MW-7, MW-9, MW-10*, MW-12*, MW-16-29, MW-16-34, RW-1* & RW-2*	May and November of each year	DES Waste Management Division Full List of Analytes for Volatile Organics & Static Water Level
MW-3, MW-8, MW-13, MW-14, MW-15, MW-16, MW-20, MW-23, MW-16-28, MW-16-32	May of each year	DES Waste Management Division Full List of Analytes for Volatile Organics & Static Water Level
MW-24, MW-11-26, MW-16-30, & MW-16-31	May 2025	DES Waste Management Division Full List of Analytes for Volatile Organics & Static Water Level

MW-24, MW-11-26, MW-16-30 & MW-16-31	May and November of each year	Static Water Level Only
MW-3, MW-8, MW-13, MW-14, MW-15, MW-16, MW-20, MW-23, MW-16-28 & MW-16-32	November of each year	Static Water Level Only

Attached to this letter report are an updated **LUST Groundwater Site Plans** with groundwater contours created from the November 2022 sampling event, updated **Groundwater Quality Tables**, and the **Laboratory Analytical Report** for the current sampling event.

Please do not hesitate to contact the undersigned at (603) 444-4111 if you have any questions or require additional information.

Sincerely,  
Horizons Engineering, Inc.



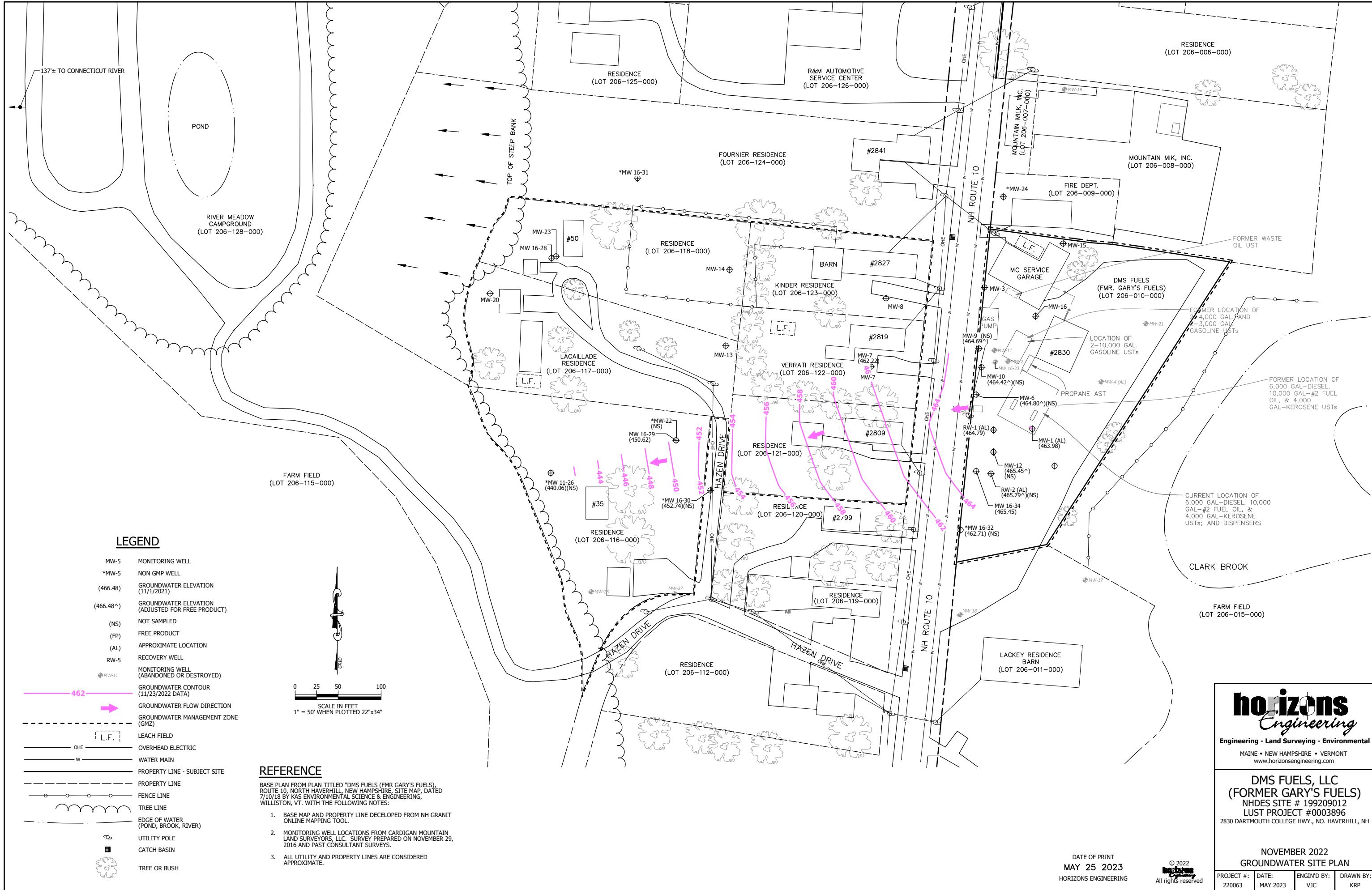
Valerie J. Carr  
*Environmental Project Manager*

Horizons Engineering, Inc.

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## **ATTACHMENTS**

## **November 2022 Groundwater Site Plan**



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**Engineering**  
Engineering - Land Surveying - Environmental  
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**DMS FUELS, LLC**  
**(FORMER GARY'S FUELS)**  
NHDES SITE # 199209012  
LUST PROJECT #0003896  
2830 DARTMOUTH COLLEGE HWY., NO. HAVERHILL, NH

NOVEMBER 2022  
GROUNDWATER SITE PLAN

PROJECT #: 220063 DATE: MAY 2023 ENGIN'D BY: VJC DRAWN BY: KRP

## **Groundwater Quality Tables**

**Groundwater Analytical Results  
OMS Fuels, LLC (Former Gary's Fuels)  
NHDES #199209012**

Notes: Concentrations listed in **bold** equal to or greater than applicable NHDES

AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS Fuels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater		MW-6																																				
	Quality Standards		AGQS																																				
Top of PVC	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21	493.21										
Depth to Water (ft)	29.11	28.41	28.68	28.82	28.20	27.70	27.32	27.19	26.99	27.14	27.55	27.17	25.72	25.60	26.06	26.43	27.54	27.60	26.04	26.21	28.98	26.55	26.57	26.97	27.19	27.50	27.80	27.18	27.90	27.86	28.05	28.65	28.10	27.90	28.46				
Product Thickness (ft)							0.44	0.04	0.30		0.01		3.03	4.40	3.26	1.50	0.11	1.42	2.87		2.94	2.37	2.63	1.03	2.24	1.85	1.87	1.17	0.06	0.51	0.30	0.11	0.18	0.25	0.20	0.18	0.06		
Water Table Elevation (ft)	464.10	464.80	464.53	464.39	465.01	465.51	466.28	466.06	466.48	466.07	465.67	466.04	470.16	471.48	470.02	468.10	465.77	466.86	469.70	469.59	466.32	468.97	467.55	493.21	468.21	467.65	467.36	465.23	465.46	466.09	493.21	466.48	465.57	465.45	465.32	464.78	465.29	465.47	464.80
Laboratory Dilution Factor																																							
Volatile Organic Compounds	ug/L (ppb)																																						
Benzene	5																																						
Toluene	1,000																																						
Ethylbenzene	700																																						
m,p-xylene	NA																																						
o-xylene	NA																																						
Total Detected Xylenes	10,000																																						
Total Detected BTEX	NA																																						
Methyl tert butyl ether (MTBE)	13																																						
sec-Butylbenzene	260																																						
tert-Butylbenzene	260																																						
n-Butylbenzene	260																																						
1,2,3-Trimethylbenzene	330																																						
1,2,4-Trimethylbenzene	330																																						
1,3,5-Trimethylbenzene	330																																						
n-Propylbenzene	260																																						
p-Isopropyltoluene	260																																						
Isopropylbenzene	800																																						
Naphthalene	100																																						
1,2 Dibromoethane	0.5																																						
1,2 Dichloroethane	5																																						
	<200	520	586	604	448																																		

Notes:

Concentrations listed in **bold** equal to or greater than applicable NHDES AGQS.

NA = Standard not available.

(<sup>†</sup>) AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results  
MS Fuels, LLC (Former Gary's Fuels)  
NHDES #199209012**

### Notes

Concentrations listed in **bold** equal to or greater than applicable NHDES AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS Fuels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater																									
	MW-9																									
Top of PVC																										
Depth to Water (ft)																										
Product Thickness (ft)																										
Water Table Elevation (ft)																										
Laboratory Dilution Factor																										
Volatile Organic Compounds																										
Benzene																										
Toluene																										
Ethylbenzene																										
mp-xylene																										
o-xylene																										
Total Detected Xylenes																										
Total Detected BTEX																										
cis-1,2-Dichloroethene																										
Tetrachloroethene (PCE)																										
Trichloroethene (TCE)																										
1,2-dichloroethane																										
1,2-dibromoethane (Ethylene Dibromide)																										
Methyl tert butyl ether (MTBE)																										
sec-Butylbenzene																										
tert-Butylbenzene																										
n-Butylbenzene																										
1,2,4-Trimethylbenzene																										
1,3,5-Trimethylbenzene																										
n-Propylbenzene																										
p-Isopropyltoluene																										
Isopropylbenzene																										
Naphthalene																										
Bromodichloromethane																										
Dibromochloromethane																										
Chloroform																										

Notes:

Concentrations listed in **bold** equal to or greater than applicable NHDES AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS Fuels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater		MW-10																															
	Quality Standards		04/30/04	07/20/04	11/09/04	12/09/04	04/08/05	07/18/05	11/29/05	04/11/06	07/12/06	11/21/06	11/07/07	04/17/08	11/24/08	03/13/09	11/02/09	04/09/10	11/23/10	04/21/11	12/06/12	04/18/14	04/06/16	04/27/17	11/28/17	05/30/18	08/26/19	11/06/19	05/13/20	11/09/20	05/10/21	11/01/21	05/25/22	11/23/22
Top of PVC		493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69	493.69		
Depth to Water (ft)		27.79	27.60	27.43	27.55	27.93	27.55	26.40	26.05	26.50	27.30	27.87	27.34	26.46		26.59	30.17	DRY	26.68		27.54	27.68		28.51	27.48	31.79	29.55	28.60	29.47	26.69	28.48	28.50	29.40	
Product Thickness (ft)						0.24			2.15	6.25	2.27	2.99		0.60	2.27		2.97	3.53		2.21		0.78	1.52		0.35	1.33	4.47	1.32	0.09	0.49	0.33	0.27	0.58	0.15
Water Table Elevation (ft)		465.90	466.09	466.26	466.14	465.97	466.14	469.18	473.14	469.19	469.02	465.82	466.88	469.23		469.71	466.63		468.95		466.84	467.35		465.49	467.38	465.83	465.30	465.17	464.65	467.29	465.44	465.70	464.42	
Laboratory Dilution Factor																																		
Volatile Organic Compounds	AGQS																																	
Benzene		5	12,800	12,000	13,700																													
Toluene		1,000	19,700	20,900	28,500																													
Ethylbenzene		700	2,140	2,160	4,490																													
<i>mp</i> -xylene		NA																																
<i>o</i> -xylene		NA																																
Total Detected Xylenes		10,000	9,960	9,980	10,900																													
Total Detected BTEX		NA	44,600	45,040	57,590																													
Methyl tert butyl ether (MTBE)		13	<400	<400	<400																													
sec-Butylbenzene		260	<200	<200	<200																													
tert-Butylbenzene		260	<200	<200	<200																													
n-Butylbenzene		260	<200	<200	<200																													
1,2,4-Trimethylbenzene		330	1,420	1,500	4,530																													
1,3,5-Trimethylbenzene		330	438	428	1,210																													
n-Propylbenzene		260	222	246	602																													
<i>o</i> -Isopropyltoluene		260	<200	<200	<200																													
Isopropylbenzene		800	<200	<200	<200																													
Naphthalene		100	<400	<400	<400																													
1,2-dichloroethane		5	<200	<200	206																													
1,2-dibromoethane (Ethylene Dibromide)		0.05	466	470	718																													

**Notes:**

Concentrations listed in **bold** equal to or greater than applicable NHDES

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS Fuels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater		MW-12																															
	Quality Standards		12/09/04	04/08/05	07/18/05	11/29/05	04/11/06	07/12/06	11/21/06	04/13/07	11/07/07	04/17/08	11/24/08	03/13/09	11/02/09	04/09/10	11/23/10	04/21/11	12/06/12	04/18/14	04/06/16	10/13/16	04/27/17	11/28/17	05/30/18	11/13/18	08/26/19	11/06/19	05/13/20	11/09/20	05/10/21	11/01/21	05/25/22	11/23/22
Top of PVC		492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96	492.96				
Depth to Water (ft)		26.44	26.52	25.60	24.32	25.38	25.32	25.47		26.64	29.10	25.24		25.17	30.12	25.31	25.23	27.53	26.42				26.41	25.69	26.47	30.27	30.00	29.67	30.10	29.78	26.87	26.40	29.80	
Product Thickness (ft)		5.98	1.06	6.48	5.09	1.44	2.63	1.23		0.02	4.65	1.95		5.21	5.02	4.70	4.41	0.53	0.81				3.77	5.07	3.10	4.97	3.26	3.16	3.49	3.00	3.52	3.20	2.60	
Water Table Elevation (ft)		471.78	467.37	473.06	473.12	468.85	469.95	468.57		466.34	467.95	469.44		472.37	467.26	471.79	471.61	465.90	467.25				469.87	471.73	469.22	467.06	465.83	466.07	465.93	465.82	469.19	469.38	465.45	
Laboratory Dilution Factor																																		
Volatile Organic Compounds	AGQS																																	
Benzene		5																																
Toluene		1,000																																
Ethylbenzene		700																																
m,p-xylene		NA																																
o-xylene		NA																																
Total Detected Xylenes		10,000																																
Total Detected BTEx		NA																																
Methyl tert butyl ether (MTBE)		13																																
sec-Butylbenzene		260																																
tert-Butylbenzene		260																																
n-Butylbenzene		260																																
1,2,4-Trimethylbenzene		330																																
1,3,5-Trimethylbenzene		330																																
n-Propylbenzene		260																																
p-Isopropyltoluene		260																																
Isopropylbenzene		800																																
Naphthalene		100																																
Tetrachloroethene (PCE)		5																																
Trichloroethene (TCE)		5																																

Notes:

Concentrations listed in **bold** equal to or greater than applicable NHDES AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS FUels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater Quality Standards	MW-11-26							
		07/07/11	12/06/12	04/18/14	04/06/16	08/26/19	05/10/21	05/25/22	11/23/22
Top of PVC						491.21	491.21	491.21	491.21
Depth to Water (ft)			50.50	49.35	50.18	49.60	51.45	50.05	51.15
Product Thickness (ft)									
Water Table Elevation (ft)			-50.50	-49.35	-50.18	441.61	439.76	441.16	440.06
Laboratory Dilution Factor								1	1
Volatile Organic Compounds	AGQS	ug/L (ppb)							
Benzene	5	<1.0	<1.0	<1.0	<1.0	Not Sampled	<1	Not Sampled	Not Required by GMP
Toluene	1000	<1.0	<1.0	<1.0	<1.0		<1		
Ethylbenzene	700	<1.0	<1.0	<1.0	<1.0		<1		
mp-xylene	NA						<1		
o-xylene	NA						<1		
Total Detected Xylenes	10000	<2.0	<2.0	<2.0	<2.0	Not Sampled	<2	Not Required	Not Required
Total Detected BTEX	NA	ND	ND	ND	ND		<5		
Methyl tert butyl ether (MTBE)	13	<b>27.0</b>	2.5	<2.0	<2.0		<1		
sec-Butylbenzene	260	<1.0	<1.0	<1.0	<1.0		<1		
tert-Butylbenzene	260	<1.0	<1.0	<1.0	<1.0		<1		
n-Butylbenzene	260	<1.0	<1.0	<1.0	<1.0	Sampled	<1	Required by GMP	Required by GMP
1,2,4-Trimethylbenzene	330	<1.0	<1.0	<1.0	<1.0		<1		
1,3,5-Trimethylbenzene	330	<1.0	<1.0	<1.0	<1.0		<1		
n-Propylbenzene	260	<1.0	<1.0	<1.0	<1.0		<1		
p-Isopropyltoluene	260	<1.0	<1.0	<1.0	<1.0		<1		
Isopropylbenzene	800	<1.0	<1.0	<1.0	<1.0	MUD	<1	Required by GMP	Required by GMP
Naphthalene	<sup>(1)</sup> 100						<2		
Bromodichloromethane							1.6		
1,2 dichloroethane	5	<1.0	<1.0	1.8	<1.0		<1		
1,2 dibromoethane (EDB)	0.05	<1.0	<1.0	<b>1.4</b>	<1.0		<0.5		

Notes:

Concentrations listed in **bold** equal to or greater than applicable NHDES

AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS FUels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater	MW-16-29												
		10/12/16	04/27/17	11/28/17	05/30/18	11/13/18	08/26/19	11/06/19	05/13/20	11/09/20	05/10/21	11/01/21	05/25/22	11/23/22
Top of PVC		492.62	492.62	492.62	492.62	492.62	492.62	492.62	492.62	492.62	492.62	492.62	492.62	492.62
Depth to Water (ft)		40.86	41.75	40.52	40.25	40.53	39.92	40.24	40.96	40.95	41.62	40.40	40.50	42.00
Product Thickness (ft)														
Water Table Elevation (ft)		451.76	450.87	452.10	452.37	452.09	452.70	452.38	451.66	451.67	451.00	452.22	452.12	450.62
Laboratory Dilution Factor							1	1	1	1	1	1	1	1
Volatile Organic Compounds	AGQS	ug/L (ppb)												
Benzene	5	<b>691</b>	<b>897</b>	<b>304</b>	<b>214</b>	<b>250</b>	<b>160</b>	<b>210</b>	<b>150</b>	<b>160</b>	<b>160</b>	<b>92</b>	<b>24</b>	<b>38</b>
Toluene	1000	77.0	44.4	10.0	29.4	13.1	21.0	35.0	12	22	10	6.3	2.0	3.9
Ethylbenzene	700	43.7	54.1	6.9	45.0	10.8	9.3	14.0	21	22	26	8.6	6.2	14.0
<i>mp-xylene</i>	NA						7.0	21.0	9.7	17.0	7.1	4.4	1.9	3.5
<i>o-xylene</i>	NA						<1	3.0	<1	1.6	<1	<1	<1	1.6
Total Detected Xylenes	10000	170.0	81.1	16.4	21.1	9.8	7.0	24.0	9.7	18.6	7.1	4.4	1.9	5.1
<b>Total Detected BTEX</b>	NA	982	1077.0	337.0	310.0	284.0	197.3	283.0	192.7	222.6	203.1	111.3	34.1	61.0
Acetone	6000			30.3	<100		<10	<10	<10	<10	19.0	27.0	15.0	13.0
2-Butanone (MEK)	4000			10.7	<100	<10	<10	<10	<10	11	<10	<10	<10	<10
Methyl tert butyl ether (MTBE)	13	<10.0	<20.0	<2.0	<20.0	<2	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	260	5.5	<10	3.2	<100	2.0	1.2	1.8	2.2	2.2	2.2	1.8	1.4	1.6
tert-Butylbenzene	260	<5.0	<10.0	<1.0	<10.0	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene	260	<10.0	<10.0	2.9	<10.0	2.1	<1	3.3	3.6	3.1	2.7	1.8	1.1	1.2
1,2,4-Trimethylbenzene	330	15.0	<10.0	1.2	<10.0	1.3	<1	1.2	<1	<1	<1	<1	<1	1.0
1,3,5-Trimethylbenzene	330	48.4	55.3	35.7	27.8	28.1	13.0	25.0	7.8	7.7	<1	<1	<1	<1
n-Propylbenzene	260	43.5	48.3	30.6	27.5	27.8	18.0	28.0	27	32	28	19	13	16
p-Isopropyltoluene	260	<5.0	<10.0	1.8	<10.0	<1	<1	1.1	1.1	1.2	1.0	<1	<1	<1
Isopropylbenzene	800	39.0	45.8	32.9	23.8	25.7	20.0	30.0	28	28	28	21	16	21
Naphthalene	'100	55.1	84.7	90.1	56.5	73.0	48.0	51.0	52	44	37	45	26	30

Notes:

Concentrations listed in **bold** equal to or greater than applicable NHDES AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS Fuels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater Quality Standards	MW-16-30				
		10/12/16	08/26/19	05/10/21	05/25/22	11/23/22
Top of PVC		492.49	492.49	492.49	492.49	492.49
Depth to Water (ft)		38.45	37.26	39.62	38.15	39.75
Product Thickness (ft)						
Water Table Elevation (ft)		454.04	455.23	452.87	454.34	452.74
Laboratory Dilution Factor		1		1	1	
Volatile Organic Compounds	AGQS	ug/L (ppb)				
Benzene	5	<0.5	Not Sampled	<1	<1	Note Required by GMP
Toluene	1000	<1.0		<1.0	<1	
Ethylbenzene	700	<1.0		<1.0	<1	
<i>mp-xylene</i>	NA			<1	<1	
<i>o-xylene</i>	NA			<1	<1	
Total Detected Xylenes	10000	<2.0		<2	<2	
<b>Total Detected BTEX</b>	NA	<4.5		<5	<5	
Acetone	6000			<10	<1	
2-Butanone (MEK)	4000			<10	<1	
tertiary-butyl Alcohol (TBA)	40			<30	<30	
Methyl tert butyl ether (MTBE)	13	<2.0		<2	<1	
Diisopropyl Ether (DIPE)	120			<2	<2	
2-Hexanone (MBK)	NS			<10	<10	
sec-Butylbenzene	260	<1.0		<1	<1	
tert-Butylbenzene	260	<1.0		<1	<1	
n-Butylbenzene	260	<1.0		<1	<1	
1,2,4-Trimethylbenzene	330	<1.0		<1	<1	
1,3,5-Trimethylbenzene	330	<1.0		<1	<1	
n-Propylbenzene	260	<1.0		<1	<1	
p-Isopropyltoluene	260	<1.0		<1	<1	
Isopropylbenzene	800	<1.0		<1	<1	
Naphthalene	100			<2	<2	

Notes:

Concentrations listed in **bold** equal to or greater than applicable NHDES AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS FUels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater Quality Standards	MW-16-32				
		10/12/16	08/26/19	05/10/21	05/25/22	11/23/22
Top of PVC		492.41	492.41	492.41	492.41	492.41
Depth to Water (ft)		26.85	25.90	26.98	27.10	29.70
Product Thickness (ft)						
Water Table Elevation (ft)		465.56	466.51	465.43	465.31	462.71
Laboratory Dilution Factor		1		1	1	
Volatile Organic Compounds	AGQS	ug/L (ppb)				
Benzene	5	<0.5	Not Sampled	<1	<1	Not Sampled - Not Required by GMP
Toluene	1000	<1.0		<1	<1	
Ethylbenzene	700	<1.0		<1	<1	
<i>mp-xylene</i>	NA			<1	4.4	
<i>o-xylene</i>	NA			<1	2.3	
Total Detected Xylenes	10000	<2.0		<2	6.7	
<b>Total Detected BTEX</b>	NA	<4.5		<5	6.7	
Acetone	6000			<10	<10	
2-Butanone (MEK)	4000			<10	<10	
tertiary-butyl Alcohol (TBA)	40			<30	<30	
Methyl tert butyl ether (MTBE)	13	<2.0		<1	<1	
Diisopropyl Ether (DIPE)	120			<2	<2	
2-Hexanone (MBK)	NS			<10	<10	
sec-Butylbenzene	260	<1.0		<1	<1	
tert-Butylbenzene	260	<1.0		<1	<1	
n-Butylbenzene	260	<1.0		<1	<1	
1,2,4-Trimethylbenzene	330	<1.0		<1.0	6.2	
1,3,5-Trimethylbenzene	330	<1.0		<1.0	1.8	
n-Propylbenzene	260	<1.0		<1.0	<1	
p-Isopropyltoluene	260	<1.0		<1.0	<1	
Isopropylbenzene	800	<1.0		<1.0	<1	
Naphthalene	100			<2	<2	

Notes:

Concentrations listed in **bold** equal to or greater than applicable NHDES AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 ug/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results**  
**DMS FUels, LLC (Former Gary's Fuels)**  
**NHDES #199209012**

Analytes	NHDES Ambient Groundwater	MW-16-34													
		10/13/16	04/27/17	11/28/17	05/30/18	11/13/18	08/26/19	11/06/19	05/13/20	11/09/20	05/10/21	11/01/21	05/25/22	11/23/22	
Top of PVC		492.45	492.45	492.45	492.45	492.45	492.45	492.45	492.45	492.45	492.45	492.45	492.45	492.45	
Depth to Water (ft)		26.85	27.25	26.67	26.07	26.40	26.13	26.70	26.92	26.92	27.39	27.08	27.40	27.00	
Product Thickness (ft)															
Water Table Elevation (ft)		465.60	465.20	465.78	466.38	466.05	466.32	465.75	465.53	465.53	465.06	465.37	465.05	465.45	
Laboratory Dilution Factor							1	20	20	20	20	1	20	10	
Volatile Organic Compounds	AGQS	ug/L (ppb)													
Benzene	5	118	120	108	26	36	12	56	<20	21	<20	20	<20	14	
Toluene	1000	10,600	8,610	10,900	2,640	1,910	990	5,000	5,700	7,300	3,400	4,300	1,700	6,900	
Ethylbenzene	700	1,340	936	1,310	382	460	150	1,300	840	1,200	430	750	310	1,300	
mp-xylene	NA						320	2,800	2,500	3,200	1,200	1,900	770	3,000	
o-xylene	NA						160	1,600	1,100	1,500	580	830	370	1,500	
Total Detected Xylenes	10000	7,140	4,370	6,220	1,390	1,670	480	4,400	3,600	4,700	1,780	2,730	1,140	4,500	
<b>Total Detected BTEX</b>	NA	19,198	14,036	18,538	4,438	4,076	1,632	10,756	10,140	13,221	5,610	7,800	3,150	12,714	
Acetone	6,000												14	<200	<100
Methyl tert butyl ether (MTBE)	13	<20	<400	<200	<40	<100	<5	<20	<20	<20	<20	<1	<20	<10	
sec-Butylbenzene	260					<50	<5	<20	<20	<20	<20	2.8	<20	<10	
tert-Butylbenzene	260					<50	<5	<20	<20	<20	<20	<1	<20	<10	
n-Butylbenzene	260					<50	<5	22	<20	<20	<20	<1	<20	<10	
1,2,4-Trimethylbenzene	330	828	514	719	192	353	130	870	510	700	260	410	180	660	
1,3,5-Trimethylbenzene	330	235	<200	221	38	55	23	220	140	170	66	91	44	170	
n-Propylbenzene	260	138	<200	148	30	57	25	150	77	100	39	72	29	110	
p-Isopropyltoluene	260	<10	<200	<100	<20.0	<50	<5	<20	<20	<20	1.7	<20	<10		
Isopropylbenzene	800	62	<200	<100	<20.0	<50	11	64	31	41	<20	28	<20	44	
Naphthalene	<sup>(1)</sup> 100	115	<400	<200	<40	50	<30	110	86	100	72	95	<40	130	
Bromomethane	10													23	
Bromodichloroethane	260		110	<100	<10	<25	<3	<20	<20	<20	<10	<1	<20	<10	

Notes:

Concentrations listed in **bold** equal to or greater than applicable NHDES AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

**Groundwater Analytical Results  
DMS Fuels, LLC (Former Gary's Fuels)  
NHDFS #199209012**

Analytes	NHDES Ambient Groundwater		RW-1																													
	Quality Standards		07/18/05	11/29/05	04/11/06	07/12/06	11/21/06	11/07/07	04/17/08	11/24/08	03/13/06	11/02/09	04/09/10	11/23/10	04/21/11	12/06/12	04/18/14	04/06/16	10/12/16	04/27/17	11/28/17	05/30/18	11/13/18	08/26/19	11/06/19	05/13/20	11/09/20	05/10/21	11/01/21	05/25/22	11/23/22	
Top of PVC		493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09	493.09				
Depth to Water (ft)		26.85	26.09	26.05	26.04	26.40	27.43	26.23			26.13	27.06	26.34	26.11	27.59	26.84	27.01	27.69	27.82	27.45	26.82	27.25	25.77	27.36	27.50	27.65	28.15	27.67	28.00	28.30		
Product Thickness (ft)				0.35	0.07	0.35	0.32	0.43			0.35	0.44	0.31	0.33	0.07	0.23		0.01														
Water Table Elevation (ft)		466.24	467.00	467.35	467.11	467.00	465.94	467.24			467.27	466.42	467.02	467.27	465.56	466.45	466.08	465.41	465.27	465.64	466.27	465.84	467.32	465.73	465.59	465.44	464.94	465.42	465.09	464.79		
Laboratory Dilution Factor																									5	20	20	20	10	1	10	1
Volatile Organic Compounds	AGQS		ug/L (ppb)																													
Benzene		5	6,260	6,860																	850	1,230	1,150	2,150	190	560	31	4.6	16	20	<10	1.1
Toluene		1,000	12,900	19,600																	3,850	707	1,120	2,380	670	940	230	62	150	170	77	120
Ethylbenzene		700	1,470	3,440																	1,440	299	211	241	250	470	110	37	96	41	16	10
<i>mp-xylene</i>		NA																							2,300	2,900	880	400	830	720	280	140
<i>o-xylene</i>		NA																							980	1,200	390	230	440	290	160	85
Total Detected Xylenes		10,000	6,460	18,300																	11,800	2,010	2,250	7,101	3,280	4,100	1,270	630	1,270	1,010	440	225.0
Total Detected BTEX		NA	27,090	48,200																	17,940	4,246	4,731	11,872	4,390	6,070	1,641	734	1,532	1,241	533	356.1
Acetone		6,000																							69	<200	<200	<200	<100	59	<100	<10
2-Butanone (MEK)		4000																														
Methyl tert butyl ether (MTBE)		13	<40	<400																	<400	<40	<20	<40	<5	<20	<20	<20	<10	<10	<10	
sec-Butylbenzene		260	<20	<200																	<200	<20	17	<20	<5	120	28	11	1,100	8.5	<10	2.0
tert-Butylbenzene		260	<20	<200																	<200	<20	<20	<20	<5	<20	<20	<10	<10	<1		
n-Butylbenzene		260	<20	<200																	<200	<20	18.4	22.0	<5	570	<20	<20	<10	<1	<10	
1,2,4-Trimethylbenzene		330	897	3,300																	3,560	2,030	1,710	1,800	3900E	5,100	1,700	930	1,100	650	310	150
1,3,5-Trimethylbenzene		330	257	966																	1,210	834	807	826	1800E	2,700	790	480	620	360	230	120
n-Propylbenzene		260	146.0	340																	318	200	179	150	330	890	180	79	100	51	23	12
p-Isopropyltoluene		260	<20	<200																	<200	33.0	16.7	<20	40	94	26	12	14	10	<10	3.2
Isopropylbenzene		800	<20	<200																	<200	69	50.4	42.2	94	240	52	20	28	28	14	<10
Naphthalene		100																			400	73.2	51.3	45.6	96	150	44	16	97	30	<20	9.5
1,2 dibromoethane (EDB)		0.05	208.0	<400																	<400	<40	<20	<40	<5	<40	<40	<5	<5	<5	<0.5	

Notes

Concentrations listed in **bold** equal to or greater than applicable NHDES ACOS.

AGQ3.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International.

Groundwater Analytical Results  
DMS Fuels, LLC (Former Gary's Fuels)  
NHDES #199209012

### Note

Concentrations listed in **bold** equal to or greater than applicable NHDES

AGQS.

NA = Standard not available.

<sup>(1)</sup> AGQS changed from 20 to 100 µg/L on 9/1/2018

Data from 4/2/01 to 7/20/04 was collected by Griffin International, Inc.

Data from 11/9/04 to 11/30/18 was collected by KAS, Inc.

## **November 2022 Laboratory Analytical Report**

Valerie Carr  
Horizons Engineering, Inc.  
34 School Street  
Littleton , NH 03561



Laboratory Report for:

Eastern Analytical, Inc. ID: 252839

Client Identification: DMS Fuels | 220063

Date Received: 11/23/2022

Enclosed are the analytical results per the Chain of Custody for sample(s) in the referenced project. All analyses were performed in accordance with our QA/QC Program, NELAP and other applicable state requirements. All quality control criteria was within acceptance criteria unless noted on the report pages. Results are for the exclusive use of the client named on this report and will not be released to a third party without consent.

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the written approval of the laboratory.

The following standard abbreviations and conventions apply to all EAI reports:

- < : "less than" followed by the reporting limit
- > : "greater than" followed by the reporting limit
- %R : % Recovery

Certifications:

Eastern Analytical, Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012), New York (12072), West Virginia (9910C) and Alabama (41620). Please refer to our website at [www.easternanalytical.com](http://www.easternanalytical.com) for a copy of our certificates and accredited parameters.

References:

- EPA 600/4-79-020, 1983
- Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd edition or noted revision year.
- Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- Hach Water Analysis Handbook, 4th edition, 1992
- ASTM International

If you have any questions regarding the results contained within, please feel free to contact customer service. Unless otherwise requested, we will dispose of the sample(s) 6 weeks from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw

Lorraine Olashaw, Lab Director

12.1.22

Date



# SAMPLE CONDITIONS PAGE

EAI ID#: 252839

Client: Horizons Engineering, Inc.

Client Designation: DMS Fuels | 220063

Temperature upon receipt (°C): 5.4

Acceptable temperature range (°C): 0-6

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date/Time Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
252839.01	MW-1	11/23/22	11/23/22 08:30	aqueous		Adheres to Sample Acceptance Policy
252839.02	MW-7	11/23/22	11/23/22 10:00	aqueous		Adheres to Sample Acceptance Policy
252839.03	MW-16-29	11/23/22	11/23/22 10:30	aqueous		Adheres to Sample Acceptance Policy
252839.04	MW-16-34	11/23/22	11/23/22 11:35	aqueous		Adheres to Sample Acceptance Policy
252839.05	RW-1	11/23/22	11/23/22 09:10	aqueous		Adheres to Sample Acceptance Policy

All results contained in this report relate only to the above listed samples.

Unless otherwise noted:

- Hold times, preservation, container types, and sample conditions adhered to EPA Protocol.
- Solid samples are reported on a dry weight basis, unless otherwise noted. pH/Corrosivity, Flashpoint, Ignitability, Paint Filter, Conductivity and Specific Gravity are always reported on an "as received" basis.
- Analysis of pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite were performed at the laboratory outside of the recommended 15 minute hold time.
- Samples collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures.



# LABORATORY REPORT

EAI ID#: 252839

Client: Horizons Engineering, Inc.

Client Designation: DMS Fuels | 220063

Sample ID:	MW-1	MW-7	MW-16-29	MW-16-34
Lab Sample ID:	252839.01	252839.02	252839.03	252839.04
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/23/22	11/23/22	11/23/22	11/23/22
Date Received:	11/23/22	11/23/22	11/23/22	11/23/22
Units:	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/24/22	11/24/22	11/24/22	11/23/22
Analyst:	SG	SG	SG	SG
Method:	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	10
Dichlorodifluoromethane	< 2	< 2	< 2	< 20
Chloromethane	< 2	< 2	< 2	< 20
Vinyl chloride	< 1	< 1	< 1	< 10
Bromomethane	< 2	< 2	< 2	23
Chloroethane	< 2	< 2	< 2	< 20
Trichlorofluoromethane	< 2	< 2	< 2	< 20
Diethyl Ether	< 2	< 2	< 2	< 20
Acetone	< 10	< 10	13	< 100
1,1-Dichloroethene	< 0.5	< 0.5	< 0.5	< 5
tert-Butyl Alcohol (TBA)	< 30	< 30	< 30	< 300
Methylene chloride	< 1	< 1	< 1	< 10
Carbon disulfide	< 2	< 2	< 2	< 20
Methyl-t-butyl ether(MTBE)	< 1	< 1	< 1	< 10
Ethyl-t-butyl ether(ETBE)	< 2	< 2	< 2	< 20
Isopropyl ether(DIPE)	< 2	< 2	< 2	< 20
tert-amyl methyl ether(TAME)	< 2	< 2	< 2	< 20
trans-1,2-Dichloroethene	< 1	< 1	< 1	< 10
1,1-Dichloroethane	< 1	< 1	< 1	< 10
2,2-Dichloropropane	< 1	< 1	< 1	< 10
cis-1,2-Dichloroethene	< 1	< 1	< 1	< 10
2-Butanone(MEK)	< 10	< 10	< 10	< 100
Bromochloromethane	< 1	< 1	< 1	< 10
Tetrahydrofuran(THF)	< 10	< 10	< 10	< 100
Chloroform	< 1	< 1	< 1	< 10
1,1,1-Trichloroethane	< 1	< 1	< 1	< 10
Carbon tetrachloride	< 1	< 1	< 1	< 10
1,1-Dichloropropene	< 1	< 1	< 1	< 10
Benzene	< 1	74	38	14
1,2-Dichloroethane	< 1	< 1	< 1	< 10
Trichloroethene	< 1	< 1	< 1	< 10
1,2-Dichloropropane	< 1	< 1	< 1	< 10
Dibromomethane	< 1	< 1	< 1	< 10
Bromodichloromethane	< 0.5	< 0.5	< 0.5	< 5
1,4-Dioxane	< 50	< 50	< 50	< 500
4-Methyl-2-pentanone(MIBK)	< 10	< 10	< 10	< 100
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 5
Toluene	< 1	9.4	3.9	6900
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 5
1,1,2-Trichloroethane	< 1	< 1	< 1	< 10
2-Hexanone	< 10	< 10	< 10	< 100
Tetrachloroethene	< 1	< 1	< 1	< 10
1,3-Dichloropropane	< 1	< 1	< 1	< 10
Dibromochloromethane	< 1	< 1	< 1	< 10
1,2-Dibromoethane(EDB)	< 0.5	0.65	< 0.5	< 5
Chlorobenzene	< 1	< 1	< 1	< 10
1,1,1,2-Tetrachloroethane	< 1	< 1	< 1	< 10



# LABORATORY REPORT

EAI ID#: 252839

Client: Horizons Engineering, Inc.

Client Designation: DMS Fuels | 220063

Sample ID:	MW-1	MW-7	MW-16-29	MW-16-34
Lab Sample ID:	252839.01	252839.02	252839.03	252839.04
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled:	11/23/22	11/23/22	11/23/22	11/23/22
Date Received:	11/23/22	11/23/22	11/23/22	11/23/22
Units:	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	11/24/22	11/24/22	11/24/22	11/23/22
Analyst:	SG	SG	SG	SG
Method:	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	10
Ethylbenzene	< 1	12	14	1300
mp-Xylene	< 1	13	3.5	3000
o-Xylene	2	2.2	1.6	1500
Styrene	< 1	< 1	< 1	11
Bromoform	< 2	< 2	< 2	< 20
IsoPropylbenzene	< 1	1.4	21	44
Bromobenzene	< 1	< 1	< 1	< 10
1,1,2,2-Tetrachloroethane	< 1	< 1	< 1	< 10
1,2,3-Trichloropropane	< 0.5	< 0.5	< 0.5	< 5
n-Propylbenzene	< 1	1.8	16	110
2-Chlorotoluene	< 1	< 1	< 1	< 10
4-Chlorotoluene	< 1	< 1	< 1	< 10
1,3,5-Trimethylbenzene	< 1	1.6	< 1	170
tert-Butylbenzene	< 1	< 1	< 1	< 10
1,2,4-Trimethylbenzene	< 1	7.2	1	660
sec-Butylbenzene	< 1	< 1	1.6	< 10
1,3-Dichlorobenzene	< 1	< 1	< 1	< 10
p-Isopropyltoluene	< 1	< 1	< 1	< 10
1,4-Dichlorobenzene	< 1	< 1	< 1	< 10
1,2-Dichlorobenzene	< 1	< 1	< 1	< 10
n-Butylbenzene	< 1	< 1	< 1	< 10
1,2-Dibromo-3-chloropropane	< 2	< 2	1.2	< 10
1,3,5-Trichlorobenzene	< 1	< 1	< 2	< 20
1,2,4-Trichlorobenzene	< 1	< 1	< 1	< 10
Hexachlorobutadiene	< 0.5	< 0.5	< 0.5	< 5
Naphthalene	< 2	4.1	30	130
1,2,3-Trichlorobenzene	< 0.5	< 0.5	< 0.5	< 5
4-Bromofluorobenzene (surr)	105 %R	106 %R	105 %R	104 %R
1,2-Dichlorobenzene-d4 (surr)	98 %R	98 %R	98 %R	99 %R
Toluene-d8 (surr)	97 %R	97 %R	98 %R	98 %R
1,2-Dichloroethane-d4 (surr)	100 %R	99 %R	97 %R	98 %R

Deviations from the Report:

MW-16-34 Parameter: Toluene Date of Analysis: 11/28/2022 Dilution Factor: 50



# LABORATORY REPORT

EAI ID#: 252839

Client: Horizons Engineering, Inc.

Client Designation: DMS Fuels | 220063

Sample ID: RW-1

Lab Sample ID: 252839.05

Matrix: aqueous

Date Sampled: 11/23/22

Date Received: 11/23/22

Units: ug/L

Date of Analysis: 11/28/22

Analyst: SG

Method: 8260C

Dilution Factor: 1

Dichlorodifluoromethane	< 2
Chloromethane	< 2
Vinyl chloride	< 1
Bromomethane	< 2
Chloroethane	< 2
Trichlorofluoromethane	< 2
Diethyl Ether	< 2
Acetone	< 10
1,1-Dichloroethene	< 0.5
tert-Butyl Alcohol (TBA)	< 30
Methylene chloride	< 1
Carbon disulfide	< 2
Methyl-t-butyl ether(MTBE)	< 1
Ethyl-t-butyl ether(ETBE)	< 2
Isopropyl ether(DIPE)	< 2
tert-amyl methyl ether(TAME)	< 2
trans-1,2-Dichloroethene	< 1
1,1-Dichloroethane	< 1
2,2-Dichloropropane	< 1
cis-1,2-Dichloroethene	< 1
2-Butanone(MEK)	< 10
Bromochloromethane	< 1
Tetrahydrofuran(THF)	< 10
Chloroform	< 1
1,1,1-Trichloroethane	< 1
Carbon tetrachloride	< 1
1,1-Dichloropropene	< 1
Benzene	1.1
1,2-Dichloroethane	< 1
Trichloroethene	< 1
1,2-Dichloropropane	< 1
Dibromomethane	< 1
Bromodichloromethane	< 0.5
1,4-Dioxane	< 50
4-Methyl-2-pentanone(MIBK)	< 10
cis-1,3-Dichloropropene	< 0.5
Toluene	120
trans-1,3-Dichloropropene	< 0.5
1,1,2-Trichloroethane	< 1
2-Hexanone	< 10
Tetrachloroethene	< 1
1,3-Dichloropropane	< 1
Dibromochloromethane	< 1
1,2-Dibromoethane(EDB)	< 0.5
Chlorobenzene	< 1
1,1,1,2-Tetrachloroethane	< 1



# LABORATORY REPORT

EAI ID#: 252839

Client: Horizons Engineering, Inc.

Client Designation: DMS Fuels | 220063

Sample ID: RW-1

Lab Sample ID:	252839.05
Matrix:	aqueous
Date Sampled:	11/23/22
Date Received:	11/23/22
Units:	ug/L
Date of Analysis:	11/28/22
Analyst:	SG
Method:	8260C
Dilution Factor:	1
Ethylbenzene	10
mp-Xylene	140
o-Xylene	85
Styrene	< 1
Bromoform	< 2
IsoPropylbenzene	3.2
Bromobenzene	< 1
1,1,2,2-Tetrachloroethane	< 1
1,2,3-Trichloropropane	< 0.5
n-Propylbenzene	12
2-Chlorotoluene	< 1
4-Chlorotoluene	< 1
1,3,5-Trimethylbenzene	120
tert-Butylbenzene	< 1
1,2,4-Trimethylbenzene	150
sec-Butylbenzene	2
1,3-Dichlorobenzene	< 1
p-Isopropyltoluene	3.2
1,4-Dichlorobenzene	< 1
1,2-Dichlorobenzene	< 1
n-Butylbenzene	< 1
1,2-Dibromo-3-chloropropane	< 2
1,3,5-Trichlorobenzene	< 1
1,2,4-Trichlorobenzene	< 1
Hexachlorobutadiene	< 0.5
Naphthalene	9.5
1,2,3-Trichlorobenzene	< 0.5
4-Bromofluorobenzene (surr)	98 %R
1,2-Dichlorobenzene-d4 (surr)	98 %R
Toluene-d8 (surr)	95 %R
1,2-Dichloroethane-d4 (surr)	85 %R

Due to the presence of headspace in the sample at the time of receipt, the values reported may not accurately reflect the concentration in the sample.

Page 1 of 1

## CHAIN-OF-CUSTODY RECORD

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

SAMPLE I.D.	SAMPLING DATE/TIME		MATRIX (SEE BELOW) GRAB/*COMPOSITE	VOC		SVOC		TCPL		INORGANICS		MICRO		METALS		OTHER		NOTES MEOH VIAL #	
	6W	6W		8015	8270	TPH8100	8015	8270	TPH8100	TCLP	VOC	BOD	TSS	TOC	DOC	Total Coliform	Fecal Coliform	Enterococcus	Heterotrophic Plate Count
MW-1	11/23	9:30	A	*	*					ABN	PAH	U	L	12					10/2
MW-7	11/23	10:00	E	*	*					PEST	60B	PCB	608	PCB	8082				10/2
MW-16-29	11/23	10:30	E							OIL & GREASE	1644	TPH	1644						10/2
MW-16-34	11/23	11:35	E							TCLP	1311	ABN	PEST	HERB					10/2
MW-1	11/23	9:10	E							VOC	CBOD	TDS	TS						10/2
										Br	Cl	F	SO <sub>4</sub>	NO <sub>3</sub>	NO <sub>2</sub>	NO <sub>x</sub>			
										TKN	NH <sub>3</sub>	TN							
										T. PHOS.	O. PHOS.								
										pH	T. RES.	CHLORINE							
										SPEC. CON.	T. ALK.								
										COD	PHENOLS	TOC	DOC						

MATRIX: A-AIR; S-SOIL; GW-GROUND WATER; SW-SURFACE WATER; DW-DRINKING WATER;

WW-WASTE WATER

PRESERVATIVE: H-HCL; N-HNO<sub>3</sub>; S-H<sub>2</sub>SO<sub>4</sub>; Na-NaOH; M-MEOH

PROJECT MANAGER: Valerie J. Carr

COMPANY: Horizons Engineering, Inc.

ADDRESS: 34 School Street

CITY: Littleton STATE: NH ZIP: 03561

PHONE: 603-444-4111 EXT: 9271

E-MAIL: vcarr@horizonsengineering.com

SITE NAME: Oms Fuels

PROJECT #: 220063

STATE: NH MA ME VT OTHER:

REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR  
GWP, OIL FUND BROWNFIELD OR OTHER:

QUOTE #: PO #:

## QA/QC REPORTING

 A    B    C

MA MCP

TEMP: 54 °C

ICE?  YES  NO

## REPORTING OPTIONS

PRELIMS:  YES OR NO

## ELECTRONIC OPTIONS

 PDF    EXCEL EQUIIS

OTHER \_\_\_\_\_

## TURN AROUND TIME

24hr\*   48hr\*

3-4 Days\*

5 Day   7 Day

10 Day

\*Pre-approval Required

METALS: 8 RCRA 13 PP FE, MN Pb, Cu

OTHER METALS: \_\_\_\_\_

SAMPLES FIELD FILTERED?  YES  NO

NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)

Bill @ OODfund Rates

SAMPLER(S): Debra Casperius / Kevin Wurzich

1/27/22 12:27 BAF

RELINQUISHED BY: DATE: TIME: RECEIVED BY:

RELINQUISHED BY: DATE: TIME: RECEIVED BY:

RELINQUISHED BY: DATE: TIME: RECEIVED BY:

SITE HISTORY: \_\_\_\_\_

SUSPECTED CONTAMINATION: \_\_\_\_\_

FIELD READINGS: \_\_\_\_\_



Eastern Analytical, Inc.

professional laboratory and drilling services