



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

**5 Post Office Square, Suite 100
BOSTON, MA 02109-3912**

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

JUN 17 2013

Kevin Gottwald
Vice President, Business Development
Global Contracting Services, Inc.
680 Richmond Street
East Taunton, MA 02718

Re: Authorization to discharge under the Remediation General Permit (RGP) –
MAG910000. Best Gas Excavation Dewatering site located at 899 Belmont Street,
Brockton, MA 02301-5545, Plymouth County; Authorization # MAG910582

Dear Mr. Gottwald:

Based on the review of a Notice of Intent (NOI) submitted on behalf of Global Contracting Services (Global), by Vineyard Engineering and Environmental Services, Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

The checklist enclosed with this RGP authorization indicates the pollutants which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of this permit, including influent and effluent monitoring, narrative water quality standards, record keeping, and reporting requirements, found in Parts I and II, and Appendices I – VIII of the RGP. See EPA's website for the complete RGP and other information at: <http://www.epa.gov/region1/npdes/mass.html#dgp>.

Due to the nature of pollutants historically found in groundwater excavations at gasoline station sites, which includes but is not limited to gasoline and petroleum by-products, EPA is requiring the permittee to comply with all of the effluent limitations and monitoring requirements in RGP's Category I: Petroleum Related Site Remediation, Subcategories A and B, which include "Gasoline Only sites" and "Fuel Oils and Other Oils Sites", respectively. The attached checklist also includes other parameters for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the MLs established in Appendix VI of the RGP.

Also, please note that the metals included on the checklist are dilution dependent pollutants and are subject to discharge limitations based on a dilution factor range (DFR). Because wetlands in general offer limited dilution and the discharge from this site will be made to an adjacent wetland area, EPA has determined that the DFR for each parameter is in the one to five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities) Therefore, the following limits are required to achieve permit compliance at your site:

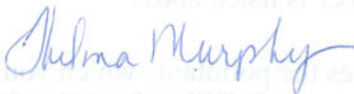
trivalent chromium – 48.8 ug/l, lead - 1.3 ug/L, nickel - 29 ug/l, zinc - 66.6 ug/l,
iron - 1,000 ug/L

Finally, please note the checklist of pollutants attached to this authorization is subject to a recertification if the operations at the site result in a discharge lasting longer than six (6) months. A recertification can be submitted to EPA within six (6) to twelve (12) months of operations in accordance with the 2010 RGP.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on July 17, 2013. If for any reason the discharge terminates sooner, you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

Thank you in advance for your cooperation in this matter. Please contact Victor Alvarez at 617-918-1572 or Alvarez.Victor@epa.gov, if you have any questions.

Sincerely,



Thelma Murphy, Chief
Storm Water and Construction Permits Section

Enclosure

cc: Robert Kubit, MassDEP
Michael Thoreson, Brockton DPW
Todd W. Nickerson, Vineyard Engineering

**2010 Remediation General Permit
Summary of Monitoring Parameters^[1]**

NPDES Authorization Number:	MAG910582
Authorization Issued:	June, 2013
Facility/Site Name:	Best Gas/ Excavation Dewatering
Facility/Site Address:	899 Belmont Street, Brockton, MA 02301-5545, Plymouth County
	Email address of owner: gsaad@444yahoo.com
Legal Name of Operator:	Vineyard Engineering and Environmental Services, Inc.
Operator contact name, title, and Address:	Kevin Gottwald, VP, 680 Richmond Street, East Taunton, MA 02718, Bristol County
	Email: kgottwald@globalcontractingse.com
Estimated date of The Project Completion:	July 17, 2013
Category and Sub-Category:	Petroleum Related Site Remediation. Sub-category A. Gasoline Only Sites and Sub-category B, Fuel Oils and Other Oils Sites
RGP Termination Date:	September 10, 2015
Receiving Water:	Area Wetland

Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing ** Me#160.2/ML5ug/L
	2. Total Residual Chlorine (TRC) ¹	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
✓	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
	4. Cyanide (CN) ^{2, 3}	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
✓	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
✓	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ML 2ug/L
✓	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ML 2ug/L
✓	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ML 2ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method# /ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) ⁴	100 ug/L/ Me#8260C/ ML 2ug/L
✓	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
✓	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
✓	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
✓	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
✓	14. Naphthalene ⁵	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
✓	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L, Me#604 &625/ML 10ug/L
	33. Total Phthalates (Phthalate esters) ⁶	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L & Me#625/ML 5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L & Me#625/ML 5ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
✓	a. Benzo(a) Anthracene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	b. Benzo(a) Pyrene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	c. Benzo(b)Fluoranthene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	d. Benzo(k)Fluoranthene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	e. Chrysene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	f. Dibenzo(a,h)anthracene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	g. Indeno(1,2,3-cd) Pyrene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
✓	h. Acenaphthene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	i. Acenaphthylene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	j. Anthracene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	l. Fluoranthene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	m. Fluorene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	n. Naphthalene ⁵	20 ug/L / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	o. Phenanthrene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	p. Pyrene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) ^{8, 9}	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
✓	38. Chloride	Monitor only/Me# 300.0/ ML 100 ug/L

	Metal parameter	Total Recoverable Metal Limit @ H¹⁰ = 50 mg/l CaCO₃ for discharges in Massachusetts (ug/l)^{11/12} /ML	
		Freshwater	Saltwater
	39. Antimony	5.6/ML 10	
	40. Arsenic **	10/ML20	36/ML 20
	41. Cadmium **	0.2/ML10	8.9/ML 10
✓	42. Chromium III (trivalent) **	48.8/ML15	100/ML 15
	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10
	44. Copper **	5.2/ML15	3.7/ML 15
✓	45. Lead **	1.3/ML20	8.5/ML 20
	46. Mercury **	0.9/ML0.2	1.1/ML 0.2
✓	47. Nickel **	29/ML20	8.2/ML 20
	48. Selenium **	5/ML20	71/ML 20
	49. Silver	1.2/ML10	2.2/ML 10
✓	50. Zinc **	66.6/ML15	85.6/ML 15
✓	51. Iron	1,000/ML 20	

	Other Parameters	Limit
✓	52. Instantaneous Flow	Site specific in CFS
✓	53. Total Flow	Site specific in CFS
✓	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab ¹³
	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab ¹³
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab ¹³
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab ¹⁴
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab ¹⁴
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab ¹⁴
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab ¹⁴
	61. Maximum Change in Temperature in MA - Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab ¹⁴
	62. Maximum Change in Temperature in MA - Any Class SA water body - Coastal	1.5°F; 1/Month/Grab ¹⁴
	63. Maximum Change in Temperature in MA - Any Class SB water body - July to September	1.5°F; 1/Month/Grab ¹⁴
	64. Maximum Change in Temperature in MA -Any Class SB water body - October to June	4°F; 1/Month/Grab ¹⁴

Footnotes:

¹ Although the maximum values for TRC are 11ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).

² Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.

³ Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).

⁴ BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

⁵ Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.

⁶ The sum of individual phthalate compounds(not including the #34, Bis (2-Ethylhexyl) Phthalate . The compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

⁷ Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

⁸ In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Oroclor analyses."Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

⁹Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).

¹⁰ Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

¹¹ For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using $DF \times 1,000 \text{ ug/L}$ (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit = $1,000 \times 2 = 2,000 \text{ ug/L}$, etc. not to exceed the $DF=5$.

¹² Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).

¹³ pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.

¹⁴ Temperature sampling per Method 170.1

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General facility/site information. Please provide the following information about the site:

a) Name of facility/site :		Facility/site mailing address:	
Location of facility/site : longitude: _____ latitude: _____	Facility SIC code(s):	Street:	
b) Name of facility/site owner :		Town:	
Email address of facility/site owner:	State:	Zip:	County:
Telephone no. of facility/site owner :			
Fax no. of facility/site owner :	Owner is (check one): 1. Federal____ 2. State/Tribal____ 3. Private____ 4. Other ____ if so, describe:		
Address of owner (if different from site):			
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator :	Operator telephone no:		
	Operator fax no.:		Operator email:
Operator contact name and title:			
Address of operator (if different from owner):	Street:		
Town:	State:	Zip:	County:

d) Check Y for “yes” or N for “no” for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Y___ N___, if Y, number:_____ 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Y___ N___, if Y, date and tracking #:_____ 3. Is the discharge a “new discharge” as defined by 40 CFR 122.2? Y___ N___ 4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y___ N___	
e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y___ N___ If Y, please list: 1. site identification # assigned by the state of NH or MA: _____ 2. permit or license # assigned: _____ 3. state agency contact information: name, location, and telephone number: _____	f) Is the site/facility covered by any other EPA permit, including: 1. Multi-Sector General Permit? Y___ N___, if Y, number: _____ 2. Final Dewatering General Permit? Y___ N___, if Y, number: _____ 3. EPA Construction General Permit? Y___ N___, if Y, number: _____ 4. Individual NPDES permit? Y___ N___, if Y, number: _____ 5. any other water quality related individual or general permit? Y___ N___, if Y, number: _____
g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y___ N___	
h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.	
<u>Activity Category</u>	<u>Activity Sub-Category</u>
I - Petroleum Related Site Remediation	A. Gasoline Only Sites _____ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) _____ C. Petroleum Sites with Additional Contamination _____
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites _____ B. VOC Sites with Additional Contamination _____ C. Primarily Heavy Metal Sites _____
III - Contaminated Construction Dewatering	A. General Urban Fill Sites _____ B. Known Contaminated Sites _____

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ____ B. Well Development/Rehabilitation at Contaminated/Formely Contaminated Sites ____ C. Hydrostatic Testing of Pipelines and Tanks ____ D. Long-Term Remediation of Contaminated Sumps and Dikes ____ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ____
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:	
b) Provide the following information about each discharge:	
1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow _____ Is maximum flow a design value ? Y___ N___ Average flow (include units) _____ Is average flow a design value or estimate? _____
3) Latitude and longitude of each discharge within 100 feet: pt.1: lat. _____ long. _____; pt.2: lat. _____ long. _____; pt.3: lat. _____ long. _____; pt.4: lat. _____ long. _____; pt.5: lat. _____ long. _____; pt.6: lat. _____ long. _____; pt.7: lat. _____ long. _____; pt.8: lat. _____ long. _____; etc.	
4) If hydrostatic testing, total volume of the discharge (gals): _____	5) Is the discharge intermittent ____ or seasonal ____? Is discharge ongoing? Y ___ N _____
c) Expected dates of discharge (mm/dd/yy): start _____ end _____	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).	

3. Contaminant information.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
1. Total Suspended Solids (TSS)											
2. Total Residual Chlorine (TRC)											
3. Total Petroleum Hydrocarbons (TPH)											
4. Cyanide (CN)	57125										
5. Benzene (B)	71432										
6. Toluene (T)	108883										
7. Ethylbenzene (E)	100414										
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207										
9. Total BTEX ²	n/a										
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934										
11. Methyl-tert-Butyl Ether (MtBE)	1634044										
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650										

* Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

² BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

³ EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
13. tert-Amyl Methyl Ether (TAME)	9940508										
14. Naphthalene	91203										
15. Carbon Tetrachloride	56235										
16. 1,2 Dichlorobenzene (o-DCB)	95501										
17. 1,3 Dichlorobenzene (m-DCB)	541731										
18. 1,4 Dichlorobenzene (p-DCB)	106467										
18a. Total dichlorobenzene											
19. 1,1 Dichloroethane (DCA)	75343										
20. 1,2 Dichloroethane (DCA)	107062										
21. 1,1 Dichloroethene (DCE)	75354										
22. cis-1,2 Dichloroethene (DCE)	156592										
23. Methylene Chloride	75092										
24. Tetrachloroethene (PCE)	127184										
25. 1,1,1 Trichloro-ethane (TCA)	71556										
26. 1,1,2 Trichloro-ethane (TCA)	79005										
27. Trichloroethene (TCE)	79016										

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
28. Vinyl Chloride (Chloroethene)	75014										
29. Acetone	67641										
30. 1,4 Dioxane	123911										
31. Total Phenols	108952										
32. Pentachlorophenol (PCP)	87865										
33. Total Phthalates (Phthalate esters) ⁴											
34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	117817										
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)											
a. Benzo(a) Anthracene	56553										
b. Benzo(a) Pyrene	50328										
c. Benzo(b)Fluoranthene	205992										
d. Benzo(k)Fluoranthene	207089										
e. Chrysene	21801										
f. Dibenzo(a,h)anthracene	53703										
g. Indeno(1,2,3-cd) Pyrene	193395										
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)											

⁴The sum of individual phthalate compounds.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
h. Acenaphthene	83329										
i. Acenaphthylene	208968										
j. Anthracene	120127										
k. Benzo(ghi) Perylene	191242										
l. Fluoranthene	206440										
m. Fluorene	86737										
n. Naphthalene	91203										
o. Phenanthrene	85018										
p. Pyrene	129000										
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.										
38. Chloride	16887006										
39. Antimony	7440360										
40. Arsenic	7440382										
41. Cadmium	7440439										
42. Chromium III (trivalent)	16065831										
43. Chromium VI (hexavalent)	18540299										
44. Copper	7440508										
45. Lead	7439921										
46. Mercury	7439976										
47. Nickel	7440020										
48. Selenium	7782492										
49. Silver	7440224										
50. Zinc	7440666										
51. Iron	7439896										
Other (describe):											

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>

b) For discharges where **metals** are believed present, please fill out the following (attach results of any calculations):

<i>Step 1:</i> Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y____ N____	If yes, which metals?
<i>Step 2:</i> For any metals which exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal:_____DF:_____ Metal:_____DF:_____ Metal:_____DF:_____ Metal:_____DF:_____ Etc.	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y____ N____ If Y, list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
	Chlorination	De-chlorination	Other (please describe):			

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate(s)** (gallons per minute) of the treatment system:

Average flow rate of discharge _____ gpm Maximum flow rate of treatment system _____ gpm

Design flow rate of treatment system _____ gpm

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct to receiving water _____	Within facility (sewer) _____	Storm drain _____	Wetlands _____	Other (describe): _____
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:					
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.					
d) Provide the state water quality classification of the receiving water _____					
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _____ cfs Please attach any calculation sheets used to support stream flow and dilution calculations.					
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y____ N____ If yes, for which pollutant(s)? _____					
Is there a final TMDL? Y____ N____ If yes, for which pollutant(s)? _____					

6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

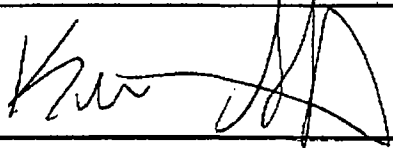
- a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?
A ____ B ____ C ____ D ____ E ____ F ____
- b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ____ N ____ Underway ____
- c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is “not likely to adversely affect” listed species or critical habitat received? Y ____ N ____
- d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.
- e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?
1 ____ 2 ____ 3 ____
- f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

7. Supplemental information.

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name:	Best Gas - 899 Belmont Street, Brockton, MA
Operator signature:	
Printed Name & Title:	Global Contracting Services, Inc.
Date:	6/3/2013



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>

January 7, 2013

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

(<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Brett Hillman of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Vineyard Engineering & Environmental Services, Inc.

Land Survey, Civil Engineering and Environmental Services
Offices in Woburn, Plymouth and Vineyard Haven, Massachusetts
www.vineyardeng.com

June 3, 2013

U.S. Environmental Protection Agency
5 Post Office Square, Suite 1000
Mail Code OEP06-4
Boston, MA 02109-3912
ATTN: Remediation General Permit NOI Processing

Re: Notice of Intent
NPDES Remediation General Permit
899 Belmont Street Brockton, MA

Dear Sir/Madam:

On behalf of Global Contracting Services (Global), the proposed operator, Vineyard Engineering & Environmental Services, Inc. (Vineyard) has prepared this Notice of Intent (NOI) for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP), Massachusetts General Permit (MAG910000) for a property located at the above referenced address. This NOI was prepared in accordance with the general requirements of the NPDES RGP under Federal Register, Volume 0, No. 147 and related guidance documentation provided by the U.S. Environmental Protection Agency (EPA).

Site Information

This NOI has been prepared for the management of excavation-related dewatering operations that will be undertaken at the property located at 899 Belmont Street in Brockton, Massachusetts (the Site). The Site location is depicted on a U.S. Geological Survey (USGS) Site Locus Map included as Figure 1 and as Lot 35 on Brockton Assessors Map 19 presented as Figure 2. The Site is an active gasoline service station with three underground storage tanks (USTs) containing gasoline and diesel fuel. The Site property is owned and operated by Saad, Inc.

The Site is situated in a mixed residential/commercial area along Route 123. As indicated in an aerial photograph presented as Figure 3, the Site abuts a restaurant to the east, an electric utility easement and wetlands to the north, Edinboro Avenue and a Massachusetts Electric substation to the west, and Belmont Street and the Brockton VA Hospital to the south. Brockton High School is the nearest school and is located 0.5 miles east of the Site.

400 West Cummings Park, Suite 4800
Woburn, MA 01801
Phone: 781.933.3330
Fax: 781.933.3334

Martha's Vineyard
P.O. Box 458
Tisbury, MA 02568
508.687.9437

2277 State Road, Suite L
Plymouth, MA 02360
Phone: 508.591.4144
Fax: 774.773.2063

The Site is identified as a “disposal site” as defined by Massachusetts General Law (MGL) 21E and the 310 Code of Massachusetts Regulations (CMR) 40.0000, the Massachusetts Contingency Plan (MCP) due to a failed tank tightness test that was performed on one of the three USTs at the Site. Subsequently, the Massachusetts Department of Environmental Protection (DEP) assigned Release Tracking Number (RTN) 4-24435 to the Site. The USTs are proposed to be removed and replaced by Global under the supervision of Vineyard as an Immediate Response Action (IRA) under the MCP. During UST replacement, excavation of potentially contaminated soils will be conducted as necessary, and groundwater will be pumped from the excavation to allow for soil removal and UST replacement activities.

Discharge and Receiving Water Information

Based on the use of the Site as a gasoline service station containing gasoline and diesel fuel USTs, there is a potential that groundwater recovered during soil removal and UST replacement activities may contain petroleum-related compounds in addition to metals. In order to evaluate the proposed discharge and treatment of groundwater at the Site, a groundwater sample was collected from an existing groundwater monitoring well (MW-2) located north/northeast of the USTs (Figure 4). The sample was analyzed for parameters required under the NPDES RGP. As indicated in Table 1, the analytical results confirmed the presence of total iron, total zinc and total lead as summarized on the attached laboratory reports prepared by AMRO Environmental Laboratories of Merrimack, New Hampshire. As further indicated in Table 1, extractable petroleum hydrocarbons (EPH), polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), nickel, chromium (III) and chromium (VI) were not detected above the laboratory’s detection limits. The concentrations of iron, zinc and lead in the groundwater sample were detected using total metals analyses, and is likely reflective of suspended solids observed in the groundwater sample. Total suspended solids (TSS) were detected at 220 milligrams per liter (mg/l). A copy of the laboratory analytical results are attached in Appendix A.

It is proposed that the recovered groundwater will be treated to remove suspended solids, metals and organic compounds prior to discharge to the nearby wetland area located on the northern portion of the Site. The proposed discharge point is shown on the attached Site Plan (Figure 4). The proposed treatment system as shown on the System Schematic attached as Figure 5. Additional information regarding the receiving water is provided in the NOI.

Consultation with State/Federal Services

According to the Massachusetts Geographical Information Systems (MassGIS) online maps for the Natural Heritage Endangered Species Program (NHESP), the Site and proposed discharge area are not located in an area of Priority Habitat of Rare Species or Estimated Habitats of Rare Wildlife. Additionally, a review of the MassGIS Numerical Ranking System (NRS) Map, attached as Figure 6, indicated the Site and proposed discharge area are not located within an Area of Critical Environmental Concern (ACEC). Furthermore, the Site is not located within a drinking water resource area, Zone II or Zone A. The Massachusetts Cultural Resource Information System (MACRIS) was consulted to search the Massachusetts Historical

Commission database for information on historic properties in the area of the Site and discharge point. The Site property and discharge area were not listed or identified in the query.

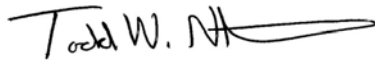
Request for Coverage Under NPDES RGP

In consideration of the particulars of this discharge and the requirements of the NPDES RGP, it is our opinion that the subject discharge is eligible for coverage under the NPDES RGP. On behalf of the operator (Global), Vineyard hereby requests coverage under the NPDES RGP for discharge of treated groundwater to the adjacent wetland area.

The attached NOI submission provides the required information pertaining to this NOI and the appropriate signature of the facility operator (Global).

Pending authorization from the EPA, discharge of treated water is scheduled for June and July 2013. Please contact the undersigned at 781.933.3330 if you have any questions regarding this NOI.

Sincerely,



Todd W. Nickerson, LSP
Sr. Project Manager
Vineyard Engineering & Environmental Services, Inc.

Attachments

FIGURES

Figure 1	Site Locus Map
Figure 2	Brockton Assessor's Map 19
Figure 3	Aerial Photograph
Figure 4	Site Plan
Figure 5	System Schematic
Figure 6	MassGIS NRS Map

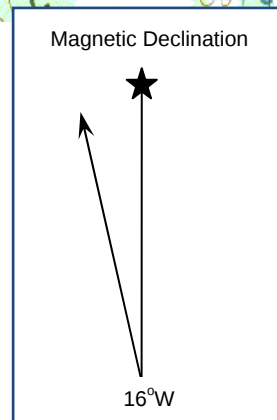


FIGURE I
SITE LOCUS MAP

899 BELMONT STREET
BROCKTON, MA
PREPARED FOR:
YACUB SAAD

UTM Coordinates:
4659159 mN
330086 mE

LAT/ LON Coordinates:
42° 03' 58.05"
71° 03' 13.48"

Vineyard Engineering &
Environmental Services, Inc.

400 W. Cummings Park, Suite 4800
Woburn, MA 01801

Tel. 781.933.3330

Fax. 781.933.3334

www.vineyardeng.com

MANLEY ST.

9

11 Acres 9775

4 Acres 11635

144.05 Acres

TAKEN PLOT 11 TORREY ST.
PLAN 9

SITE LOCATION
Best Gas
899 Belmont Street
Brockton, MA

EDINBORO AVE.

CALVIN ST.

CALVIN ST.

LONGO ST.

ANGELONA ST.

DAWES ST.

ROCKLAND AVE.

BIGNEY AVE.

HAZARD ST.

AVE.

From
City Engineer's Office
Scale 1" = 100 Feet

TAKEN PLOT 46
PLAN 21

LINWOOD ST.

HUNTINGTON AVE.

TORREY ST.

21

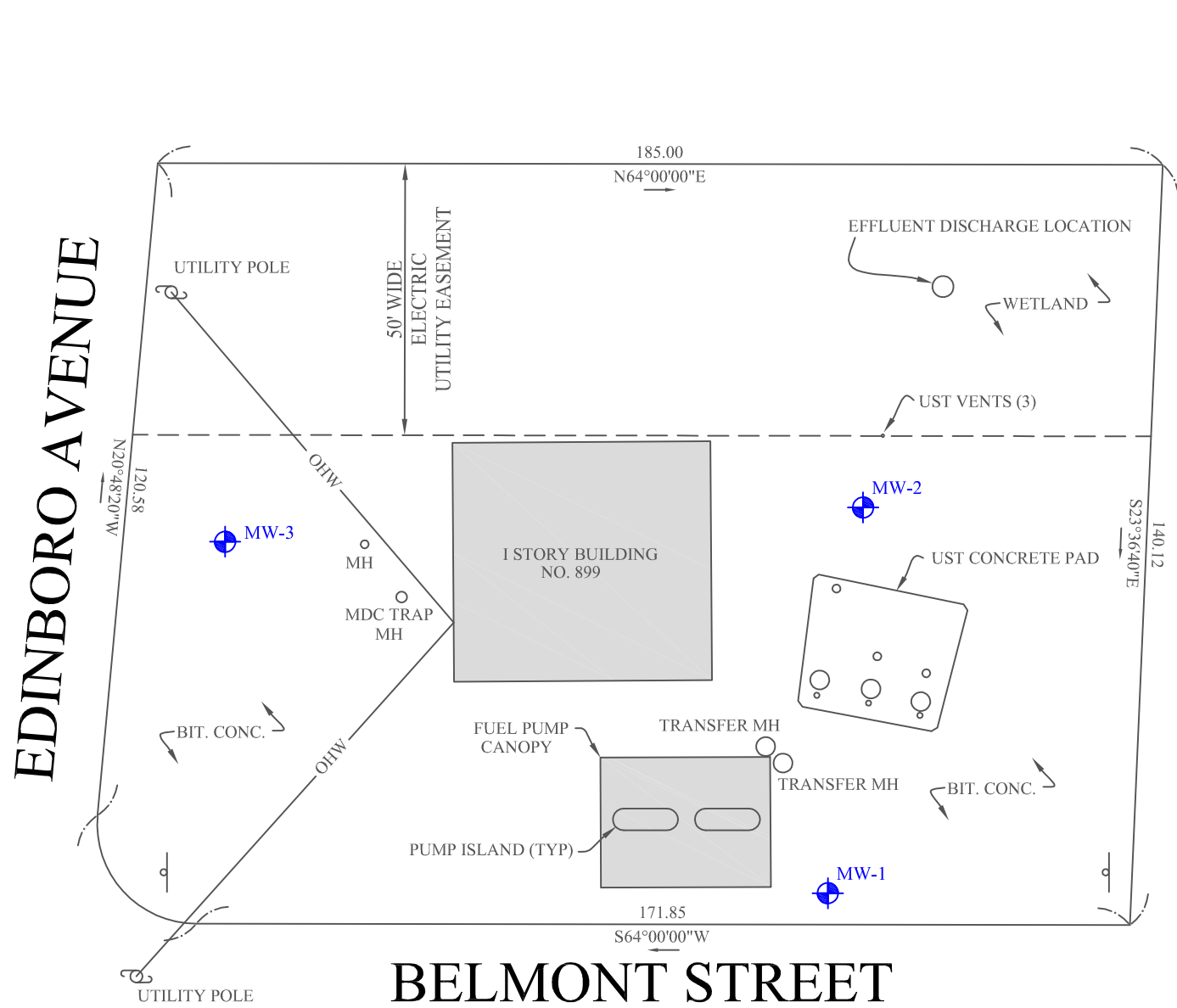
31

17

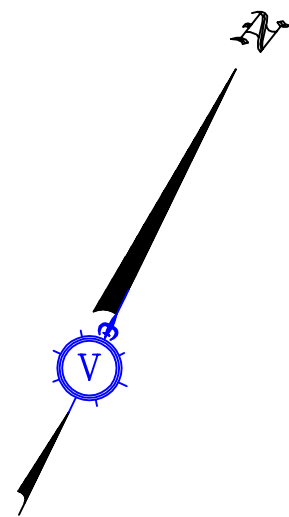
18

Figure 3
899 Belmont Street
Brockton, MA





SITE PLAN
SCALE: 1"=30'



NOTE:

1. SITE PLAN BASED ON "PLAN OF LAND IN BROCKTON, MA" DATED SEPTMEBER 23, 1966 BY GILBERT & MAHONEY LAND SURVEYORS & INSTRUMENT SURVEY PREFORMED BY VINEYARD ENGINEERING & ENVIRONMENTAL SERVICES, INC. OF WOBURN, MA

LEGEND

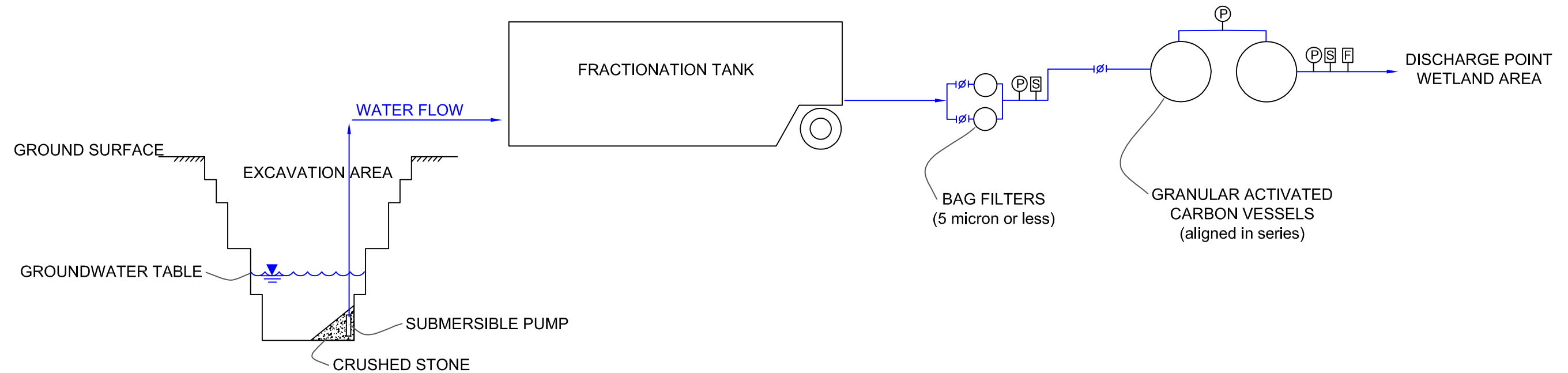
- MONITORING WELL
- MW-1
- MANHOLE
- MH
- SIGN

**FIGURE 4
SITE PLAN**
LOCATED IN
**899 BELMONT STREET
BROCKTON, MA**
PLYMOUTH COUNTY
PREPARED FOR
YACOUB SAAD
PREPARED BY

*Vineyard Engineering &
Environmental Services Inc.*

Land Survey & Environmental Services
400 West Cummings Park, Suite 4800 Woburn, MA. 01801
Tel. 781.933.3330 Fax: 781.933.3334
Web Page: VineyardEng.com





LEGEND:

- Ⓟ PRESSURE GAUGE
- Ⓢ SAMPLE PORT
- Ⓣ FLOW METER

FIGURE 5 SYSTEM SCHEMATIC LOCATED IN 899 BELMONT STREET BROCKTON, MA

PLYMOUTH COUNTY

PREPARED FOR

YACOUN SAAD

PREPARED BY

*Vineyard Engineering &
Environmental Services Inc.*

Land Survey & Environmental Services
400 West Cummings Park, Suite 4800 Woburn, MA. 01801
Tel. 781.933.3330 Fax: 781.933.3334
Web Page: VineyardEng.com

MassDEP - Bureau of Waste Site Cleanup

Site Information: MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

BEST GAS
899 BELMONT STREET BROCKTON, MA
4-000024435

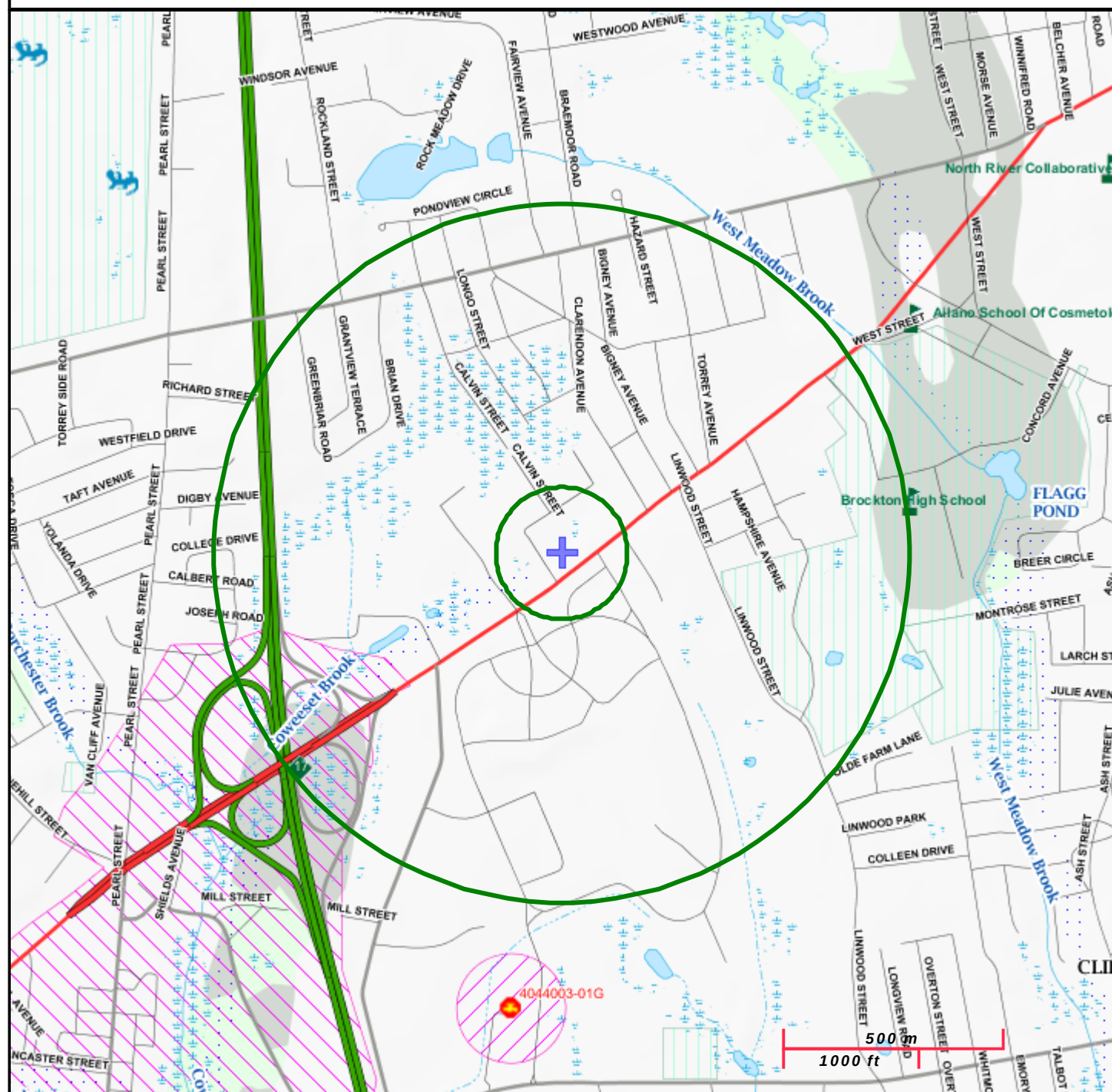
NAD83 UTM Meters:
4659173mN, 330077mE (Zone: 19)
May 31, 2013

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<http://www.mass.gov/mgis/>



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

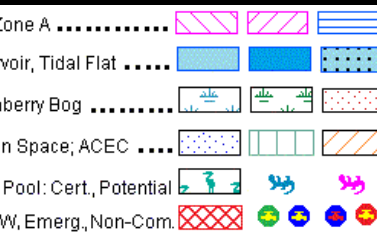
Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert, Potential

Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.



TABLES

Table 1 RGP Sampling

400 West Cummings Park, Suite 4800
Woburn, MA 01801
Phone: 781.933.3330
Fax: 781.933.3334

Martha's Vineyard
P.O. Box 458
Tisbury, MA 02568
508.687.9437

2277 State Road, Suite L
Plymouth, MA 02360
Phone: 508.591.4144
Fax: 774.773.2063

Table 1
RGP Sampling
899 Belmont Street, Brockton, MA
Sample Matrix: Groundwater

Sample ID Sample Date	MW-2 5/14/2013	Effluent Limits	
EPH w/Targets (ug/l)			
Surrogate Recovery	ok		
C9-C18 Aliphatic Hydrocarbons	ND (100)		
C19-C36 Aliphatic Hydrocarbons	ND (100)		
C11-C22 Aromatic Hydrocarbons	ND (100)		
Naphthalene	ND (0.10)	20 ug/l	
Total Group I PAHs			
Benz(a)anthracene	ND (0.10)		
Chrysene	ND (0.10)		
Benzo(b)fluoranthene	ND (0.10)		
Benzo(k)fluoranthene	ND (0.10)	10 ug/l Total	
Benzo(a)pyrene	ND (0.10)		
Dibenz(a,h)anthracene	ND (0.10)		
Indeno(1,2,3-cd)pyrene	ND (0.10)		
Total Group II PAHs			
Benzo(g,h,i)perylene	ND (0.10)		
Acenaphthylene	ND (0.10)		
Acenaphthene	ND (0.10)		
Fluorene	ND (0.10)	100 ug/l Total	
Phenanthrene	ND (0.10)		
Anthracene	ND (0.10)		
Fluoranthene	ND (0.10)		
Pyrene	ND (0.10)		
Methyl tert butyl ether	ND (0.10)	70 ug/l Total	
Total Metals (ug/l)		Freshwater (ug/l)	Saltwater (ug/l)
Nickel	ND (40.0)	29	8.2
Chromium (III)	ND (10.0)	48.8	100
Chromium (VI)	ND (10.0)	11.4	50.3
Zinc	136	66.6	85.6
Iron	4,140	1,000	1,000
Lead	2.3	1.3	8.5
Total Suspended Solids (mg/l)	220	30 mg/l	
Chloride (mg/l)	610	Monitor Only	
VOCs by 624 (ug/l)			
Surrogate Recovery	ok		
Benzene	ND (2.0)		
Toluene	ND (2.0)		
Ethylbenzene	ND (2.0)	100 ug/l Total	
p/m-Xylene	ND (2.0)		
o-Xylene	ND (2.0)		
TPH by 1664A (mg/l)	ND (5.0)	5.0 mg/l	

Notes: ug/l- micrograms per liter; mg/l- milligrams per liter; mL- milliliters

RGP- Remediation General Permit

EPH- Extractable Petroleum Hydrocarbons

TPH- Total Petroleum Hydrocarbons

Sampling parameters as defined by Remediation General Permit Appendix III, Category I, Sub-categories A & B.

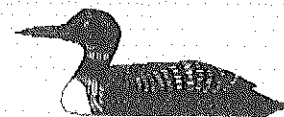
APPENDIX A

LABORATORY ANALYTICAL DATA REPORT

400 West Cummings Park, Suite 4800
Woburn, MA 01801
Phone: 781.933.3330
Fax: 781.933.3334

Martha's Vineyard
P.O. Box 458
Tisbury, MA 02568
508.687.9437

2277 State Road, Suite L
Plymouth, MA 02360
Phone: 508.591.4144
Fax: 774.773.2063



111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 • FAX: (603) 429-8496
www.amrolabs.com

May 29, 2013

ANALYTICAL TEST RESULTS

Steven Fleming
Vineyard Engineering & Environmental Services
400 West Cummings Park
Suite 4800
Woburn, MA 01801
TEL: (781) 933-3330
FAX: (781) 933-3334

Subject: Best Gas

Workorder No.: 1305032

Dear Steven Fleming:

AMRO Environmental Laboratories Corp. received 1 sample on 5/14/2013 for the analyses presented in the following report.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

The enclosed Sample Receipt Checklist details the condition of your sample(s) upon receipt. Please be advised that any unused sample volume and sample extracts will be stored for a period of 60 days from sample receipt date (90 days for samples from New York). After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 39 pages. This letter is an integral part of your data report. All results in this project relate only to the sample(s) as received by the laboratory and documented in the Chain-of-Custody. This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions regarding this project in the future, please refer to the Workorder Number above.

Sincerely,

Nancy Stewart
Vice President

State Certifications: NH (NELAC): 1001, MA: M-NH012, CT: PH-0758, NY: 11278 (NELAC), ME: NH012 and 1001.

Hard copy of the State Certification is available upon request.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Project: Best Gas
Lab Order: 1305032
Date Received: 5/14/2013

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
1305032-01A	MW-2	5/14/2013	2:10 PM
1305032-01B	MW-2	5/14/2013	2:10 PM
1305032-01C	MW-2	5/14/2013	2:10 PM
1305032-01D	MW-2	5/14/2013	2:10 PM
1305032-01E	MW-2	5/14/2013	2:10 PM

AMRO Environmental Laboratories Corp.

22-May-13

Lab Order: 1305032
Client: Vineyard Engineering & Environmental Services
Project: Best Gas

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name Preparatory Test Name	Prep Date	Analysis Date Batch ID	TCLP Date
1305032-01A	MW-2	5/14/2013 2:10:00 PM	Groundwater	EPA 624 Volatile Organics in Wastewater	5/14/2013	5/16/2013 R51038	
1305032-01B				EPH 1.1, Water, Full List, w/SIM PAHs		5/20/2013	
				AQPREP SEP FUNNEL: EPH	5/20/2013	23242	
				EPH 1.1, Water, Full List, w/SIM PAHs	5/20/2013	5/20/2013 23242	
				EPH 1.1, Water, Full List, w/SIM PAHs	5/20/2013	5/20/2013 23242	
1305032-01C				TPH, EPA 1664		5/20/2013 R51055	
1305032-01D				EPA 7421 LEAD		5/17/2013	
				EPA 3010 AQPREP TOTAL METALS: ICP/GFAA	5/15/2013	23238	
				ICP METALS, TOTAL	5/15/2013	5/15/2013 23238	
1305032-01E				Ion Chromatography, EPA 300		5/17/2013 R51060	
				Ion Chromatography, EPA 300		5/17/2013 R51060	
				SM 3500D Hexavalent Chromium		5/15/2013 R51053	
				Standard Methods - Total Suspended Solids		5/20/2013 R51049	

[illegible]

Analyses to Run for Best Gas

From: Andrew Pandolph

Sent: Tue, May 14, 2013 at 4:49 pm

To: Nancy Stewart

Cc: Mirta, Steve Fleming

Nancy/Mirta,

Please run the following analyses for the Best Gas project Bill picked up today (5/14).

-VOCs by 624

-EPH w/ Targets

-TPH by 1664A

-Total Nickel, Chromium, Zinc, Iron, Lead

-Hexavalent Chromium

-TSS

-Chloride

Please let me know if you have any questions.

Sincerely,

Andrew

Andrew C. Pandolph
Environmental Scientist

Vineyard Engineering & Environmental Services, Inc.
Land Surveyors & Civil/Environmental Engineers
Woburn, Plymouth & Vineyard Haven, MA
Phone: 781.933.3330
Fax: 781.933.3334
Cell: 781.589.6494
Email: apandolph@vineyardeng.com

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Sample= Waste

AMRO ID: 1305032

* = if the laboratory preserves the drinking water sample (s) for EPA Method 200 series, sample (s) should be held at least 16 hours prior to analysis or 24 hours for water sample (s).

pH Checked By: _____ Date: _____ pH adj.(16 or 24hrs)By: _____ Date: _____

CLIENT: Vineyard Engineering & Environmental Ser
Project: Best Gas
Lab Order: 1305032

CASE NARRATIVE

GC/MS VOLATILES: 8260B:

1. A Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were performed on 05/16/13 (Batch ID: R51038).

- 1.1 The % Recovery for 1 analyte out of 38 analytes in the LCS was outside the control limits.
- 1.2 The % Recovery for 1 analyte out of 38 analytes in the LCSD was outside the control limits.

2. A quadratic regression was used for Acetone in the Initial Calibration analyzed on 04/30/13.

MA-DEP EPH 1.1: PAH:SIM:

1. AMRO Laboratory analyzed EPH using the GC/MS option as indicated in the MADEP EPH Rev.1.1, Section 9.10 May 2004.

2. The C11-C22 Aromatic Hydrocarbons range result has been adjusted to exclude the concentration of Target PAH Analytes.

3. The C19-C36 aliphatic range recovered outside the control limits (+/- 25%) in the closing Continuing Calibration Verification Standard analyzed on 05/20/13. Please refer to the Calibration Summary in the EPH section.

METALS:

- 1. Chromium, Iron, Lead, Nickel and Zinc were analyzed at the request of the client.
- 2. No QC deviations were noted.

WET CHEMISTRY:

- 1. No QC deviations were noted.

MassDEP Analytical Protocol Certification Form

Laboratory Name: AMRO Environmental Lab. Corp.

Project #: n/a

Project Location: Best Gas (MA)

RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):

1305032-01

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7000 Metals CAM III C ☒	MassDEP EPH CAM IV B ☒	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A ☒	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☒ Yes ☐ No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☒ Yes ☐ No Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☒ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No ¹
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Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ☐ No ¹ ☒
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ☐ No ¹ ☒

¹All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Nancy Stewart

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Position: Vice President

Printed Name: Nancy Stewart

Date: 5-29-13

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative

Micro Data Qualifiers

TNTC	Too numerous to count
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Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser**Client Sample ID:** MW-2**Lab Order:** 1305032**Collection Date:** 5/14/2013 2:10:00 PM**Project:** Best Gas**Matrix:** GROUNDWATER**Lab ID:** 1305032-01A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN WASTEWATER		E624		Analyst: DH		
Chloromethane	ND	5.0		µg/L	1	5/16/2013 12:47:00 PM
Vinyl chloride	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Chloroethane	ND	5.0		µg/L	1	5/16/2013 12:47:00 PM
Bromomethane	ND	5.0		µg/L	1	5/16/2013 12:47:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	5/16/2013 12:47:00 PM
Carbon disulfide	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Methylene chloride	ND	5.0		µg/L	1	5/16/2013 12:47:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Chloroform	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Vinyl acetate	ND	10		µg/L	1	5/16/2013 12:47:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Benzene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Trichloroethene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/16/2013 12:47:00 PM
Toluene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	5/16/2013 12:47:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/16/2013 12:47:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Chlorobenzene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Ethylbenzene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
m,p-Xylene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
o-Xylene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Styrene	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Bromoform	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/16/2013 12:47:00 PM
Acrolein	ND	50		µg/L	1	5/16/2013 12:47:00 PM
Acrylonitrile	ND	10		µg/L	1	5/16/2013 12:47:00 PM
Acetone	ND	10		µg/L	1	5/16/2013 12:47:00 PM
2-Butanone	ND	10		µg/L	1	5/16/2013 12:47:00 PM
2-Hexanone	ND	10		µg/L	1	5/16/2013 12:47:00 PM
4-Methyl-2-Pentanone	ND	10		µg/L	1	5/16/2013 12:47:00 PM

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser**Client Sample ID:** MW-2**Lab Order:** I305032**Collection Date:** 5/14/2013 2:10:00 PM**Project:** Best Gas**Matrix:** GROUNDWATER**Lab ID:** I305032-01A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Surr: Dibromofluoromethane	104	68-122		%REC	1	5/16/2013 12:47:00 PM
Surr: 1,2-Dichloroethane-d4	108	74-124		%REC	1	5/16/2013 12:47:00 PM
Surr: Toluene-d8	103	69-121		%REC	1	5/16/2013 12:47:00 PM
Surr: 4-Bromofluorobenzene	97.4	62-129		%REC	1	5/16/2013 12:47:00 PM

AMRO Environmental Laboratories Corp.

Date: 20-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Method Blank

Sample ID: mb-05/16/13 Batch ID: R51038 Test Code: E624 Units: µg/L Analysis Date 5/16/2013 12:13:00 PM Prep Date: 5/16/2013
Client ID: Run ID: V-3_130516A SeqNo: 849478

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Que
Chloromethane	ND	5.0	µg/L									
Vinyl chloride	ND	2.0	µg/L									
Chloroethane	ND	5.0	µg/L									
Bromomethane	ND	5.0	µg/L									
Trichlorofluoromethane	ND	2.0	µg/L									
1,1-Dichloroethene	ND	1.0	µg/L									
Carbon disulfide	ND	2.0	µg/L									
Methylene chloride	ND	5.0	µg/L									
trans-1,2-Dichloroethene	ND	2.0	µg/L									
1,1-Dichloroethane	ND	2.0	µg/L									
Chloroform	ND	2.0	µg/L									
1,1,1-Trichloroethane	ND	2.0	µg/L									
Carbon tetrachloride	ND	2.0	µg/L									
Vinyl acetate	ND	10	µg/L									
1,2-Dichloroethane	ND	2.0	µg/L									
Benzene	ND	2.0	µg/L									
Trichloroethene	ND	2.0	µg/L									
1,2-Dichloropropane	ND	2.0	µg/L									
Bromodichloromethane	ND	2.0	µg/L									
cis-1,3-Dichloropropene	ND	1.0	µg/L									
Toluene	ND	2.0	µg/L									
2-Chloroethyl vinyl ether	ND	10	µg/L									
trans-1,3-Dichloropropene	ND	1.0	µg/L									
1,1,2-Trichloroethane	ND	2.0	µg/L									
Tetrachloroethene	ND	2.0	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 20-May-13

QC SUMMARY REPORT

Method Blank

CLIENT:	Vineyard Engineering & Environmental Ser		
Work Order:	1305032		
Project:	Best Gas		
Dibromochloromethane	ND	2.0	
Chlorobenzene	ND	2.0	
Ethylbenzene	ND	2.0	
m,p-Xylene	ND	2.0	
o-Xylene	ND	2.0	
Styrene	ND	2.0	
Bromoform	ND	2.0	
1,1,2,2-Tetrachloroethane	ND	2.0	
Acrolein	ND	50	
Acrylonitrile	ND	10	
Acetone	ND	10	
2-Butanone	ND	10	
2-Hexanone	ND	10	
4-Methyl-2-Pentanone	ND	10	
Surr: Dibromofluoromethane		26.03	2.0
Surr: 1,2-Dichloroethane-d4		27.42	2.0
Surr: Toluene-d8		25.37	2.0
Surr: 4-Bromofluorobenzene		23.89	2.0

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	NA - Not applicable where J values or ND results occur
	RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.		

AMRO Environmental Laboratories Corp.

Date: 20-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: Ics-05/16/13		Batch ID: R51038		Test Code: E624		Units: µg/L		Analysis Date 5/16/2013 10:30:00 AM		Prep Date: 5/16/2013			
Client ID:		Run ID: V-3_130516A		SeqNo: 849476									
Analyte	QC Sample		RL	Units	QC Spike		Original Sample		Original Sample		%RPD	RPDLimit	Qua
	Result				Amount	Result	%REC	LowLimit	HighLimit	or MS Result			
Chloromethane	21.17		5.0	µg/L	20	0	106	51	149	0			
Vinyl chloride	24.75		2.0	µg/L	20	0	124	59	152	0			
Chloroethane	23.3		5.0	µg/L	20	0	116	65	138	0			
Bromomethane	20.35		5.0	µg/L	20	0	102	53	128	0			
Trichlorofluoromethane	25		2.0	µg/L	20	0	125	56	157	0			
1,1-Dichloroethene	24.06		1.0	µg/L	20	0	120	77	139	0			
Carbon disulfide	23.52		2.0	µg/L	20	0	118	55	129	0			
Methylene chloride	24.1		5.0	µg/L	20	0	120	77	133	0			
trans-1,2-Dichloroethene	23.48		2.0	µg/L	20	0	117	79	128	0			
1,1-Dichloroethane	24.02		2.0	µg/L	20	0	120	81	131	0			
Chloroform	21.53		2.0	µg/L	20	0	108	69	132	0			
1,1,1-Trichloroethane	22.55		2.0	µg/L	20	0	113	68	145	0			
Carbon tetrachloride	22.22		2.0	µg/L	20	0	111	58	130	0			
Vinyl acetate	9.38		10	µg/L	20	0	46.9	34	150	0			J
1,2-Dichloroethane	21.54		2.0	µg/L	20	0	108	61	140	0			
Benzene	20.99		2.0	µg/L	20	0	105	75	129	0			
Trichloroethene	21.49		2.0	µg/L	20	0	107	81	129	0			
1,2-Dichloropropane	21.42		2.0	µg/L	20	0	107	81	134	0			
Bromodichloromethane	21.22		2.0	µg/L	20	0	106	63	118	0			
cis-1,3-Dichloropropene	20.28		1.0	µg/L	20	0	101	65	115	0			
Toluene	20.85		2.0	µg/L	20	0	104	81	123	0			
2-Chloroethyl vinyl ether	20.31		10	µg/L	20	0	102	13	150	0			
trans-1,3-Dichloropropene	20.22		1.0	µg/L	20	0	101	55	126	0			
1,1,2-Trichloroethane	20.82		2.0	µg/L	20	0	104	79	122	0			
Tetrachloroethene	20.75		2.0	µg/L	20	0	104	87	137	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 20-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike

Dibromochloromethane	20.27	2.0	µg/L	20	0	101	59	119	0
Chlorobenzene	20.69	2.0	µg/L	20	0	103	86	121	0
Ethylbenzene	20.73	2.0	µg/L	20	0	104	81	125	0
m,p-Xylene	41.76	2.0	µg/L	40	0	104	81	125	0
o-Xylene	20.86	2.0	µg/L	20	0	104	68	134	0
Styrene	20.35	2.0	µg/L	20	0	102	66	133	0
Bromoform	15.77	2.0	µg/L	20	0	78.8	44	115	0
1,1,2,2-Tetrachloroethane	18.3	2.0	µg/L	20	0	91.5	65	132	0
Acrylonitrile	22.46	10	µg/L	20	0	112	60	154	0
Acetone	8.21	10	µg/L	20	0	41	44	133	0
2-Butanone	11.02	10	µg/L	20	0	55.1	47	141	0
2-Hexanone	11.12	10	µg/L	20	0	55.6	41	138	0
4-Methyl-2-Pentanone	15.25	10	µg/L	20	0	76.2	54	124	0
Surr: Dibromofluoromethane	25.48	2.0	µg/L	25	0	102	68	122	0
Surr: 1,2-Dichloroethane-d4	27.15	2.0	µg/L	25	0	109	74	124	0
Surr: Toluene-d8	25.53	2.0	µg/L	25	0	102	69	121	0
Surr: 4-Bromofluorobenzene	24.78	2.0	µg/L	25	0	99.1	62	129	0

JS

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit: defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 20-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: 1csd-05/16/13 Batch ID: R51038 Test Code: E624 Units: µg/L Analysis Date 5/16/2013 11:04:00 AM Prep Date: 5/16/2013
Client ID: Run ID: V-3_130516A SeqNo: 849477

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Que
Chloromethane	21.78	5.0	µg/L	20	0	109	51	149	21.17	2.84	20	
Vinyl chloride	25.72	2.0	µg/L	20	0	129	59	152	24.75	3.84	20	
Chloroethane	23.41	5.0	µg/L	20	0	117	65	138	23.3	0.471	20	
Bromomethane	20.13	5.0	µg/L	20	0	101	53	128	20.35	1.09	20	
Trichlorofluoromethane	26.61	2.0	µg/L	20	0	133	56	157	25	6.24	20	
1,1-Dichloroethene	24.25	1.0	µg/L	20	0	121	77	139	24.06	0.787	20	
Carbon disulfide	24.39	2.0	µg/L	20	0	122	55	129	23.52	3.63	20	
Methylene chloride	24.06	5.0	µg/L	20	0	120	77	133	24.1	0.166	20	
trans-1,2-Dichloroethene	23.35	2.0	µg/L	20	0	117	79	128	23.48	0.555	20	
1,1-Dichloroethane	24.47	2.0	µg/L	20	0	122	81	131	24.02	1.86	20	
Chloroform	21.28	2.0	µg/L	20	0	106	69	132	21.53	1.17	20	
1,1,1-Trichloroethane	22.18	2.0	µg/L	20	0	111	68	145	22.55	1.65	20	
Carbon tetrachloride	22.4	2.0	µg/L	20	0	112	58	130	22.22	0.807	20	
Vinyl acetate	9.56	10	µg/L	20	0	47.8	34	150	9.38	1.9	20	J
1,2-Dichloroethane	21.7	2.0	µg/L	20	0	108	61	140	21.54	0.74	20	
Benzene	21.4	2.0	µg/L	20	0	107	75	129	20.99	1.93	20	
Trichloroethene	21.46	2.0	µg/L	20	0	107	81	129	21.49	0.14	20	
1,2-Dichloropropane	21.43	2.0	µg/L	20	0	107	81	134	21.42	0.0467	20	
Bromodichloromethane	21.6	2.0	µg/L	20	0	108	63	118	21.22	1.77	20	
cis-1,3-Dichloropropene	19.97	1.0	µg/L	20	0	99.8	65	115	20.28	1.54	20	
Toluene	21.57	2.0	µg/L	20	0	108	81	123	20.85	3.39	20	
2-Chloroethyl vinyl ether	20.6	10	µg/L	20	0	103	13	150	20.31	1.42	20	
trans-1,3-Dichloropropene	19.74	1.0	µg/L	20	0	98.7	55	126	20.22	2.4	20	
1,1,2-Trichloroethane	20.25	2.0	µg/L	20	0	101	79	122	20.82	2.78	20	
Tetrachloroethene	21.04	2.0	µg/L	20	0	105	87	137	20.75	1.39	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 20-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Dibromochloromethane	20.39	2.0	µg/L	20	0	102	59	119	20.27	0.59	20
Chlorobenzene	21.69	2.0	µg/L	20	0	108	86	121	20.69	4.72	20
Ethylbenzene	21.73	2.0	µg/L	20	0	109	81	125	20.73	4.71	20
m,p-Xylene	42.75	2.0	µg/L	40	0	107	81	125	41.76	2.34	20
o-Xylene	21.76	2.0	µg/L	20	0	109	68	134	20.86	4.22	20
Styrene	21.15	2.0	µg/L	20	0	106	66	133	20.35	3.86	20
Bromofom	15.8	2.0	µg/L	20	0	79	44	115	15.77	0.19	20
1,1,2,2-Tetrachloroethane	19.1	2.0	µg/L	20	0	95.5	65	132	18.3	4.28	20
Acrylonitrile	20.84	10	µg/L	20	0	104	60	154	22.46	7.48	20
Acetone	8.73	10	µg/L	20	0	43.6	44	133	8.21	6.14	20
2-Butanone	10.9	10	µg/L	20	0	54.5	47	141	11.02	1.09	20
2-Hexanone	10.86	10	µg/L	20	0	54.3	41	138	11.12	2.37	20
4-Methyl-2-Pentanone	15.36	10	µg/L	20	0	76.8	54	124	15.25	0.719	20
Surr: Dibromofluoromethane	25.96	2.0	µg/L	25	0	104	68	122	0	0	0
Surr: 1,2-Dichloroethane-d4	26.33	2.0	µg/L	25	0	105	74	124	0	0	0
Surr: Toluene-d8	25.54	2.0	µg/L	25	0	102	69	121	0	0	0
Surr: 4-Bromofluorobenzene	24.98	2.0	µg/L	25	0	99.9	62	129	0	0	0

JS

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Lab Order: 1305032
Project: Best Gas
Lab ID: 1305032-01B

Client Sample ID: MW-2
Collection Date: 5/14/2013 2:10:00 PM
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MADEP EPH REVISION 1.1 W/ SIM PAHS		MAEPH				Analyst: KAM
C9-C18 Aliphatic Hydrocarbons	ND	100		µg/L	1	5/20/2013 7:12:00 PM
C19-C36 Aliphatic Hydrocarbons	ND	100		µg/L	1	5/20/2013 7:12:00 PM
C11-C22 Aromatic Hydrocarbons	ND	100		µg/L	1	5/20/2013 7:49:00 PM
Naphthalene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
2-Methylnaphthalene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Acenaphthylene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Acenaphthene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Fluorene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Phenanthrene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Anthracene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Fluoranthene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Pyrene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Benz(a)anthracene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Chrysene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Benzo(k)fluoranthene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Benzo(a)pyrene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Dibenz(a,h)anthracene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Benzo(g,h,i)perylene	ND	0.10		µg/L	1	5/20/2013 3:49:00 PM
Surr: 1-Chlorooctadecane	58.3	40-140		%REC	1	5/20/2013 7:12:00 PM
Surr: 2-Bromonaphthalene	64.6	40-140		%REC	1	5/20/2013 7:49:00 PM
Surr: 2-Fluorobiphenyl	84.1	40-140		%REC	1	5/20/2013 3:49:00 PM
Surr: 2-Fluorobiphenyl	64.6	40-140		%REC	1	5/20/2013 7:49:00 PM
Surr: o-Terphenyl	76.1	40-140		%REC	1	5/20/2013 7:49:00 PM

AMRO Environmental Laboratories Corp.

Date: 21-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Method Blank

Sample ID: MB-23242	Batch ID: 23242	Test Code: MAEPH	Units: µg/L	Analysis Date 5/20/2013 5:24:00 PM	Prep Date: 5/20/2013						
Client ID:	Run ID: SV-2_130520A	SeqNo: 849577									
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	HighLimit	LowLimit	%REC	%RPD	RPDLimit	Que
C9-C18 Aliphatic Hydrocarbons	ND	100	µg/L								
C19-C36 Aliphatic Hydrocarbons	ND	100	µg/L								
Surr: 1-Chlorooctadecane	27.33	1.0	µg/L	40	0	68.3	40	140	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
 RL - Reporting Limit: defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 21-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Method Blank

Sample ID: MB-23242		Batch ID: 23242	Test Code: MAEPH	Units: µg/L	Analysis Date 5/20/2013 3:37:00 PM	Prep Date: 5/20/2013
Client ID:		Run ID: SV-2_130520A	SeqNo: 849574			
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	Original Sample HighLimit
C11-C22 Aromatic Hydrocarbons	ND	100	µg/L			
Naphthalene	ND	0.10	µg/L			
2-Methylnaphthalene	ND	0.10	µg/L			
Acenaphthylene	ND	0.10	µg/L			
Acenaphthene	ND	0.10	µg/L			
Fluorene	ND	0.10	µg/L			
Phenanthrene	ND	0.10	µg/L			
Anthracene	ND	0.10	µg/L			
Fluoranthene	ND	0.10	µg/L			
Pyrene	ND	0.10	µg/L			
Benz(a)anthracene	ND	0.10	µg/L			
Chrysene	ND	0.10	µg/L			
Benzo(b)fluoranthene	ND	0.10	µg/L			
Benzo(k)fluoranthene	ND	0.10	µg/L			
Benzo(a)pyrene	ND	0.10	µg/L			
Dibenz(a,h)anthracene	ND	0.10	µg/L			
Indeno(1,2,3-cd)pyrene	ND	0.10	µg/L			
Benzo(g,h,i)perylene	ND	0.10	µg/L			
Surr: 2-Bromonaphthalene	22.92	1.0	µg/L	40	0	57.3
Surr: 2-Fluorobiphenyl	23.93	1.0	µg/L	40	0	59.8
Surr: o-Terphenyl	27.38	1.0	µg/L	40	0	68.4

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 21-May-13

AMRO Environmental Laboratories Corp.

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Method Blank

Sample ID: MB-23242	Batch ID: 23242	Test Code: MAEPH	Units: µg/L	Analysis Date 5/20/2013 3:13:00 PM	Prep Date: 5/20/2013						
Client ID:	Run ID: SV-4_130520A	SeqNo: 849596									
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	HighLimit	LowLimit	%REC	%RPD	RPDLimit	Que
Naphthalene	ND	0.10	µg/L								
2-Methylnaphthalene	ND	0.10	µg/L								
Acenaphthylene	ND	0.10	µg/L								
Acenaphthene	ND	0.10	µg/L								
Fluorene	ND	0.10	µg/L								
Phenanthrene	ND	0.10	µg/L								
Anthracene	ND	0.10	µg/L								
Fluoranthene	ND	0.10	µg/L								
Pyrene	ND	0.10	µg/L								
Benz(a)anthracene	ND	0.10	µg/L								
Chrysene	ND	0.10	µg/L								
Benzo(b)fluoranthene	ND	0.10	µg/L								
Benzo(k)fluoranthene	ND	0.10	µg/L								
Benzo(a)pyrene	ND	0.10	µg/L								
Dibenz(a,h)anthracene	ND	0.10	µg/L								
Indeno(1,2,3-cd)pyrene	ND	0.10	µg/L								
Benzo(g,h,i)perylene	ND	0.10	µg/L								
Surr: 2-Fluorobiphenyl	30.84	1.0	µg/L	40	0	77.1	40	140	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 21-May-13

AMRO Environmental Laboratories Corp.

CLIENT: Vineyard Engineering & Environmental Ser
 Work Order: 1305032
 Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: LCS-23242	Batch ID: 23242	Test Code: MAEPH	Units: µg/L	Analysis Date 5/20/2013 6:00:00 PM	Prep Date: 5/20/2013							
Client ID:	Run ID: SV-2_130520A	SeqNo: 849578										
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
n-Decane	26.1	1.0	µg/L	50	0	52.2	40	140	0			
n-Docosane	41.59	1.0	µg/L	50	0	83.2	40	140	0			
n-Dodecane	28.69	1.0	µg/L	50	0	57.4	40	140	0			
n-Eicosane	41.08	1.0	µg/L	50	0	82.2	40	140	0			
n-Hexacosane	44.8	1.0	µg/L	50	0	89.6	40	140	0			
n-Hexadecane	37.31	1.0	µg/L	50	0	74.6	40	140	0			
n-Hexatriacontane	38.77	1.0	µg/L	50	0	77.5	40	140	0			
n-Nonadecane	41.26	1.0	µg/L	50	0	82.5	40	140	0			
n-Nonane	24.01	1.0	µg/L	50	0	48	40	140	0			
n-Octacosane	44.7	1.0	µg/L	50	0	89.4	40	140	0			
n-Octadecane	39.64	1.0	µg/L	50	0	79.3	40	140	0			
n-Tetracosane	42.82	1.0	µg/L	50	0	85.6	40	140	0			
n-Tetradecane	34.22	1.0	µg/L	50	0	68.4	40	140	0			
n-Triacontane	39.77	1.0	µg/L	50	0	79.5	40	140	0			
Surr: 1-Chlorooctadecane	33.87	1.0	µg/L	40	0	84.7	40	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
 RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 21-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: LCS-23242	Batch ID: 23242	Test Code: MAEPH	Units: µg/L	Analysis Date	5/20/2013 4:12:00 PM	Prep Date: 5/20/2013						
Client ID:	Run ID: SV-2_130520A	SeqNo: 849575										
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
Naphthalene	29.23	0.10	µg/L	50	0	58.5	40	140	0			
2-Methylnaphthalene	31.29	0.10	µg/L	50	0	62.6	40	140	0			
Acenaphthylene	34.32	0.10	µg/L	50	0	68.6	40	140	0			
Acenaphthene	34.94	0.10	µg/L	50	0	69.9	40	140	0			
Fluorene	37.98	0.10	µg/L	50	0	76	40	140	0			
Phenanthrene	41.2	0.10	µg/L	50	0	82.4	40	140	0			
Anthracene	44.31	0.10	µg/L	50	0	88.6	40	140	0			
Fluoranthene	45.27	0.10	µg/L	50	0	90.5	40	140	0			
Pyrene	45.79	0.10	µg/L	50	0	91.6	40	140	0			
Benz(a)anthracene	50.72	0.10	µg/L	50	0	101	40	140	0			
Chrysene	47.41	0.10	µg/L	50	0	94.8	40	140	0			
Benzo(b)fluoranthene	48.42	0.10	µg/L	50	0	96.8	40	140	0			
Benzo(k)fluoranthene	56.82	0.10	µg/L	50	0	114	40	140	0			
Benzo(a)pyrene	50.99	0.10	µg/L	50	0	102	40	140	0			
Dibenz(a,h)anthracene	54.04	0.10	µg/L	50	0	108	40	140	0			
Indeno(1,2,3-cd)pyrene	56.33	0.10	µg/L	50	0	113	40	140	0			
Benzo(g,h,i)perylene	52.82	0.10	µg/L	50	0	106	40	140	0			
Surr: 2-Bromonaphthalene	23.29	1.0	µg/L	40	0	58.2	40	140	0			
Surr: 2-Fluorobiphenyl	23.31	1.0	µg/L	40	0	58.3	40	140	0			
Surr: o-Terphenyl	34.46	1.0	µg/L	40	0	86.2	40	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 21-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-23242	Batch ID: 23242	Test Code: MAEPH		Units: µg/L	Analysis Date 5/20/2013 6:36:00 PM		Prep Date: 5/20/2013			
Client ID:	Run ID: SV-2_130520A	SeqNo: 849579								
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	HighLimit	LowLimit	%RPD	RPDLimit	QC
n-Decane	23.33	1.0	µg/L	50	0	46.7	40	26.1	11.2	25
n-Docosane	37.43	1.0	µg/L	50	0	74.9	40	41.59	10.5	25
n-Dodecane	26.01	1.0	µg/L	50	0	52	40	28.69	9.8	25
n-Eicosane	37.5	1.0	µg/L	50	0	75	40	41.08	9.11	25
n-Hexacosane	39.94	1.0	µg/L	50	0	79.9	40	44.8	11.5	25
n-Hexadecane	34.08	1.0	µg/L	50	0	68.2	40	37.31	9.05	25
n-Hexatriacontane	34.63	1.0	µg/L	50	0	69.3	40	38.77	11.3	25
n-Nonadecane	37.08	1.0	µg/L	50	0	74.2	40	41.26	10.7	25
n-Nonane	20.6	1.0	µg/L	50	0	41.2	40	24.01	15.3	25
n-Octacosane	40.33	1.0	µg/L	50	0	80.7	40	44.7	10.3	25
n-Octadecane	35.61	1.0	µg/L	50	0	71.2	40	39.64	10.7	25
n-Tetracosane	38.98	1.0	µg/L	50	0	78	40	42.82	9.39	25
n-Tetradecane	31.42	1.0	µg/L	50	0	62.8	40	34.22	8.53	25
n-Triacontane	37.04	1.0	µg/L	50	0	74.1	40	39.77	7.11	25
Surr: 1-Chlorooctadecane	29.14	1.0	µg/L	40	0	72.8	40	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur

B - Analyte detected in the associated Method Blank

AMRO Environmental Laboratories Corp.

Date: 21-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-23242	Batch ID: 23242	Test Code: MAEPH	Units: µg/L	Analysis Date 5/20/2013 4:48:00 PM	Prep Date: 5/20/2013							
Client ID:	Run ID: SV-2_130520A	SeqNo: 849576										
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Naphthalene	27.76	0.10	µg/L	50	0	55.5	40	140	29.23	5.16	25	
2-Methylnaphthalene	28.5	0.10	µg/L	50	0	57	40	140	31.29	9.33	25	
Acenaphthylene	30.06	0.10	µg/L	50	0	60.1	40	140	34.32	13.2	25	
Acenaphthene	30.85	0.10	µg/L	50	0	61.7	40	140	34.94	12.4	25	
Fluorene	32.9	0.10	µg/L	50	0	65.8	40	140	37.98	14.3	25	
Phenanthrene	37.38	0.10	µg/L	50	0	74.8	40	140	41.2	9.72	25	
Anthracene	38.94	0.10	µg/L	50	0	77.9	40	140	44.31	12.9	25	
Fluoranthene	41.99	0.10	µg/L	50	0	84	40	140	45.27	7.52	25	
Pyrene	42.94	0.10	µg/L	50	0	85.9	40	140	45.79	6.42	25	
Benz(a)anthracene	51.74	0.10	µg/L	50	0	103	40	140	50.72	1.99	25	
Chrysene	48.4	0.10	µg/L	50	0	96.8	40	140	47.41	2.07	25	
Benzo(b)fluoranthene	55.22	0.10	µg/L	50	0	110	40	140	48.42	13.1	25	
Benzo(k)fluoranthene	60.92	0.10	µg/L	50	0	122	40	140	56.82	6.96	25	
Benzo(a)pyrene	57.61	0.10	µg/L	50	0	115	40	140	50.99	12.2	25	
Dibenz(a,h)anthracene	62.08	0.10	µg/L	50	0	124	40	140	54.04	13.8	25	
Indeno(1,2,3-cd)pyrene	63.2	0.10	µg/L	50	0	126	40	140	56.33	11.5	25	
Benzo(g,h,i)perylene	61.78	0.10	µg/L	50	0	124	40	140	52.82	15.6	25	
Surr: 2-Bromonaphthalene	23.64	1.0	µg/L	40	0	59.1	40	140	0	0	0	
Surr: 2-Fluorobiphenyl	24.34	1.0	µg/L	40	0	60.8	40	140	0	0	0	
Surr: o-Terphenyl	30.19	1.0	µg/L	40	0	75.5	40	140	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 f - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
 RL - Reporting Limit: defined as the lowest concentration the laboratory can accurately quantitate.

Send to Database

Breakthrough Report

LIMS Sample ID: LCS-23242
Test Code: EPH1.1WSIM
Instrument ID: SV2

AROMATIC FRACTION(S):

Analyte	File ID	Amount
Naphthalene	C:\HPCHEM\1\DATA\052013E\2B10243.D	29.23
2-Methylnaphthalene	C:\HPCHEM\1\DATA\052013E\2B10243.D	31.292

ALIPHATIC FRACTION(S):

Analyte	File ID	Amount
Naphthalene	C:\HPCHEM\1\DATA\052013E\2B10246.D	0.054591
2-Methylnaphthalene	C:\HPCHEM\1\DATA\052013E\2B10246.D	0

Naphthalene Breakthrough: 0.186414079 %

2-Methylnaphthalene Breakthrough: 0 %

Send to Database

Breakthrough Report

LIMS Sample ID: LCSD-23242
Test Code: EPH1.1WSIM
Instrument ID: SV2

AROMATIC FRACTION(S):

Analyte	File ID	Amount
Naphthalene	C:\HPCHEM\1\DATA\052013E\2B10244.D	27.756
2-Methylnaphthalene	C:\HPCHEM\1\DATA\052013E\2B10244.D	28.5033

ALIPHATIC FRACTION(S):

Analyte	File ID	Amount
Naphthalene	C:\HPCHEM\1\DATA\052013E\2B10247.D	0.035635
2-Methylnaphthalene	C:\HPCHEM\1\DATA\052013E\2B10247.D	0

Naphthalene Breakthrough: 0.128222395 %

2-Methylnaphthalene Breakthrough: 0 %

SEMIVOLATILE CONTINUING CALIBRATION SUMMARY

Instrument ID: SV-2

Analyst: KM

Aliphatic

Initial Calibration File: C:\HPCHEM\1\DATA\052013E\2B10240.D

Terminal Calibration File: C:\HPCHEM\1\DATA\052013E\2B10255.D

Aromatic

Initial Calibration File: C:\HPCHEM\1\DATA\052013E\2B10241.D

Terminal Calibration File: C:\HPCHEM\1\DATA\052013E\2B10256.D

ANALYTE	INITIAL CALIB			TERMINAL CALIB		
	EXPECTED	ACTUAL	%DRIFT	EXPECTED	ACTUAL	%DRIFT
C9-C18 Aliphatic Hydrocarbons	300	261.408	-12.86%	300	248.431	-17.19%
C19-C36 Aliphatic Hydrocarbons	400	316.989	-20.75%	400	283.071	-29.23% *
n-Nonane	50	44.5778	-10.84%	50	41.3218	-17.36%
n-Decane	50	45.878	-8.24%	50	42.1284	-15.74%
n-Dodecane	50	46.525	-6.95%	50	42.4938	-15.01%
n-Tetradecane	50	47.8921	-4.22%	50	42.227	-15.55%
n-Hexadecane	50	47.8973	-4.21%	50	43.3787	-13.24%
n-Octadecane	50	47.8859	-4.23%	50	43.7865	-12.43%
n-Nonadecane	50	48.045	-3.91%	50	43.9801	-12.04%
n-Eicosane	50	47.9575	-4.08%	50	43.898	-12.20%
1-Chlorooctadecane	50	47.0386	-5.92%	50	44.52	-10.96%
n-Docosane	50	48.0547	-3.89%	50	43.1519	-13.70%
n-Tetracosane	50	48.1836	-3.63%	50	43.6742	-12.65%
n-Hexacosane	50	48.1456	-3.71%	50	44.1393	-11.72%
n-Octacosane	50	47.9496	-4.10%	50	43.9386	-12.12%
n-Triacontane	50	43.8602	-12.28%	50	41.2422	-17.52%
n-Hexatriacontane	50	48.3449	-3.31%	50	45.0037	-9.99%
C11-C22 Aromatic Hydrocarbons	850	697.459	-17.95%	850	695.409	-18.19%
Naphthalene	50	42.4356	-15.13%	50	42.0465	-15.91%
2-Methylnaphthalene	50	42.8364	-14.33%	50	43.6364	-12.73%
2-Fluorobiphenyl	50	41.7206	-16.56%	50	42.2068	-15.59%
Acenaphthylene	50	43.2254	-13.55%	50	43.6806	-12.64%
2-Bromonaphthalene	50	41.4028	-17.19%	50	41.5375	-16.93%
Acenaphthene	50	42.7612	-14.48%	50	43.4943	-13.01%
Fluorene	50	43.4288	-13.14%	50	43.6098	-12.78%
Phenanthrene	50	43.8186	-12.36%	50	43.1292	-13.74%
Anthracene	50	44.8017	-10.40%	50	44.7677	-10.46%
o-Terphenyl	50	46.3916	-7.22%	50	46.3348	-7.33%
Fluoranthene	50	43.5906	-12.82%	50	43.9714	-12.06%
Pyrene	50	44.6894	-10.62%	50	44.9703	-10.06%
Benz(a)anthracene	50	47.1227	-5.75%	50	47.3747	-5.25%
Chrysene	50	44.1066	-11.79%	50	44.1655	-11.67%
Benzo(b)fluoranthene	50	45.6869	-8.63%	50	47.1397	-5.72%
Benzo(k)fluoranthene	50	48.7433	-2.51%	50	48.7575	-2.49%
Benzo(a)pyrene	50	47.5745	-4.85%	50	48.7255	-2.55%
Dibenz(a,h)anthracene	50	49.1612	-1.68%	50	52.0939	4.19%
Indeno(1,2,3-cd)pyrene	50	50.4561	0.91%	50	53.0219	6.04%
Benzo(g,h,i)perylene	50	47.354	-5.29%	50	53.9944	7.99%

Number out (Initial CCV) : 0

Number out (Terminal CCV) : 1

* Maximum %Dev = 25% for Aliphatic compounds, 20% for Aromatic compounds

* Up to 4 compounds may be out on the terminal CCV

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Project: Best Gas**Lab Order:** 1305032**Lab ID:** 1305032-01**Collection Date:** 5/14/2013 2:10:00 PM**Collection Time:****Client Sample ID:** MW-2**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP METALS TOTAL SW-846		SW6010B		Analyst: AL		
Chromium	ND	10.0		µg/L	1	5/15/2013 6:29:20 PM
Iron	4,140	100		µg/L	1	5/15/2013 6:29:20 PM
Nickel	ND	40.0		µg/L	1	5/15/2013 6:29:20 PM
Zinc	136	20.0		µg/L	1	5/15/2013 6:29:20 PM
OIL & GREASE, TPH (NON-POLAR MATERIAL)		E1664		Analyst: AL		
SGT-Hexane Extractable Material	ND	5.0		mg/L	1	5/20/2013
ION CHROMATOGRAPHY		E300		Analyst: REB		
Chloride	610	5.0		mg/L	10	5/17/2013 10:26:37 AM
LEAD, TOTAL		SW7421		Analyst: REB		
Lead	2.3	0.50		µg/L	1	5/17/2013 11:02:57 AM
TOTAL SUSPENDED SOLIDS		SM2540 D		Analyst: DD		
Suspended Solids (Residue, Non-Filterable)	220	4.0		mg/L	1	5/20/2013
HEXAVALENT CHROMIUM		M3500-CR		Analyst: AL		
Chromium, Hexavalent	ND	0.010		mg/L	1	5/15/2013 11:40:00 AM

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Method Blank

Sample ID	mb-23238	Batch ID: 23238	Test Code: SW6010B	Units: µg/L	Analysis Date 5/15/13 6:07:21 PM	Prep Date 5/15/13
Client ID:		Run ID: ICP-OPTIMA_130515A			SeqNo: 849406	
Analyte	QC Sample	Result	RL	Units	QC Spike Amount	Original Sample
					Result	HighLimit or MS Result
					%REC	%RPD
					LowLimit	RPDLimit
					HighLimit	Qua
Chromium	ND		10	µg/L		
Iron	ND		100	µg/L		
Nickel	ND		40	µg/L		
Zinc	ND		20	µg/L		

Sample ID	MB-R51055	Batch ID: R51055	Test Code: E1664	Units: mg/L	Analysis Date 5/20/13	Prep Date
Client ID:		Run ID: ING-WET_130520C			SeqNo: 849624	
Analyte	QC Sample	Result	RL	Units	QC Spike Amount	Original Sample
					Result	HighLimit or MS Result
					%REC	%RPD
					LowLimit	RPDLimit
					HighLimit	Qua
SGT-Hexane Extractable Material	ND		5.0	mg/L		

Sample ID	MB-23238	Batch ID: 23238	Test Code: SW7421	Units: µg/L	Analysis Date 5/17/13 10:46:14 AM	Prep Date 5/15/13
Client ID:		Run ID: AANALYST 600_130517			SeqNo: 849439	
Analyte	QC Sample	Result	RL	Units	QC Spike Amount	Original Sample
					Result	HighLimit or MS Result
					%REC	%RPD
					LowLimit	RPDLimit
					HighLimit	Qua
Lead	ND		0.50	µg/L		

Sample ID	MB-R51049	Batch ID: R51049	Test Code: SM2540 D	Units: mg/L	Analysis Date 5/20/13	Prep Date
Client ID:		Run ID: ING-WET_130520A			SeqNo: 849590	
Analyte	QC Sample	Result	RL	Units	QC Spike Amount	Original Sample
					Result	HighLimit or MS Result
					%REC	%RPD
					LowLimit	RPDLimit
					HighLimit	Qua
Suspended Solids (Residue, Non	ND		4.0	mg/L		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where I values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Method Blank

Sample ID	MB-R51053	Batch ID:	R51053	Test Code:	M3500-Cr	Units:	mg/L	Analysis Date	5/15/13 11:40:00 AM	Prep Date	
Client ID:		Run ID:	ING-WET_130515B					SeqNo:	849612		
Analyte		QC Sample	Result	RL	Units	QC Spike Amount	Original Sample Result	LowLimit	HighLimit	%RPD	RPDLimit
Chromium, Hexavalent		ND	0.010		mg/L						

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID	LCS-23238	Batch ID:	23238	Test Code:	SW6010B	Units:	µg/L	Analysis Date	5/15/13 6:12:43 PM	Prep Date	5/15/13	
Client ID:		Run ID:	ICP-OPTIMA_130515A	SeqNo:	849407							
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium	3830	10	µg/L	3976	0	96.3	80	120	0			
Iron	3955	100	µg/L	4004	0	98.8	80	120	0			
Nickel	3930	40	µg/L	3984	0	98.7	80	120	0			
Zinc	3893	20	µg/L	3984	0	97.7	80	120	0			

Sample ID	LCSD-23238	Batch ID:	23238	Test Code:	SW6010B	Units:	µg/L	Analysis Date	5/15/13 6:20:57 PM	Prep Date	5/15/13	
Client ID:		Run ID:	ICP-OPTIMA_130515A	SeqNo:	849408							
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium	3810	10	µg/L	3976	0	95.8	80	120	0			
Iron	3895	100	µg/L	4004	0	97.3	80	120	0			
Nickel	3971	40	µg/L	3984	0	99.7	80	120	0			
Zinc	3952	20	µg/L	3984	0	99.2	80	120	0			

Sample ID	LCS-R51055	Batch ID:	R51055	Test Code:	E1664	Units:	mg/L	Analysis Date	5/20/13	Prep Date		
Client ID:		Run ID:	ING-WET_130520C	SeqNo:	849625							
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
SGT-Hexane Extractable Material	18.7	5.0	mg/L	20	0	93.5	42.4	144	144	0		0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID	LCS	Batch ID: R51060	Test Code: E300	Units: mg/L	Analysis Date	5/17/13 10:26:37 AM	Prep Date
Client ID:		Run ID: DIONEX_130517A			SeqNo:	849721	
Analyte		QC Sample	QC Spike	Original Sample	LowLimit	HighLimit	%RPD RPDLimit Qua
Chloride		Result 11.72	Amount 12	Result 0	90	110	0
Sample ID	LCSD	Batch ID: R51060	Test Code: E300	Units: mg/L	Analysis Date	5/17/13 10:26:37 AM	Prep Date
Client ID:		Run ID: DIONEX_130517A			SeqNo:	849722	
Analyte		QC Sample	QC Spike	Original Sample	LowLimit	HighLimit	%RPD RPDLimit Qua
Chloride		Result 11.74	Amount 12	Result 0	90	110	0
Sample ID	LCS-23238	Batch ID: 23238	Test Code: SW7421	Units: µg/L	Analysis Date	5/17/13 10:51:50 AM	Prep Date 5/15/13
Client ID:		Run ID: AANALYST 600_130517			SeqNo:	849440	
Analyte		QC Sample	QC Spike	Original Sample	LowLimit	HighLimit	%RPD RPDLimit Qua
Lead		Result 21.06	Amount 20	Result 0	80	120	0
Sample ID	LCSD-23238	Batch ID: 23238	Test Code: SW7421	Units: µg/L	Analysis Date	5/17/13 10:57:24 AM	Prep Date 5/15/13
Client ID:		Run ID: AANALYST 600_130517			SeqNo:	849441	
Analyte		QC Sample	QC Spike	Original Sample	LowLimit	HighLimit	%RPD RPDLimit Qua
Lead		Result 20.51	Amount 20	Result 0	80	120	2.65

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID	LCS-R51049	Batch ID: R51049	Test Code: SM2540 D	Units: mg/L	Analysis Date	5/20/13	Prep Date		
Client ID:		Run ID: ING-WET_130520A	SeqNo: 849591						
Analyte	QC Sample	Result	QC Spike	Original Sample	LowLimit	HighLimit	%RPD	RPDLimit	Qual
			Amount	Result					
Suspended Solids (Residue, Non	635	4.0	mg/L	609	0	86.2	125	0	

Sample ID	LCS-R51053	Batch ID: R51053	Test Code: M3500-Cr	Units: mg/L	Analysis Date	5/15/13 11:40:00 AM	Prep Date		
Client ID:		Run ID: ING-WET_130515B	SeqNo: 849613						
Analyte	QC Sample	Result	QC Spike	Original Sample	LowLimit	HighLimit	%RPD	RPDLimit	Qual
			Amount	Result					
Chromium, Hexavalent	0.094	0.010	mg/L	0.1	0	80	120	0	

Sample ID	Icsd-r51053	Batch ID: R51053	Test Code: M3500-Cr	Units: mg/L	Analysis Date	5/15/13 11:40:00 AM	Prep Date		
Client ID:		Run ID: ING-WET_130515B	SeqNo: 849617						
Analyte	QC Sample	Result	QC Spike	Original Sample	LowLimit	HighLimit	%RPD	RPDLimit	Qual
			Amount	Result					
Chromium, Hexavalent	0.097	0.010	mg/L	0.1	0	80	120	0.094	20

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur
RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser
Work Order: 1305032
Project: Best Gas

QC SUMMARY REPORT

Sample Duplicate

Sample ID 1305032-01DD Batch ID: 23238 Test Code: SW6010B Units: µg/L Analysis Date 5/15/13 7:02:15 PM Prep Date 5/15/13
Client ID: MW-2 Run ID: ICP-OPTIMA_130515A SeqNo: 849413

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium	8.236	10	µg/L	0	0	0	0	0	8.86	7.31	20	J
Iron	4112	100	µg/L	0	0	0	0	0	4137	0.606	20	
Nickel	15.38	40	µg/L	0	0	0	0	0	14.05	9.1	20	J
Zinc	129.8	20	µg/L	0	0	0	0	0	136.2	4.76	20	

Sample ID 1305032-01ED Batch ID: R51060 Test Code: E300 Units: mg/L Analysis Date 5/17/13 10:26:37 AM Prep Date
Client ID: MW-2 Run ID: DIONEX_130517A SeqNo: 849727

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	614.9	5.0	mg/L	0	0	0	0	0	614.9	0	20	

Sample ID 1305032-01DD Batch ID: 23238 Test Code: SW7421 Units: µg/L Analysis Date 5/17/13 11:14:16 AM Prep Date 5/15/13
Client ID: MW-2 Run ID: AANALYST 600_130517 SeqNo: 849444

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	2.461	0.50	µg/L	0	0	0	0	0	2.322	5.81	20	

Sample ID 1305032-01ED Batch ID: R51049 Test Code: SM2540 D Units: mg/L Analysis Date 5/20/13 Prep Date
Client ID: MW-2 Run ID: ING-WET_130520A SeqNo: 849595

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Suspended Solids (Residue, Non	229	4.0	mg/L	0	0	0	0	0	224	2.21	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Sample Duplicate

Sample ID	Batch ID	Test Code	Units	mg/L	Analysis Date	Prep Date
Client ID	Run ID	SeqNo				
1305032-01Ed	R51053	M3500-Cr			5/15/13 11:40:00 AM	
MW-2	ING-WET_130515B				849615	
Analyte	QC Sample Result	RL	Units	QC Spike Original Sample		Original Sample
				Amount	Result	
			mg/L		%REC	LowLimit
					HighLimit	RPDLimit
					%RPD	Qua
Chromium, Hexavalent	ND	0.010		0	0	0
				0	0	20

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	NA - Not applicable where J values or ND results occur
	RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.		

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	1305032-01dms	Batch ID: 23238	Test Code: SW6010B	Units: µg/L	Analysis Date	5/15/13 7:09:32 PM	Prep Date	5/15/13				
Client ID:	MW-2		Run ID:	ICP-OPTIMA_130515A	SeqNo:	849414						
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium	3559	10	µg/L	3976	8.86	89.3	75	125	0			
Iron	7631	100	µg/L	4004	4137	87.2	75	125	0			
Nickel	3674	40	µg/L	3984	14.05	91.9	75	125	0			
Zinc	3854	20	µg/L	3984	136.2	93.3	75	125	0			

Sample ID	1305032-01dmsd	Batch ID: 23238	Test Code: SW6010B		Units: µg/L		Analysis Date 5/15/13 7:17:24 PM		Prep Date 5/15/13					
Client ID: MW-2			Run ID: ICP-OPTIMA_130515A	SeqNo: 849415										
Analyte	QC Sample	Result	RL	Units	QC Spike	Original Sample	Result	%REC	LowLimit	HighLimit	Original Sample	%RPD	RPDLimit	Qua
Chromium		3668	10	µg/L	3976		8.86	92	75	125	3559	3	20	
Iron		7678	100	µg/L	4004		4137	88.4	75	125	7631	0.618	20	
Nickel		3743	40	µg/L	3984		14.05	93.6	75	125	3674	1.86	20	
Zinc		3903	20	µg/L	3984		136.2	94.5	75	125	3854	1.28	20	

Sample ID	1305032-01Cms	Batch ID: R51055	Test Code: E1664	Units: mg/L	Analysis Date	5/20/13	Prep Date					
Client ID:	MW-2		Run ID: ING-WET_130520C		SeqNo:	849627						
Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qual
SGT-Hexane Extractable Material	20	5.0	mg/L	20	0	100	78	114	0			

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: 22-May-13

CLIENT: Vineyard Engineering & Environmental Ser

Work Order: 1305032

Project: Best Gas

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID 1305032-01EMS Batch ID: R51060 Test Code: E300 Units: mg/L Analysis Date 5/17/13 10:26:37 AM Prep Date
Client ID: MW-2 Run ID: DIONEX_130517A SeqNo: 849728

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	760	5.0	mg/L	125	614.9	116	80	120	0			

Sample ID 1305032-01DMS Batch ID: 23238 Test Code: SW7421 Units: µg/L Analysis Date 5/17/13 11:19:49 AM Prep Date 5/15/13
Client ID: MW-2 Run ID: AANALYST 600_130517 SeqNo: 849445

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	24.81	0.50	µg/L	20	2.322	112	75	125	0			

Sample ID 1305032-01DMSD Batch ID: 23238 Test Code: SW7421 Units: µg/L Analysis Date 5/17/13 11:25:22 AM Prep Date 5/15/13
Client ID: MW-2 Run ID: AANALYST 600_130517 SeqNo: 849446

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	25.15	0.50	µg/L	20	2.322	114	75	125	24.81	1.36	20	

Sample ID 1305032-01Ems Batch ID: R51053 Test Code: M3500-Cr Units: mg/L Analysis Date 5/15/13 11:40:00 AM Prep Date
Client ID: MW-2 Run ID: ING-WET_130515B SeqNo: 849616

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium, Hexavalent	0.092	0.010	mg/L	0.1	0	92	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

B - Analyte detected in the associated Method Blank

NA - Not applicable where J values or ND results occur