

EDWARD P. MANGANO
COUNTY EXECUTIVE

SHILA SHAH-GAVNOUDIAS, P.E.
COMMISSIONER



COUNTY OF NASSAU
DEPARTMENT OF PUBLIC WORKS
1194 PROSPECT AVENUE
WESTBURY, NEW YORK 11590-2723

May 14, 2015

Mr. Benjamin Rung, P.E., Project Manager
NYS Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Hazardous Site Control
625 Broadway
Albany, New York 12233

Re: Firemen's Training Center (Site #1-30-042)
Post Termination Monitoring Program Sampling Results – May 2015

Dear Mr. Rung:

The Nassau County Department of Public Works has completed the spring 2015 Semi-Annual Post Termination Monitoring round at the Nassau County Fire Service Academy (A.K.A. Firemen's Training Center) site. This program replaces the original termination monitoring program stipulated in the approved 1994 Remediation Monitoring Program for this site. The Post Termination Monitoring results for the revised group of offsite monitoring wells have been included herewith for your review.

The twelve (12) offsite PTM wells selected for sampling in the revised post-termination monitoring program have been divided into two groups for review. The first group has been designated as the *FTC Core Wells*; and, it includes those monitoring wells (BP-2B, BP-4B, BP-12B, C) which are adjacent to and directly downgradient of the Nassau County Fire Service Academy (see map).

The second group has been designated the *Eastern Plume wells*; and, these wells (MW-7Br, EW-14D, BP-3B,C, BP-15B,C, BP-10B,C) represent those wells which appear to have been impacted from unknown sources north and east of the original Nassau County Firemen's Training Center offsite monitoring well network and the former Offsite Recovery Well field.

Offsite Post Termination Monitoring Well Summary (FTC Core Wells)

Review of the groundwater sampling results obtained from the four (4) *FTC Core Wells* indicates that groundwater collected from these wells is below detectable limits (BDL) for all Volatile Organic Compounds (VOC's) tested; and, this includes the fifteen (15) volatile organic compounds designated for monitoring in the original Remediation Monitoring Plan (RMP) developed for the site in 1994.

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Re: Firemen's Training Center (Site #1-30-042)
Post Termination Monitoring Program Sampling Results – May 2015

Post Termination Monitoring Well Summary (Eastern Plume Wells)

Review of the volatile organic compound results obtained from the group of ***Eastern Plume Wells*** (see map) indicates that all eight (8) wells have been impacted by varying concentrations of volatile organic compounds. The highest concentration of volatile organic compounds is found in monitoring well MW-7Br where a total of 894 ppb was measured. The lowest total volatile organic concentration was detected in monitoring well BP-15C where a total volatile organic compound concentration of 7.7 ppb was recorded. Please note Tert – Butyl Alcohol (TBA) was detected for the first time in monitoring well BP-10C at a concentration of 17 ppb.

The individual volatile organic compounds with the highest concentrations were Tetrachloroethylene (84 ppb/BP-3B), Trichloroethylene (812 ppb/MW-7Br) and Cis-1, 2 Dichloroethylene (120 ppb/BP-3C). The highest concentration and widest variety of compounds were detected in the "B" Hydrogeologic zone (-80 to -140 ft. below msl). A significantly lower number of compounds at lower concentration are found in the "C" Hydrogeologic zone (-180 to -240 ft. below msl).

If you require any additional information regarding this data, please contact Mr. Michael Flaherty, Hydrogeologist III at (516) 571-7514.

Very truly yours,



Shila Shah-Gavoudias, P.E.
Commissioner of Public Works

SSG:KGA:JLD:rp

Attachment

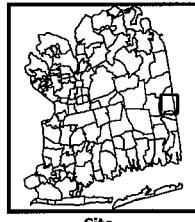
c: Jane M. Houdek, Attorney for Public Works
Joseph L. Davenport, Unit Head, Water/Wastewater Engineering Unit
Joseph Defranco, Chief, Office of Soil and Groundwater Remediation, NCDH
Michael Flaherty, Hydrogeologist III
Walter J. Parish, P.E., Regional Hazardous Waste Engineer, NYSDEC
Guy Bobersky, P.E., Section Chief, Remedial Bureau, NYSDEC
Tara Ruttand, P.E., Environmental Engineer, NYSDEC
Josah White, P.E., Section Chief, Remedial Bureau, NYSDEC
Ralph Ekstrand, Mayor, Village of Farmingdale



Legend

- The legend contains 13 entries, each consisting of a small black circle followed by a label:

 - Nassau County Recovery Well
 - Plainview WD Public Supply Well
 - S. Farmingdale WD Public Supply Well
 - T of Oyster Bay Monitoring Well or Well Cluster
 - T of Oyster Bay Recovery Well
 - V of Farmingdale Public Supply Well
 - Nassau County Injection Well
 - Nassau County Monitoring Well or Well Cluster
 - Proposed PTM Monitoring Wells
 - Railroad
 - Recharge Basins



**FTC POST TERMINATION
MONITORING WELL
LOCATIONS**

Prepared By: - NCDPW - Water/Wastewater
Engineering Unit



Nassau County

Geographic Information System

This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Nassau County makes no representations or warranties, expressed or implied, concerning the accuracy, completeness, reliability or suitability for the use of this information. Nassau County assumes no liability associated with the use or misuse of such information.

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Date: 05/11/2015

FIREMAN'S TRAINING CENTER

SEMI-ANNUAL PTM (revised) SAMPLING RESULTS FOR 2014 - 15 (FTC Core Wells)

VOLATILE ORGANICS COMPOUNDS (ppb)				WELL BP-12B			
WELL BP-2B DATE SAMPLED	WELL BP-4B DATE SAMPLED	WELL BP-12B DATE SAMPLED	WELL BP-12C DATE SAMPLED	WELL BP-2B DATE SAMPLED	WELL BP-4B DATE SAMPLED	WELL BP-12B DATE SAMPLED	WELL BP-12C DATE SAMPLED
9/19/14	4/13/15	9/15/14	3/16/15	9/18/14	3/19/15	9/18/14	3/19/15
1,1,1,2-Tetrachloroethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,1,2-Tetrachloroethene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2-Trichloro-1,2-difluoroethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2-Trichloroethene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2,3-Trichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2,3-Trichloropropane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4,5-Tetramethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4-Trimethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichloroethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,2-Dichloroethene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3,5-Trimethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Acetone	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromoform	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Carbon Tetrachloride	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloroform	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
cis-1,2-Dichloroethylene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dichlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ethyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2 = Hexanone	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Isopropylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methyl Acetylene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methyl t-Butyl Ether (MTBE)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methyl Chloride	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methyl Ethyl Ketone	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
n-Butyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
n-Propylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
o-Xylene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
p-Ethyltoluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
p-Isopropyltoluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
sec-Butyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
t, t, 1,2-Dichlorotetrafluoroethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
tert-Butyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Tetrachloroethylene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Trichlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Trichloroethylene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Vinyl Chloride	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TVOC	0.0	0.0	0.0	0.0	0.0	0.0	0.0

B - Analyte detected in associated Method Blank
 BDL - Below detection limits
 - FTC / RMP Compound

All results in pp

FIREMAN'S TRAINING CENTER

SEMI-ANNUAL PTM (revised) SAMPLING RESULTS FOR 2014 - 15 (Eastern Plume Wells)

VOLATILE ORGANICS COMPOUNDS (ppb)											
WELL MW-7Br DATE SAMPLED	WELL EW-14D DATE SAMPLED	WELL BP-3B DATE SAMPLED	WELL BP-3C DATE SAMPLED	WELL BP-15B DATE SAMPLED	WELL BP-15C DATE SAMPLED	WELL BP-10B DATE SAMPLED	WELL BP-10C DATE SAMPLED	WELL BP-10 DATE SAMPLED	WELL BP-14 DATE SAMPLED	WELL BP-15 DATE SAMPLED	WELL BP-10 DATE SAMPLED
8/20/14 4/6/15	9/18/14 3/26/15	9/15/14 3/24/15	10/6/14 3/24/15	9/17/14 3/17/15	9/17/14 3/7/15	9/12/14 4/13/15	9/12/14 4/3/15	9/12/14 4/13/15	9/12/14 4/13/15	9/12/14 4/13/15	9/12/14 4/13/15
1,1,1,2-Tetrachloroethane 1,1,1,2-Tetrachloro-1,1,1-trifluoroethane	15.6	4.3	20	25	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2-Trichloroethane	BDL	.75J	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2,Trichloroethane	BDL	.5J	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1-Dichloroethane	1.6	1	.5J	.5J	6.3	9.0	7.9	36	28.0	5.5	12
1,1-Dichloroethane	17	6.1	17	25.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,3-Trichloropropane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4-Tetrachlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4,5-Tetrachlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4,5-Tetramethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichloroethane	0.7	BDL	4.4	5.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichloroethene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3,5-Trimethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Acetone	BDL	BDL	19	21	BDL	28	BDL	29.0	BDL	BDL	BDL
Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromochloromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Carbon Tetrachloride	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloroform	5.1	1.7	.91J	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloromenthane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
cis-1,2-Dichloroethylene	140	52.1	1.3	2.1	58	51	190.0	120.0	67	55.0	7.8
Dichlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	19.0	12.0	15	15.0	15.0	15
Ethyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2-Hexene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Isopropylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methyl Ethyl Ketone	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
n-Butyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
n-Propylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
c-Xylyl	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
p-Ethyltoluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
p-Isopropyltoluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
sec-Butyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
t, t-Dichloroethene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Trichlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Trichloroethylene	2,267	812	200	9.2	8.6	220	11	12.0	9.2	12.0	9.2
Water Chloride	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TVOCl	2515.1	894.2	265.1	302.4	134.9	177.9	421.0	243.9	197.7	162.3	13.3
										7.7	31.0
										5.5	0.0

B - Analyte detected in associated Method Blank

All results in ppb

BDL - Below detection limits

- FTC / RMP compound