ARCADIS Design & Consultancy for natural and built assets

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ENVIRONMENT

Subject:
Results of Third Quarter 2017 System Operation and Monitoring, Bethpage Park Groundwater Containment System (BPGWCS), Operable Unit 3 (OU3; Former Grumman Settling Ponds), Bethpage, New York, NYSDEC Site #1-30-003A

Date:
November 22, 2017

Contact:
Christopher Engler

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Our ref:
NY001496.1416

Dear Jason:

Enclosed is one electronic PDF copy of the third quarter results of the OU3 BPGWCS operation and monitoring, performed in accordance with the NYSDEC-approved OU3 Groundwater IRM OM&M Manual (Arcadis 2009) and the NYSDEC-approved Sampling and Analysis Plan (SAP; Arcadis 2009). As we have transitioned to electronic submittals (via PDF) in line with NYSDEC's paper reduction program, hard copies of the report can be provided upon request.

If you have any questions, please do not hesitate to contact us.

Sincerely,

Arcadis of New York, Inc.

Christopher Engler PE

Vice President

Enclosure

Copies:
Ed Hannon, Northrop Grumman
Donald Hesler, NYSDEC
Steven Karpinski, New York State Department of Health
Joseph DeFranco, Nassau County Department of Health
Lorenzo Thantu, USEPA
Carlo San Giovanni, Arcadis
Public Repository
File

TABLES

Table 1
Operational Summary
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

MONTH	DAY																													Days Operational (1)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
2009 Total																																160
2010 Total																																352
2011 Total																																351
2012 Total																																353
2013 Total																																354
2014 Total																																349
2015 Total																																348
2016 Total																																351
1 Q 2017																																88
2 Q 2017																																90
Jul-17																	(2)								(3)							25
Aug-17																																31
Sep-17											(4)																					30
3 Q 2017																																86
2017 Total																																264
TOTAL																																**2,882**

Legend:

	Indicates system online the majority or all of the day.
	Indicates system operated with reduced flow rates.
	Indicates system off-line the majority or all of the day.
K	Indicates PPZ change-out.
C	Indicates carbon change-out.

Acronyms\Key:

3Q	third quarter
ECU	emission control unit
VPGAC	vapor phase granular activated carbon
PPZ	potassium permanganate-impregnated zeolite
RW	recovery well
LOTO	lock out tag out
GPM	gallons per minute

Notes:

(1) Days in which the system was operational for the majority of the day are counted as one day.

Third Quarter 2017

(2) System shut down due to sump-pump alarm.
(3) Various system alarms during pH calibration.
(4) RW-2 flow less than 60 gpm due to pump fouling and motor issues. Pump fouling is attributed to iron buildup from high influent iron concentrations. A new pump and motor were installed on September 25, 2017

Table 2
Summary of Influent Water Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Compound	12/16/16 (µg/L)	03/17/17 (µg/L)	06/16/17 (µg/L)	08/16/17 (µg/L)
Project VOCs				
1,1,1 - Trichloroethane	< 1.0	< 1.0	< 1.0	< 1.0
1,1 - Dichloroethane	**0.31 J**	**0.29 J**	< 1.0	< 1.0
1,2 - Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0
1,1 - Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	**3.9**	**4.1**	**3.5**	**3.3**
Vinyl Chloride	**13**	**5.9**	**3.4**	**2.1**
cis 1,2-Dichloroethene	**7.7**	**8.2**	**4.7**	**4.1**
trans 1,2-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	< 0.50	< 0.50	< 0.50	< 0.50
Toluene	**2.5**	**0.63 J**	< 1.0	< 1.0
Xylene-O	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - M,P	< 1.0	< 1.0	< 1.0	< 1.0
Subtotal Project VOCs	**27**	**19**	**11.6**	**9.5**

Compound	12/16/16 (µg/L)	03/17/17 (µg/L)	06/16/17 (µg/L)	08/16/17 (µg/L)
Non-Project VOCs				
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Butanone	NA	NA	< 5.0	< 5.0
2-Butanone	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone	< 5.0	< 5.0	< 5.0	< 5.0
Acetone	< 10	< 10	< 10	< 10
Bromodichloromethane	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Tetrachloride	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodifluoromethane (Freon 22)	**2.1 J**	**2.0 J**	< 5.0	< 5.0
Chloroethane	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	**1.3**	**1.0**	**0.88 J**	**0.71 J**
Chloromethane	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorodifluoromethane (Freon 12)	< 2.0	< 2.0	< 2.0	< 2.0
Dichloromethane	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	**0.31 J**	**0.22 J**	< 1.0	< 1.0
Methyl N-Butyl Ketone	< 5.0	< 5.0	< 5.0	< 5.0
Methyl Tert-Butyl Ether	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane (Freon 11)	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorotrifluoroethane (Freon 113)	< 5.0	< 5.0	< 5.0	< 5.0
1-Chloro-1,1-difluoroethane (Freon 142b)	--	--	< 5.0	< 5.0
Subtotal Non-Project VOCs	**3.7**	**3.2**	**0.88**	**0.71**
Total VOCs[(1)]	**31**	**22**	**12.5**	**10**
1,4-Dioxane[(2)]	**0.97**	**0.93**	**0.87**	**0.665**

Notes and abbreviations on last page.

Table 2
Summary of Influent Water Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Compound	12/16/16 (µg/L)	03/17/17 (µg/L)	06/16/17 (µg/L)	08/16/17 (µg/L)
Inorganics				
Dissolved Cadmium	< 3.0	--	--	--
Total Cadmium	< 3.0	--	--	--
Dissolved Chromium	**11**	**--**	--	**12**
Total Chromium	**20**	**--**	--	**11**
Dissolved Iron	**240**	**146**	**123**	**151**
Total Iron	**3,140**	**233**	**161**	**195**
Total Mercury	--	--	--	--
pH[3]	**5.7**	**5.5**	**5.3**	**5.6**

Notes and Abbreviations:

(1) "Total VOCs" represents the sum of individual concentrations of the compounds detected. The values used in calculations referenced in this report have been rounded to the nearest whole number.

(2) Samples collected were analyzed for 1,4-Dioxane using USEPA Method 522.

(3) Influent pH samples collected and measured in the field by Arcadis personnel on the dates listed using an Oakton Model 300 pH/conductivity meter. pH units are standard units.

700 Bold value indicates a detection.

< 5 Compound not detected at or above the laboratory quantification limit.

-- Compound not analyzed.

J Compound detected below the reporting limit; value is estimated.

µg/L micrograms per liter

USEPA United States Environmental Protection Agency

VOC volatile organic compound

Table 3
Summary of Effluent Water Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Compound	Discharge Limit[(1)] (µg/L)	10/11/16 (µg/L)	11/28/16 (µg/L)	12/16/16 (µg/L)	01/20/17 (µg/L)	02/22/17 (µg/L)	03/17/17 (µg/L)	04/21/17 (µg/L)	05/11/17 (µg/L)	06/18/17 (µg/L)	08/01/17 (µg/L)	08/16/17 (µg/L)	09/11/17 (µg/L)
Project VOCs													
1,1,1-Trichloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans 1,2-Dichloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Toluene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylene-O	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - M,P	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Subtotal Project VOCs	**--**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Notes and abbreviations on last page.

Table 3
Summary of Effluent Water Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Compound	Discharge Limit[1] (µg/L)	10/11/16 (µg/L)	11/28/16 (µg/L)	12/16/16 (µg/L)	01/20/17 (µg/L)	02/22/17 (µg/L)	03/17/17 (µg/L)	04/21/17 (µg/L)	05/11/17 (µg/L)	06/16/17 (µg/L)	08/01/17 (µg/L)	08/16/17 (µg/L)	09/11/17 (µg/L)
Non-Project VOCs													
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	0.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Butadiene	0.5[9]	--	--	--	--	--	--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Butanone	50	< 10	< 10	< 10 J	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone	50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Acetone	50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromodichloromethane	50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide	60	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodifluoromethane (Freon 22)	50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0
Chloromethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorodifluoromethane (Freon 12)	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dichloromethane	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl N-Butyl Ketone	50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl Tert-Butyl Ether	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane (Freon 11)	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorotrifluoroethane (Freon 113)	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1-Chloro-1,1-difluoroethane (Freon 142b)	--	--	--	--	--	--	--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Subtotal Non-Project VOCs	**--**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total VOCs[2]	**--**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Treatment Efficiency[3]	--	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%

Notes and abbreviations on last page.

Table 3
Summary of Effluent Water Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Compound	Discharge Limit[1] (µg/L)	10/11/16 (µg/L)	11/28/16 (µg/L)	12/16/16 (µg/L)	01/20/17 (µg/L)	02/22/17 (µg/L)	03/17/17 (µg/L)	04/21/17 (µg/L)	05/11/17 (µg/L)	06/16/17 (µg/L)	08/01/17 (µg/L)	08/16/17 (µg/L)	09/11/17 (µg/L)
Inorganics													
Dissolved Cadmium	5	--	--	< 3.0	--	--	< 3.0	--	--	**3.1**	< 3.0	< 3.0	--
Total Cadmium	5	--	--	< 3.0	--	--	< 3.0	--	--	< 3.0	< 3.0	< 3.0	--
Dissolved Chromium	50	--	--	< 10	--	--	< 10	--	--	< 10	< 10	< 10	--
Total Chromium	50	--	--	< 10	--	--	< 10	--	--	< 10	< 10	< 10	--
Dissolved Iron	600	**201**	**262**	**224**	**223**	**1580**[7]	**155**	**136**	**184**	**102**	**200**	**163**	< 100 [10]
Total Iron	600	**205**	**280**	**622**[7]	**265**	**4590**[7]	**245**	**236**	**242**	**140**	**241**	**179**	**129** [10]
Total Mercury	250	< 0.20	< 0.20	< 0.20	< 0.20	< 0.30	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,4-Dioxane[6]	--	**1.3**	**1.3**	**1.0**	**0.9**	**1.5**	**1.0**	**0.82**	**1.0**	**0.89**	**0.778**	**0.747**	**0.696**
pH[4]	5.5 - 8.5	**6.7**	--[5]	**6.8**	**4.2**[8]	--[5]	**6.5**	**6.4**	**6.4**	**7.0**	--[5]	**6.2**	**6.6**

Notes and Abbreviations:

(1) Discharge limits per the interim SPDES equivalency program or Division of Water Technical and Operational Guidance Series (TOGS 1.1.1) Quality Standards and Guidance Values and Groundwater Effluent Limitations, if the compound is not part of the interim SPDES equivalency program.

(2) "Total VOCs" represents the sum of individual concentrations of compounds detected. The values used in calculations referenced in this report have been rounded to the nearest whole number.

(3) Treatment efficiency was calculated by dividing the difference between the influent and effluent total VOC concentrations by the influent total VOC concentration.

(4) Effluent pH samples collected and measured in the field by Arcadis personnel on the dates listed using an Oakton Model 300 pH/conductivity meter. pH units are standard units.

(5) pH not recorded due to technician error.

(6) Samples collected were analyzed for 1,4-Dioxane using USEPA Method 522.

(7) The December 16, 2016 and February 22, 2017 iron concentrations exceeded their discharge limit of 600 µg/l. The exceedances are suspected to be the result of iron precipitates in the effluent sample line, and it was cleaned prior to the next sampling event.

(8) The anomalous pH value in January 2017 is suspected to be the result of an equipment calibration issue. The pH returned to typical values in subsequent sampling events.

(9) Discharge limit per Department of Environmental Conservation Chapter X- Division of Water Part 703.

(10) Iron sampled on 09/13/17 due to technician error.

Indicates an exceedance of an SCG.

700 Bold value indicates a detection.

< 5 Compound not detected above the laboratory quantification limit.

-- Compound not analyzed.

J Compound detected below the reporting limit; value is estimated.

µg/L micrograms per liter

SPDES State Pollutant Discharge Elimination System

USEPA United States Environmental Protection Agency

VOC volatile organic compound

Table 4
Influent Vapor Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Compound[1]	12/22/16 (µg/m^3)	03/17/17 (µg/m^3)	06/16/17 (µg/m^3)	08/16/17 (µg/m^3)
Project VOCs				
1,1,1 - Trichloroethane	< 1.1	< 0.55	< 2.2	**0.71**
1,1 - Dichloroethane	**4.5**	**3.5**	**3.4**	**4**
1,2 - Dichloroethane	< 1.6	< 0.81	< 3.2	< 0.81
1,1 - Dichloroethene	**1.9**	**1.8**	< 3.2	**2.3**
Tetrachloroethene	**142**	**0.50**	**3.8**	**20**
Trichloroethene	**58**	**11**	**58**	**74.7**
Vinyl Chloride	**143**	**95**	**45**	**52.1**
cis 1,2-Dichloroethene	**119**	**77**	**67**	**93.6**
trans 1,2-Dichloroethene	< 1.6	**0.27 J**	< 3.2	**0.48 J**
Benzene	**1.5**	< 0.64	< 2.6	< 0.64
Toluene	**37**	< 0.75	**2.4 J**	**0.60 J**
Xylene-O	**2.3**	< 0.87	< 3.5	< 0.87
Xylenes - M,P	**5.6**	< 0.87	< 3.5	< 0.87
Subtotal Project VOCs	**515**	**190**	**179**	**248**

Compound[1]	12/22/16 (µg/m^3)	03/17/17 (µg/m^3)	06/16/17 (µg/m^3)	08/16/17 (µg/m^3)
Non-Project VOCs				
1,1,2,2-Tetrachloroethane	< 1.4	< 0.69	< 2.7	< 0.69
1,1,2-Trichloroethane	< 1.1	< 0.55	< 2.2	< 0.55
1,2-Dichloropropane	< 1.8	< 0.92	< 3.7	< 0.92
1,3-Butadiene	< 0.88	< 0.44	< 1.8	< 0.44
2-Butanone	**3.2**	**0.94**	**1.6 J**	**0.65**
4-Methyl-2-Pentanone	< 1.6	< 0.82	< 3.3	< 0.82
Acetone	**19**	**15**	**21**	**4.3**
Bromodichloromethane	< 1.3	< 0.67	< 2.7	< 0.67
Bromoform	< 0.83	< 0.41	< 1.7	< 0.41
Bromomethane	< 1.6	< 0.78	< 3.1	< 0.78
Carbon Disulfide	**11**	< 0.62	< 2.5	**0.72**
Carbon Tetrachloride	< 0.50	< 0.25	< 1.0	< 0.25
Chlorobenzene	< 1.8	< 0.92	< 3.7	< 0.92
Chlorodibromomethane	< 1.7	< 0.85	< 3.4	< 0.85
Chlorodifluoromethane (Freon 22)	**26**	**22**	**26**	**26**
Chloroethane	< 1.1	< 0.53	< 2.1	< 0.53
Chloroform	**19**	**13**	**15**	**18**
Chloromethane	**1.4**	**1.2**	1.5 J	**1.3**
cis-1,3-Dichloropropene	< 1.8	< 0.91	< 3.6	< 0.91
Dichlorodifluoromethane (Freon 12)	**2.1**	**1.9**	2.7 J	**3.0**
Dichloromethane	**1.8**	**1.4**	**3.8**	**1.8**
Ethylbenzene	**5.2**	< 0.87	< 3.5	**0.42 J**
Methyl N-Butyl Ketone	< 1.6	< 0.82	< 3.3	< 0.82
Methyl Tert-Butyl Ether	< 1.4	< 0.72	< 2.9	**0.72**
Styrene (Monomer)	< 1.7	< 0.85	< 3.4	< 0.85
trans-1,3-Dichloropropene	< 1.8	< 0.91	< 3.6	< 0.91
Trichlorofluoromethane (Freon 11)	**1.5**	**1.3**	< 2.2	**1.9**
Trichlorotrifluoroethane (Freon 113)	**2.1**	**1.7**	< 3.1	**2.5**
1-Chloro-1,1-difluoroethane (Freon 142b)	< 1.6	< 0.82	< 3.3	< 0.82
Subtotal Non-Project VOCs	**92**	**58**	**72**	**61**
Total VOCs[2]	**607**	**248**	**251**	**309**

Notes and abbreviations on last page.

Table 4
Influent Vapor Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes and Abbreviations:

(1) Vapor samples collected by Arcadis on the dates shown and submitted to a NYSDOH ELAP certified laboratory for VOC analyses per Modified USEPA Method TO-15. A VOC analyte list is provided in the DRAFT Bethpage Park Groundwater Containment System OM&M Manual (Arcadis 2016). Influent samples were collected at Vapor Sampling Port-1 (VSP-1); refer to Figure 3 of this OM&M Report for the location of VSP-1.

(2) "Total VOCs" represents the sum of individual concentrations of compounds detected. The values sed in calculations referenced in this report have been rounded to the nearest whole number.

700	Bold value indicates a detection.
< 5	Compound not detected above the laboratory quantification limit.
J	Compound detected below the reporting limit; value is estimated.
µg/m^3	micrograms per cubic meter
ELAP	Environmental Laboratory Approval Program
IRM	interim remedial measure
NYSDOH	New York State Department of Health
OM&M	operation, maintenance, and monitoring
SPDES	State Pollutant Discharge Elimination System
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

Table 5
Summary of Effluent Vapor Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Compound[1]	12/22/16 (µg/m^3)	03/17/17 (µg/m^3)	06/16/17 (µg/m^3)	08/16/17 (µg/m^3)
Project VOCs				
1,1,1 - Trichloroethane	< 0.55	< 1.1	< 2.2	< 0.55
1,1 - Dichloroethane	**4.5**	**11**	**5.3**	**3.9**
1,2 - Dichloroethane	< 0.81	< 1.6	< 3.2	< 0.81
1,1 - Dichloroethene	**0.83**	**2.4**	< 3.2	< 0.79
Tetrachloroethene	**0.64**	**25**	< 1.1	**1.8**
Trichloroethene	**2.7**	**10**	**2.1**	**2.1**
Vinyl Chloride	**17**	**53**	**2.8**	**1.6**
cis 1,2-Dichloroethene	**40**	**141**	**21**	**10**
trans 1,2-Dichloroethene	< 0.79	< 1.6	< 3.2	< 0.79
Benzene	**6.4**	**12**	< 2.6	**5.8**
Toluene	**4.1**	**7.2**	**1.1 J**	**1.8**
Xylene-O	**0.69 J**	**339**	**1.7 J**	< 0.87
Xylenes - M,P	**2.5**	**608**	**2.6 J**	**0.87**
Subtotal Project VOCs	**79**	**1209**	**37**	**28**

Compound[1]	12/22/16 (µg/m^3)	03/17/17 (µg/m^3)	06/16/17 (µg/m^3)	08/16/17 (µg/m^3)
Non-Project VOCs				
1,1,2,2-Tetrachloroethane	< 0.69	< 1.4	< 2.7	< 0.69
1,1,2-Trichloroethane	< 0.55	< 1.1	< 2.2	< 0.55
1,2-Dichloropropane	< 0.92	< 1.8	< 3.7	< 0.92
1,3-Butadiene	< 0.44	< 0.88	< 1.8	< 0.44
2-Butanone	**8.8**	**27**	< 2.4	**4.4**
4-Methyl-2-Pentanone	< 0.82	< 1.6	< 3.3	< 0.82
Acetone	**143**	**190**	**21**	**72**
Bromodichloromethane	< 0.67	< 1.3	< 2.7	< 0.67
Bromoform	< 0.41	< 0.83	< 1.7	< 0.41
Bromomethane	< 0.78	< 1.6	< 3.1	< 0.78
Carbon Disulfide	**0.75**	< 1.2	< 2.5	**0.72**
Carbon Tetrachloride	< 0.25	< 0.50	< 1.0	< 0.25
Chlorobenzene	< 0.92	< 1.8	< 3.7	< 0.92
Chlorodibromomethane	< 0.85	< 1.7	< 3.4	< 0.85
Chlorodifluoromethane (Freon 22)	**21**	**48**	**27**	**22**
Chloroethane	< 0.53	< 1.1	< 2.1	< 0.53
Chloroform	**24**	**58**	**27**	**19**
Chloromethane	**2.0**	**2.9**	**1.7**	**1.6**
cis-1,3-Dichloropropene	< 0.91	< 1.8	< 3.6	< 0.91
Dichlorodifluoromethane (Freon 12)	**2.1**	**3.7**	< 4.0	**3.3**
Dichloromethane	**10**	**1.9**	**3.2**	**1.8**
Ethylbenzene	**0.96**	**5.6**	**2.0 J**	**0.43 J**
Methyl N-Butyl Ketone	< 0.82	< 1.6	< 3.3	< 0.82
Methyl Tert-Butyl Ether	< 0.72	< 1.4	< 2.9	< 0.72
Styrene (Monomer)	< 0.85	< 1.7	< 3.4	< 0.85
trans-1,3-Dichloropropene	< 0.91	< 1.8	< 3.6	< 0.91
Trichlorofluoromethane (Freon 11)	**1.7**	**3.0**	< 2.2	**2.2**
Trichlorotrifluoroethane (Freon 113)	**1.4**	**4.2**	< 3.1	**2.4**
1-Chloro-1,1-difluoroethane (Freon 142b)	< 0.82	< 1.6	< 3.3	< 0.82
Subtotal Non-Project VOCs	**216**	**344**	**82**	**130**
Total VOCs[2]	**295**	**1553**	**119**	**158**

Notes and abbreviations on last page.

Table 5
Summary of Effluent Vapor Sample Analytical Results
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Notes and Abbreviations:

(1) Vapor samples collected by Arcadis on the dates shown and submitted to a NYSDOH ELAP certified laboratory for VOC analyses per Modified USEPA Method TO-15. A VOC analyte list is provided in the DRAFT Bethpage Park Groundwater Containment System OM&M Manual (Arcadis 2016). Effluent samples were collected at Vapor Sampling Port-5 (VSP-5); refer to Figure 3 of this OM&M Report for the location of VSP-5.

(2) "Total VOCs" represents the sum of individual concentrations of all compounds detected. The values used in calculations referenced in this report have been rounded to the nearest whole number.

700 Bold data indicates that the analyte was detected at or above the reporting limit.

< 5 Compound not detected above the laboratory quantification limit.

J Compound detected below the reporting limit; value is estimated.

µg/m^3 micrograms per cubic meter

ELAP Environmental Laboratory Approval Program

NYSDOH New York State Department of Health

OM&M operation, maintenance, and monitoring

USEPA United States Environmental Protection Agency

VOC volatile organic compound

Table 6
Summary of Effluent Vapor Tentatively Identified Compou
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Compound[1]	12/22/16 (ppbv)	03/17/17 (ppbv)	06/23/17 (ppbv)	08/16/17 (ppbv)
Tentatively Identified Compounds				
alkane	**6.1 J**	**36 J**	--	**14 J**
alkane	**3.6 J**	**33 J**	--	**9.4 J**
alkane	**3.5 J**	**27 J**	--	**9.2 J**
alkane	**2.9 J**	**23 J**	--	**8.3 J**
alkane	**2.7 J**	**21 J**	--	**7.8 J**
alkane	**2.7 J**	**20 J**	--	**7.6 J**
alkane	--	**17 J**	--	**7.4 J**
alkane	--	**16 J**	--	**7.0 J**
alkane	--	**14 J**	--	**7.0 J**
C alkyl benzene	--	**13 J**	--	--
Cycloalkane/alkene	**7.1 J**	**19 J**	--	--
Cycloalkane/alkene	**3.7 J**	**14 J**	--	--
Cycloalkane/alkene	**3.4 J**	**12 J**	--	--
Cycloalkane/alkene	**3.2 J**	--	--	--
Cycloalkane/alkene	**1.3 J**	--	--	--
Cycloalkane/alkene	**1.2 J**	--	--	--
Naphthalene, decahydro-methyl-	**6.0 J**	--	--	--
Naphthalene, decahydro-methyl-	**5.8 J**	--	--	--
Naphthalene, decahydro-methyl-	**4.2 J**	--	--	--
Pentyl-Cyclohexane	--	--	--	**11 JN**
Unknown	**3.5 J**	**23 J**	--	**8.8 J**
Unknown	**2.0 J**	**21 J**	--	**8.1 J**
Unknown	**1.5 J**	**18 J**	--	**6.3 J**
Unknown	--	**16 J**	--	**5.4 J**
Unknown	--	**14 J**	--	**4.4 J**
Unknown Alkane	--	**14 J**	--	**6.5 J**
Unknown Alkane	--	**13 J**	--	**6.1 J**
Unknown Alkane	--	--	--	**5.1 J**
Unknown Alkane	--	--	--	**5.0 J**
Unknown Alkene	--	--	--	**7.9 J**
Total VOC TICs	**64.4 J**	**384 J**	**0**	**152 J**

Notes and abbreviations on last page.

Table 6
Summary of Effluent Vapor Tentatively Identified Compou
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes and Abbreviations:

(1) Vapor samples collected by Arcadis on the dates shown and submitted to a NYSDOH ELAP certified laboratory for VOC analyses per Modified USEPA Method TO-15. A VOC analyte list is provided in the DRAFT Bethpage Park Groundwater Containment System OM&M Manual (Arcadis 2016). Effluent samples were collected at Vapor Sampling Port-5 (VSP-5); refer to Figure 3 of this OM&M Report for the location of VSP-5.

700 Bold data indicates that the TIC was detected at or above the reporting limit.

-- TIC not detected.

B TIC was detected in the associated field blank.

J TIC detected below the reporting limit; value is estimated.

N Indicates presumptive evidence of a compound.

ppbv parts per billion by volume

ELAP Environmental Laboratory Approval Program

IRM interim remedial measure

NYSDOH New York State Department of Health

OM&M operation, maintenance, and monitoring

TIC tentatively identified compound

USEPA United States Environmental Protection Agency

VOC volatile organic compound

Table 7
Summary of System Parameters
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Date[1]	Water Flow Rates						Water Pressures[2]					Air Flow Rate[2]	Air Pressures[5]					Air Temp.[5]
	Remedial Well[2]				Combined Influent[3]	Effluent[2]	Remedial Well Effluent[4]				Effluent	Effluent	ECU Influents				Effluent	Effluent
	RW-1	RW-2	RW-3	RW-4			RW-1	RW-2	RW-3	RW-4			GAC-501	GAC-502	PPZ-601	PPZ-602		
	(gpm)	(gpm)	(gpm)	(gpm)	(gpm)	(gpm)	(psi)	(psi)	(psi)	(psi)	(psi)	(scfm)	(iwc)	(iwc)	(iwc)	(iwc)	(iwc)	(°R)
04/18/16	30.9	75.8	75.7	29.9	212	216	55	30	14	55	11	1,814	5.8	3.4	0.5	2.0	0.0	532
05/18/16	29.9	75.4	75.7	30.2	211	224	56	22	20	55	12	1,973	6.5[6]	3.4[6]	1.0[6]	2.0[6]	2.0[6]	532[6]
06/10/16	30.2	73.7	75.2	30.3	209	211	56	11	22	54	11	1,827	7.0[7]	3.5[7]	1.0[7]	2.2[7]	0.0[7]	537[7]
07/14/16	30.3	75.1	75.0	30.8	211	222	55	13	25	54	12	1,816	6.9[8]	3.4[8]	1.0[8]	2.0[8]	0.0[8]	538[8]
08/23/16	30.1	62.7	75.3	29.8	198	203	55	6	21	54	12	1,840	6.5[9]	3.2[9]	1.0[9]	2.0[9]	0.0[9]	540[9]
09/14/16	30.7	74.7	75.1	30.8	211	221	54	6	19	53	11	1,738	6.0[10]	3.0[10]	1.0[10]	2.0[10]	0.0[10]	539[10]
10/11/16	30.0	72.9	74.4	30.9	208	233	55	9	20	53	13	1,689	6.4	3.2	1.0	2.0	0.0	538
11/28/16	30.8	75.9	75.2	29.9	212	226	54	50	43	54	13	1,719	6.5	3.2	1.0	2.0	0.0	532
12/16/16	30.0	74.6	74.8	29.8	209	229	55	46	40	53	12	1,736	6.5[11]	3.0[11]	1.0[11]	1.9[11]	0.0[11]	519[11]
01/20/17	31.0	76.2	75.3	30.1	213	234	54	12	32	53	13	1,757	6.5[12]	3.2[12]	1.0[12]	2.0[12]	0.0[12]	530[12]
02/22/17	30.5	81.2	75.0	30.2	217	230	54	53	28	53	18	1,698	7.0[13]	3.5[13]	1.0[13]	2.0[13]	0.0[13]	532[13]
03/17/17	30.2	79.8	76.0	30.3	216	227	55	53	26	53	25	1,690	6.4[14]	3.0[14]	1.0[14]	1.9[14]	0.0[14]	530[14]
04/21/17	30.6	74.8	75.3	29.8	210	219	55	69	26	54	13	1,695	6.5[15]	3.0[15]	1.0[15]	1.5[15]	0.0[15]	534[15]
05/18/17	30.9	73.9	75.7	30.0	211	229	54	50	25	54	13	1,676	6.0[16]	3.0[16]	1.0[16]	1.9[16]	0.0[16]	538[16]
06/16/17	30.0	58.2	73.1	30.7	192	213	55	8	25	54	14	1,571	6.0[17]	2.9[17]	1.0[17]	1.9[17]	0.0[17]	540[17]
08/01/17	30.7	77.1	74.6	29.5	212	242	55	50	25	55	10	1,607	4.9[18]	2.5[18]	1.0[18]	1.5[18]	0.0[18]	538[18]
08/16/17	30.3	75.0	75.0	30.8	211	234	55	67	17	54	10	1,549	6.0[19]	2.9[19]	1.0[19]	1.8[19]	0.0[19]	542[19]

Notes and abbreviations on last page.

Table 7
Summary of System Parameters
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Notes and Abbreviations:

(1) Operational data collected by Arcadis on days noted. Parameters listed were typically recorded during compliance monitoring events. Data in this table correspond to approximately the past year of system operation.
(2) Instantaneous parameters obtained from the SCADA HMI: Water Flow Rate, Water Pressure, Air Flow Rate.
(3) Combined influent water-flow rate is the sum of individual well flow rates via the SCADA System.
(4) Remedial Well effluent pressure readings measured at the influent manifold within the treatment system building.
(5) Instantaneous values from field-mounted instruments.
(6) Values collected on May 16, 2016 during the weekly site visit. No values collected on day of sampling.
(7) Values collected on June 6, 2016 during the weekly site visit. No values collected on day of sampling.
(8) Values collected on July 11, 2016 during the weekly site visit. No values collected on day of sampling.
(9) Values collected on August 22, 2016 during the weekly site visit. No values collected on day of sampling.
(10) Values collected on September 13, 2016 during the weekly site visit. No values collected on day of sampling.
(11) Values collected on December 19, 2016 during the weekly site visit. No values collected on day of sampling.
(12) Values collected on January 16, 2017 during the weekly site visit. No values collected on day of sampling.
(13) Values collected on February 20, 2017 during the weekly site visit. No values collected on day of sampling.
(14) Values collected on March 20, 2017 during the weekly site visit. No values collected on day of sampling.
(15) Values collected on April 24, 2017 during the weekly site visit. No values collected on day of sampling.
(16) Values collected on May 15, 2017 during the weekly site visit. No values collected on day of sampling.
(17) Values collected on June 26, 2017 during the weekly site visit. No values collected on day of sampling.
(18) Values collected on August 02, 2017 during the weekly site visit. No values collected on day of sampling.
(19) Values collected on August 14, 2017 during the weekly site visit. No values collected on day of sampling.

ECU	emission control unit
gpm	gallons per minute
HMI	human-machine interface
iwc	inches of water column
NM	Not measured. The value was not measured due to a faulty gauge.
psi	pounds per square inch
^{o}R	degrees Rankine
SCADA	Supervisory Control and Data Acquisition
scfm	standard cubic feet per minute
Temp.	temperature

Table 8
Summary of Groundwater Recovered, VOC Mass Recovered, and VOC Mass Recovery Rates
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Operating Period[1]	Volume of Groundwater Recovered (x1,000 gal)[2]					VOC Mass Recovered (lbs)[3]															VOC Mass Recovery Rate (lbs/day)[4]													
						Total VOCs[5]					Project VOCs[6]					Non-Project VOCs[7]					Total VOCs[5]					Project VOCs[6]					Non-Project VOCs[7]				
	RW-1	RW-2	RW-3	RW-4	Total	RW-1	RW-2	RW-3	RW-4	Total	RW-1	RW-2	RW-3	RW-4	Total	RW-1	RW-2	RW-3	RW-4	Total	RW-1	RW-2	RW-3	RW-4	Total	RW-1	RW-2	RW-3	RW-4	Total	RW-1	RW-2	RW-3	RW-4	Total
System Pilot Test, Shakedown and Startup Totals [8]	137	270	251	150	808	NA	NA	NA	NA	1.1	NA	NA	NA	NA	1.0	NA	NA	NA	NA	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009 Totals	6,592	13,838	16,445	6,574	43,449	0.17	275	53	14	342	0.17	273	19	0.20	293	<0.01	0.56	35	13	48	<0.01	1.7	0.33	0.086	2.1	<0.01	1.7	0.12	<0.01	1.8	<0.01	<0.01	0.22	0.080	0.30
2010 Totals	15,726	35,127	38,160	15,689	104,702	0.56	172	412	89	672	0.56	171	28	0.10	200	<0.01	0.17	383	89	469	<0.01	0.46	1.1	0.24	1.8	<0.01	0.46	0.075	<0.01	0.54	<0.01	<0.01	1.0	0.24	1.3
2011 Totals	15,218	36,570	37,682	15,196	104,666	0.36	167	271	78	516	0.36	167	35	0.090	203	<0.01	1.1	236	78	314	<0.01	0.45	0.73	0.21	1.4	<0.01	0.45	0.095	<0.01	0.55	<0.01	<0.01	0.64	0.21	0.85
2012 Totals	15,260	35,178	36,111	15,336	101,885	0.28	114	113	40	267	0.25	113	12	0.39	126	<0.01	1.5	101	40	141	<0.01	0.31	0.31	0.11	0.73	<0.01	0.31	0.032	<0.01	0.35	<0.01	<0.01	0.28	0.11	0.39
2013 Totals	15,968	37,514	36,622	16,036	106,140	0.14	111	41	18	171	0.14	110	4.3	0.36	113	<0.01	1.6	37	18	57	<0.01	0.30	0.11	0.050	0.47	<0.01	0.30	0.012	<0.01	0.31	<0.01	<0.01	0.10	0.049	0.16
2014 Totals	15,690	33,222	31,199	15,691	95,802	0.063	67	9.9	8.1	85	0.063	65	2.0	0.20	67	<0.01	1.5	8.1	7.9	17	<0.01	0.19	0.028	0.023	0.24	<0.01	0.18	<0.01	<0.01	0.19	<0.01	<0.01	0.023	0.022	0.047
January 2017 through March 2017 Totals																																		
01/01/17 - 02/01/17	1,404	2,631	3,511	1,405	8,951	<0.01	1.7	0.25	0.12	2.1	<0.01	1.6	0.13	0.012	1.7	<0.01	0.072	0.12	0.10	0.30	<0.01	0.055	<0.01	<0.01	0.068	<0.01	0.052	<0.01	<0.01	0.055	<0.01	<0.01	<0.01	<0.01	<0.01
02/01/17 - 03/01/17	1,237	879	3,091	1,237	6,444	<0.01	0.56	0.22	0.10	0.88	<0.01	0.53	0.11	0.011	0.65	<0.01	0.024	0.11	0.091	0.23	<0.01	0.020	<0.01	<0.01	0.031	<0.01	0.019	<0.01	<0.01	0.023	<0.01	<0.01	<0.01	<0.01	<0.01
03/01/17 - 04/01/17	1,413	3,129	3,532	1,413	9,487	<0.01	2.0	0.25	0.12	2.4	<0.01	1.9	0.13	0.012	2.0	<0.01	0.086	0.12	0.10	0.31	<0.01	0.065	<0.01	<0.01	0.08	<0.01	0.061	<0.01	<0.01	0.065	<0.01	<0.01	<0.01	<0.01	<0.01
Subtotal Jan - Mar 2017[9]	4,054	6,639	10,134	4,055	24,882	<0.01	4.3	0.72	0.34	5.4	<0.01	4.0	0.37	0.035	4.4	<0.01	0.18	0.35	0.29	0.80	<0.01	0.048	<0.01	<0.01	0.060	<0.01	0.044	<0.01	<0.01	0.049	<0.01	<0.01	<0.01	<0.01	<0.01
April 2017 Through June 2017 Totals																																		
04/01/17 - 05/01/17	1,379	2,759	3,448	1,379	8,965	<0.01	1.1	0.22	0.12	1.4	<0.01	1.1	0.11	0.017	1.2	<0.01	0.06	0.12	0.11	0.28	<0.01	0.037	<0.01	<0.01	0.048	<0.01	0.037	<0.01	<0.01	0.041	<0.01	<0.01	<0.01	<0.01	<0.01
05/01/17 - 06/01/17	1,427	2,853	3,567	1,427	9,274	<0.01	1.2	0.23	0.13	1.6	<0.01	1.1	0.11	0.018	1.2	<0.01	0.06	0.12	0.11	0.29	<0.01	0.039	<0.01	<0.01	0.050	<0.01	0.035	<0.01	<0.01	0.040	<0.01	<0.01	<0.01	<0.01	<0.01
06/01/17 - 07/01/17	1,325	2,649	3,312	1,325	8,611	<0.01	1.1	0.22	0.12	1.4	<0.01	1.0	0.10	0.017	1.1	<0.01	0.05	0.11	0.10	0.26	<0.01	0.037	<0.01	<0.01	0.048	<0.01	0.033	<0.01	<0.01	0.037	<0.01	<0.01	<0.01	<0.01	<0.01
Subtotal Apr - Jun 2017 [10]	4,131	8,261	10,327	4,131	26,850	<0.01	3.4	0.67	0.37	4.4	<0.01	3.2	0.32	0.050	3.6	<0.01	0.17	0.34	0.32	0.83	<0.01	0.037	<0.01	<0.01	0.049	<0.01	0.04	<0.01	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01
July 2017 Through September 2017 Totals																																		
07/01/17 - 08/01/17	1,109	2,218	2,773	1,109	7,209	<0.01	0.63	0.14	0.071	0.84	<0.01	0.60	0.067	0.009	0.68	<0.01	0.031	0.073	0.062	0.17	<0.01	0.020	<0.01	<0.01	0.027	<0.01	0.019	<0.01	<0.01	0.022	<0.01	<0.01	<0.01	<0.01	<0.01
08/01/17 - 09/01/17	1,426	2,854	3,566	1,427	9,273	<0.01	0.81	0.18	0.091	1.1	<0.01	0.77	0.086	0.012	0.87	<0.01	0.040	0.093	0.080	0.21	<0.01	0.026	<0.01	<0.01	0.035	<0.01	0.025	<0.01	<0.01	0.028	<0.01	<0.01	<0.01	<0.01	<0.01
09/01/17 - 10/01/17	1,377	2,751	3,440	1,376	8,944	<0.01	0.78	0.17	0.088	1.0	<0.01	0.74	0.083	0.011	0.83	<0.01	0.039	0.090	0.077	0.21	<0.01	0.026	<0.01	<0.01	0.035	<0.01	0.025	<0.01	<0.01	0.028	<0.01	<0.01	<0.01	<0.01	<0.01
Subtotal Jul - Sept 2017 [11]	3,912	7,823	9,779	3,912	25,426	<0.01	2.2	0.49	0.25	3.0	<0.01	2.1	0.24	0.032	2.4	<0.01	0.110	0.260	0.22	0.59	<0.01	0.024	<0.01	<0.01	0.032	<0.01	0.023	<0.01	<0.01	0.026	<0.01	<0.01	<0.01	<0.01	<0.01
2017 Totals	12,097	22,723	30,240	12,098	77,158	<0.01	9.9	1.9	1.0	13	<0.01	9.3	0.93	0.12	10.4	<0.01	0.46	0.95	0.83	2.22	<0.01	0.036	<0.01	<0.01	0.047	<0.01	0.034	<0.01	<0.01	0.038	<0.01	<0.01	<0.01	<0.01	<0.01
Total[12]	128,373	287,063	301,020	127,351	843,807	1.6	1,001	913	255	2,168	1.6	990	104	1.9	1,098	<0.01	10.0	809	253	1,064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes and Abbreviations:

(1) Represents operating period between consecutive monitoring events.
(2) Volume of groundwater recovered is based on individual local well totalized flow readings. Listed value is the difference between totalized flow values recorded between consecutive monitoring events. The total groundwater recovered during a given operating period is the sum of the individual well flow totals. Values shown are rounded to the nearest gallon, but should only be considered accurate to two significant figures to account for error associated with field measurements.
(3) Mass recovered per well was calculated by multiplying the Total VOC concentration from the most recent sampling event by the number of gallons extracted during the reporting period. The total amount recovered during a given operating period is the sum of masses recovered from each of the individual wells. Values less than ten pounds are presented using two significant figures and values greater than ten pounds have been rounded to the nearest whole number; however, these values should only be considered accurate to two significant figures to account for error associated with field measurements and analytical data.
(4) Mass recovery rates were calculated by dividing the total mass recovered for each well and for the system by the number of days in the respective operating period. Values are presented using two significant figures.
(5) "Total VOCs" represents the sum of individual concentrations of the VOCs detected.
(6) "Project VOCs" represents the sum of individual compound concentrations of 1,1,1-trichloroethane; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethene; tetrachloroethene; trichloroethelyene; vinyl chloride; cis-1,2-dichloroethene; trans-1,2-dichloroethene; benzene; toluene; and xylenes-o,m, p.
(7) "Non-Project VOCs" represents the difference between Total VOCs and Project VOCs.
(8) Values based on operational data recorded prior to system startup on July 21, 2009.
(9) The volume of groundwater recovered and mass recovered calculations represent the operational period between January 1, 2017 and April 1, 2017.
(10) The volume of groundwater recovered and mass recovered calculations represent the operational period between April 1, 2017 and July 1, 2017.
(11) The volume of groundwater recovered and mass recovered calculations represent the operational period between July 1, 2017 and October 1, 2017.
(12) "Total" refers to the amounts removed by the Operable Unit 3 Bethpage Park Groundwater Containment System.

gal gallons
HMI human-machine interface
lbs pounds
lbs/day pounds per day
-- not applicable

Table 9
Summary of Air Quality Impact Analysis
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Toxic Air Contaminant	CAS#	VSP-05 Vapor Effluent ($\mu g/m^3$)	Emission Rate[1]			Scaled Impact - Hourly[2] ($\mu g/m^3$)	Scaled Impact - Annual[2] ($\mu g/m^3$)	SGC[3] ($\mu g/m^3$)	AGC[3] ($\mu g/m^3$)	% of SGC	% of AGC
		8/16/2017	lb/yr	lb/hr	g/s						
Project VOCs											
1,1 - Dichloroethane	00075-34-3	3.9	0.22	2.5E-05	3.2E-06	1.0E-02	3.1E-04	--	0.63	--	0.0%
Tetrachloroethene	00127-18-4	1.8	0.10	1.2E-05	1.5E-06	4.7E-03	1.4E-04	300	4	0.0%	0.0%
Trichloroethene	00079-01-6	2.1	0.12	1.4E-05	1.7E-06	5.4E-03	1.7E-04	20	0.20	0.0%	0.1%
Vinyl Chloride	00075-01-4	1.6	0.09	1.0E-05	1.3E-06	4.1E-03	1.3E-04	180,000	0.11	0.0%	0.1%
cis-1,2-Dichloroethene	00156 59 2	10	0.57	6.5E-05	8.2E-06	2.6E-02	7.9E-04	--	63	--	0.0%
Benzene	00071-43-2	5.8	0.33	3.8E-05	4.8E-06	1.5E-02	4.6E-04	1,300	0.13	0.0%	0.4%
Toluene	00108-88-3	1.8	0.10	1.2E-05	1.5E-06	4.7E-03	1.4E-04	37,000	5,000	0.0%	0.0%
Xylenes - M,P	01330-20-7	0.87	0.05	5.7E-06	7.1E-07	2.2E-03	6.9E-05	22,000	100	0.0%	0.0%
Non-Project VOCs											
2-Butanone	00078 93 3	4.4	0.25	2.9E-05	3.6E-06	1.1E-02	3.5E-04	13,000	5,000	0.0%	0.0%
Acetone	00067 64 1	72	4.1	4.7E-04	5.9E-05	1.9E-01	5.7E-03	180,000	30,000	0.0%	0.0%
Carbon Disulfide	00075 15 0	0.72	0.04	4.7E-06	5.9E-07	1.9E-03	5.7E-05	6,200	700	0.0%	0.0%
Chlorodifluoromethane (Freon 22)	00075 45 6	22	1.3	1.4E-04	1.8E-05	5.7E-02	1.7E-03	--	50,000	--	0.0%
Chloroform	00067-66-3	19	1.1	1.2E-04	1.6E-05	4.9E-02	1.5E-03	150	15	0.0%	0.0%
Chloromethane	00074 87 3	1.6	0.09	1.0E-05	1.3E-06	4.1E-03	1.3E-04	22,000	90	0.0%	0.0%
Dichlorodifluoromethane (Freon 12)	00075 71 8	3.3	0.19	2.1E-05	2.7E-06	8.5E-03	2.6E-04	--	12,000	--	0.0%
Dichloromethane	00075 09 2	1.8	0.10	1.2E-05	1.5E-06	4.7E-03	1.4E-04	14,000	60	0.0%	0.0%
Ethylbenzene	00100 41 4	0.43	0.02	2.8E-06	3.5E-07	1.1E-03	3.4E-05	--	1000	--	0.0%
Trichlorofluoromethane (Freon 11)	00075 69 4	2.2	0.13	1.4E-05	1.8E-06	5.7E-03	1.7E-04	9,000	5,000	0.0%	0.0%
Trichlorotrifluoroethane (Freon 113)	00076-13-1	2.4	0.14	1.6E-05	2.0E-06	6.2E-03	1.9E-04	960,000	180,000	0.0%	0.0%

Notes and abbreviations on last page.

Table 9
Summary of Air Quality Impact Analysis
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Notes and Abbreviations:

(1) Emission rate calculated based on an exit air flow rate of 1,726 ft^3/min.

1,1,1-Trichloroethane (lb/hr) = TCE [µg/m^3] x Air Flow Rate [ft^3/min] x (1 m^3/35 ft^3) x (60 min/hr) x (0.000001 g/1 µg) x (0.0022 lb/g)

lb/yr = lb/hr x 8,760 hrs/yr

g/s = lb/hr x hr/3,600 sec x 453.59 g/lb

(2) Ambient impact based on AERMOD modeling using normalized rate of 1 g/s is scaled to the actual emission rate of the pollutant. Modeling was performed using the representative meteorological data from the nearest station (Brookhaven/Farmingdale) for the years 2011 through 2015. The maximum impact from all the years was used for the calculations.

Scaled hourly impact (µg/m^3) = AERMOD predicted hourly ambient impact at 1 g/s ([µg/m^3]/[g/s]) x Actual emission rate (g/s)

Scaled annual impact (µg/m^3) = AERMOD predicted annual ambient impact at 1 g/s ([µg/m^3]/[g/s]) x Actual emission rate (g/s)

AERMOD Normalized Ambient Impact at 1 g/s	
Hourly ([µg/m^3]/[g/s])	Annual ([µg/m^3]/[g/s])
3,153.03	96.49

(3) Short-term and annual guideline concentrations specified in the NYSDEC DAR-1 AGC/SGC tables revised August 10, 2016.

(4) Compounds not detected above the laboratory reporting limit are excluded from the air quality impact analysis summary.

--	none specified
cfm	cubic feet per minute
g/s	grams per second
lb/hr	pounds per hour
lb/yr	pounds per year
µg/m^3	micrograms per cubic meter
AGC	annual guideline concentration
CAS#	Chemical Abstracts Service Registry Number
DAR-1	Division of Air Resources-1
NYSDEC	New York State Department of Environmental Conservation
SGC	short-term guideline concentration
VSP	vapor sampling point

Table 10
Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Remedial Wells
Bethpage Park Groundwater Containment System
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Compound[1] (µg/L)	Sample Location: Sample Date: NYSDEC SCGs	RW-1 12/16/2016	RW-1 3/17/2017	RW-1 6/16/2017	RW-1 8/16/2017	RW-2 12/16/2016	RW-2 3/17/2017	RW-2 6/16/2017	RW-2 8/16/2017	RW-3 12/16/2016	RW-3 3/17/2017	RW-3 6/16/2017	RW-3 8/16/2017	RW-4 12/16/2016	RW-4 3/17/2017	RW-4 6/16/2017	RW-4 8/16/2017
1,1,1-Trichloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	**0.80 J**	**0.81 J**	**0.58 J**	**0.34 J**	< 1.0	< 1.0	< 1.0	< 1.0	**0.31 J**	< 1.0	**0.34 J**	< 1.0
1,1-Dichloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	**0.21 J**	**0.37 J**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Butadiene	0.5	NA	NA	< 5.0	< 5.0	NA	NA	< 5.0	< 5.0	NA	NA	< 5.0	< 5.0	NA	NA	< 5.0	< 5.0
2-Butanone	NE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-methyl-2-pentanone	50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Acetone	NE	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane	50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide	60	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodifluoromethane (Freon 22)	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	**3.2 J**	**2.9 J**	**2.8 J**	**2.2 J**	**11.6**	**8.8**	**9.3**	**6.7**
Chloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	7	< 1.0	< 1.0	< 1.0	< 1.0	**2.6**	**2.5**	**2.4**	**1.7**	**1.8**	**1.3**	**1.2**	**0.94 J**	**0.29 J**	< 1.0	< 1.0	< 1.0
Chloromethane	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	**26.6**	**30.9**	**18.9**	**14.8**	**2.1**	**2.0**	**1.6**	**1.2**	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-dichloropropene	0.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorodifluoromethane (Freon 12)	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dichloromethane	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0	**1.2**	**0.78 J**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl N-Butyl Ketone	50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-Butyl Ether	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**0.26 J**	< 1.0	< 1.0	**0.53 J**	**0.52 J**	**0.65 J**	**0.54 J**
Toluene	5	< 1.0	< 1.0	< 1.0	< 1.0	**9.0**	**2.6**	**0.41 J**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-dichloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene	0.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene	5	< 1.0	< 1.0	< 1.0	< 1.0	**12.4**	**13.6**	**12.1**	**10.4**	**2.4**	**2.2**	**2.2**	**1.7**	**0.51 J**	**0.54 J**	**0.52 J**	**0.45 J**
Trichlorofluoromethane (Freon 11)	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorotrifluoroethane (Freon 113)	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl Chloride	2	< 1.0	< 1.0	< 1.0	< 1.0	**38.9**	**23.9**	**15.2**	**6.7**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylene-o	5	< 1.0	< 1.0	< 1.0	< 1.0	**0.40 J**	**0.32 J**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - m,p	5	< 1.0	< 1.0	< 1.0	< 1.0	**0.69 J**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1-Chloro-1,1-difluoroethane (Freon 142b)	--	NA	NA	< 5.0	< 5.0	NA	NA	< 5.0	< 5.0	NA	NA	< 5.0	< 5.0	NA	NA	< 5.0	< 5.0
Total VOCs[2]		0	0	0	0	92.8	75.78	49.59	33.94	9.5	8.66	7.8	6.04	13.24	9.86	10.81	7.69
Project VOCs[3]		0	0	0	0	89	72.5	47.19	32.24	4.5	4.46	3.8	2.9	1.35	1.06	1.51	0.99
1,4-Dioxane[4]		0.768	0.758	0.695	0.652	1.72	1.97	1.76	1.27	0.662	0.663	0.612	0.491	0.284	0.238	0.227	0.214

Notes and Abbreviations:

(1) Water samples collected by Arcadis on the dates shown and submitted to a NYSDOH ELAP certified laboratory for VOC analyses per NYSDEC ASP 2005, Method OLM 4.3 (prior to September 1, 2014) and per SEPA Method 8260C (after September 1, 2014). Results validated following protocols specified in Sampling and Analysis Plan in the DRAFT Bethpage Park Groundwater Containment System OM&M Manual (Arcadis 2016). See previous quarterly reports for historical analytical results

(2) "Total VOCs" represents the sum of individual concentrations of the VOCs detected

(3) "Project VOCs" represents the sum of individual compound concentrations of 1,1,1-trichloroethane; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethene; tetrachloroethene; trichloroethene; vinyl chloride; cis-1,2-dichloroethene; trans-1,2-dichloroethene; benzene; toluene; and xylenes-o,m, and p

(4) Samples collected were analyzed for 1,4-Dioxane using USEPA Method 522.

	Bold cell outline indicates an exceedance of an SCG
700	Bold data indicates a detection.
< 5	Compound not detected above its laboratory quantification limit
--	Compound not analyzed
J	Compound detected below its reporting limit; value is estimated
µg/L	micrograms per liter
ASP	analytical services protocol
ELAP	Environmental Laboratory Approval Program
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
SCGs	standards, criteria, and guidance values
VOC	volatile organic compound
NE	not established

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	B24MW-2 4/23/2009	B24MW-2 10/4/2010	B24MW-2 10/27/2011	B24MW-2 10/3/2012	B24MW-2 6/13/2013
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	< 5	< 5	< 5.0 J
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5	< 5	< 5.0 J
1,1,2-Trichloroethane	1	< 5	< 5	< 5	< 5	< 5.0 J
1,1-Dichloroethane	5	< 5	< 5	< 5	< 5	< 5.0 J
1,1-Dichloroethene	5	< 5	< 5	< 5	< 5	< 5.0 J
1,2-Dichloroethane	0.6	< 5	< 5	< 5	< 5	< 5.0 J
1,2-Dichloropropane	1	< 5	< 5	< 5	< 5	< 5.0 J
2-Btanone	NE	< 50	< 50	< 50	< 50	< 50 J
2-Hexanone	50	< 50	< 50	< 50	< 50	< 50 J
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 50	< 50 J
Acetone	NE	< 50 B	< 50	< 50 B	< 50	< 50 J
Benzene	1	< 0.7	< 0.7	< 0.7	< 0.7	< 0.70 J
Bromodichloromethane	50	< 5	< 5	< 5	< 5	< 5.0 J
Bromoform	50	< 5	< 5	< 5	< 5	< 5.0 J
Bromomethane	5	< 5	< 5	< 5	< 5	< 5.0 J
Carbon Dislfide	60	< 5	< 5	< 5	< 5	< 5.0 J
Carbon Tetrachloride	5	< 5	< 5	< 5	< 5	< 5.0 J
Chlorobenzene	5	< 5	< 5	< 5	< 5	< 5.0 J
Chlorodiflоromethane (Freon 22)	NE	< 5	< 5	< 5	**0.41 J**	< 5.0 J
Chloroethane	5	< 5	< 5	< 5	< 5	< 5.0 J
Chloroform	7	< 5	**0.3 J**	< 5	**1.3 J**	**0.21 J**
Chloromethane	5	< 5	< 5	< 5	< 5	< 5.0 J
cis-1,2-Dichloroethene	5	< 5	< 5	< 5	**1.9 J**	**0.23 J**
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5	< 5	< 5.0 J
Chlorodibromomethane	50	< 5	< 5	< 5	< 5	< 5.0 J
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5	< 5	< 5.0 J
Ethylbenzene	5	< 5	< 5	< 5	< 5	< 5.0 J
Methyl-Tert-Btylether	5	--	< 5	--	**0.45 J**	**0.21 J**
Methylene Chloride	5	< 5	< 5	< 5	< 5	< 5.0 J
Styrene (Monomer)	5	< 5	< 5	< 5	< 5	< 5.0 J
Tetrachloroethene	5	< 5	< 5	< 5	< 5	< 5.0 J
Tolene	5	< 5	< 5	< 5	< 5	< 5.0 J
trans-1,2-Dichloroethene	5	< 5	< 5	< 5	< 5	< 5.0 J
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5	< 5	< 5.0 J
Trichloroethene	5	**3.7 J**	**4.4 J**	**3.2 J**	**25**	**4.3 J**
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	< 5	< 5	< 5.0 J
Vinyl Chloride	2	< 2	< 2	< 2	< 2	< 2.0 J
o-Xylene	5	< 5	< 5	< 5	< 5	< 5.0 J
m,p-Xylene	5	< 5	< 5	< 5	< 5	< 5.0 J
Total VOCs [3]		**3.7**	**4.7**	**3.2**	**29**	**5.0**
Project VOCs [4]		**3.7**	**4.4**	**3.2**	**27**	**4.5**
1,4-Dioxane		--	--	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	B24MW-2 11/13/2014	B24MW-2 12/28/2015	B24MW-2 12/29/2016	B24MW-2 8/4/2017	B24MW-3 4/20/2009
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	**0.62 J**
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
1,1,2-Trichloroethane	1	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
1,1-Dichloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
1,1-Dichloroethene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
1,2-Dichloroethane	0.6	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
1,2-Dichloropropane	1	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
2-Btanone	NE	< 10	< 10	< 10	*< 10*	< 50
2-Hexanone	50	< 5.0	< 5.0	< 5.0	*< 5.0*	< 50 J
4-Methyl-2-Pentanone	50	< 5.0	< 5.0	< 5.0	*< 5.0*	< 50 J
Acetone	NE	< 10	< 10	< 10	*< 10*	< 50
Benzene	1	< 1.0	< 0.50	< 0.50	*< 0.50*	< 0.7
Bromodichloromethane	50	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Bromoform	50	< 4.0	< 1.0	< 1.0	*< 1.0*	< 5
Bromomethane	5	< 2.0	< 2.0	< 2.0	*< 2.0*	< 5
Carbon Dislfide	60	< 2.0	< 2.0	< 2.0	*< 2.0*	< 5
Carbon Tetrachloride	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Chlorobenzene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Chlorodiflоromethane (Freon 22)	NE	< 5.0	< 5.0	< 5.0	*< 5.0*	< 5
Chloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Chloroform	7	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Chloromethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
cis-1,2-Dichloroethene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	**10**
cis-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Chlorodibromomethane	50	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Dichlorodiflоromethane (Freon 12)	5	< 5.0	< 2.0	< 2.0	*< 2.0*	< 5
Ethylbenzene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Methyl-Tert-Btylether	5	< 1.0	< 1.0	< 1.0	*< 1.0*	--
Methylene Chloride	5	< 2.0	< 2.0	< 2.0	*< 2.0*	< 5
Styrene (Monomer)	5	< 5.0	< 1.0	< 1.0	*< 1.0*	< 5
Tetrachloroethene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	**0.51 J**
Tolene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
trans-1,2-Dichloroethene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
trans-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Trichloroethene	5	**2.7**	**2.7**	**2.4**	***2.1***	**45**
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< 5.0	< 5.0	*< 5.0*	< 5
Vinyl Chloride	2	< 1.0	< 1.0	< 1.0	*< 1.0*	< 2
o-Xylene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
m,p-Xylene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 5
Total VOCs [3]		**2.7**	***2.7***	**2.4**	***2.1***	**56**
Project VOCs [4]		**2.7**	**2.7**	**2.4**	***2.1***	**56**
1,4-Dioxane		--	**0.185**	**0.417**	***0.348***	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

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Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	B24MW-3 10/6/2010	B24MW-3 10/27/2011	B24MW-3 10/4/2012	B24MW-3 6/13/2013	B24MW-3 11/13/2014
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	< 5	< 5.0 J	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5	< 5.0 J	< 1.0
1,1,2-Trichloroethane	1	< 5	< 5	< 5	< 5.0 J	< 1.0
1,1-Dichloroethane	5	< 5	< 5	< 5	< 5.0 J	< 1.0
1,1-Dichloroethene	5	< 5	< 5	< 5	< 5.0 J	< 1.0
1,2-Dichloroethane	0.6	< 5	< 5	< 5	< 5.0 J	< 1.0
1,2-Dichloropropane	1	< 5	< 5	< 5	< 5.0 J	< 1.0
2-Btanone	NE	< 50	< 50	< 50	< 50 J	< 10
2-Hexanone	50	< 50	< 50	< 50	< 50 J	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 50 J	< 5.0
Acetone	NE	< 50	< 50	< 50	< 50 J	< 10 J
Benzene	1	< 0.7	< 0.7	< 0.7	< 0.70 J	< 1.0
Bromodichloromethane	50	< 5	< 5	< 5	< 5.0 J	< 1.0
Bromoform	50	< 5	< 5	< 5	< 5.0 J	< 4.0
Bromomethane	5	< 5	< 5	< 5	< 5.0 J	< 2.0
Carbon Dislfide	60	< 5	< 5	< 5	< 5.0 J	< 2.0
Carbon Tetrachloride	5	< 5	< 5	< 5	< 5.0 J	< 1.0
Chlorobenzene	5	< 5	< 5	< 5	< 5.0 J	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5	< 5	< 5	< 5.0 J	< 5.0
Chloroethane	5	< 5	< 5	< 5	< 5.0 J	< 1.0
Chloroform	7	**< 5**	**0.32 J**	**0.38 J**	**1.3 J**	**0.28 J**
Chloromethane	5	< 5	< 5	< 5	< 5.0 J	< 1.0
cis-1,2-Dichloroethene	5	**1.2 J**	**0.4 J**	**0.62 J**	< 5.0 J	< 1.0
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5	< 5.0 J	< 1.0
Chlorodibromomethane	50	< 5	< 5	< 5	< 5.0 J	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5	< 5.0 J	< 5.0
Ethylbenzene	5	< 5	< 5	< 5	< 5.0 J	< 1.0
Methyl-Tert-Btylether	5	< 5	--	< 5	< 5.0 J	< 1.0
Methylene Chloride	5	< 5	< 5	< 5	< 5.0 J	< 2.0
Styrene (Monomer)	5	< 5	< 5	< 5	< 5.0 J	< 5.0
Tetrachloroethene	5	< 5	< 5	< 5	< 5.0 J	< 1.0
Tolene	5	< 5	< 5	< 5	< 5.0 J	< 1.0
trans-1,2-Dichloroethene	5	< 5	< 5	< 5	< 5.0 J	< 1.0
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5	< 5.0 J	< 1.0
Trichloroethene	5	**5.9**	**1.4 J**	**1 J**	**0.44 J**	< 1.0
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	< 5	< 5.0 J	< 5.0
Vinyl Chloride	2	< 2	< 2	< 2	< 2.0 J	< 1.0
o-Xylene	5	< 5	< 5	< 5	< 5.0 J	< 1.0
m,p-Xylene	5	< 5	< 5	< 5	< 5.0 J	< 1.0
Total VOCs [3]		**7.1**	**2.1**	**2**	**1.7**	**0.28**
Project VOCs [4]		**7.1**	**1.8**	**1.6**	**0.4**	0
1,4-Dioxane		--	--	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	B24MW-3 12/28/2015	B24MW-3 1/20/2017	B24MW-3 8/2/2017	B30MW-1 4/23/2009	B30MW-1 10/4/2010
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,1,2-Trichloroethane	1	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,1-Dichloroethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,1-Dichloroethene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,2-Dichloroethane	0.6	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,2-Dichloropropane	1	< 1.0	< 1.0	*< 1.0*	< 5	< 5
2-Btanone	NE	< 10	< 10	*< 10*	< 50	< 50
2-Hexanone	50	< 5.0	< 5.0	*< 5.0*	< 50	< 50
4-Methyl-2-Pentanone	50	< 5.0	< 5.0	*< 5.0*	< 50	< 50
Acetone	NE	< 10	< 10	*< 10*	< 50 B	< 50 B
Benzene	1	< 0.50	< 0.50	*< 0.50*	< 0.7	< 0.7
Bromodichloromethane	50	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Bromoform	50	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Bromomethane	5	< 2.0	< 2.0	*< 2.0*	< 5	< 5
Carbon Dislfide	60	< 2.0	< 2.0	*< 2.0*	< 5	< 5
Carbon Tetrachloride	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Chlorobenzene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Chlorodifloromethane (Freon 22)	NE	< 5.0	< 5.0	*< 5.0*	< 5	< 5
Chloroethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Chloroform	7	**0.30 J**	< 1.0	*< 1.0*	< 5	< 5
Chloromethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
cis-1,2-Dichloroethene	5	< 1.0	< 1.0	***0.59 J***	< 5	< 5
cis-1,3-Dichloropropene	0.4	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Chlorodibromomethane	50	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Dichlorodifloromethane (Freon 12)	5	< 2.0	< 2.0	*< 2.0*	< 5	< 5
Ethylbenzene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Methyl-Tert-Btylether	5	< 1.0	< 1.0	*< 1.0*	--	< 5
Methylene Chloride	5	< 2.0	< 2.0	*< 2.0*	< 5	< 5
Styrene (Monomer)	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Tetrachloroethene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Tolene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
trans-1,2-Dichloroethene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
trans-1,3-Dichloropropene	0.4	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Trichloroethene	5	**0.25 J**	< 1.0	*< 1.0*	< 5	< 5
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< 5.0	*< 5.0*	< 5	< 5
Vinyl Chloride	2	< 1.0	< 1.0	*< 1.0*	< 2	< 2
o-Xylene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
m,p-Xylene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Total VOCs [3]		**0.55**	0	**0.59**	0	0
Project VOCs [4]		**0.25**	0	**0.59**	0	0
1,4-Dioxane		**0.257**	**0.918**	**0.675**	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	B30MW-1 10/27/2011	B30MW-1 10/3/2012	B30MW-1 6/14/2013	B30MW-1 11/13/2014	B30MW-1 12/31/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
2-Btanone	NE	< 50	< 50	< 50	< 10	< 10
2-Hexanone	50	< 50	< 50	< 50	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 5.0	< 5.0
Acetone	NE	< 50	< 50	< 50	< 10	< 10
Benzene	1	< 0.7	< 0.7	< 0.70	< 1.0	< 0.50
Bromodichloromethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Bromoform	50	< 5	< 5	< 5.0	< 4.0	< 1.0
Bromomethane	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorobenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5	< 5	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chloroform	7	< 5	< 5	< 5.0	< 1.0	< 1.0
Chloromethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5.0	< 5.0	< 2.0
Ethylbenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	--	< 5	< 5.0	< 1.0	< 1.0
Methylene Chloride	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5	< 5	< 5.0	< 5.0	< 1.0
Tetrachloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Tolene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Trichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Vinyl Chloride	2	< 2	< 2	< 2.0	< 1.0	< 1.0
o-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
m,p-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Total VOCs [3]		0	0	0	0	0
Project VOCs [4]		0	0	0	0	0
1,4-Dioxane		--	--	--	--	< 0.10

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	B30MW-1 1/4/2017	B30MW-1 8/3/2017	BCPMW-1 4/28/2009	BCPMW-2 4/28/2009	BCPMW-3 4/29/2009
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< *1.0*	< 5	< 10	< 25
1,1,2,2-Tetrachloroethane	5	< 1.0	< *1.0*	< 5	< 10	< 25
1,1,2-Trichloroethane	1	< 1.0	< *1.0*	< 5	< 10	< 25
1,1-Dichloroethane	5	< 1.0	< *1.0*	**0.37 J**	**8 J**	**9.6 J**
1,1-Dichloroethene	5	< 1.0	< *1.0*	< 5	**3.8 J**	**43**
1,2-Dichloroethane	0.6	< 1.0	< *1.0*	< 5	**0.68 J**	< 25
1,2-Dichloropropane	1	< 1.0	< *1.0*	< 5	< 10	< 25
2-Btanone	NE	< 10	< *10*	< 50	< 100	< 250
2-Hexanone	50	< 5.0	< *5.0*	< 50	< 100	< 250
4-Methyl-2-Pentanone	50	< 5.0	< *5.0*	< 50	< 100	< 250
Acetone	NE	< 10	< *10*	< 50 B	< 100	< 250
Benzene	1	< 0.50	< *0.50*	< 0.7	< 1.4	< 3.5
Bromodichloromethane	50	< 1.0	< *1.0*	< 5	< 10	< 25
Bromoform	50	< 1.0	< *1.0*	< 5	< 10	< 25
Bromomethane	5	< 2.0	< *2.0*	< 5	< 10	< 25
Carbon Dislfide	60	< 2.0	< *2.0*	< 5	< 10	< 25
Carbon Tetrachloride	5	< 1.0	< *1.0*	< 5	< 10	< 25
Chlorobenzene	5	< 1.0	< *1.0*	< 5	< 10	< 25
Chlorodiflоromethane (Freon 22)	NE	< 5.0	< *5.0*	< 5	< 10	< 25
Chloroethane	5	< 1.0	< *1.0*	< 5	< 10	< 25
Chloroform	7	< 1.0	< *1.0*	**0.88 J**	< 10	< 25
Chloromethane	5	< 1.0	< *1.0*	< 5	< 10	< 25
cis-1,2-Dichloroethene	5	< 1.0	< *1.0*	**22**	**310**	**900**
cis-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 10	< 25
Chlorodibromomethane	50	< 1.0	< *1.0*	< 5	< 10	< 25
Dichlorodiflоromethane (Freon 12)	5	< 2.0	< *2.0*	< 5	< 10	< 25
Ethylbenzene	5	< 1.0	< *1.0*	< 5	< 10	< 25 B
Methyl-Tert-Btylether	5	< 1.0	< *1.0*	--	--	--
Methylene Chloride	5	< 2.0	< *2.0*	**0.52 J**	< 10	< 25
Styrene (Monomer)	5	< 1.0	< *1.0*	< 5	< 10	< 25
Tetrachloroethene	5	< 1.0	< *1.0*	< 5	**1.5 J**	< 25
Tolene	5	< 1.0	< *1.0*	**0.33 J**	< 10	< 25 B
trans-1,2-Dichloroethene	5	< 1.0	< *1.0*	**0.44 J**	**2.4 J**	**8.9 J**
trans-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 10	< 25
Trichloroethene	5	< 1.0	< *1.0*	**190**	**180**	**470**
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< *5.0*	< 5	< 10	< 25
Vinyl Chloride	2	< 1.0	< *1.0*	< 2	**4.1**	**300**
o-Xylene	5	< 1.0	< *1.0*	< 5	< 10	< 25 B
m,p-Xylene	5	< 1.0	< *1.0*	< 5	< 10	< 25 B
Total VOCs [3]		0	*0*	**220**	**510**	**1,700**
Project VOCs [4]		0	*0*	**210**	**510**	**1,700**
1,4-Dioxane		< 0.200	< *0.200*	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-4-1 4/17/2009	BCPMW-4-1 12/1/2009	BCPMW-4-1 10/4/2010	BCPMW-4-1 10/28/2011	BCPMW-4-1 10/3/2012
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 25	**2.4 J**	**14 J**	**10 J**	**29**
1,1,2,2-Tetrachloroethane	5	< 25	< 5	< 25	< 25	< 25
1,1,2-Trichloroethane	1	< 25	**0.38 J**	< 25	< 25	**1.7 J**
1,1-Dichloroethane	5	**6.5 J**	**46**	**38**	**18 J**	**39**
1,1-Dichloroethene	5	**1.8 J**	**14**	**21 J**	**13 J**	**24 J**
1,2-Dichloroethane	0.6	< 25	**0.65 J**	< 25	**2.1 J**	**4.8 J**
1,2-Dichloropropane	1	< 25	**4.7 J**	**3.8 J**	**1.9 J**	**5.1 J**
2-Btanone	NE	< 250	< 50	< 250	< 250	< 250
2-Hexanone	50	< 250 J	< 50	< 250	< 250	< 250
4-Methyl-2-Pentanone	50	< 250 J	< 50	< 250	< 250	< 250
Acetone	NE	< 250 J	< 50	< 250	< 250B	< 250
Benzene	1	< 3.5	**0.44 J**	< 3.5	< 3.5	< 3.5
Bromodichloromethane	50	< 25	< 5	< 25	< 25	< 25
Bromoform	50	< 25	< 5	< 25	< 25	< 25
Bromomethane	5	< 25	R	< 25	< 25	< 25
Carbon Dislfide	60	< 25	< 5	< 25	< 25	< 25
Carbon Tetrachloride	5	< 25	< 5	< 25	< 25	< 25
Chlorobenzene	5	< 25	< 5	< 25	< 25	< 25
Chlorodiflоromethane (Freon 22)	NE	**17 J**	**6.2**	**4.3 J**	**2.5 J**	< 25
Chloroethane	5	< 25	**2.4 J**	**4.1 J**	< 25	**1.6 J**
Chloroform	7	< 25	< 5	< 25	< 25	< 25
Chloromethane	5	< 25	R	< 25	< 25	< 25
cis-1,2-Dichloroethene	5	**1,800 D**	**750 D**	**510**	**500**	**840**
cis-1,3-Dichloropropene	0.4	< 25	< 5	< 25	< 25	< 25
Chlorodibromomethane	50	< 25	< 5	< 25	< 25	< 25
Dichlorodiflоromethane (Freon 12)	5	< 25	< 5	< 25	< 25	< 25
Ethylbenzene	5	< 25	< 5	< 25	< 25	< 25
Methyl-Tert-Btylether	5	--	--	< 25	< 25	< 25
Methylene Chloride	5	< 25	< 5	< 25	< 25 B	< 25
Styrene (Monomer)	5	< 25	< 5	< 25	< 25	< 25
Tetrachloroethene	5	< 25	**0.64 J**	< 25	< 25	< 25
Tolene	5	< 25	< 5	< 25	< 25	< 25
trans-1,2-Dichloroethene	5	**110**	**2.5 J**	**3.9 J**	**1.3 J**	**2.2 J**
trans-1,3-Dichloropropene	0.4	< 25	< 5	< 25	< 25	< 25
Trichloroethene	5	**22 J**	**170**	**45**	**43**	**110**
Trichlorotrifloroethane (Freon 113)	5	< 25	< 5	< 25	< 25	< 25
Vinyl Chloride	2	**180**	**540 D**	**220**	**32**	**420**
o-Xylene	5	< 25	**8**	< 25	< 25	< 25
m,p-Xylene	5	< 25	< 5	< 25	< 25	< 25
Total VOCs [3]		**2,100**	**1,500**	**860**	**620**	**1,500**
Project VOCs [4]		**2,100**	**1,500**	**850**	**620**	**1,500**
1,4-Dioxane		--	--	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-4-1 6/5/2013	BCPMW-4-1 11/17/2014	BCPMW-4-1 10/8/2015	BCPMW-4-1 12/30/2015	BCPMW-4-1 12/28/2016
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	**5.1**	**2.4**	**4.2**	**7.3**	**0.36 J**
1,1,2,2-Tetrachloroethane	5	< 5.0	< 1.0		< 1.0	< 1.0
1,1,2-Trichloroethane	1	**0.24 J**	**0.42 J**	**1.1**	**1.7**	< 1.0
1,1-Dichloroethane	5	**7.4**	**7.3**	**13.3**	**27.1**	**3.2**
1,1-Dichloroethene	5	**4.1 J**	**1.1**	**0.98 J**	**1.7**	**0.42 J**
1,2-Dichloroethane	0.6	**0.95 J**	**0.70 J**	**0.97 J**	**1.3**	**0.87 J**
1,2-Dichloropropane	1	**0.95 J**	**0.61 J**	**0.95**	**1.5**	< 1.0
2-Btanone	NE	< 50	< 10	< 10	< 10	< 10
2-Hexanone	50	< 50	< 5.0	< 5.0	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 5.0	< 5.0	< 5.0	< 5.0
Acetone	NE	< 50	< 10	< 10	< 10	< 10
Benzene	1	< 0.70	< 1.0	< 0.50	< 0.50	< 0.50
Bromodichloromethane	50	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	50	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0
Bromomethane	5	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	5	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	**1.1 J**	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane	5	**0.46 J**	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	7	< 5.0	**0.61 J**	**0.70 J**	**1.1**	**1.4**
Chloromethane	5	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	**310 D**	**207 D**	**156**	**252 D**	**81.4**
cis-1,3-Dichloropropene	0.4	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	5	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	5	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	5	**0.37 J**	**0.80 J**	**1.1**	**1.1**	**0.50 J**
Tolene	5	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	**0.78 J**	**0.59 J**	**< 1.0**	**0.86 J**	**0.49 J**
trans-1,3-Dichloropropene	0.4	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	5	**16**	**34.7**	**68.1**	**81.5**	**48.2**
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl Chloride	2	**47**	**21**	**13**	**197**	**3.3**
o-Xylene	5	< 5.0	< 1.0	< 1.0	0.70 J	< 1.0
m,p-Xylene	5	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Total VOCs [3]		**390**	**280**	**260**	**570**	**140**
Project VOCs [4]		**390**	**280**	**260**	**570**	**140**
1,4-Dioxane		--	--	--	**37.7**	**39.3**

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-4-1 7/31/2017	BCPMW-4-2 4/17/2009	BCPMW-4-2 12/4/2009	BCPMW-4-2 10/7/2010	BCPMW-4-2 10/28/2011
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< *1.0*	< 250	< 10	< 5	**0.33 J**
1,1,2,2-Tetrachloroethane	5	< *1.0*	< 250	< 10	< 5	< 5
1,1,2-Trichloroethane	1	< *1.0*	< 250	< 10	< 5	< 5
1,1-Dichloroethane	5	***1.6***	**57 J**	**8.7 J**	**7.3**	**2.6 J**
1,1-Dichloroethene	5	< *1.0*	**34 J**	**2.7 J**	**1.9 J**	**1.1 J**
1,2-Dichloroethane	0.6	< *1.0*	< 250	< 10	**0.91 J**	**0.85 J**
1,2-Dichloropropane	1	< *1.0*	< 250	< 10	**0.9 J**	**0.39 J**
2-Btanone	NE	< *10*	< 2,500	< 100	< 50	< 50
2-Hexanone	50	< *5.0*	< 2,500 J	< 100	< 50	< 50
4-Methyl-2-Pentanone	50	< *5.0*	< 2,500 J	< 100	< 50	< 50
Acetone	NE	< *10*	< 2,500 J	< 100	< 50 B	< 50
Benzene	1	< *0.50*	< 35	< 1.4	< 0.7	< 0.7
Bromodichloromethane	50	< *1.0*	< 250	< 10	< 5	< 5
Bromoform	50	< *1.0*	< 250	< 10	< 5	< 5
Bromomethane	5	< *2.0*	< 250	< 10	< 5	< 5
Carbon Dislfide	60	< *2.0*	< 250	< 10	< 5	< 5
Carbon Tetrachloride	5	< *1.0*	< 250	< 10	< 5	< 5
Chlorobenzene	5	< *1.0*	< 250	< 10	< 5	< 5
Chlorodiflоromethane (Freon 22)	NE	< *5.0*	< 250	**0.8 J**	< 5	< 5
Chloroethane	5	< *1.0*	< 250	**1.1 J**	**0.79 J**	< 5
Chloroform	7	***0.76 J***	< 250	< 10	**0.96 J**	**0.62 J**
Chloromethane	5	< *1.0*	< 250	R	< 5	< 5
cis-1,2-Dichloroethene	5	***53.5***	**18,000 D**	**270**	**99**	**59**
cis-1,3-Dichloropropene	0.4	< *1.0*	< 250	< 10	< 5	< 5
Chlorodibromomethane	50	< *1.0*	< 250	< 10	< 5	< 5
Dichlorodiflоromethane (Freon 12)	5	< *2.0*	< 250	< 10	< 5	< 5
Ethylbenzene	5	< *1.0*	**62 J**	**0.78 J**	< 5	< 5
Methyl-Tert-Btylether	5	< *1.0*	--	--	**0.35 J**	**0.28 J**
Methylene Chloride	5	< *2.0*	< 250	< 10	< 5	< 5
Styrene (Monomer)	5	< *1.0*	< 250	< 10	< 5	< 5
Tetrachloroethene	5	< *1.0*	< 250	**0.82 J**	**0.73 J**	**0.59 J**
Tolene	5	< *1.0*	**2,400**	< 10 B	< 5	< 5
trans-1,2-Dichloroethene	5	< *1.0*	< 250	**1.3 J**	**0.65 J**	**0.41 J**
trans-1,3-Dichloropropene	0.4	< *1.0*	< 250	< 10	< 5	< 5
Trichloroethene	5	***21.9***	< 250	**310**	**66**	**50**
Trichlorotrifloroethane (Freon 113)	5	< *5.0*	< 250	< 10	< 5	< 5
Vinyl Chloride	2	< *1.0*	**6,300**	**58**	**54**	**20**
o-Xylene	5	< *1.0*	**110 J**	< 10 B	< 5	< 5
m,p-Xylene	5	< *1.0*	**190 J**	< 10 B	< 5	< 5
Total VOCs [3]		***78***	**27,000**	**660**	**230**	**140**
Project VOCs [4]		***77***	**27,000**	**650**	**230**	**130**
1,4-Dioxane		***2.64***	--	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-4-2 10/3/2012	BCPMW-4-2 6/5/2013	BCPMW-4-2 11/18/2014	BCPMW-4-2 10/8/2015	BCPMW-4-2 12/31/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	**0.23 J**	**0.22 J**	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5	< 5.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 5	< 5.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	5	**1.4 J**	**1.5 J**	< 1.0	**0.48 J**	**0.23 J**
1,1-Dichloroethene	5	**0.8 J**	**0.49 J**	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	0.6	**0.45 J**	**0.52 J**	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 5	< 5.0	< 1.0	< 1.0	< 1.0
2-Btanone	NE	< 50	< 50	< 10	< 10	< 10
2-Hexanone	50	< 50	< 50	< 5.0	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 5.0	< 5.0	< 5.0
Acetone	NE	< 50	**1.8 J**	< 10	< 10	< 10
Benzene	1	< 0.7	< 0.70	< 1.0	< 0.50	< 0.50
Bromodichloromethane	50	< 5	< 5.0	< 1.0	< 1.0	< 1.0
Bromoform	50	< 5	< 5.0	< 4.0	< 1.0	< 1.0
Bromomethane	5	< 5	< 5.0	< 2.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5	< 5.0	< 2.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5	< 5.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	5	< 5	< 5.0	< 1.0	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 5	< 5.0	< 1.0	< 1.0	< 1.0
Chloroform	7	**0.54 J**	**3.3 J**	**3.2**	**1.3**	**2.0**
Chloromethane	5	< 5	< 5.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	**70**	**47**	**8.6**	**29.7**	**13.3**
cis-1,3-Dichloropropene	0.4	< 5	< 5.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5	< 5.0	< 1.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5.0	< 5.0	< 2.0	< 2.0
Ethylbenzene	5	< 5	< 5.0	< 1.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	**0.29 J**	< 5.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	5	< 5	< 5.0	< 2.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5	< 5.0	< 5.0	< 1.0	< 1.0
Tetrachloroethene	5	**0.91 J**	**0.63 J**	< 1.0	< 1.0	< 1.0
Tolene	5	< 5	< 5.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	**0.5 J**	**0.40 J**	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5	< 5.0	< 1.0	< 1.0	< 1.0
Trichloroethene	5	**68**	**56**	**9.1**	**25.6**	**16.0**
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl Chloride	2	**9.5**	**9.7**	**1.6**	**3.7**	**0.96 J**
o-Xylene	5	< 5	< 5.0	< 5.0	< 1.0	< 1.0
m,p-Xylene	5	< 5	< 5.0	< 5.0	< 1.0	< 1.0
Total VOCs [3]		**150**	**120**	**23**	**61**	**32**
Project VOCs [4]		**150**	**120**	**19**	**59**	**30**
1,4-Dioxane		--	--	--	--	**0.858**

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

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Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-4-2 (REP) 12/31/2015	BCPMW-4-2 12/22/2016	BCPMW-4-2 (REP) 12/22/2016	BCPMW-4-2 7/31/2017
	NYSDEC SCGs				
1,1,1-Trichloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*
1,1,2-Trichloroethane	1	< 1.0	< 1.0	< 1.0	*< 1.0*
1,1-Dichloroethane	5	**0.24 J**	**0.22 J**	**0.23 J**	***0.25 J***
1,1-Dichloroethene	5	< 1.0	< 1.0	< 1.0	*< 1.0*
1,2-Dichloroethane	0.6	< 1.0	< 1.0	< 1.0	*< 1.0*
1,2-Dichloropropane	1	< 1.0	< 1.0	< 1.0	*< 1.0*
2-Btanone	NE	< 10	< 10	< 10	*< 10*
2-Hexanone	50	< 5.0	< 5.0	< 5.0	*< 5.0*
4-Methyl-2-Pentanone	50	< 5.0	< 5.0	< 5.0	*< 5.0*
Acetone	NE	< 10	< 10	< 10	*< 10*
Benzene	1	< 0.50	< 0.50	< 0.50	*< 0.50*
Bromodichloromethane	50	< 1.0	< 1.0	< 1.0	*< 1.0*
Bromoform	50	< 1.0	< 1.0	< 1.0	*< 1.0*
Bromomethane	5	< 2.0	< 2.0	< 2.0	*< 2.0*
Carbon Dislfide	60	< 2.0	< 2.0	< 2.0	*< 2.0*
Carbon Tetrachloride	5	< 1.0	< 1.0	< 1.0	*< 1.0*
Chlorobenzene	5	< 1.0	< 1.0	< 1.0	*< 1.0*
Chlorodifloromethane (Freon 22)	NE	< 5.0	< 5.0	< 5.0	*< 5.0*
Chloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*
Chloroform	7	**2.0**	**3.9**	**3.6**	***2.3***
Chloromethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*
cis-1,2-Dichloroethene	5	**13.2**	**16.9**	**17.4**	***19.9***
cis-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	*< 1.0*
Chlorodibromomethane	50	< 1.0	< 1.0	< 1.0	*< 1.0*
Dichlorodifloromethane (Freon 12)	5	< 2.0	< 2.0	< 2.0	*< 2.0*
Ethylbenzene	5	< 1.0	< 1.0	< 1.0	*< 1.0*
Methyl-Tert-Btylether	5	< 1.0	< 1.0	< 1.0	*< 1.0*
Methylene Chloride	5	< 2.0	< 2.0	< 2.0	*< 2.0*
Styrene (Monomer)	5	< 1.0	< 1.0	< 1.0	*< 1.0*
Tetrachloroethene	5	< 1.0	< 1.0	**0.27 J**	*< 1.0*
Tolene	5	< 1.0	< 1.0	< 1.0	*< 1.0*
trans-1,2-Dichloroethene	5	< 1.0	**0.62 J**	**0.58 J**	*< 1.0*
trans-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	*< 1.0*
Trichloroethene	5	**16.3**	**18.0**	**18.1**	***17.6***
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< 5.0	< 5.0	*< 5.0*
Vinyl Chloride	2	**0.92 J**	< 1.0	< 1.0	*< 1.0*
o-Xylene	5	< 1.0	< 1.0	< 1.0	*< 1.0*
m,p-Xylene	5	< 1.0	< 1.0	< 1.0	*< 1.0*
Total VOCs [3]		**33**	**40**	**40**	***40***
Project VOCs [4]		**31**	**36**	**37**	***38***
1,4-Dioxane		**0.982**	**2.34**	**2.40**	***1.35***

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-4-3 4/17/2009	BCPMW-4-3 12/1/2009	BCPMW-4-3 10/7/2010	BCPMW-4-3 10/28/2011	BCPMW-4-3 10/3/2012
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	1	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	5	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	0.6	< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	1	< 5	< 5	< 5	< 5	< 5
2-Btanone	NE	< 50	< 50	< 50	< 50	< 50
2-Hexanone	50	< 50 J	< 50	< 50	< 50	< 50
4-Methyl-2-Pentanone	50	< 50 J	< 50	< 50	< 50	< 50
Acetone	NE	< 50 J	< 50	< 50	< 50	< 50
Benzene	1	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50	< 5	< 5	< 5	< 5	< 5
Bromoform	50	< 5	< 5	< 5	< 5	< 5
Bromomethane	5	< 5	< 5	< 5	< 5	< 5
Carbon Dislfide	60	< 5	< 5	< 5	< 5	< 5
Carbon Tetrachloride	5	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	5	< 5	< 5	< 5	< 5	< 5
Chlorodiflоromethane (Freon 22)	NE	< 5	< 5	< 5	< 5	< 5
Chloroethane	5	< 5	< 5	< 5	< 5	< 5
Chloroform	7	**0.53 J**	**0.32 J**	< 5	< 5	**0.2 J**
Chloromethane	5	< 5	R	< 5	< 5	< 5
cis-1,2-Dichloroethene	5	**0.37 J**	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	50	< 5	< 5	< 5	< 5	< 5
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	5	< 5	< 5	< 5	< 5	< 5
Methyl-Tert-Btylether	5	--	--	< 5	< 5	< 5
Methylene Chloride	5	< 5	< 5	< 5	< 5	< 5
Styrene (Monomer)	5	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5	< 5	< 5	< 5	**0.27 J**	**0.3 J**
Tolene	5	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5	< 5	< 5
Trichloroethene	5	**0.56 J**	**0.51 J**	**0.41 J**	**0.74 J**	**0.84 J**
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	< 5	**0.38 J**	< 5
Vinyl Chloride	2	< 2	< 2	< 2	< 2	< 2
o-Xylene	5	< 5	< 5	< 5	< 5	< 5
m,p-Xylene	5	< 5	< 5	< 5	< 5	< 5
Total VOCs [3]		**1.5**	**0.83**	**0.41**	**1.4**	**1.3**
Project VOCs [4]		**0.93**	**0.51**	**0.41**	**1.0**	**1.1**
1,4-Dioxane		--	--	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-4-3 (REP) 6/5/2013	BCPMW-4-3 6/5/2013	BCPMW-4-3 11/17/2014	BCPMW-4-3 12/31/2015	BCPMW-4-3 12/22/2016
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
2-Btanone	NE	< 50	< 50	< 10	< 10	< 10
2-Hexanone	50	< 50	< 50	< 5.0	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 5.0	< 5.0	< 5.0
Acetone	NE	< 50	< 50	< 10	< 10	< 10
Benzene	1	< 0.70	< 0.70	< 1.0	< 0.50	< 0.50
Bromodichloromethane	50	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Bromoform	50	< 5.0	< 5.0	< 4.0	< 1.0	< 1.0
Bromomethane	5	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Chloroethane	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Chloroform	7	**0.97 J**	**1.1 J**	**0.58 J**	< 1.0	**0.52 J**
Chloromethane	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.4	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0
Ethylbenzene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	5	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0
Tetrachloroethene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Tolene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Trichloroethene	5	**0.34 J**	**0.39 J**	< 1.0	< 1.0	< 1.0
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Vinyl Chloride	2	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0
o-Xylene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
m,p-Xylene	5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
Total VOCs [3]		**1.3**	**1.5**	**0.58**	0	**0.52**
Project VOCs [4]		**0.34**	**0.39**	0	0	0
1,4-Dioxane		--	--	--	***0.263***	**0.776**

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-4-3 8/3/2017	BCPMW-5-1 4/23/2009	BCPMW-6-1 4/20/2009	BCPMW-6-1 12/4/2009	BCPMW-6-1 10/6/2010
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< *1.0*	< 100	< 5	< 5	< 100
1,1,2,2-Tetrachloroethane	5	< *1.0*	< 100	< 5	< 5	< 100
1,1,2-Trichloroethane	1	< *1.0*	< 100	< 5	< 5	< 100
1,1-Dichloroethane	5	< *1.0*	< 100	**0.3 J**	< 5	< 100
1,1-Dichloroethene	5	< *1.0*	**21 J**	< 5	< 5	< 100
1,2-Dichloroethane	0.6	< *1.0*	< 100	< 5	< 5	< 100
1,2-Dichloropropane	1	< *1.0*	< 100	< 5	< 5	< 100
2-Btanone	NE	< *10*	< 1,000	< 50	< 50	< 1,000
2-Hexanone	50	< *5.0*	< 1,000	< 50 J	< 50	< 1,000
4-Methyl-2-Pentanone	50	< *5.0*	< 1,000	< 50 J	< 50	< 1,000
Acetone	NE	< *10*	< 1,000	< 50 J	< 50	< 1,000
Benzene	1	< *0.50*	< 14	< 0.7	< 0.7	< 14
Bromodichloromethane	50	< *1.0*	< 100	< 5	< 5	< 100
Bromoform	50	< *1.0*	< 100	< 5	< 5	< 100
Bromomethane	5	< *2.0*	< 100	< 5	R	< 100
Carbon Dislfide	60	< *2.0*	< 100	< 5	< 5	< 100
Carbon Tetrachloride	5	< *1.0*	< 100	< 5	< 5	< 100
Chlorobenzene	5	< *1.0*	< 100	< 5	< 5	< 100
Chlorodifloromethane (Freon 22)	NE	< *5.0*	< 100	**4,500 D**	**1,700 EJ**	**10,000 D**
Chloroethane	5	< *1.0*	< 100	< 5	< 5	< 100
Chloroform	7	< *1.0*	< 100	**1.7 J**	**0.32 J**	< 100
Chloromethane	5	< *1.0*	< 100	< 5	R	< 100
cis-1,2-Dichloroethene	5	< *1.0*	**960**	**21**	**1.7 J**	< 100
cis-1,3-Dichloropropene	0.4	< *1.0*	< 100	< 5	< 5	< 100
Chlorodibromomethane	50	< *1.0*	< 100	< 5	< 5	< 100
Dichlorodifloromethane (Freon 12)	5	< *2.0*	< 100	< 5	< 5	< 100
Ethylbenzene	5	< *1.0*	**48 J**	< 5	< 5	< 100
Methyl-Tert-Btylether	5	< *1.0*	--	--	--	<100
Methylene Chloride	5	< *2.0*	< 100	< 5	< 5	< 100
Styrene (Monomer)	5	< *1.0*	< 100	< 5	< 5	< 100
Tetrachloroethene	5	< *1.0*	< 100	**0.34 J**	< 5	< 100
Tolene	5	< *1.0*	**2,700**	< 5	< 5	< 100
trans-1,2-Dichloroethene	5	< *1.0*	< 100	< 5	< 5	< 100
trans-1,3-Dichloropropene	0.4	< *1.0*	< 100	< 5	< 5	< 100
Trichloroethene	5	< *1.0*	**220**	**4.9 J**	**1.6 J**	< 100
Trichlorotrifloroethane (Freon 113)	5	< *5.0*	< 100	< 5	< 5	< 100
Vinyl Chloride	2	< *1.0*	**330**	< 2	< 2	< 40
o-Xylene	5	< *1.0*	**40 J**	< 5	< 5	< 100
m,p-Xylene	5	< *1.0*	**110**	< 5	< 5	< 100
Total VOCs [3]		*0*	**4,400**	**4,500**	**1,700**	**10,000**
Project VOCs [4]		0	**4,400**	**27**	**2.3**	0
1,4-Dioxane		***0.616***	--	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-6-1 10/31/2011	BCPMW-6-1 10/3/2012	BCPMW-6-1 6/7/2013	BCPMW-6-1 11/11/2014	BCPMW-6-1 12/23/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 250	< 100	< 13	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 250	< 100	< 13	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 250	< 100	< 13	< 1.0	< 1.0
1,1-Dichloroethane	5	< 250	< 100	< 13	< 1.0	< 1.0
1,1-Dichloroethene	5	< 250	< 100	< 13	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 250	< 100	< 13	< 1.0	< 1.0
1,2-Dichloropropane	1	< 250	< 100	< 13	< 1.0	< 1.0
2-Btanone	NE	< 2,500	< 1,000	< 130	< 10	< 10
2-Hexanone	50	< 2,500	< 1,000	< 130	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 2,500	< 1,000	< 130	< 5.0	< 5.0
Acetone	NE	< 2,500	< 1,000	< 130	< 10	< 10
Benzene	1	< 35	< 14	< 1.8	< 1.0	< 0.50
Bromodichloromethane	50	< 250	< 100	< 13	< 1.0	< 1.0
Bromoform	50	< 250	< 100	< 13	< 4.0	< 1.0
Bromomethane	5	< 250	< 100	< 13	< 2.0	< 2.0
Carbon Dislfide	60	< 250	< 100	< 13	< 2.0	< 2.0
Carbon Tetrachloride	5	< 250	< 100	< 13	< 1.0	< 1.0
Chlorobenzene	5	< 250	< 100	< 13	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	**7,100**	**2,100**	**400**	< 5.0	< 5.0
Chloroethane	5	< 250	< 100	< 13	< 1.0	< 1.0
Chloroform	7	< 250	< 100	< 13	< 1.0	< 1.0
Chloromethane	5	< 250	< 100	< 13	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	< 250	< 100	< 13	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.4	< 250	< 100	< 13	< 1.0	< 1.0
Chlorodibromomethane	50	< 250	< 100	< 13	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 250	< 100	< 13	< 5.0	< 2.0
Ethylbenzene	5	< 250	< 100	< 13	< 1.0	< 1.0
Methyl-Tert-Btylether	5	< 250	< 100	< 13	< 1.0	< 1.0
Methylene Chloride	5	< 250	< 100	< 13	< 2.0	< 2.0
Styrene (Monomer)	5	< 250	< 100	< 13	< 5.0	< 1.0
Tetrachloroethene	5	< 250	< 100	< 13	< 1.0	< 1.0
Tolene	5	< 250	< 100	< 13	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 250	< 100	< 13	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 250	< 100	< 13	< 1.0	< 1.0
Trichloroethene	5	< 250	< 100	< 13	< 1.0	< 1.0
Trichlorotrifloroethane (Freon 113)	5	< 250	< 100	< 13	< 5.0	< 5.0
Vinyl Chloride	2	< 100	< 40	< 5.0	< 1.0	< 1.0
o-Xylene	5	< 250	< 100	< 13	< 1.0	< 1.0
m,p-Xylene	5	< 250	< 100	< 13	< 1.0	< 1.0
Total VOCs [3]		**7,100**	**2,100**	**400**	0	0
Project VOCs [4]		0	0	0	0	0
1,4-Dioxane		--	--	--	--	< 0.10

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-6-1 12/27/2016	BCPMW-6-1 8/1/2017	BCPMW-6-2 5/8/2009	BCPMW-6-2 12/4/2009	BCPMW-6-2 10/6/2010
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< *1.0*	**< 5**	**0.78 J**	< 5
1,1,2,2-Tetrachloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,1,2-Trichloroethane	1	< 1.0	< *1.0*	< 5	< 5	< 5
1,1-Dichloroethane	5	< 1.0	< *1.0*	**0.37 J**	**0.65 J**	**0.47 J**
1,1-Dichloroethene	5	< 1.0	< *1.0*	< 5	**0.44 J**	< 5
1,2-Dichloroethane	0.6	< 1.0	< *1.0*	< 5	< 5	< 5
1,2-Dichloropropane	1	< 1.0	< *1.0*	< 5	< 5	< 5
2-Btanone	NE	< 10	< *10*	< 50	< 50	< 50
2-Hexanone	50	< 5.0	< *5.0*	< 50	< 50	< 50
4-Methyl-2-Pentanone	50	< 5.0	< *5.0*	< 50	< 50	< 50
Acetone	NE	< 10	< *10*	< 50	< 50	< 50
Benzene	1	< 0.50	< *0.50*	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50	< 1.0	< *1.0*	< 5	< 5	< 5
Bromoform	50	< 1.0	< *1.0*	< 5	< 5	< 5
Bromomethane	5	< 2.0	< *2.0*	< 5	R	< 5
Carbon Dislfide	60	< 2.0	< *2.0*	< 5	< 5	< 5
Carbon Tetrachloride	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorobenzene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorodiflоromethane (Freon 22)	NE	< 5.0	< *5.0*	< 5	< 5	< 5
Chloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chloroform	7	< 1.0	< *1.0*	**0.53 J**	< 5	**0.41 J**
Chloromethane	5	< 1.0	< *1.0*	< 5	R	< 5
cis-1,2-Dichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
cis-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorodibromomethane	50	< 1.0	< *1.0*	< 5	< 5	< 5
Dichlorodiflоromethane (Freon 12)	5	< 2.0	< *2.0*	< 5	< 5	< 5
Ethylbenzene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Methyl-Tert-Btylether	5	< 1.0	< *1.0*	--	--	<5
Methylene Chloride	5	< 2.0	< *2.0*	< 5	< 5	< 5
Styrene (Monomer)	5	< 1.0	< *1.0*	< 5	< 5	< 5
Tetrachloroethene	5	< 1.0	< *1.0*	< 5	**0.79 J**	**2.1 J**
Tolene	5	< 1.0	< *1.0*	< 5	< 5	< 5
trans-1,2-Dichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
trans-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 5	< 5
Trichloroethene	5	< 1.0	< *1.0*	< 5	**0.45 J**	< 5
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< *5.0*	< 5	< 5	< 5
Vinyl Chloride	2	< 1.0	< *1.0*	< 2	< 2	< 2
o-Xylene	5	< 1.0	< *1.0*	< 5	< 5	< 5
m,p-Xylene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Total VOCs [3]		0	*0*	**0.9**	**3.1**	**2.98**
Project VOCs [4]		0	*0*	**0.37**	**3.1**	**2.59**
1,4-Dioxane		< 0.200	< *0.200*	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-6-2 10/31/2011	BCPMW-6-2 10/3/2012	BCPMW-6-2 6/5/2013	BCPMW-6-2 11/11/2014	BCPMW-6-2 12/23/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethane	5	**0.41 J**	**0.23 J**	**0.31 J**	**0.41 J**	< 1.0
1,1-Dichloroethene	5	**0.3 J**	< 5	< 5.0 J	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
2-Btanone	NE	< 50	< 50	< 50	< 10	< 10
2-Hexanone	50	< 50	< 50	< 50	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 5.0	< 5.0
Acetone	NE	< 50	< 50	< 50	< 10	< 10
Benzene	1	< 0.7	< 0.7	< 0.70 J	< 1.0	< 0.50
Bromodichloromethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Bromoform	50	< 5	< 5	< 5.0	< 4.0	< 1.0
Bromomethane	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorobenzene	5	< 5	< 5	< 5.0 J	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5	**0.64 J**	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chloroform	7	**0.3 J**	**0.38 J**	**0.93 J**	**0.30 J**	< 1.0
Chloromethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5.0	< 5.0	< 2.0
Ethylbenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	**0.33 J**	**0.24 J**	**0.36 J**	**0.26 J**	< 1.0
Methylene Chloride	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5	< 5	< 5.0	< 5.0	< 1.0
Tetrachloroethene	5	**1.8 J**	**1.6 J**	**1.3 J**	**0.35 J**	< 1.0
Tolene	5	< 5	< 5	< 5.0 J	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Trichloroethene	5	< 5	< 5	< 5.0 J	< 1.0	< 1.0
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Vinyl Chloride	2	< 2	< 2	< 2.0	< 1.0	< 1.0
o-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
m,p-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Total VOCs [3]		**3.1**	**3.1**	**2.9**	**1.3**	0
Project VOCs [4]		**2.51**	**1.83**	**1.6**	**0.76**	0
1,4-Dioxane		--	--	--	--	< 0.10

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-6-2 12/27/2016	BCPMW-6-2 8/2/2017	BCPMW-7-1 4/20/2009	BCPMW-7-1 12/1/2009	BCPMW-7-1 10/7/2010
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,1,2-Trichloroethane	1	< 1.0	< *1.0*	< 5	< 5	< 5
1,1-Dichloroethane	5	< 1.0	***0.21 J***	< 5	< 5	< 5
1,1-Dichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,2-Dichloroethane	0.6	< 1.0	< *1.0*	< 5	< 5	< 5
1,2-Dichloropropane	1	< 1.0	< *1.0*	< 5	< 5	< 5
2-Btanone	NE	< 10	< *10*	< 50	< 50	< 50
2-Hexanone	50	< 5.0	< *5.0*	< 50 J	< 50	< 50
4-Methyl-2-Pentanone	50	< 5.0	< *5.0*	< 50 J	< 50	< 50
Acetone	NE	< 10	< *10*	< 50	< 50	< 50
Benzene	1	< 0.50	< *0.50*	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50	< 1.0	< *1.0*	< 5	< 5	< 5
Bromoform	50	< 1.0	< *1.0*	< 5	< 5	< 5
Bromomethane	5	< 2.0	< *2.0*	< 5	R	< 5
Carbon Dislfide	60	< 2.0	< *2.0*	< 5	< 5	< 5
Carbon Tetrachloride	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorobenzene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorodifloromethane (Freon 22)	NE	< 5.0	< *5.0*	**2.6 J**	**1.5 J**	**5.2**
Chloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chloroform	7	< 1.0	< *1.0*	< 5	< 5	< 5
Chloromethane	5	< 1.0	< *1.0*	< 5	R	< 5
cis-1,2-Dichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
cis-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorodibromomethane	50	< 1.0	< *1.0*	< 5	< 5	< 5
Dichlorodifloromethane (Freon 12)	5	< 2.0	< *2.0*	< 5	< 5	< 5
Ethylbenzene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Methyl-Tert-Btylether	5	< 1.0	< *1.0*	--	--	< 5
Methylene Chloride	5	< 2.0	< *2.0*	< 5	< 5	< 5
Styrene (Monomer)	5	< 1.0	< *1.0*	< 5	< 5	< 5
Tetrachloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Tolene	5	< 1.0	< *1.0*	< 5	< 5	< 5
trans-1,2-Dichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
trans-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 5	< 5
Trichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< *5.0*	< 5	< 5	< 5
Vinyl Chloride	2	< 1.0	< *1.0*	< 2	< 2	< 2
o-Xylene	5	< 1.0	< *1.0*	< 5	< 5	< 5
m,p-Xylene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Total VOCs [3]		0	***0.21***	**2.6**	**1.5**	**5.2**
Project VOCs [4]		0	***0.21***	0	0	0
1,4-Dioxane		< 0.200	< *0.100*	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-7-1 11/1/2011	BCPMW-7-1 10/4/2012	BCPMW-7-1 6/7/2013	BCPMW-7-1 11/18/2014	BCPMW-7-1 12/22/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
2-Btanone	NE	< 50	< 50	< 50	< 10 J	< 10
2-Hexanone	50	< 50	< 50	< 50	< 5.0 J	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 5.0	< 5.0
Acetone	NE	< 50	< 50	< 50	< 10 J	< 10
Benzene	1	< 0.7	< 0.7	< 0.70	< 1.0	< 0.50
Bromodichloromethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Bromoform	50	< 5	< 5	< 5.0	< 4.0	< 1.0
Bromomethane	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorobenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	**9.2**	**3.6 J**	**2.5 J**	< 5.0	< 5.0
Chloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chloroform	7	< 5	**0.37 J**	**0.29 J**	**0.25 J**	< 1.0
Chloromethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5.0	< 5.0	< 2.0
Ethylbenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	**0.22 J**	**0.26 J**	**0.22 J**	< 1.0	< 1.0
Methylene Chloride	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5	< 5	< 5.0	< 5.0	< 1.0
Tetrachloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Tolene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Trichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Vinyl Chloride	2	< 2	< 2	< 2.0	< 1.0	< 1.0
o-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
m,p-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Total VOCs [3]		**9.4**	**4.2**	**3.0**	**0.25**	0
Project VOCs [4]		**0.2**	0	0	0	0
1,4-Dioxane		--	--	--	--	< 0.10

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	BCPMW-7-1 12/28/2016	BCPMW-7-1 8/1/2017	MW-200-1 4/29/2009	MW-200-1 12/2/2009	MW-200-1 10/5/2010
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,1,2-Trichloroethane	1	< 1.0	< *1.0*	< 5	< 5	< 5
1,1-Dichloroethane	5	< 1.0	< *1.0*	**0.79 J**	< 5	< 5
1,1-Dichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,2-Dichloroethane	0.6	< 1.0	< *1.0*	< 5	< 5	< 5
1,2-Dichloropropane	1	< 1.0	< *1.0*	< 5	< 5	< 5
2-Btanone	NE	< 10	< *10*	< 50	< 50	< 50
2-Hexanone	50	< 5.0	< *5.0*	< 50	< 50	< 50
4-Methyl-2-Pentanone	50	< 5.0	< *5.0*	< 50	< 50	< 50
Acetone	NE	< 10	< *10*	< 50 B	< 50	< 50
Benzene	1	< 0.50	< *0.50*	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50	< 1.0	< *1.0*	< 5	< 5	< 5
Bromoform	50	< 1.0	< *1.0*	< 5	< 5	< 5
Bromomethane	5	< 2.0	< *2.0*	< 5	R	< 5
Carbon Dislfide	60	< 2.0	< *2.0*	< 5	< 5	< 5
Carbon Tetrachloride	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorobenzene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorodiflоromethane (Freon 22)	NE	< 5.0	< *5.0*	< 5	< 5	< 5
Chloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chloroform	7	< 1.0	< *1.0*	**2.3 J**	**2.3 J**	**0.5 J**
Chloromethane	5	< 1.0	< *1.0*	< 5	R	< 5
cis-1,2-Dichloroethene	5	< 1.0	< *1.0*	**38**	**5.7**	**3.5 J**
cis-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorodibromomethane	50	< 1.0	< *1.0*	< 5	< 5	< 5
Dichlorodiflоromethane (Freon 12)	5	< 2.0	< *2.0*	< 5	< 5	< 5
Ethylbenzene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Methyl-Tert-Btylether	5	< 1.0	< *1.0*	--	--	< 5
Methylene Chloride	5	< 2.0	< *2.0*	< 5	< 5	< 5
Styrene (Monomer)	5	< 1.0	< *1.0*	< 5	< 5	< 5
Tetrachloroethene	5	< 1.0	< *1.0*	**0.54 J**	< 5	< 5
Tolene	5	< 1.0	< *1.0*	< 5	< 5	< 5
trans-1,2-Dichloroethene	5	< 1.0	< *1.0*	**0.3 J**	< 5	< 5
trans-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 5	< 5
Trichloroethene	5	< 1.0	< *1.0*	**34**	**12**	**7**
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< *5.0*	< 5	< 5	< 5
Vinyl Chloride	2	< 1.0	< *1.0*	< 2	< 2	< 2
o-Xylene	5	< 1.0	< *1.0*	< 5	< 5	< 5
m,p-Xylene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Total VOCs [3]		0	*0*	**770**	**20**	**11**
Project VOCs [4]		0	*0*	**74**	**18**	**11**
1,4-Dioxane		< 0.200	< *0.200*	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

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Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-200-1 11/3/2011	MW-200-1 10/4/2012	MW-200-1 5/31/2013	MW-200-1 11/18/2014	MW-200-1 12/24/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
2-Btanone	NE	< 50	< 50	< 50	< 10	< 10
2-Hexanone	50	< 50	< 50	< 50	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 5.0	< 5.0
Acetone	NE	< 50	< 50	< 50	< 10	< 10
Benzene	1	< 0.7	< 0.7	< 0.70	< 1.0	< 0.50
Bromodichloromethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Bromoform	50	< 5	< 5	< 5.0	< 4.0	< 1.0
Bromomethane	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorobenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5	< 5	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chloroform	7	**0.21 J**	< 5	< 5.0	< 1.0	< 1.0
Chloromethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	**11**	**1.5 J**	**0.41 J**	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5.0	< 5.0	< 2.0
Ethylbenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Methylene Chloride	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5	< 5	< 5.0	< 5.0	< 1.0
Tetrachloroethene	5	**0.43 J**	< 5	< 5.0	< 1.0	< 1.0
Tolene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Trichloroethene	5	**20**	**3.8 J**	**1.3 J**	< 1.0	< 1.0
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Vinyl Chloride	2	< 2	< 2	< 2.0	< 1.0	< 1.0
o-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
m,p-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Total VOCs [3]		**32**	**5.3**	**1.7**	0	0
Project VOCs [4]		**31**	**5.3**	**1.7**	0	0
1,4-Dioxane		--	--	--	--	**0.309**

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-200-1 1/17/2017	MW-200-1 8/7/2017	MW-201-1 5/1/2009	MW-201-1 12/2/2009	MW-201-1 10/5/2010
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< *1.0*	**5.5 J**	**3.3 J**	< 50
1,1,2,2-Tetrachloroethane	5	< 1.0	< *1.0*	< 25	< 50	< 50
1,1,2-Trichloroethane	1	< 1.0	< *1.0*	< 25	< 50	< 50
1,1-Dichloroethane	5	< 1.0	< *1.0*	**10 J**	**9 J**	**14 J**
1,1-Dichloroethene	5	< 1.0	< *1.0*	**7.9 J**	**8.1 J**	**6.9 J**
1,2-Dichloroethane	0.6	< 1.0	< *1.0*	< 25	< 50	< 50
1,2-Dichloropropane	1	< 1.0	< *1.0*	< 25	< 50	< 50
2-Btanone	NE	< 10	< *10*	< 250	< 500	< 500
2-Hexanone	50	< 5.0	< *5.0*	< 250	< 500	< 500
4-Methyl-2-Pentanone	50	< 5.0	< *5.0*	< 250	< 500	< 500
Acetone	NE	< 10	< *10*	< 250 B	< 500	< 500
Benzene	1	< 0.50	< *0.50*	< 3.5	< 7	< 7
Bromodichloromethane	50	< 1.0	< *1.0*	< 25	< 50	< 50
Bromoform	50	< 1.0	< *1.0*	< 25	< 50	< 50
Bromomethane	5	< 2.0	< *2.0*	< 25	< 50	< 50
Carbon Dislfide	60	< 2.0	< *2.0*	< 25	< 50	< 50
Carbon Tetrachloride	5	< 1.0	< *1.0*	< 25	< 50	< 50
Chlorobenzene	5	< 1.0	< *1.0*	< 25	< 50	< 50
Chlorodiflоromethane (Freon 22)	NE	< 5.0	< *5.0*	< 25	< 50	< 50
Chloroethane	5	< 1.0	< *1.0*	< 25	< 50	< 50
Chloroform	7	< 1.0	< *1.0*	< 25	< 50	**4.2 J**
Chloromethane	5	< 1.0	< *1.0*	< 25	R	< 50
cis-1,2-Dichloroethene	5	< 1.0	< *1.0*	**970 D**	**1,300**	**3,900 D**
cis-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 25	< 50	< 50
Chlorodibromomethane	50	< 1.0	< *1.0*	< 25	< 50	< 50
Dichlorodiflоromethane (Freon 12)	5	< 2.0	< *2.0*	< 25	< 50	< 50
Ethylbenzene	5	< 1.0	< *1.0*	< 25	< 50	< 50
Methyl-Tert-Btylether	5	< 1.0	< *1.0*	--	--	<50
Methylene Chloride	5	< 2.0	< *2.0*	< 25	< 50	< 50
Styrene (Monomer)	5	< 1.0	< *1.0*	< 25	< 50	< 50
Tetrachloroethene	5	< 1.0	< *1.0*	< 25	< 50	< 50
Tolene	5	< 1.0	< *1.0*	< 25	< 50	< 50
trans-1,2-Dichloroethene	5	< 1.0	< *1.0*	**2.7 J**	**3.5 J**	**6.7 J**
trans-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 25	< 50	< 50
Trichloroethene	5	< 1.0	< *1.0*	**160**	**230**	**72**
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< *5.0*	< 25	< 50	< 50
Vinyl Chloride	2	< 1.0	< *1.0*	< 10	**38**	**820**
o-Xylene	5	< 1.0	< *1.0*	< 25	< 50	**7.2 J**
m,p-Xylene	5	< 1.0	< *1.0*	< 25	< 50	< 50
Total VOCs [3]		0	*0*	**1,200**	**1,600**	**4,800**
Project VOCs [4]		0	*0*	**1,200**	**1,600**	**4,800**
1,4-Dioxane		**0.725**	***0.537***	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-201-1 11/3/2011	MW-201-1 10/4/2012	MW-201-1 5/31/2013	MW-201-1 11/20/2014	MW-201-1 12/24/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethane	5	**0.51 J**	**1.2 J**	< 5.0	< 1.0	< 1.0
1,1-Dichloroethene	5	**0.21 J**	**0.65 J**	< 5.0	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
2-Btanone	NE	< 50	< 50	< 50	< 10	< 10
2-Hexanone	50	< 50	< 50	< 50	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 5.0	< 5.0
Acetone	NE	< 50	< 50	< 50	< 10	< 10
Benzene	1	< 0.7	< 0.7	< 0.70	< 1.0	< 1.0
Bromodichloromethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Bromoform	50	< 5	< 5	< 5.0	< 4.0	< 4.0
Bromomethane	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorobenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5	< 5	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chloroform	7	**3.2 J**	**2.9 J**	**0.49 J**	< 1.0	**0.43**
Chloromethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	**61**	**180 D**	**7.9**	**3.9**	**2**
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Ethylbenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	**0.75 J**	**0.22 J**	< 5.0	< 1.0	< 1.0
Methylene Chloride	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Tetrachloroethene	5	**0.24 J**	**0.24 J**	< 5.0	< 1.0	< 1.0
Tolene	5	< 5 J	< 5	< 5.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 5	**0.59 J**	< 5.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Trichloroethene	5	**20**	**20**	**13**	**6.3**	**2.3**
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Vinyl Chloride	2	< 2	**13**	< 2.0	< 1.0	< 1.0
o-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
m,p-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Total VOCs [3]		**86**	**220**	**21**	**10**	**4.7**
Project VOCs [4]		**82**	**220**	**21**	**10**	**4.3**
1,4-Dioxane		--	--	--	--	0.262

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-201-1 1/18/2017	MW-201-1 8/8/2017	MW-202-1 5/1/2009	MW-202-1 12/2/2009	MW-202-1 10/6/2010
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,1,2-Trichloroethane	1	< 1.0	< *1.0*	< 5	< 5	< 5
1,1-Dichloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,1-Dichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
1,2-Dichloroethane	0.6	< 1.0	< *1.0*	< 5	< 5	< 5
1,2-Dichloropropane	1	< 1.0	< *1.0*	< 5	< 5	< 5
2-Btanone	NE	< 10	< *10*	< 50	< 50	< 50
2-Hexanone	50	< 5.0	< *5.0*	< 50	< 50	< 50
4-Methyl-2-Pentanone	50	< 5.0	< *5.0*	< 50	< 50	< 50
Acetone	NE	< 10	< *10*	< 50	< 50	< 50
Benzene	1	< 0.50	< *0.50*	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50	< 1.0	< *1.0*	< 5	< 5	< 5
Bromoform	50	< 1.0	< *1.0*	< 5	< 5	< 5
Bromomethane	5	< 2.0	< *2.0*	< 5	< 5	< 5
Carbon Dislfide	60	< 2.0	< *2.0*	< 5	< 5	< 5
Carbon Tetrachloride	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorobenzene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorodiflоromethane (Freon 22)	NE	< 5.0	< *5.0*	< 5	< 5	**0.61 J**
Chloroethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
Chloroform	7	< 1.0	< *1.0*	**6.2**	**6.7**	**0.93 J**
Chloromethane	5	< 1.0	< *1.0*	< 5	< 5	< 5
cis-1,2-Dichloroethene	5	**2.0**	***1.5***	**0.64 J**	**0.58 J**	< 5
cis-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 5	< 5
Chlorodibromomethane	50	< 1.0	< *1.0*	< 5	< 5	< 5
Dichlorodiflоromethane (Freon 12)	5	< 2.0	< *2.0*	< 5	< 5	< 5
Ethylbenzene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Methyl-Tert-Btylether	5	< 1.0	< *1.0*	--	--	< 5
Methylene Chloride	5	< 2.0	< *2.0*	< 5	< 5	< 5
Styrene (Monomer)	5	< 1.0	< *1.0*	< 5	< 5	< 5
Tetrachloroethene	5	< 1.0	< *1.0*	< 5	< 5	**0.48 J**
Tolene	5	< 1.0	< *1.0*	< 5	< 5	< 5
trans-1,2-Dichloroethene	5	< 1.0	< *1.0*	< 5	< 5	< 5
trans-1,3-Dichloropropene	0.4	< 1.0	< *1.0*	< 5	< 5	< 5
Trichloroethene	5	**1.6**	***1.3***	**7.5**	**9.3**	**2.4 J**
Trichlorotrifloroethane (Freon 113)	5	< 5.0	< *5.0*	< 5	< 5	**0.43 J**
Vinyl Chloride	2	< 1.0	< *1.0*	< 2	< 2	< 2
o-Xylene	5	< 1.0	< *1.0*	< 5	< 5	< 5
m,p-Xylene	5	< 1.0	< *1.0*	< 5	< 5	< 5
Total VOCs [3]		**3.6**	***2.8***	**14**	**17**	**5.0**
Project VOCs [4]		**3.6**	***2.8***	**8.1**	**9.9**	**2.9**
1,4-Dioxane		0.655	***0.676***	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-202-1 11/3/2011	MW-202-1 10/4/2012	MW-202-1 5/30/2013	MW-202-1 11/19/2014	MW-202-1 (REP) 11/19/2014
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	**0.32 J**	**0.74 J**	**0.93 J**	**0.70 J**	**0.69 J**
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
1,1-Dichloroethane	5	**0.86 J**	**2.1 J**	**3.0 J**	**2.4**	**2.2**
1,1-Dichloroethene	5	**0.72 J**	**1.9 J**	**2.3 J**	**1.7**	**1.8**
1,2-Dichloroethane	0.6	< 5	< 5	< 5.0	< 1.0	< 1.0
1,2-Dichloropropane	1	< 5	< 5	< 5.0	< 1.0	< 1.0
2-Btanone	NE	< 50	< 50	< 50	< 10	< 10
2-Hexanone	50	< 50	< 50	< 50	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 5.0	< 5.0
Acetone	NE	< 50	< 50	< 50	< 10	< 10
Benzene	1	< 0.7	< 0.7	< 0.70	< 1.0	< 1.0
Bromodichloromethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Bromoform	50	< 5	< 5	< 5.0	< 4.0	< 4.0
Bromomethane	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Dislfide	60	< 5	< 5	< 5.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorobenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	**0.21 J**	< 5	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Chloroform	7	< 5	< 5	< 5.0	< 1.0	< 1.0
Chloromethane	5	< 5	< 5	< 5.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	< 5	**0.4 J**	**0.63 J**	**1.1**	**1.0**
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5	< 5	< 5.0	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Ethylbenzene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Methyl-Tert-Btylether	5	**0.37 J**	< 5	< 5.0	< 1.0	< 1.0
Methylene Chloride	5	< 5	< 5	< 5.0	< 2.0	< 2.0
Styrene (Monomer)	5	< 5	< 5	< 5.0	< 5.0	< 5.0
Tetrachloroethene	5	**0.92 J**	**1.7 J**	**2.8 J**	**2.3**	**2.4**
Tolene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5.0	< 1.0	< 1.0
Trichloroethene	5	**0.78 J**	**1.2 J**	**1.6 J**	**2.1**	**2.0**
Trichlorotrifloroethane (Freon 113)	5	**0.44 J**	**0.76 J**	**1.4 J**	**1.8 J**	**1.8 J**
Vinyl Chloride	2	< 2	< 2	< 2.0	< 1.0	< 1.0
o-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
m,p-Xylene	5	< 5	< 5	< 5.0	< 1.0	< 1.0
Total VOCs [3]		**5.0**	**8.8**	**13**	**12**	**12**
Project VOCs [4]		**3.6**	**8.0**	**11**	**10**	**10**
1,4-Dioxane		--	--	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

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Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-202-1 12/31/2015	MW-202-1 1/19/2017	MW-202-1 8/9/2017	MW-203-1 5/1/2009	MW-203-1 12/2/2009
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,1,2-Trichloroethane	1	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,1-Dichloroethane	5	**2.4**	**0.66 J**	***0.80 J***	< 5	< 5
1,1-Dichloroethene	5	**1.5**	**0.33 J**	*< 1.0*	< 5	< 5
1,2-Dichloroethane	0.6	< 1.0	< 1.0	*< 1.0*	< 5	< 5
1,2-Dichloropropane	1	< 1.0	< 1.0	*< 1.0*	< 5	< 5
2-Btanone	NE	< 10	< 10	*< 10*	< 50	< 50
2-Hexanone	50	< 5.0	< 5.0	*< 5.0*	< 50	< 50
4-Methyl-2-Pentanone	50	< 5.0	< 5.0	*< 5.0*	< 50	< 50
Acetone	NE	< 10	< 10	*< 10*	< 50 B	< 50
Benzene	1	< 0.50	< 0.50	*< 0.50*	< 0.7	< 0.7
Bromodichloromethane	50	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Bromoform	50	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Bromomethane	5	< 2.0	< 2.0	*< 2.0*	< 5	< 5
Carbon Dislfide	60	< 2.0	< 2.0	*< 2.0*	< 5	< 5
Carbon Tetrachloride	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Chlorobenzene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Chlorodiflоromethane (Freon 22)	NE	< 5.0	< 5.0	*< 5.0*	**73**	**17**
Chloroethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Chloroform	7	< 1.0	< 1.0	*< 1.0*	**7.9**	**2.6 J**
Chloromethane	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
cis-1,2-Dichloroethene	5	**1.2**	**0.45 J**	*< 1.0*	**1.6 J**	**0.83 J**
cis-1,3-Dichloropropene	0.4	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Chlorodibromomethane	50	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Dichlorodiflоromethane (Freon 12)	5	< 2.0	< 2.0	*< 2.0*	< 5	< 5
Ethylbenzene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Methyl-Tert-Btylether	5	< 1.0	< 1.0	*< 1.0*	--	--
Methylene Chloride	5	< 2.0	< 2.0	*< 2.0*	< 5	< 5
Styrene (Monomer)	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Tetrachloroethene	5	**2.5**	**1.3**	***1.4***	< 5	< 5
Tolene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
trans-1,2-Dichloroethene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
trans-1,3-Dichloropropene	0.4	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Trichloroethene	5	**1.3**	**0.68 J**	***0.96 J***	**1.3 J**	**0.7 J**
Trichlorotrifloroethane (Freon 113)	5	**1.1 J**	< 5.0	*< 5.0*	< 5	< 5
Vinyl Chloride	2	< 1.0	< 1.0	*< 1.0*	< 2	< 2
o-Xylene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
m,p-Xylene	5	< 1.0	< 1.0	*< 1.0*	< 5	< 5
Total VOCs [3]		**10**	**3.4**	***3.2***	**84**	**21**
Project VOCs [4]		**8.9**	**3.4**	***3.2***	**2.9**	**1.5**
1,4-Dioxane		**0.404**	**0.396**	***0.518***	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-203-1 10/5/2010	MW-203-1 11/1/2011	MW-203-1 10/3/2012	MW-203-1 (REP) 5/31/2013	MW-203-1 5/31/2013
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 5	< 5	**0.26 J**	< 5.0	**0.25 J**
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5	< 5.0	< 5.0
1,1,2-Trichloroethane	1	< 5	< 5	< 5	< 5.0	< 5.0
1,1-Dichloroethane	5	< 5	**0.32 J**	**1 J**	**0.98 J**	**1.1 J**
1,1-Dichloroethene	5	< 5	< 5	**0.44 J**	**0.47 J**	**0.46 J**
1,2-Dichloroethane	0.6	< 5	< 5	< 5	< 5.0	< 5.0
1,2-Dichloropropane	1	< 5	< 5	< 5	< 5.0	< 5.0
2-Btanone	NE	< 50	< 50	< 50	< 50	< 50
2-Hexanone	50	< 50	< 50	< 50	< 50	< 50
4-Methyl-2-Pentanone	50	< 50	< 50	< 50	< 50	< 50
Acetone	NE	< 50 B	< 50	< 50	< 50	< 50
Benzene	1	< 0.7	< 0.7	< 0.7	< 0.70	< 0.70
Bromodichloromethane	50	< 5	< 5	< 5	< 5.0	< 5.0
Bromoform	50	< 5	< 5	< 5	< 5.0	< 5.0
Bromomethane	5	< 5	< 5	< 5	< 5.0	< 5.0
Carbon Dislfide	60	< 5	< 5	< 5	< 5.0	< 5.0
Carbon Tetrachloride	5	< 5	< 5	< 5	< 5.0	< 5.0
Chlorobenzene	5	< 5	< 5	< 5	< 5.0	< 5.0
Chlorodiflоromethane (Freon 22)	NE	**29**	**8.9**	**3.6 J**	**3.5 J**	**3.2 J**
Chloroethane	5	< 5	< 5	< 5	< 5.0	< 5.0
Chloroform	7	**1.5 J**	**0.68 J**	**0.36 J**	**0.28 J**	**0.27 J**
Chloromethane	5	< 5	< 5	< 5	< 5.0	< 5.0
cis-1,2-Dichloroethene	5	**0.97 J**	**1.4 J**	**0.62 J**	**0.39 J**	**0.24 J**
cis-1,3-Dichloropropene	0.4	< 5	< 5	< 5	< 5.0	< 5.0
Chlorodibromomethane	50	< 5	< 5	< 5	< 5.0	< 5.0
Dichlorodiflоromethane (Freon 12)	5	< 5	< 5	< 5	< 5.0	< 5.0
Ethylbenzene	5	< 5	< 5	< 5	< 5.0	< 5.0
Methyl-Tert-Btylether	5	**0.88 J**	**0.41 J**	**0.21 J**	**0.24 J**	**0.24 J**
Methylene Chloride	5	< 5	< 5	< 5	< 5.0	< 5.0
Styrene (Monomer)	5	< 5	< 5	< 5	< 5.0	< 5.0
Tetrachloroethene	5	< 5	**0.35 J**	**0.59 J**	**0.93 J**	**1.1 J**
Tolene	5	< 5	< 5	< 5	< 5.0	< 5.0
trans-1,2-Dichloroethene	5	< 5	< 5	< 5	< 5.0	< 5.0
trans-1,3-Dichloropropene	0.4	< 5	< 5	< 5	< 5.0	< 5.0
Trichloroethene	5	**1.6 J**	**2.9 J**	**1.8 J**	**2.5 J**	**2.7 J**
Trichlorotrifloroethane (Freon 113)	5	< 5	< 5	**1.1 J**	**1.1 J**	**1.4 J**
Vinyl Chloride	2	< 2	< 2	< 2	< 2.0	< 2.0
o-Xylene	5	< 5	< 5	< 5	< 5.0	< 5.0
m,p-Xylene	5	< 5	< 5	< 5	< 5.0	< 5.0
Total VOCs [3]		**34**	**15**	**10**	**10**	**11**
Project VOCs [4]		**2.6**	**5.0**	**4.7**	**5.3**	**5.9**
1,4-Dioxane		--	--	--	--	--

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-203-1 11/19/2014	MW-203-1 12/30/2015	MW-203-1 1/20/2017	MW-203-1 *8/10/2017*	MW-204-1 12/24/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
1,1,2-Trichloroethane	1	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
1,1-Dichloroethane	5	**0.60 J**	**0.38 J**	**0.30 J**	***0.34 J***	< 1.0
1,1-Dichloroethene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
1,2-Dichloroethane	0.6	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
1,2-Dichloropropane	1	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
2-Btanone	NE	< 10	< 10	< 10	*< 10*	< 10
2-Hexanone	50	< 5.0	< 5.0	< 5.0	*< 5.0*	< 5.0
4-Methyl-2-Pentanone	50	< 5.0	< 5.0	< 5.0	*< 5.0*	< 5.0
Acetone	NE	< 10	< 10	< 10	*< 10*	< 10
Benzene	1	< 1.0	< 0.50	< 0.50	*< 0.50*	< 0.50
Bromodichloromethane	50	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Bromoform	50	< 4.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Bromomethane	5	< 2.0	< 2.0	< 2.0	*< 2.0*	< 2.0
Carbon Dislfide	60	< 2.0	< 2.0	< 2.0	*< 2.0*	< 2.0
Carbon Tetrachloride	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Chlorobenzene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5.0	**1.9 J**	**2.0 J**	***3.3 J***	< 5.0
Chloroethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Chloroform	7	**0.34 J**	**0.32 J**	**0.27 J**	***0.35 J***	**0.50 J**
Chloromethane	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
cis-1,2-Dichloroethene	5	**0.39 J**	**0.35 J**	**0.92 J**	***0.55 J***	**2.5**
cis-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Chlorodibromomethane	50	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 5.0	< 2.0	< 2.0	*< 2.0*	< 2.0
Ethylbenzene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Methyl-Tert-Btylether	5	**1.1**	**0.58 J**	< 1.0	*< 1.0*	< 1.0
Methylene Chloride	5	< 2.0	< 2.0	< 2.0	*< 2.0*	< 2.0
Styrene (Monomer)	5	< 5.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Tetrachloroethene	5	**1.1**	**1.2**	**0.76 J**	***1.2***	< 1.0
Tolene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
trans-1,2-Dichloroethene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
trans-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Trichloroethene	5	**3.2**	**2.5**	**3.9**	***2.9***	**4.0**
Trichlorotrifloroethane (Freon 113)	5	< 5.0	**0.56 J**	< 5.0	*< 5.0*	< 5.0
Vinyl Chloride	2	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
o-Xylene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
m,p-Xylene	5	< 1.0	< 1.0	< 1.0	*< 1.0*	< 1.0
Total VOCs [3]		**6.7**	**7.8**	**8.2**	***8.6***	**7.0**
Project VOCs [4]		**5.2**	**4.4**	**5.9**	***5.0***	**6.5**
1,4-Dioxane		--	**0.134**	**0.401**	***0.262***	< 0.11

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-204-1 1/17/2017	MW-204-1 8/7/2017	MW-204-1 (REP) 8/7/2017	MW-205-1 12/29/2015	MW-205-1 1/18/2017
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
1,1,2-Trichloroethane	1	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
1,1-Dichloroethane	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
1,1-Dichloroethene	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
1,2-Dichloroethane	0.6	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
1,2-Dichloropropane	1	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
2-Btanone	NE	< 10	*< 10*	*< 10*	< 10	< 10
2-Hexanone	50	< 5.0	*< 5.0*	*< 5.0*	< 5.0	< 5.0
4-Methyl-2-Pentanone	50	< 5.0	*< 5.0*	*< 5.0*	**3.0 J**	< 5.0
Acetone	NE	< 10	*< 10*	*< 10*	< 10	< 10
Benzene	1	< 0.50	*< 0.50*	*< 0.50*	< 0.50	< 0.50
Bromodichloromethane	50	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Bromoform	50	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Bromomethane	5	< 2.0	*< 2.0*	*< 2.0*	< 2.0	< 2.0
Carbon Dislfide	60	< 2.0	*< 2.0*	*< 2.0*	< 2.0	< 2.0
Carbon Tetrachloride	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Chlorobenzene	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< 5.0	*< 5.0*	*< 5.0*	< 5.0	< 5.0
Chloroethane	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Chloroform	7	**0.24 J**	*< 1.0*	*< 1.0*	< 1.0	**0.64 J**
Chloromethane	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	**3.4**	*< 1.0*	*< 1.0*	**1.1**	**0.39 J**
cis-1,3-Dichloropropene	0.4	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Chlorodibromomethane	50	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< 2.0	*< 2.0*	*< 2.0*	< 2.0	< 2.0
Ethylbenzene	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Methyl-Tert-Btylether	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Methylene Chloride	5	< 2.0	*< 2.0*	*< 2.0*	< 2.0	< 2.0
Styrene (Monomer)	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Tetrachloroethene	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Tolene	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Trichloroethene	5	**4.1**	***2.4***	***2.5***	**0.76 J**	**0.91 J**
Trichlorotrifloroethane (Freon 113)	5	< 5.0	*< 5.0*	*< 5.0*	< 5.0	< 5.0
Vinyl Chloride	2	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
o-Xylene	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
m,p-Xylene	5	< 1.0	*< 1.0*	*< 1.0*	< 1.0	< 1.0
Total VOCs [3]		**7.7**	***2.4***	***2.5***	**4.9**	**1.9**
Project VOCs [4]		**7.5**	***2.4***	***2.5***	**1.9**	**1.3**
1,4-Dioxane		**0.350**	***0.306***	***0.319***	**0.162**	**0.366**

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Componds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-205-1 8/8/2017	MW-206-1 12/29/2015	MW-206-1 1/19/2017	MW-206-1 8/9/2017	MW-208-1 12/29/2015
	NYSDEC SCGs					
1,1,1-Trichloroethane	5	< *1.0*	< 1.0	**0.27 J**	***0.76 J***	< 1.0
1,1,2,2-Tetrachloroethane	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
1,1,2-Trichloroethane	1	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
1,1-Dichloroethane	5	< *1.0*	**0.44 J**	**0.74 J**	***3.0***	**2.9**
1,1-Dichloroethene	5	< *1.0*	< 1.0	**0.27 J**	***1.7***	**0.89 J**
1,2-Dichloroethane	0.6	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
1,2-Dichloropropane	1	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
2-Btanone	NE	< *10*	< 10	< 10	< *10*	< 10
2-Hexanone	50	< *5.0*	< 5.0	< 5.0	< *5.0*	< 5.0
4-Methyl-2-Pentanone	50	< *5.0*	< 5.0	< 5.0	< *5.0*	< 5.0
Acetone	NE	< *10*	< 10	< 10	< *10*	< 10
Benzene	1	< *0.50*	< 0.50	< 0.50	< *0.50*	< 0.50
Bromodichloromethane	50	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Bromoform	50	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Bromomethane	5	< *2.0*	< 2.0	< 2.0	< *2.0*	< 2.0
Carbon Dislfide	60	< *2.0*	< 2.0	< 2.0	< *2.0*	< 2.0
Carbon Tetrachloride	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Chlorobenzene	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Chlorodiflоromethane (Freon 22)	NE	< *5.0*	< 5.0	< 5.0	< *5.0*	< 5.0
Chloroethane	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Chloroform	7	< *1.0*	< 1.0	< 1.0	< *1.0*	**3.1**
Chloromethane	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
cis-1,2-Dichloroethene	5	***0.62 J***	**0.32 J**	**0.92 J**	***1.3***	**546 D**
cis-1,3-Dichloropropene	0.4	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Chlorodibromomethane	50	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Dichlorodiflоromethane (Freon 12)	5	< *2.0*	< 2.0	< 2.0	< *2.0*	< 2.0
Ethylbenzene	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Methyl-Tert-Btylether	5	< *1.0*	< 1.0	< 1.0	< *1.0*	**0.39 J**
Methylene Chloride	5	< *2.0*	< 2.0	< 2.0	< *2.0*	< 2.0
Styrene (Monomer)	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Tetrachloroethene	5	< *1.0*	**0.45 J**	**0.56 J**	***2.8***	< 1.0
Tolene	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
trans-1,2-Dichloroethene	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
trans-1,3-Dichloropropene	0.4	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Trichloroethene	5	***0.41 J***	< 1.0	< 1.0	***0.65 J***	**17.4**
Trichlorotrifloroethane (Freon 113)	5	< *5.0*	< 5.0	< 5.0	< *5.0*	< 5.0
Vinyl Chloride	2	< *1.0*	< 1.0	< 1.0	< *1.0*	**6.4**
o-Xylene	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
m,p-Xylene	5	< *1.0*	< 1.0	< 1.0	< *1.0*	< 1.0
Total VOCs [3]		***1.0***	**1.2**	**2.8**	***10***	**580**
Project VOCs [4]		***1.0***	**1.2**	**2.8**	***10***	**570**
1,4-Dioxane		***0.714***	< 0.10	**0.301**	***1.06***	**0.526**

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Grondwater Containment System, OU3 (Former Settling Ponds) Bethpage, New York

Compound [1, 2] (units in µg/L)	Sample Location: Sample Date:	MW-208-1 1/20/2017	MW-208-1 8/10/2017
	NYSDEC SCGs		
1,1,1-Trichloroethane	5	< 1.0	*< 1.0*
1,1,2,2-Tetrachloroethane	5	< 1.0	*< 1.0*
1,1,2-Trichloroethane	1	< 1.0	*< 1.0*
1,1-Dichloroethane	5	**2.1**	***1.1***
1,1-Dichloroethene	5	**0.70 J**	*< 1.0*
1,2-Dichloroethane	0.6	< 1.0	*< 1.0*
1,2-Dichloropropane	1	**0.35 J**	*< 1.0*
2-Btanone	NE	< 10	*< 10*
2-Hexanone	50	< 5.0	*< 5.0*
4-Methyl-2-Pentanone	50	< 5.0	*< 5.0*
Acetone	NE	< 10	*< 10*
Benzene	1	< 0.50	*< 0.50*
Bromodichloromethane	50	< 1.0	*< 1.0*
Bromoform	50	< 1.0	*< 1.0*
Bromomethane	5	< 2.0	*< 2.0*
Carbon Dislfide	60	< 2.0	*< 2.0*
Carbon Tetrachloride	5	< 1.0	*< 1.0*
Chlorobenzene	5	< 1.0	*< 1.0*
Chlorodiflоromethane (Freon 22)	NE	< 5.0	*< 5.0*
Chloroethane	5	< 1.0	*< 1.0*
Chloroform	7	**2.8**	***1.4***
Chloromethane	5	< 1.0	*< 1.0*
cis-1,2-Dichloroethene	5	**597**	***268***
cis-1,3-Dichloropropene	0.4	< 1.0	*< 1.0*
Chlorodibromomethane	50	< 1.0	*< 1.0*
Dichlorodifloromethane (Freon 12)	5	< 2.0	*< 2.0*
Ethylbenzene	5	< 1.0	*< 1.0*
Methyl-Tert-Btylether	5	**0.43 J**	*< 1.0*
Methylene Chloride	5	< 2.0	*< 2.0*
Styrene (Monomer)	5	< 1.0	*< 1.0*
Tetrachloroethene	5	< 1.0	*< 1.0*
Tolene	5	< 1.0	*< 1.0*
trans-1,2-Dichloroethene	5	**0.60 J**	***1.6***
trans-1,3-Dichloropropene	0.4	< 1.0	*< 1.0*
Trichloroethene	5	**10.9**	***12.8***
Trichlorotrifloroethane (Freon 113)	5	< 5.0	*< 5.0*
Vinyl Chloride	2	**3.3**	***1.8***
o-Xylene	5	< 1.0	*< 1.0*
m,p-Xylene	5	< 1.0	*< 1.0*
Total VOCs [3]		**620**	***290***
Project VOCs [4]		**610**	***290***
1,4-Dioxane		**1.02**	***0.800***

See Notes and Abbreviations on last page

Table 11
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds) Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes and Abbreviations:

(1) Results are validated at 20% frequency, per protocols specified in Sampling and Analysis Plan in the Bethpage Park Groundwater Containment System OM&M Manual (ARCADIS 2016).

(2) Samples analyzed for the TCL VOCs using NYSDEC ASP 2005 Method OLM4.3 (prior to November 2014) and per USEPA Method 8260C (after November 2014). Samples analyzed for 1,4-Dioxane using USEPA Method 8270D SIM (prior to 2016) and per USEPA Method 522 SIM (starting 2016).

(3) "Total VOCs" represents the sum of individual concentrations of the VOCs detected. TVOCs were rounded to two significant figures.

(4) "Project VOCs" represents the sum of individual concentrations of 1,1,1-Trichloroethane; 1,1-Dichloroethane; 1,2-Dichloroethane; 1,1-Dichloroethene; Tetrachloroethene; Trichloroethene; Vinyl Chloride; cis-1,2-Dichloroethene; trans-1,2-Dichloroethene; Benzene; Toluene; and Xylenes-o,m, and p.

Bolded outline indicates an exceedance of an SCG.

-- Not analyzed
< 5 Compound not detected above its laboratory quantification limit.
µg/L Micrograms per liter.

italicized indicates most recent data
Bold value indicates a detection.

B Compound detected in associated blank sample.
D Constituent identified from secondary dilution.
E Concentration for the constituent exceeded the calibration range.
J Value is estimated.
R Concentration for the constituent was rejected.

ASP Analytical services protocol.
NE Not established.
NYSDEC New York State Department of Environmental Conservation.
REP Field replicate QA/QC sample
SCGs Standards, criteria, and guidance values.
SIM Selective Ion Monitoring
TCL Target compound list.
USEPA United State Environmental Protection Agency.
VOC Volatile Organic Compound.

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	B24MW-2 4/23/2009	B24MW-3 4/20/2009	BCPMW-1 4/28/2009	BCPMW-2 4/28/2009	BCPMW-3 4/29/2009	BCPMW-4-1 4/17/2009	BCPMW-4-1 10/4/2010
	NYSDEC SCGs							
Cadmium, Total		< 5	< 5	< 5	< 5	< 5	< 5	< 5
Cadmium, Dissolved	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chromium, Total	50	**40.3**	**28.2**	**20.8**	< 10	< 10	**22.7**	**43**
Chromium, Dissolved	50	< 10	**10.6**	< 10	< 10	< 10	**12.8**	**41**
Iron (total)	300	--	**597**	--	< 100	**2,080**	**103**	--
Iron (dissolved)	300	--	< 100	--	< 100	**1,760**	< 100	--
Manganese (total)	300	--	**16.9**	--	**12.7**	**51.4**	**11.2**	--
Manganese (dissolved)	300	--	**13.7**	--	**11.3**	**49.2**	< 10	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-4-1 10/28/2011	BCPMW-4-1 10/3/2012	BCPMW-4-1 10/4/2012	BCPMW-4-1 6/5/2013	BCPMW-4-1 11/17/2014	BCPMW-4-1 10/8/2015	BCPMW-4-1 12/30/2015
	NYSDEC SCGs							
Cadmium, Total		< 5	< 5	--	< 5.0	< 3.0	< 3.0	< 3.0
Cadmium, Dissolved	5	< 5	--	< 5	< 5.0	< 3.0	< 3.0	< 3.0
Chromium, Total	50	**25**	**32**	--	**16.1**	**24.7**	**24.9**	**22.7**
Chromium, Dissolved	50	**22**	--	**26**	**13.1**	**20.7**	**22.1**	**19.2**
Iron (total)	300	--	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-4-1 12/28/2016	BCPMW-4-1 7/31/2017	BCPMW-4-2 4/17/2009	BCPMW-4-2 10/7/2010	BCPMW-4-2 10/28/2011	BCPMW-4-2 10/3/2012	BCPMW-4-2 10/4/2012
	NYSDEC SCGs							
Cadmium, Total		< 3.0	< *3.0*	< 5	< 5	< 5	< 5	--
Cadmium, Dissolved	5	< 3.0	< *3.0*	< 5	--	< 5	--	< 5
Chromium, Total	50	< 10	< *10*	**10.6**	< 10	< 10	< 10	--
Chromium, Dissolved	50	< 10	< *10*	< 10	--	< 10	--	< 10
Iron (total)	300	--	--	**4,630**	--	--	--	--
Iron (dissolved)	300	--	--	**4,080**	--	--	--	--
Manganese (total)	300	--	--	**228**	--	--	--	--
Manganese (dissolved)	300	--	--	**217**	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-4-2 6/5/2013	BCPMW-4-2 11/18/2014	BCPMW-4-2 10/8/2015	BCPMW-4-2 12/31/2015	BCPMW-4-2 12/22/2016	BCPMW-4-2 (REP) 12/22/2016
	NYSDEC SCGs						
Cadmium, Total		< 5.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cadmium, Dissolved	5	< 5.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chromium, Total	50	< 10	**4.1 B**	< 10	< 10	**17.3**	**20.5**
Chromium, Dissolved	50	< 10	< 10	< 10	< 10	< 10	< 10
Iron (total)	300	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-4-2 7/31/2017	BCPMW-4-3 4/17/2009	BCPMW-4-3 10/7/2010	BCPMW-4-3 10/28/2011	BCPMW-4-3 10/3/2012	BCPMW-4-3 10/4/2012	BCPMW-4-3 6/5/2013
	NYSDEC SCGs							
Cadmium, Total		< *3.0*	< 5	< 5	< 5	< *5*	--	< 5.0
Cadmium, Dissolved	5	< *3.0*	< 5	< 5	< 5	--	< 5	< 5.0
Chromium, Total	50	< *10*	< 10	< 10	< 10	< *10*	--	< 10
Chromium, Dissolved	50	< *10*	< 10	< 10	< 10	--	< 10	< 10
Iron (total)	300	--	< 100	--	--	--	--	--
Iron (dissolved)	300	--	< 100	--	--	--	--	--
Manganese (total)	300	--	< 10	--	--	--	--	--
Manganese (dissolved)	300	--	< 10	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

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Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-4-3 (REP) 6/5/2013	BCPMW-4-3 11/17/2014	BCPMW-4-3 10/9/2015	BCPMW-4-3 12/31/2015	BCPMW-4-3 12/22/2016	BCPMW-4-3 8/3/2017
	NYSDEC SCGs						
Cadmium, Total		< 5.0	< 3.0	< 3.0	< 3.0	< 3.0	*< 3.0*
Cadmium, Dissolved	5	< 5.0	< 3.0	< 3.0	< 3.0	< 3.0	*< 3.0*
Chromium, Total	50	< 10	**6.8 B**	< 10	< 10	**11.2**	*< 10*
Chromium, Dissolved	50	< 10	**3.7 B**	< 10	< 10	< 10	*< 10*
Iron (total)	300	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-5-1 4/23/2009	BCPMW-6-1 4/20/2009	BCPMW-6-1 10/6/2010	BCPMW-6-1 10/31/2011	BCPMW-6-1 10/3/2012	BCPMW-6-1 10/4/2012	BCPMW-6-1 6/7/2013
	NYSDEC SCGs							
Cadmium, Total		< 5	< 5	<5	< 5	< 5	--	< 5.0
Cadmium, Dissolved	5	< 5	< 5	<5	< 5	--	< 5	< 5.0
Chromium, Total	50	< 10	< 10	< 10	**14**	< 10	--	< 10
Chromium, Dissolved	50	< 10	< 10	<10	< 10	--	< 10	< 10
Iron (total)	300	**7,420**	< 100	--	--	--	--	--
Iron (dissolved)	300	**6,370**	< 100	--	--	--	--	--
Manganese (total)	300	**145**	< 10	--	--	--	--	--
Manganese (dissolved)	300	**131**	< 10	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-6-1 11/11/2014	BCPMW-6-1 12/23/2015	BCPMW-6-1 12/27/2016	BCPMW-6-1 8/1/2017	BCPMW-6-2 5/8/2009	BCPMW-6-2 10/6/2010	BCPMW-6-2 10/31/2011
	NYSDEC SCGs							
Cadmium, Total		< 3.0	< 3.0	< 3.0	< *3.0*	< 5	<5	<5
Cadmium, Dissolved	5	< 3.0	< 3.0	< 3.0	< *3.0*	< 5	<5	<5
Chromium, Total	50	**11.6**	< 10	**223**	< *10*	**10.3**	<10	<10
Chromium, Dissolved	50	< 10 B	< 10	< 10	< *10*	< 10	<10	<10
Iron (total)	300	--	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

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Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-6-2 10/3/2012	BCPMW-6-2 10/4/2012	BCPMW-6-2 6/5/2013	BCPMW-6-2 11/11/2014	BCPMW-6-2 12/23/2015	BCPMW-6-2 12/27/2016	BCPMW-6-2 8/2/2017
	NYSDEC SCGs							
Cadmium, Total		< 5	--	< 5.0	< 3.0	< 3.0	< 3.0	***3.3***
Cadmium, Dissolved	5	--	< 5	< 5.0	< 3.0	< 3.0	< 3.0	*< 3.0*
Chromium, Total	50	< 10	--	< 10	**13.9**	< 10	**13.5**	***87.7***
Chromium, Dissolved	50	--	< 10	< 10	< 10 B	< 10	< 10	*< 10*
Iron (total)	300	--	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-7-1 4/20/2009	BCPMW-7-1 10/7/2010	BCPMW-7-1 11/1/2011	BCPMW-7-1 10/4/2012	BCPMW-7-1 6/7/2013	BCPMW-7-1 11/18/2014	BCPMW-7-1 12/22/2015
	NYSDEC SCGs							
Cadmium, Total		< 5	< 5	< 5	< 5	< 5.0	< 3.0	< 3.0
Cadmium, Dissolved	5	< 5	< 5	< 5	< 5	< 5.0	< 3.0	< 3.0
Chromium, Total	50	< 10	< 10	< 10	< 10	< 10	**5.1 B**	< 10
Chromium, Dissolved	50	< 10	< 10	< 10	< 10	< 10	**0.90 B**	< 10
Iron (total)	300	< 100	--	--	--	--	--	--
Iron (dissolved)	300	< 100	--	--	--	--	--	--
Manganese (total)	300	**106**	--	--	--	--	--	--
Manganese (dissolved)	300	**94.8**	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	BCPMW-7-1 12/28/2016	BCPMW-7-1 8/1/2017	MW-200-1 4/29/2009	MW-200-1 10/5/2010	MW-200-1 11/3/2011	MW-200-1 [3] 10/4/2012	MW-200-1 4/15/2013
	NYSDEC SCGs							
Cadmium, Total		< 3.0	*< 3.0*	< 5	< 5	< 5	< 5	--
Cadmium, Dissolved	5	< 3.0	*< 3.0*	< 5	< 5	< 5	< 5	--
Chromium, Total	50	**66.0**	*< 10*	< 10	**14**	**48**	**1,130**	**86**
Chromium, Dissolved	50	< 10	*< 10*	< 10	< 10	**13**	**320**	**21**
Iron (total)	300	--	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	MW-200-1 5/31/2013	MW-200-1 11/18/2014	MW-200-1 12/24/2015	MW-200-1 1/17/2017	MW-200-1 8/7/2017	MW-201-1 5/1/2009	MW-201-1 10/5/2010	MW-201-1 11/3/2011
	NYSDEC SCGs								
Cadmium, Total		< 5	< 3.0	< 3.0	< 3.0	*< 3.0*	< 5	< 5	< 5
Cadmium, Dissolved	5	< 5	< 3.0	< 3.0	< 3.0	*< 3.0*	< 5	< 5	< 5
Chromium, Total	50	**15.7**	**96.7**	**54.2**	< 10	***11.1***	< 10	< 10	< 10
Chromium, Dissolved	50	< 10	**19**	**29.5**	< 10	*< 10*	< 10	< 10	< 10
Iron (total)	300	--	--	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	MW-201-1 [3] 10/4/2012	MW-201-1 4/16/2013	MW-201-1 5/31/2013	MW-201-1 11/20/2014	MW-201-1 12/30/2015	MW-201-1 1/18/2017	MW-201-1 8/8/2017	MW-202-1 5/1/2009
	NYSDEC SCGs								
Cadmium, Total		< 5	--	< 5	< 3.0	< 3.0	< 3.0	*< 3.0*	< 5
Cadmium, Dissolved	5	< 5	--	< 5	< 3.0	< 3.0	< 3.0	*< 3.0*	< 5
Chromium, Total	50	**159**	**28**	< 10	**6.7 B**	< 10	< 10	***11.7***	**16.5**
Chromium, Dissolved	50	**42**	**17**	< 10	**1.7 B**	< 10	< 10	*< 10*	< 10
Iron (total)	300	--	--	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

Constituents (units in ug/L)	Sample Location: Sample Date:	MW-202-1 10/6/2010	MW-202-1 11/3/2011	MW-202-1 [3] 10/4/2012	MW-202-1 4/16/2013	MW-202-1 5/30/2013	MW-202-1 11/19/2014	MW-202-1(REP) 11/19/2014
	NYSDEC SCGs							
Cadmium, Total		< 5	< 5	< 5	--	< 5	< 3.0	< 3.0
Cadmium, Dissolved	5	< 5	< 5	< 5	--	< 5	< 3.0	< 3.0
Chromium, Total	50	**15**	**23**	**263 J**	**19**	**34.3**	**74.3**	**83.8**
Chromium, Dissolved	50	<10	< 10	**22**	<10	< 10	**2.7 B**	**2.3 B**
Iron (total)	300	--	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	MW-202-1 12/31/2015	MW-202-1 1/19/2017	MW-202-1 8/9/2017	MW-203-1 5/1/2009	MW-203-1 10/5/2010	MW-203-1 11/1/2011	MW-203-1 [3] 10/3/2012
	NYSDEC SCGs							
Cadmium, Total		< 3.0	< 3.0	*< 3.0*	< 5	< 5	< 5	< 5
Cadmium, Dissolved	5	< 3.0	< 3.0	*< 3.0*	< 5	< 5	< 5	--
Chromium, Total	50	**34.9**	< 10	***73.4***	**31.5**	**31**	**37**	**1,600**
Chromium, Dissolved	50	< 10	< 10	***14.4***	< 10	< 10	< 10	--
Iron (total)	300	--	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

ARCADIS Design & Consultancy for natural and built assets

Constituents (units in ug/L)	Sample Location: Sample Date:	MW-203-1 10/4/2012	MW-203-1 4/16/2013	MW-203-1 5/31/2013	MW-203-1(REP) 5/31/2013	MW-203-1 11/19/2014	MW-203-1 12/20/2015
	NYSDEC SCGs						
Cadmium, Total		--	--	< 5	< 5	< 3.0	< 3.0
Cadmium, Dissolved	5	< 5	--	< 5	< 5	< 3.0	< 3.0
Chromium, Total	50	--	**155**	**29.5**	**38.2**	**22.9**	**81.6**
Chromium, Dissolved	50	**84**	<10	< 10	< 10	**3.3 B**	< 10
Iron (total)	300	--	--	--	--	--	--
Iron (dissolved)	300	--	--	--	--	--	--
Manganese (total)	300	--	--	--	--	--	--
Manganese (dissolved)	300	--	--	--	--	--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

Constituents (units in ug/L)	Sample Location: Sample Date:	MW-203-1 1/20/2017	MW-203-1 8/10/2017	MW-204-1 12/24/2015	MW-204-1 1/17/2017	MW-204-1 8/7/2017	MW-204-1 (REP) 8/7/2017	MW-205-1 12/29/2015
	NYSDEC SCGs							
Cadmium, Total		< 3.0	*< 3.0*	< 3.0	< 3.0	*< 3.0*	*< 3.0*	< 3.0
Cadmium, Dissolved	5	< 3.0	*< 3.0*	< 3.0	< 3.0	*< 3.0*	*< 3.0*	< 3.0
Chromium, Total	50	< 10	***138***	**85.3**	**57.0**	***175***	***171***	**11.4**
Chromium, Dissolved	50	< 10	*< 10*	**38.5**	**31.1**	***87.0***	***85.3***	< 10
Iron (total)	300	--	--	--	--	--	--	
Iron (dissolved)	300	--	--	--	--	--	--	
Manganese (total)	300	--	--	--	--	--	--	
Manganese (dissolved)	300	--	--	--	--	--	--	

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

Constituents (units in ug/L)	Sample Location: Sample Date:	MW-205-1 1/18/2017	MW-205-1 8/8/2017	MW-206-1 12/29/2015	MW-206-1 1/19/2017	MW-206-1 8/9/2017	MW-208-1 12/29/2015	MW-208-1 1/20/2017	MW-208-1 8/10/2017
	NYSDEC SCGs								
Cadmium, Total		< 3.0	*< 3.0*	< 3.0	< 3.0	*< 3.0*	< 3.0	< 3.0	*< 3.0*
Cadmium, Dissolved	5	< 3.0	*< 3.0*	< 3.0	< 3.0	*< 3.0*	< 3.0	< 3.0	*< 3.0*
Chromium, Total	50	**73.4**	***134***	**12.6**	**162**	***82.0***	< 10	< 10	*< 10*
Chromium, Dissolved	50	< 10	*< 10*	< 10	< 10	***10.7***	< 10	< 10	*< 10*
Iron (total)	300	--	--		--	--		--	--
Iron (dissolved)	300	--	--		--	--		--	--
Manganese (total)	300	--	--		--	--		--	--
Manganese (dissolved)	300	--	--		--	--		--	--

Notes and Abbreviations on last page

Table 12
Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Bethpage Park Groundwater Containment System, OU 3 (Former Settling Ponds), Bethpage, New York [1,2]

Notes:

(1) Results are validated at 20% frequency, per protocols specified in Sampling and Analysis Plan in the DRAFT Bethpage Park Groundwater Containment System OM&M Manual (ARCADIS 2016).

(2) Samples analyzed for metals using USEPA Method 6010.

(3) Samples collected with HydraSleeve™ no purge method, all other samples collected by purge (3-Volume) method.

italicized indicates most recent data

Indicates an exceedance of an SCG.

Bold Indicates a detection.

NYSDEC New York State Department of Environmental Conservation.

USEPA United State Environmental Protection Agency.

SCGs Standards, criteria, and guidance values.

ug/L Micrograms per liter.

-- Not analyzed.

< 5 Compound not detected above its laboratory quantification limit.

B Compound detected in associated blank sample.

J Value is estimated.

FIGURES

SOURCE:
USGS 7.5 MIN. AMITYVILLE QUADRANGLE, AMITYVILLE, N.Y., 1994, FREEPORT QUADRANGLE, FREEPORT, N.Y., 1994, HICKSVILLE QUADRANGLE, HICKSVILLE, N.Y., 1967, PHOTOREVISED 1979, HUNTINGTON, N.Y., 1967, PHOTOREVISED 1979

0 2000' 4000'

SCALE IN FEET

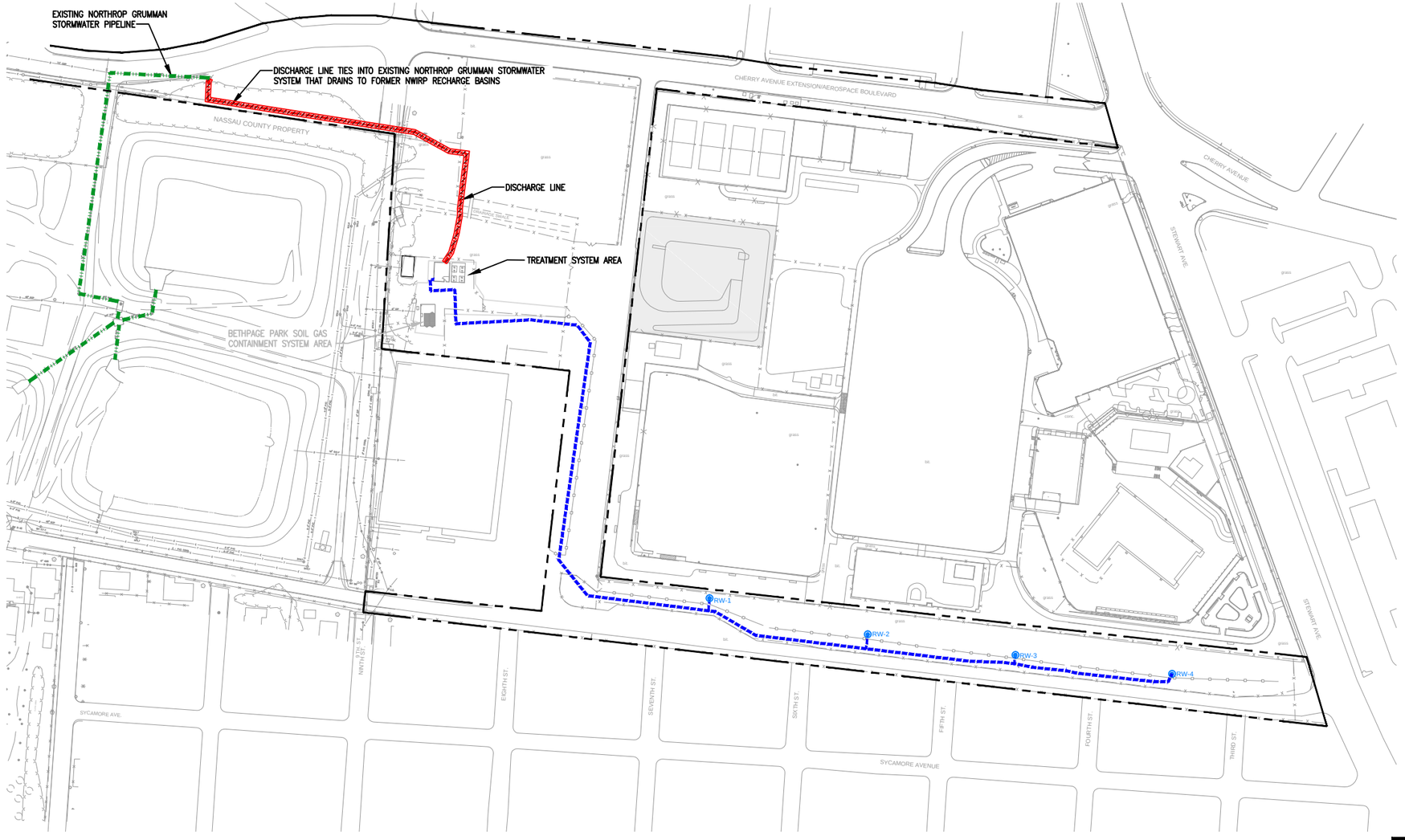
BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

SITE LOCATION

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY:SYRACUSE-NY DIV/GROUP:ENV DB:A.SANCHEZ LD: PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVE\NY001496\114\IOMM4\NY1496_B01.dwg LAYOUT: BETHPAGE PARK SAVED: 11/11/2015 4:51 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 11/11/2015 4:54 PM BY: STOWELL, GARY
XREFS: IMAGES: PROJECTNAME: ----
AMITYVILLE.TIF
FREEPORT.TIF
HICKSVILLE.TIF
HUNTINGTON.TIF



LEGEND:

- NORTHROP GRUMMAN PROPERTY LINE
- FENCE
- bit. BITUMINOUS PAVEMENT
- INFLUENT PIPELINE AND ELECTRICAL CONDUITS
- EFFLUENT PIPELINE
- EXISTING NORTHROP GRUMMAN STORMWATER PIPELINE
- RW-4 REMEDIAL WELL
- NWIRP NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NOW OWNED BY NASSAU COUNTY)

0 200' 400'

SCALE IN FEET

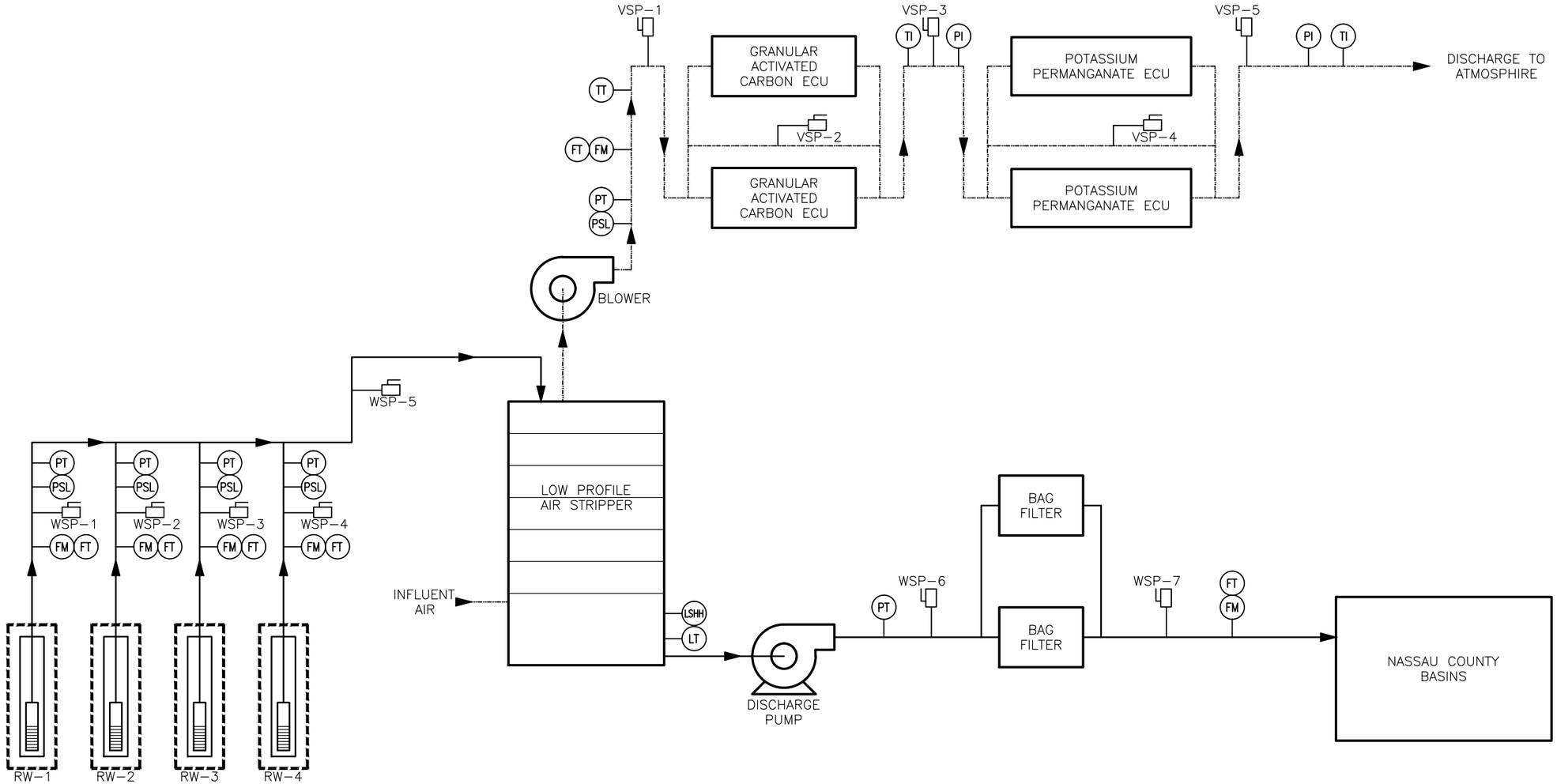
BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

GROUNDWATER CONTAINMENT SYSTEM SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

CITY:SYRACUSE-NY DIV/GROUP:ENV DB:A.SANCHEZ LD:AS PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVITY\00149\6114\IOMM\4NY1496B01.DWG LAYOUT: 2 SAVED: 11/11/2015 4:26 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 11/11/2015 4:54 PM BY: STOWELL, GARY
XREFS: IMAGES: PROJECTNAME: ----
X1496X00
X1496X01



LEGEND:

	PROCESS WATER
	PROCESS AIR
FM	INSTRUMENT
	SAMPLE PORT
	FLOW DIRECTION
FM	FLOW METER
FT	FLOW RATE TRANSMITTER
PSL	PRESSURE SWITCH LOW
PT	PRESSURE TRANSMITTER
PI	PRESSURE INDICATOR
LSHH	LEVEL SWITCH HIGH HIGH
LT	LEVEL TRANSMITTER
TT	TEMPERATURE TRANSMITTER
TI	TEMPERATURE INDICATOR
WSP	WATER SAMPLE PORT
VSP	VAPOR SAMPLE PORT
ECU	EMISSION CONTROL UNIT

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

GROUNDWATER TREATMENT SYSTEM PROCESS SCHEMATIC AND MONITORING LOCATIONS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

EXPLANATION:

- NORTHROP GRUMMAN PROPERTY LINE
- FENCE
- BASIN
- bit. — BITUMINOUS PAVEMENT
- MW-200-1 — MONITORING WELL
- RW-2 — REMEDIAL WELL
- PZ-2C — PIEZOMETER

NOTES:

1. MONITORING WELLS, REMEDIAL WELLS, AND PIEZOMETERS SURVEYED TO NORTH AMERICAN DATUM (NAD) 83.
2. PARK FEATURES SHOWN WERE PRESENT PRIOR TO TOWN OF OYSTER BAY REDEVELOPMENT IN 2005.

0 100' 200'

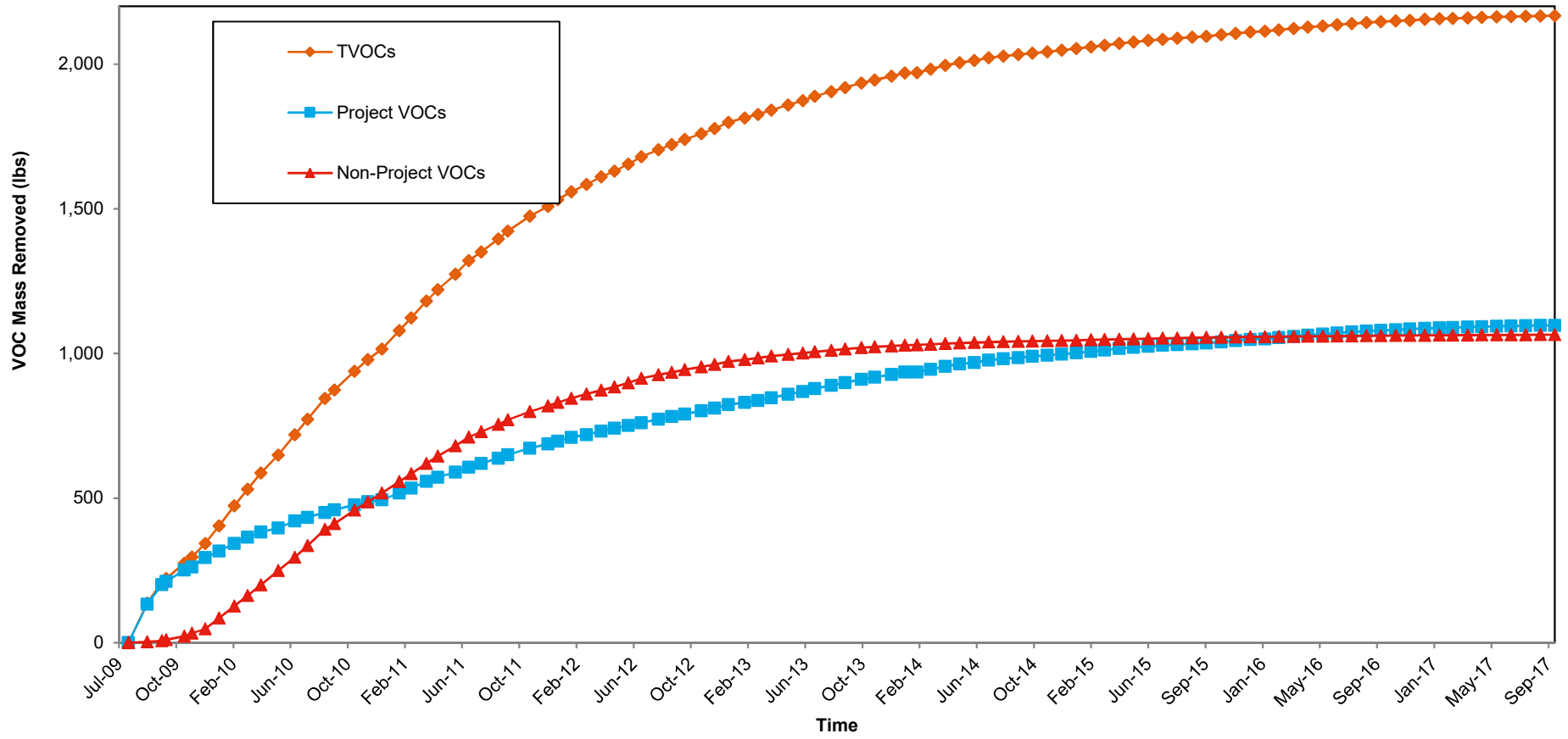
APPROXIMATE SCALE IN FEET

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

GROUNDWATER MONITORING NETWORK PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4



Notes:

VOC = volatile organic compound

lbs = pounds

TVOCs = total VOCs detected

Project VOCs = sum of 1,1,1-trichloroethane; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethene; tetrachloroethene; trichloroethene; vinyl chloride; cis-1,2-dichloroethene; trans-1,2-dichloroethene; benzene; toluene; and total xylenes.

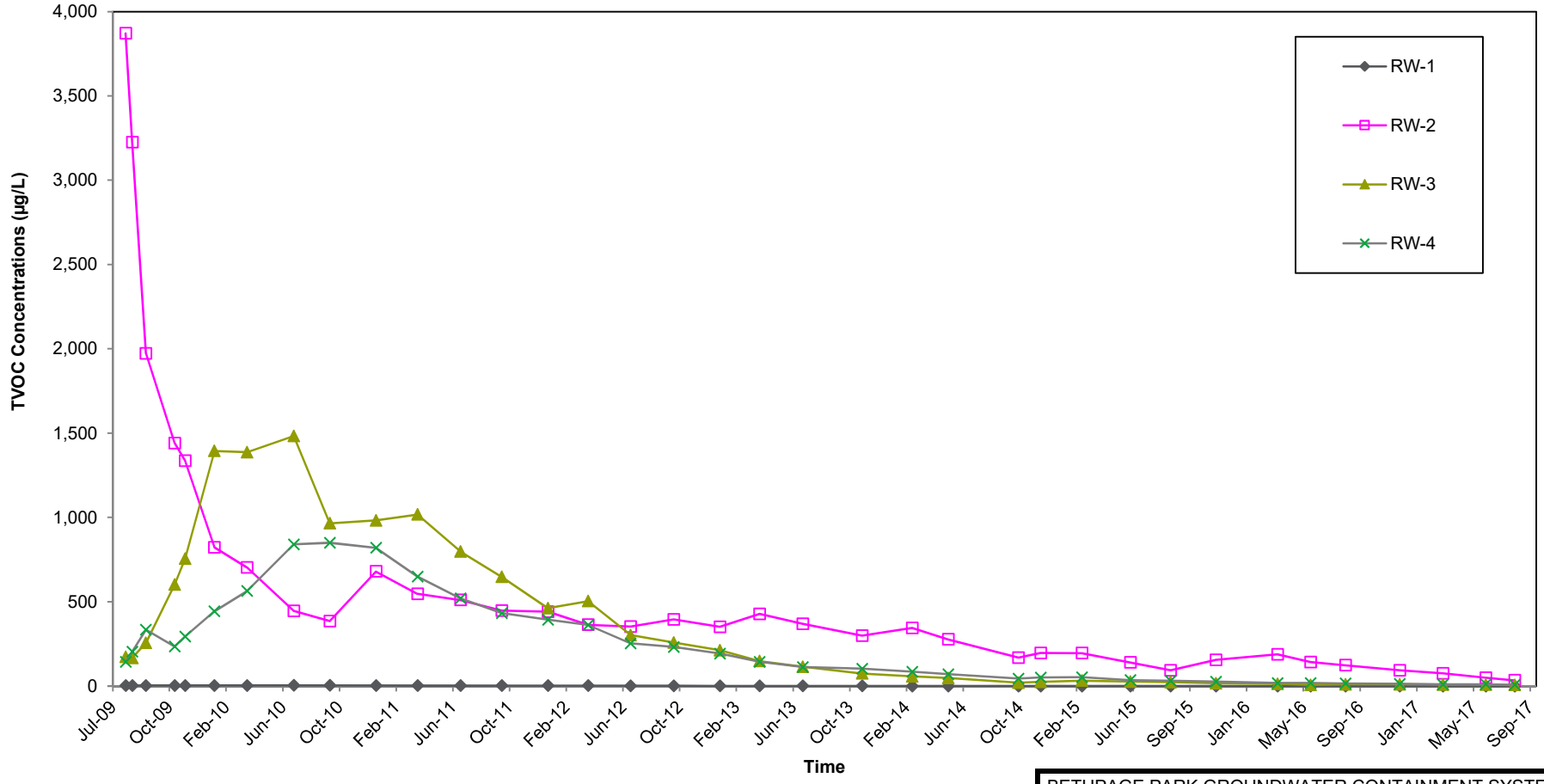
Non-Project VOCs = sum of VOCs that are not Project VOCs.

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

CUMULATIVE TOTAL, PROJECT, AND NON-PROJECT VOC MASS REMOVED THROUGH SEPTEMBER 2017

ARCADIS

FIGURE 5



Notes:

VOC = volatile organic compound

µg/L = micrograms per liter

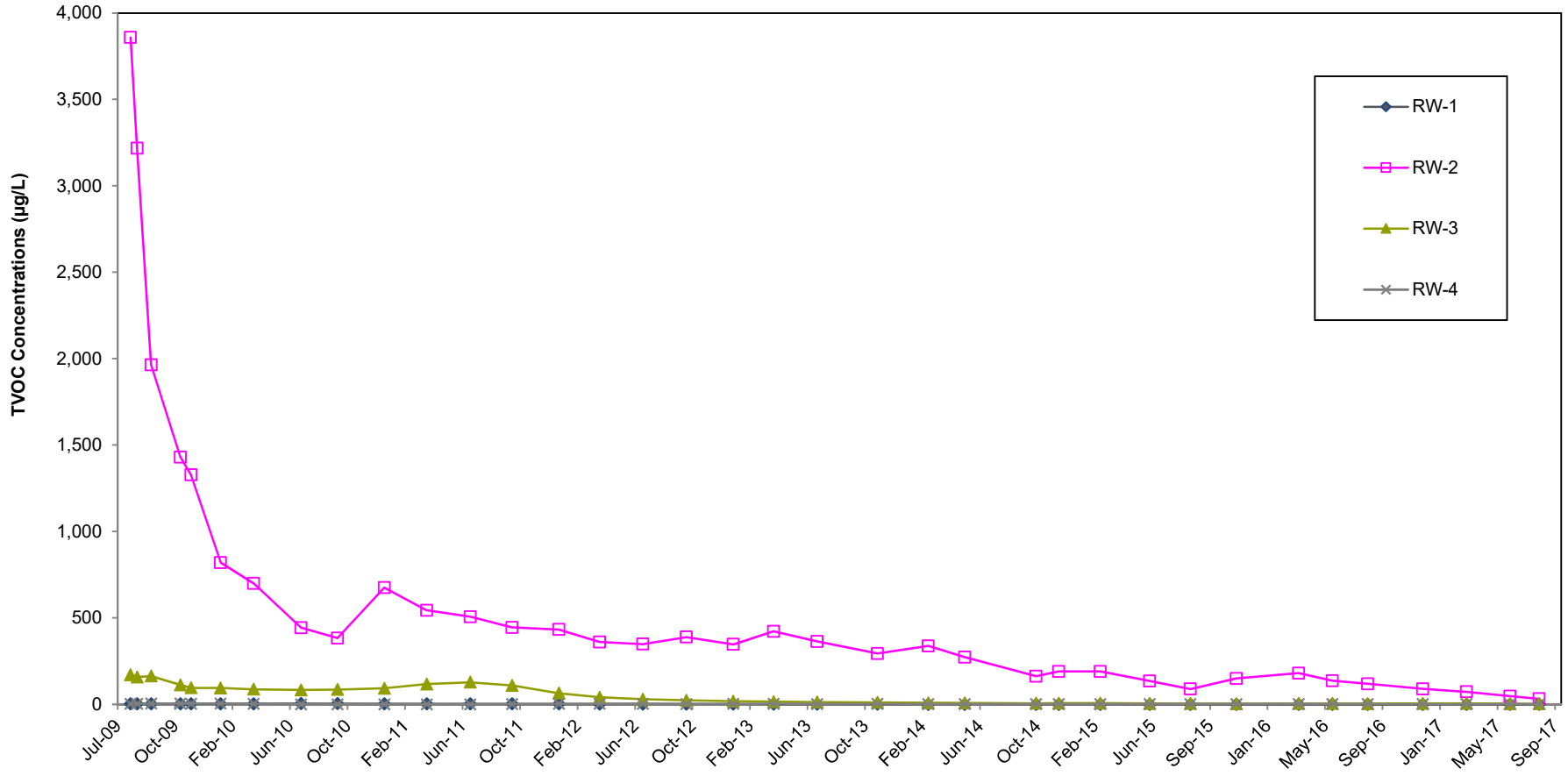
TVOCs = total VOCs detected

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

REMEDIAL WELL TOTAL VOC CONCENTRATIONS THROUGH SEPTEMBER 2017

ARCADIS

FIGURE
6A



Notes:

VOC = zolatile organic compound

µg/L = micrograms per liter

TVOCs = total VOCs detected

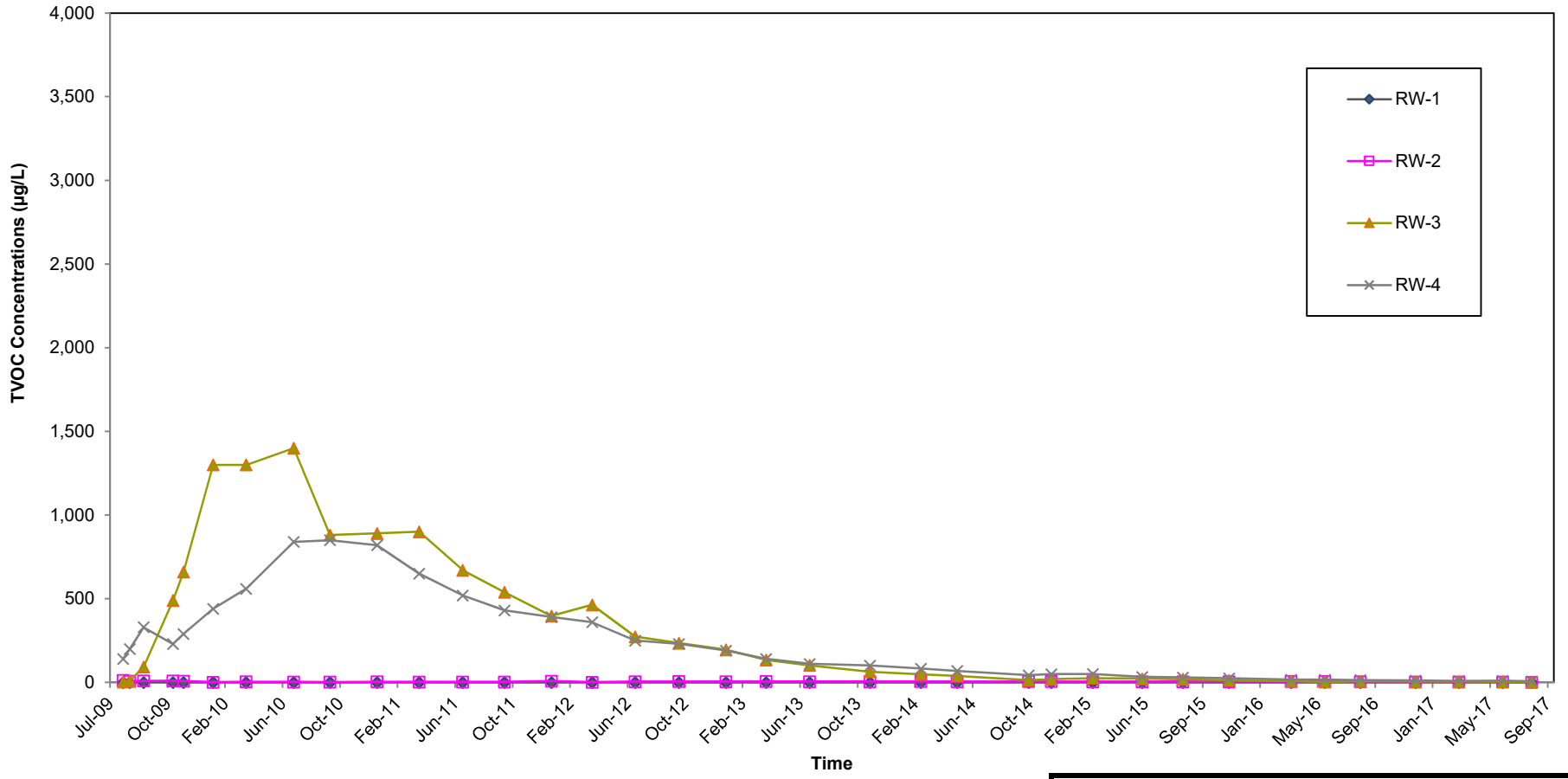
Project VOCs = sum of 1,1,1-trichloroethane; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethene; tetrachloroethene; trichloroethene; vinyl chloride; cis-1,2-dichloroethene; trans-1,2-dichloroethene; benzene; toluene; and total xylenes.

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

REMEDIAL WELL PROJECT VOC CONCENTRATIONS THROUGH SEPTEMBER 2017

ARCADIS

FIGURE
6B



Notes:

VOC = volatile organic compound

µg/L = micrograms per liter.

TVOCs = total VOCs detected.

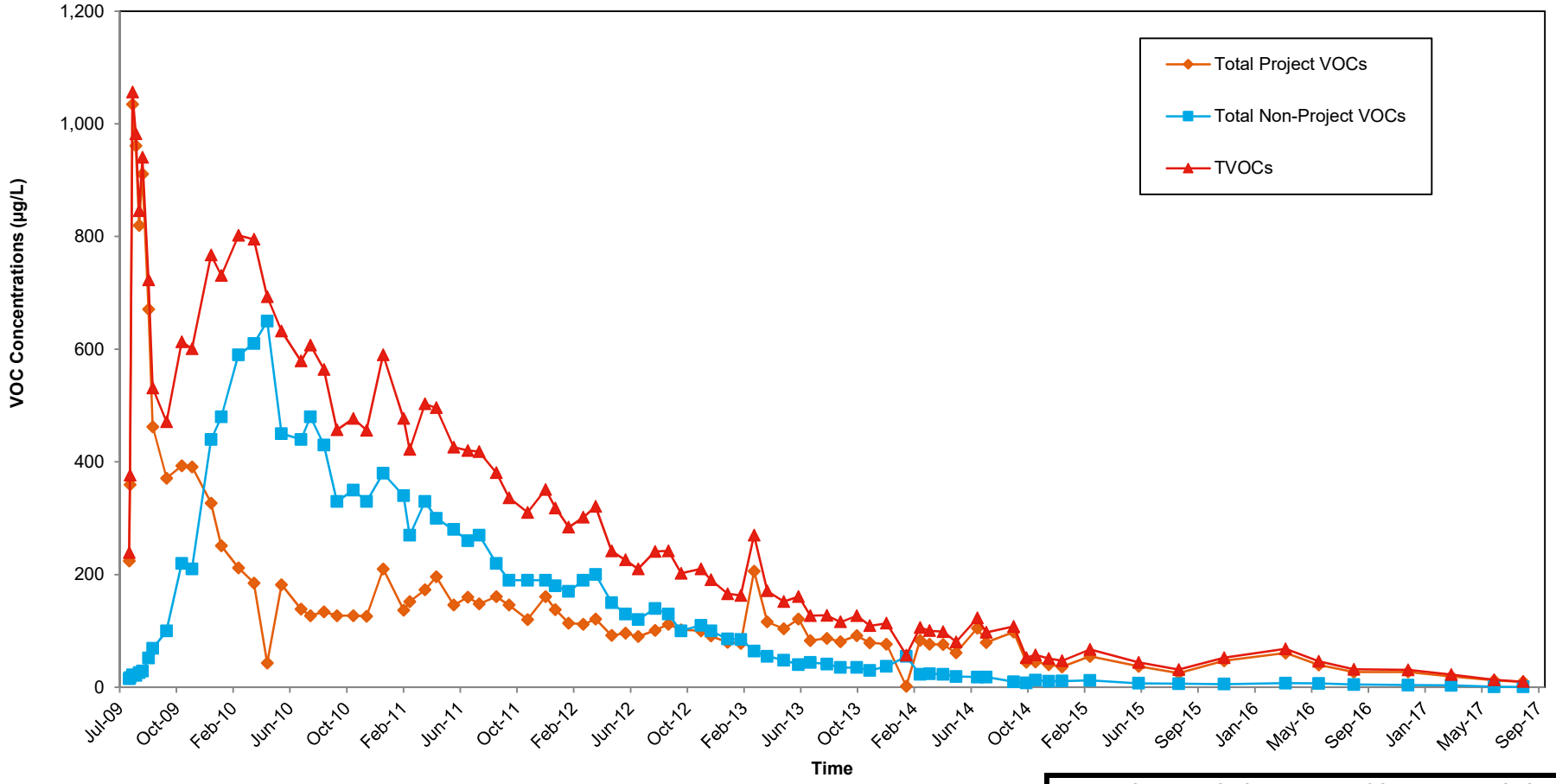
Non-Project VOCs = sum of TVOCs that are not Project VOCs.

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

REMEDIAL WELL NON-PROJECT VOC CONCENTRATIONS THROUGH SEPTEMBER 2017

ARCADIS

FIGURE
6C



Notes:

VOC = volatile organic compound

µg/L = micrograms per liter

TVOCs = total VOCs detected.

Project VOCs = sum of 1,1,1-trichloroethane; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethene; tetrachloroethene; trichloroethene; vinyl chloride; cis-1,2-dichloroethene; trans-1,2-dichloroethene; benzene; toluene; and total xylenes.

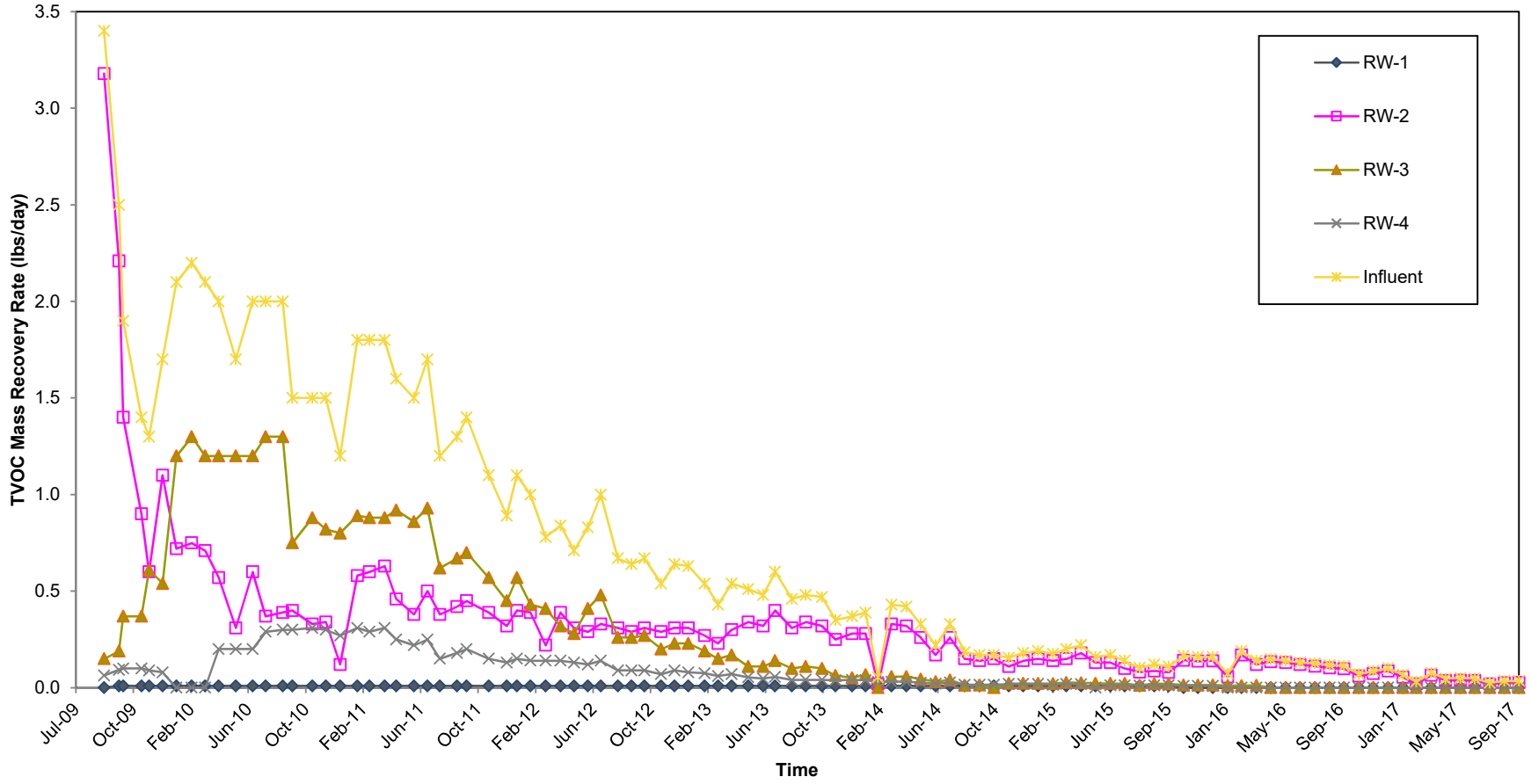
Non-Project VOCs = sum of VOCs that are not Project VOCs.

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

INFLUENT TOTAL, PROJECT AND NON-PROJECT VOC CONCENTRATIONS THROUGH SEPTEMBER 2017

ARCADIS

FIGURE
7



Notes:

VOC = volatile organic compound

lbs/day = pounds per day

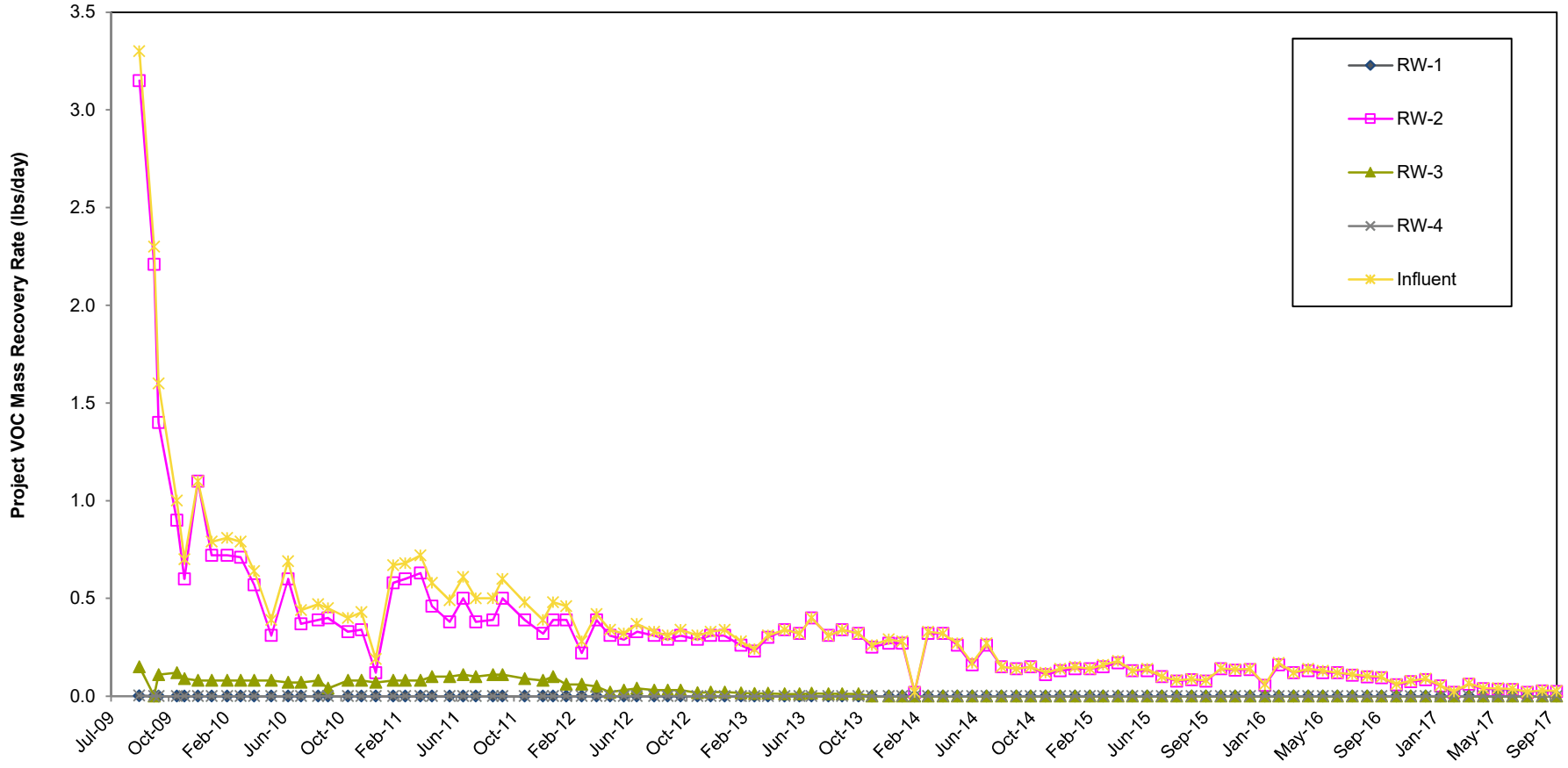
TVOCs = total VOCs detected

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

TOTAL VOC MASS RECOVERY RATES THROUGH SEPTEMBER 2017

ARCADIS

FIGURE
8A



Notes:

VOC = volatile organic compound

lbs/day = pounds per day.

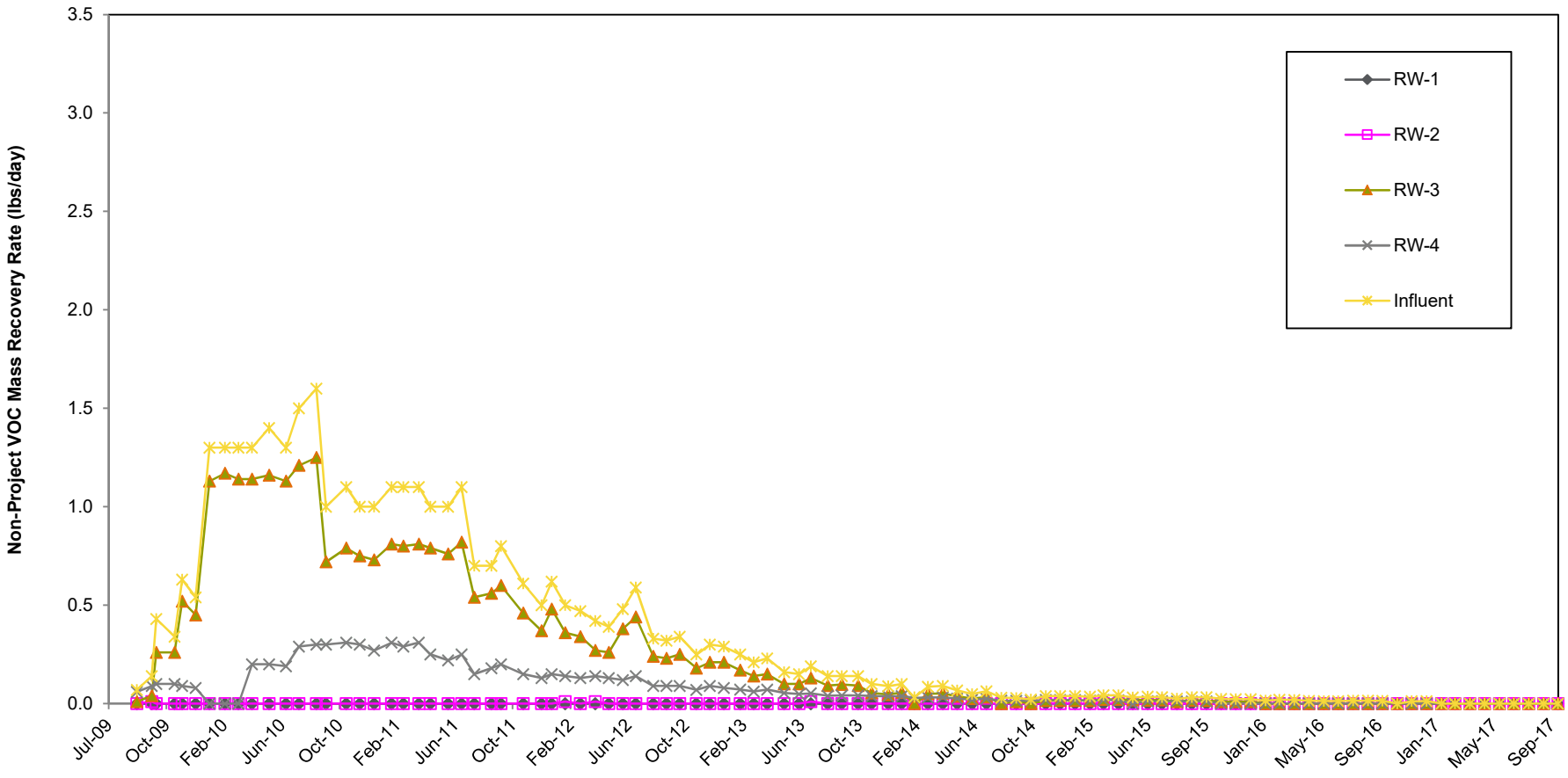
Project VOCs = Sum of 1,1,1-trichloroethane; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethene; tetrachloroethene; trichloroethene; vinyl chloride; cis-1,2-dichloroethene; trans-1,2-dichloroethene; benzene; toluene; and total xylenes

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

PROJECT VOC MASS RECOVERY RATES THROUGH SEPTEMBER 2017

ARCADIS

FIGURE
8B



Notes:

VOC = volatile organic compound

lbs/day = pounds per day

Non-Project VOCs = sum of VOCs that are not Project VOCs.

BETHPAGE PARK GROUNDWATER CONTAINMENT SYSTEM
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

NON-PROJECT VOC MASS RECOVERY RATES THROUGH SEPTEMBER 2017

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FIGURE 8C