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September 1, 2021

David J. Raymond, Project Manager
NYS Department of Environmental Conservation
Division of Environmental Remediation
SUNY @ Stony Brook
50 Circle Road
Stony Brook, NY 11790

Re: Former Purex Site (Site #130014) Technical Memorandum:
Containment Area & Vicinity: Monitoring Results (July 2021)

Dear Mr. Raymond:

In response to your Departments request for additional groundwater quality information pursuant to Nassau County's desire to continue the de-listing process of the former Purex Site, the Nassau County Department of Public Works has completed additional groundwater sampling of monitoring wells ***within the sites containment area*** as well as monitoring wells located upgradient and downgradient of the former source area (see attached map for all well locations). Well construction information for these eleven (11) wells have also been provided for your review (please see attached table). All wells were sampled by the remaining NCDPW hydrogeologists and environmental specialists using approved departmental protocols.
The wells were sampled for Volatile Organic Compounds and Emerging Compounds (1,4 – Dioxane, PFOA / PFOs). All samples were delivered to Pace Analytical laboratories of Melville, NY for VOC analysis (EPA Method 8260C), Con-test Labs of East Longmeadow, MA for PFO / PFOA analysis (EPA Method 537) and Eurofins Test America laboratories, Buffalo / Amherst, NY for 1,4-Dioxane analysis (EPA Method 8270D). The results for four (4) different hydraulic well groups (Upgradient, "side-gradient", Containment Area and Downgradient) are attached, they are discussed as follows:

Upgradient Monitoring Wells:

The upgradient monitoring well group includes ***N-9703*** and ***N-9713***, these wells have a total depth of 106 feet and 218 feet respectively. Both can be considered Magothy wells, N-9703 is screened at the base of the Upper Glacial Aquifer. Both wells have a long sampling history and have exhibited varying levels of VOC's; they have never been sampled for the presence of emerging compounds.

Volatile organic compounds were detected in both wells, please see attached table which includes the results of the last semi-annual round to include these wells which was conducted in October 2014. Groundwater collected from N-9703 had a TVOC concentration of 4.6 ppb. This included 1.2 ppb of 1,2-Dichlorobenzene and 3.4 ppb of Tetrachloroethylene.
The TVOC concentration detected in N-9713 was 117.1 ppb. A total of seven (7) different VOC's were detected in this well. Four of the detected compounds exceeded their respective Class GA standards, 1,1-Dichloroethene (33.2 ppb),cis-1,2- Dichloroethylene (7.4 ppb), Tetrachloroethylene (59.5 ppb) and Trichloroethylene (10 ppb).
Emerging compounds were also detected in each well. 1,4- Dioxane was detected in N-9703 at a concentration of 0.49 ppb and in groundwater collected from N-9713 at concentration of 1.7 ppb, exceeding the NYSDEC Maximum Contaminant Level (MCL) of 1 ppb established for this compound.
A variety of Perflourinated compounds were also detected in each well. However, the NYSDEC MCL of 10 ng/l was exceeded for both Perflouroоctonic acid (PFOA) and Perflouroоctanesulfonic acid (PFO) in groundwater collected from N-9703 with concentrations of 18 and 27 ng/l respectively. The concentrations of both compounds were below the 10 ng/l threshold in N-9713.

"Side-gradient" Monitoring Wells:

A single groundwater monitoring well cluster located on the corner of Quentin Roosevelt Blvd. and Commercial Avenue, which is considered to be hydraulically lateral to the containment area was also selected for sampling. Three wells are included in this cluster: ***N-9777, N-9778 and N-9779***. These wells have total depths of 51 ft, 83 ft and 258 feet respectively. The first well N-9777 is screened in the Upper Glacial aquifer and is set at approximately the same screen elevation above the clay unit which sits at the base of the containment area. The second well is screened just below the clay unit and the third is screened in the Magothy formation.
Historically, VOC's have been detected in all three monitoring wells, the sampling results for the last semi-annual sampling round conducted in October 2014 have been included in the attached summary table for review.

Review of the results obtained during the July 2021 sampling event indicate the following: Tetrachloroethylene has been detected in all three wells. The highest concentration (165.4 ppb) and largest number of compounds have been detected in the deepest well of the cluster, N-9779. Six VOC's were detected in groundwater collected from this well during the July 2021 sampling event. 1,1,1 Trichloroethane (7.6 ppb), 1,1- Dichloroethene (33.4 ppb), cis – 1,2- Dichloroethylene (12.8 ppb), Tetrachloroethylene (97.3 ppb) and Trichloroethylene (10.8) were all detected above Class GA groundwater standards in this well.

Emerging contaminants were also detected in each well of the cluster. 1,4-Dioxane was detected at a concentration of 4 ppb in the deepest well of the cluster, N-9779. It was not detected in either of the other two shallow monitoring wells, N-9777 or N-9778. Perflourinated compounds were detected in all three wells. The concentration in groundwater of both PFO and PFOA was equal to or exceeded 10 ng/l in N-9778 and N-9779. The MCL for Perflourooctanesulfonic acid (PFO) was exceeded with the highest concentration observed in the cluster (35 ng/l).

Containment Area Monitoring Wells:

A total of four (4) monitoring wells, ***W-150, W-152***, ***W-154*** and ***W-156*** which were originally installed ***inside*** the containment area on top of the "60-ft." clay were sampled as part of the July 2021 sampling round. Groundwater collected from these wells were sampled for the presence of VOC's and EC's. The Total Volatile Organic Compound (TVOC) concentrations in three (3) of these wells ranged from 7 ppb to 22 ppb, However the fourth well, ***W-150***, had a TVOC concentration of 5,942 ppb. The VOC's detected in this well were two orders of magnitude higher than the other containment area wells and exhibited a very different chemical signature. 5,620 ppb of the total are common to petroleum – related sources, while the remainder of the total (322 ppb) could be attributed to solvent – based sources.

The location of the well also suggests the possibility of contaminant migration from the former ***Commander Oil site***. Any petroleum – related compounds or body of floating petroleum product which may have been present in soils at the site's southern boundary or beneath Commercial Avenue were likely not excavated and removed due to the high volume of traffic and activity along this road. Once on or in groundwater these compounds could have migrated in a southwest direction toward the containment area slurry wall and W-150. The perimeter location of this well is also less likely to have been fully remediated by the PVC lateral system which flushed the Containment Area soils from 1990 through 1994.

The four interior containment area monitoring wells were also sampled for the presence of Emerging compounds (see attached table). 1,4 – Dioxane was not detected in W-152 and W-154 and was detected in W-150 and W-156 at concentrations of 0.29 ppb and 0.11 ppb respectively. The detection in W-156 was flagged with a "J" and represents an estimated concentration below calibration limits. All detected concentrations were below the NYSDEC MCL of 1 ppb, established for this compound.
Perflourinated compounds were detected in groundwater collected from all four interior Containment Area monitoring wells. The NYSDEC MCL of 10 ng/l established for PFOA was exceeded in W-150 (18 ng/l), W-152 (13 ng/l) and W-156 (25 ng/l). The MCL for Perflourooctanesulfonic acid (PFO) was exceeded in groundwater collected from W-152 with a concentration of 12 ng/l. There were no detections above guidance in monitoring well W-154.

Downgradient Monitoring Wells:

Two downgradient groundwater monitoring wells, ***W-261*** and ***W-290*** were sampled as part of this survey. These wells were previously selected and approved for an extended groundwater monitoring program (2015 – 2019) of the former source area following consultation the NYSDEC project manager for the former Purex site, Cynthia Whitfield and Charlotte Bethany of the NYSDOH. They were specifically selected due to their location hydraulically downgradient of the Purex containment area and for their screen zone interval(s) located in the Upper Glacial formation on top of the "60-foot clay" which underlies the containment area. Groundwater collected from these wells consistently had TVOC levels below Class GA groundwater standards for the entire 3-year duration of the extended monitoring program.
The results obtained during the July 2021 sampling round are consistent with those collected previously, TVOC concentrations in W-261 and W-290 were 1.5 ppb and ND respectively. The only volatile organic compound detected in these wells was Tetrachloroethylene.

The two downgradient monitoring wells were also sampled for the presence of Emerging compounds (see attached table). 1,4 – Dioxane was not detected in W-261 and was detected in W-290 at a concentration of 0.62 ppb. The detected concentration was below the established NYSDEC guidance value of 1 ppb.
Perflourinated compounds were detected in groundwater collected from both wells downgradient of the Containment Area. Maximum contaminant levels were not exceeded for the compounds (PFO / PFOA) detected in these wells.

Conclusions:

Review of the historic groundwater data and the data collected during the Supplemental Containment Area monitoring program – July 2021, indicate the following:

- Significant concentrations of volatile organic compounds and emerging compounds are present in groundwater collected from monitoring wells located hydraulically upgradient of the Purex containment area.
- High concentrations (5 ppm) of petroleum – related compounds (from a potential non-Purex source) are present in one interior containment area well (W-150) along with some solvent -related compounds.
- Water level measurements collected from monitoring wells within the Containment Area indicate little or no change in hydraulic gradient between the measured wells indicating the interior wells are not in good hydraulic connection with wells located outside the Containment Area

- Emerging compounds 1,4 – Dioxane and PFO / PFOA were detected within the Containment Area in all wells sampled. All wells were below the MCL (1ppb) for 1,4 – Dioxane. The MCL (10 ng/l) for PFOA was exceeded in three (3) wells and for PFO in one well.
- Groundwater monitoring wells located hydraulically downgradient of the Containment Area continue to exhibit VOC and EC contaminant levels below Guidance values four (4) years after monitoring was initiated.

With the completion of this supplemental **Containment Area monitoring round** (July 2021), the Department believes it has satisfactorily completed and fulfilled all requirements put forth by the NYSDEC and would like to continue forward in the delisting of the former Purex site. All supporting documentation and lab results used in the preparation of this technical memorandum are available upon request. Please advise this department of any additional procedures necessary for formal delisting.

If you have any questions or comments concerning this document or its contents, please contact Mr. Michael Flaherty, PG, Hydrogeologist III at (516)571-7514.

Very truly yours,

Kenneth G. Arnold, P.E.
Commissioner of Public Works

KGA:VF:rp
Enclosure
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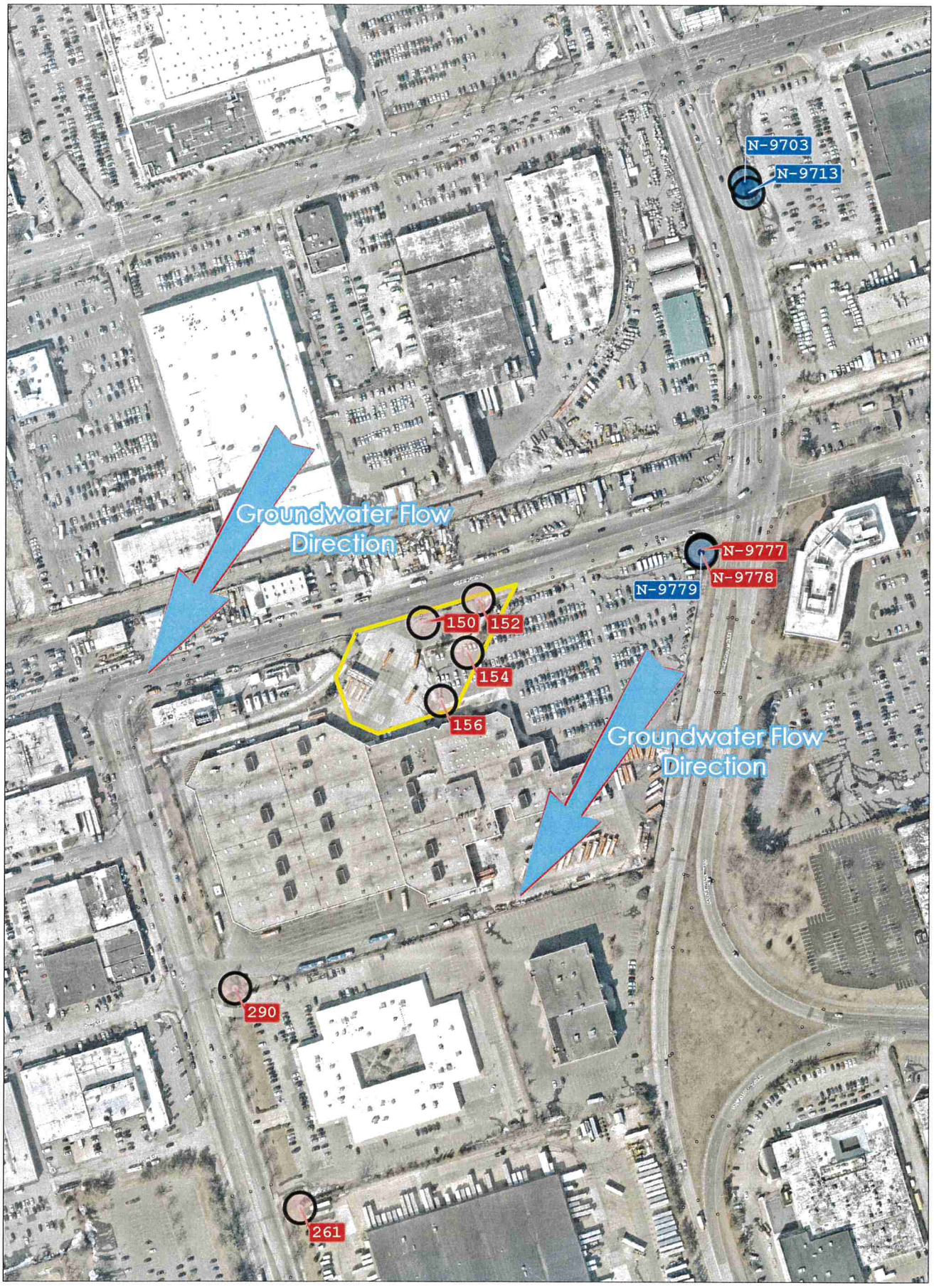

Purex Site
with Shallow Monitoring Wells

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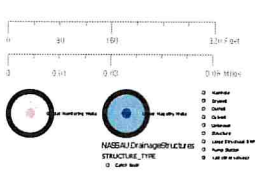

PUREX - UPGRADIENT / CONTAINMENT AREA / DOWNGRADIENT WELL CONSTRUCTION DETAILS

Site	Well Number	Method of Installation	Date of Installation	Total Depth	Depth To Water	MP Elevation	Casing Diameter	Casing Material	Screen Type	Slot Size	Screen Length	Screen Interval elevation (ft.)
Containment Area Wells												
Purex	W-150	Auger	8/21/1987	51.30 ft.	18.03	76.02	4 in.	PVC	slotted - PVC	20 slot	10 ft.	34 to 24
Purex	W-152	Auger	9/17/1987	55.60	19.56	77.57	4 in.	PVC	slotted - PVC	20 slot	10 ft.	31 to 21
Purex	W-154	Auger	8/28/1987	56.25 ft.	20.01	78.02	4 in.	PVC	slotted - PVC	20 slot	10 ft.	32 to 22
Purex	W-156	Auger	9/3/1987	56.90	19.78	79.73	4 in.	PVC	slotted - PVC	20 slot	10 ft.	35 to 25
Upgradient Wells												
Purex	N-9703 (X-156)	Mud Rotary	Jul-80	106.15	26.87	87.12	4 in.	Blk. Steel	SS-cont. wrap	20 slot	10 ft.	-3 to -13
Purex	N-9713 (X-157)	Mud Rotary	Jul-80	218.45	27.60	87.15	4 in.	Blk. Steel	SS-cont. wrap	20 slot	10 ft.	-118 to -128
Purex	N-9777 (X-162)	Mud Rotary	Oct-80	51.20	22.01	81.90	4 in.	Blk. Steel	SS-cont. wrap	20 slot	10 ft.	41 to 31
Purex	N-9778 (X-163)	Mud Rotary	Oct-80	82.90	22.20	81.73	4 in.	Blk. Steel	SS-cont. wrap	20 slot	10 ft.	9 to 1
Purex	N-9779 (X-164)	Mud Rotary	Oct-80	257.60	24.20	82.33	4 in.	Blk. Steel	SS-cont. wrap	20 slot	10 ft.	-160 to -170
Downgradient Wells												
Purex	W-261	Auger	8/4/87	48.00	NA	76.70	4 in.	PVC	slotted - PVC	20 slot	10 ft.	39 to 29
Purex	W-290	Auger	8/10/87	52.00	NA	75.50	4 in.	PVC	slotted - PVC	20 slot	10 ft.	34 to 24

- Upper Magothy Sceen Interval

- Upper Glacial Sceen Interval

- Lower Magothy Sceen Interval

* 10/19 result

PUREX SITE

Containment Area Sampling Results for 2021

VOLATILE ORGANICS COMPOUNDS (ppb)

	WELL W-150 DATE SAMPLED		WELL W-152 DATE SAMPLED		WELL W-154 DATE SAMPLED		WELL W-156 DATE SAMPLED		WELL W-261 DATE SAMPLED		WELL W-290 DATE SAMPLED	
	7/6/21		7/5/21		7/5/21		7/6/21		10/23/19	7/13/21	10/23/19	7/13/21
1,1,1,2-Tetrachloroethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,1,1-Trichloroethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,1,2-Trichloro-1,1,2-trifluoroethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,1,2-Trichloroethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,1-Dichloroethane	**17.7**		BDL		BDL		**1.8**		BDL	BDL	BDL	BDL
1,1-Dichloroethene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,2,3-Trichlorobenzene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,2,3-Trichloropropane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,2,4,5-Tetramethylbenzene	**1.4**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,2,4-Trimethylbenzene	**5.7**		**1.1**		BDL		BDL		BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	**4,380**		**5.2**		**2.3**		**2.6**		BDL	BDL	BDL	BDL
1,2-Dichloroethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,2-T-Dichloroethene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,3,5-Trimethylbenzene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	**86.2**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	**872**		**1.3**		BDL		**2.5**		BDL	BDL	BDL	BDL
Benzene	**1.6**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Bromochloromethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Carbon Tetrachloride	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Chlorobenzene	**241**		**12.2**		**4.7**		**8.3**		BDL	BDL	BDL	BDL
Chlorodifluoromethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Chloroform	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Chloromenthane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
cis-1,2-Dichloroethylene	**99.7**		BDL		BDL		**1.8**		BDL	BDL	BDL	BDL
Dichlorodifluoromethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Ethyl Benzene	**2.2**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Isopropylbenzene	**1.1**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
m,p-Xylene	**6**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Methyl t-Butylether (MTBE)	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Methylene Chloride	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Naphthalene	**3.8**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
n-Butyl Benzene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
n-Propylbenzene	**1.5**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
o-Xylene	**4.6**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
p-Ethyltoluene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
p-Isopropyltoluene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
sec-Butyl Benzene	**1.4**		**2**		BDL		BDL		BDL	BDL	BDL	BDL
t-1,2 Dichloroethene	**1.3**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
tert-Butyl Benzene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Tetrachloroethylene	BDL		BDL		BDL		BDL		**3.4**	**1.5**	BDL	BDL
Toluene	**11.8**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Trichlorodifluoromethane	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Trichloroethylene	BDL		BDL		BDL		BDL		BDL	BDL	BDL	BDL
Vinyl Chloride	**292**		BDL		BDL		BDL		BDL	BDL	BDL	BDL
TVOC	**6031.0**	**0.0**	**21.8**	**0.0**	**7.0**	**0.0**	**17.0**	**0.0**	3.4	**1.5**	0.0	0.0

BDL - Below detection limits B - Analyte detected in associated Method Blank All results in ppb

PUREX SITE

Containment Area Sampling results - 2021

VOLATILE ORGANICS COMPOUNDS (ppb)

	WELL X-156 / (N-9703) DATE SAMPLED		WELL X-157 / (N-9713) DATE SAMPLED		WELL (N-9777) DATE SAMPLED		WELL (N-9778) DATE SAMPLED		WELL (N-9779) DATE SAMPLED	
	10/27/14	7/7/21	10/27/14	7/7/21	10/28/14	7/8/21	10/28/14	7/12/21	10/28/14	7/12/21
1,1,1,2-Tetrachloroethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,1-Trichloroethane	BDL	BDL	BDL	**3.9**	BDL	BDL	BDL	BDL	BDL	**7.6**
1,1,2-Trichloro-1,1,2-trifluoroethane	BDL	BDL	**12**	BDL	BDL	BDL	BDL	BDL	**7.2**	BDL
1,1,2-Trichloroethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1-Dichloroethane	BDL	BDL	BDL	**1.9**	BDL	BDL	BDL	BDL	BDL	**3.5**
1,1-Dichloroethene	**6.3**	BDL	**74.0**	**33.2**	BDL	BDL	BDL	BDL	**49.0**	**33.4**
1,2,3-Trichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,3-Trichloropropane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4,5-Tetramethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4-Trimethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	BDL	**1.2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichloroethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-T-Dichloroethene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3,5-Trimethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromochloromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Carbon Tetrachloride	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorobenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorodifluoromethane	BDL	BDL	BDL	**1.2**	BDL	BDL	BDL	BDL	BDL	BDL
Chloroform	BDL	BDL	BDL	BDL	BDL	**1.0**	BDL	BDL	BDL	BDL
Chloromenthane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
cis-1,2-Dichloroethylene	BDL	BDL	BDL	**7.4**	BDL	BDL	BDL	BDL	**5.9**	**12.8**
Dichlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ethyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Isopropylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
m,p-Xylene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methyl t-Butylether (MTBE)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methylene Chloride	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
n-Butyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
n-Propylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
o-Xylene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
p-Ethyltoluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
p-Isopropyltoluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
sec-Butyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
t-1,2 Dichloroethene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
tert-Butyl Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Tetrachloroethylene	**88.0**	**3.4**	**23**	**59.5**	**7.6**	**13.2**	**12**	**17.5**	**110**	**97.3**
Toluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Trichlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Trichloroethylene	**5.5**	BDL	**9.6**	**10**	BDL	BDL	BDL	BDL	**7.8**	**10.8**
Vinyl Chloride	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TVOC	**99.8**	**4.6**	**118.6**	**117.1**	**7.6**	**14.2**	**12.0**	**17.5**	**179.9**	**165.4**

BDL - Below detection limits **B** - Analyte detected in associated Method Blank All results in ppb

Purex - Containment Area 1,4 Dioxane results

WELL_NO	*Sampling Date*	*1,4 - Dioxane result (ppb)*
W-150	7/6/2021	0.29
W-152	7/6/2021	ND
W-154	7/5/2021	ND
W-156	7/6/2021	0.11J
N-9703	7/7/2021	0.49
N-9713	7/7/2021	**1.7**
N-9777	7/8/2021	0.40
N-9778	7/12/2021	ND
N-9779	7/12/2021	**4**
W-261	7/13/2021	ND
W-290	7/13/2021	0.62

ND - No Detections

Bold - above NYSDEC guidance value (1 ppb)

PUREX / Containment Area
PFO / PFOA SAMPLING RESULTS July 2021 (ppb)

Compound	WELL W-150 DATE SAMPLED 7/6/21		WELL W-152 DATE SAMPLED 7/6/21		WELL W-154 DATE SAMPLED 7/5/21		WELL W-156 DATE SAMPLED 7/6/21		WELL N-9703 DATE SAMPLED 7/7/21		WELL N-9713 DATE SAMPLED 7/7/21		WELL W-261 DATE SAMPLED 7/13/21	
Perflourobutanoic acid	9.30		ND		4.80		12.00		7.00		5.00		2.90	
Perflourobutanesulfonic acid	3.00		3.70		1.40		4.90		2.50		0.64		0.69	
Perflouropentanoic acid	ND		ND		13.00		32.00		18.00		4.50		3.70	
Perflourohexanoic acid	4.70		4.80		4.70		19.00		12.00		4.00		2.80	
Perflourodecanoic acid	1.00		0.81		1.30		1.50		1.80		ND		ND	
Perflourohexanesulfonic acid	1.90		2.80		0.91		2.10		9.50		1.30		0.54	
Perflouroheptanoic acid	5.50		4.70		3.90		12.00		10.00		3.80		2.50	
Perflourooctonoic acid (PFOA)	18.00		13.00		8.40		25.00		18.00		9.00		3.80	
Perflourooctanesulfonic acid (PFOs)	7.5		12.00		4.10		9.40		27.00		5.40		3.80	
Perflourononanoic acid	1.80		2.20		1.40		2.50		3.20		0.69		0.84	
(PFOA / PFO) Total	**25.5**		**25.0**		**12.5**		**34.4**		**45.0**		**14.4**		**7.6**	**0.0**

BDL - Below detection limits **B** - Analyte detected in associated Trip Blank All results in ng/L NYSDEC MCL = 10 ng/L

Compound	WELL W-290 DATE SAMPLED 7/13/21		WELL N-9777 DATE SAMPLED 7/8/21		WELL N-9778 DATE SAMPLED 7/12/21		WELL N-9779 DATE SAMPLED 7/12/21	
Perflourobutanoic acid	2.90		2.70		6.00		4.90	
Perflouropentanoic acid	17.00		3.00		12.00		5.60	
Perflourohexanoic acid	6.10		3.20		6.80		4.80	
Perflourodecanoic acid	ND		ND		ND		ND	
Perflourobutanesulfonic acid	1.00		2.10		3.10		0.45	
Perflourohexanesulfonic acid	1.40		2.10		1.50		2.40	
Perflouroheptanoic acid	5.90		2.70		6.20		4.90	
Perflourooctonoic acid (PFOA)	8.60		5.50		10.00		12.00	
Perflourooctanesulfonic acid (PFOs)	6.40		35.00		21.00		12.00	
Perflourononanoic acid	1.70		3.20		3.20		1.60	
(PFOA / PFO) Total	**15.0**	**0.0**	**40.5**	**0.0**	**31.0**	**0.0**	**24.0**	**0.0**

- Upgradient wells
- Sidegradient wells
-Containment Area wells

Well Constrution Details

Well #	Total Depth	Screen Interval
N-9703	106 ft.	-3 to -13
N-9713	218 ft.	-118 to -128
N-9777	51 ft.	41 to 31
N-9778	83 ft.	9 to 1
N-9779	258 ft.	-160 to -170
W-150	51 ft.	34 to 24
W-152	56 ft.	31 to 21
W-154	56 ft.	32 to 22
W-156	57 ft.	35 to 25
W-261	48 ft.	39 to 29
W-290	52 ft.	34 to 24