

Periodic Review Report For NYS DOH Wadsworth Center (Site No. 401031) Albany, New York

Prepared for

New York State Department of Environmental Conservation 625 Broadway Albany, New York
12233

2016 Report



Prepared by

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1. EXECUTIVE SUMMARY

This Periodic Review Report (PRR) has been prepared to document the ongoing performance, effectiveness, and protectiveness of the selected remedy at the NYS DOH Wadsworth Center site as required by 6 New York Code of Rules and Regulations Part 375. The Wadsworth Center site (New York State Department of Environmental Conservation [NYSDEC] Site No. 401031) is located in the city of Albany, at the rear of property at 120 New Scotland Avenue (Figures 1 and 1a).

The overall purpose of this report is to demonstrate that the remedy selected in the Record of Decision (ROD) issued in March 1992 is protecting groundwater and showing current contamination concentrations in ground water are not migrating, and therefore not impacting human health or the environment. Originally the groundwater monitoring program at the Wadsworth Center site consisted of collecting groundwater samples and recording ground water elevations from three monitoring wells every fifth quarter. An additional well was located to the West of the site on adjacent property, and well 8S on adjacent property to the South was replaced after being paved over by the property owner. The site map with well locations is illustrated in Figure 2. The interpreted ground water map for the December 2016 sampling is illustrated in Figure 3.

2. SITE OVERVIEW

After the Wadsworth Center reported past practices of ground disposal of chemical waste at 120 New Scotland Avenue, the location was listed as an inactive waste burial site. The firm of Environmental Resources Management was contracted to perform Remedial Investigation activities (performed in 1990 and 1991), develop the remedial plan, and perform required monitoring and testing. They have subsequently been involved in all aspects of the program management for this inactive waste site.

In 1992 the ROD was issued and the Remedial Plan developed. In August of 1993 the Order on Consent was issued. The Remedial Plan included installation of a geomembrane cap with vents and a ground water pump and treat system, and deed restrictions to eliminate disturbance of the cap area. The area covered by the cap would include a section of property owned by the Christian Brothers Academy (CBA). That piece of property was eventually purchased by DOH to maintain institutional control over the cap area.

The pump and treat system operated under the Operations and Maintenance Plan for roughly 7 years. Water analysis reports indicated that the system was not effectively removing contaminants as intended, so a request was made to DEC to allow DOH to remove the system.

Approval for removal was granted in 2000, completed in 2001, and the decommissioning report approved in Spring 2002.

Secondary to the pump and treat system was fencing and access control. While the pump and treat system was operational, the plan was followed as required and fencing and access controls were maintained. When the pump and treat system was removed, the fencing and access controls were also eventually removed. As part of the pump and treat system removal plan, the original Order on Consent was modified to include a provision for monitoring ground water, whereby certain shallow wells would be sampled every fifth quarter to evaluate water levels and determine if contaminants were migrating from the original site. Three wells had been monitored according to plan. Those Groundwater Reports are on file for Dec. '03, March '05, September '06, Dec. '07, March '09, June 2010, and September 2011. As mentioned above, a fourth well was added to the matrix, and the original well (8S) that was covered over has since been replaced and sampled. All four wells are currently able to be monitored.

Vapor intrusion was evaluated in 2009, through a combination of soil vapor point tests (Geoprobe), internal building air samples, and analysis of building construction, ventilation, and space uses. Sample results showed no abnormal levels that may be attributable to the inactive burial site, and the subsequent NFA memo from DEC was issued.

3. REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

3.1 INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS CERTIFICATION

Engineering Controls (EC) were approved for removal and are no longer applicable to the site, with the exception of the cover system, which is still in place.

Institutional Controls (IC) could not originally be certified as land use restrictions could not be verified as being listed on deed documents. In 2012 the Wadsworth Center had a survey completed to reduce the area of the site to be considered as the "controlled area" (indicated in Figure 2), where land use and deed restrictions would apply. Due to additional information that was discovered, the survey was revised in April of 2013, with deed restrictions, and subsequently filed with the Albany County Clerk's Office.

3.1.1 Institutional Controls/Engineering Controls - Requirements and Compliance

The ICs/ECs applied at the site are in place as documented on the survey included as Figure 4. Land use restriction on deed documents have been recorded, along with the Declaration of Covenants and Restrictions document.

An area of chain link fence has been erected as a security barrier over a portion of the cap area, but the depth of footings was kept shallow so as not to impact the function/integrity of the site cap.

In 2015, excavation and soil sampling activities were completed for a 45 foot by 45 foot temporary repair work area associated with a portion of the David Axelrod Institute (DAI) parking lot above the cap area. Environmental oversight and sampling was conducted in accordance with the Site Management Plan.

In 2016, the entire DAI parking lot, with the exception of a small portion located beneath the All Hazards Receipt Facility (AHRF), was replaced. However, the construction project only involved milling of the old pavement, no soil removal, so environmental oversight and soil sampling was not required for this project.

Similar to the 2015 sampling results, a small concentration (<NYSDEC standard) of the compound methyl tert-butyl ether was detected in one of the monitoring wells during the December 2016 groundwater sampling.

3.2 MONITORING PLAN COMPLIANCE

The Wadsworth Center has submitted a Site Management Plan to DEC. Currently PRR submissions are required annually.

As set forth in the modified Order on Consent, fifth quarter well monitoring has proceeded according to schedule. However, it should be noted that the most recent groundwater testing didn't occur in the fifth quarter as required, but rather in the sixth quarter (December 2016). As a result, the next groundwater testing will be conducted during the next fourth quarter (i.e., Oct – Dec 2017) to ensure that we remain in compliance with the every fifth quarter requirement/cycle.

Also note, since well 8S to the South of the site is not on state-owned property, the Wadsworth Center annually renews an access agreement with the property owner to permit access for continued monitoring and repairs as needed. Monitoring well locations are detailed in Figure 2.

3.2.1 Groundwater Sampling

Groundwater samples have routinely been collected by qualified firms and analyzed by a NYSDOH approved environmental testing laboratory. Historically samples were analyzed for VOCs by USEPA Method 8260B, in accordance with the NYSDEC Analytical Services Protocol. The December 2016 samples (collected by Adirondack Environmental Services, were analyzed for TLC VOCs using USEPA Method 8260C, in accordance with the 1995 NYSDEC Analytical Services Protocol (ASP) Category B deliverable guidelines.

During the previous sampling event (6/26/2015), methyl tert-butyl ether was detected in MW-8SR at 5.7 ug/L, which is below the NYSDEC Ambient Water Quality Standard (AWQS) of 10 ug/L. During most recent sampling event in December 2016, methyl tert-butyl ether was again detected in MW-8SR at 4.5 ug/L, which is once again below the NYSDEC Ambient Waste Quality Standard of 10 ug/L. No other Volatile Organics were detected above the laboratory reporting limits in the groundwater samples collected. Available historical data of detectable VOC's from ground water sampling reports are summarized in Table 1. Ground water

elevations and depth to water measurements for all sampling events are summarized in Table 2.

4. CONCLUSIONS

Concentrations of methyl tert-butyl ether (MTBE) at MW-8S have decreased slightly since the last groundwater sampling in 2015 and continue to remain below the NYSDEC Ambient Waste Quality Standard of 10 ug/L. MTBE was not identified at any other well and no other volatile organics were detected above the laboratory reporting limits in the groundwater samples collected in December 2016. Although this compound appeared in well 11S during the December 2007 sampling event and appeared again in 2015 at a low concentration, the concentration at MW-8S has decreased slightly and it has not been detected in any of the other wells during the most recent sampling event in December 2016. The actual source of this compound is not definite, but since it has also been a fuel additive, one possibility is that the MTBE may be from vehicle fuel infiltrating from the parking lot near where the well is located. Although well 8S is apparently down gradient, if the waste site were the source of the contaminant, it would be reasonable to expect the appearance of MTBE in well 11S in subsequent samplings. It would also be reasonable to expect the appearance of other contaminants, originally found in the “site”, in one of the down gradient wells. Continued monitoring of the current wells will help evaluate the source and detail if there is actual movement from the cap site.

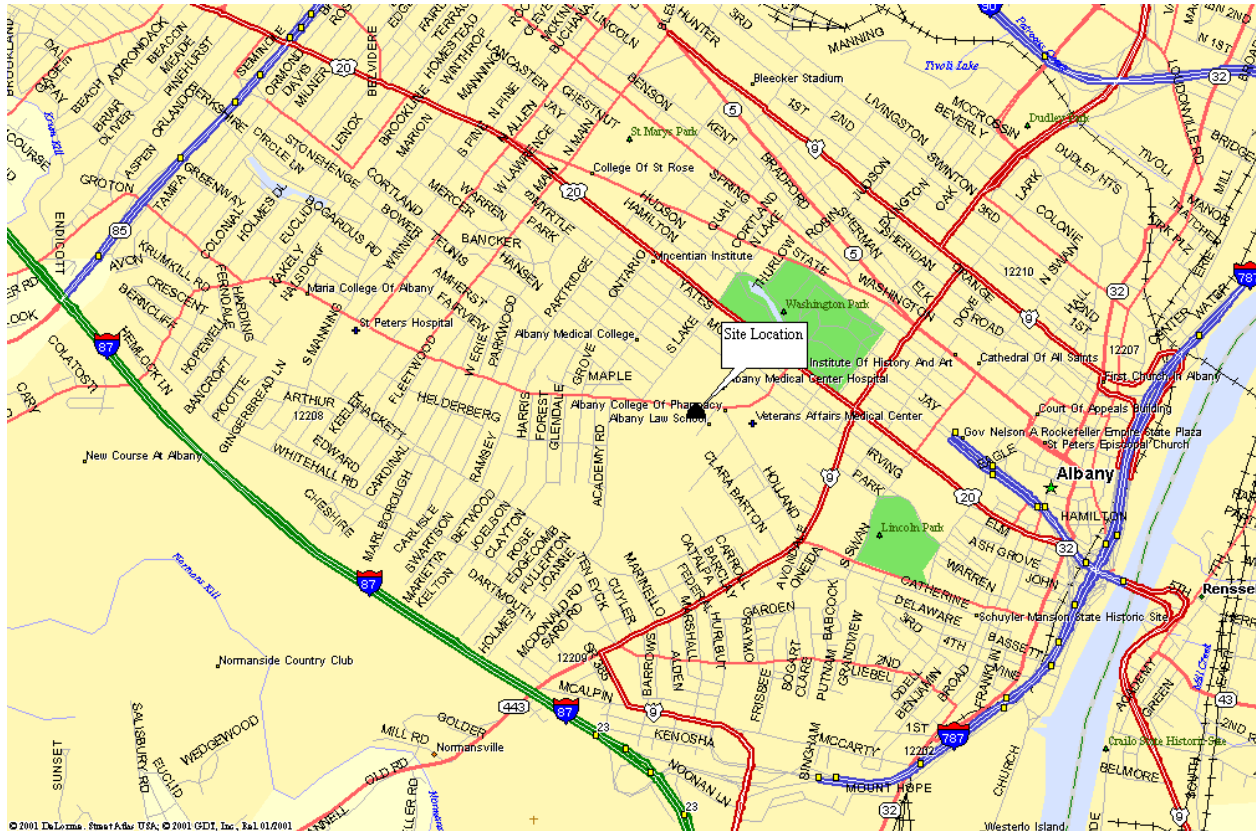
The Wadsworth Center again secured an access agreement with the property owner to the South of the site to allow access for continued monitoring. This process was finalized prior to the round of sampling conducted in December of 2016.

Part of an annual review process, included in the SMP, is the reiteration to staff that official site restrictions are in place to ensure no projects/activities are undertaken within the site boundary without proper review and approval by the site coordinator and the DEC.

As noted in the 2015 PRR, the asphalt cover system, while maintaining its original intent, had developed widespread cracks with vegetation. In 2016, the Wadsworth Center initiated and completed a construction project that involve replacement of the entire DAI parking lot asphalt, with the exception of a small section located beneath the existing All Hazards Receipt Facility (AHRF) located at the back of the site. We will continue to monitoring the condition and integrity of that section during the annual site inspection.

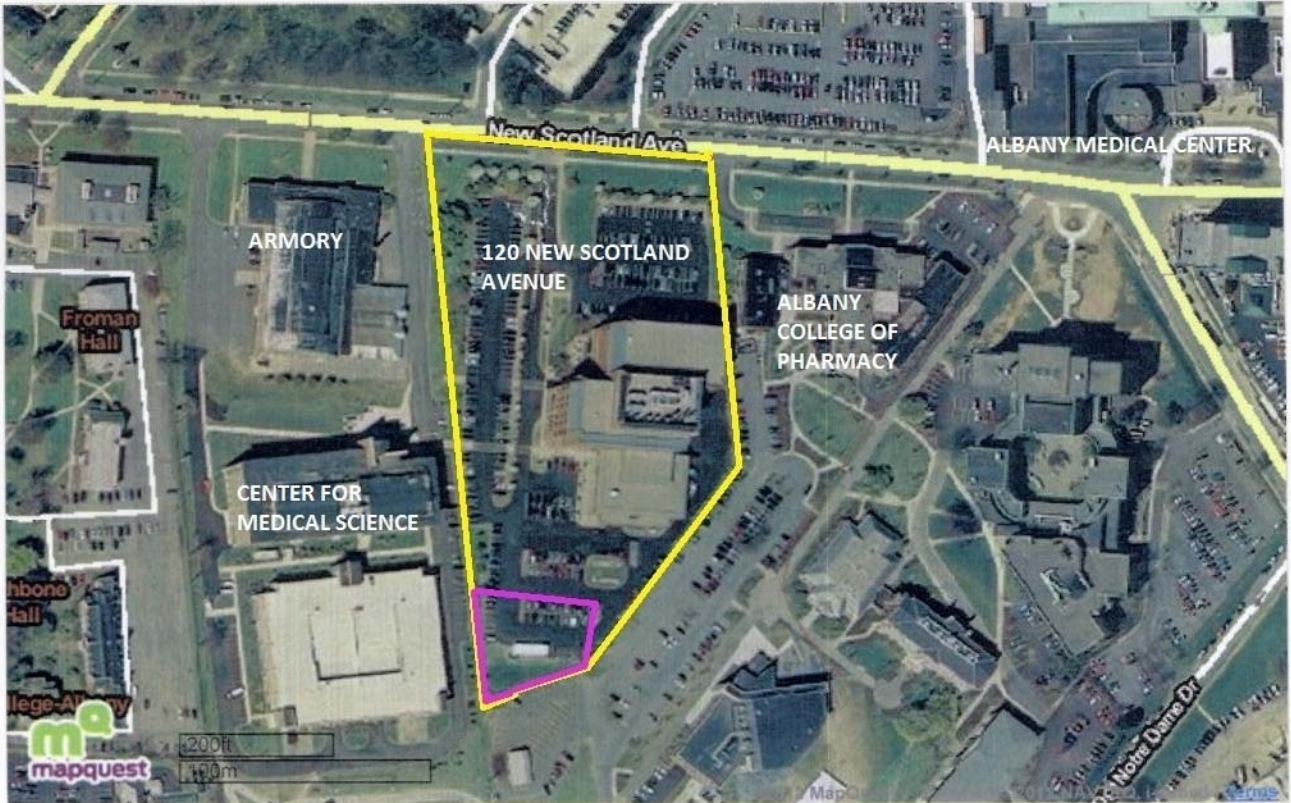
Figure 1

SITE LOCATION MAP



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Figure 1a - Site and Site Boundaries



— Approximate Controlled Area Boundary

— Approximate Property Boundary



Figure 2 - Site Map with Well Locations



- Approximate Cap Boundary
- Monitoring Well Locations (12S, 8S, 9S, 11S)
- Proposed Area Subject to SMP

Figure 3 - Groundwater Contour Map (01/17)

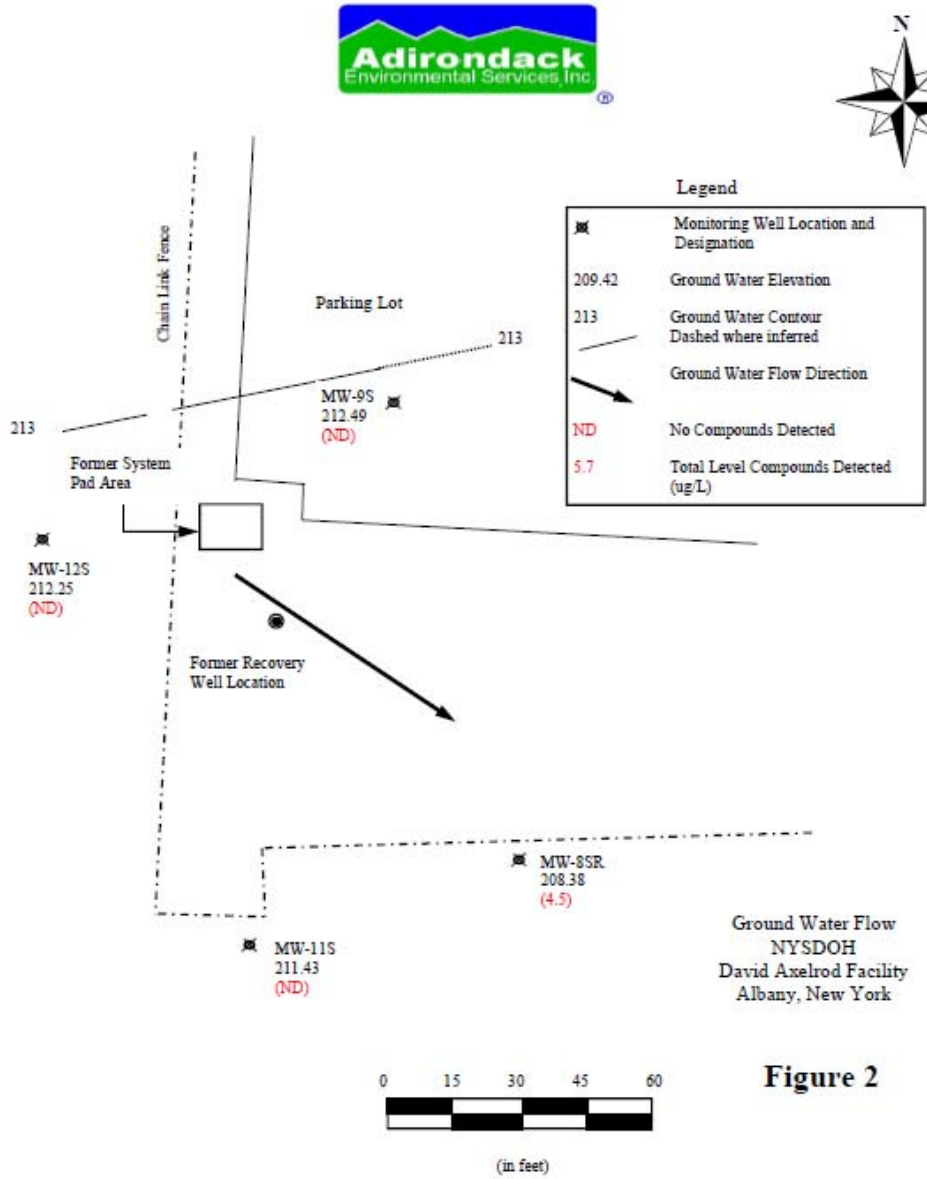
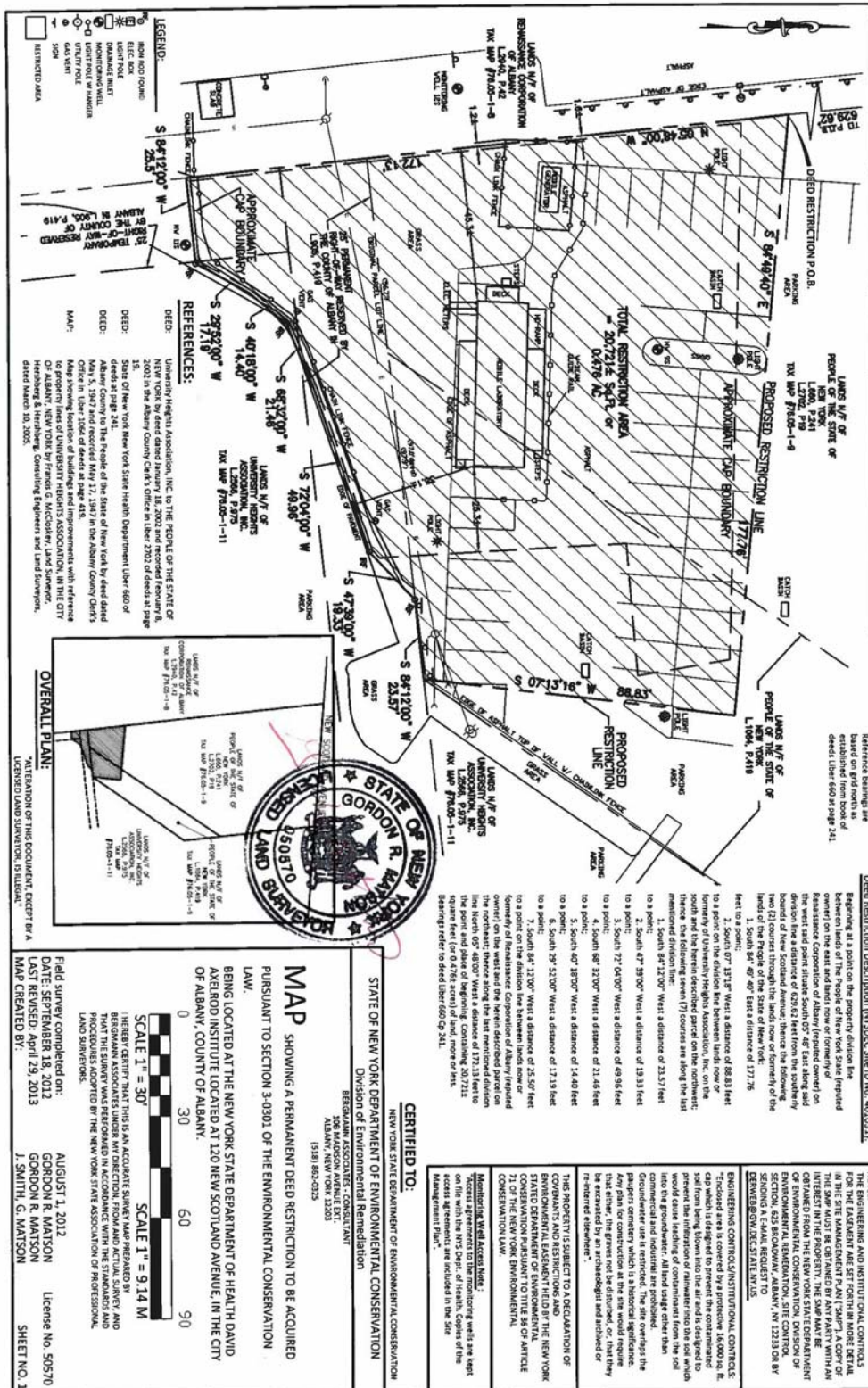


Figure 2

Notes: Locations are estimated and approximate

Figure 4 – Survey With Deed Restrictions





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Table 1
Summary of Volatile Organics Detected
Axelrod Facility
Albany, New York

AES project: 161228037

Sample Location Date Sampled	NYSDEC Standard	MW-8S 12/22/2003	MW-9S 12/22/2003	MW-10S 12/22/2003	MW-11S 12/22/2003	MW-8S 3/2/2005	MW-9S 3/2/2005	MW-10S 3/2/2005	MW-11S 3/2/2005
TCL VOCs (ug/L)									
Methyl tert-butyl ether	10	U	U	NS	U	U	U	NS	2.10

Sample Location Date Sampled	NYSDEC Standard	MW-8S 9/7/2006	MW-9S 9/7/2006	MW-10S 9/7/2006	MW-11S 9/7/2006	MW-8S 12/4/2007	MW-9S 12/4/2007	MW-10S 12/4/2007	MW-11S 12/4/2007
TCL VOCs (ug/L)									
Methyl tert-butyl ether	10	U	U	NS	19 J	8.24 J	U	NS	6.91 J

Sample Location Date Sampled	NYSDEC Standard	MW-8S 3/19/2009	MW-9S 3/19/2009	MW-10S 3/19/2009	MW-11S 3/19/2009	MW-8S 6/8/2010	MW-9S 6/8/2010	MW-10S 6/8/2010	MW-11S 6/8/2010
TCL VOCs (ug/L)									
Methyl tert-butyl ether	10	13	U	NS	U	13	U	NS	U

Sample Location Date Sampled	NYSDEC Standard	MW-8S 9/8/2011	MW-9S 9/8/2011	MW-11S 9/8/2011	MW-12S 9/8/2011	MW-8SR 1/30/2013	MW-9S 1/30/2013	MW-11S 1/30/2013	MW-12S 1/30/2013
TCL VOCs (ug/L)									
Methyl tert-butyl ether	10	NS	U	U	U	5.52	U	U	U
Ethyl Ether	NS	NS	U	U	U	54.2	1.32	U	U
Di-isopropyl ether	NS	NS	U	U	U	2.87	U	U	U
1,4-Dioxane	NS	NS	U	U	U	398	U	U	U

Sample Location Date Sampled	NYSDEC Standard	MW-8SR 3/17/2014	MW-9S 3/17/2014	MW-11S 3/17/2014	MW-12S 3/17/2014	MW-8SR 6/26/2015	MW-9S 6/26/2015	MW-11S 6/26/2015	MW-12S 6/26/2015
TCL VOCs (ug/L)									
Methyl tert-butyl ether	10	U	U	U	U	5.7	U	U	U

Sample Location Date Sampled	NYSDEC Standard	MW-8SR 12/28/2016	MW-9S 12/28/2016	MW-11S 12/28/2016	MW-12S 12/28/2016				
TCL VOCs (ug/L)									
Methyl tert-butyl ether	10	4.5 J	U	U	U				

NOTES:

- U = Not Detected above the laboratory detection limits
- NYSDEC Standards - NYSDEC Ambient Water Quality Standards - TOGS 1.1.1;
- NS = No standard or guidance value given
- TCL VOCs = Target Compound List Volatile Organic Compounds
- ug/L = micrograms per liter
- Bold Text - Above the NYSDEC Standard**
- J = Estimated Value
- Only those analytes that were detected in at least one sample are presented.
- All samples analyzed for TCL VOCs by EPA Method 8260
- MW-10S was not sampled (NS) since the well was destroyed.
- MW-8S was not sampled (NS) since the well was covered with new asphaltic pavement.



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**Table 2
Summary of Groundwater Elevation Data
Axelrod Facility
Albany, New York**

AES project: 161228037

Well ID	MW-8S	MW-9S	MW-11S	MW-12S
Elevation at Top of Casing	216.42	219.64	219.39	220.94
Total Depth of Well	17.92	19.88	16.35	19.75
Screen Length	10	15	10	10
Date				
12/22/2003	211.74	213.24	212.17	NA
3/2/2005	211.40	213.00	211.54	NA
9/7/2006	211.27	212.42	211.41	NA
12/4/2007	211.90	213.22	211.99	NA
3/19/2009	212.36	213.63	212.31	NA
6/8/2010	211.56	212.59	211.47	NA
9/8/2011	NM	214.32	214.97	216.88
1/30/2013	211.77	212.74	212.01	212.64
3/17/2014	209.42	213.21	212.99	216.89
6/26/2015	212.26	213.30	210.26	212.72
12/28/2016	208.38	212.49	211.43	212.25

NOTES:

- All measurements reported in feet.

NA - Not Applicable - MW-12S installed April 8, 2011

NM = Not Measured (Well was covered with new asphaltic pavement since June 2010 sampling event).

* - Replacement Well MW-8SR installed January 26, 2013 - Elevation TOC = 216.88

Total depth of replacement well MW-8SR = 17.42 feet and screen length is 10 feet.

Depth to Water Data	MW-8S MW-8SR *	MW-9S	MW-11S	MW-12S
Date				
12/22/2003	4.68	6.40	7.22	NA
3/2/2005	5.02	6.64	7.85	NA
9/7/2006	5.15	7.22	7.98	NA
12/4/2007	4.52	6.42	7.40	NA
3/19/2009	4.06	6.01	7.08	NA
6/8/2010	4.86	7.05	7.92	NA
9/8/2011	NM	5.32	4.42	4.06
1/30/2013	5.11 *	6.90	7.38	8.30
3/17/2014	7.46	6.43	6.40	4.05
6/26/2015	4.62	6.34	9.13	8.22
12/28/2016	8.50	7.15	7.96	8.69