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Sixth Annual Report
Interim Remedial Measure for NAPL Recovery

August 2019 Through July 2020
Former Equity Works MGP Site, Brooklyn, New York
NYSDEC Site No.: 224050
Order on Consent Index #: A2-0552-0606
EPA ID number for the Site: NYR 000 225 615

National Grid

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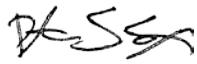	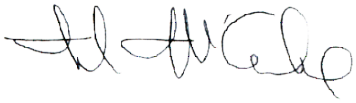
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Table of Contents

Figures

Tables

Executive Summary

National Grid's consultant, AECOM, has prepared this Interim Remedial Measure (IRM) Annual Report to document the sixth year of operation of the non-aqueous phase liquid (NAPL) recovery system within the footprint of the former Equity Manufactured Gas Plant (MGP) site (the Site) located at 254 Maspeth Avenue in Brooklyn, New York during the period of August 2019 through July 2020. The IRM is being conducted pursuant to a Multi-site Order on Consent and Administrative Settlement, Index # A2-0552-0606, between The Brooklyn Union Gas Company (BUG) d/b/a National Grid NY, and the New York State Department of Environmental Conservation (NYSDEC). Details regarding the construction of the NAPL recovery IRM remedy are included in the IRM for NAPL Recovery Construction Completion Report (CCR), submitted to the NYSDEC in May 2015 (AECOM, 2015).

The Site is located in a historically industrialized area and operated as a MGP from approximately 1893 to 1929. BUG acquired the MGP in approximately 1903 and transferred ownership of the Site in 1951. The Site currently consists of three adjoining properties – 222 Maspeth Avenue, 252 Maspeth Avenue, and 254 Maspeth Avenue. The 222 Maspeth Avenue property was historically used by Cooper Tank as a solid waste recycling facility, with the 252 and 254 parcels used to support Cooper Tank's recycling operations. More recently, the 222 Maspeth Avenue parcel is used to refurbish and ship roll-off containers. The 252 Maspeth Avenue property is was recently leased to a tenant who parks and maintains buses, and the 254 Maspeth Avenue parcel is leased to a construction contractor as a lay-down space to support their construction operations.

The IRM activities included the following:

- installation of 5 recovery wells at appropriate locations within the central areas of the Site to reduce the quantity of NAPL, and at 18 selected perimeter locations to control the potential for off-site migration.
- Installation of two recovery wells within the former No.1 Relief Holder in 2018.
- on-going measurement and recovery of NAPL that collects in the recovery wells.

Data collected to date indicate that NAPL collection rates at 12 of the initial 23 recovery well locations (2 on-site and 10 perimeter locations) warrant the continued operation of pumps to support automated recovery. The well pumps are controlled with timers that are adjusted, as required, with a goal of containing the NAPL within the sump of each well, but at a level above the inlet to the pump to minimize the collection of groundwater. The remaining 13 wells, including those located in the No. 1 Relief Holder, are managed using manual recovery techniques on a quarterly basis.

Since system startup through July 31, 2020, the system has operated with an average on-line factor of 98% without incidents or unplanned releases from the system. Based on system measurements, approximately 24,800 gallons of mixed fluids have been collected from the recovery system and managed as an alternative fuel, initially at the Tradebe Facility in Cohoes, New York until March of 2017 and more recently at Veolia Technical Solutions Facility in Middlesex, New Jersey. An estimate of the organic/water ratios over the monitoring period indicates that the mixed fluids collected typically contain 60 to 75% organic, resulting in over 14,900 gallons of NAPL being removed from the site to date.

1. Introduction

National Grid's consultant, AECOM, is submitting this 6th Annual Report outlining the Interim Remedial Measure (IRM) for NAPL Recovery progress during its sixth year of operation. The NAPL recovery system is located within the footprint of the former Equity Works Manufactured Gas Plant (MGP) site (the Site). The Site consists of three adjoining properties – 222 Maspeth Avenue, 252 Maspeth Avenue, and 254 Maspeth Avenue located in Brooklyn, New York. The location of the Site and the orientation of the individual properties are illustrated in Figures 1-1 and 1-2, respectively.

The IRM is being implemented pursuant to a Multi-site Order on Consent and Administrative Settlement, Index # A2-0552-0606, between The Brooklyn Union Gas Company (BUG) d/b/a National Grid NY, and the New York State Department of Environmental Conservation (NYSDEC), in accordance with applicable guidelines of the NYSDEC and the New York State Department of Health (NYSDOH).

This document is organized in the following manner: a summary of activities associated with the initial installation and operation of the recovery wells is presented in Section 2; the results from the fifth year's monitoring activities are documented in Section 3 and proposed revisions to the system's operation and monitoring program are discussed in Section 4.

2. Recovery Well Installation and Operation

National Grid conducted the IRM to collect recoverable NAPL while site-wide investigation and remedial alternative and design activities are completed. The design of the NAPL recovery system included the installation of 23 recovery wells at locations that were determined to have the potential to collect mobile NAPL and be compatible with Cooper Tank's construction and long-term operational activities. Consistent with the NYSDEC approved work-plan (AECOM, 2013), recovery wells were installed in the following areas of the Site:

- On-Site–5 recovery wells (RW-1 through 5) were installed at locations within the 252 Maspeth Avenue property.
- Site Perimeter –18 recovery wells (RW-6 through 23) were installed along the perimeter of the Site on the 222, 252 and 254 Maspeth Avenue properties.
- Two additional recovery wells (RW-24 and RW-25) were installed in 2018 inside the former No. 1 Relief Holder and added to the NAPL recovery O&M program.

Recovery well locations are shown on Figure 2-1. The perimeter locations are spaced at approximately 18 ft on center, with the exception of the area along the driveway of 254 Maspeth Avenue where the presence of a subsurface structure has required spacing of approximately 30 feet between the three recovery wells (RW-6, -7 and -8). The On-Site and Site Perimeter locations were equipped with the infrastructure, i.e., conduits for electrical service and tubing, for the subsequent automation of NAPL recovery activities.

2.1 Recovery Well Designs

Recovery wells were designed to accommodate the uncertainty of long-term NAPL recovery rates. All well risers were constructed of 6-inch diameter schedule 40 polyvinyl chloride (PVC). Recovery well screens were constructed of 6-inch diameter 0.020-inch slot wire wrap stainless steel. Five (5) and ten (10) foot lengths of screen were used, as required, to address soil intervals where NAPL (i.e., saturated thickness greater than 1-inch) have been observed. Centralizers were installed at the top and bottom of each screen. The screen size was selected based on the grain-size information obtained during the Pre-Design Investigation (PDI). Each well was equipped with a 5-foot long, 6-inch diameter, stainless steel sump to collect NAPL, with the exception of new wells RW-24 and RW-25 which were screened to the former No. 1 Relief Holder foundation to avoid penetrating the holder bottom. The annular space above the filter pack was filled with a bentonite seal (minimum of 3 to 4 feet thick). Note that additional bentonite seals were used at locations where multiple screen intervals were installed. The annular space above the bentonite seal was filled with a grout mixture from the bentonite seal to approximately one to two feet below the top of casing (TOC). Recovery wells at the On-Site and Site Perimeter locations were completed in a 4-foot by 4-foot traffic rated well vault. Illustrations of an in-place recovery well and completed well location are provided in Figure 2-2.

2.2 Initial Monitoring and NAPL Recovery

The NAPL recovery system is intended to operate in a manner that contains the NAPL levels at the locations within the well sumps (5 ft. in length). As part of the installation of the system, initial monitoring activities were conducted to provide a preliminary estimate of potential collection rates. The results were used to determine which locations would require automation for the cost-effective recovery of NAPL. The monitoring activities provided the ability to group the locations into three categories based on the observed recharge rates. They were grouped as follows: Primary Recovery Wells (produce approximately 1 gallon per day (gpd) of NAPL recovered; Secondary Recovery Wells (approximately 0.1 to 0.5 gpd of NAPL recovered) and Gauging Wells (< 0.1 gpd of NAPL recovered). The distribution of wells within these categories is provided on Table 2-1.

2.2.1 Primary Recovery Wells

The majority of NAPL (approximately 85 percent of total) was collected from the eight primary locations. The manual management of NAPL at these locations would require that recovery activities be conducted on a weekly basis to ensure that the storage capacity of the well sumps (approximately 7.5 gallons) not be exceeded. This frequency of manual monitoring/collection is not cost-effective or practical given site access issues and the level of activity on the Cooper Tank facility. As a result, the wells at these eight locations were automated by setting NAPL recovery pumps in the wells.

2.2.2 Secondary Recovery Wells

Approximately fifteen percent of the NAPL was collected from seven secondary wells. The manual management of NAPL at these locations would require that recovery activities be conducted on a monthly basis to ensure that the storage capacity of the well sumps is not exceeded. Long-term manual monitoring/recovery at this frequency is not cost effective, and these locations were also automated by setting NAPL recovery pumps in the wells.

2.2.3 Gauging Wells

NAPL levels at the 13 remaining wells were consistently observed to be within the well's sumps at each location or within the former No. 1 Relief Holder foundation. It was determined that NAPL at these locations could be effectively managed on a quarterly basis using manual recovery techniques. Note that one of the secondary wells (RW-11) was converted to a gauging well during the first year of operation, bringing the total to 13 wells.

The initial measurements of the quantity of NAPL collected from locations within the former No. 1 Relief Holder indicate that RW-24 and RW-25 can also be effectively managed using manual recovery techniques on a quarterly basis.

2.3 System Operation

Discussions of the recovery/collection methods for the automated and gauging wells are provided below.

2.3.1 Automated Wells

The Primary and Secondary recovery well locations (Figure 2-3) are equipped with fixed speed pumps manufactured by Pump Works and/or Linear Pumps. Note that the equipment designed by Linear Pumps has been determined to be better suited to site conditions and will be used to replace the Pump Works equipment over time. The well pumps are controlled with timers that are adjusted, as required, with a goal of containing the NAPL within the sump of each well, but at a level above the inlet to the pump to minimize the collection of groundwater.

Collected NAPL is accumulated in a 500-gallon capacity double-walled polyethylene tank located above ground in the system's control trailer on the 254 Maspeth Avenue parcel (Figure 2-4). The accumulation tank is equipped with a high liquid level detector to prevent over-filling, as well as secondary containment. The system is equipped with additional alarms and communication equipment to ensure its safe operation.

The contents of the tank are periodically gauged by field staff using the following method:

- The tank is accessed through the topmost access port;
- An interface probe is lowered to the bottom of the tank;
- The probe is left in place for a period of 5 minutes to allow the separate layers of NAPL and water to resolve;
- The probe is slowly raised until the water level is encountered;

The thicknesses of the NAPL and water levels are used to estimate the relative organic/water composition of the mixed fluids.

2.3.2 Gauging Wells

The Gauging Wells are monitored during quarterly inspection activities and accumulated NAPL is recovered using an air lift system that consists of an air compressor and sample line (1 inch outside diameter black iron pipe) that runs from the bottom of the well sump to a closed 55-gallon drum and is operated in the following manner:

- A small stream of compressed air is introduced into the bottom of the sample line through a “T’ connection.
- The upward movement of the air “bubble” creates a vacuum that draws NAPL upward from the sump and into the drum.
- The consistency of the stream is observed until the fluid being removed appears to be clear (i.e., NAPL is no longer being removed). At that point, the air flow is discontinued and the volume of collected NAPL is measured and recorded.

The collected NAPL is stored in sealed drums and collected with the NAPL from the accumulation tank at regular intervals by a certified waste hauler.

3. System Performance

The following discussion provides summaries of NAPL recovery and waste management observations during the sixth year of system operation (August 2019 to July 2020), as well as a discussion of the associated maintenance and response activities.

3.1 NAPL Recovery

Monitoring and recovery activities were conducted on an approximate quarterly basis through the year. The results from the monitoring of the automated and gauging wells are discussed below.

3.1.1 Automated Wells

The results from the gauging activities during the system's operation are summarized in Table 3-1. Adjustments to the pumping rates were generally appropriate to contain NAPL within the sumps of the wells. However, experience during the first six years of operation demonstrate that although general trends of the flow of NAPL to a well can be established, there are short-term variabilities in flow and/or minor mechanical issues (e.g. pump screen clogging, tripped fuses) that can challenge the ability to continually maintain a matching pumping rate. In addition, because the system is automated with pumping times and durations controlled by a timer, periodically there are times where the NAPL thickness is identified above the sump interval, e.g. if wells are gauged just before pumping. These are temporary conditions, as accumulated NAPL is removed from the sumps on a continuous basis over time. Pump duration adjustments are also made on an on-going basis when data indicate NAPL thickness is near or above the sump level in the recovery wells.

Approximately 2,530 gallons of mixed fluids were collected from the system during the sixth year of operation (August 1, 2019 through July 31, 2020). An illustration of the cumulative volume of mixed fluids collected over time is provided in Figure 3-1. From startup through July 2020, approximately 24,847 gallons of mixed fluids have been removed by the system based on readings from the level sensor in the recovery tank. Note that the estimates of total recovered volume presented in Table 3-1 (based on in-truck volumes listed on the manifests) can vary slightly from the "tank" level sensor estimate due to the variability over time between the level sensor readings and the "in-truck" volumes recorded by the waste hauling company. In the past, observation of the relative proportions of organic/water have been highly variable; however, the use of the standardized protocol presented in the Year 2 Report has provided more consistent results. During Year 6 operations, the observed NAPL to water ratio of collected mixed fluids was approximately 60% NAPL. A conservative estimate of the organic/water ratios since system startup indicates that the collected material likely contained over 14,900 gallons of NAPL.

3.1.2 Gauging Wells

The 2015-2020 data from the gauging wells is presented in Table 3-2. As indicated, manual recovery on a quarterly basis is appropriate to maintain DNAPL levels within the sumps. During Year 6 operations, approximately 103 gallons of mixed fluids were recovered from the 13 gauging wells.

Figure 3-2 presents a graphical illustration of the trend in DNAPL thickness in the "gauging" recovery wells during the first six years of operation. As illustrated, thicknesses have generally decreased over time with typical variation. This suggests that the collection system is having a potentially significant effect on reducing the quantity of recoverable DNAPL in the areas where the gauging wells are located.

3.2 Waste Management

The collected NAPL was managed as an alternative fuel at the Tradebe Facility in Cohoes, New York until March of 2017 and more recently at Veolia Technical Solutions Facility in Middlesex, New Jersey. A summary of the waste shipments and associated quantities from both the automated and gauging wells is presented in Table 3-3.

The initial shipments of mixed fluids during Years 1 and 2 were managed as a non-hazardous waste in accordance with NYSDEC Guidance DER-4, “Management of Coal Tar Waste and Coal Tar Contaminated Soils and Sediment”. From time to time the results from the analysis of the mixed fluids in the tank indicated a flash point that we greater than 140^{o} F. Although the results were believed to be the result of inconsistencies in sampling and analysis, shipments after February 5, 2016 during Year 2 operations were conservatively managed as a D001 Ignitable Waste using the RCRA ID number for the Site: NYR 000 225 615. Documentation of the shipments for Year 6 operations are provided in Appendix A.

3.3 System Maintenance

There were no significant maintenance issues with the system during the monitoring period. The following maintenance activities were accomplished during the sixth year of operation:

- Periodic cleaning of the system trailer to remove dust generated by site operations.
- Quarterly cleaning of recovery well pump intake screens as needed and replacement of vault lid hardware (latches, hinges, etc.) that get damaged by site operations.
- Updates to the program run by the SCADA 3000 programmable logic controller (PLC) to facilitate greater control over pump timing (daily or weekly).

During the current reporting period, the system was on-line 329 days out of a total of 329 planned operating days, as outlined below. This reflects an on-line factor of 100%, which is higher than prior years of operation. There were two scheduled manual NAPL pump down and recharge tests performed during Year 6 operations following quarterly monitoring to evaluate NAPL recharge in response to less frequent but longer duration pumping. These included one event from August 13, 2019 to September 4, 2019 (22 days) and a second event from May 1, 2020 to May 15, 2020 (14 days). Results of the manual pump down and recharge events indicated that NAPL levels would be maintained within the recovery well sumps using weekly pumping, therefore supporting the change in pumping frequency from a daily basis to a weekly basis.

3.4 Incidents/Unplanned Releases

There were no incidents or unplanned releases during the reporting period.

4. Recommendations for Future Operation

National Grid continues to conduct additional evaluations of recharge rates and the composition of mixed fluids to determine if it will be practical to refine the operation of the system, e.g. transition automated wells to gauging wells, over time.

Starting in June 2014, and continued during various quarterly gauging events, a pilot program was initiated to evaluate the recharge rates for select wells. During the evaluation, NAPL was removed from the well and NAPL thicknesses were monitored periodically over the next 24 hours or longer, with results reported in gallons/day. The results for three wells located along the southern edge of the 252 Maspeth Avenue parcel (RW-18, -19 and -20) and one well along the eastern edge of the 254 Maspeth Avenue parcel (RW-10) are summarized in Figure 4-1. As illustrated, NAPL recharge rates indicate a decreasing trend, with some expected variability. Data collected during Year 6 operations indicated a continued decrease in NAPL recharge rates in RW-10, -18, -19, and -20 compared to baseline (2014) levels. This is expected as the NAPL is continually removed from the subsurface. The evaluation will be continued at these wells and possibly additional wells during Year 7 operations.

During Year 3 operations, National Grid also conducted a recharge evaluation to evaluate the possibility that the decreasing recharge rates could be associated with “fouling” of the well screens. The results from the evaluation were presented in the Year 3 Annual Report (AECOM, 2017) and demonstrated that significant NAPL recharge was noted in all wells, confirming that recovery well screen fouling is not an issue or the cause of the gradually decreasing recharge rates.

The NAPL recovery system was also switched from daily to weekly pumping on July 27, 2020 in an attempt to improve NAPL to water collection ratios. The results of the above actions will be reviewed as part of the next annual report to determine if there is a trend in the rate of NAPL collection and if any modifications to the operation of the system are required.

5. References

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Tables

Table 2-1
Categories of Recovery Wells
Former Equity Works MGP Site, Brooklyn, New York

Primary Recovery Wells (collection rate < 1 gpd)

Well	Location	
RW-2	252 Parcel	on-site
RW-3	252 Parcel	on-site
RW-10	254 Parcel	perimeter
RW-12	254 Parcel	perimeter
RW-13	254 Parcel	perimeter
RW-18	254 Parcel	perimeter
RW-19	254 Parcel	perimeter
RW-20	254 Parcel	perimeter

Secondary Recovery Wells (collection rates 0.1 to 0.5 gpd)

Well	Location	
RW-8	254 Parcel	perimeter
RW-9	254 Parcel	perimeter
RW-11	254 Parcel	perimeter
RW-21	254 Parcel	perimeter
RW-22	222 Parcel	perimeter

Gauging Wells (collection rate < 0.1 gpd)

Well	Location	
RW-1	252 Parcel	on-site
RW-4	252 Parcel	on-site
RW-5	252 Parcel	on-site
RW-6	254 Parcel	perimeter
RW-7	254 Parcel	perimeter
RW-11	254 Parcel	perimeter
RW-14	254 Parcel	perimeter
RW-15	254 Parcel	perimeter
RW-16	254 Parcel	perimeter
RW-17	254 Parcel	perimeter
RW-23	222 Parcel	perimeter
RW-24	222 Parcel	on-site
RW-25	222 Parcel	on-site

Note: [1] Based on data from initial gauging events - May 2013 through February 2014

Table 3-1
NAPL Monitoring and Recovery - Automated Wells
Former Equity Works MGP Site, Brooklyn, New York

Location			Depth of Well (ft.)		Typical Pre-Recovery NAPL Thickness (ft.)	NAPL Thickness (ft)																			
	Parcel	Well ID	Design	Measured		7/29/2015	10/15/2015	1/15/2016	4/28/2016	7/28/2016	10/17/2016	1/19/2017	4/6/2017	7/26/2017	10/26/2017	1/19/2018	4/5/2018	7/25/2018	11/5/2018	1/30/2019	4/3/2019	8/13/2019	11/7/2019	1/28/2020	4/30/2020	7/27/2020
On-Site	252	**RW- 2**	51.00	49.70	12	0.06	5.43	8.98	0.55	3.42	0.20	3.33	0.01	6.05	3.62	8.82	1.38	1.52	0.14	6.10	9.55	0.00	1.21	6.05	6.80	0.01
		RW- 3	51.00	50.40	14	0.63	4.72	11.74	1.25	3.06	0.50	9.20	6.02	12.04	11.02	13.42	1.11	13.95	10.21	11.33	11.15	0.30	3.43	9.88	---	2.44
Perimeter	254	RW- 8	48.00	46.72	3	0.06	0.15	1.89	0.98	0.10	2.41	3.63	2.05	0.01	0.01	0.01	0.00	2.71	5.10	5.83	5.42	6.35	2.05	4.25	0.00	3.20
		RW- 9	50.00	48.87	6	0.06	1.73	7.32	13.50	7.78	0.10	4.92	6.30	12.30	0.01	0.01	0.00	0.00	0.00	1.70	5.25	7.55	3.80	6.95	5.00	3.20
		RW- 10	46.00	45.30	11	0.06	6.25	11.44	3.03	0.20	0.05	6.32	6.60	0.95	0.01	0.01	0.00	0.02	0.02	2.72	6.42	7.99	4.06	6.99	5.30	1.25
		RW- 11	46.00	45.73	8	---	---	---	---	---	---	---	---	---	---	---	---	0.91	1.41	1.30	0.82	1.05	1.00	1.00	1.00	1.15
		RW- 12	46.00	45.48	13	4.01	2.65	10.45	10.60	2.25	10.11	1.20	0.01	2.85	2.65	0.75	4.30	5.60	0.10	0.01	2.55	0.85	0.03	0.00	0.20	0.01
		RW- 13	46.00	45.53	12	0.06	0.35	10.51	6.01	0.1	8.08	5.53	6.2	0.01	0.01	0.01	6.95	10.81	0.00	0.00	1.52	0.15	0.01	0.00	0.00	0.01
	252	**RW- 18**	50.00	47.50	10	8.80	0.10	trace	0.10	0.10	0.05	0.01	0.01	0.01	0.01	0.01	0.01	3.65	0.10	0.01	7.71	0.02	0.00	0.00	0.00	0.01
		RW- 19	52.00	50.18	12	0.06	0.1	7.71	0.15	2.72	0.05	5.56	0.01	6.2	0.01	0.01	0.01	0.00	0.00	0.00	9.68	0.23	6.95	9.23	9.50	9.55
		RW- 20	52.00	50.75	11	9.01	1.8	2.0	1.4	2.2	1.9	2.0	0.0	2.1	2.0	1.2	0.0	1.31	1.45	2.00	10.02	5.55	6.02	1.87	2.30	1.93
		RW- 21	50.00	49.80	5	0.06	0.1	trace	8.65	0.1	5.97	0.01	0	0	0.01	2.12	1.82	3.70	---	2.60	4.01	3.00	6.67	4.98	3.90	0.01
	222	RW- 22	46.00	42.95	8	1.88	8.34	0.57	0	0.1	0.1	0.01	1.51	0.01	---	0.01	0.01	0.02	---	---	2.02	0.00	0.02	0.00	---	0.00
Recovered Gallons (cumulative from system startup)						4215	5539	7156	9277	11477	12531	14071	15277	16263	16750	17730	18792	19316	19877	21035	21629	23127	23801	24216	24988	25473
Average Gallons per Day						11.1	12.1	13.1	14.3	15.5	15.3	15.4	15.4	14.8	14.0	13.9	13.9	13.2	12.7	12.7	12.6	12.5	12.0	11.7	12.1	12.3

Notes:

Bold Primary Recovery Wells

--- Not available. At RW-11, pump transferred to RW-22 during 10/3/14 event

RW-11 converted to a Gauging Well

Recovered Gallons (cumulative) is total amount pumped (based on disposal manifests) and does not include correction factor for NAPL to water ratio

Gallons per Day does not include correction factor for NAPL to water ratio

Table 3-2
NAPL Monitoring and Recovery - Gauging Wells
Former Equity Works MGP Site, Brooklyn, New York

Location			Depth of Well (ft.)		Typical Pre-Recovery NAPL Thickness (ft.)	NAPL Thickness (feet)															
	Parcel	Well ID	Design	Measured		7/28/2016	10/17/2016	1/19/2017	4/6/2017	7/26/2017	10/26/2017	1/19/2018	4/5/2018	7/25/2018	11/5/2018	1/30/2019	4/3/2019	8/13/2019	11/7/2019	1/28/2020	4/30/2020	7/27/2020
On-Site	252	RW- 1	45.00	43.35	3	1.50	0.98	1.55	0.01	1.66	1.02	0.95	1.00	1.52	1.52	0.73	1.11	1.72	1.00	1.00	---	3.11
		RW- 4	51.00	49.91	trace	trace	0.05	0.01	0.01	0.06	0.00	0.01	0.01	0.02	---	0.54	1.15	0.02	0.01	0.0	0.0	0.01
		RW- 5	47.00	44.45	2	1.23	0.05	0.01	0.01	0.00	0.01	0.01	0.01	0.02	---	0.55	0.73	0.0	0.02	0.0	0.10	0.01
Perimeter	254	RW- 6	47.00	45.72	3	2.91	2.67	3.75	2.55	2.95	3.23	2.85	2.00	2.33	2.71	1.80	1.65	2.55	2.11	1.88	2.40	2.54
		RW- 7	48.00	46.05	1	---	---	---	1.46	0.75	0.01	0.54	1.30	0.60	0.70	0.73	0.72	0.82	0.75	0.59	---	1.22
		RW- 11	46.00	45.73	4	2.25	1.33	2.20	1.22	2.85	1.30	0.80	0.80	0.91	1.41	1.30	0.82	1.05	1.00	1.00	1.00	1.15
		RW- 14	45.00	45.13	trace	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		RW- 15	45.00	43.72	trace	trace	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	---	---	---	0.0	0.0
		RW- 16	50.00	49.72	1	---	---	0.56	0.0	0.0	0.0	1.7	1.81	0.02	---	---	0.0	---	---	---	---	---
		RW- 17	48.00	49.60	6	4.42	3.55	3.72	3.20	4.67	4.03	3.14	2.90	4.65	4.83	2.93	2.27	4.22	3.33	3.35	3.90	2.23
	222	RW- 23	44.00	41.69	2	---	---	---	0.01	0.01	---	---	---	---	---	---	---	---	---	---	---	---
		RW- 24	26.50	25.95	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		RW- 25	26.25	24.93	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	1.75	0.01	0.11	0.80	0.55	0.10	0.20	0.25

Notes:
RW-11 converted to a Gauging Well during 10/3/14 event
No manual gauging and removal during June 2015 due to time/access limitation
--- = Unable to access due to ongoing Cooper Tank/bus company site operations or equipment blocking recovery well that could not be moved
ot installed

Table 3-2
NAPL Monitoring and Recovery - Gauging Wells
Former Equity Works MGP Site, Brooklyn, New York

Location			Depth of Well (ft.)		Typical Pre-Recovery NAPL Thickness (ft.)	Mixed Fluids Quantity Recovered (gal.)															
	Parcel	Well ID	Design	Measured		7/28/2016	10/17/2016	1/19/2017	4/6/2017	7/26/2017	10/26/2017	1/19/2018	4/5/2018	7/25/2018	11/5/2018	1/30/2019	4/3/2019	8/13/2019	11/7/2019	1/28/2020	4/30/2020	7/27/2020
On-Site	252	RW- 1	45.00	43.35	3	5.0	5.0	5.0	0.0	5.0	3.0	3.0	2.0	4.0	4.0	3.0	4.0	3.0	3.0	3.0	---	10.0
		RW- 4	51.00	49.91	trace	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	---	4.0	0.0	0.0	0.0	0.0	0.0
		RW- 5	47.00	44.45	2	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	3.0	0.0	0.0	0.0	0.0	0.0
Perimeter	254	RW- 6	47.00	45.72	3	7.0	7.0	7.0	7.0	7.0	5.0	5.0	6.0	4.5	6.0	5.0	3.0	4.5	5.0	5.0	0.0	7.0
		RW- 7	48.00	46.05	1	---	---	---	0.0	3.0	0.0	2.0	3.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0	---	5.0
		RW- 11	46.00	45.73	4	6.0	3.5	5.0	3.5	4.0	3.0	3.0	3.0	4.0	3.5	3.0	4.0	5.0	3.0	4.0	0.0	0.0
		RW- 14	45.00	45.13	trace	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		RW- 15	45.00	43.72	trace	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		RW- 16	50.00	49.72	1	---	---	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	---	---	---	---	---	---	---
		RW- 17	48.00	49.60	6	10.0	6.0	12.0	7.0	9.0	7.0	7.0	6.0	8.0	10.0	5.0	8.0	8.0	5.0	7.0	5.0	5.0
	222	RW- 23	44.00	41.69	2	---	---	---	0.0	0.0	---	0.0	0.0	---	---	---	---	---	---	---	---	---
		RW- 24	26.50	25.95	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		RW- 25	26.25	24.93	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	3.5	1.0	1.0	5.0	1.0	0.0	0.0	2.0
					Total	33.0	21.5	29.0	17.5	32.0	18.0	20.0	25.0	22.5	30.0	19.0	29.0	28.5	19.0	21.0	5.0	29.0
					Cumulative from System Startup	283.0	304.5	333.5	351.0	383.0	401.0	421.0	446.0	468.5	498.5	517.5	546.5	575.0	594.0	615.0	620.0	649.0

Notes:
RW-11 converted to a Gauging Well during 10/3/14 event
No manual gauging and removal during June 2015 due to time/access limitation
--- = Unable to access due to ongoing Cooper Tank/bus company site operations or
ot installed

Table 3-3
Summary of Waste Management
Former Equity Works MGP Site, Brooklyn, New York

Date	Quantity Shipped (gallons)
6/8/2015	466
6/24/2015	490
7/9/2015	550
7/24/2015	437
8/17/2015	493
9/10/2015	335
9/29/2015	496
10/22/2015	617
11/18/2015	550
12/22/2015	450
2/5/2016	581
2/19/2016	545
3/11/2016	462
4/5/2016	533
5/2/2016	540
5/31/2016	625
6/27/2016	495
7/25/2016	540
9/1/2016	540
10/6/2016	514
11/10/2016	550
12/14/2016	500
1/12/2017	490
3/10/2017	553
4/6/2017	653
5/22/2017	520
7/28/2017	466
9/29/2017	487
11/17/2017	495
12/22/2017	485
2/15/2018	571
4/6/2018	491
6/29/2018	524
8/15/2018	561
11/7/2018	567
12/20/2018	591
2/7/2019	594
5/6/2019	530
6/10/2019	483
7/17/2019	485
10/7/2019	533
12/4/2019	415
2/6/2020	421
4/23/2020	472
6/24/2020	485

Note: Shipments prior to June 2015 not included on table.

Figures

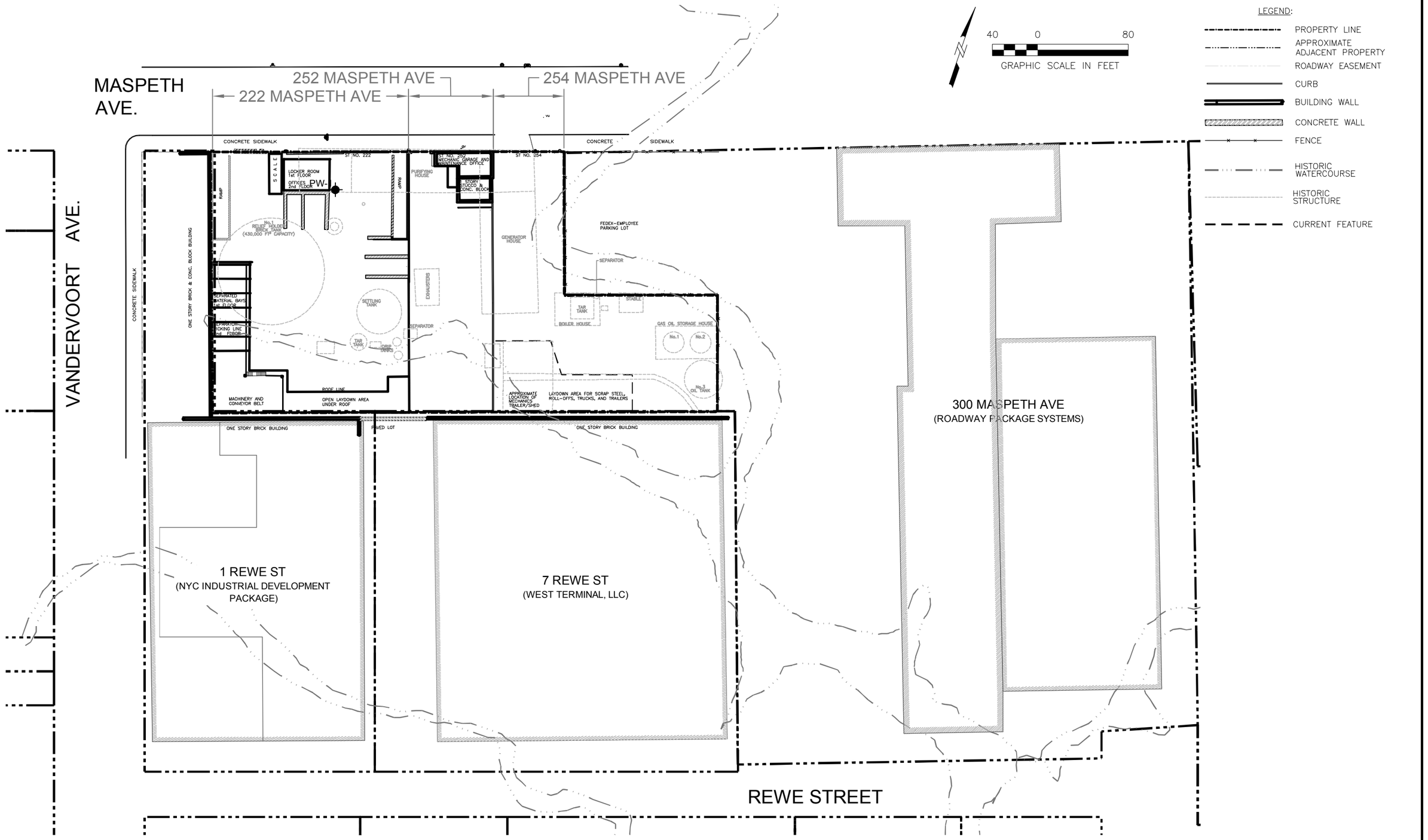
AECOM

NATIONAL GRID
FORMER EQUITY WORKS MGP SITE,
BROOKLYN NY

SITE LOCATION

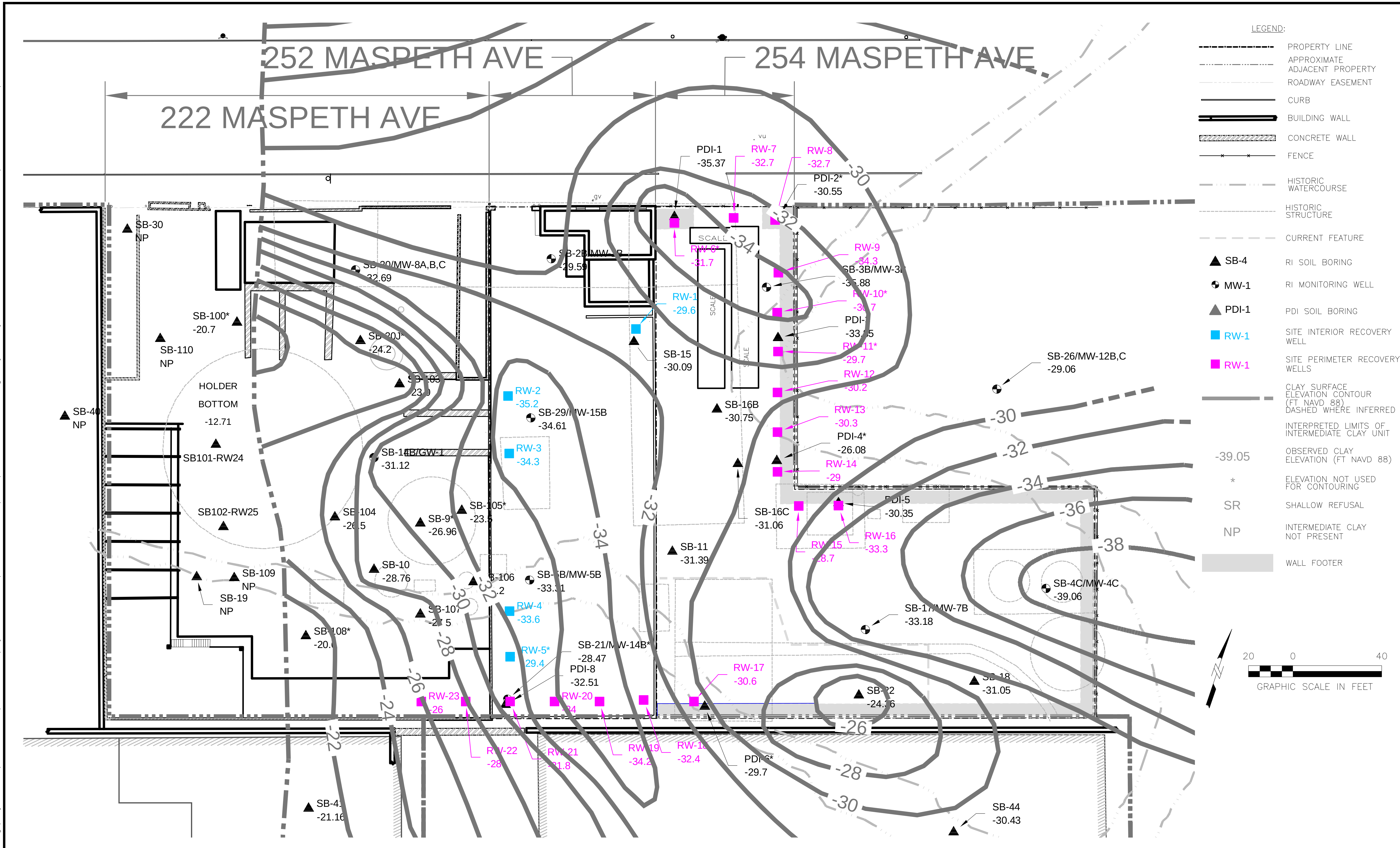
DATE: 12/2012	DRWN: BcV/C-MA			**FIGURE 1-1**

File: J:\Rem_Eng\Project Files\National Grid\1765-076 Equity Former MGP\7.2 CADD & GIS\2012-IRM_PRODUCT-RECOVERY\WorkPlan_figures\60137362-660-A1.dwg Layout: Site LocUSGSphoto User: vershonb Plotte



AECOM

NATIONAL GRID FORMER EQUITY WORKS MGP SITE, BROOKLYN NY 60137362-400			**SITE PROPERTIES**
DATE: 12/2012	DRWN: BcV/C-MA		**FIGURE 1-2**



252 MASPETH AVE
254 MASPETH AVE
222 MASPETH AVE
HOLDER
BOTTOM
-12.71
SB-30
NP
SB-100*
-20.7
SB-110
NP
SB-40
NP
SB101-RW24
SB102-RW25
SB-109
NP
SB-19
NP
SB-15
-30.09
SB-16B
-30.75
SB-16C
-31.06
SB-11
-31.39
SB-29/MW-15B
-34.61
SB-26/MW-12B,C
-29.06
SB-4C/MW-4C
-39.06
SB-44
-30.43
PDI-1
-35.37
PDI-2*
-30.55
PDI-4*
-26.08
PDI-5
-30.35
PDI-8
-32.51
RW-2
-35.2
RW-3
-34.3
RW-4
-33.6
RW-7
-32.7
RW-8
-32.7
RW-9
-34.3
RW-12
-30.2
RW-13
-30.3
RW-14
-29
RW-16
-33.3
RW-17
-30.6
RW-22
-28
LEGEND:
PROPERTY LINE
APPROXIMATE ADJACENT PROPERTY
ROADWAY EASEMENT
CURB
BUILDING WALL
CONCRETE WALL
FENCE
HISTORIC WATERCOURSE
HISTORIC STRUCTURE
CURRENT FEATURE
SB-4 RI SOIL BORING
MW-1 RI MONITORING WELL
PDI-1 PDI SOIL BORING
RW-1 SITE INTERIOR RECOVERY WELL
RW-1 SITE PERIMETER RECOVERY WELLS
CLAY SURFACE ELEVATION CONTOUR (FT NAVD 88) DASHED WHERE INFERRED
INTERPRETED LIMITS OF INTERMEDIATE CLAY UNIT
-39.05 OBSERVED CLAY ELEVATION (FT NAVD 88)
* ELEVATION NOT USED FOR CONTOURING
SR SHALLOW REFUSAL
NP INTERMEDIATE CLAY NOT PRESENT
WALL FOOTER
20 0 40
GRAPHIC SCALE IN FEET

File: P:\Jobs\Rem_Eng\Project Files\National Grid\1765-076 Equity Former MGP\7.2 CADD & GIS\2019\60137362-660_A5.dwg Layout: Layout1 User: BourdeauJ Plotted: Sep 19, 2019 - 2:57pm

AECOM

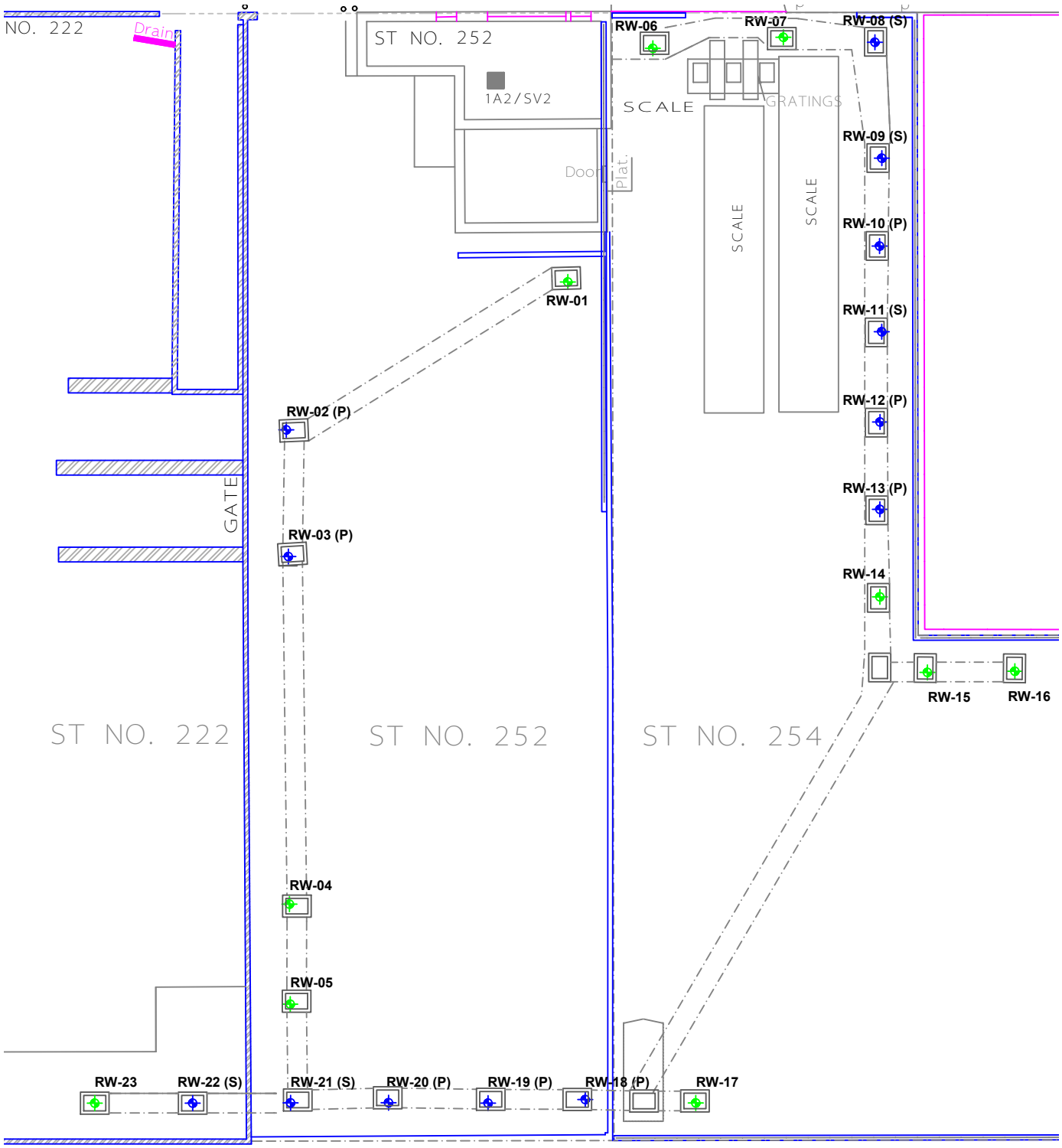
NATIONAL GRID
FORMER EQUITY WORKS MGP SITE, BROOKLYN NY
60137362-350

LOCATIONS OF ON-SITE AND PERIMETER RECOVERY WELLS

DATE: 01/02/19 | DRWN: JB

FIGURE 2-1

AECOM	**NATIONAL GRID** **FORMER EQUITY WORKS MGP SITE, BROOKLYN, NY** **60137362.660**	COMPLETED WELL LOCATION **Figure 2-2**



LEGEND

RW-02 (P) AUTOMATED WELLS - PRIMARY (APPROX. COLLECTION RATE > 1 GPD)

RW-08 (S) AUTOMATED WELLS - SECONDARY (APPROX. COLLECTION RATE 0.5-0.1 GPD)

RW-01 GAUGING WELLS (APPROX. COLLECTION RATE < 0.1GPD)

15 0 30

GRAPHIC SCALE IN FEET

AECOM

NATIONAL GRID
FORMER EQUITY WORKS MGP SITE,
BROOKLYN NY
60137362.660

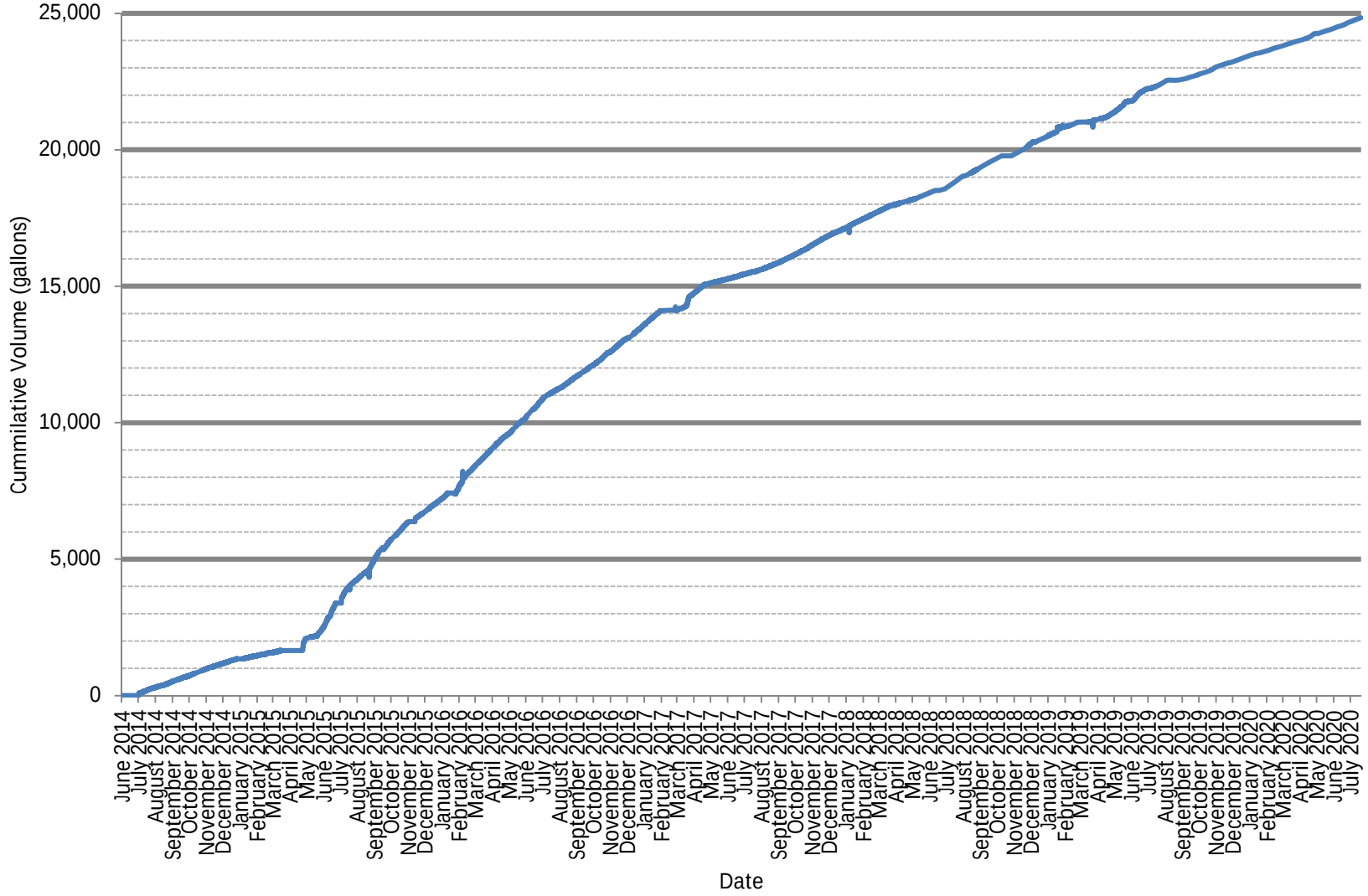
LOCATION OF AUTOMATED WELLS

DATE: 10/30/2013 | DRWN: BcV/C-MA

FIGURE 2-3

AECOM	**NATIONAL GRID** **FORMER EQUITY WORKS MGP SITE, BROOKLYN, NY** **60137362.660**	CONTROL TRAILER **Figure 2-4**

Figure 3-1
Cumulative Volume of Mixed Fluids Collected
IRM for NAPL Recovery
Former Equity Works MGP Site



Note: Mixed Fluids are estimated to contain 55% NAPL

Figure 3-2
NAPL Thickness Versus Time - Gauging Wells
Former Equity Works MGP Site, Brooklyn, New York

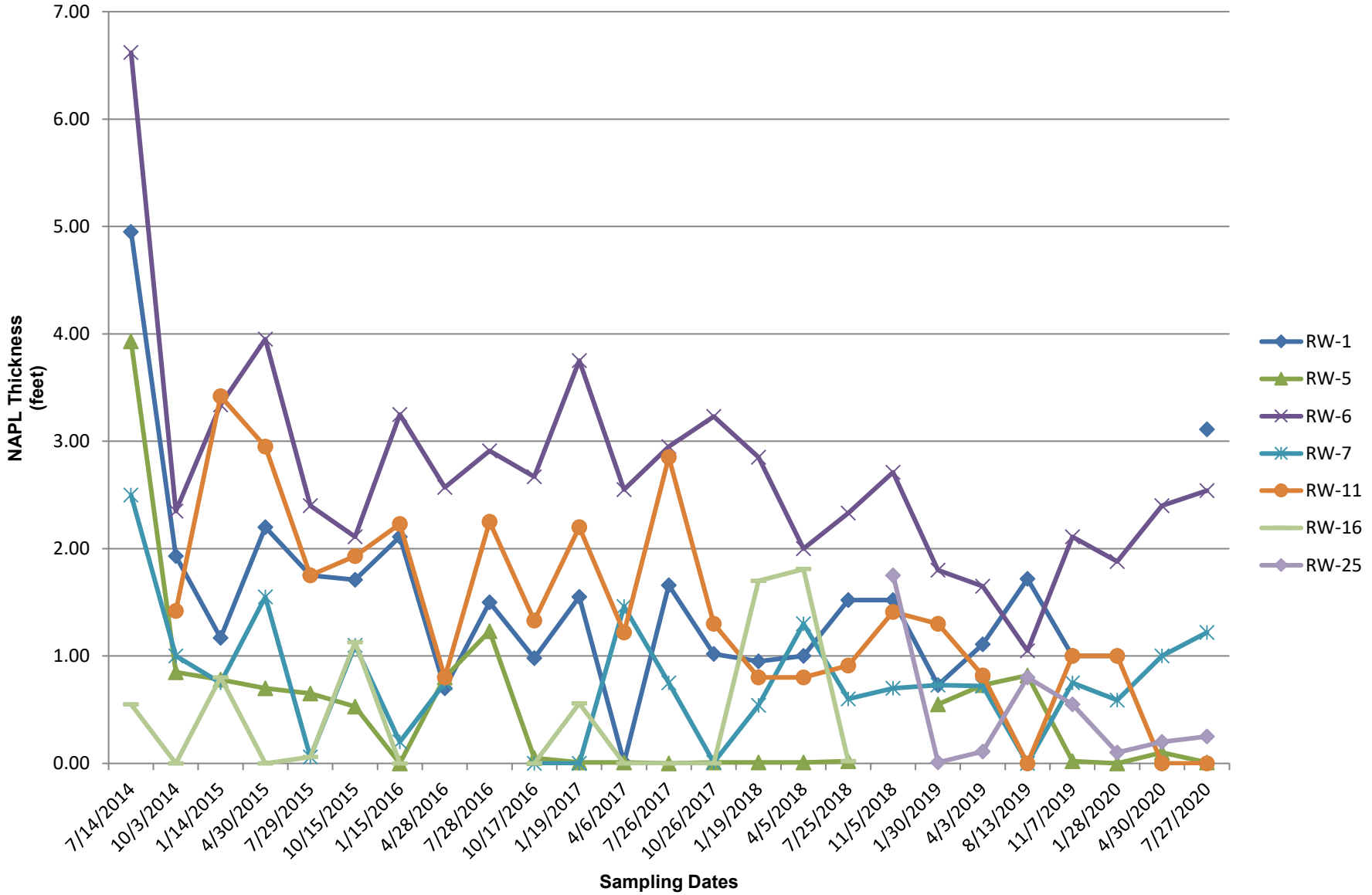
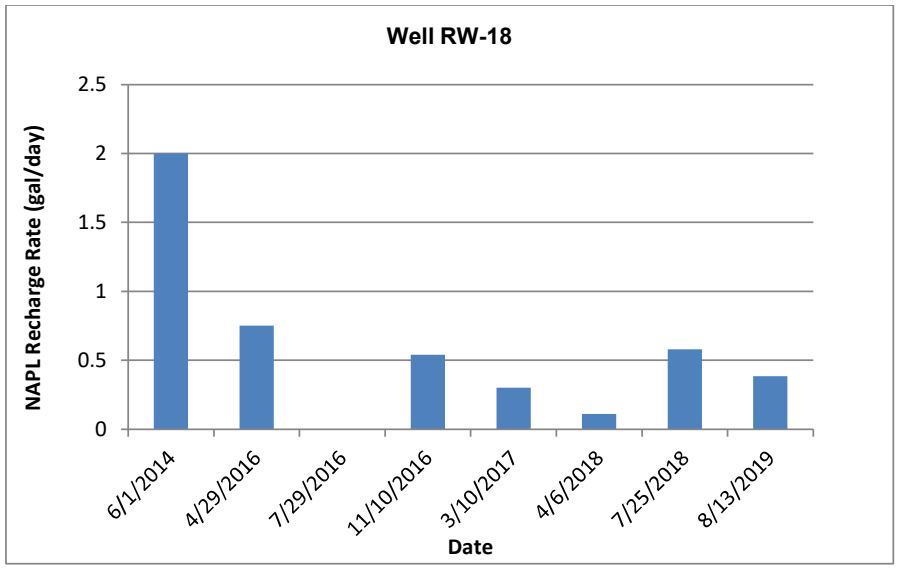
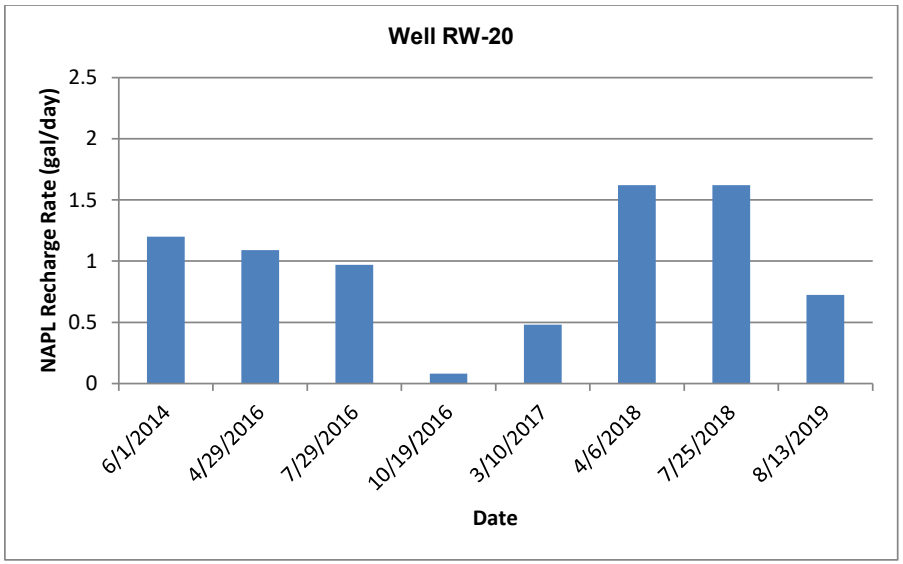
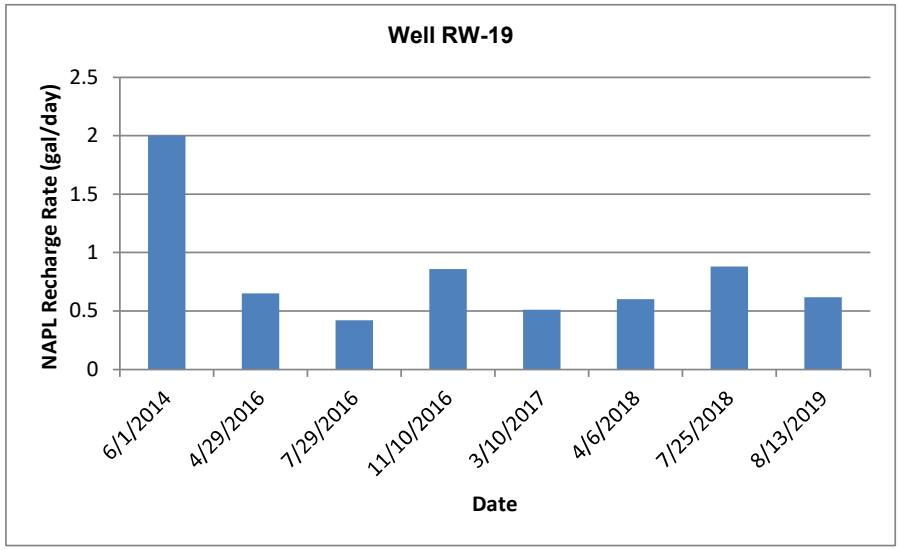
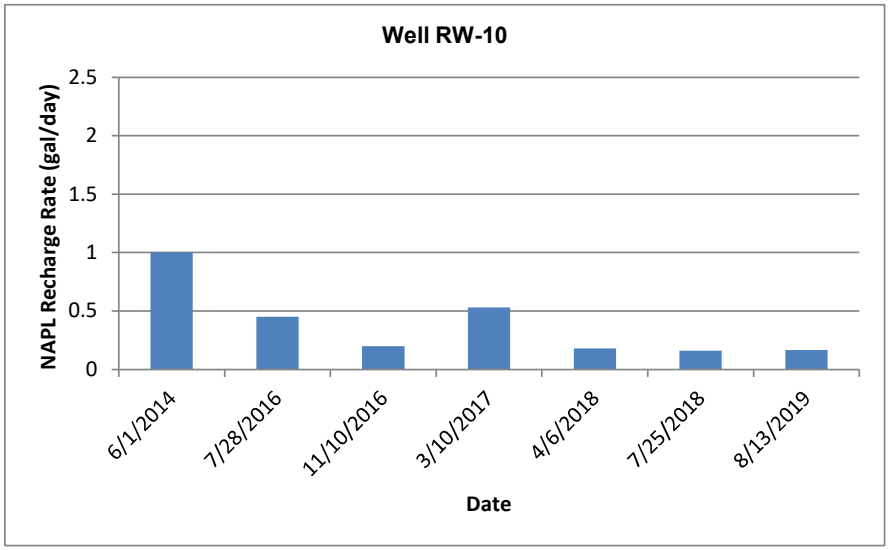


Figure 4-1
NAPL Recharge Rates Versus Time - Automated Wells
Former Equity Works MGP Site, Brooklyn, New York









Appendix A Waste Disposal Documentation

241561

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NYR000225615	1	(877) 818-0087	001714802 VES

GENERATOR

5. Generator's Name and Mailing Address
JOE ODIERNA
EQUITY WORKS MGP SITE
175 E. OLD COUNTRY ROAD
HICKSVILLE, NY 11801
Generator's Phone: 516 545-2586

Generator's Site Address (if different than mailing address)
254 MASPETH AVE
BROOKLYN, NY 11211

6. Transporter 1 Company Name
ENVIRON. TRANSPORT GROUP INC.
U.S. EPA ID Number: NJD000692061

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
VEOLIA ES TECHNICAL SOLUTIONS
125 FACTORY LANE
MIDDLESEX, NJ 08846
Facility's Phone: 732 469-5100
U.S. EPA ID Number: NJD002454544

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1993, WASTE FLAMMABLE LIQUIDS, n.o.s., (BENZENE, PETROLEUM DISTILLATES), 3, II, RQ (D001,D018)	1	T T	674	G/VJB	D001 D018	B	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ER Service Contracted by VESTS + Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf + 1) W: 101578 A:MARBULK5 MIXED NAPL IMPACTED GROUND WATER

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Teresa Mannersberg on behalf of Nat Grid | Signature: Teresa Mannersberg | Month 10 Day 07 Year 19

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Wm S Blanchard | Signature | Month 10 Day 07 Year 19
Transporter 2 Printed/Typed Name: | Signature | Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual Qty Received By weight 533 gallons
18b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H061 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: APRIL WATKINS | Signature | Month 10 Day 17 Year 19

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete. DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NYR000225615	1	(877) 818-0037	001714890 VES

GENERATOR

5. Generator's Name and Mailing Address
JOE ODIERNA
EQUITY WORKS MGP SITE
175 E. OLD COUNTRY ROAD
HICKSVILLE, NY 11801
Generator's Phone: 516 545-2586

Generator's Site Address (if different than mailing address)
254 MARPETH AVE
BROOKLYN, NY 11211

6. Transporter 1 Company Name
ENVIRON TRANSPORT GROUP INC
U.S. EPA ID Number
NJD000692061

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
VEOLIA ES TECHNICAL SOLUTIONS
125 FACTORY LANE
MIDDLESEX, NJ 08846
Facility's Phone: 732 469-5100
U.S. EPA ID Number
NJD002454544

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1993, WASTE FLAMMABLE LIQUIDS, n.o.s., (BENZENE, PETROLEUM DISTILLATES), 3, II, RQ (D001,D018)	1	T T	415	G	D001 D018	B	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ER Service Contracted by VESTS + Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf. + 1) W. 101578 A.MARBULK5 MIXED NAPL IMPACTED GROUND WATER
187

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Teresa Mannering (Sign on behalf of Nat Grid)
Signature: Teresa Mannering
Month: 12 Day: 04 Year: 19

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Rich Sullivan
Signature:
Month: 12 Day: 04 Year: 19
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name Signature Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

VEOLIA

PACKING SUMMARY

Generator Number: 640920
EQUITY WORKS MGP SITE
254 MASPETH AVE
BROOKLYN, NY 11211
Attn:
EPA ID: NYR000225615

Manifest Number: 001714890VES
Field System ID: JS
Work Order Number: 3405899000
Date Shipped: 12/04/2019

Container#: JS-3405899000-001 Waste Area: Manifest Page/Line: 01 / 1

WIP: 101578 DisposalCode: MARBULK5 PHY State: L

Date Accumulated: 12/04/2019 Gen Drum ID:

Shipping Name: UN1993, WASTE FLAMMABLE LIQUIDS, n.o.s., (BENZENE, PETROLEUM DISTILLATES), 3, II, RQ (D001,D018)

No. of Commons: 01 Outer Container: VACTRU-TT Inner Container:

Primary Waste Codes: D001,D018,B PCB Serial #: OOS Date: / /

Total Cmns Wt: 5000 SIC: 1389 Source: G49 Form: W606 System: H061 Cubic Ft.: 625.00

Individual Common Weights: 1 @ 5000 (GALLONS)

Units	Container Size	Net Weight	Chemical Name	EPA/State Codes
1	TANKTR		BENZENE [21000B] NAPHTHALENE [57000B] TOLUENE [12000B] NAPL IMPACTED WATER [95%] MAY CONTAIN NAPL SOLIDS [5%]	D001, D018, B

FORM# VES-6

VEOLIA

Land Disposal Restriction Notification Form

Generator Name EQUITY WORKS MGP SITE

EPA ID Number NYR000225615 Manifest 001714890VES

This notice is being provided in accordance with 40 CFR 268.7 to inform you that this shipment contains waste restricted from land disposal by the USEPA under the land disposal restriction program. Identified below for each container is the designation of the waste as a wastewater or non-wastewater, the Clean Water Act (CWA) permit status associated with the treatment/disposal facility, applicable waste codes and any corresponding subcategories, list of any F001-F005 solvent constituents that are present in the waste, and any underlying hazardous constituents (UHC) that are present.

This notice is also being provided in accordance with 6 NYCRR 376.1(g)(1).

Container Number: JS-3405899000-001 (1/ 1)

WIP / Approval Code:	101578 / MARBULK5
Form Designation / CWA Status:	Non-Wastewater / Non-CWA
Waste Codes (Subcategories):	D001 (IGNITABLE CHARACTERISTIC WASTE, LIQUIDS >= 10% TOC PER 261.2 1(a)(1)), D018
Constituents (F001 - F005):	None
UHCs Present:	NAPHTHALENE (CRUDE OR REFINED), TOLUENE
Treatment Requirements:	Restricted waste requires treatment to applicable standards.
Additional Notices:	

I hearby certify that all information in this and associated land disposal restriction documents is complete and accurate to the best of my knowledge and information.

Signature Tricia Mannerberg

Title Sign on behalf of NatGrid Date 12/4/19

VEOLIA

Activity Report

JOB NO: 3405899000 WO NO: 3405899000
BILL DOC NO JS91126759 EPA ID: NYR000225615
GENERATOR NO 640920

BILL TO: NATIONAL GRID
175 E OLD COUNTRY RD
HICKSVILLE, NY 11801-4257
(516) 545-2255

JOB SITE: EQUITY WORKS MGP SITE
254 MASPETH AVE
BROOKLYN, NY 11211
(516) 545-2586

CONTACT: JOSEPH ODIERNA

CONTACT: WILLIAM RYAN, PROJECT MANAGE

MANIFEST NUMBER(S):
001714890VES

CUSTOMER P.O. NUMBER	PROJECT NUMBER	SHIP DATE	TERR.
		12/04/2019	N05

DESCRIPTION	# CONT.	CONT.CODE	QTY	UOM	PG/LN	WASTE AREA
Manifest # 001714890VES WP 101578 / Approval MARBULK5 MIXED NAPL IMPACTED GROUND WATER	1	VACTRU-TT	4/5	G	1/ 1	

Total Hours: 0
# of Containers: 1

Comments:

Signature: Teresa Mannerberg Sign on behalf of Nat Grid

Print Name: Teresa Mannerberg

Customer authorizes Contractor to make changes on Customer's behalf in regards to transporters used and to perform t Services, including adding or changing transporters listed on manifests. If Customer provides an approved transporter li writing to Contractor at the time Customer executes this Agreement, Contractor shall select only these transporters on th when providing transportation services to Customer. If Customer does not provide an approved transporter list in writing Contractor at the time Customer executes this Agreement, Customer authorizes Contractor to select any permitted trans to provide transportation services to Customer.

Veolia Environmental Solutions is permitted for and has capacity to accept waste listed above in container quantities.

FORM# VES-6

P.O. Box 296 • Flanders, NJ 07836 • 800-598-3844 • Fax: 973-347-3564

ETGI

CUSTOMER: Veolia

PO#: ______

DROP

SPOT: ______ (Date / Time)

DRIVER: ______ TRACTOR#: ______ TRAILER#: ______

FACILITY NAME ______ ADDRESS ______

TIME IN: ______ TIME OUT: ______

COMMENTS: ______

DRIVER RELEASED FROM DUTY TIME: ______ **CUSTOMER INITIAL:** ______

PRINT: ______ SIGNATURE: ______

PICK-UP

PICK UP: 12/4/18 200 (Date / Time)

DRIVER: Rick TRACTOR#: 320 TRAILER#: 157

FACILITY NAME / ADDRESS: [illegible] Brooklyn NY

TIME IN: 1:45 TIME OUT: 2:30

COMMENTS: ______

DRIVER RELEASED FROM DUTY TIME: ______ **CUSTOMER INITIAL:** ______

PRINT: ______ SIGNATURE: [illegible]

INTERMEDIATE/ SITE WORK

INT./SITE WORK: ______ (Date / Time)

DRIVER: ______ TRACTOR#: ______ TRAILER#: ______

FACILITY NAME ______ ADDRESS ______

TIME IN: ______ TIME OUT: ______

COMMENTS: ______

DRIVER RELEASED FROM DUTY TIME: ______ **CUSTOMER INITIAL:** ______

PRINT: ______ SIGNATURE: ______

UNLOAD

UNLOAD: 12/4/18 6:30 (Date / Time)

DRIVER: ______ TRACTOR#: ______ TRAILER#: ______

FACILITY NAME / ADDRESS: Veolia [illegible]

TIME IN: ______ TIME OUT: ______

COMMENTS: ______

DRIVER RELEASED FROM DUTY TIME: ______ **CUSTOMER INITIAL:** ______

PRINT: ______ SIGNATURE: ______

DUMP BOX VAN TANK ROLL OFF

ROLLOFF#: ______

LINER: ______

MANIFEST#: 001714890VES

SPOT CHARGE: $ ______

PRELOAD CHARGE: $ ______

RENTAL:

______ # of Days @ $ ______ Per Day = $ ______

PICK/UP DEMURRAGE:

______ # of Hrs. @ $ ______ Per Hr. = $ ______

INT. STOP CHARGE: $ ______

INTERMEDIATE/SITE WORK:

______ # of Hrs. @ $ ______ Per Hr. = $ ______

UNLOAD DEMURRAGE:

______ # of Hrs. @ $ ______ Per Hr. = $ ______

LINER: $ ______

TANK WASH: $ ______

______ **TONS @ $** ______ = $ ______

______ **LOADS @ $** ______ = $ ______

LINE HAUL RATE: $ ______

F/S ______ % = $ ______

PERMITS: $ ______

TOLLS: $ ______

INVOICE TOTAL: $ ______

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NYR000225615	1	(877) 818-0087	001714965 VES

GENERATOR

5. Generator's Name and Mailing Address
JOE ODIERNA
EQUITY WORKS MGP SITE
175 E. OLD COUNTRY ROAD
HICKSVILLE, NY 11801
Generator's Phone: 516 545-2586

Generator's Site Address (if different than mailing address)
254 MASPETH AVE
BROOKLYN, NY 11211

6. Transporter 1 Company Name
ENVIRON. TRANSPORT GROUP INC.
U.S. EPA ID Number: NJD000692061

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
VEOLIA ES TECHNICAL SOLUTIONS
125 FACTORY LANE
MIDDLESEX, NJ 08846
Facility's Phone: 732 469-5100
U.S. EPA ID Number: NJD002454544

9a HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1993, WASTE FLAMMABLE LIQUIDS, n.o.s., (BENZENE, PETROLEUM DISTILLATES), 3, II, RQ (D001,D018)	1	TT	300	G	D001 D018	B	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ER Service Contracted by VESTS + Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf + 1) W: 101578 A:MARBULK3 MIXED NAPL IMPACTED GROUND WATER
Trlr 412

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Megan Dascoli agent for National Grid | Signature: Megan Dascoli agent for Nat Grid | Month 02 | Day 06 | Year 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Rich Switzer | Signature: RS | Month 02 | Day 06 | Year 20

Transporter 2 Printed/Typed Name: | Signature: | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual Qty Received By weight 421 gallons
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H061			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: DONN BLEVINS | Signature: DB | Month 12 | Day 16 | Year 20

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

246648

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NYR000225615	1	(877) 818-0087	001802538 VES

GENERATOR

5. Generator's Name and Mailing Address: JOE ODIERNA
EQUITY WORKS MGP SITE
175 E. OLD COUNTRY ROAD
HICKSVILLE, NY 11801
Generator's Phone: 516 545-2586

Generator's Site Address (if different than mailing address):
254 MASPETH AVE
BROOKLYN, NY 11211

6. Transporter 1 Company Name: ENVIRON. TRANSPORT GROUP INC.
U.S. EPA ID Number: NJD000692061

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: VEOLIA ES TECHNICAL SOLUTIONS
125 FACTORY LANE
MIDDLESEX, NJ 08846
U.S. EPA ID Number: NJD002454544
Facility's Phone: 732 469-5100

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1993, WASTE FLAMMABLE LIQUIDS, n.o.s., (BENZENE, PETROLEUM DISTILLATES), 3, II, RQ (D001,D018)	1	TT	4130	G	D001 D018	B	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: ER Service Contracted by VESTS + 1) W:101578 A:MARBULKS MIXED NAPL IMPACTED GROUND WATER; APPROVAL-MARBULKS

TRLR# 195

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Teresa Mannerberg On behalf of Veolia
Signature: Teresa Mannerberg
Month 4 Day 23 Year 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAVE DELMAN
Signature: Dave Delman
Month 04 Day 23 Year 2020

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual qty Received 472 gallons Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H061			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Kristal Ellison
Signature:
Month 4 Day 23 Year 20

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete. DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

247452

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NYR000225615	1	(877) 818-0087	001802522 VES

GENERATOR

5. Generator's Name and Mailing Address
JOE ODIERNA
EQUITY WORKS MGP SITE
175 E. OLD COUNTRY ROAD
HICKSVILLE, NY 11801
Generator's Phone: 516 545-2586

Generator's Site Address (if different than mailing address)
254 MASPETH AVE
BROOKLYN, NY 11211

6. Transporter 1 Company Name
ENVIRON. TRANSPORT GROUP INC.
U.S. EPA ID Number: NJD000069206 1

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
VEOLIA ES TECHNICAL SOLUTIONS
125 FACTORY LANE
MIDDLESEX, NJ 08846
U.S. EPA ID Number: NJD002454544
Facility's Phone: 732 469-5100

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1993, WASTE FLAMMABLE LIQUIDS, n.o.s., (BENZENE, PETROLEUM DISTILLATES), 3, II, RQ (D001,D018)	1	TT	500	G	D001 D018	B	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ER Service Contracted by VESTS + 1) W:101578 A:MARBULKS MIXED NAPL IMPACTED GROUND WATER; APPROVAL:MARBULKS
TRUCK # 122

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Teresa Mannerberg on behalf of Nat Grid
Signature: Teresa Mannerberg
Month 06 Day 24 Year 20

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DAVE DELMAR
Signature:
Month 06 Day 24 Year 20
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual Qty Received 485 99 kgms Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H061			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: DAVE BROWN
Signature:
Month 06 Day 24 Year 20

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM