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February 11, 2016

Ms. Ainura Doronova
New York State Department of Environmental Conservation
Region 2 – Spill Prevention and Response Section
Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101-5401

Re: Project Progress Report #9
Automotive Trades High School
50 Bedford Avenue
Brooklyn, New York 11222
NYSDEC Spill No. 04-13160
SCA LLW No. 079949, IEH Job No. 42447
TRC Project No. 195240.0000.0000

Dear Ms. Doronova:

On behalf of the New York City School Construction Authority (NYCSCA), TRC Engineers, Inc. (TRC) has prepared this 9th Project Progress Report for remediation activities associated with New York State Department of Environmental Conservation (NYSDEC) Spill Case No. 04-13160 at Automotive Trades High School, located at 50 Bedford Avenue, Brooklyn, New York (the "Site"). A Site location map is presented as *Figure 1* and a Site Plan is presented as *Figure 2*.

Remedial efforts were performed at the Site between July 2012 and July 2013 pursuant to the "Remedial Action Plan" (RAP) dated December 2009 and the NYSDEC approved "RAP Addendum" dated March 21, 2012. During this one year period, the activities completed at the Site consisted of the in-place closure of the 20,000-gallon No. 4 and No. 6 fuel oil underground storage tank (UST), geophysical survey, subsurface soil investigation, groundwater monitoring well installation, removal of ancillary tank gauges and piping from the boiler room, concrete vault and boiler room ejector pit inspection, monitoring well gauging, light non-aqueous phase liquid (LNAPL) recovery, and quarterly groundwater sampling.

Based on the results of the remedial efforts performed at the Site between July 2012 and July 2013, which confirmed that the remaining residual LNAPL in the area of the closed-in-place UST and in the building under drain system was not impacting groundwater at the Site, TRC recommended in Project Progress Report #4, dated September 3, 2013, that sampling of the monitoring well network was no longer required, bi-annual inspection and gauging of the monitoring well network should be performed, absorbent socks should be placed (and replaced, as necessary) in monitoring wells containing measurable LNAPL, and that bi-annual inspection and LNAPL removal from the concrete vault should continue until LNAPL is no longer observed for two consecutive six month periods. After review of Project Progress Report #4, the NYSDEC provided written approval, dated October 15, 2013, of TRC's recommendations.

This report provides an update on the progress of remedial efforts at the Site pursuant to the RAP, the NYSDEC approved RAP Addendum and NYSDEC approval of recommendations made by TRC in

Project Progress Report #4 dated September 3, 2013. A description of planned environmental activities at the Site is also provided in this report.

During the performance of remedial work at the Site, the NYCSCA prepared and submitted documentation to the NYSDEC providing updates regarding the progress of the work. Specifically, eight (8) progress reports have been previously submitted and are described as follows:

1. **Progress Report #1, dated December 19, 2012.** Progress Report #1 provided a summary of the in-place closure of the 20,000-gallon UST, geophysical survey, subsurface soil investigation, groundwater monitoring well installation, groundwater sampling, concrete vault and boiler room ejector pit inspections, monitoring well gauging, and LNAPL recovery actions completed between July 14 and October 18, 2012.
2. **Progress Report #2, dated February 27, 2013.** Progress Report #2 provided a summary of groundwater sampling, concrete vault and boiler room ejector pit inspections, monitoring well gauging, and LNAPL recovery actions completed between October 18, 2012 and January 25, 2013.
3. **Progress Report #3, dated May 24, 2013.** Progress Report #3 provided a summary of groundwater sampling, concrete vault and boiler room ejector pit inspections, removal of ancillary tank gauges and piping from the boiler room, monitoring well gauging, and LNAPL recovery actions completed between April 9 and April 19, 2013.
4. **Progress Report #4, dated September 3, 2013.** Progress Report #4 provided a summary of groundwater sampling, concrete vault and boiler room ejector pit inspections, monitoring well gauging, and LNAPL recovery actions completed between July 19 and July 23, 2013.
5. **Progress Report #5, dated March 14, 2014.** Progress Report #5 provided a summary of concrete vault and boiler room ejector pit inspections, monitoring well gauging, and LNAPL recovery actions completed on January 20, 2014.
6. **Progress Report #6, dated September 23, 2014.** Progress Report #6 provided a summary of concrete vault and boiler room ejector pit inspections, monitoring well gauging, and LNAPL recovery actions completed on July 28, 2014.
7. **Progress Report #7, dated February 6, 2015.** Progress Report #7 provided a summary of concrete vault and boiler room ejector pit inspections, monitoring well gauging, and LNAPL recovery actions completed on January 19, 2015.
8. **Progress Report #8, dated August 12, 2015.** Progress Report #8 provided a summary of concrete vault and boiler room ejector pit inspections, monitoring well gauging, and LNAPL recovery actions completed on July 27, 2015.

FIELD ACTIVITY SUMMARY

Field activities were conducted at the Site on January 18, 2016 and consisted of the following:

- Concrete vault and boiler room ejector pit inspection;
- Monitoring well gauging; and
- LNAPL recovery.

Details regarding these activities are presented below.

Concrete Vault/Boiler Room Ejector Pit Inspections and Monitoring Well Gauging

The concrete vault (located north of the school building), the boiler room ejector pit, and the groundwater monitoring well network were inspected and gauged for the presence of LNAPL on January 18, 2016 by TRC. LNAPL was only present in the concrete vault and monitoring wells TRC-MW12 and TRC-MW13, which is consistent with inspection results since April 9, 2013. The oil absorbent socks present in monitoring wells TRC-MW12 and TRC-MW13 were also found to be saturated with oil. LNAPL was not present in the boiler room ejector pit or in monitoring wells TRC-MW1 through TRC-MW11, TRC-MW14, and TRC-MW15.

An oil/water interface probe was used to approximate the thickness of LNAPL by lowering the probe to the depth of LNAPL, then submerging the probe into the water until the sound indicated the presence of water, then raising the probe until the oil indicator sounded. The thickness of the LNAPL could not be accurately determined due to the high viscosity of the oil identified in the concrete vault and monitoring wells; therefore, the thicknesses listed below are estimated:

LNAPL Thickness Measurements Recorded in Monitoring Wells
January 18, 2016

Monitoring Well Identification No.	Estimated Thickness of LNAPL (feet)
TRC-MW12	0.03
TRC-MW13	0.03

As indicated above, since April 2013, only monitoring wells TRC-MW12 and TRC-MW13 have had measureable LNAPL. The LNAPL thicknesses measured in monitoring wells TRC-MW12 and TRC-MW13 have decreased since April 2013. The LNAPL thickness measurements recorded in monitoring wells TRC-MW12 and TRC-MW13 in April 2013 were 0.07 and 0.10 feet, respectively.

LNAPL Product Recovery

Periodic recovery of LNAPL has been performed at the Site since July 2012. LNAPL was removed from the concrete vault north of the school building and groundwater monitoring wells TRC-MW12 and TRC-MW13 on January 18, 2016 using a vacuum truck.

The procedure for measurement and removal of LNAPL at the Site consisted of the following:

- The contents of the concrete vault were removed below the elevation of the building underdrain pipe. This allowed LNAPL present in the pipe to flow into the concrete vault. LNAPL and water were then pumped from the concrete vault into the vacuum truck.
- The oil absorbent socks present in monitoring wells TRC-MW12 and TRC-MW13 were found to be saturated with oil and were removed. A vacuum truck was then used to pump LNAPL and water from monitoring wells TRC-MW12 and TRC-MW13. After pumping of LNAPL and water from monitoring wells TRC-MW12 and TRC-MW13 was complete, new oil absorbent socks were placed into monitoring wells TRC-MW12 and TRC-MW13.

A total of approximately 3,248 gallons of water mixed with LNAPL was removed from the concrete vault and monitoring wells containing LNAPL (TRC-MW12 and TRC-MW13) on January 18, 2016. Approximately 25 gallons of water mixed with LNAPL were removed from each of the monitoring wells and approximately 3,198 gallons of water mixed with LNAPL were removed from the concrete vault for

off-site disposal. The LNAPL and water removal was performed by Brookside Environmental, Inc. under the supervision of TRC and transported to Clean Water of New York, Inc., of Staten Island, New York for disposal. The disposal manifest is presented in *Attachment A.*

Approximately 46,880 gallons of water mixed with LNAPL have been removed from the concrete vault and monitoring wells containing LNAPL (TRC-MW2, TRC-MW12, TRC-MW13, and TRC-MW14) from July 2012 to January 2016. *Table 1* presents the quantity of LNAPL and water recovered during each extraction event.

PLANNED ACTIVITIES

In connection with the NYSDEC approval letter dated October 15, 2013, the following activities are planned for the next bi-annual inspection and LNAPL removal event:

- The monitoring well network will be gauged.
- Inspection of and LNAPL removal (if required) from the concrete vault and monitoring wells. Absorbent socks will be replaced, as necessary, in monitoring wells containing LNAPL.
- Project Progress Report #10 will be submitted to the NYSDEC following the next inspection and product removal event, which will be performed in July 2016.

Please do not hesitate to contact me at (212) 221-7822 x123 if you have any questions.

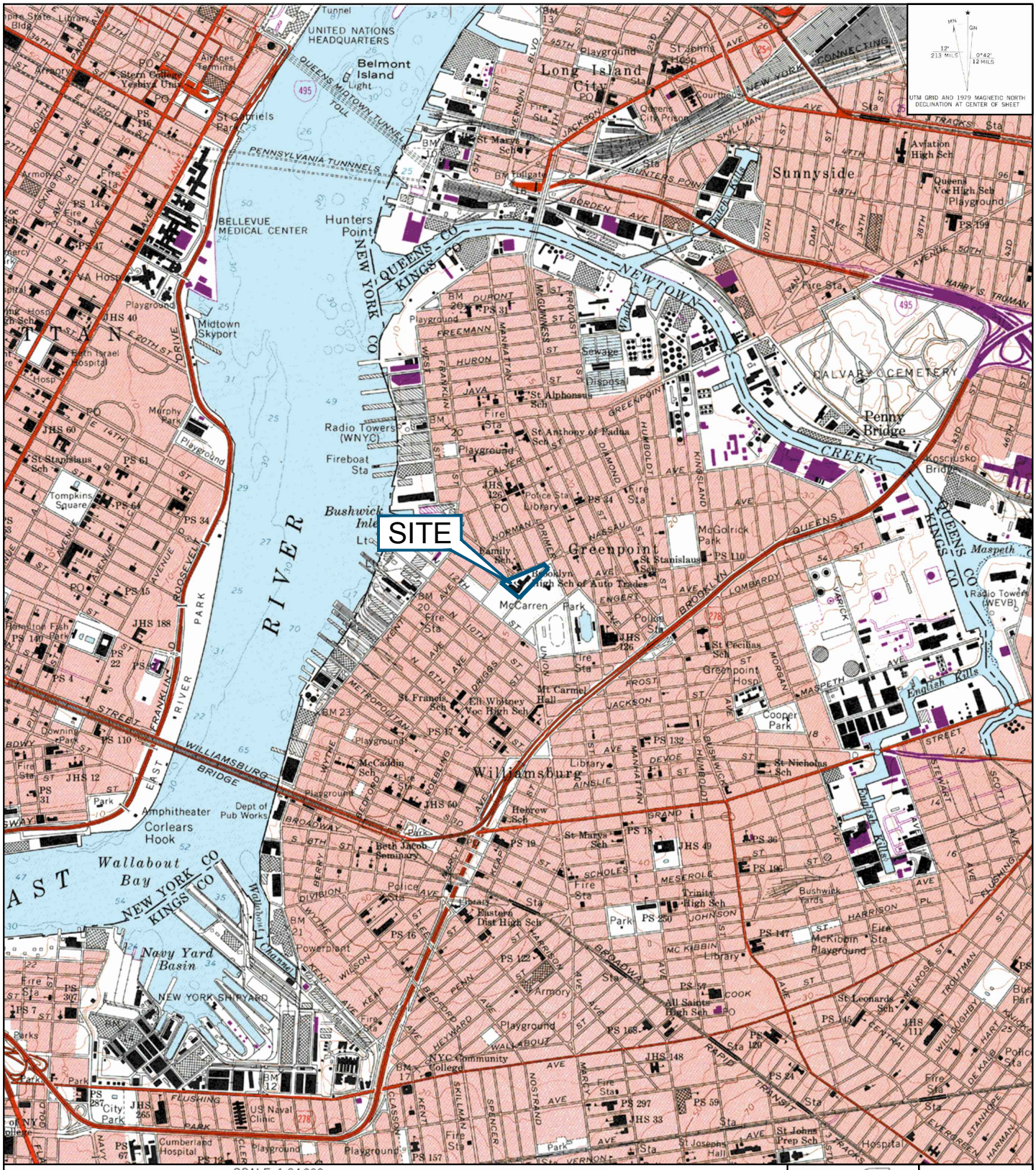
Sincerely,
TRC Engineers, Inc.

Patrick Narea
Project Manager

cc: A. Lempert, NYCSCA
L. Guterman, NYCSCA
S. Kanaparthi, NYCSCA
M. Sherwood, NYCSCA

Enclosures: Figure 1 – Site Location Map
Figure 2 – Site Plan
Table 1 – 2012 to 2016 Monitoring Well and Concrete Vault Product Removal Data
Attachment A – Disposal Manifest

FIGURES



SCALE 1:24 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

NEW YORK

QUADRANGLE LOCATION

BROOKLYN, N. Y.

N4037.5—W7352.5/7.5

1967

PHOTOREVISED 1979

AMS 6265 III NW—SERIES V82

MAP OBTAINED THROUGH USE OF MAPTECH TERRAIN NAVIGATOR PRO SOFTWARE.

TRC
1430 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10018
212-221-7822

DESIGNED BY: PN

DRAWN BY: HD

CHECKED BY: DSG

DATE: JULY 2015

SCALE: AS SHOWN

PROJECT NUMBER: 195240.0000.0000

PROJECT NAME:

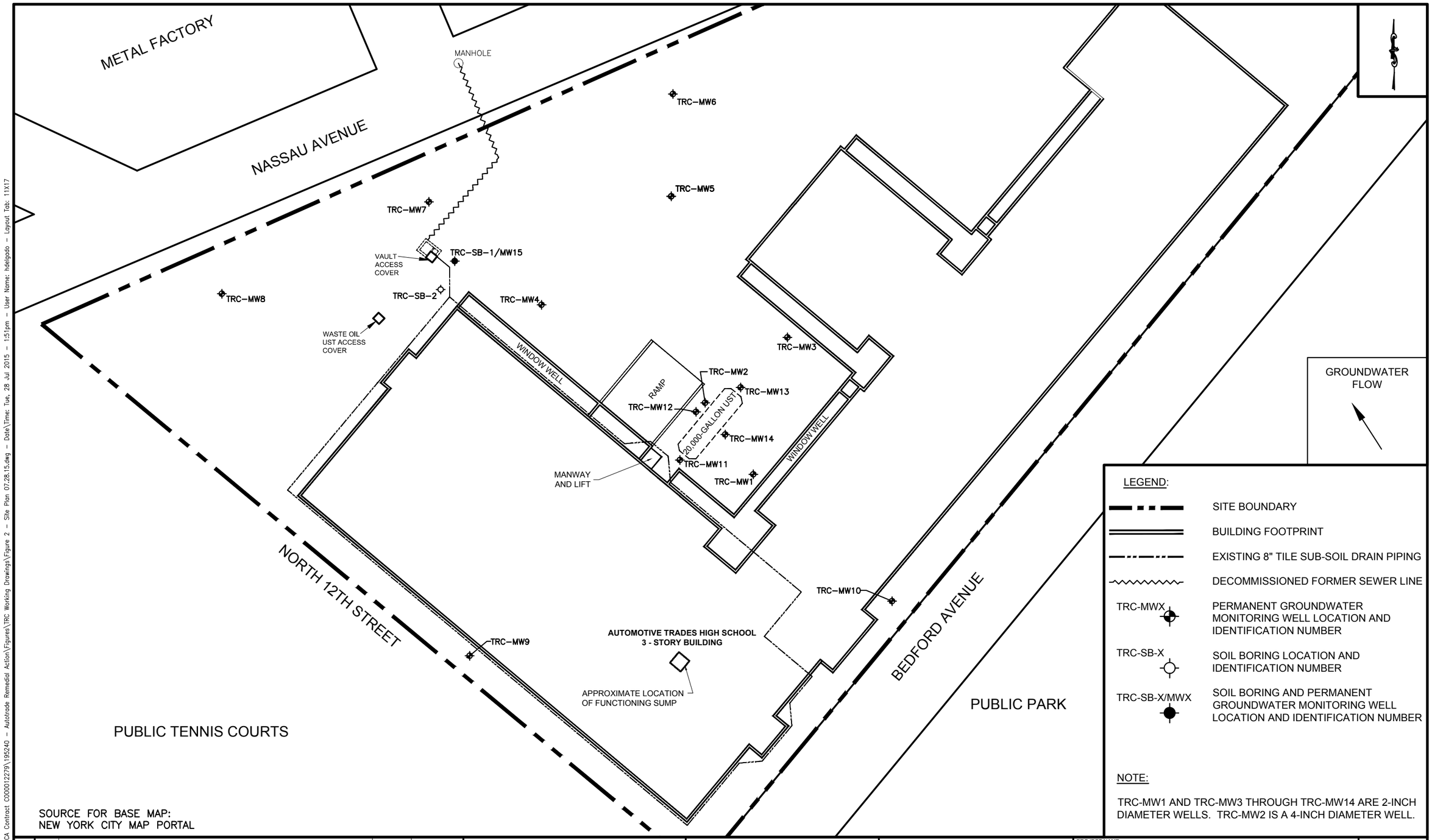
NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
AUTOMOTIVE TRADES H.S. - 50 BEDFORD AVENUE
BROOKLYN, NEW YORK 11222

DRAWING TITLE:

SITE LOCATION MAP

FIGURE
1

Path\Name: L:\Projects\NYCSCA Contract C000012279\195240 – Autotrade Remedial Action\Figures\TRC Working Drawings\Figure 1 – Site Location Map 7.31.15.dwg – Date\Time: Fri, 31 Jul 2015 – 11:26am – User Name: hdelgado – Layout Tab: LAYOUT1



NOTE:

TRC-MW1 AND TRC-MW3 THROUGH TRC-MW14 ARE 2-INCH DIAMETER WELLS. TRC-MW2 IS A 4-INCH DIAMETER WELL.

SOURCE FOR BASE MAP:
NEW YORK CITY MAP PORTAL

REVISIONS			
NO.	DESCRIPTION	BY	DATE

0 40 80 FT.

APPROX. SCALE: 1" = 40'

PAPER SIZE: 11" x 17"

TRC
1430 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10018
212-221-7822

DESIGNED BY:	JM
DRAWN BY:	HD
CHECKED BY:	JM
DATE:	JULY 2015
SCALE:	AS SHOWN
PROJECT NUMBER:	195240.0000.0000

PROJECT NAME:
NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
AUTOMOTIVE TRADES H.S. - 50 BEDFORD AVENUE
BROOKLYN, NEW YORK 11222

DRAWING TITLE:
SITE PLAN

FIGURE
2

Path\Name: i:\Projects\NYCSCA Contract C0000122791\195240 – Autotrade Remedial Action\Figures\TRC Working Drawings\Figure 2 – Site Plan 07.28.15.dwg – Date\Time: Tue, 28 Jul 2015 – 1:51pm – User Name: hdelgado – Layout Tab: 11X17

TABLES

Table 1
Automotive Trades High School
50 Bedford Avenue
Brooklyn, New York 11222
2012 to 2016 Monitoring Well and Concrete Vault Product Removal Data

Monitoring Well (Note 1)	Monitoring Well and Concrete Vault Product Removal Event													
	7/26/2012	8/2/2012	8/9/2012	9/5/2012	9/26/2012	10/18/2012	1/21/2013	4/9/2013	7/19/2013	1/20/2014	7/28/2014	1/19/2015	7/27/2015	1/18/2016
TRC-MW2	40	40	40	40	40	40	40	Note 5	Note 5	Note 5	Note 5	Note 5	Note 5	Note 5
TRC-MW11	Note 3	Note 2						Note 5	Note 5	Note 5	Note 5	Note 5	Note 5	Note 5
TRC-MW12		40	40	40	40	40	40	25	25	35	35	25	50	25
TRC-MW13		40	40	40	40	40	40	25	25	35	35	25	50	25
TRC-MW14		40	40	40	40	40	40	Note 5	Note 5	Note 5	Note 5	Note 5	Note 5	Note 5
Concrete vault	2,760	2,840	493 (Note 4)	2,840	2,391	3,440	3,490	3,550	5,576	3,633	3,049	5,674	2,506	3,198
Amount recovered each event (G)	2,800	3,000	653	3,000	2,551	3,600	3,650	3,600	5,626	3,703	3,119	5,724	2,606	3,248
Total Recovered (G)														**46,880**

Notes

LNAPL: Light non-aqueous phase liquid

G = Gallons

Note 1: Monitoring well TRC-MW2 is a 4-inch diameter well. Monitoring wells TRC-MW11 through TRC-MW14 are 2-inch diameter wells.

Note 2: Oil absorbent sock is removed and replaced during each event.

Note 3: LNAPL identified in monitoring wells. Vacuum truck did not have proper fittings in order to recover LNAPL and water from the wells.

Note 4: Vacuum truck experienced mechanical problems. The recovery of LNAPL and water from the concrete vault was not completed.

Note 5: There was no measurable LNAPL in these monitoring wells.

ATTACHMENT A

DISPOSAL MANIFEST

NON-HAZARDOUS WASTE MANIFEST

Please type or print.

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Doc. No. 1 4 3 2 1 7

2. Page 1 of 1

3. Generator's Name and Mailing Address
NYC School Construction Authority
30-30 Thomson Ave.
Long Island City, NY

4. Generator's Telephone Number (917) 291-9176

A. Generator's Site Address (if different)
Auto Trade High School
50 Bedford Ave,Brooklyn

5. Transporter 1 (Company Name)
William J. Lauer Corp.

6. US EPA ID Number
N Y R 0 0 0 1 5 7 6 4 4

B. State Transporter's ID 2A -531

C. Transporter 1 Telephone (718) 981-8500

7. Transporter 2 (Company Name)

8. US EPA ID Number

D. State Transporter's ID

E. Transporter 2 Telephone ( )

9. Designated Facility Name and Site Address
Clean Water Of New York, Inc.
3249 Richmond Terrace
Staten Island, NY 10303

10. US EPA ID Number
N Y 0 0 0 0 9 6 8 5 4 5

F. State Facility ID

G. Facility Telephone (718) 981-4600

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers Number	12. Containers Type	13. Total Quantity	14. Unit Wt / Vol	H. Waste No.
a. NON RCRA NON DOT REGULATED LIQUIDS	0 0 1	TT	3248	GAL	EPA None / STATE N018
b.					EPA / STATE
c.					EPA / STATE
d.					EPA / STATE

I. Additional Description for Materials listed Above
237-039 - Oily Water
ON SITE 7:30
Start pump. 8:15
Finish pump - 13:05
Depart - 13:11

J. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
Tr/TI # - VAC #5
24 Hour Emergency Telephone (877)319-0800

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: Patrick Navin as agent for NYCSCA
Signature: as agent for NYCSCA
Mo. 10 Day 18 Year 16

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Victor Maldonado
Signature: Victor Maldonado
Mo. 10 Day 18 Year 16

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Mo. Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Mo. Day Year

GENERATOR'S COPY