HAZARDOUS MATERIAL SPILLS INFORMATION REQUEST

WATERMARK DESIGNS LTD **Spill Number:** [redacted] **Close Date: 03/01/2019**
[redacted] WORTMAN AVE BROOKLYN, NY NO ZIP PROVIDED

ADDRESS CHANGE INFORMATION
Revised street:
Revised zip code:

Source of Spill:	COMMERCIAL/INDUSTRIAL	Spiller:	UNKNOWN	Spiller Phone:	
Notifier Type:	Other	Notifier Name:		Notifier Phone:	
Caller Name:		Caller Agency:		Caller Phone:	
DEC Investigator:	AABARRAZ	Contact for more spill info:	JOHN EICHLER	Contact Person Phone:	(631) 589−6353

Spill Date	Date Cleanup Ceased	Cause of Spill	Meets Cleanup Standards	Penalty Recommended
12/03/2008		HOUSEKEEPING	NO	NO

Material Spilled	Material Class	Quantity Spilled	Units	Quantity Recovered	Units	Resource(s) Affected
TRICHLOROETHENE (TCE)	HAZARDOUS MATERIAL	0.00	GALLONS	0.00	GALLONS	SOIL, GROUNDWATER

Caller Remarks:

CALLER STATES THAT THEY RECIEVED SOIL BORING SAMPLES BACK TODAY INDICATING CONTAMINATED SOIL AND GROUND WATER. CLEAN UP IS PENDING.

DEC Investigator Remarks:

08/15/09−HRAHMED− As per PropertyShark records: Street address: [redacted] Wortman Ave

Primary address: [redacted] Linwood St

Zip 11208

Borough Brooklyn

Block & lot 04384−0036

First 3 alt addresses [redacted] Wortman Ave, [redacted] Linwood St

1/26/10−Vought−File review by Vought:

Supplemental Subsurface Investigation Report (PW Grosser−John Eichler−Ph;631−589−6353)−12/9/08. Sent to:

Mr. Jack Abel Watermark Designs 350 Dewitt Avenue Brooklyn, NY 11207

Site has one commercial building that covers entire area of property. Site formerly used as a metal etching company, steel tube manufacturing company and a plumbing faucet/fixture company. Possible plating pit in northwest corner of building. Phase II shows elevated TCE in soil collected from northwest portion of building . Attempts made to dye flush test floor drain in bathroom but drain was blocked but drain appeared to lead to a sewer connection pit which discharges to the municipal sewer . Fuel oil AST encased in concrete block in the basement and soil samples below AST shows that soils were not impacted . Plating pit later discovered to be a loading/bay truck scale. Based on conversations with the current owner of the property, the sources of TCE appears to have been a TCE degreasing tank with was formerly located directly to the south of the former loading bay/truck scale. Report recommends additional soil and groundwater investigation via soil borings. Proposal of soil boring investigation to delineate contamination via Geoprobe collection of soil and groundwater samples. Delineation will also include vertical profile of groundwater contamination to a depth of 50'bg (i.e collection of vertical groundwater samples at 10 foot intervals from 10−50'bg to study DNAPL). Cost estimate included in proposal.

EnviroTrac Limited Subsurface Investigation Report (EnviroTrac−David Lorthior−631−924−3001)−2/1/09. Seven soil boring and one well were installed including collection of five groundwater samples. Borings installed via Geoprobe. Fill from 6−8'bg and sand below. Soil analyticals show: 2400ppb TCE (B2 8−10'bg), 20000ppb TCE (B3(0−5'bg), 8800ppb TCE(B4 6'bg), 140000ppb TCE(B7 2−5'bg), 5000ppb PCE(B7 2−5'bg), 4400ppb TCE(B8 3−5'bg), 3300ppb TCE(B8 7−7.5'bg). PCE not used at site and suggests that a possible source associated with the prior usage of he building could be repsonsible for the impacted soil in this area. Depth to groundwater is 12'bg. Groundwater analyticals show:54ppb TCE(B2 15'bg), 91ppb PCE(B2 15'bg), 5700ppb TCE(B5 15'bg), 510ppb PCE(B5 15'bg), 36ppb TCE(B5 25'bg), 97ppb PCE(B5 25'bg), 14ppb TCE(B5 35'bg), 26ppb PCE(B5 35'bg), 18ppb TCE(B5 45'bg), 38ppb PCE(B5 45'bg). Report recommends submission of a Remedial Investigation Work Plan. No petroleum contamination found at site.

Phase II Environmental Site Assessment (PW Grosser John Eichler Ph:631−589−6353)−1/13/09. Seven soil borings were installed at site in Nov 2008 via Geoprobe. Groundwater at 10'bg and two samples collected for analysis. Groundwater flow estimated to south. Fuel and vent noted leading to AST in basement. One boring installed adjacent to UST with no petroleum staining observed. Floor drain dye test resulted in determination drain was clogged. Boring B−02 was located in the reported vicinity of a former TCE degreasing tank. Based on this, the degreasing tank appears to be the source of TCE in the soil . Soil analyticals show: 201ppb MTBE (GP2 8−10'bg), 18900ppb TCE(GP−02 0−2'bg), 63100ppb TCE(GP−02 8−10'bg). Groundwater analyticals show: 24000ppb TCE(GP1), 544ppb PCE(GP1) 7ppb DCE(GP1), 78ppb PCE(GP4), 24ppb TCE(GP4). Report recommends further investigation to delineate contaminaton and that indoor air quality be evaluated and that AST be properly closed.

Environmental Services Report Proposed Corrective Action and Remedial Investigation Work Plan(Impact Environmental−Tony Kloss−Ph:908−534−8820)−7/10/09. Prepared for Watermark Designs. Onsite building has three sections and properly is currently vacant and unoccupied. Building owned by Watermark Designs for past 25 years to manufacture, store, package and ship hardware, bathroom fixtures. Onsite processes included painting, plating, etching, polishing, and machining. Cleaning agents, such as trichloroethylene(TCE) and tetrachlorethylene(PCE) were routinely used by Watermark Designs, Ltd. at the subject property to fine clean and polish metals and metal products. Watermark purchased new property at 350 Dewitt Avenue and moved and looking to sell this site. Proposal to isolate each building section and excavated contaminated soil. It is estimated that a total of approximately 400 tons of chlorinated VOC contaminated soil will be excavated from two designated work areas in Building 1... . Work activities will include the evacuation of as much chlorinated VOC contaminated groundwater as is safe and practical with estimates of removal of 18,000 gallons of contaminated groundwater. Proposal to collect endpoint soil and bottom groundwater samples and submit results report.

Email from Abel to DEC Ahmed−12/3/09. I'm following−up on our most recent conversation about the NYSDEC Spill Case No. 0809879 assigned to [redacted] Wortman Avenue, Brooklyn, NY. Were you able to identify and/or obtain a copy of the NYSDEC correspondence issued to Mr. Jack Abel from Watermark Designs Ltd. for the subject property? Watermark Designs Ltd. received some type of NYSDEC correspondence about the subject property but misplaced the letter. The NYSDEC correspondence would have been dated late October 2009 or early November 2009. Our firm advised Watermark Designs Ltd. that the subject property is the first site assigned to a new program within the NYSDEC system for hazardous TCE and DNAPL type contaminant investigation and corrective action. As a responsible party and environmental steward, Watermark Designs Ltd. is prepared to move forward with the scope of work presented in the Proposed Corrective Action and Remedial Investigation Work Plan prepared by our firm and dated 10 July 2009. Watermark Designs Ltd. would like to start the project as soon as possible. Please provide our firm and/or Mr. Jack Abel at Watermark Designs Ltd. withan update concerning the project at your earliest convenience. I included Jack Abel's contact information below. Thank you for your time and attention to the matter.

Mr. Jack Abel Watermark Designs Ltd. (p) 718.257.2800, Ext. 20 (f) 718.257.2144 (e) jabel@watermark−designs.com

Email from Impact (Kloss) to DEC Ahmed−1/5/10. We spoke approximately four (4) weeks ago concerning thecorrective action project for Watermark Designs Ltd. at [redacted] Wortman Avenue, Brooklyn, NY. Did you have an opportunity to issue an update letter or e−mail to Mr. Jack Abel from Watermark Designs Ltd concerning the project? Also, what is the status of the consent order for the project? When last we spoke in early December 2009, you indicated that the consent order would be issued to Mr. Jack Abel within three (3) to four (4) weeks.

DEC possibly requires: 1)P−Site letter 2)Check PBS for AST registration 3)delineation of chlorinated solvent soil and groundwater contamination 4)possible approval of proposal to evaluate indoor air (property vacant as per 7/09 report).

1/26/10−Vought−Meeting with DEC Krimgold and Austin. Spill reassigned from Ahmed to Vought.

1/28/10−Vought−Received email from Abel that Good morning. I'm following up on our conversation yesterday morning and the internal NYSDEC meeting you had for the contaminated soil and groundeater project at [redacted] Wortman Avenue, Brooklyn, NY. When you have a moment today (Thursday, 28 January 2010), please provide a brief update for the proposed project at the subject property. The update can be forwarded to me and/or Mr. Jack Abel of Watermark Designs Ltd. Contact information for Mr. Jack Abel is below.

02/2/10−Vought−Received message from Kloss (908−534−8820) and returned call and left message.

02/5/10−Vought−Received message from Impact (Kloss) and returned call and left message to return call.

02/10/10−Vought−DEC O'Connnell preparing Class II package. Site code received from DEC Spath as:

Site Remediation Code: [redacted] T&A Code: [redacted]

2/11/10−Vought−Received message from Impact (Kloss cell:908−623−0310) and returned call and spoke to Kloss and informed him of reclassification of site as Class II site. Vought also provided him contact info for DEC Oliva for further information regarding Class II CO and possibly beginning of soil excavation. Kloss noted that he had suspected the site would be listed as Class II and has already prepared Watermark Designs for such possibilities. Vought to complete Remediation Database so that DEC O'Connell can designate new Section A project manager. Received email from Impact (Kloss) that again, thank you for the phone call concerning the latest administrative information for [redacted] Wortman Avenue, Brooklyn, NY. The initial information is very much appreciated and will be a great help to our client (Watermark Designs Ltd.). Our firm will be reviewing the information with the client tomorrow morning.

2/12/09−Vought−Obtained Lat and Long from Google Earth as:40deg39min40secN and 73deg52min32sec W. Note Google earth based on same datum as DEC GIS system used by DEC 0'Connell. Area of lot is .44 acres as per Report and .218 acres when using dimensions from [redacted] Wortman deed only. Vought to use acreage as per Report as site may encompass other addresses in addition to [redacted] Wortman. Vought spoke to DEC Barrie and provided acreage of .44 acres and she also will transfer E−docs into UIS database.

02/15/10−Vought−Recevied email from Kloss to DEC Oliva that Late last week I spoke with Mr. Jeffery Vought (NYSDEC Liaison at this point) concerning the NYSDEC Remediation Case Site Code [redacted] assigned to the hazardous waste site project at [redacted] Wortman Avenue, Brooklyn, NY. Mr. Vought provided a much anticipated update and NYSDEC agency contact information. During the conversation Mr. Vought requested that the owner/operator of the subject property (Mr. Jack Abel − Watermark Designs Ltd.) contact you to discuss a Stipulation Agreement/Consent Order for the project. I was informed that Mr. Abel is out of his office this week and will return on Monday, 22 February 2010. I'm certain Mr. Abel will contact you shortly after his return to the office.

3/11/10−Vought−DEC Oliva sent draft CO to Kloss and Abel.

3/15/10−Vought−Meeting with DEC O'Connell and DEC Austin and spill manager transferred to DEC O'Connell for further action.

3/01/2019 − Site owner entered into a Brownfields Cleanup Agreement as a participant to address the chlorinated solvents in groundwater, soil and soil vapor at the site. BCP Site #[redacted]. Remedial Investigation completed. Air Sparge/Soil Vapor Extraction (AS/SVE) Interim Remedial Measure construction completed 8/25/2016. Remedial Action Work Plan approved and Decision Document issued on June 1, 2017. Remedy includes an ongoing operation of AS/SVE along with a site cover, SSDS when AS/SVE complete, site management plan and environmental easement. BCP Certificate of Completion issued on 10/24/2017. Site management and monitoring ongoing.

HAZARDOUS MATERIAL SPILLS INFORMATION REQUEST

BRIGHTON CLEANERS **Spill Number:** [redacted] **Close Date: 01/04/2016**
[redacted] CONEY ISLAND AVE BROOKLYN, NY NO ZIP PROVIDED

ADDRESS CHANGE INFORMATION
Revised street:
Revised zip code:

Source of Spill:	COMMERCIAL/INDUSTRIAL	Spiller:	JOHN SCHRETZMAYER − BRIGHTON CLEANERS	Spiller Phone:	(631) 234−4280
Notifier Type:	Other	Notifier Name:		Notifier Phone:	
Caller Name:		Caller Agency:		Caller Phone:	
DEC Investigator:	YYWONG	Contact for more spill info:	JOHN SCHRETZMAYER	Contact Person Phone:	(631) 234−4280

Category: Known petroleum or hazardous material release with minimal potential for fire/explosion (indoors or outdoors), drinking water contamination, or releases to surface waters.
Class: Willing RP − No DEC Field Response − Corrective Action Initiated or Completed by RP or Other Agency

Spill Date	Date Cleanup Ceased	Cause of Spill	Meets Cleanup Standards	Penalty Recommended
10/25/2007		HUMAN ERROR	NO	NO

Material Spilled	Material Class	Quantity Spilled	Units	Quantity Recovered	Units	Resource(s) Affected
UNKNOWN HAZARDOUS MATERIAL	HAZARDOUS MATERIAL	0.00	GALLONS	0.00	GALLONS	SOIL, GROUNDWATER

Caller Remarks:

CASno: SOIL BORINGS SHOWED CONTAMINATED SOIL − DRY CLEANER COMPOUNDS

DEC Investigator Remarks:

1/8/08 − Raphael Ketani. I spoke to John Schretzmayer of Associated Environmental (631) 234−4280 regarding the site. He said that they were doing borings and soil and groundwater sampling at the location of a shed behind the dry cleaning store. The shed had held containers of dry cleaning chemicals. They found dry cleaning chemical contamination in the soil and the groundwater. One groundwater sample contained 12,800 ppb of DCE, 2080 ppb of vinyl chloride, and 1700 ppb of TCE.

There also were some very low hits of benzene and other petroleum chemicals in the water. Oil staining was seen in the soil around a 550 gal. fuel tank. However, the chemical concentrations were very low in the groundwater and the soil, according to Mr. Schretzmayer. I asked whether there were any odors in any neighboring buildings. Mr. Schretzmayer said there weren't.

The site is going to be developed. The owner is Mike Boller at (212) 326−2212/FAX (212) 326−2061. The company is MLV Holdings, LLC at [redacted] Coney Island Avenue, Brklyn., 11235.

I told Mr. Schretzmayer that the petroleum chemical concentrations weren't high enough to warrant opening up a spill case and that DEC Spills does not presently have jurisdiction over dry cleaning chemicals in the groundwater. Therefore, I said, we are closing the spill case, but the case will be referred to the Division of Hazardous Materials.

Based upon the type of chemical release, I am closing the spill case.

1/6/09 − Raphael Ketani. Nathan Pinkahsov, attorney (718) 459−2600, called to find out whether the spill case is still open, whether anyone in DEC is managing the case, and what the impacts are regarding the TCE and DCE in the groundwater. He said that he represents a prospective buyer and that he is doing a do diligence search of the records for the site. I told him the case was closed on 1/8/08 and to contact the Division of Hazardous Materials, Hassan Hussein.

Mr. Hussein e−mailed me the following message:

I just received a call from Mr. Nathan Pinkahsov, (718) 459−2600, who identified himself as an attorney performing due diligence on behalf of his client who is a potential purchaser of the above referenced property. He said that you referred him to us for information regarding potential soil and groundwater contamination at the site. Please note that our investigation at this site was limited to determining if there was contamination resulting from operation of the facility's dry−cleaning equipment. In that respect, we referred the case to DAR since has a unit that specifically regulate all aspects of dry−cleaning operations. DAR staff sent us an email on 1/31/08 indicating that the facility was inspected on multiple occasions by 3rd party inspectors and found to be in full compliance with the applicable DAR regulations − see attached email. Therefore, the soil and groundwater contamination remediation remains the responsibility of DER. RCRA has no outstanding violations regarding this facility.

This facility, like so many other dry−cleaning facilities currently being managed by DER, seems to be suitable candidate for one of DER cleanup programs (Brownfields, VCP, etc.).

Mr. Hussein also wrote that he received the following message from Niranjan Gandhi of DAR (see below)=

Hassan & Sam,

We have reviewed the Spill Report ([redacted]) sent by Raphael Ketani on 1−8−08, and forwarded by Sam Arakhan for this facility (DEC ID #[redacted]8). We have also reviewed our file and records, and found that the facility was In Compliance for the 6NYCRR Part−232 requirements for all their eight 3rd Party Inspection Reports from May 2000 to May 2007. Their next 3rd Party Inspection is due in May 2008.

As already discussed with Hassan, please inform us when you plan to inspect this facility. One of our engineers may also join you for the Part−232 Air Compliance Inspection.

Thanks.

Niranjan

1/9/09 − Raphael Ketani. I reopened the case at the request of Randall Austin, Chief of the Spills Unit. I also tried to contact Mr. Schretzmayer of Associated Environmental (631) 234−4280. I left a message for him to call me back. I also stated in my message that the owner should not develop the site because there are hazardous chemicals in the groundwater that need to be remediated. I also called up Mr. Pinkahsov (718) 459−2600, but could only leave a message that the spill case was reopened.

Mr. Schretzmayer called me back. He acknowledged that I had left a message that the case was being reopened. He asked why. I told him that there are high levels of chemicals in the groundwater that need to be remediated. I told him that no buildings can be constructed on the site until it is cleaned up. He understood, but said that he had no further involvement in the case since doing the phase II. I told him that the case will likely be referred to the Superfund unit within DEC.

1/14/09 − Raphael Ketani. I called up Associated Environmental and asked for Mr. Schretzmayer. The receptionist said that he was out, but she asked whether she could help me. I told her that I needed a copy of the analytical data for the site. She said that she will let Mr. Schretzmayer know that I need a printout of the data and have it sent to DEC.

1/27/09 − Raphael Ketani. I called up Associated Environmental again (631) 234−4280 and spoke to the receptionist again. I told her that DEC still hadn't received the analytical data, nor any reports for the site. She asked whether Mr. Schretzmayer had ever called me back. I said No. She said that she will take my message again and have Mr. Schretzmayer send the reports and data.

Christina of Associated Environmental sent me the 10/9/07 Phase II Subsurface Investigation report. I reviewed the report. Groundwater is at 8 feet below grade. Borings B−1 to B−3 were installed in the vicinity of the UST. B−2, and B−4 to B−7 were installed throughout the site. Soil samples from B−4 to B−7 had no signs of contamination. There were elevated PID readings from soil samples taken from borings B−1 to B−3. B−2 (taken in the metal shed) had suspect odors in a sample from the 8 feet to 12 feet depth. Soil sample B−1 was submitted to the laboratory, but the results were below TAGM. Groundwater samples were taken for B−2 to B−7. 2−methylnaphthalene was a commonly exceeded contaminant. Sample B−2 had a number of very high chlorinated species exceedences of up to 12,800 ppb of cis−1,2−dichloroethene. This chemical was an exceedence in all of the samples. Vinyl chloride exceeded the TAGM limits in B−2 to B−6 and so did tetrachloroethylene.

1/30/09 − Raphael Ketani. A meeting was held with Randall Austin, Chief of the Spills Unit, Jacob Krimgold, head of the PBS Unit, and myself to discuss the case. In the end, it was determined that the owners should be offered the chance to join the brownfield program (if the development project has the time), or be sent a STIP (if the owners want to work fast). They should hire a consulting company to delineate the groundwater contamination, soil contamination, and indoor air impacts.

2/3/09 − Raphael Ketani. I tried to contact Mr. Pinkahsov (718) 459−2600 to find out whether his client had purchased the property, but could only leave a message. I contacted Associated Environmental to find out the present owner's mailing address, but Associated had only the [redacted] Coney Island address.

2/10/09 − Raphael Ketani. Mr. Austin approved a letter to Mike Boller of MLV Holdings, LLC. The letter requested that Mr. Boller expand the investigation and remediate the site. I informed him that he can either choose to become part of the Brownfields Cleanup Program or sign a STIP. A deadline of February 23, 2009 was given for his response.

2/18/09 − Raphael Ketani. I received a call from Michael Boller (212) 326−2212 of Brighton Cleaners. He said that he is on top of the situation. He said that the building is empty. They are trying to decide what to do regarding the site's development. They are working on one possible plan with the architect. He is in touch with Mr. Schretzmayer of Associated Environmental. I told him that DEC needs a workplan. He said that we will get one soon.

2/24/09 − Raphael Ketani. I tried to contact Mr. Boller to ask him whether he had decided to remediate the spill via the Brownfield Cleanup Program or whether he wanted a STIP agreement. However, I could only leave a message.

Later, I spoke to Mr. Boller. He said that he was working on an architectural plan and that it will be submitted in the near future. I told him that DEC needed a quicker submission. I also told him that we will be sending a STIP agreement that should be signed by one of the owners of the site and returned to DEC promptly. He sounded upset and told me to do what I needed to.

3/18/09 − Raphael Ketani. The STIP package was sent to Mr. Boller with a deadline of 4/10/09.

4/3/09 − Raphael Ketani. Harry Manesis, an attorney for a potential buyer, called to find out about the status of the site. I told him about the soil and groundwater contamination. He asked me about what the remediation of the site may cost. I told him that it was hard to give a number because the costs depended on many factors. I ball parked the number at from $5,000 for a simple groundwater collection to $30,000 for a dig out in selected areas. He said that MLV Holdings, LLC was trying to negotiate and push his client into buying the property. However, given the information he just received, he said he will tell his client to either forget about the purchase, or to negotiate the price way down.

4/23/09 − Raphael Ketani. I spoke to Mr. Boller regarding the site. He informed me that the property was officially sold on 4/21/09. He said that they agreed to do the environmental remediation work and will start on it very soon. I asked him for the owners' name and address. He said that he wasn't privy to this and that the owners told him that they will contact me soon.

I looked up the sale transaction in ACRIS. The date of the deed is 4/22/09. The deed shows that MLV Holdings LLC sold the property to [redacted] Coney Island Realty, LLC at [redacted] Coney Island Avenue, Brklyn, 11235. However, the mortgage shows that MLV is the lender/mortgagee and [redacted] C.I. Realty is the mortgagor/borrower. (MLV Holdings is listed as c/o Mike Voller, 2800 E. 29 Street, #2E, Brklyn, 11235.)

5/19/09 − Raphael Ketani. A meeting was held today between Randall Austin, Chief of the Spills Unit, Jacob Krimgold, Head of the PBS Unit, Jennifer Kann, EE I in the PBS Unit, and myself. The meeting took place to discuss the spill case and whether the PBS Unit will take it over. During the meeting, it was decided that the Brighton Cleaners case will go to Ms. Kann.

As per Mr. Austin, I am switching the case manager name to Jennifer Kann.

6/19/09: J.Kann − spoke with John Schretzmayer of Associated. He will be emailing me the new owners information and said that the new owner will likely sign a STIP. He will also be preparing the work plan for investigation.

07/10/09: J.Kann − stipulation agreement sent to Mr. Oleg Blimshteyn, [redacted] Brighton 6 Street, Brooklyn, NY 11235 . This owner information was provided by Mr. Schretzmayer.

08/17/09: J.Kann − signed stipulation agreement received on July 31, 2009. Cover Letter prepared and forwarded to Lou Oliva on August 17.

08/19/09: J.Kann − stip signed by S. Mattei on August 18. Stip edoced.

09/09/09: J.Kann − executed stip forwarded to Associated Environmental.

10/07/09: J.Kann − email sent to Associated indicating that the Work Plan is past due.

10/08/09: J.kann − Work Plan submitted and edoced.

10/20/09: J.Kann − Comments sent via email today− The Department has reviewed the work plan prepared for the referenced site and dated September 21, 2009. The Department has the following comments:

1. Proposed groundwater sampling depths are the groundwater interface, 25−27 feet and 50−52 feet. What was the basis for choosing these sample depth locations? Is there any knowledge of possible confining layers in the soils beneath the site?

2. The proposed boring/well locations include many off−site downgradient locations. Given that perc was detected at elevated concentrations throughout the site, additional sampling points should be collected on the site at greater depths (for instance B−3 had 103 ppb perc). In addition, an upgradient sample location would aid in plume delineation.

3. Is the building shown in Figure 2 on an adjacent property? Please clearly label the site boundary. In addition, assumed groundwater flow direction should be identified in the figures.

A revised work plan addressing the above comments should be submitted to the Department within 30 days. If you have any questions, please call me at 718−482−4977.

12/9/09: J.Kann − sent reminder email to consultant indicating that the report is past due and a violation letter will be sent out if the work plan is not received by Friday. Consultant called and comments from the October 20 email were discussed.

12/11/09: J.Kann − a revised work plan was received (edoced)

01/07/10: J.Kann − revised work plan approved. Report due March 4, 2010.

1/14/10: J.Kann − observed field work being conducted along Brighton Beach Avenue. Dave from Associated was present. Groundwater samples were being collected.

2/9/10: J.Kann − spoke with Gregory of Associated Environmental. He is preparing the RI/RAWP and he indicated that the most impacts are in the soil and the groundwater on site. The report is expected to be submitted within two weeks.

2/23/10: J.Kann − site investigation report/remedial action plan submitted on 2/15/10 and edoced.

3/24/10: J.kann − sent email to J. Harrington on 3/22 requesting guidance. J. harrington provided comments in an email from 3/24 (edoced)

4/22/10: J.Kann − provided comments to Associated environmental in an email (edoced).

7/6/10: J.kann − work plan was due June 22nd. An email went out on June 29th reminding the consultant that the plan was past due and that it must be submitted by July 2nd. Work Plan submitted on July 2nd (edoced).

9/20/10: J.Kann − comment letter sent out (edoced).

1/6/11: J.kann − revised work plan received on 12/5/10.

4/4/11: J.Kann − spoke with Joe O'connell on how to proceed with this site on 3/11/11. Based on high levels of perc in soil and groundwater needed to confirm with Albany if site should remain in non−petroleum stip or if it should be transferred to another section. Conference call held with Bob Cozzy, Jane O'Connell, Joe O'Connell on March 30. Based on the call, B. Cozzy said until we have off−site concerns the site will remain in the stipulation. Samples collected to date, are limited to on site soils and on−site and off−site geoprobe groundwater grabs, which shoe significant contamination on site, with minimal impacts off−site. Additional sampling was proposed and approved, which includes soil and groundwater sampling in an adjacent property, sub−slab/indoor/ambient air sampling at three properties and the installation of three wells on site. The revised work plan was approved in a letter dated March 31, 2011.

4/7/11: J.Kann − Wanted to add that in the conference call of 3/30 it was questioned whether to involve DOH at this point. It

was decided by B. Cozzy to hold off until we receive the results of this round of sampling.

6/9/11: J.kann− UST removal work plan submitted via email on 6/7/11 (edoced). Does not propose to dispose of soils as hazardous waste. Consultant informed that soils are listed wastes (edoced). Consultant requested a meeting and meeting was scheduled for 6/14/11 (this entry was added on 9/19/11).

6/14/11: J.Kann − Greg Ernst of Associated met with Joe O'connell and myself to discuss the site. No off−site access has been granted for subslab/indoor/ambient air sampling to date. Two attempts have been made via certified mail. All perc contaminated soils on−site are listed hazardous waste per 371.

6/23/11: J.Kann − access letters sent out to adjacent property owners on June 9, 2011 email to the Department. (letters edoced and entry added on 9/19/11)

8/8/11: J.kann − Oleg Blimshtyn (site owner) called and asked for information about the BCP. I provided him with Jane O'Connell's number.

9/12/11: J.Kann − received message from Greg Ernst indicating that they plan on excavating all contaminated material and disposing of it as hazardous waste. No plan was submitted; he said he would hopefully submit it in the next day or two. He asked if it was okay to install sheet piling. I told him I would need to discuss the site with Joe. I called him back and asked him to confirm the type of shoring to be installed. He was not sure and said he would get back to me.

9/15/11: J.Kann − recved another message from greg on 9/13. He said that H beam and lagging was going to be installed. He wanted to know what the Department's position was on it. Meeting to discuss how to move forward with the site scheduled internally.

9/16/11: J.Kann − sent an email to Greg Ernst at Associated on 9/15 indicating that the Department has not recieved the SRIR and it's not clear what the shoring work will entail and also that his client is in violation of the stipulation agreement. (edoced). Rcvd the SRIR this morning and edoced it.

9/29/11: J.Kann − rcvd a phone call from Oleg Blimshtyn (917−977−0734). Told him that Bryan Wong is the new project manager and provided Bryan's phone number to him.

10/14/11: B.Wong − met with property owner, Mr. Oleg Blimshtyn and his consultant, Greg Ernst from Associated. Mr Blimshtyn express interest in filing an application to join the BCP program and anticipated to have the application sent to the department by 10/28/2011. 12/15/2011: B.Wong − BCP application for the [redacted] coney island avenue property was received by the departemnt and it is under review. 4/12/12: B. Wong − BCA executed and cleanup will be done under the BCP with site No. [redacted]. 7/20/2012: B.Wong − received email from consultant (PW grosser),for the BCP site ([redacted]) informed me that groundwater sampling during the RI working on July 19, noted about 1 inches of pertrolem producted detected in one of the well installed in July 2012. 1/4/2016: B. Wong − on site remediation completed as of December of 2015, and Final Engineering report for [redacted] was approved and COC issued on 12/17/15. The off−site project under [redacted] is pending to obtain additional data to assess extend of contamination migrate off−site in groundwater, and Vapor intrusion off−site.

HAZARDOUS MATERIAL SPILLS INFORMATION REQUEST

POLYTECH **Spill Number:** [redacted] **Close Date: 05/09/2017**
[redacted] JOHNSON ST BROOKLYN, NY NO ZIP PROVIDED

ADDRESS CHANGE INFORMATION
Revised street:
Revised zip code:

Source of Spill:	COMMERCIAL/INDUSTRIAL	Spiller:	POLYTECHNIC UNIVERSITY	Spiller Phone:	
Notifier Type:	Other	Notifier Name:		Notifier Phone:	
Caller Name:		Caller Agency:		Caller Phone:	
DEC Investigator:	AXDORONO	Contact for more spill info:	ANGELO BACARELLA	Contact Person Phone:	

Category: Known petroleum or hazardous material release with minimal potential for fire/explosion (indoors or outdoors), drinking water contamination, or releases to surface waters.
Class: Willing RP − No DEC Field Response − Corrective Action Initiated or Completed by RP or Other Agency

Spill Date	Date Cleanup Ceased	Cause of Spill	Meets Cleanup Standards	Penalty Recommended
12/17/2010		EQUIPMENT FAILURE	NO	NO

Material Spilled	Material Class	Quantity Spilled	Units	Quantity Recovered	Units	Resource(s) Affected
#2 FUEL OIL	PETROLEUM	0.00	UNKNOWN	0.00	UNKNOWN	SOIL

Caller Remarks:

Caller advised unk amount of oil leaked in soil. Clean up is pending.

DEC Investigator Remarks:

+12/17/10−HRAHMED−Spoke to Angelo from Four Sons Fuel Oil (718 358 4541). They will pump out the tank. No visual evidence of spill at this time.

PBS # 2−158224 12/18/10−HRAHMED−Angelo confirmed that they pumped out the oil from the tank yesterday. 1/4/11−HRAHMED− Four Suns Fuel Oil has submitted a proposal for the remediation; and are awaiting an approval. the contact at polytec is Paul(347−587−9975).

1/7/11−HRAHMED− Spoke to Angelo of Four Sons fuel oil (718 358 4541, cell−917 282 7668). As per him, they have received the approval for the investigation and remediation. On 1/10/11 they will start doing the mark out for utilities, do some initial soil boring and take soil samples. based on the analytical report, they will start excavation to remove the tank and the contaminated soil. No visual evidence of oil spill at this time.

10/31/11−Hiralkumar Patel. case transferred from DEC Hasan to DEC Patel.

11/17/11−Hiralkumar Patel. alternate addresses: [redacted] Tech Place (Johnson Street), [redacted] Metrotech Center, [redacted] Bridge Street, [redacted] Duffield Street

PBS #: [redacted], [redacted] no other spills found.

as per ACRIS, site owned by City of New York currently leased to FC Flatbush Associates, L.P.

The City of New York

property owner City Hall New York, NY 10007

FC Flatbush Associates, L.P.

leasee [redacted] Metrotech Center North Brooklyn, NY 11201

reviewed available documents:

− 1) 06/29/11: Remedial Action Work Plan: − property also identified as 122 Tech Place − on 12/17/10, spill was reported due to release of #2 oil from the 5,000 gal tank − 5,000 gal #2 oil UST was located at the northwestern side of the subject building − on 01/10/11, borings were installed proximate to the tank in order to determine vertical and lateral extents of the spill − on 01/14/11, contractor removed the concrete slabs overlying and underlying the tank − it was single−walled fiberglass tank − tank cracked at the bottom (stress fracture) approx. 48 inches from the southern end of the UST prior to removing from the site − UST was located proximate to the building foundation and multiple sub−grade utilities were determined present in teh adjacent area − on 02/02/11, additional soil borings were drilled to further delineate petroleum impact; based on result, an excavation plan was created − shoring installed to secure excavation − all soil from within the shoring area was removed down to an approx. depth of 40 ft bg − total of 1,880.54 tons of petroleum−impacted soils were removed − the shored area is approx. 35 ft by 35 ft in size − found groundwater at the base of the excavation − about 8 inches of product found on water at the base of excavation − proposes to install two concrete leaching rings at the base of the excavation, with the base of the deeper ring 5 to 7 ft into groundwater − proposes to install slotted PVC pipes in trenches around the base of the excavation (within the shoring) − proposes to leave shoring in place

2) 07/13/11: Michael Rosati from AB Environmental sent email to DEC Hasan including result of soil and groundwater sample. there was no site map or other information, so don’t know where those samples were collected.

3) 07/27/11: DEC Hasan sent letter requiring complete delineation of soil and groundwater contamination including site specific groundwater flow direction and submission of CAMP. Hasan approved to install two 12 ft diameter concrete wells at least 7 ft below water level as an ’Interim Remedial Action’. he mentioned that the Department may require deeper remedial system based on complete delineation. he also mentioned that the department does not approve the proposed installation of 3 ft deep trench around the base of the excavation as delineation has not been completed. he required submission of final RAP based on delineation report.

4) 07/28/11: DEC Hasan sent email to Mr. Zulick at Polytech and informed him that the department approves the installation of only one (not two as mentioend in letter dated 07/27/11) 12 ft diameter concrete well.

5) 08/03/11: Community Air Monitoring Plan
–

Polytechnic Institute of NYU [redacted] Metro Center Brooklyn, NY 11201 Attn.: George Zulick Director of Engineering Services Ph. (718) 260−3522 Fax (718) 260−3753 email: gzulick@poly.edu

Polytechnic Institute of NYU [redacted] Metro Center Brooklyn, NY 11201 Attn.: Paul Omoagbi Chief Building Engineer Ph. (718) 260−3499

(516) 996−1737 (C) Fax (718) 260−3575 email: aomoagbi@poly.edu

Michael Rosati AB Environmental PH. (631) 567−6545 (O)

(631) 484−0320 (C) Fax (631) 567−9390 email: mrosati@abenviro.com

angelo@foursunsfuel.com

4:40 PM:− left message for Mr. Rosati at AB Environmental.

11/21/11−Hiralkumar Patel. 1:01 PM:− spoke with John Sabatino at AB Environmental. he mentioned that concrete ring has been installed. they have also completed delineation on west, south and east side of the tank field and currently waiting for lane closure permit from NYC DOT to perform delineation on north side of the tank area. they have also conducted soil−vapor analysis within as well as outside the building. Mr. Sabatino will submit an interim report in first week of Dec. 2011.

John Sabatino AB Environmental PH. (631) 567−6545 (O) cell: (631) 300−6493 email: jsabatino@abenviro.com

1:15 PM:− sent email to Mr. Sabatino and asked him to submit interim report by the end of 12/09/11. email copied to Mr. Rosati, Mr. Zulick and aomoagbi@poly.edu.

12/15/11−Hiralkumar Patel. 4:28 PM:− left message for Mr. Sabatino.

12/20/11−Hiralkumar Patel. 3:38 PM:− left message for Mr. Sabatino.

12/21/11−Hiralkumar Patel. 11:15 AM:− received call from Mr. Sabatino. he will send report today. 11:32 AM:− received email from Mr. Sabatino including an Initial Interim Environmental Summary Report. abstract: − in addition to the removed UST that was beneath the parking lot, a second and reportedly out−of−service 5,0000 gal UST is located in the courtyard of the adjacent Civil Engineering Building to the west

less than −−−−−−−−−−−− − as approved by NYSDEC, two (2) 12−foot diameter, five ft high concrete leaching rings were installed at the bottom of excavation − the base of the bottom−most ring was placed approx. 5 to 7 ft below water table − platform was constructed on top of the two leaching rings with two manholes for installation of a diaphragm pump and a submersible pump − from first platform to ground elevation, 12 ft diameter, 5 ft high solid concrete rings were installed − second platform with two manholes was constructed on top of concrete rings, at ground elevation − skimmer is hookded into the diaphragm pump to transfer the fuel oil to 55 gal drums − submersible pump transfers oil and water into a 20,000 gal aboveground frac tank thereby creating a cone of depression − mode of operation is to activate the skimmer first so as to remove the oil from the top of the water table − liquid discharging to the 55 gal drums is visually inspected to determine when the volume of water is greater than the volume of oil. at this point, the skimmer is truned off − once the skimmer is turned off, the submersible pump is activated

and pumps greater than 99% water and less than 1% oil into the frac tank − submersible pump remains in operation until the water table drops and the pump shuts off automatically by a float switch − operation is repeated once the water table recharges − as of 12/01/11, approx. 2,649 gal of contaminated water has been removed less than −−−−−−−−−− − currently doing subsurface investigation that was initiated in Aug. 2011 − installed soil borings and monitoring wells − conducted soil vapor survey in the adjacent buildings − to date, all dust monitoring measurements have been below regulatory action levels − to date, total of 12 soil borings (GP−1 through GP−12) have been advanced across the subject site − along the eastern property boundry, refusal was encountered in a number of location and therefore limited the number of soil borings/groundwater monitoring wells − soil borings are completed to an average depth of 30 to 35 ft bg, which is the depth of soil/groundwater interface − soil samples have been collected from select soil borings at their termination depth − total of 23 monitoring wells installed − wells MW−1 to MW−12, MW−14 to MW−17, MW−22 (as per site map) and MW−23 are located on the subject property − well MS−13 is located south of the subject property in front of Rogers Hall − wells MW−18 to MW−21 are located on the sidewalk adjacent to Johnson st − as per well logs, monitoring wells MW−2 to MW−23 were completed to a depth of 45 ft with 20 ft slotted screen − well MW−1 is located adjacent to the remediation system 12 ft diameter concrete rings and therefore a well log was not provided − wells MW−2 to MW−4 and MW−12 to MW−23 are one inch diameter wells − wells MW−5 to MW−11 are two inch diameter wells − during installation of a number of monitoring wells, very strong fuel oil odors were noted, especially in the southwest portion of the subject property − to a lesser degree, fuel oil odors were noted north of the former UST − wells MW−5 to MW−11 contained visible product

less than −−−−−−−−−− − wells MW−5 to MW−11 are located in the area that was excavated for installation of the remediation system (wells within shorings)

less than −−−−−−−−−−−− − layer of product was also noted in wells MW−3, MW−4, MW−12, MW−13, MW−14, MW−15, MW−18, MW−20, MW−21, MW−22 and MW−23 less than −−−−−−−−−− − no product found in wells MW−2, MW−16, MW−17, MW−19 and MW−23 which are located on the eastern portion of the property

less than −−−−−−−−−−−−−−−−−− − total of 11 grab groundwater samples were collected from ten temporary wells (GW−2, GW−3, GW−4, GW−5, GW−7, GW−8, GW−9, GW−10, GW−11, GW−12) and product sample was collected from temporary well GW−6 − groundwater samples were also collected from wells MW−3, MW−4, MW−17 and MW−22 − product sample is representative of typical fuel oil product − greatest impacts are noted in the groundwater, specifically from samples collected from points to the southwest and west of the former UST. this is consistent with the observation made during tank excavation that the stress fracture was noted on the southern portion of the UST − groundwater elevation measurements indicate that local groundwater flow is to the southwest − local groundwater flow direction may be altered by the active remediation system that was installed in the UST excavation pit − no contamination found in soil samples − found contamination (petroleum and chlorinated solvents) in groundwater samples (highest contamination in GW−4)

petroleum contamination in groundwater:

−−−−−−−−−−−−−−−−−−−−−−−−MW−4−−−−−MW−22−−−−−GW−3−−−−−GW−4−−−−−GW−5−−−−−GW−7−−−−−GW−10
Benzene−−−−−−−−−−−−−−−−−−−30−−−−−−−−80−−−−−−−−−−−−−−−100−−−−−−−34−−−−−−−−−−−−−−−−35
Toluene−−−−−−−−−−−−−−−−−−170−−−−−−−−13−−−−−−130−−−−−−180−−−−−−100−−−−−−−−−−−−−−−110
Ethylbenzene−−−−−−−−−−−−−−−99−−−−−−−−−−−−−−−−−99−−−−−−270−−−−−−−85−−−−−−−10−−−−−−−−70
Xylene−−−−−−−−−−−−−−−−−−−620−−−−−−−150−−−−−−560−−−−2,200−−−−−−860−−−−−−−69−−−−−−−710
1,2,4−Trimethylbenzene−−−−−260−−−−−−−−32−−−−−−330−−−−1,300−−−−−−470−−−−−−−31−−−−−−−400
1,3,5−Trimethylbenzene−−−−−−73−−−−−−−−−9−−−−−−−74−−−−−−340−−−−−−−58−−−−−−−13−−−−−−−−88
Naphthalene−−−−−−−−−−−−−−−290−−−−−−−−−−−−−−−790−−−−4,400−−−−−−400−−−−−−−36−−−−−−−390

TCE contamination in groundwater:

well−−−−−−−TCE (in ppb) MW−3−−−−−−−−2 MW−4−−−−−−−−2 MW−17−−−−−−−1 MW−22−−−−−−−3 GW−2−−−−−−−−1 GW−3−−−−−−−−2 GW−4−−−−−−−−1 GW−7−−−−−−−−1 GW−10−−−−−−−1 GW−11−−−−−−−2 GW−12−−−−−−−3

abstract of soil vapor survey report: − Civil Engineering Building is proximate to the identified source and potentially impacted by adjacent contaminated soil − soil vapor survey included the collection of four sub−slab soil vapor, four indoor air and three ambient samples − buiding that were sampled included the Donald F. and Mildred Topp Othmer Residence Hall to the north (101 Johnson St), Polytech Civil Engineering Building (adjacent to the west), Polytech Dibner Hall (adjacent to the east), and Polytech Rogers Hall (adjacent to the south) − total of four sub−slab samples (SSV−01 through SSV−04), one from each building, were collected from approx. two (2) inches beneath the bottom of the concrete floor slab − sub−slab sample SSV−01 was collected beneath the furniture storage closet, located in the southeast corner of the Donald F and Mildred Topp Othmer Residence Hall − sub−slab sample SSV−02 was collected beneath the basement work bench area in Polytech Civil Engineering building, adjacent to the tank site − sub−slab sample SSV−03 was collected at the base of the elevator shaft in the northwest corner of the Polytech Rogers Hall − sub−slab sample SSV−04 was collected adjacent to the interior stairwell in Polytech Dibner Hall − four indoor sir samples (IA−01 through IA−04) were collected adjacent to the sub−slab samples and set at heights consistenet with the breathing zone − three outdoor air samples (OA−01 through OA−03) were collected at locations that surround the parking lot − outdoor sample OA−01 was collected from east of the parking lot − outdoor sample OA−02 was collected from northeast corner of the Rogers Hall − outdoor sample OA−03 was collected from adjacent to the southwest of the parking lot − found petroleum and chlorinated solvent contamination in sub−slab samples *−*−*−− − number of compounds in the outdoor samples exceed the ambient concentrations collected at the Queens College monitoring point; this is likely reflective of a greater presence of car exhaust in the vicinity of the subject site − potential sources of chlorinated solvent contamination may include the use of solvents in the Chemical Engineering Building

less than −−−−−−−−−−−−−−−−

soil vapor/indoor/outdoor air sample results (ug/m3):

−−−−−−−−−−−−−−−−−−−−−−−−−−−SSV−01−−−−−−−−SSV−02−−−−−−−−SSV−03−−−−−−−−SSV−04 Ethylbenzene−−−−−−−−−−−−−−−−−−−−18
Xylene−−−−−−−−−−−−−−−−−−−−−−−−88 1,2,4−Trimethylbenzene−−−−−−−−−−−39 1,3,5−Trimethylbenzene−−−−−−−−−−−15
TCE−−−−−−−−−−−−−−−−−−−−−−−−−−7−−−−−−−−−3,600−−−−−−−−−−120
PCE−−−−−−−−−−−−−−−−−−−−−−−−−−11−−−−−−−−−−150−−−−−−−−−−−13−−−−−−−−−−−20

report is missing following: − amount of product recovered since the recovery system was installed − scaled site map including location of removed tank, previously unknown 5,000 gal tank in courtyard of Civil Engineering Building, shoring, recovery system and MW−1 (exact location) − shoring depth − size of well MW−1 − logs for borings GP−1 through GP−12 − reason for not collecting soil samples from boring GP−1, GP−2, GP−3 and GP−10

4:03 PM:− spoke with Mr. Sabatino and asked him about any Phase I report prepared in past. Mr. Sabatino mentioned that Phase I was not done as part of ongoing spill investigation. and he doesn’t know if any Phase I done by property owner in past.

4:44 PM:− sent email to Mr. Sabatino and asked him to label pics sent earlier.

12/22/11−Hiralkumar Patel. 11:15 AM:− left message for Mr. Zulick at Polytech. 2:34 AM:− sent email to Mr. Sabatino and Mr. Zulick. asked Mr. Sabatino to submit missing information (listed above). also asked him to submit a site map with all boring/well locations, but no sample results. asked Mr. Zulick to submit copy of previous Phase I, if done in past. informed him that the department requires Phase I investigaiton, if no reports available. asked Mr. Sabatino and Mr. Zulick to submit documents by 12/30/11. email copied to Mr. Omoagbi and Mr. Rosati.

2:52 PM:− sent email to Mike Hughes at NYS DOH including copy of soil vapor survey report, for review.

12/23/11−Hiralkumar Patel. 11:41 AM:− received email from DOH Hughes. he had forwarded report to NYS DOH Bureau of Environmental Expose Investigation and also to Chris D'Andrea at NYC DOH. 11:52 AM:− received email from Joseph Crua from NYS DOH. Bridget Callaghan from his unit will review report and call back.

12/27/11−Hiralkumar Patel. 2:43 PM:− received call from Bridget Callaghan from NYS DOH. she reviewed the soil vapor survey report and agrees with the proposed corrective action. she mentioned that further investigation needs to be done to find out the source, if any on−site. during conversation, she mentioned that she is working on another site ([redacted] Bridge Street) in neighbourhood, with soil/vapor contamination. during further investigation on her project site, they found groundwater flow in completely opposite direction then anticipated. during further review, they found that there is a subway pumping station in area which is affecting the groundwater flow direction.

3:41 PM:− received email from Bridget. she offered the following recommendations after reviewing the soil vapor survey report: − the groundwater wells need to be sampled and analyzed for the full−VOC suite. this will help determine the presence or absence of a chlorinated solvent source on the property. − there is a potential for a nearby subway pumping station to affect the groundwater flow direction and subsequent contamination migration. the near site groundwater flow needs to be determined. − a full review of the chemicals used/stored on−site within the engineering school needs to be conducted. − soil vapor contamination to the west and southwest of SSV−02 needs to be delineated. − the recommendations made in the report may help to minimize vapor intrusion from occurring. continued indoor air monitoring will provide further evidence of the success of these actions.

01/04/12−Hiralkumar Patel. discussed with DEC Austin. he asked to discuss with DEC Jeff to prepare memo for case transfer due to chlorinated solvent contamination.

3:00 PM:− left message for Mr. Sabatino. 3:12 PM:− sent email to Mr. Sabatino inquiring updates. email copied to Mr. Rosati and Mr. Omoagbi.

01/05/12−Hiralkumar Patel. 1:31 PM:− due to findings of chlorinated solvent contamination, sent email to DEC Jane with site history and a site map (including sampling results). email copied to DEC Austin and DEC Vought.

01/09/12−Hiralkumar Patel. 2:44 PM:− received email from Mr. Sabatino including site map and boring logs for GP−1 through GP−12. he mentioned that the amount of product recovered as of December 11, 2011 is 2649 gallons. but as per the interim summary report (dated 12/20/11) section 1.3, approx. 2,649 gal of water contaminated with petroleum has been removed. as per submitted site map, the recovery ring is noted as well MW−1. as per boring logs, less than 4.7 ppm recorded on PID in all borings.

the submitted information added to the report dated 12/20/11.

01/20/12−Hiralkumar Patel. 3:05 PM:− sent email to Mr. Sabatino and asked him to submit information about amoung of product (not contaminated water) recovered till now. email copied to Mr. Zulick, Mr. Rosati and Angelo. 3:40 PM:− received email from Mr. Sabatino. he mentioned that as of today, they recovered total of 2,845 gal of oil (not oil and water as stated in report).

01/26/12−Hiralkumar Patel. discussed with DEC Jane regarding chlorinated solvent found in sub−slab sample. she has sent data to DEC Cozzy for evaluation.

discussed with DEC Austin regarding groundwater contamination (free product and dissolved). he asked to send memo requesting a case transfer.

01/27/12−Hiralkumar Patel. sent email to DEC Austin requesting case transfer to remediation.

02/03/12−Hiralkumar Patel. with DEC Austin's approval, case transferred to DEC Vadim.

DEC requires: 1) Phase I, 2) soil/gw analysis via 8260 full list/STARs 8270, 3) inventory of chemicals used in Chemical Engineering Building (as suspects the source of chlorinated solvents), disposal methods of used chemicals and drainage structure in chemical engineering building.

02/22/2012: This sill was transferred to A. Doronova. − AD

This is a memo from Kumar:

Spill #: [redacted] Address: [redacted] Johnson Street, Brooklyn.

The site is occupied by the Polytech University. The subject spill was reported on 12/17/2010 due to a product loss from a 5,000 gallon #2 oil underground storage tank. During further investigation, a crack found in the southern end of the tank bottom. The tank and associated soil contamination has been removed. The final excavation was 35 ft long by 35 ft wide and 40 ft deep. Groundwater was found at the excavation bottom. Petroleum product was found on water table. Tank excavation area was backfilled after installing a recovery system (12 ft diameter concrete rings). As of Dec. 2011, total of 2,845 gal of oil has been recovered. During further delineation, free product iss found beyond the limits of excavation area. To evaluate any impact on air quality due to the petroleum release, a soil vapor study was conducted. During the soil vapor study, chlorinated solvents were found in sub−slab samples, with maximum contamination in sample collected from Civil Engineering building (TCE: 3.600 ug/m3, PCE: 150 ug/m3). BTEX contamination also found in sub−slab sample (maximum 88 ug/m3 of Xylene) collected from Civil Engineering Building. The Civil Engineering building is located adjacent to the former tank location. Chlorinated compounds were not found in any indoor or outdoor air samples or any soil or groundwater samples.

Sent an e−mail to Mr. Sabatino stating that I am a new project manager, with my contact info.

John Sabatino AB Environmental PH. (631) 567−6545 (O) cell: (631) 300−6493 email: jsabatino@abenviro.com

AD

03/14/2012: Contacted Mr. Sabatino regarding report submission. I was told that they are still in a process of delineation, and that report will be probably ready in 8 weeks. AD

04/30/2012: Received tne following e−mail from Mr. Sabatino:

Ainura,

We spoke about 8 weeks ago regarding the situation at Polytechnic. We have been delineating the spill area for quite some time. We will hopefully complete the delineation this week regarding the well point installation and most recent sampling. We will be performing some additional sampling for wells where the analysis is more than 60 days old so as to gather up to date information. Once this has been complete we will be ready to prepare another report regarding the delineation and proposed remedial action.

If you have questions, contact me.

Best regards,

John Sabatino Project Manager AB Environmental Services, Inc. Phone 631−567−6545 Fax 631−567−9390 jsabatino@abenviro.com

AD

05/22/2012: Received the following e−mail from Stephen Kaplan of VHB Engineering:

Ms. Doronova,

Attached is a letter pertaining to the capacity of the removed underground storage tank associated with NYSDEC Spill No. 1009933. Please feel free to contact me if you have any questions. Thank you.

Stephen I. Kaplan Senior Project Manager VHB Engineering, Surveying and Landscape Architecture, P.C.

DL the document to eDocs. AD

07/06/2012: received the following e−mail from S. Kaplan:

Ms. Doronova,

The attached soil vapor report was prepared on behalf of AB Environmental and at Michael Rosati´s request, we are submitting an electronic copy to your attention. In addition, one hardcopy will be sent via U.S. Mail to you.

If you have any questions regarding the attached, please feel free to contact me directly. Thank you.

Stephen I. Kaplan Senior Project Manager

Will review. AD

08/13/2012: Reviewed the report. It states that on March 15, 2012, VHB completed a soil vapor investigation on the site in accordance with New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

The soil vapor survey included the collection of four sub−slab soil vapor, four indoor air and three ambient (background) samples. The buildings that were sampled included the Donald F. and Mildred Topp Othmer Residence Hall to the north [redacted] Johnson Street); Polytech Civil Engineering Building (adjacent to the west); Polytech Dibner Hall (adjacent to the east); and Polytech Rogers Hall (adjacent to the south). The sub−slab samples were collected in each building to characterize the nature and extent of soil vapor contamination directly beneath each respective building. The indoor air samples were collected to characterize exposures to air within each respective building. The outdoor air samples were collected to characterize site specific background outdoor air conditions.

The September 9, 2011 soil vapor sampling identified impacts in sub−slab soil samples SSV−01 and SSV−02. Associated indoor air samples IA−01 and IA−02 had only minimal impacts. Lesser impacts are noted in the other sub−slab samples, SSV−03 and SSV−04 and the associated indoor air samples indicate minimal impacts. Outdoor ambient air samples did not indicate any impacts to air quality.

The most recent March 15, 2012 soil vapor sampling identified similar impacts in sub−slab soil samples SSV−01 and SSV−02. However, an elevated concentration of TCE was detected in SSV−03 at a level that was much higher than the first initial sample. Impacts in SSV−04 were noted to be similar to the September 9, 2011 soil vapor sampling.

Based upon previous ambient and sub−slab soil vapor sampling conducted on September 9, 2011, the two main areas of concern were the Donald F. and Mildred Topp Othmer Residence Hall and the Civil Engineering Building. These areas continue to be the areas of concern based upon a second sampling event on March 15, 2012, given that elevated levels of similar compounds were detected in both rounds of sampling. Based on the previously discussed NYSDOH matrices, including both the September 9, 2011 and March 15, 2012 sampling events, no further action is required for the Donald F. and Mildred Topp Othmer Residence Hall.

However, since other compounds were detected and the building is used for student housing, it is recommended that all subsurface vapor entry points, such as cracks in the concrete floor and pipe entry points be sealed. Following sealing, the entire floor should be painted with an impermeable sealant. It is also recommended that semiannual indoor air monitoring be conducted.

Based on the previously discussed decision matrix, recommended mitigation measures for Rogers Hall (SSV−03) and Dibner Library (SSV−04) include sealing of all subsurface vapor entry points, application of the impermeable sealant, and semiannual indoor air monitoring of each basement.

Based on the above data gathered through both the September 9, 2011 and March 15, 2012 sampling events, and in conjunction with the NYSDOH Guidance, VHB recommends that sub−slab soil vapor and ambient air monitoring be continued on a semi−annual basis as a result of the March 15, 2012 soil vapor collection. In each case, the basement floors should be properly sealed as indicated above and consistent with the NYSDOH Guidance´s recommendation for ˆmitigation.˜ Based upon the performance of the remediation system located at the eastern exterior of [redacted] Johnson Street (within the spill area), it is likely that petroleum−related soil vapor impacts will decrease over time. VHB also recommends that permanent vapor points (inclusive with lockable manholes) be installed in the areas of the previous sub−slab soil vapor sample locations. This will create an easily accessible and secure point to collect additional sub−slab soil vapor samples for the recommended semi−annual monitoring.

Groundwater sampling is on−going as part of this subsurface investigation. The results of the groundwater investigation will be reviewed in conjunction with the soil results in an attempt to identify possible additional sources of contamination.

AD

08/16/2012: Received an e−mail from Peter Daniels of Berninger Environmental, Inc. saying:

Dear Ms. Doronova,

I am writing to you today on behalf of Michael Rosati from AB Environmental. He has asked Berninger Environmental, Inc. to collect and report all monitoring data for the Poly Tech, Johnson St. Brooklyn site. My name is Peter Daniels and I have been assigned the task of collecting and sending that report to you. I will be receiving, from AB Environmental, all the information collected from the weekly and bi−weekly monitoring visits. I will compile these into a monthly report, to which I will send to you via email. If you have any questions or concerns please feel free to contact myself or Mike.

Please see the attached July monitoring report.

Thank You,

Peter Daniels

DL the report to eDocs. Will review. AD

09/04/2012: Reviewed the report. It states that this report includes visits on the following July dates: 3, 6, 10, 13, 27, and 31. Skimmer and submersible pump were operational only during bi−weekly visits.

09/06/2012: Received August 2012 Monitoring Report. DL the report to eDocs. Will review. AD

09/18/2012: Called and spoke with Mr. Rosati of AB Environmental regarding the submitted GW monitoring report. He said that they will submit RAP after they will get discharge permit from DEP. GW was sampled 2 months ago, sampling report was not submitted yet. Mr. Rosati told that the report was prepared by Berninger Environmental, Inc., which was subcontructed by AB Environmental, so DEC should request the report from them. AD

09/28/2012: Reviewed the August 2012 report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. AB Env. visited the site on the following August 2012 dates: 3, 6, 10, 13, 27, and 31. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 14 wells were gauged on these events. AD

10/11/2012: Received September 2012 Monitoring Report. DL the report to eDocs. Will review. AD

11/09/2012: Received the RAP by VHB Engineering. No PDF copy was submitted. Called and left a message to Mr. Kaplan of VHB with a request for its submission. It lookes like as many as three different environmental consulting companies are involved with this project. Called and left a message to Mr. Zulick (director of engineering services of Polytech) to clarivy the situation. AD

11/14/2012: Reviewed the submitted RAP. It proposes improvements to the existing IRM groundwater remediation system to accomodate an automatic and full−time operation in order to expedite product recovery and treat contaminated groundwater so it can be discharged into the NYC municipal sewer. Currently, effluent water is manually pumped out of an existing 10,000−gallon frac tank into a pump truck and discharged at an licensed facility. The existing skimmer device currently discharges free product into 55−gallons drums, which are manually removed from the site. Under the proposed improvements, an automatic skimer device will be placed in well MW−1 at an appropriate depth in order to detect free product at a certain GW elevation. The autimatic skimmer (AS) will begin pumping untill no product would be detected. AS will discharge free product into 500−gallon skid tank in the storage shed. The proposed 500−gallon tank will be pumped by vactor truck on as−needed basis. AS will be equipped to automaticallly shut down when 500−gallon tank filled to operating capacity.

When AS shuts down as a FP recovered from the water table, submerged pump will automatically pump contaminated GW from well MW−1 into 10,000−gallon frac tank. A secondary submerged pump in the frac tank will pump the GW from the tank into filtration system, from which the treated GW will be discharged to the municipal sewer.

VHB will monitor GW and product levels in the existing wells in the vicinity of MW−1. VHB will also perform semi−annual sub−slab soil vapor and anbient air quality sampling.

No product recovery from 12 wells currently exhibiting free product is proposed in the RAP. Also, no groundwater sampling proposed during the remediation. Called and spoke with Mr. Rosati of AB Environmental. Requested him to revise the RAP to include product recovery from site wells and quarterly GW sampling. AD

11/15/2012: Sent the following e−mail with DEC requirements to Mr. Rosati:

Dear Mr. Rosati:

I reviewed the RAWP for the above−referenced site submitted by VHB Engineering on November 8, 2012. Please revise the RAWP to incorporate the following comments:

1. Baseline groundwater sampling should be proposed for all site−related monitoring wells, which do not exhibit free product;

2. A groundwater sampling schedule should be proposed;

3. Additional remedial actions should be proposed for 1 and 2 wells which continuously exhibit free product;

4. System operation and maintenance plan should be included in the RAWP.

A PDF copy of the revised RAWP should be submitted to DEC on a CD by regular mail.

Sincerely,

Ainura Doronova

AD

12/05/2012: Received a November 2012 GW monitoring Report. DL pdf copy of the report to eDocs. Will review. AD

12/07/2012: Received a Revised RAP on a CD. Will review. AD

01/09/2013: Reviewed the revised work plan for DEC requirements. In Attachment E of the RAWP(Operations, Maintenance & Monitoring Plan) one paragraph was added, which states that in addition to manually emptying the product recovery tank, monitoring wells that exhibit floating product will be pumped in order to remove floating product from select areas and increase the radius of influence of recovery.

Also, in the BEi OMM Plan indicated that all site monitoring wells will be sampled on a quarterly basis. Will approve the work plan. AD

01/17/2013: Discussed the revised work plan with J. Kolleeny of DEC. Issued an approval letter to George Zulick of Polytech. DL pdf copy of the letter to eDocs. AD

02/06/2013: Received the following e−mail from Michael Rosati:

Attached is the results from the semi−annual soil vapor sampling performed September 2012. Please call with any questions and / or concerns.

Regards,

Michael Rosati Vice President AB Environmental [redacted] Ocean Avenue Bohemia, NY 11716 631.567.6545 ˇ office 631.567.9390 − fax 631.484.0320 − cell

DL the report to eDocs. Will review. AD

03/07/2013: Reviewed the semi−annual soil vapor sampling report for September 2012. It states that the soil vapor survey included the collection of four sub−slab soil vapor, four indoor air and three ambient (background) samples. All samples were collected in accordance with the NYSDOH Guidance.

A total of four sub−slab soil vapor samples (SSV−01, SSV−02, SSV−03 and SSV−04) were collected on September 26, 2012 from the noted location in each of the following four buildings: Donald F. and Mildred Topp Othmer Residence Hall ˇ furniture storage closet; Polytech Civil Engineering Building ˇ basement work bench area adjacent to site; Polytech Rogers Hall ˇ at the base of the elevator shaft; and Polytech Dibner Hall ˇ adjacent to the stairwell.

Results of survey:

Impacts were noted at the sampling location − SSV−01 (Donald F. and Mildred Topp Othmer Residence Hall), with a number of contaminants exceeding both applicable standards. The location of this sampling point is in the furniture closet located in the southeast corner of the building. The initial sampling, conducted on September 9, 2011, indicated the primary contaminants of concern, ethylbenzene, xylene, 1,3,5−trimethylbenzene, and 1,2,4−trimethylbenzene, are indicative of a fuel spill, with impacts from a secondary source(s), such as a drycleaner or solvent spill. Contaminants associated with a potential secondary source include trichloroethene (TCE) and tetrachloroethene (PCE). However, subslab vapor collected on March 15, 2012 indicated that most of these compounds are still present beneath the building foundation, but at a reduced concentration. In addition, no detection of the potential secondary source compounds (TCE and PCE) were detected in March 15, 2012 sample. During the most recent sampling of SSV−01, conducted on September 26, 2012, TCE has re−emerged above the USEPA average indoor air concentrations. Furthermore, acetone, methylene chloride and chloroform were also detected above their average USEPA indoor air concentrations.

SSV−02 (Civil Engineering Building) is the closest sub−slab vapor point to the centralized location of the fuel oil spill. The previous results from SSV−02 indicated significant impacts from TCE which is approximately 800 times the applicable standard. To a lesser degree, impacts were also noted from chloroform and PCE. The location of this sampling point was in the basement adjacent to the west of the spill site. TCE and PCE are widely used as a degreaser for metal parts in addition to use as a dry cleaning solvent. Potential sources of these elevated TCE and PCE concentrations may include use of solvents in the Chemical Engineering Building and an off−site source, such as a drycleaner. Chloroform is commonly related to bleaches discharged in wastewater (i.e., laundry and cleaners) and municipal potable water sources (i.e., leaking water service lines). The same TCE, PCE and chloroform compounds were also detected in the March 15, 2012 sample, but at reduced concentrations. The September 26, 2012 sampling at SSV−02 revealed highly elevated levels of TCE, along with PCE, chloroform, acetone, carbon disulfide, n−Hexane, cis−1,2−Dichloroethene, toluene, ethylbenzene, n−Heptane xylenes, 1,3,5−trimethylbenzene, 1,2,4−trimethylbenzene and 4−methyl−2−pentanone. The fluctuations detected in TCE and PCE can still be attributed to off−site impacts. However, the continued presence of ethylebenzene, toluene, along with the presence of n−Heptane and n−Hexane, indicate the continued presence of the adjacent fuel oil spill, as these compounds are common constituents found in petroleum products.

The March 15, 2012 and September 26, 2012 sampling event of SSV−04 detected similar compounds when compared to the September 9, 2011 sample results, which supports VHB´s previous conclusion that contamination may be attributed to multiple point sources.

The four indoor air sample locations (IA−01, IA−02, IA−03 and IA−04) that are associated with the four sub−slab sample points have only very limited impacts. However, significantly elevated concentrations of toluene and xylenes were detected in IA−02 during the September 26, 2012 sampling. These concentrations can likely be attributed to the presence of maintenance products and paints/thinners located proximate to the sampling locations. Similarly, the three outdoor air samples (OA−01 [east of the parking lot], OA−02 [northeast corner of Rogers Hall], and OA−03 [adjacent to the southwest of the parking lot]) also indicate very limited impacts. A number of the compounds in the outdoor samples exceed the ambient concentrations collected at the Queens

College monitoring point; this is likely reflective of a greater presence of motor vehicle exhaust in the vicinity of the subject property.

Based on the above data gathered through both the September 9, 2011, March 15, 2012 and September 26, 2012 sampling events, and in conjunction with the NYSDOH Guidance, VHB recommends that sub−slab soil vapor and ambient air monitoring be continued on a semi−annual basis as a result of the September 26, 2012 soil vapor collection. In each case, the basement floors should be properly sealed as indicated above and consistent with the NYSDOH Guidance´s recommendation for ˆmitigation.˜ Based upon the performance of the remediation system located at the eastern exterior of [redacted] Johnson Street (within the spill area), it is likely that petroleum−related soil vapor impacts will decrease over time. VHB also recommends that permanent vapor points (inclusive with lockable manholes) be installed in the areas of the previous sub−slab soil vapor sample locations. This will create an easily accessible and secure point to collect additional sub−slab soil vapor samples for the recommended semi−annual monitoring. AD

03/13/2013: Received a January and February 2013 GW monitoring reports. DL pdf copy of the reports to eDocs. Will review. AD

04/10/2013: Reviewed the January 2013 report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. AB Env. visited the site on the following January 2013 dates: 2, 4, 9, 11, 21, 24, & 31. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 15 wells were gauged on these events. Thickness of the product on January 31, 2013 site visit ranged from 0.15’ in well MW−9 (2 well) to 0.79’ in MW−4 (1 well). In total − 530 gallons of oil were recovered during January 2013 period. AD

04/17/2013: Reviewed the February 2013 report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. AB Env. visited the site on the following February 2013 dates: 5, 12, 14, 18, 20, 25, & 27. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 15 wells were gauged on these events. Thickness of the product on February 27, 2013 site visit ranged from 0.18’ in well MW−8 (2 well) to 0.81’ in MW−4 and MWE−12 (1 wells). In total − 410 gallons of oil were recovered during February 2013 period. 8,431 gallons of oil were recovered from the site since August 2011. AD

04/19/2013: Received a March 2013 GW monitoring Report. DL pdf copy of the report to eDocs. Will review. AD

05/15/2013: Reviewed the March 2013 report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. AB Env. visited the site on the following March 2013 dates: 6, 8, 11, 13, 18, 21, 25, 27 & 29. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 15 wells were gauged on these events. Thickness of the product on March 29, 2013 site visit ranged from 0.09’ in well MW−5 (2 well) to 0.5’ in MW−4 (1 well). In total − 465 gallons of oil were recovered during March 2013 period. AD

05/17/2013: Received an April 2013 GW monitoring Report. DL pdf copy of the report to eDocs. Will review. AD

06/11/2013: Reviewed the April 2013 report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. AB Env. visited the site on the following April 2013 dates: 1, 3, 5, 8, 10, 15, 17, 19, 22, & 23. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 14 wells were gauged on these events. Thickness of the product on April 23, 2013 site visit ranged from 0.15’ in well MW−9 (2 well) to 0.72’ in MW−4 (1 well). In total − 650 gallons of oil were recovered during April 2013 period. 9,547 gallons of oil were

recovered from the site since August 2011. AD

06/14/2013: Received a May 2013 GW monitoring Report. DL pdf copy of the report to eDocs. Will review. AD

07/16/2013: Reviewed the May 2013 report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. AB Env. visited the site on the following May 2013 dates: 6, 7, 8, 13, 16, 20, 22, 24, 28 & 30. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 15 wells were gauged on these events. Thickness of the product on May 30, 2013 site visit ranged from 0.13' in well MW−5 (2 well) to 0.58' in MW−4 (1 well). In total − 720 gallons of oil were recovered during May 2013 period. AD

07/17/2013: Received a June 2013 GW monitoring Report. DL pdf copy of the report to eDocs. Will review. AD

08/13/2013: Received a July 2013 GW monitoring Report. DL pdf copy of the report to eDocs. Will review. AD

08/15/2013: Reviewed the June 2013 report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. AB Env. visited the site on the following June 2013 dates: 6, 12, 13, 17, 19, 21, 24, & 26. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 15 wells were gauged on these events. Thickness of the product on June 26, 2013 site visit ranged from 0.04' in well MW−15 (2 well) to 0.27' in MW−8 (2 well). There is a downgradient trend in free product thickness in the site wells. In total − 10,772 gallons of oil were recovered during June 2013 period. 190,990 gallons of oil were recovered from the site since August 2011. ABE will continue monthly site visits. AD

09/23/2013: Reviewed the July 2013 report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. ABE visited the site on the following July 2013 dates: 1, 8, 15, 17, 19, 23, 24, 26, 29 and 31. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 15 wells were gauged on these events. Thickness of the product on July 31, 2013 site visit ranged from 0.02' in well MW−9 (2 well) to 0.67' in MW−12 (2 well). There is a downgradient trend in free product thickness in the site wells. In total − 11,427 gallons of oil were recovered during July 2013 period. 211,195 gallons of oil were recovered from the site since August 2011. ABE will continue monthly site visits. AD

09/24/2013: Received August 2013 Monitoring report. DL the report to eDocs. Will review. AD

10/04/2013: Received Soil Vapor Survey Report. DL the report to eDocs. Will review. AD

10/10/2013: Received September 2013 Monitoring report. DL the report to eDocs. Will review. AD

10/29/2013: Reviewed the August 2013 groundwater monitoring report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. ABE visited the site on the following August 2013 dates: 2, 5, 7, 12, 14, 19, 21, 23, 26, 28 and 29. The report states that skimmer and submersible pump were operational only during bi−weekly visits. 15 wells were gauged on these events. Thickness of the product on August 28, 2013 site visit ranged from 0.01' in wells MW−1 (144 well) and MW−9 (2 well) to 0.85' in MW−12 (2 well). There is a downgradient trend in free product thickness in the site wells. In total − 12,122 gallons of oil were recovered during August 2013 period. 234,120 gallons of oil were recovered from the site since August 2011. ABE will continue monthly site visits. AD

11/21/2013: Reviewed the September 2013 groundwater monitoring report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. ABE visited the site on the following September 2013 dates: 3, 4, 6, 9, 11, 18, 20, 23, 25, and 27.

The report states that skimmer and submersible pump were operational only during bi−weekly visits. 14 wells were gauged on these events. Thickness of the product on September 27, 2013 site visit ranged from ND in wells MW−20 and MW−21 (1 wells) to 1.44' in MW−12 (2 well). There is a upgradient trend in free product thickness in the site wells. In total − 12,812 gallons of oil were recovered during September 2013 period. 253,410 gallons of oil were recovered from the site since August 2011. ABE will continue monthly site visits. AD

11/26/2013: Reviewed the Soil Vapor Survey Report. It states that the semi−annual soil vapor survey includes the collection of four sub−slab soil vapor, four indoor air and three ambient (background) samples.

A total of four sub−slab soil vapor samples (SSV−01, SSV−02, SSV−03 and SSV−04) were collected on August 14, 2013 from each of the following four buildings: 1. Donald F. and Mildred Topp Othmer Residence Hall ˇ furniture storage closet; 2. Polytech Civil Engineering Building ˇ basement work bench area adjacent to site; 3. Polytech Rogers Hall ˇ at the base of the elevator shaft; 4. Polytech Dibner Hall ˇ adjacent to the stairwell.

Four indoor (ambient) air samples (IA−01, IA−02, IA−03, and IA−04) were collected adjacent to the sub−slab sample and set at heights consistent with the breathing zone (i.e., approx. three−to−five−feet above grade level [agl]). Similar to the sub−slab soil vapor samples six−liter laboratory−supplied vacuum Summa canisters were utilized to collect each air sample over a two−hour period at a flow rate of approximately 0.05 LPM.

Three outdoor (ambient) air samples (OA−01, OA−02 and OA−03) were collected at locations that surround the parking lot.

SVS results:

SSV−01 − (Donald F. and Mildred Topp Othmer Residence Hall) impacts were noted at this sampling location, with a number of contaminants exceeding both applicable standards. The location of this sampling point is in the furniture closet located in the southeast corner of the building. The initial sampling, conducted on September 9, 2011, indicated the primary contaminants of concern, ethylbenzene, xylene, 1,3,5−trimethylbenzene, and 1,2,4−trimethylbenzene, are indicative of a fuel spill, with impacts from a secondary source(s), such as a drycleaner or solvent spill. Contaminants associated with a potential secondary source include trichloroethene (TCE) and tetrachloroethene (PCE). However, sub−slab vapor collected on March 15, 2012 indicated that most of these compounds are still present beneath the building foundation, but at reduced concentrations. In addition, no detection of the potential secondary source compounds (TCE and PCE) were detected in the March 15, 2012 sample. As a result of soil vapor sampling conducted on September 26, 2012, TCE concentrations were identified again above the USEPA average indoor air concentrations. Furthermore, acetone, methylene chloride and chloroform were also detected above their average USEPA indoor air concentrations. Sampling conducted on February 5, 2013 indicated the presence of TCE at similar concentrations above the average USEPA indoor air concentration. However, other previously detected constituents such as acetone, methylene chloride and chloroform were either not detected, or detected at concentrations within or below their average USEPA indoor air concentrations. Sampling conducted on August 14, 2013 indicated elevated concentrations of chloroform, TCE and PCE above their average USEPA indoor air concentrations. The concentrations were similar to their respective summer season sampling.

SSV−02 (Civil Engineering Building) is the closest sub−slab vapor point to the centralized location of the fuel oil spill. The previous results from SSV−02 indicated significant impacts from TCE which is approximately 800 times the applicable standard. To

a lesser degree, impacts were also noted from chloroform and PCE. The location of this sampling point was in the basement a adjacent to the west of the spill site. TCE and PCE are widely used as a degreaser for metal parts in addition to use as a dry cleaning solvent. Potential sources of these elevated TCE and PCE concentrations may include use of solvents in the Chemical Engineering Building and an off−site source, such as a drycleaner.

SSV−03 (Rogers Hall basement ˇ northwest corner) sampling results from August 14, 2013 exhibited elevated concentrations of methylene chloride, carbon tetrachloride, TCE, toluene and PCE at slightly reduced levels to those detected during the September 26, 2012 sampling event.

SSV−04 (Dibner Library adjacent to interior stairwell) The August 14, 2013 sampling event revealed elevated concentrations of n−Hexane, toluene and PCE at concentrations above their USEPA average indoor air concentrations. similar to the September 26, 2012 sampling event, which further indicates the presence of these compounds during summer months.

The four indoor air sample locations (IA−01, IA−02, IA−03 and IA−04) that are associated with the four sub−slab sample points have only very limited impacts during the August 14, 2013 sampling event. Concentrations of many of the VOCs detected can likely be attributed to the presence of maintenance products and paints/thinners located proximate to the sampling locations.

Minor quantities of VOCs were detected in outdoor air samples (OA−01 [east of the parking lot], OA−02 [northeast corner of Rogers Hall], and OA−03 [adjacent to the southwest of the parking lot]). Slightly elevated concentrations of methylene chloride were detected in outdoor air samples OA−2 and OA−3 during the August 24, 2013 sampling event. However, these concentrations are similar to previous outdoor air sampling events and can likely be attributed to background conditions. No additional constituents in outdoor (ambient) air samples were detected at concentrations above their respective USEPA 75th percentile concentrations.

When compared to the more recent samples, collected on March 15, 2012, September 26, 2012, February 5, 2013 and August 14, 2013, none of the compounds that are included in the NYSDOH matrices were detected in the sub−slab vapor (SSV−01) and ambient indoor air sample (IA−01). As such, the matrix indicates that no further action is required for soil vapors. More recent sampling events from February 5, 2013 and August 14, 2013 indicate that monitoring is recommended.

Based on the data gathered through the September 9, 2011, March 15, 2012, September 26, 2012, February 5, 2013 and August 24, 2013 sampling events, and in conjunction with the NYSDOH Guidance, VHB recommends that sub−slab soil vapor and ambient air monitoring be continued on a semi−annual basis as a result of the August 24, 2013 soil vapor collection. In each case, the basement floors should be properly sealed as indicated above and consistent with the NYSDOH Guidance´s recommendation for ˆmitigation.˜ Based upon the performance of the remediation system located at the eastern exterior of 122 Johnson Street (within the spill area), it is likely that petroleum−related soil vapor impacts will decrease over time. AD

01/10/2014: Received December 2013 Monitoring report. DL the report to eDocs. Will review. AD

01/27/2013: Reviewed the December 2013 groundwater monitoring report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. ABE visited the site on the following December 2013 dates: 2, 4, 6, 9, 10, 11, 13, 16, 18, 23, and 26.

The report states that skimmer and submersible pump were operational only during bi−weekly visits. 14 wells were gauged on these events. Thickness of the product on December 26, 2013 site visit ranged from ND in wells MW−20 and MW−21 (1 wells) to 1.27’ in MW−4 (1 well). There is a fluctuating trend in free product thickness in the site wells. In total − 15,368 gallons of oil were recovered during December 2013 period. 331,772 gallons of oil were recovered from the site since August 2011. ABE will continue monthly site visits. AD

02/11/2014: Received January 2014 Monitoring Report. DL the report to eDocs. Will review. AD

03/02/2014: Reviewed the January 2014 groundwater monitoring report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. ABE visited the site on the following January 2014 dates: 2, 8, 9, 10, 14, 15, 17, 20, 22, 27, 29 and 31.

The report states that skimmer and submersible pump were operational only during bi−weekly visits. 14 wells were gauged on these events. Thickness of the product on January 31, 2014 site visit ranged from ND in wells MW−20 and MW−21 (1 wells) to 1.28' in MW−4 (1 well). There is a fluctuating trend in free product thickness in the site wells. In total − 16,173 gallons of oil were recovered during January 2014 period. 356,727 gallons of oil were recovered from the site since August 2011. ABE will continue monthly site visits. AD

03/04/2014: Received February 2014 Monitoring Report. DL the report to eDocs. Will review. AD

04/08/2014: Reviewed the February 2014 groundwater monitoring report. It states that bi−weekly visits to the site were performed by by AB Environmental personnel, to recover floating product from monitoring well MW−1. The surrounding monitoring wells were gauged and AB Env. recorded measurements to document any influence. ABE visited the site on the following February 2014 dates: 5, 7, 10, 12, 14, 19, 21, 24, 26 and 28.

The report states that skimmer and submersible pump were operational only during bi−weekly visits. 15 wells were gauged on these events. Thickness of the product on February 28, 2014 site visit ranged from ND in wells MW−20 and MW−21 (1 wells) to 1.05' in MW−4 (1 well). There is a fluctuating trend in free product thickness in the site wells. In total − 16,783 gallons of oil were recovered during February 2014 period. 372,884 gallons of oil were recovered from the site since August 2011. ABE will continue monthly site visits. AD

07/09/2014: Received a phone call from Gerrey Nicholls of Langan (ph:212−479−5559). Langan is taking over the project and will be a new consultant for the site. Mr. Nicholls requested a meeting with DEC to discus the site and planned additional site investigation, since NYU decided that previous course of actions at the site was ineffective. Said to Mr. Nicholls that the meting could be scheduled, but it would be unproductive, since there is no new data or new remediation to discuss. Suggested to Mr. Nicholls first to review and analyze existing data and site conditions to prepare and submit supplemental site investigation work plan to DEC for review and approval. After performing and getting results of this SI, an adequate RAP should be proposed based on the data, and then a meeting can be held to discuss most sutable remedial approaches for the site. He will speak with NYU and get back with their decision regarding suggested course of actions. AD

07/17/2014: Received the following e−mail from Langan:

Ainura,

Please see attached Supplemental Site Investigation Work Plan for your review.

Thank you,

Gerry

Gerald Nicholls, PE, CHMM Project Engineer Direct: 212.479.5559 Mobile: 609.933.5330

Will review. AD

07/22/2014: Reviewed the work plan. The investigation work includes:

− A geophysical survey in the planned investigation area.

− Completion of a laser−induced fluorescence (LIF) investigation including advancement of up to 20 LIF points. They will be advanced using hydraulic machinery equipped with an Ultraviolet Optical Screening Tool (UVOST®) to delineate the extents of petroleum impacts; the LIF points will be advanced within the expected spill radius. Each LIF point will be advanced to 40± fbg. If petroleum impacts are identified beyond the proposed sampling area, the sampling area will be expanded or modified as necessary.

− Completion of up to five soil borings and collection and analysis of up to five grab soil samples, based on the results of the LIF investigation. Following advancement of all LIF points, up to five locations will be selected for direct−push soil borings based on observed LIF data. The purpose of these borings is to record geological soil information and collect soils samples to calibrate the LIF data.

− Replacement of up to six existing 0.75− to 1−inch monitoring wells with 2−inch monitoring wells. A licensed contractor will utilize a hollow−stem auger and the ˆdrill and dropˇ method to install the replacement wells at an average depth of 40 fbg. Location of well replacement will be determined in the field and based on subsurface observations during LIF point and soil boring advancement.

− Collection and analysis of groundwater samples from each all accessible monitoring wells.

− Possible installation of three 4−inch or 6−inch recovery wells at boring locations where grossly contaminated media is identified.

− A survey of the remediation system, surrounding buildings and adjacent sewer lines.

− Upon completion of the investigation, a supplemental site investigation report will be submitted. The report will document compliance with this SSIWP and include a description of the site investigation work performed. At a minimum, the supplemental site investigation report will include a Conceptual Site Model (CSM), an estimate of free product in the subsurface, results of collected data, assumptions, closure assessment, recommendations, and an evaluation of potential sensitive receptors.

Some locations of the proposed LIF points are questionable. Discussed the work plan with J. Kolleeny of DEC. Called and left a message to Gerald Nicholls of Langan. AD

07/28/2014: Called and spoke with Mr. Nicholls regarding the proposed work plan. Requested to add one more LIF point to the north of MW−18. He agreed to this modification. AD

07/31/2014: Sent an approval letter to Mr. Celeste Rufer of NYU. AD

09/23/2014: received a phone call from G. Nicholls. They completed soil investigation and will start well reinstallation in the next week. he had a question regarding soil vapor sampling at the site. Recommended to review and analyze data from the previous vapor sampling and to make recommendations based on this review. AD

11/11/2014: Received the following e−mail from G. Nicholls:

Ainura,

I hope this email finds you well. We wanted to update you on progress of the activities associate with the 7/17/2014 Supplemental Site Investigation Work Plan.

Work is proceeding as planned. We completed the laser−induced fluoresce (LIF) investigation to better understand the LNAPL source and to develop a conceptual site model. Based on LIF results, we replaced 5 of the 0.75−inch wells with 2−inch wells to improve sampling efficiency. We also installed a 4−inch recovery well. The attached figure shows the newly−installed well locations. After well installation and development, we sampled nine wells to delineate the current plume extent˙the sampled wells are circled on the attached figure. We are also performing a site survey to measure well locations and elevations so that a groundwater flow direction can be determined.

We are in the process of receiving the groundwater data. Once all the data is received, we will finalize the conceptual site model and prepare a report per the Supplemental Site Investigation Work Plan.

Let us know if you have any questions.

Regards,

Gerry

Gerald Nicholls, PE, CHMM Senior Project Manager Direct: 212.479.5559 Mobile: 609.933.5330

AD

02/18/2015: Received the following e−mail from G. Nicholls:

Ainura,

Via the link below, please download the Spill [redacted] − Supplemental Site Investigation Report for your review.

http://clients.langan.com/lph/default.aspx?postTransaction=[redacted]

Regards,

Gerry

Gerald Nicholls, PE, CHMM Senior Project Manager Direct: 212.479.5559 Mobile: 609.933.5330 File Sharing Link

LANGAN Phone: 212.479.5400 Fax: 212.479.5444 21 Penn Plaza 360 West 31st Street, 8th Floor New York, NY 10001−2727 www.langan.com :

Will review. AD

03/10/2015: Reviewed the report. It states that the SSI was implemented between August 12 and November 5, 2014 in accordance with

Langan´s July 16, 2014 Supplemental Site Investigation Work Plan. The investigation consisted of a geophysical survey, advancement of Ultra−Violet Optical Screening Tool (UVOST®) laserinduced fluorescence (LIF) probes, advancement of soil borings, installation of groundwater monitoring wells, installation of a product recovery well, monitoring well inventory and gauging, collection and laboratory analysis of soil and groundwater samples, and a site survey.

During the SSI, depth to groundwater ranged from 29.3 to 41.95 feet bgs. Based on the survey data, the groundwater depths corresponded to elevations ranging from about el 2.14 to el 1.64 feet. The groundwater elevation is highest in the northeast and appears to slope downward toward the west−southwest; the anticipated direction of groundwater flow is northeast to southwest. Groundwater flow may also be influenced locally by tides and the presence of underground man−made structures (pipes, foundations, etc.).

SSI: The SSI was completed between August 12 and November 5, 2014 and consisted of the following activities: − A geophysical investigation to identify subsurface utilities and anomalies; − Advancement of 13 UVOST LIF Probes; − Advancement of four soil borings and collection of 19 grab soil samples for laboratory analysis; − Installation and sampling of five monitoring wells, and sampling of four existing wells; − Installation of one 4−inch diameter recovery well; and − Gauging of all accessible wells.

Free prodict: On October 22, 2014, TEI gauged ten monitoring wells and product was detected in nine of the wells: MW−4, MW−7, MW−8, MW−9, MW−11, MW−12, MW−14, MW−15, and MW−22. A Langan conducted a follow−up round of synoptic groundwater depth measurements on November 5, 2014. Twenty monitoring wells were gauged by Langan, and product was detected in six of the wells: MW−4, MW−7, MW−8, MW−9, MW−11, and MW−14 (MW−12 could not be opened, MW−15 no longer existed when Langan gauged the wells because it was overdrilled when MW−37 was installed, and no product was detected in MW−22). During both gauging events, product thickness ranged from 0.01 feet in MW−9 to 0.85 feet in MW−12. The product thickness was greatest in wells MW−4, MW−7, MW−8, and MW−12, which are all located to the west and southwest of the spill source. There was no product detected in recovery well RW−1.

GW sampling: A Langan conducted a synoptic round of groundwater depth measurements on November 5, 2014. Nine groundwater samples were submitted for laboratory analysis. Groundwater samples were not collected from monitoring wells where product was detected. The highest VOC and SVOC concentrations were detected in samples collected from monitoring wells MW−34, located to the northeast of the spill source, and MW−36 located to the southwest of the spill source. There were no VOCs or SVOCs detected at concentrations above their respective TOGS Class GA AWQS and Guidance Values in samples collected from MW−27, MW−28, MW−32, MW−33, and MW−37.

Conclusions: − Conceptual Site Model ˇ Soil samples collected for TPH analysis are described as medium to coarse, angular sands, varying volumes of subrounded to angular gravel/rock fragments and only trace fines. Such soil would permit a relatively rapid vertical migration to the water table. Initially, the product mound would provide enough head to induce radial flow away from its center with only some relatively limited influence from groundwater gradient or small−scale lithological changes. Once the product supply was eliminated, the migration of product would be more influenced by groundwater gradient flow, facilitating migration in the direction of groundwater gradient. − Spill Delineation ˇ The LIF investigation successfully delineated the spill impacts on soil to the east of the spill source via probe locations LIF11, LIF18, and LIF22. Additionally, the lower %RE peak at LIF08 indicates a diminishing degree of impacts to the north and northeast. Delineation to the west and southwest was not completed because of the buildings; however, there was no free product observed in the basement monitoring wells. − Groundwater ˇ * The groundwater flow direction is to the west−southwest. * VOC and SVOC impacts ˇ Petroleum−related VOCs and two SVOCs were identified in groundwater at concentrations exceeding the Class GA TOGS AWQS and Guidance Values. Petroleum−impacted groundwater does not appear to be migrating off−site. − Free Product Observations ˇ Free product was observed in six monitoring wells with thicknesses ranging from 0.01 in the 12−foot diameter recovery well to 0.51 feet in MW−4, located about 25 feet west of the spill source. Free product does not appear to be migrating off−site. − Recoverable Free Product ˇ Recoverable free product was calculated using a relationship between the LIF response data and TPH concentrations, and estimates of the subgrade pore space. The estimated volume of recoverable free product remaining in the subsurface is between 175 and 600

gallons.

Langan's Recommendations: − System Automation ˇ The results of the SSI suggest that recoverable oil remains in the subsurface and near the original spill source area. A continuation of free oil recovery via system automation is recommended so that manual recovery is no longer required. * DEP Discharge Permit ˇ As part of the system automation, treated groundwater will be discharged directly to the combined sewer located on Lawrence Street. This will require obtaining a DEP Sewer Discharge Permit as well as constructing a new sewer connection.

− Monitoring Well Decommissioning ˇ Based on the results of the well inventory and groundwater sampling performed during this SSI, Langan states that 12 of the 35 wells should be decommissioned.

− Groundwater and Free Product Monitoring ˇ The NYSDEC−approved RAWP requires quarterly groundwater sampling events, monthly monitoring well gauging, and monthly reporting. The investigation results indicate that recoverable free product remains in the subsurface, and significant improvements to groundwater quality will not be possible without removal of the free−flowing product. Therefore, while implementing the product−recovery remedy Langan recommends reducing the monitoring and reporting frequency to: annual groundwater sampling events, quarterly gauging events, and annual progress reports. Eight monitoring wells would be sampled annually: MW25, MW27, and MW32 through MW37. All accessible wells would be gauged for depth to water and product thickness during the quarterly gauging events.

− Soil Vapor Sampling ˇ Semi−annual soil vapor sampling was conducted between September 2011 and August 2013. Monitoring was continued because PCE, TCE, and carbon tetrachloride concentrations in sub−slab soil vapor triggered a recommendation of mitigation and/or monitoring based on the NYSDOH decision matrices. Based on the indoor air concentrations from the five sampling events, Langan states that these contaminants are not a concern inside of the building and are unrelated to the petroleum spill. Considering the commercial and academic use of the affected buildings, Langan recommends discontinuing the semi−annual soil vapor sampling program.

Several wells should be included into the sampling program and reporting should be on semi−annual basis. Will discuss the Langan's recommendations with J. Kolleeny of DEC. AD

03/31/2015: Discussed the site with J. Kolleeny of DEC. Will issue an approval letter. AD

04/01/2015: Issued and sent recommendations approval letter with the following modifications:

− Monitoring wells MW−5 and MW−10 should be included in the annual groundwater sampling program;

− Progress reports should be submitted to DEC on a semi−annual basis.

AD

12/01/2015: Received the following e−mail from Mr. Nicholls:

Ainura,

We wanted to update you on progress with regard to spill response activities at NYU Tandon (formerly NYU Polytech).

The NYSDEC completed their review of the January 22, 2015 Supplemental Site Investigation Report (SSIR) in March 2015. In a letter dated March 31, 2015, the NYSDEC approved the recommendations made in the SSIR, with modifications to the wells included

in the annual groundwater sampling program and the progress report frequency. The following summarizes completed and anticipated activities at the site:

¯ Dual−Phase Extraction System Repair and Automation o A DEP sewer discharge permit was issued on September 22, 2015 allowing discharge of up to 10,000 gallons per day. o Construction of the sewer connection was completed on October 9, 2015. o System operation began on October 26, 2015. About 50,000 gallons have been pumped. The extraction system has not yet recovered measurable product; however, about 7 gallons were recovered by skimming operations conducted in recovery well MW−1 prior to system operation. o Final automation is planned for December 1, 2015 with the installation of a timer on the submersible pump controller. ¯ Monitoring Well Decommissioning o Decommissioning of 12 of the 35 wells is anticipated for January 2016. ¯ Annual Groundwater Sampling o The first groundwater sampling event was completed in November 2014 and the results were included in the SSIR o The next groundwater sampling event will be conducted later this week. ¯ Quarterly Well Gauging/Free Product Monitoring o Monitoring wells were gauged in August 2015. Product was detected in 6 of 18 accessible wells. o The next gauging event is scheduled for later this week. ¯ Semi−annual reporting o The first semi−annual progress report will be submitted in January 2016 and will summarize the results of system operation, groundwater sampling, and free product monitoring.

Regards,

Gerry

Gerald Nicholls, PE, CHMM Senior Project Manager Direct: 212.479.5559 Mobile: 609.933.5330 File Sharing Link

LANGAN Phone: 212.479.5400 Fax: 212.479.5444 21 Penn Plaza 360 West 31st Street, 8th Floor New York, NY 10001−2727 www.langan.com

Report is due. AD

07/12/2016: Received the following e−mail from Langan:

Ainura,

We wanted to confirm that you received the Biannual Report hard copy and inquire about your review schedule.

On a separate note regarding the discharge to combined sewer, based on the consistent reduction in groundwater contamination and the absence of LNAPL in our monitoring/recovery wells, we are considering bypassing the particulate and carbon filtration units to discharge directly from the settling tank to the city sewer. We´ve collected two samples (in July 2015 and March 2016) for NYCDEP discharge parameters and the concentrations are below the DEP discharge limits. Additionally, our December 2015 monitoring well sample results were below the DEP discharge limits. We submitted a discharge application addendum to the NYCDEP to get approval; however, NYCDEP asked that we confirm that NYSDEC is okay with the change to the pretreatment train.

Please let us know if you are available to discuss a proposal to bypass the particulate and carbon filtration units, and if you require any additional information.

Thanks, Paul

Paul McMahon, P.E. Senior Staff Engineer Direct: 212.479.5451 Mobile: 914.433.1157

Ainura, Please find the attached summary tables and dewatering site plan.

Let me know if you have any questions.

Thanks, Paul

Paul McMahon, P.E. Senior Staff Engineer

Will review. AD

07/13/2016: Reviewed the submitted documents. The Department has received a request from Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) on behalf of New York University, dated July 12, 2016, regarding the wastewater discharge from the on−site frac tank to the municipal combined sewer. Based on the consistent reduction in groundwater contamination and the absence of LNAPL in the site monitoring and recovery wells, Langan proposes bypassing the particulate and carbon filtration units to discharge directly from the settling tank to the city sewer. Two samples collected in July 2015 and March 2016 and analyzed for NYCDEP discharge parameters indicated that the concentrations are below the DEP discharge limits. Discussed the proposal with J. Kolleeny of DEC. It was decided to approve it. AD

07/14/2016: Issued and sent an approval letter to Stephanie Kung of Environmental Health & Safety to:

New York University 10 Astor Place, 6th Floor New York, NY 10003

stating that:

Taking into consideration the data provided, the Department concurs with the proposal to bypass the filtration system, with the following comment: − Routine sampling of wastewater should continue as scheduled; if a contaminant is detected above its DEP standard, usage of the filtration units will again be required.

AD

12/05/2016: Received the following e−mail from Langan:

Ainura,

Via the link below, please download the 2nd NYU Tandon Biannual Monitoring Report for the remediation of NYSDEC Spill No. 1009933. A hard copy of the report is being mailed to you.

The NYCDEP discharge permit expired on December 1, 2016. Because of the consistent lack of product detected in the recovery well (MW−1) and surrounding monitoring wells over recent monitoring events, we did not extend the permit. Our next quarterly groundwater gauging event will be during the week of December 19−23. If no product is detected, we will evaluate a recommendation to close the spill. We will prepare the 3rd Biannual Monitoring Report for submission in January 2017 and request closure, if applicable. If product is detected, we will install recovery socks and continue recovering product and evaluate next steps. .

http://clients.langan.com/lph/default.aspx?postTransaction=1185897839 2016.11.28_NYU Tandon_Biannual Monitoring Report.pdf

Regards,

Gerry

Gerald Nicholls, PE, CHMM Senior Project Manager Direct: 212.479.5559 Mobile: 609.933.5330 File Sharing Link

Will review. AD

01/12/2017: Reviewed the Biannual Monitoring Report: January to June 2016 which documents the progress of the ongoing remediation at the site.

GW and LNAPL gauging: Site−wide groundwater gauging events were conducted on March 3, 2016, June 9, 2016, and, although technically not within this reporting period, September 1, 2016. Nineteen accessible wells were gauged during at least one event. Additional gauging events were conducted April, May, July, and August to monitor wells where product was previously detected. LNAPL has been detected during at least one event in seven wells: MW−4, MW−7, MW−8, MW−9, MW−11, MW−14, and MW−25. LNAPL thickness decreased between the March 2016 and September 2016 gauging events. The groundwater flow, as determined by groundwater elevation measurements obtained on November 5, 2014, is to the southwest.

LNAPL recovery: No LNAPL was recovered via the skimmer pump in the 12−foot−diameter recovery well. Based on the results of groundwater gauging events, oil −absorbent socks were periodically placed in monitoring wells to recover free product . On April 19, 2016, oil−absorbent socks were placed in monitoring wells MW−8, MW−9, and MW−11. The socks were removed on April 28, 2016 and recovered product was observed on all three socks. After the socks were removed, the three wells were gauged and no product was detected. On May 9, 2016, one sock was placed in monitoring well MW−9. The sock was removed on June 9, 2016 and recovered product was observed on the sock. No product was detected in any other monitoring wells during subsequent gauging events. Less than 0.1 gallons of LNAPL were recovered from monitoring wells MW−8, MW−9, and MW−11.

GW sampling: There was no groundwater sampling from wells conducted during the reporting period. The next annual groundwater sampling event is scheduled for November 2016.

Water samples were collected from the settling tank for NYCDEP discharge parameters on March 3, 2016 and September 16, 2016. Sample results are summarized below: − Two VOCs, methyl tert−butyl ether (MTBE) and o−xylene, were detected in the sample collected on March 3, 2016. No VOCs were detected in the sample collected on September 16, 2016. − Detected concentrations did not exceed NYCDEP discharge parameters. The detected MTBE concentration of 11 ug/l exceeded the NYSDEC Technical and Operational Guidance Series (TOGS) Class GA Ambient Water Quality Standard and Guidance Value (AWQS) of 10 ug/l. MTBE is a gasoline additive and is not associated with the fuel oil spill. − No SVOCs were detected in either sample. − No additional NYCDEP discharge parameters were detected at concentrations exceeding the NYCDEP sewer discharge limitations.

The following conclusions and recommendations were made based on field observations and the analytical data:

Conclusions: − Eight gauging events were conducted between March and September 2016. During that period, LNAPL was detected at least once in two monitoring wells. In March 2016, LNAPL was detected in MW−8 and MW−9, and in September 2016, LNAPL was not detected in any accessible site monitoring wells (Note: MW−07 was not accessible). − Less than 0.1 gallons of fuel oil were recovered from oil−absorbent pads placed in monitoring wells MW−8, MW−9 and MW−11. No additional fuel oil was recovered via the dual−phase extraction system because of inadequate product thickness on the groundwater surface in MW−1. − Based on the results of water samples collected from the settling tank in March 2016, the NYSDEC and NYCDEP approved installation of a bypass to the particle filtration and carbon filtration units.

Recommendations and Planned Activities: − Operation of the automated dual−phase extraction system will continue. − Absorbent socks will be placed in monitoring wells if LNAPL is detected, and periodically replaced. − Quarterly monitoring well gauging

and annual groundwater sampling will continue. The next quarterly well gauging event is planned for December 2016, and the next annual groundwater sampling event is planned for November 2016. − The next Biannual Monitoring Report will be submitted in January 2017.

AD

02/03/2017: Received the following e−mail from Langan:

Ainura, Via the link below, please download the 3rd NYU Tandon Biannual Monitoring Report for the remediation of NYSDEC Spill No. 1009933. A hard copy of the report is being mailed to you.

Per my email below, we recommend closure of the spill based on the findings discussed in the report.

http://clients.langan.com/lph/default.aspx?[redacted]

Please let us know if you have any questions.

Thanks, Paul

Paul McMahon, P.E. Project Engineer Office: 212.479.5451 Mobile: 914.433.1157 Fax: 212−479−5444

Will review. AD

03/09/2017: Reviewed the report. It states that during the reporting period, site−wide groundwater gauging events were conducted on September 1 and December 22, 2016. Additional gauging events were conducted in July and August at monitor wells where LNAPL was previously detected. Prior to June 2016, LNAPL was detected during at least one gauging event in seven monitoring wells: MW−4, MW−7, MW−8, MW−9, MW−11, MW−14, and MW−25. No LNAPL was detected during the June 2016 and December 2016 gauging events. The groundwater flow, as determined by groundwater elevation measurements obtained on November 5, 2014, is to the southwest.

Groundwater sampling was conducted on November 3 and 4, 2016. Prior to sampling, a minimum of three well volumes were purged from each well, groundwater parameters (pH, conductivity, turbidity, dissolved oxygen [DO], temperature, and oxidation−reduction potential [ORP]) had stabilized and turbidity measurements were below 5 Nephelometric Turbidity Units (NTU).

Groundwater samples were collected from seven 2−inch−diameter monitoring wells (MW−05, MW−10, and MW−33 through MW−37), and from one 1−inch−diameter monitoring well (MW−32). Since annual groundwater monitoring began in November 2014, the total VOC and SVOC concentrations have generally decreased or remained constant, with some exceptions. Total VOC and SVOC concentrations in individual monitoring wells, where at least one VOC or SVOC was detected at a concentration above its TOGS Class GA AWQS. Total VOC concentrations decreased or remained stable in all monitoring wells except MW−10. Total VOC concentrations increased in well MW−10 between December 2015 and November 2016; however, the total VOC concentration in MW−10 during the November 2016 monitoring event was about 140 ug/L less than the total VOC concentration detected in MW−05 in December 2015.

A water sample was collected from the settling tank for NYCDEP discharge parameters on September 16, 2016. An additional sample was collected on November 4, 2016 and analyzed for TCL VOCs and SVOCs. − No VOCs were detected in the sample collected on September 16, 2016. Sixteen (16) VOCs were detected in the sample collected on November 4, 2016. − Detected concentrations did not exceed NYCDEP discharge parameters. One VOC, 1,2,4−trimethylbenzene, was detected at a concentration of 5.5 ug/L, which exceeded the NYSDEC TOGS Class GA AWQS of 5 ug/L. − No SVOCs were detected in sample collected on September 16, 2016. Five SVOCs were detected in the sample collected on November 4, 2016; however, no SVOC concentrations exceeded the NYCDEP discharge

parameters or NYSDEC TOGS Class GA AWQS. − No additional NYCDEP discharge parameters were detected at concentrations exceeding the NYCDEP sewer discharge limitations.

Conclusions − No additional LNAPL was recovered via the dual−phase extraction system and no LNAPL was detected in any of the monitoring wells between June and December 2016. − An annual groundwater sampling event was conducted on November 3 and 4, 2016. The VOC and SVOC concentrations in individual monitoring wells typically decreased or remained stable compared to the two previous annual groundwater sampling events. Total VOC and SVOC concentrations decreased from maximum concentrations of about 187 ug/L and 116 ug/L, respectively, in December 2015, to 47 ug/L and 56 ug/L, respectively, in November 2016.

Recommendations and Planned Activities: ? Based on the lack of LNAPL detected during gauging events and recovered through the extraction system, and the significant and stabilized decreases in dissolved VOC and SVOC concentrations between November 2014 and November 2016, we recommend administrative closure of NYSDEC Spill No. 1009933. ? After spill closure, the following activities will be completed: − Decommissioning of monitoring wells in accordance with CP−43; and − Dismantling and removal of the automated recovery system.

Will discuss case closure request with J. Kolleeny. AD

03/20/2017: Discussed the case closure request with J. Kolleeny. Since, there were only two monitoring events with no free product in the site wells, one more round of LNAPL monitoring should be performed to ensure its permanent absence. AD

03/22/2017: Called and spoke with Mr. McMahon of Langan. Explained why spill case closure will be pending. He agreed to do one more round of monitoring at the site. Sent him the following−mail:

Hi Paul,

As per our today´s phone conversation, DEC requires to perform one more gauging event at the site to ensure that there will be no LNAPL re−appearance in the site wells in the future. Usually, the Department requires one year of free product monitoring since first record of ˆNo Product˜ in the site wells. Spill closure will be pending the results of this gauging event.

Sincerely,

Ainura Doronova

AD

04/24/2017: Received an e−mail from Langan with attached summary table with gauging results and monitoring wells plan saying:

Good afternoon Ainura,

Per your request, we performed a monitoring well gauging event on April 11, 2017 at the NYU Tandon site (NYSDEC Spill No. 1009933). Fifteen monitoring wells were gauged on April 11, and no LNAPL was detected in any of the monitoring wells. Due to equipment storage on the site, five monitoring wells that were gauged during the previous gauging event in December 2016 were not accessible. We coordinated with NYU Tandon building management to access the additional wells, and on April 24 we returned to the site and gauged four additional monitoring wells. No product was detected in any of the 19 gauged monitoring wells between April 11 and 24.

Please find the following attached to this email: Table 1 ˇ Groundwater Gauging Summary ˇ Updated 4/24/2017

Figure 2 ˇ Monitoring Well Location Plan ˇ Updated 4/24/2017

Please let us know if you have any questions.

Thanks, Paul

Called and spoke with Mr. McMahon of Langan. Told him that the submitted data will be reviewed and discussed with J. Kolleeny and if DEC will need a summary report instead of just tables, I will let him know. AD

05/01/2017: Received e−mail from Langan saying:

Ainura,

We revisited the site today to access one of the previously inaccessible wells (MW−8). See attached updated table. The oil−water interface probe did not register any LNAPL in MW−8.

Thanks,

Gerry

Gerald Nicholls, PE, CHMM Senior Project Manager Direct: 212.479.5559 Mobile: 609.933.5330

Will review. AD

05/05/2017: Discussed the new data with J. Kolleeny. Based on the investigative and remedial actions performed at the site such as: − Excavation and removal of the 6,000−gallon UST. − Excavation of an approximately 35−foot by 25−foot area surrounding the tank to a depth of 40 feet bgs. − Installation of a manually−operated groundwater and LNAPL recovery system consisting of the 12−foot diameter well, a submerged pump that transferred groundwater to a 21,000 gallon fractionation/settling tank, and a floating skimmer pump that transferred LNAPL to 55−gallon drums; − Installation of 32 groundwater monitoring wells. − Monthly monitoring events including groundwater depth and LNAPL thickness gauging; − Quarterly groundwater sampling; − Biannual sub−slab soil vapor and ambient air quality sampling.

and taking into consideration the following information:

− LNAPL absence in all site wells since May 2016; − An annual groundwater sampling event was conducted on November 3 and 4, 2016. The VOC and SVOC concentrations in individual monitoring wells typically decreased or remained stable compared to the two previous annual groundwater sampling events. Total VOC and SVOC concentrations decreased from maximum concentrations of about 187 ?g/L and 116 ?g/L, respectively, in December 2015, to 47 ?g/L and 56 ?g/L, respectively, in November 2016;

it was decided to approve spill closure request. Case closed. AD