Case Name: 107 New Street

PI #: 602475

IMPORTANT: *1) Do not delete or copy and paste across multiple columns because it can disrupt hidden equations.*

2) If pasting from a Word document, use the Paste option: ***Match Destination Formatting***

3) If the text turns ***red*** *you have exceeded the character limit for that column*

Case Inventory Document Version 1.4 02/23/17

AOC ID	AOC Type	AOC Description	Confirmed Contamination	AOC Status	Status Date	Incident #	DEP AOC Number	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
1	Storage tank and appurtenance - Above ground storage tank	275-gallon residential No. 2 Heating oil in the basement of former residential structure	Yes	RAO-A (Unrestricted Use)	7/8/2019	13-02-28-1634-40		Mixed Media	VO + EPH	Not Applicable	Not Applicable	Remediation Standards	Ingestion/Dermal		Excavation	Sub-slab depressurization system		No	Upon inspection of the building at 107 New Street (Site) a leaking AST was observed in the basement. Signs of a release were observed. The neighboring residence, 105 New Street (IEC Site), was inspected and evidence of migration of the No. 2 heating oil was observed in the basement of the structure. Debris, water and product were removed from both basements on February 28, 2013 and the discharge was reported to the NJDEP, 13-02-28-1634-40. An exhaust fan was installed, and windows opened in the basement of 105 New Street to allow for ventilation. Air samples were collected on March 1, 2013 and results were reported above the applicable RALs. The NJDEP was notified of the IEC condition, 13-03-06-1602-23. An additional confirmation round of air samples was collected on March 12, 2013. Notification procedures were followed as per the NJDEP IEC Guidance. A Vapor Intrusion Mitigation System (VIMS) was installed and samples collected after the installation, on July 24, 2013, indicated a reduction in the concentration of contaminants of concern.Soil and groundwater investigations were completed in March and June 2013 as part of the RI. Concentrations of benzene, 2-methylnaphthalene and EPH were reported above applicable SRS and/or DIGSSL in soil samples collected between the Site and the IEC Site. One temporary well, TW-14, reported concentrations of benzene and MTBE above the GWQS. Based on these findings, in addition to the demolition of the structure on-Site excavation operations were expanded to include this area. Excavation was completed between September and December 2013. Samples were collected to confirm excavation was complete or needed to be expanded. All final post-excavation soil samples reported no exceedances of targeted analytes. A permanent monitoring well was installed in the former location of TW-14 and was sampled for TCL VO+15 and TCL BN+15. No exceedances were reported for two consecutive rounds. Remediation of the Site is complete. The Township of Woodbridge acquired the property in December 2016. The structure, along with the VIMS, was demolished and a confirmatory sample was collected on May 22, 2017 in order to confirm no residual contamination was present. An Unrestricted Use, AOC Specific RAO will be issued concurrent with the submittal of the RI/RA report. The IEC Case # was closed out 7/19/2018.

New Jersey Department of Environmental Protection
Site Remediation Program

SITE AND CONTACT INFORMATION UPDATE FORM

Date Stamp
(For Department use only)

SECTION A. EXISTING SITE NAME AND LOCATION

***NOTE:* If you are changing LSRP contact information *only*, skip to Section B, No. 4.**

Site Name: 107 New Street

Street Address: 107 New Street

Tax Lot Address (*if different*):

Municipality: Woodbridge Township (Township, Borough or City)

County: Middlesex Zip Code: 07095

Program Interest (PI) Number(s): 602475

Case Tracking Number(s): 13-02-28-1634-40, 13-03-06-1602-23

SECTION B. INFORMATION TO BE UPDATED

Check all that apply then complete the corresponding section(s) of the form.

☐ 1. **Changes in Site Address or Block and Lot Information**

- Complete Section C. Changes in Site Address or Block and Lot Information
  *(For changes in block and lot information **attach map(s)** showing old and new block and lot configurations)*
- Complete Section D. Responsible Party Certification ***Or*** Section E. Person Responsible for Conducting Remediation Certification

☒ 2. **Changes in Responsible Party Information**

☐ I am adding Myself as a Responsible Party

☒ I am Updating the Responsible Party's Contact Information

Provide the new information in Section D. Responsible Party Information and Certification

NOTE: *Adding a new responsible party does not relinquish responsibility for any previous responsible parties. See the instructions for this form for more details, available at: http://www.nj.gov/dep/srp/srra/forms/.*

☒ 3. **Changes in Person Responsible for Conducting Remediation Information**

☐ I am changing the Person Responsible for Conducting Remediation (***Entity is Changing***)

☒ I am Updating the Contact Information for the Person Responsible for Conducting Remediation (***Entity remains the same***)

Provide the new information in Section E. Responsible Party Information and Certification

NOTE: *Adding a Person Responsible for Conducting Remediation is **ONLY NECESSARY** when the Person Responsible for Conducting Remediation is DIFFERENT from the Responsible Party. Responsible Parties are assumed to be conducting remediation unless noted in this section. See the instructions for this form for definitions of 'Responsible Party' and 'Person Responsible for Conducting Remediation', available at: http://www.nj.gov/dep/srp/srra/forms/.*

☐ 4. **Changes in LSRP *Contact Information***

- Section F. Licensed Site Remediation Professional Information and Certification

SECTION C. CHANGES IN SITE ADDRESS OR BLOCK AND LOT INFORMATION

If you are reporting a change to **either** the site address or the site blocks and lots, provide **all information** *(both address and block and lot information)* below.

Check all that apply:

- ☐ I am reporting changes in the Site address
- ☐ I am reporting changes in the Block and lot information

Street Address (*Site*): ______________________________

Tax Lot Address (*if different):* ______________________________

Municipality: ______________________________ (Township, Borough or City)

County: ______________________________ Zip Code: ______________

NOTE: When changing Block and Lots, please **attach Maps** to this form showing the current and former configuration of the Site Parcels.

List **Old** Municipal Block and Lot Numbers:		List **New** Municipal Block and Lot Numbers:	
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________
Block # ________	Lot #(s) ____________	Block # ________	Lot #(s) ____________

SECTION D. RESPONSIBLE PARTY INFORMATION AND CERTIFICATION

Full Legal Name of the Responsible Party: Township of Woodbridge

Name of Organization / Affiliation: Township of Woodbridge

Representative First Name: Michael Representative Last Name: Gelin

Title: Township Engineer

Phone Number: (732) 634-4500 Ext: _____ Fax: _____

Mailing Address: 1 Main Street

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: michael.gelin@twp.woodbridge.nj.us

Relationship to site:

☒ Property Owner ☐ Leasehold ☐ Developer ☐ Other: _____

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Michael J. Gelin Date: 7-8-19

Name/Title: Michael Gelin/Township Engineer

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

SECTION E. PERSON RESPONSIBLE FOR CONDUCTING REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of Person Responsible for Conducting Remediation: Township of Woodbridge

Name of Organization / Affiliation: Township of Woodbridge

Representative First Name: Michael Representative Last Name: Gelin

Title: Township Engineer

Phone Number: (743) 634-4500 Ext: Fax:

Mailing Address: 1 Main Street

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: michael.gelin@twp.woodbridge.nj.us

Relationship to site:

☒ Property Owner ☐ Leasehold ☐ Developer ☐ Other:

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Michael J. Gelin Date: 7-8-19

Name/Title: Michael Gelin/Township Engineer

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

Complete this Section ONLY if you are changing LRSP contact information

SECTION F. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND CERTIFICATION

Provide New Contact Information and Certify:

LSRP ID Number: _____

First Name: _____ Last Name: _____ *(cannot change with this form)*

Phone Number: _____ Ext: _____ Fax: _____

Mailing Address: _____

City/Town: _____ State: _____ Zip Code: _____

Email Address: _____

This statement shall be signed by the LSRP who is submitting this notification in accordance with N.J.S.A. 58:10C-14, and N.J.S.A. 58:10B-1.3b(1) and (2).

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: _____ Date: _____

LSRP Name/Title: _____

Company Name: _____

NOTE: This form should **not** be used to retain or dismiss an LSRP from a specific site or program interest number. A completed LSRP Notification of Retention or Dismissal Form must be filed electronically through NJDEP Online at http://www.nj.gov/dep/online to dismiss the assigned LSRP, and a separate complete LSRP Notification of Retention or Dismissal Form must be filed to retain the new LSRP. **The purpose of this form is to update LSRP contact information ONLY.**

This form updates license information in the NJDEP's the database. It will not update your user profile information on NJDEP Online. You must update that information yourself on NJDEP Online available at: *http://www.nj.gov/dep/online*.

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

COVER/CERTIFICATION FORM

(Submit with Remedial Phase Report, Receptor Evaluation, and CEA Forms)

Date Stamp
(For Department use only)

SECTION A. SITE INFORMATION

Site Name: 107 New Street

AKAs:

Street Address: 107 New Street

Municipality: Woodbridge (*Township, Borough or City*)

County: Middlesex Zip Code: 07095

Program Interest (PI) Number(s): 602475

Case Tracking Number(s) for this submission: 13-02-28-1634-40

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2: 03/13/2013

State Plane Coordinates for a central location at the site: Easting: 626440 Northing: 553110

List current Municipal Block and Lot Numbers of the Site:

Block # 536	Lot #(s) 16	Block #	Lot #(s)
Block #	Lot #(s)	Block #	Lot #(s)
Block #	Lot #(s)	Block #	Lot #(s)
Block #	Lot #(s)	Block #	Lot #(s)

SECTION B. SUBMISSION STATUS

1. Indicate how the Electronic Data Deliverable (EDD) for this submission is being provided to the NJDEP:
   - ☒ Via Email at srpedd@dep.state.nj.us (attach NJDEP confirmation email); or
   - ☐ CD (attach to this submission)
   - ☐ Not Applicable – No EDD
2. Complete the following Submission and Permit Status Table:

Remedial Phase Documents	N/A	Included in this Submission	Previously Submitted	Date of Submission	Date of Revised Submission	Date of Previous NJDEP Approval	Date of Document Withdrawal
Preliminary Assessment Report	☐	☐	☐				
Site Investigation Report	☐	☒	☐				
Remedial Investigation Report	☐	☒	☐				
Remedial Action Work Plan	☐	☐	☐				
Remedial Action Report	☐	☒	☐				
Response Action Outcome	☐	☒	☐				
Other Submissions							
Alternative Soil Remediation Standard and/or Screening level Application Form	☒	☐	☐				
Case Inventory Document		☒					
Classification Exception Area / Well Restriction Area (CEA/WRA)	☒	☐	☐				
Discharge to Ground Water Permit by Rule Authorization Request	☒	☐	☐				

IEC Engineered System Response Action Report	☐	☐	☒	11/06/2013		11/25/2013	
Immediate Environmental Concern Report	☐	☐	☒	11/06/2013		11/25/2013	
LNAPL Interim Remedial Measure Report	☒	☐	☐				
Public Notification	☐	☐	☒	09/24/2013			
Receptor Evaluation	☐	☒	☐				
Technical Impracticability Determination	☒	☐	☐				
Vapor Concern Mitigation Report	☒	☐	☐				
Permit Application – list:	☒						
		☐	☐				
		☐	☐				
		☐	☐				
		☐	☐				
Radionuclide Remedial Action Report	☒	☐	☐				
Radionuclide Remedial Action Workplan	☒	☐	☐				
Radionuclide Remedial Investigation Report	☒	☐	☐				
Radionuclide Remedial Investigation Workplan	☒	☐	☐				

SECTION C. SITE USE

Current Site Use: (*check all that apply*)

- ☐ Industrial
- ☐ Residential
- ☐ Commercial
- ☐ School or child care
- ☐ Agricultural
- ☐ Park or recreational use
- ☐ Vacant
- ☒ Government
- ☐ Other: _____

Intended Future Site Use, if known: (*check all that apply*)

- ☐ Industrial
- ☐ Residential
- ☐ Commercial
- ☐ School or child care
- ☐ Park or recreational use
- ☐ Vacant
- ☒ Government
- ☐ Future site use unknown
- ☐ Other: _____

SECTION D. CASE TYPE: (*check all that apply*)

- ☐ Administrative Consent Order (ACO)
- ☐ Brownfield Development Area (BDA)
- ☐ Child Care Facility
- ☐ Chrome Site (Chromate chemical production waste)
- ☐ Coal Gas
- ☐ Due Diligence with RAO
- ☐ Hazardous Discharge Remediation Fund (HDSRF) Grant/Loan
- ☐ ISRA
- ☐ Landfill (SRP subject only)
- ☐ Regulated Underground Storage Tank (UST)
- ☐ Remediation Agreement (RA)/Remediation Certification
- ☐ School Development Authority (SDA)
- ☐ School facility
- ☐ Spill Act Defense – Government Entity
- ☒ Spill Act Discharge
- ☐ UST Grant/Loan
- ☐ Other: _____

Federal Case (*check all that apply*)

☐ RCRA GPRA 2020 ☐ CERCLA/NPL ☐ USDOD ☐ USDOE

1. Is the party conducting remediation a government entity? ..... ☒ Yes ☐ No

   If "Yes," check one: ☐ Federal ☐ State ☒ Municipal ☐ County

SECTION E. PUBLIC FUNDS

Did the remediation utilize public funds? ..... ☐ Yes ☒ No

If "Yes," check applicable:

- ☐ UST Grant
- ☐ HDSRF Grant
- ☐ Spill Fund
- ☐ UST Loan
- ☐ HDSRF Loan
- ☐ Schools Development Authority
- ☐ Brownfield Reimbursement Program
- ☐ Landfill Reimbursement Program
- ☐ Environmental Infrastructure Trust

SECTION F. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 628352

First Name: Jeffrey Last Name: Kozic

Phone Numbers: (732) 676-1733 Ext.: Fax:

Mailing Address: 11 Tindall Road

Municipality: Middletown State: NJ Zip Code: 07748

Email Address: jkozic@tandmassociates.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with N.J.S.A. 58:10C-14, and N.J.S.A. 58:10B-1.3b(1) and (2).

(1) I certify, as a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C-1 et seq. to conduct business in New Jersey, that for the remediation described in this submission, and all attachments included in this submission, I personally: Managed, supervised, or performed the remediation conducted at this site that is described in this submission, and all attachments included in this submission; and/or periodically reviewed and evaluated the work performed by other persons that forms the basis for the information in this submission; and/or completed the work of another site remediation professional, licensed or not, after having: (1) reviewed all available documentation on which I relied; (2) conducted a site visit and observed the then-current conditions and verified the status of as much of the work as was reasonably observable; and (3)concluded, in the exercise of my independent professional judgment, that there was sufficient information upon which to complete any additional phase of remediation and prepare workplans and reports related thereto.

(2) I certify:

- *That I have read this submission and all attachments to this submission;*
- *That in performing the professional services as the licensed site remediation professional for the entire site or each area of concern, I adhered to the professional conduct standards and requirements governing licensed site remediation professionals provided in N.J.S.A. 58:10C-16;*
- *That the remediation conducted at the entire site or each area of concern, that is described in this submission and all attachments to this submission, was conducted pursuant to and in compliance with the remediation requirements in N.J.S.A. 58:10C-14.c;*
- *That the remediation described in this submission, and all attachments to this submission, was conducted pursuant to and in compliance with the regulations of the Site Remediation Professional Licensing Board at N.J.A.C. 7:26I; and*
- *That the information contained in this submission and all attachments to this submission is true, accurate, and complete.*

(3) I certify, when this submission includes a response action outcome, that the entire site or each area of concern has been remediated in compliance with all applicable statutes, rules, and regulations and is protective of public health and safety and the environment.

(4) I certify that no other person is authorized or able to use any password, encryption method, or electronic signature that the Board or the Department have provided to me.

(5) I certify that I understand and acknowledge that:

- *If I knowingly make a false statement, representation, or certification in any document or information I submit to the Department I may be subject to civil and administrative enforcement pursuant to N.J.S.A. 58:10C-17.a.1(a)through (f) by the Board, including but not limited to license suspension, revocation, or denial of renewal; and*
- *If I purposely, knowingly, or recklessly make a false statement, representation, or certification in any application, form, record, document or other information submitted to the Department or required to be maintained pursuant to the Site Remediation Reform Act, I shall be guilty, upon conviction, of a crime of the third degree and shall, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, be subject to a fine of not less than $5,000 nor more than $75,000 per day of violation, or by imprisonment, or both.*

(6) I certify that I have read this certification prior to signing, certifying, and making this submission.

LSRP Signature: Date: 7/8/2019

LSRP Name: Jeffrey Kozic

Company Name: T&M Associates

SECTION G. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Township of Woodbridge

Representative First Name: Michael Representative Last Name: Gelin

Title: Township Engineer

Phone Number: (732) 624-4500 Ext.: FAX:

Mailing Address: 1 Main Street

Municipality: Woodbridge State: NJ Zip code: 07095

Email Address: michael.gelin@twp.woodbridge.nj.us

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Michael J. Gelin Date: 7-8-19

Name/Title: Michael Gelin/Township Engineer

For CEA Submissions:

☐ Check this box if the person above is also the property owner of the site or their representative. If this person is not the site property owner, please ensure the site property owner's name and address is in the first line of the table in Section E.2 of the Classification Exception Area / Well Restriction Area (CEA/WRA) Fact Sheet Form.

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

AUTHORIZATION TO SUBMIT A REMEDIAL PHASE REPORT THROUGH NJDEP ONLINE

[Except Response Action Outcome (RAO)]

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: 107 New Street

Street Address: 107 New Street

Municipality: Woodbridge (Township, Borough or City)

County: Middlesex Zip Code: 07095

Program Interest (PI) Number(s): 602475

SECTION B. STATEMENT OF AUTHORIZATION TO SUBMIT THE REMEDIAL PHASE REPORT

I authorize the Licensed Site Remediation Professional, retained for this site pursuant to the Brownfield and Contaminated Site Remediation Act at N.J.S.A. 58:10B-1.3b, and named below to submit, as applicable, the remedial phase report listed below, updated Receptor Evaluation Form, and CEA/Well Restriction Fact Sheet Form, for the Program Interest Number noted above. I understand that I am assuming full responsibility that the information provided in the remedial phase report is true, accurate, and complete.

Name and Date of Remedial Phase Report:

Remedial Investigation/Remedial Action Report, July 2019

Authorized Licensed Site Remediation Professional (LSRP)

First Name: Jeffrey Last Name: Kozic

LSRP License #: 628352

SECTION C. CERTIFICATION BY THE PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION

Full Name of Person Responsible for Conducting the Remediation: Township of Woodbridge

Representative First Name: Michael Representative Last Name: Gelin

Mailing Address: 1 Main Street

Municipality: Woodbridge State: NJ Zip Code: 07095

Telephone Number: (732) 634-4500 Ext.: Fax:

Email Address: michael.gelin@twp.woodbridge.nj.us

This certification shall be signed by the person responsible for conducting the remediation who is submitting this Authorization and Report in accordance with the Administrative Requirements for the Remediation of Contaminated Sites at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Michael J. Gelin Date: 7-8-19.

Name/Title: Michael Gelin/Township Engineer

Completed form should be uploaded to NJDEP Online.

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp
(For Department use only)

SECTION A. SITE

Site Name: 107 New Street

Program Interest (PI) Number(s): 602475

Communication Center Number(s) and/or ISRA number(s) for this submission: (as *many as will fit in the space provided)*

13-02-28-1634-40

This form must be attached to the Cover/Certification Form if not submitted through a Remedial Phase Online Service

Indicate the type of submission:

☐ Initial RE Submission

☒ Updated RE Submission

Indicate the reason for submission of an updated RE form

☐ Submission of an Immediate Environmental Concern (IEC) source control report;
☒ Submission of a Remedial Investigation Report;
☒ Submission of a Remedial Action Report;

Check if included in updated RE

☐ The known concentration or extent of contamination in any medium has increased;
☐ A new AOC has been identified;
☐ A new receptor is identified;
☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site property boundary (*check all that apply*):

	On-site	Off-site
None of the following	☒	☐
Residences or residential property	☐	☒
Public or Private Schools Grades K-12	☐	☐
Child care centers	☐	☐
Public parks, playgrounds or other recreation areas	☐	☐
Other sensitive population use(s) Explain _____	☐	☐

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site.

2. Current site uses (*check all that apply*):

☐ Industrial ☐ Residential ☐ Commercial
☐ School or child care ☒ Government ☐ Park or recreational use
☐ Vacant ☐ Agricultural ☒ Other: Parking Lot

3. Planned future on-site uses and off-site uses within 200 feet of the site boundary (*check all that apply*):

On-Site	Off-Site		On-Site	Off-Site		On-Site	Off-Site	
☐	☐	Industrial	☐	☒	Residential	☐	☒	Commercial
☐	☐	School or child care	☒	☐	Government	☐	☐	Park or recreational use
☐	☐	Vacant	☐	☐	Agricultural	☒	☐	Other: Parking Lot

Provide a map depicting the location of the proposed changes in land use.

SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site:

Yes	No	
☐	☒	Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL* or ☐ DNAPL**.
		Date identified: _____
☐	☒	Residual product [N.J.A.C. 7:26E-1.8]
☐	☒	Other primary source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos). See form instructions for additional information.
		Explain: _____

* LNAPL – measured thickness of .01 feet or more

**DNAPL – See *Ground Water Technical Guidance* and *USEPA Assessment and Delineation of DNAPL Source Zones at Hazardous Waste Sites* (attached as Appendix A of the NJDEP GW Guidance) available at: http://www.nj.gov/dep/srp/guidance/#pa_si_ri_gw. Also, see US EPA DNAPL Overview available at: http://cluin.org/contaminantfocus/default.focus/sec/Dense_Nonaqueous_Phase_Liquids_(DNAPLS)/cat/Overview

2. Soil Migration Pathway

Has soil contamination been delineated to the applicable Direct Contact Soil Remediation Standard pursuant to N.J.A.C. 7:26E-4.2? ☒ Yes ☐ No

Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ☒ Yes ☐ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise, attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

SECTION D. GROUND WATER USE

1. Have all potentially contaminated areas of concern been evaluated to determine if there is a potential that ground water is contaminated pursuant to N.J.A.C. 7:26E-3.5? ☒ Yes ☐ No

   If "**No**," proceed to Section E.

2. Is a ground water investigation required? ☒ Yes ☐ No

   If "**No**," proceed to Section E.

3. Has a groundwater investigation been conducted? ☒ Yes ☐ No

   If "**Yes**":
   Has the laboratory data package been received? ☒ Yes ☐ No

   If the laboratory data package has not been received, provide the expected due date for data: _____ and proceed to Section E.

   If "**No**":
   Proceed to Section E.

4. Is ground water contaminated above the Ground Water Remediation Standards [N.J.A.C.7:9C]? ☐ Yes ☒ No

   If "**Yes**": Provide the date that the laboratory data package was available and confirmed contamination was identified above the Ground Water Remediation Standards. Date: _____

   If "**No**": Proceed to Section E.

5. Has ground water contamination been delineated to the applicable Remediation Standard pursuant to N.J.A.C 7:26E-4.3? ☐ Yes ☐ No

6. What is the ground water classification for this site as per N.J.A.C. 7:9C? (*check all that apply*)

☐ Class I-A	☐ Class II-A
☐ Class I-PL Pinelands Protection Area	☐ Class III-A
☐ Class I-PL Pinelands Preservation Area	☐ Class III-B

7. Has a well search been completed?..... ☐ Yes ☐ No

Date of most recent or updated well search: _____

8. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to srpgis_wrs@dep.nj.gov. ..... ☐ Yes ☐ No

Note: Redacted wells must be excluded from all non-confidential documents including maps, tables, etc. (see RE Instructions).

If "**No**," explain: _____

9. Are any potable or irrigation wells located within ½ mile of the currently known extent of contamination? ..... ☐ Yes ☐ No

If "**Yes**,":

- A door to door survey is required in accordance with [N.J.A.C.7:26E-1.14(a)ii]. Attach results of the door to door survey.
- Identify if any of the following conditions exist based on the well search and door to door survey [N.J.A.C.7:26E-1.14(a)]:

Yes	No	
☐	☐	Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination.
☐	☐	Potable wells located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination.
☐	☐	Ground water contamination from the discharge is located within a Tier 1 wellhead protection area (WHPA).

10. Has sampling been conducted of ☐ potable well(s) and /or ☐ non-potable use well(s)? ..... ☐ Yes ☐ No

If "No," provide justification then proceed to Question 12.

_____

11. Has contamination been identified in potable well(s), **not attributed to background conditions**, above the Class II Ground Water Remediation Standards or State Safe Drinking Water levels, N.J.A.C 7:1E, whichever is applicable? ..... ☐ Yes ☐ No

If "**Yes**":

- Provide the date laboratory data package was received: _____
- Follow the **IEC** Guidance Document at http://www.nj.gov/dep/srp/guidance/IEC/index.html for required actions and answer the following:
- Has an engineered system response action been completed on all impacted receptors? ..... ☐ Yes ☐ No
  Provide a brief narrative description:

Date completed: _____ NJDEP Case Manager: _____

12. Has contamination been identified in non-potable well(s), **not attributed to background conditions**, above the Class II Ground Water Remediation Standards?..... ☐ Yes ☐ No

If "**Yes**," provide the date laboratory data package was received: _____

13. Has the ground water use evaluation been completed pursuant to N.J.A.C. 7:26E-1.14? ..... ☐ Yes ☐ No

SECTION E. VAPOR INTRUSION (VI)

1. Indicate if any of the following conditions exist that trigger a Vapor Intrusion investigation. For each condition checked "Yes", provide the date the condition was first identified (e.g. date laboratory data package was available). (*see NJDEP Vapor Intrusion Technical Guidance*)

Yes	No		Date Condition First Identified
☐	☒	Ground water contamination in excess of the NJDEP Vapor Intrusion Ground Water Screening Levels (VIGWSL) and within 30 feet of a building for Petroleum Hydrocarbon Compounds (PHC) or 100 feet for non-PHC compounds ..	_____
☐	☒	Free product within 30 feet of a building for PHC or 100 feet for non-PHC compounds	_____
☐	☒	Soil gas contamination detected at concentrations that exceed the Soil Gas Screening Levels (SGSL)	_____
☐	☒	Indoor air contamination that exceeds the Indoor Air Screening Levels	_____
☐	☒	Wet basement or sump containing free product or ground water containing detectable concentration of volatile organic contaminants	_____
☐	☒	Methane generating conditions causing oxygen deficient or explosion concern	_____
☐	☒	Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated soil contamination), *explain below:*	_____

If you checked "No" to <u>all</u> boxes in Question 1., proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.

2. Has ground water contamination been delineated to the applicable Vapor Intrusion Ground Water Screening Levels pursuant to N.J.A.C 7:26E-4.3? ..... ☐ Yes ☐ No

3. Was a site-specific screening level, modeling or other alternative approach employed for the VI pathway? ..... ☐ Yes ☐ No

4. Identify and locate, on a scaled map, any buildings/sensitive populations that exist within the following distances from ground water contaminant concentrations above the Vapor Intrusion Ground Water Screening Levels or other specific triggers noted in Question 1 above.:

Yes	No	
☐	☐	30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water
☐	☐	100 feet of any non-petroleum free product (e.g. chlorinated hydrocarbons) or any non-petroleum dissolved volatile organic ground water contamination
☐	☐	Other specific triggers
☐	☐	No buildings exist within the specified distances or other specific triggers

5. Is the vapor intrusion pathway a concern at or adjacent to the site? (if "No," attach justification) ..... ☐ Yes ☐ No

6. Has soil gas sampling of the building(s) been conducted? ..... ☐ Yes ☐ No

   If "**Yes**," has the laboratory data package been received? ..... ☐ Yes ☐ No

   If the data package was received, did constituents exceed the Soil Gas Screening Levels? ..... ☐ Yes ☐ No

   If "**No**," attach technical justification consistent with the NJDEP Vapor Intrusion Technical Guidance.

7. Has indoor air sampling been conducted at the identified building(s)? ..... ☐ Yes ☐ No

   If "**Yes**," has the laboratory data package been received? ..... ☐ Yes ☐ No

   If the data package has been received, did constituents exceed the Indoor Air Screening Levels? .. ☐ Yes ☐ No

   If "**No**," or awaiting indoor air laboratory data package, proceed to Question 12.

8 Has indoor air contamination been identified but not suspected to be from a discharge? (if "**Yes**," attach justification) ☐ Yes ☒ No

9. Were indoor air results above the NJDEP's Rapid Action Levels? ☐ Yes ☐ No

If "**Yes**":

- Provide the date laboratory data package was received: _____
- Follow the **IEC** Guidance Document at http://www.nj.gov/dep/srp/guidance/index.html#iec for required actions and answer the following:
- Was the IEC engineering system response for control implemented for all impacted structures? ☐ Yes ☐ No

  Date implemented: _____ NJDEP Case Manager: _____

10. Were the results of indoor air sampling above the NJDEP's Indoor Air Screening Levels but at, or below, the Rapid Action Levels ☐ Yes ☐ No

If "**Yes**," answer the following:

- Provide the date laboratory data package was received: _____
- Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances been submitted? ☐ Yes ☐ No

  Date: _____
- Has a plan to mitigate and monitor the exposure been submitted? ☐ Yes ☐ No

  Date: _____
- Has the Mitigation Response Action Report been submitted? ☐ Yes ☐ No

  Date: _____

11. Do one or more buildings have an Indeterminate VI Pathway status? ☐ Yes ☐ No

If "**Yes**," attach a list of the building(s) with address(s) and block/lot(s)

12. Has the vapor intrusion investigation been completed? ☐ Yes ☐ No

If "**No**", is the vapor intrusion investigation stepping out as part of the site investigation or remedial investigation. (If "No," attach justification) ☐ Yes ☐ No

SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) been conducted? [N.J.A.C. 7:26E-1.16] ☒ Yes ☐ No

   Date conducted: 04/21/2014

2. Are any site-related contaminants above any Ecological Screening Criteria? ☐ Yes ☒ No
3. Are there any Environmentally Sensitive Natural Resources (ESNRs) on or adjacent to the site, or potentially impacted by site related contamination? [N.J.A.C. 7:26E-1.16] ☐ Yes ☒ No
4. Do any potential or complete migration pathways exist between Contaminant of Potential Ecological Concern (COPECs) and ESNRs, or did historic migration pathways exist? ☐ Yes ☒ No

If You answered "No" to Questions 2, 3, or 4, above <u>Stop Here</u> (form is complete).

5. If site-related free or residual product is/was present, does/did a potential or complete migration pathway exist to an ESNR? ☐ Yes ☐ No
6. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8] ☐ Yes ☐ No

   If "**Yes**", has a remedial investigation of ecological receptors been conducted? ☐ Yes ☐ No

   Date conducted: _____

7. Do available data indicate an impact (COPECs above Ecological Screening Criteria in ESNRs) to Ecological Receptor(s), Surface water, or Sediment? ☐ Yes ☐ No

   If "**Yes**,"

   a) Check all ESNRs or media that apply:

   ☐ Surface water ☐ Sediment ☐ Soil ☐ Wetlands

   b) If this information is not submitted with an ecological evaluation that includes contaminant summary information, attach a brief summary of all currently available data and a description of all actions to be taken to mitigate exposure.

8. Have COPECs been fully delineated to the Ecological Screening Criteria [N.J.A.C. 7:26E-4.8(a)] in:

   a) Migration pathways ☐ Yes ☐ No

   b) ESNR ☐ Yes ☐ No

9. Has an Ecological Risk Assessment been conducted? ☐ Yes ☐ No

10. Provide the following information for any on-site and/or off-site surface water body, which is potentially impacted by the site related discharges:

Surface Water Body Name	Stream Classification	Antidegradation Designation	Trout Production	Trout Maintenance
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐

11. Has a Program Interest (PI) or Permit number been issued for any regulated areas by the Division of Land Use Regulation? (e.g. wetlands, transition areas, flood hazard areas, coastal areas, tidelands, etc.). ☐ Yes ☐ No

    If "**Yes**,":

    Identify the type(s) of regulated areas: _____

    Provide the Land Use Regulation Program (LURP) PI or Permit number(s) for the site:

    _____

12 Are there any **pending** applications for LURP jurisdiction letters or approvals under review by the NJDEP for the remediation? ☐ Yes ☐ No

13. Are there any **valid** LURP jurisdiction letters or approvals issued for the remediation? ☐ Yes ☐ No

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

State of New Jersey

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Site Remediation and Waste Management Program
BUREAU OF INSPECTION AND REVIEW
401 E. STATE STREET
P.O.BOX 420
MAIL CODE 401-05P

CATHERINE R. MCCABE
Commissioner

LSRP: Jeffrey Kozic
jkozic@tandmassociates.com

July 9, 2019

Robert Landolfi
Business Administrator
WOODBRIDGE TWP
1 Main St
Woodbridge, NJ 07095
Phone: (732) 634-4500
Email: robert.landolfi@twp.woodbridge.nj.us

Robert Landolfi
Business Administrator
Township of Woodbridge
1 Main Street
Woodbridge, NJ 07095
Phone: (732) 634-4500
Email: robert.landolfi@twp.woodbridge.nj.us

Re: 107 NEW STREET
107 NEW ST
Woodbridge Twp, Middlesex
Case Tracking #: 137394
SRP PI: 602475
Activity Number Reference: LSD190001
Submission Type: LSRP - RIR (Area of Concern)

Dear Jeffrey Kozic,

This letter serves to advise you that a Remedial Investigation Report submission has been received by the New Jersey Department of Environmental Protection (NJDEP) for 107 NEW STREET**.**

On May 7, 2009, the Site Remediation Reform Act (SRRA) was enacted. SRRA establishes criteria for the licensing of site remediation professionals who will assure that contaminated sites are remediated in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E. SRRA authorizes the NJDEP to establish mandatory timeframes for the completion of each phase of remediation. These timeframes, as well as other requirements of the act, have been codified in regulations that became effective November 4, 2009. The complete rule can be found at www.state.nj.us/dep/srp/regs/arrcs/arrcs_rule.pdf. N.J.A.C. 7:26C-2.4 identifies the requirements with which you must comply.

Per the NJDEP records, the following attachments have been associated with your submission:

ATTACHMENT TYPE	DESCRIPTION	FILE NAME	RECEIVED	DUE
Signed Affidavit	Authorization to Submit through NJDEP Online	2019-07-09_Affidavit_602475.pdf	07/09/2019	
Remedial Investigation Report (RIR)	Remedial Investigation Report (RIR)	2019-07 - RIR-RAR.pdf	07/09/2019	
EDD (Contaminant Results Data)	Electronic Data Deliverable (Contaminant Results Data, Zip)			07/24/2019
Receptor Evaluation (Updated)	Receptor Evaluation (Updated)	107 New Street receptor_evaluation_report.pdf	07/09/2019	
Data Deliverable (Pdf)	Data Deliverable (Pdf)	107 New Street Lab Reports thru 3-28-13.pdf	07/09/2019	
Data Deliverable (Pdf)	Data Deliverable (Pdf)	107 New Street Lab Reports thru 1-21-14.pdf	07/09/2019	
Data Deliverable (Pdf)	Data Deliverable (Pdf)	107 New Street Lab Reports thru 5-22-2017.pdf	07/09/2019	

The table above displays attachments associated with your submittal. The NJDEP will proceed with its inspection of your submission at this time. You may view the status of your submission via the NJDEP DataMiner service, at https://www13.state.nj.us/DataMiner.

Sincerely,

Matthew Turner, Acting Bureau Chief
BUREAU OF INSPECTION AND REVIEW

TRANSMITTAL SHEET

Facility ID: 602475
FACILITY Name: 107 NEW STREET
CASE Name: 107 NEW STREET
CASE Tracking#: 137394
SUBMISSION TYPE: LSRP - RIR (Area of Concern)
SERVICE ID: 953195
SUMBISSION COR: LSD190001

You are required to submit the following documents(s). If you Bypassed the Electronic Data Deliverable because you previously submitted electronically to the Department, then disregard it from the list:

Electronic Data Deliverable (Contaminant Results Data, Zip)

Please mail to:

Attn: LSRP - Submission SRRA Report received
401 East State Street
Mail Code 401-05H
PO Box 420
Trenton, NJ 08625

***Note: If you are still required to submit the Electronic Data Deliverable, Please send electronically via e-mail to srpedd@dep.nj.gov. Please put in the subject line of e-mail, 602475, SERVICE ID: 953195**

Per the NJDEP records, the following depicts the Areas of Concern associated with your case:

In Submission	NJDEP ID	AOC ID	AOC TYPE	DESCRIPTION	Confirmed Contamination	STATUS	DATE
X	1594227	1	Storage tank and appurtenance – Above ground storage tank	275-gallon residential No. 2 Heating oil in the basement of former residential structure	Yes	RAO-A (Unrestricted Use)	07/08/2019

Note: NJDEP recommends that you keep the NJDEP ID recorded in your Master Case Inventory Document Spreadsheet

RESOLUTION

WHEREAS, the Administration has advised the need for professional engineering services for 105-107 New Street Remediation and Environmental Consulting (the "Project"); and

WHEREAS, the Township of Woodbridge has undertaken a fair and open process to establish a pool of approved engineering firms to provide the Township with services as needed; and

WHEREAS, the fair and open process undertaken by the Township complies with the requirements of New Jersey Statutes and applicable municipal public contracting reform ordinance; and

WHEREAS, T & M Associates has been approved as a qualified engineering firm to provide engineering services to the Township; and

WHEREAS, the Administration has received a proposal from T & M Associates, 11 Tindall Road, Middletown, NJ 07748 for services for the herein described Project in an amount not to exceed $26,400.00; and

WHEREAS, the Administration recommends T & M Associates to perform engineering services on the Project;

NOW, THEREFORE, BE IT RESOLVED BY THE MUNICIPAL COUNCIL OF THE TOWNSHIP OF WOODBRIDGE, that the Mayor and Municipal Clerk are hereby authorized and directed to enter into an agreement with T & M Associates, 11 Tindall Road, Middletown, NJ 07748 for professional engineering services for the Project in an amount not to exceed $26,400.00; and

BE IT FURTHER RESOLVED, that this contract is awarded through a competitive process; and

BE IT FURTHER RESOLVED, that the Business Disclosure Entity Certification and the Determination of Value be placed on file with this Resolution; and

BE IT FURTHER RESOLVED, that a notice in accordance with this Resolution and the Local Public Contracts Law of the State of New Jersey, shall be published in the official newspaper or newspapers of the Township and that an executed copy of the Contract shall be filed in the office of the Municipal Clerk and shall be available there for public inspection in accordance with law.

CERTIFICATION OF CONTRACTS OFFICER

I certify that the Local Public Contracts Laws have been satisfied or that the Local Public Contracts Laws do not apply and that the award of the contract is to the lowest responsible bidder, if applicable.

Marianne K Horta

MARIANNE K. HORTA
PURCHASING AGENT AND
CONTRACTS OFFICER

CERTIFICATION AND AVAILABILITY OF FUNDS

I certify subject that funds will be committed and encumbered for the above items under Account # C-04-006-1507-0033-8100. No items, more or less, shall be negotiated unless funds are available and approved by the Municipal Council.

Manuel Fernandez

MANUEL FERNANDEZ
CHIEF FINANCIAL OFFICER

ADOPTED: MAY 19, 2015

I hereby certify that the above is a true and exact copy of the Resolution adopted by the Municipal Council of the Township of Woodbridge at their Regular Meeting held on MAY 19, 2015.

John M. Mitch

JOHN M. MITCH, RMC, CMC, CMR
MUNICIPAL CLERK

YOUR GOALS. OUR MISSION.

REMEDIAL INVESTIGATION / REMEDIAL ACTION REPORT

107 NEW STREET

Block 536, Lot 16
Township of Woodbridge
Middlesex County, New Jersey
Incident # 13-02-28-1634-40
& 13-03-06-1602-23
NJDEP SRP PI# 602475
Activity # LSR130001

Prepared For:
The Township of Woodbridge
One Main Street
Woodbridge, New Jersey 07095

July 2019
WOOD-00270

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ATTACHMENTS

Tables

Table 1	-	Site Sampling Summary Table
Table 2	-	Soil Sampling Summary Table – March 2013
Table 3	-	Groundwater Sampling Summary Table – March 2013
Table 4	-	Soil Sampling Summary Table – June 2013
Table 5	-	Groundwater Sampling Summary Table – June 2013
Table 6	-	Post-Excavation Soil Sampling Summary Table
Table 7	-	Groundwater Sampling Summary Table – 2014
Table 8	-	Quality Assurance & Quality Control Table
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Table 10	-	Waste Classification Sampling Summary Table
Table 11	-	Air Sampling Summary Table – January 2014
Table 12	-	Post-Demolition Soil Sampling Summary Table – May 2017

Figures

Figure 1	-	Site Location Map
Figure 2	-	Site Plan
Figure 3	-	Soil and Groundwater Sample Location Plan – March & June 2013
Figure 4	-	Post-Excavation Sample Location Plan

APPENDICES

Appendix 1	-	Copies of NJDEP Forms: ▪ Case Inventory Document ▪ Site and Contact Information Update ▪ Cover Certification Form ▪ Authorization to Submit Form ▪ Receptor Evaluation Form
Appendix 2	-	GPR Survey Report
Appendix 3	-	Soil Boring Logs
Appendix 4	-	Well Documents
Appendix 5	-	Soil Disposal Manifests
Appendix 6	-	Clean Fill Manifests
Appendix 7	-	VIMS Inspection Log
Appendix 8	-	Indoor Air Sample Results Letter & IEC Close-out Letter
Appendix 9	-	Conformance/Non-Conformance Summary
Appendix 10	-	Laboratory Reports & EDDs

1.0 INTRODUCTION

T&M Associates (T&M) has completed this Remedial Investigation and Remedial Action Report (RIR/RAR) for the former No. 2 heating oil above ground storage tank (AST) located in the basement of 107 New Street which is located at Block 536, Lot 16 in the Township of Woodbridge, Middlesex County, New Jersey (Site). The Site contamination also resulted in an Immediate Environmental Concern (IEC) condition at 105 New Street (Block 536, Lot 15) in the Township of Woodbridge, Middlesex County, New Jersey (IEC Site). The Site locations, surface topography, and nearby surface water bodies are depicted on **Figure 1**, an annotated section of the U.S.G.S. 7.5-minute series topographic map (Perth Amboy, NJ).

2.0 PROJECT BACKGROUND

On February 27, 2013, based on complaints of odor emanating from 107 New Street (Site), which, at the time was a vacant residential property, owned by the Township of Woodbridge, the Township retained a consultant to investigate the matter. Upon inspection it was observed that an out-of-service 275-gallon single walled No. 2 heating oil AST located in the basement had leaked on the concrete floor. Water with assumed petroleum sheen was observed leaking through several cracks within the basement wall of the neighboring property at 105 New Street (IEC Site). Significant odors of heating oil were observed within the basement and the first floor of the structure at the IEC Site. The Township attempted to relocate the resident of 105 New Street.

On February 28, 2013, Atlantic Response (AR) removed free product and contaminated materials from both 107 and 105 New Street basements. In addition, subsequent to product removal, the Township's Department of Public Works removed the debris that remained within the 107 New Street property basement. The discharge was reported to the New Jersey Department of Environmental Protection (NJDEP) Spill Hotline and case# 13-02-28-1634-40 was assigned. In an attempt to reduce the vapors from entering 105 New Street, AR placed a temporary vapor barrier and exhaust fan within the basement. A basement window and the basement bilco doors were also opened for cross ventilation.

On March 1, 2013, due to the resident's refusal to temporarily relocate from the structure, indoor air quality testing was conducted in the basement and first floor of the 105 New Street property. The results of the air quality testing identified concentrations of volatile organic compounds above the NJDEP action levels. Upon receipt of the results, the NJDEP hotline was notified again and an IEC case # 13-03-06-1602-23 was assigned. On March 12, 2013, a second indoor air sampling event was conducted to confirm the contaminant levels. Based on the analytical results, several compounds exceeded the Indoor Air Screening Levels and the Rapid Action Levels.

As per the NJDEP IEC Technical Guidance document, dated August 2011, upon receipt of the analytical results of the air samples, the tenant of the property at 105 New Street was notified of the discovery of the IEC condition and the interim response action to be provided to address the impacts from the contamination.

In addition to notifying the tenant, the property owner was also provided written notification of the test results, their significance and future planned actions. A copy was provided to the local health department, municipal clerk, NJDEP and NJ Department of Health and Senior Services. Due to the concentrations reported in the samples above the indoor air RALs, the notification included the explanation of the immediate action needed to reduce the concentrations present to safe levels.

The Township then retained Clean Vapor (CV) for the installation of a vapor intrusion mitigation system (VIMS) at 105 New Street. T&M collected one round of indoor air quality samples on July 24, 2013 after the installation of the VIMS. The sample results indicated a reduction in the concentration of the contaminants of concern.

Based on the results of soil and groundwater investigations, the environmental impacts appeared to be limited to the footprint of the structure at 107 New Street and the alley between the residence at 105 and 107 New Street.

The complete details of the installation of the VIMS, air sampling, and the investigations conducted prior to October 2013 were presented in the IEC Engineered System Response Action Report (ESRA) dated October 2013. In addition, a summary of the RI and RA operations as they applied to the IEC conditions was presented in the IEC Source Control Report dated June 2014. These submittals were made to the NJDEP, specifically the assigned IEC Case Manager Frank Camera, under SRP PI# 602475, activity number OSA130001.

3.0 SITE DESCRIPTION AND PHYSICAL SETTING

The Site is 0.0895 acres in area and has no structures on the parcel. The Site is bordered to the north by a parking lot on the other side of New Street, to the south by residential properties, to the east by the IEC Site, and to the west by residential properties. The Site Plan, which depicts on-site structures and other pertinent features, is presented in **Figure 2**.

3.1 Topography

Based on interpretation of the U.S.G.S. Topographic Map, Perth Amboy, NJ quadrangle, review of the current and former surveys and field observations, the topography at the Site is relatively even and flat with no steep slopes, ravines or bluffs.

A copy of the U.S.G.S. Topographic Map is provided in **Figure 1**.

3.2 Geology and Soils

3.2.1 Physiographic Province

Based on a review of the NJDEP Geoweb layer for Bedrock Geology, the Site lies within the Coastal Plain physiographic province of New Jersey.

3.2.2 Surficial Geology

The Surficial Geology theme of the GeoWeb program depicts the Rahway Till (Qwtr) surficial geologic formation for the Site. The lithology is listed as clayey silt to sandy silt with some to many pebbles and cobbles and few boulders; reddish brown, reddish yellow, yellowish brown, brown. As much as 100 feet thick, generally less than 40 feet thick.

3.2.3 Bedrock Geology

The Bedrock Geology theme of the GeoWeb program depicts the Raritan Formation stratigraphic bedrock unit at the Site with lithology consisting of clayey silt overlaying quartz sand.

3.2.4 Soils

The United States Department of Agriculture (USDA) Web Soil Survey (WSS) (http://websoilsurvey.nrcs.usda.gov) depicts the following soil types at the Site:

- Boonton-Urban land complex, 0 to 8 percent slopes (BogB) for the entire Site and for the majority of the IEC Site property, with the exception of the southeast corner
- Haledon-Urban land complex, 0 to 3 percent slopes (HasA) at the remainder, southeast corner, of the IEC Site.

The NJDEP Geoweb Historic Fill layer does not depicts any mapped State Fill areas at or adjacent to the Site.

3.3 Hydrology

3.3.1 Groundwater

The depth to groundwater encountered at the Site during the investigations conducted by T&M ranged from depths of 4 feet to 8 feet below ground surface. The Surficial Aquifers theme of the GeoWeb program does not depict any surficial aquifer at the Site area. The Bedrock Aquifer theme of the GeoWeb program depicts the Potomac-Raritan-Magothy bedrock aquifer system (prma) at the Site.

3.3.2 Surface Water

There are no surface water bodies situated at, adjacent to or intersecting the Site. The nearest surface water body to the Site is the Woodbridge Creek located approximately 1,050 feet to the north.

3.4 Receptor Evaluation

As per N.J.A.C. 7:26E-1.12 an initial Receptor Evaluation (RE) was completed for the Site. The RE included a land use evaluation of properties within 200 feet of the Site's property boundary as well as an ecological evaluation.

3.4.1 Land Use

The Site is approximately 0.0895 acres and listed as public property used as a parking area. Land use within 200 feet of the Site includes one (1) vacant land, five (5) public properties, twelve (12) commercial properties and twenty-one (21) residential properties.

3.4.2 Ecological Evaluation

In order to assess the potential for adverse ecological effects on wildlife and plants in environmentally sensitive natural resources (ESNRs) resulting from site-related contamination an ecological evaluation (EE) was completed.

As per NJAC 7:26E-1.16 an ecological receptor evaluation is conducted to determine if any ESNRs, other than groundwater, are present on-site, adjacent to the site or may have been or currently are impacted by contamination from the site. It is also conducted to determine if any contaminant concentration is present at the site above the applicable ecological screening level or surface water quality standard, classifying it as a contaminant of potential ecological concern (COPEC).

3.4.2.1 Environmentally Sensitive Natural Resources (ESNRs)

ESNRs are habitats where concern for plant and wildlife exposure to site COPECs is paramount. In order to identify ESNRs within the site boundaries, on properties adjacent to the site and at all other locations that may have been potentially impacted by discharges at the site, T&M utilized the online NJDEP tool, NJ GeoWeb, as well as previous and subsequent site visits to confirm the initial findings.

No ESNRs were identified within the site boundary, on properties adjacent to the Site or at any other location potentially impacted by discharges from the Site.

3.4.2.2 Contaminants of Potential Ecological Concern (COPECs)

Contamination related to the leaking No. 2 Heating Oil AST including extractable petroleum hydrocarbons (EPH), benzene and 2-methylnaphthalene were reported in initial soil samples. Benzene and methyl tert-butyl ether (MTBE) were reported in one initial groundwater sample from a temporary well. Impacted soil was excavated based on analytical results, visual observations and field screening. All final post-excavation samples reported no exceedances of targeted compounds. A permanent monitoring well was installed in the location of the former temporary well point. No exceedances of targeted analytes were reported for two consecutive rounds of sampling.

3.4.2.3 Contaminant Migration Pathways

Due to the remediation of the impacted soil as well as the groundwater samples which reported no impacts, all potential pathways have been addressed and the potential for contaminant migration is negligible.

3.4.2.4 Ecological Evaluation Conclusions and Recommendations

Based on the findings of this evaluation, on-Site contaminants were remediated and all potential pathways for migration have been addressed. In addition, there are no ESNRs in the proximity of the Site. Therefore, no further investigation is recommended for the ecological evaluation.

4.0 SITE INVESTIGATION

4.1 Ground Penetrating Radar (GPR) Survey

In order to determine if any underground storage tanks (USTs) or utilities were present on-Site or on the IEC Site property a Ground Penetrating Radar (GPR) survey was completed on March 11, 2013. As per the EnviroPhysics, Inc. Subsurface Delineation Report (**Appendix 2**) electromagnetic (EM) metal detection data were collected throughout the accessible portions of the main study area along parallel transects separated by five feet in an effort to detect buried steel tanks and other electrically conductive buried targets. This was followed by radar, metal detection and magnetometry data collection over all detected anomalies. Line tracing data was then collected in an effort to detect buried utilities.

Gas, water, electric, sewer and unknown lines were detected and marked on the ground with spray paint. No unexplained areas of buried metal were detected. In addition, no suspected former tank voids were detected.

One small area of steel-reinforced concrete was detected within the sidewalk between 103 and 105 New Street, but no tank-like radar anomaly was detected below it.

Though some sewer lines were located, others could not be definitively identified. This is fairly common due to the depth of burial and type of construction typical for these utilities. In summary, no buried tanks were detected at these three properties.

5.0 REMEDIAL INVESTIGATION

5.1 Soil and Groundwater Investigation – March 2013

In March 2013 a subsurface soil and groundwater investigation was conducted in the vicinity of 105 and 107 New Street. Soil borings were advanced utilizing direct push point drilling technology (Geoprobe®). Select soil borings were converted into temporary groundwater sampling points in accordance with the NJDEP Field Sampling Manual. These sample locations surrounded the properties at 107 and 105 New Street as well as the space between the two structures.

On March 26, 2013, S&S Subsurface Investigations (S&S) installed eleven (11) soil borings, B-1 through B-11, and six (6) temporary well points, TW-2, TW-6, TW-7, TW-8, TW-10 and TW-14. On March 28, 2013, soil borings B-12 through B-16 were installed and groundwater samples were also collected from the previously installed temporary wells. A sample could not be collected from soil boring B-4 due to low recovery and refusal.

All soil samples were analyzed for EPH Category 1, 2-methylnaphthalene and naphthalene. Samples B-1, B-2, B-7, B-9 and B-12 through B-16 were also analyzed for TCL VO+15. Benzene was reported above the NJDEP Default Impact to Groundwater Soil Screening Level (DIGSSL) of 0.005 mg/kg in samples B-1, B-2, B-14 and B-16. A concentration of 2-methylnaphthalene was reported above the DIGSSL in sample B-1. No concentrations of petroleum hydrocarbons were reported above the residential soil remediation standard of 5,100 mg/kg. No additional compounds were reported above the most stringent NJDEP Soil Remediation Standards (SRS) or DIGSSL.

The groundwater samples were analyzed for volatile organics (EPA Method 624) and base neutrals (EPA Method 625). Sample TW-14, which is located between 105 and 107 New Street, reported concentrations of benzene, MTBE and 2-methylnaphthalene above the NJDEP Groundwater Quality Standards (GWQS). No other compounds were detected above the GWQS in sample TW-14. Samples TW-2, TW-6, TW-7, TW-8 and TW-10 reported no concentrations of compounds above the GWQS.

The boring locations and temporary well points are depicted on **Figure 3**. The boring logs are presented in **Appendix 3**. The laboratory analytical report is provided in **Appendix 10** and summary tables for the soil and groundwater results are presented in **Table 2** and **Table 3**, respectively. A summary of the conformance/non-conformance of lab data is included in **Appendix 9**.

5.2 Soil and Groundwater Investigation – June 2013

On June 24, 2013 additional subsurface soil samples and a groundwater sample were collected to evaluate the soil conditions beneath the Site and to better delineate the impacts surrounding the Site. Soil borings B-17 through B-21 were completed, sampled and analyzed for EPH Category 1 with contingency analysis for 2-methylnaphthalene and naphthalene as needed. Samples were collected from various depths for vertical delineation and were run as needed based on initial sample results. Groundwater sample B-21W was collected from a temporary well installed at the location of soil boring B-21 and analyzed for VO+15.

No concentrations of petroleum hydrocarbons were reported above the residential soil remediation standard, however sample B-18A had a concentration above the 1,000 mg/kg trigger level for contingency analysis. Contingent analysis was completed on sample B-18A for 2-methylnaphthalene and naphthalene and no concentrations were reported above the NJDEP SRS or DIGSSL. The contingency vertical delineation sample, B-18B, was analyzed for EPH Category 1 however the concentration reported was below the residential soil remediation standard, so no further contingency analysis was required. The groundwater sample reported no compound concentrations above the GWQS, which confirmed that the only groundwater impact was detected between 105 and 107 New Street, in temporary well TW-14.

The boring locations and temporary well points are depicted on **Figure 3.** The boring logs are presented in **Appendix 3.** The laboratory analytical reports are provided in **Appendix 10** and summary tables for

the soil and groundwater results are presented in **Table 4** and **Table 5**, respectively. A summary of the conformance/non-conformance of lab data is included in **Appendix 9**.

5.3 Remedial Investigation Conclusions

Based on the investigations conducted in March and June 2013, only four soil samples reported concentrations of benzene above the applicable NJDEP Default Impact to Groundwater Soil Screening Level (DIGSSL). One sample also reported a concentration of 2-methylnaphthalene above the applicable DIGSSL. All four samples were located in the alley between 107 and 105 New Street. Samples collected around the perimeter of the two structures reported no concentrations above the applicable NJDEP remediation standards. The sample locations and results of the soil investigations conducted in March and June 2013 are presented in **Figure 3**.

One groundwater sample, collected from a temporary well point installed between 107 and 105 New Street, reported concentrations of benzene and methyl tert-butyl ether (MTBE) above the applicable NJDEP Groundwater Quality Standard (GWQS). All other groundwater samples reported no concentrations above the applicable NJDEP GWQS. The sample locations and results of the groundwater investigations conducted in March and June 2013 are presented in **Figure 3**.

Based on these results it was determined that the impacted soil and groundwater was isolated to the area directly between the two structures.

6.0 REMEDIAL ACTION

6.1 Post-Excavation Soil Sampling

6.1.1 Delineation and Post-Excavation Soil Sampling – September 2013

Following the demolition of the structure at the Site, soil samples were collected from the initial excavation (footprint of the former basement) in order to determine the extent of the contamination as well as the potential extent of excavation. A total of seven (7) soil borings were completed using a hand auger. Two (2) samples were collected from each boring; however, three (3) deep samples (PX-2A, PX-4A and PX-5A) were placed on hold pending the results of the shallow sample. All samples were analyzed for Extractable Petroleum Hydrocarbons (EPH) Category 1, TCL VO+15, 2-methylnaphthalene and naphthalene.

Sample PX-1A, which was located in the northeast corner of the excavation near the northwest corner of the IEC Site structure, was collected from eighty (80) to eighty-six (86) inches below surface grade (bsg) and reported a concentration of benzene (0.00544 mg/kg) above the NJDEP Default Impact to Soil Screening Level (DIGSSL) (0.005 mg/kg). EPH concentrations ranged from 60.4 mg/kg (PX-3) to 794 mg/kg (PX-6), which are below the NJDEP contingency analysis trigger (1,000 mg/kg). No additional concentrations of targeted analytes were reported above the NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS), Non-Residential Direct Contact Soil Remediation Standard (NRDCSRS) or the DIGSSL.

6.1.2 Post-Excavation Soil Sampling – December 2013

Based on the findings of the initial September 2013 soil samples, the excavation was expanded. Following the expansion of the excavation additional delineation and potential post-excavation samples were collected on December 2, 2013 and analyzed for EPH Category 1 with contingency analysis for 2-methylnaphthalene and naphthalene. Samples PX-8 and PX-11, which were intended to delineate PX-1A, also had a contingency analysis for benzene. These samples were put on a 24-hour rush turn-around-time in order to allow for continued excavation operations the next day if needed.

One concentration of benzene was reported above the NJDEP DIGSSL in sample PX-11 (0.0175 mg/kg), which was collected in the vicinity of previous sample PX-1A. Concentrations of EPH ranged from not detected in several samples to 1,310 mg/kg (PX-12). The sand layer from which sample PX-12 was collected was excavated the following day due to visible impacts that became evident overnight, therefore the contingent analyses were not activated. No additional concentrations were reported above the applicable NJDEP RDCSRS, NRDCSRS or the DIGSSL.

Based on the samples previously collected and visible impacts that appeared overnight, the excavation was expanded both vertically and horizontally to remove a thin layer of impacted sandy material. In the vicinity of the benzene exceedances soil was excavated to approximately nine (9) feet bsg, other areas were excavated to approximately eight (8) feet bsg based on soil screening completed during excavation operations and previous samples. To confirm remediation of impacted soil was complete a total of eight (8) additional post-excavation soil samples (PX-15 to PX-22) were collected from the perimeter/sidewalls and base of the excavations. Samples were analyzed for EPH Category 1 with contingency analysis for 2-methylnaphthalene and naphthalene and were run on 24-hour rush turn-around-time in order to allow for additional excavation if needed.

The analytical results indicate that the final post-excavation samples were non-detect for targeted analytes. No additional excavation was required. Post-excavation soil sample locations are depicted on **Figure 4**.

6.2 Groundwater Sampling

Due to the detection of benzene in two soil samples above the NJDEP DIGSSL, as well as the temporary well sample TW-14 collected in March 2013, which reported concentrations of benzene and methyl tert-butyl ether (MTBE) above the GWQS, a permanent monitoring well (MW-1) was installed off the northwest corner of the IEC Site structure, where the previous exceedances were reported. A well construction log is included in **Appendix 4**.

6.2.1 Groundwater Sampling – February 2014

The first round of groundwater sampling was completed on February 19, 2014 by a representative of Aqua Pro-Tech Laboratories using the Low-Flow sampling method. Sample depth was set at nine (9) feet

below the top of casing (TOC) and initial depth to groundwater was reported as 6.64 feet below TOC. Geochemical parameters were recorded in order to determine stabilization of the well prior to sampling. The reading for pH prior to sampling was 7.60, specific conductivity 1.11 mS/cm, redox potential 235 mv, dissolved oxygen 4.93 mg/L, turbidity 1.2 NTU and temperature 8.08°C.

Once stabilized, a groundwater sample was collected from MW-1. The sample was analyzed for TCL VO+15 and TCL BN+15. All targeted analytes, with the exception of bis(2-ethyl hexyl)phthalate, were not detected above the laboratory method detection limit (MDL). Bis(2-ethyl hexyl)phthalate was reported above the MDL, however it was reported as an estimated value as it was below the laboratory reporting limit (RL) and is suspected to be a lab-related contaminant. As indicated on **Table 7**, no compounds were detected above the NJDEP Groundwater Quality Criteria.

6.2.2 Groundwater Sampling – March 2014

The second round of groundwater sampling was completed on March 25, 2014 by a representative of Aqua Pro-Tech Laboratories using the Low-Flow sampling method. Sample depth was set at nine (9) feet below the top of casing (TOC) and initial depth to groundwater was reported as 6.72 feet below TOC. Geochemical parameters were recorded in order to determine stabilization of the well prior to sampling. The reading for pH prior to sampling was 8.17, specific conductivity 0.810 mS/cm, redox potential 260 mv, dissolved oxygen 4.91 mg/L, turbidity 0.0 NTU and temperature 10.43°C.

Once stabilized, a groundwater sample was collected from MW-1. The sample was analyzed for TCL VO+15 and TCL BN+15. All targeted analytes were not detected above the laboratory MDL. As indicated on **Table 7**, no compounds were detected above the NJDEP Groundwater Quality Standards.

6.3 Remedial Action Sampling Conclusions

The removal of the source of contamination, a No. 2 heating oil AST and the resulting impacted soil, was completed in December 2013. Based on post-excavation soil samples, no petroleum impacted soil remains on-Site or at the accessible portions of the IEC Site, therefore there is no potential for additional receptors or additional impact to the IEC Site due to impacted soil.

Based on the results of the two groundwater sampling events, which reported no concentrations of targeted analytes above the applicable GWQS, no impacts are present in groundwater. In addition to the monitoring well samples collected the preliminary temporary well investigation, completed in March 2013, reported no impacts with the exception of TW-14 which was addressed with the removal of impacted soil and the installation of MW-1. These results indicate the delineation of the potentially impacted area, which based on the monitoring well samples collected, is no longer present due to the removal of the source.

A site sampling summary table is included in **Table 1**. A summary of the soil post-excavation soil samples collected on-Site is presented on **Table 6**. A summary of the groundwater samples collected from the

on-Site monitoring well is presented on **Table 7**. A summary of the quality assurance and quality control samples collected for the investigation is presented on **Table 8**. A summary of concrete samples collected following the demolition of the Source Site structure is presented on **Table 9**. A summary of the waste classification sample collected from the Source Site is presented on **Table 10**.

6.4 Source Site Excavation and Restoration Operations

As previously stated, the source of the on-Site contamination and the off-Site vapor concern/IEC was a leaking No. 2 heating oil AST located in the basement of the Site which was removed on February 28, 2013 upon discovery. In addition, any product or impacted water observed in the basement of the Site or the IEC Site was removed on February 28, 2013.

The Township of Woodbridge demolished the vacant residential structure on 107 New Street (Site) on September 12, 2013. Once the debris was removed from the property, source removal remediation was conducted. Delineation and potential post-excavation soil samples were collected from the sidewalls and base of the initial excavation, as detailed in Section 4.1.1. Based on these initial samples the excavation was expanded both vertically and horizontally. Subsequent to the completion of excavation activities post-excavation soil samples were collected to confirm remediation was complete, as detailed in Section 4.1.2.

The final excavation dimensions for the Site were 25 feet wide by 55 feet long with depths ranging from 32 inches to 9.75 feet. Soil removal was completed based on field screening, the identification of an impacted sand layer and expedited post-excavation soil sample analytical results. The subsurface consisted of red brown sand from the ground surface to approximately four and a half (4.5) feet bsg. Beneath the sand was layer of red brown silt from approximately 4.5 feet bsg to 6.5 feet bsg followed by red clay to approximately 7.5 feet bsg. A narrow sand layer was encountered at approximately 7.5 feet bsg to 8 feet bsg during excavation.

Approximately 347.45 tons of petroleum impacted soil was excavated from the site. Contaminated soil was transported to the Pure Soil Technologies facility in Jackson, New Jersey for disposal. Certified clean fill was used as backfill in the excavation.

Additionally, during excavation operations any holes observed in the western foundation wall of the IEC Site structure were repaired with concrete and a window well was sealed with concrete block in order to improve the barrier against vapor intrusion. In order to reduce the amount of rain water in the vicinity of the basement a concrete sidewalk was installed in the alley between the 105 and former 107 New Street structure once the area was backfilled with certified clean fill material.

A copy of the soil disposal manifests is included in **Appendix 5**. A copy of the clean fill manifests is included in **Appendix 6**.

6.5 Vapor Monitoring and Maintenance

As per the NJDEP IEC guidance document a monitoring and maintenance plan was created to specify actions to maintain controls for impacted receptors and monitoring of potential receptors related to the vapor concern. The plan specifies the schedule for sampling and maintaining mitigation systems.

Because the structure at the IEC Site was still in place and excavation of any potentially impacted material under the foundation could not be completed, continued monitoring and maintenance is required to ensure the VIMS continues to operate effectively. Once the property is acquired by the Township of Woodbridge, the structure is to be demolished along with the VIMS and any impacted material will be removed. Monitoring and maintenance would therefore no longer be required.

6.5.1 Monitoring and Maintenance – VIMS

As per the IEC ESRA dated October 2013, a full visual inspection of system components, along with the recording of vacuum at each suction point, and the overall system vacuum will be conducted quarterly by a qualified individual. If vacuum levels have changed significantly, sub slab ports will be re-measured to ensure a vacuum level of at least 0.004" w.c. continued to be achieved in the sub slab. Following the first year of inspections it was recommended, pending no significant change in the operation of the system, that inspections be reduced to annually.

In addition to recording suction point vacuum, the following items were to be visually inspected on a quarterly basis for the first year and annually thereafter:

- Concrete integrity over French Drain
- PVC wall sheeting
- Sump cover seal
- Seal around suction points
- Seal around EDPM liner
- Integrity of expandable foam around EDPM liner
- System piping
- Gate Valve positions

Sub slab vacuum measurements were conducted at the end of the first year of operation to ensure that the required level of vacuum was still being achieved. The measurements collected during inspections of the VIMS System are included in **Appendix 7**.

In addition to the system monitoring, following the initial start-up, in-door air samples were collected on July 24, 2013. As presented in the IEC ESRA dated October 2013, no contaminants of concern were detected above the IASL or RAL in any of the samples collected in the July 24, 2013 sampling event.

As per the NJDEP Vapor Intrusion Technical Guidance, Table 6.2 – *Vapor Mitigation Verification and OMM Criteria*, a minimum of one round of indoor air samples will be collected during the heating season

(November 1 to March 31). Therefore, on January 21 and 22, 2014, air samples were collected at the IEC Site. The samples were analyzed for volatile organic compounds according to USEPA Method TO-15 Based on the analytical results of the indoor air samples, no compounds reported concentrations above the residential IASL.

Benzene was reported in sample IA-1 at a concentration of 1 µg/m^3 and in sample IA-2, at a concentration of 0.7 µg/m^3 both of which are below the residential IASL of 2 µg/m^3. No other previous contaminants of concern (ethylbenzene, MTBE, naphthalene, m,p-xylene, o-xylene and total xylenes) were detected above the IASL or RAL in any of the samples collected. A summary of the analytical results for the air samples collected on January 21, 2014 is presented in **Table 11**. A copy of the letter that was submitted to the owner of the property and the resident which summarized the January 21, 2014 air sampling results is provided in **Appendix 8**.

Based on the results of the most recent sampling event the intrusion mitigation system, along with the removal of the source of the contamination and impacted soil, appears to be effective.

All air sampling results and IEC reports have been reported to the NJDEP and the IEC Case Manager, Frank Camera, as per the IEC Guidance document. Submittals included full lab data deliverables, IEC Interim Response Action forms, IEC ESRA Report, IEC Source Control Report and various notification letters for sampling results.

6.5.2 Monitoring for Potential Additional Receptors

Based on previous sampling of both soil and groundwater it was determined that the impacted area was isolated to the area between the northeast corner of the Site structure and the northwest corner of the IEC Site structure. Because the source of the vapor concern has been removed and a system is in place to mitigate any residual impacts the potential for additional receptors is negligible. Should any evidence suggest a change in the vapor concern (e.g. failure of the VIMS system) the potential for additional receptors will be re-evaluated.

6.6 IEC Site Excavation and Restoration Operations

In December 2016 the Township of Woodbridge acquired the IEC Site property and demolished the vacant residence. The structure as well as the VIMS system were disposed of off-Site. Prior to backfill operations, an additional sample was collected below the foundation in the northwestern corner of the IEC Site structure on May 22, 2017. A total of 538.36 tons of clean fill material was used to backfill the basement void and restore grade. The on-Site well was abandoned in June 2017. Following acquisition and demolition of the IEC Site structure, the IEC Case was closed on July 19, 2018. A copy of the IEC Close-out Letter is included in **Appendix 8.**

The Well Abandonment report is included as **Appendix 4**. Copies of the Clean Fill receipts are included as **Appendix 6**. The Post-Excavation soil sample is depicted on **Figure 4**. The results of the May 2017

post-demolition soil sampling are presented in **Table 12**. The laboratory analytical report is included as **Appendix 10**.

7.0 CONCLUSIONS

The source of the contamination on-Site, a No. 2 heating oil AST, was removed along with all impacted material, including standing water and debris present in the 107 New Street basement at the time of discovery, the Site structure and foundation, and impacted soil. Based on clean post-excavation samples and no observed impacts to groundwater, remediation is complete and an Unrestricted Use - AOC Specific Response Action Outcome is recommended.