ExxonMobil

*Environmental Services*

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Steve Trifiletti
Project Manager

July 1, 2010

Mr. Brian Davidson
New York State Department of Environmental Conservation
Remedial Bureau B
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7016

Re: Interim Remedial Measure Feasibility Study Report
Former Pratt Oil Works
Inland Parcels, Queens, New York
Consent Order Case No. D2-1002-12-07AM
Document Tracking No. S241115

Dear Mr. Davidson:

ExxonMobil Oil Corporation ("ExxonMobil") is submitting for your review and comment the enclosed Interim Remedial Measure (IRM) Feasibility Study Report for the Inland Project Area of the Former Pratt Oil Works (Project Area). One hard copy and an electronic copy are provided as requested by New York State Department of Conservation (NYSDEC) dated June 2, 2010. This report has been prepared on behalf of ExxonMobil by Kleinfelder of Bohemia, New York.

Please do not hesitate to contact me at (516) 239-5232 if you have any questions.

Very truly yours,

Steve Trifiletti
Project Manager

Enclosure

Via FEDEX Overnight

cc: S. Caruso (NYSDEC – electronic copy only)
L. Forte (A&L Cesspool Ser./Co. – hard copy only)
J. Kaplan (Waste Management of New York LLC – electronic and hard copy)
K. Lumpe (Steel Equities – hard copy only)

N. Sherman (HP Sherman Co. Inc. – hard copy only)
G. Werwaiss (Werwaiss Realty co. – hard copy only)
J. Wolf (Kleinfelder)

KLEINFELDER
Bright People. Right Solutions.

***DELIVERED VIA Electronic Mail***

July 1, 2010

Mr. Steve P. Trifiletti
ExxonMobil Environmental Services Company
Global Remediation - Major Projects
400 Kingsland Avenue
Brooklyn, New York 11222

**Re: Interim Remedial Measure Feasibility Study Report**
The Inland Parcels (Tract I)
Former Pratt Oil Works
Parcel A - 38-40 Railroad Avenue
Parcel C - 38-70 Review Avenue
Parcel D - 38-84 Railroad Avenue
Parcel E - 38-50 Review Avenue and 38-54 Railroad Avenue
Parcel F - 38-98 Review Avenue
Parcel G - 38-78 Review Avenue
Parcel H - 39-30 Review Avenue
Parcel I - 38-20 Review Avenue
Parcel J - 37-88 Review Avenue
Parcel K - 38-60 Review Avenue
Long Island City, New York

NYSDEC Case No. 07-07418 (Parcel A)
NYSDEC Case No. 08-13060 (Parcel C)
NYSDEC Case No. 09-04539 (Parcel D)
NYSDEC Case No. 09-03356 (Parcel E)
NYSDEC Case No. 09-03488 (Parcel G)
NYSDEC Case No. 09-03616 (Parcel H)
NYSDEC Case No. 09-03287 (Parcel I)
Consent Order Case No. D2-1002-12-07AM
Document Tracking No. S241115

Dear Mr. Trifiletti:

Kleinfelder East, Inc. (Kleinfelder) was retained by ExxonMobil Environmental Services Company (ExxonMobil), on behalf of ExxonMobil Oil Corporation, to conduct an interim remedial measure feasibility study (IRM Study) for the above-referenced Inland Parcels



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(Tract I), herein identified as the Inland Project Area of the Former Pratt Oil Works (Project Area). The IRM Study was conducted in accordance with an *Interim Remedial Measure Feasibility Study Work Plan* (Work Plan) dated February 5, 2010 and approved by the New York State Department of Environmental Conservation (NYSDEC) on March 25, 2010. IRM Study activities were conducted in accordance with a Corrective Action Plan (CAP) included in Order on Consent No. D2-1002-12-07 AM, which was executed between ExxonMobil Oil Corporation and the NYSDEC on July 15, 2008. The location of the Project Area is illustrated on Figure 1. This IRM Study has been reviewed by Kleinfelder Engineering, P.C. for accuracy, content and quality of presentation as described in the engineering certification provided as Attachment A.

Light non-aqueous phase liquid (LNAPL) has been detected in 7 of 11 monitoring wells installed during an interim site characterization conducted on the Inland Project Area. A description including, but not limited to, the nature and extent of LNAPL was submitted to the NYSDEC in an *Interim Site Characterization Report* dated March 11, 2010. LNAPL distribution and thickness are summarized on Table 1. The intent of the IRM Study was an effort to evaluate LNAPL recoverability under various conditions and methods in an effort to determine the optimal method for IRM LNAPL recovery. In addition to evaluating optimal LNAPL recovery, temporary on-site management options, the ability to recycle and/or dispose of accumulated LNAPL, LNAPL waste characterization, physical space requirements and access agreement requirements were considered prior to recommending the proposed optimal IRM technology. Four LNAPL recovery methods were assessed based on the criteria stated above and are discussed in the later sections of this IRM Study.

## SITE DESCRIPTION

The Inland Project Area, along with the Waterfront Project Area, together compose the "Project Area" of the Former Pratt Oil Works (FPOW). The Project Area encompasses approximately 18.5 acres located adjacent to Newtown Creek. The property has been subdivided into 16-lots of Block 312 since 1949. The Project Area is divided north and




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south by the Long Island Railroad (LIRR) train tracks. Properties north of the LIRR are part of the Inland Project Area (Tract I) and properties south are part of the Waterfront Project Area (Tract II). Each tract is further subdivided into parcels (Parcels A through K) based on property ownership. Therefore, each parcel may have more than one address. This IRM Study is limited to the Inland Project Area. A Site Plan and 2006 Aerial Plan illustrating pertinent site features including, but not limited to, block and lot, parcel identification, property boundaries, LIRR, and current buildings and structure layouts are provided on Figures 2 and 3, respectively.

The Inland Project Area includes 11 commercial/industrial properties between the LIRR and Review Avenue, approximately 1,000 feet southeast of the Greenpoint Avenue Bridge. Public utilities servicing the Inland Project Area include underground water, electric, and telecommunication lines. Sanitary waste is stored on each parcel in what appear to be septic tanks; however, the construction of the structures was not confirmed.

The Inland Project Area is located in an industrial business zone. Below is a description of current property use per parcel:

- Parcel A is owned by Waste Management of New York and is used for parking by A&L Recycling.
- Parcel C is owned by Keane Realty LLC and is used for vehicle storage associated with V.I.P. Towing Inc.
- Parcel D is owned by A&L Cesspool Services Company and currently operates as A&L Recycling which specializes in restaurant oil and grease recovery and recycling, as well as cesspool services (http://aandlrecycling.com).
- Parcel E is owned by HP Sherman Co. Inc. and operates as William E. Williams Valve Corporation which designs and manufactures valves for industrial and commercial applications (http://www.williamsvalve.com/).




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- Parcel F is owned by DG Properties LLC and operates as J&S Supply Corporation, a wholesale stocking distributor of residential and commercial building materials (www.jandssupply.com/).
- Parcel G is owned by Werwaiss Realty Company and operates as United Refrigeration Inc., a commercial refrigeration supply distributor (www.uri.com).
- Parcel H operates as American Cleaning Solutions, a division of American Wax Co., who manufactures and sells cleaning and maintenance products (http://www.cleaning-solutions.com/).
- Parcel I is owned by Review Associates and includes a warehouse building partially occupied by LeNoble Lumber on the east side. LeNoble Lumber is a retail lumber and building supply distribution facility (www.lenoblelumber.com). On the west side of the warehouse is National Van Equipment Company Inc., a manufacturer of furniture pads and moving equipment www.nationalvanequip.com.
- Parcel J is owned by Up from the Ashes, Inc. and occupied by Phoenix Beverage Inc., a wholesale beverage distributor.
- Parcel K is owned by Renari Realty, LLC.

The Project Area is bound to the northeast by Review Avenue. Further northeast is Calvary Cemetery. The Project Area is bordered to the northwest by a former Quanta Resources site (State Superfund Site #2-41-005) (Quanta). Southwest of the Project Area is Newtown Creek. Southeast is a former cement facility that is currently not operational.

## SITE GEOLOGY AND HYDROGEOLOGY

The Inland Project Area geology observed in samples collected is predominantly composed of sand of unknown thickness, observed to the maximum depth of investigation (25 to 37 feet below grade [fbg]). Sporadic lenses of silt, gravel and cobble were observed in borings. Fill material including coal ash, brick, concrete and

wood debris were observed along the southern portion of the Inland Project Area (MW-15 and MW-18).

The regional hydrogeologic unit beneath the Project Area is the Upper Glacial aquifer. The Project Area is located between a groundwater recharge area to the east (USGS, 2009) and Newtown Creek to the southwest (a regional groundwater discharge area). Regional groundwater flow is west towards Newtown Creek.

Groundwater is present beneath the Inland Project Area in typical water table conditions. The water table is present beneath the Inland Project Area at depths ranging from approximately 10 fbg along the southern boundary (MW-15) to approximately 28.5 fbg in the northernmost portions (MW-22). LNAPL has been detected in 7 of 11 monitoring wells with thicknesses ranging from 0.01 feet (MW-16) to 8.90 feet (MW-24).

On April 21, 2010, a synoptic round of liquid level gauging was conducted on the monitoring well network. Groundwater flow direction at the water table was towards Newtown Creek with an average gradient of approximately 0.01 feet per foot (ft/ft).

## METHODS OF INVESTIGATION

Several LNAPL recovery techniques, including, recovery via portable battery powered submersible pump, electric powered submersible pump, pneumatic powered submersible pump, and enhanced fluid recovery (EFR), were evaluated for this IRM Study. Monitoring well MW-14 (4-inch diameter), MW-17 (2-inch diameter), and MW-24 (4-inch diameter) were selected for the IRM study based on the following:

- Terms and conditions regarding waste storage and disposal agreed to within the site access agreements executed between ExxonMobil and the individual property owners.;
- Location of the wells outside of the high traffic patterns;

- Greater LNAPL thickness levels in certain wells located in Inland Project Area; and .
- Waste characterization analysis of LNAPL samples collected from the wells was acceptable for non-hazardous recycling by a disposal facility with vacuum truck services.

The location of the monitoring wells are illustrated on Figures 2 and 3.

The results of each technique were compared in an effort to evaluate the optimal LNAPL recovery method. The following subsections describe the LNAPL recovery techniques used during the IRM study.

***Portable Battery Powered Submersible Pump***

On April 19, 2010, monitoring wells MW-17 and MW-24 were gauged for depth to LNAPL and depth to water (DTW) using an electronic interface probe (EIP) to measure LNAPL thickness. LNAPL was pumped from the monitoring wells using a portable submersible Spill Buddy™ pump. This pump was selected, rather than traditional manual bailing, in an effort to minimize possible worker exposure, waste, and surface spills. LNAPL was pumped into 5-gallon safety cans and transferred to United States Department of Transportation (USDOT)-approved 55-gallon, steel drums that were grounded and staged on spill containment pallets for temporary storage, pending off-site disposal. During the LNAPL recovery, the LNAPL thickness was periodically measured in MW-24. LNAPL was unable to be measured in monitoring well MW-17 during the recovery event due to the limited space within the 2-inch diameter well with the pump inside the well. The pumping continued until less then 0.5-feet of LNAPL was detected. Once a level of less then 0.5-feet of LNAPL was detected, pumping ceased, and the monitoring wells were gauged at various intervals, in an effort to evaluate LNAPL recharge rates.

### *Electric Powered Submersible Pump*

Electric powered submersible pumping was used on monitoring wells MW-17 and MW-24 on April 27 and 28, 2010, respectively. Depth to LNAPL and DTW was measured using an EIP to measure LNAPL thickness prior to pumping. LNAPL was pumped from the monitoring wells using a Magnum Spill Buster™ pumping system which operates by use of a portable generator. The Magnum Spill Buster™ is an automated, free-phase LNAPL pumping system. The pump is designed to remove LNAPL from the water table using an auto-seeking device allowing the pump intake to automatically follow the elevation of the LNAPL/water interface as it fluctuates throughout the length of the well. The pump is designed to shut off and not pump groundwater once the LNAPL is evacuated from the well. The Auto Seeker is a small, motorized, reel assembly installed on the wellhead. It automatically raises and lowers the probe to follow the LNAPL interface through the depth of the well. The 1.93-inch diameter probe contains a 12 volt (v) direct current (dc) electric product pump. The pump was set to automatically seek LNAPL every 20 minutes at a slow pumping rate setting. If LNAPL recharged within that 20 minute interval, the pump would reactivate and begin pumping until the well was free of LNAPL. The LNAPL recovered was transferred and temporarily stored in USDOT approved 55-gallon, steel drums staged on spill containment pallets, pending off-site disposal. During the pump event (LNAPL recovery), the LNAPL thickness was periodically measured in MW-24. MW-17 was not gauged due to the limited space from the pump in the well. The pumping continued until several pump cycles were completed. Once pumping ceased the monitoring wells were gauged at various intervals, in an effort to evaluate LNAPL recharge rates.

### *Pneumatic Powered Submersible Pump*

Pneumatic powered submersible pumping was used on monitoring wells MW-14 and MW-24 on May 3 and 4, 2010, respectively. Monitoring well MW-14 was used rather than MW-17 because the pump would not fit down the 2-inch diameter monitoring well (MW-17). Monitoring wells MW-14 and MW-24 are 4-inch diameter wells. Pneumatic pumping was conducted by using a Xitech Instruments, Inc. ADJ101H high performance

smart skimmer and 2500es electronic controller. Prior to installation of the pump, depth to LNAPL and DTW were gauged using an EIP to measure LNAPL thickness in an effort to evaluate the appropriate depth for pump installation. The pump uses a skimmer equipped with a floating intake that automatically adjusts with water/LNAPL fluctuations for the recovery of LNAPL. The LNAPL gravity drains through coiled tubing to a reservoir in the pump below the skimmer. As the chamber fills with LNAPL, a float switch is activated and pressurized air is used to pump the LNAPL from the chamber through ¼-inch diameter nylon tubing to a 55-gallon drum on the surface. A portable air compressor was used for this test. The electronic controller has a variety of pump cycle settings to operate the pump intermittently, record run time, and has a high level tank shut-off assembly. For this test, the controller setting was turned to continuous operation in an effort to evaluate pump flow rates and effectiveness until the well was free of LNAPL. Once pumping ceased, the monitoring wells were gauged at various intervals, in an effort to evaluate LNAPL recharge rates.

***Enhanced Fluid Recovery***

EFR events were conducted on monitoring wells MW-17 and MW-24 on May 11, and 18, 2010. Prior to initiating the EFR events, the wells were gauged for depth to LNAPL and DTW using an EIP to measure LNAPL thickness. The EFR event was conducted via vacuum truck to remove LNAPL from the monitoring well. The vacuum truck was provided and operated by Lorco Petroleum Services of Elizabeth, New Jersey (Lorco). A single, 1-inch diameter extraction pipe ("stinger") was temporarily installed within the monitoring well and connected to a vacuum truck via a cam lock fitting and hose. In an effort to induce recovery, the stinger was lowered under vacuum until LNAPL was entrained in the air flow. The stinger was adjusted, as necessary, in an effort to maximize LNAPL recovery without penetrating 1-foot below the LNAPL elevation. During the EFR event (LNAPL recovery), the LNAPL thickness was periodically measured. The EFR continued for approximately 5 to 6 hours. Following the EFR event, the monitoring well was gauged at various intervals in an effort to evaluate the LNAPL recharge rate.




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## FINDINGS AND RESULTS

For each recovery method, the depth to LNAPL and DTW measurements were compared to the monitoring well top of casing elevation to determine the LNAPL and groundwater elevation. In addition, the LNAPL thickness was converted to LNAPL volume observed in the well based on the well diameter. The LNAPL elevation, groundwater elevation, and LNAPL volume detected in the wells were graphed versus time to illustrate the change in elevation and volume, respectively, during the LNAPL recovery and recharge. A trend line was added to the LNAPL volume versus time plot in an effort to evaluate the average recharge rate of LNAPL in gallons per minute (gpm).

The following subsections describe the findings and results of the LNAPL recovery techniques used during the IRM study.

### *Portable Battery Powered Submersible Pump*

LNAPL recovery was conducted on monitoring well MW-17 using a Spill Buddy ™ pump for approximately 38 minutes in which 1.2 gallons of LNAPL was recovered and LNAPL thickness was reduced from 5.15 to 0.52 feet for an average recovery rate of 0.03 gpm. LNAPL recovery occurred on monitoring well MW-24 for 32 minutes in which 9 gallons of LNAPL was recovered. LNAPL thickness was reduced from 8.81 feet to 0.45 feet for an average recovery rate of 0.28 gpm. LNAPL recharge for MW-17 and MW-24 were calculated to be -0.0004 and 0.038 gpm, respectively. The negative recharge rate in MW-17 may be attributable to the groundwater recharging faster than the LNAPL in the well during the time period monitored. Tables 2 and 3 summarize the gauging data measured during Spill Buddy ™ pump evaluation. Figures 1 and 2 of Appendix B illustrate the LNAPL elevation, groundwater elevation and LNAPL volume detected in the wells over time.




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### *Electric Powered Submersible Pump*

LNAPL recovery was conducted on monitoring well MW-17 using a Spill Buddy ™ submersible pump for 141 minutes in which 1.2 gallons of LNAPL was recovered and LNAPL thickness was reduced from 2.75 to 0.14 feet for an average pumping rate of 0.009 gpm. Pumping occurred on monitoring well MW-24 for 160 minutes in which 17 gallons of LNAPL was recovered and LNAPL thickness was reduced from 7.80 feet to 0.20 feet for an average pumping rate of 1 gpm. LNAPL recharge for MW-17 and MW-24 were 0.0004 and 0.034 gpm, respectively. The steady- state pumping rate (following initial recovery of LNAPL from the well), which is believed to be more indicative of continuous pumping conditions, was calculated at 0.06 gpm for MW-24. Steady-state pumping rates were unable to be determined in MW-17 because the well could not be gauged during pumping operation because it is a 2-inch diameter well. Tables 4 and 5 summarize the gauging data measured during the Spill Buster ™ pump evaluation. Figures 3 and 4 of Appendix B illustrate the LNAPL elevation, groundwater elevation and LNAPL volume detected in the well over time.

### *Pneumatic Powered Submersible Pump*

LNAPL recovery was conducted on monitoring well MW-14 using a Xitech pneumatic pump for 89 minutes in which 7.3 gallons of LNAPL was recovered and LNAPL thickness was reduced from 5.93 to 0.15 feet for an average pumping rate of 0.08 gpm. Pumping occurred on monitoring well MW-24 for 167 minutes in which 17.43 gallons of LNAPL was recovered and LNAPL thickness was reduced from 8.78 feet to 0.20 feet for an average pumping rate of 0.1 gpm. LNAPL recharge for MW-14 and MW-24 were 0.003 and 0.035 gpm, respectively. Tables 6 and 7 summarize the gauging data measured during the pneumatic submersible pump evaluation. Figures 5 and 6 of Appendix B illustrate the LNAPL elevation, groundwater elevation and LNAPL volume detected in the well over time.




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### *Enhanced Fluid Recovery*

LNAPL recovery was conducted on monitoring well MW-17 using EFR for approximately 295 minutes in which approximately 20 gallons of total fluid (LNAPL and water) was recovered for an average recovery rate of 0.068 gpm. LNAPL thickness was reduced from 5.74 feet to 0 feet. Recharge rate for MW-17 was 0.0002 gpm. EFR occurred on monitoring well MW-24 for approximately 255 minutes in which approximately 76 gallons of total fluid was recovered and LNAPL thickness was reduced from 9.04 to 0 feet. Recharge rate for MW-24 was 0.028 gpm. Tables 8 and 9 summarize the gauging data measured during the EFR evaluation. Figures 7 and 8 of Appendix B illustrate the LNAPL elevation, groundwater elevation and LNAPL volume detected in the well over time.

## WASTE MANAGEMENT

LNAPL recovered during the IRM Study pump events were stored in USDOT-approved, 55-gallon, steel drums that were grounded and staged on spill containment pallets, pending off-site disposal. The drums were emptied on April 27, 2010 and May 11, 2010, by a Lorco vacuum truck for recycling. LNAPL recovered during the EFR events was contained in a vacuum truck supplied by Lorco and transported to its facility for recycling. Copies of the non-hazardous waste manifests are provided in Appendix C.

## CONCLUSIONS

Between April 19, 2010 and May 18, 2010, several LNAPL recovery methods were conducted in an effort to evaluate an optimal method for IRM LNAPL recovery. The methods included a portable, battery–powered, submersible pump (Spill Buddy™), electric-powered, submersible pump (Spill Buster™), pneumatic-powered, submersible pump (Xitech) and EFR. The following is a summary of the evaluation:

- Cumulative LNAPL recovery during pump evaluation ranged from 1.20 gallons in MW-17 during the Spill Buddy™ and Spill Buster™ evaluation to 17.43 gallons in MW-24 during Xitech pump evaluation.
- Cumulative total fluids recovery during EFR evaluation ranged from 20 gallons in MW-17 to 76 gallons in MW-24.
- Average LNAPL recovery rates during pump evaluation ranged from 0.009 gpm in MW-17 (Spill Buster™) to 0.28 in MW-24 (Spill Buddy™).
- Average total fluids recovery rates during EFR evaluation ranged from 0.068 gpm in MW-17 to 0.30 in MW-24.
- Changes in LNAPL elevation during recovery ranged from 0.25 feet in MW-17 (Spill Buster™) to 3.9 in MW-17 (Spill Buddy™).
- Average recharge rates ranged from -0.0004 gpm MW-17 to 0.038 gpm MW-24.

Table 11 summarizes the average recovery and recharge rates calculated during the IRM Study.

The four recovery methods induced a rise in the groundwater elevation beneath the LNAPL inside the monitoring well, which is likely attributable to hydrostatic compensation for the reduced thickness of the overlying LNAPL. This indicates that the LNAPL thicknesses measured inside the well may not represent actual thickness of LNAPL in surrounding soil grain pore space.

The low LNAPL recovery, recovery rates and recharge rates observed in monitoring well MW-17 are likely attributable to the monitoring well's installation and construction. The monitoring well was installed as a 2-inch diameter well using direct push technology and a driven casing method due to limited access in the alley where it is located. Therefore, the well is completed with a smaller borehole, less gravel pack and less screened surface area than the 4-inch diameter wells installed using hollow stem augers which may decrease the efficiency of the well.

The Spill Buster™ pump, using the slow flow setting, and Xitech Pump appear to be the most effective for LNAPL recovery, with average recovery rates of approximately 0.10 gpm in MW-24, closer to the observed recharge rate of 0.034 gpm compared to other methods, and influencing similar changes in LNAPL elevation. Recovering LNAPL at or close to the LNAPL recharge rate should reduce the displacement of LNAPL with

groundwater, and maintain the relative permeability and saturation for LNAPL recovery. It is anticipated that this may be accomplished by sustaining LNAPL-wet pore spaces in the formation to minimize premature development of residual LNAPL conditions (globules and ganglia) due to over-pumping. Over pumping may accelerate the creation of a three-phase system (water, air, LNAPL) in the formation pore space, which may inhibit LNAPL recoverability due to interfacial tension between phases and capillary forces.

EFR is the least favorable method for recovery due to the introduction of groundwater into the recovered LNAPL which may accelerate the creation of a three-phase system.

## RECOMMENDATIONS

Continued weekly gauging and manual LNAPL recovery events using portable Spill Buddy™ pumps on monitoring wells MW-14, MW-16, MW-17, MW-19, MW-22, MW-23 and MW-24 is proposed based on the findings and results of this IRM Study. Spill Buddy™ technology is preferred because it is portable, has the ability to pump only LNAPL, and sustains an LNAPL thickness in the wells that allows for the maintenance of LNAPL wet pore space.

The installation of continuous IRM LNAPL recovery pumps in monitoring wells MW-14 and MW-24 is not proposed at this time due to the limited available space around these wells, and the close proximity of MW-24 to an active overhead door and limited egress from parking areas near MW-14.

## TENTATIVE SCHEDULE

The tentative schedule of IRM activities is to continue weekly gauging and manual LNAPL recovery events using portable Spill Buddy™ pumps on monitoring wells MW-14, MW-16, MW-17, MW-19, MW-22, MW-23 and MW-24.




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If you have questions or require additional information, please contact the undersigned at (631) 218-0612.

Very truly yours,
**Kleinfelder East, Inc.**

John E. Wolf
Senior Project Manager

Scott Strom
Project Hydrogeologist

Attachments

Copy: Jeffrey Hale, Kleinfelder (electronic only)
File (12)

## LIMITATIONS

*"Kleinfelder performed the services for this project under the Standard Procurement Agreement with Procurement, a division of ExxonMobil Global Services Company (signed on June 21, 2007). Kleinfelder states that the services performed are consistent with professional standard of care defined as that level of services provided by similar professionals under like circumstances. This report is based on the regulatory standards in effect on the date of the report. It has been produced for the primary benefit of Exxon Mobil Global Services Company and its affiliates."*

## REFERENCES

United States Geological Survey, *Water-Table and Potentiometric-Surface Altitudes in the Upper Glacial, Magothy, and Lloyd Aquifers Beneath Long Island, New York, March-April 2006*, Scientific Investigation Map 3066, 2009.




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# TABLES

**TABLE 1**
**GROUNDWATER GAUGING AND FIELD PARAMETERS SUMMARY**

Former Pratt Oil Works
Long Island City, New York

April, 2009 through April 21, 2010

| | | Gauging Data | | | | | | Field Parameters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Well ID** (screen Interval) | **Date** | **Top of Casing Elevation** (feet) | **Depth to Water** (feet) | **Depth to LNAPL** (feet) | **Specific Gravity** (g/cm3) | **LNAPL Thickness** (feet) | **Corrected GW Elevation** (feet) | **PID Reading** (ppmv) | **pH** (s.u.) | **Temperature** (ºC) | **Conductivity** (mS/cm) | **Oxidation-Reduction Potential** (mV) | **Dissolved Oxygen** (mg/L) | **Turbidity** (ntu) | **Salinity** (ppt) | **Comments** |
| **MW-1** | 4/7/2009 | 13.49 | 9.51 | ND | NA | ND | 3.98 | 0.4 | 6.57 | 11.78 | 0.68 | -302 | NA* | 530 | NM | |
| (6-18) | 4/17/2009 | 13.49 | 9.43 | ND | NA | ND | 4.06 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 13.49 | 8.56 | ND | NA | ND | 4.93 | 0.6 | 7.02 | 17.97 | 0.57 | -231 | 2.64 | 0.37 | NM | |
| | 10/26/2009 | 13.49 | 8.08 | ND | NA | ND | 5.41 | NM | 6.72 | 18.59 | 2.00 | -324 | 0.00 | 7.20 | 0.08 | |
| | 1/20/2010 | 13.49 | 8.35 | ND | NA | ND | 5.14 | 0.0 | 6.76 | 11.50 | 0.58 | -295 | 0.69 | 5.80 | 0.03 | |
| | 1/22/2010 | 13.49 | 8.36 | ND | NA | ND | 5.13 | 0.2 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 13.49 | 8.30 | ND | NA | ND | 5.19 | 1.4 | 8.51 | 10.32 | 0.551 | -283 | 0.00 | 0.10 | 0.00 | |
| **MW-2** | 4/7/2009 | 6.56 | 5.45 | ND | NA | ND | 1.11 | 80.9 | NM | NM | NM | NM | NM | NM | NM | |
| (2-17) | 4/17/2009 | 6.56 | 7.81 | 7.72 | 0.89** | 0.09 | -1.17 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 6.56 | 8.88 | 7.78 | 0.89** | 1.1 | -1.34 | 0.5 | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 6.56 | 8.09 | 6.72 | 0.89** | 1.37 | -0.31 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 6.56 | 9.93 | 8.19 | 0.89** | 1.74 | -1.82 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 6.56 | 8.04 | 7.54 | 0.89** | 0.50 | -1.04 | 6.8 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-3** | 4/7/2009 | 7.95 | NM | NM | NA | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | |
| (3-18) | 4/17/2009 | 7.95 | NM | NM | NA | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 7.95 | NM | NM | 0.9386 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 7.95 | 9.70 | 8.15 | 0.9386 | 1.55 | -0.30 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 7.95 | 8.22 | 8.20 | 0.9386 | 0.02 | -0.25 | 5.5 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 7.95 | 9.05 | 8.95 | 0.9386 | 0.10 | -1.01 | 0.2 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-4** | 4/7/2009 | 8.87 | 9.65 | 6.59 | 0.8908 | 3.06 | 1.95 | 135 | NM | NM | NM | NM | NM | NM | NM | |
| (5-22) | 4/17/2009 | 8.87 | 11.55 | 6.52 | 0.8908 | 5.03 | 1.80 | NS | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 8.87 | 10.95 | 6.00 | 0.8908 | 4.95 | 2.33 | 7.6 | NM | NM | NM | NM | NM | NM | NM | Well abandoned |
| **MW-4S** | 10/26/2009 | 8.81 | 7.20 | 6.31 | 0.8908 | 0.89 | 2.40 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 8.81 | 7.27 | 6.50 | 0.8908 | 0.77 | 2.23 | 161.0 | NM | NM | NM | NM | NM | NM | NM | |
| (4-9) | 4/21/2010 | 8.81 | 6.43 | 5.81 | 0.8908 | 0.62 | 2.93 | 15.6 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-4D** | 10/26/2009 | 8.57 | 6.95 | ND | NA | ND | 1.62 | NM | NM | NM | NM | NM | NM | NM | NM | |
| (13.5-18.5) | 10/29/2009 | 8.57 | 6.78 | ND | NA | ND | 1.79 | NM | 6.68 | 18.10 | 1.05 | -119 | 0.00 | 17.00 | 0.05 | |
| | 1/22/2010 | 8.57 | 7.72 | ND | NA | ND | 0.85 | 4.9 | NM | NM | NM | NM | NM | NM | NM | |
| | 1/26/2010 | 8.57 | 7.84 | ND | NA | ND | 0.73 | NM | 6.78 | 15.92 | 1.07 | -136 | 0.66 | 59.50 | 0.08 | |
| | 4/21/2010 | 8.57 | 6.71 | ND | NA | ND | 1.86 | 1.4 | 6.99 | 15.39 | 1.18 | -202 | 0.00 | 0.10 | 0.10 | |
| **MW-5** | 4/7/2009 | 9.62 | 18.82 | 7.14 | 0.8952 | 11.68 | 1.26 | 23.0 | NM | NM | NM | NM | NM | NM | NM | |
| (13-21) | 4/17/2009 | 9.62 | 18.66 | 7.32 | 0.8952 | 11.34 | 1.11 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 9.62 | 20.00 | 6.99 | 0.8952 | 13.01 | 1.27 | 4.7 | NM | NM | NM | NM | NM | NM | NM | |
| | 9/4/2009 | 9.62 | 17.10 | 7.00 | 0.8952 | 10.10 | 1.56 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 9/10/2009 | 9.62 | 20.35 | 8.52 | 0.8952 | 11.83 | -0.14 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 9.62 | 18.05 | 7.69 | 0.8952 | 10.36 | 0.84 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 9.62 | NM | NM | 0.8952 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | Passive Bailer |
| | 4/21/2010 | 9.62 | 19.60 | 7.11 | 0.8952 | NM | NM | 9.8 | NM | NM | NM | NM | NM | NM | NM | |



**Kleinfelder**
One Corporate Drive, Suite 201, Bohemia, NY

**TABLE 1**
**GROUNDWATER GAUGING AND FIELD PARAMETERS SUMMARY**

Former Pratt Oil Works
Long Island City, New York

April, 2009 through April 21, 2010

| | | Gauging Data | | | | | | Field Parameters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Well ID** (screen Interval) | **Date** | **Top of Casing Elevation** (feet) | **Depth to Water** (feet) | **Depth to LNAPL** (feet) | **Specific Gravity** (g/cm3) | **LNAPL Thickness** (feet) | **Corrected GW Elevation** (feet) | **PID Reading** (ppmv) | **pH** (s.u.) | **Temperature** (ºC) | **Conductivity** (mS/cm) | **Oxidation-Reduction Potential** (mV) | **Dissolved Oxygen** (mg/L) | **Turbidity** (ntu) | **Salinity** (ppt) | **Comments** |
| **MW-6** | 4/7/2009 | 11.80 | 12.18 | 9.09 | 0.8944 | 3.09 | 2.38 | 68.7 | NM | NM | NM | NM | NM | NM | NM | |
| (18-23) | 4/17/2009 | 11.80 | 12.55 | 9.35 | 0.8944 | 3.20 | 2.11 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 11.80 | 12.82 | 8.79 | 0.8944 | 4.03 | 2.58 | 2.9 | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 11.80 | 15.55 | 9.08 | 0.8944 | 6.47 | 2.04 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 11.80 | 18.00 | 9.22 | 0.8944 | 8.78 | 1.65 | 42.7 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 11.80 | 9.25 | 8.62 | 0.8944 | 0.63 | 3.11 | 14.8 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-7** | 4/7/2009 | 6.54 | 5.18 | 4.82 | 0.9129 | 0.36 | 1.69 | 211 | NM | NM | NM | NM | NM | NM | NM | |
| (1-15) | 4/17/2009 | 6.54 | 8.42 | 7.74 | 0.9129 | 0.68 | -1.26 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 6.54 | 9.30 | 7.80 | 0.9129 | 1.50 | -1.39 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 6.54 | 7.70 | 7.07 | 0.9129 | 0.63 | -0.58 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 6.54 | 7.62 | 6.04 | 0.9129 | 1.58 | 0.36 | 40.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 6.54 | 8.10 | 8.05 | 0.9129 | 0.05 | -1.51 | 107 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-8** | 4/7/2009 | 5.80 | 4.09 | ND | NA | ND | 1.71 | 0.0 | 7.59 | 8.07 | 37.40 | -140 | 3.7 | 74.9 | 2.31 | |
| (1-13) | 4/17/2009 | 5.80 | 7.54 | ND | NA | ND | -1.74 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/28/2009 | 5.80 | 5.65 | ND | NA | ND | 0.15 | NM | 7.68 | 28.95 | 27.40 | -330 | 0.26 | 1.4 | NM | |
| | 7/29/2009 | 5.80 | 7.50 | ND | NA | ND | -1.70 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 5.80 | 6.83 | ND | NA | ND | -1.03 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/27/2009 | 5.80 | 5.37 | ND | NA | ND | 0.43 | NM | 7.10 | 16.32 | 32.40 | -327 | 0.00 | 2.90 | 2.01 | |
| | 1/20/2010 | 5.80 | 4.38 | ND | NA | ND | 1.42 | 0.0 | 7.04 | 7.15 | 35.20 | -238 | 1.94 | 148 | 2.14 | |
| | 1/22/2010 | 5.80 | 6.59 | ND | NA | ND | -0.79 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 5.80 | 7.66 | ND | NA | ND | -1.86 | 0.2 | 6.96 | 11.49 | 40.2 | -295 | 0.00 | 2.60 | 2.50 | |
| **MW-9** | 4/7/2009 | 9.76 | 17.70 | 8.40 | 0.9074 | 9.30 | 0.50 | 106 | NM | NM | NM | NM | NM | NM | NM | |
| (3-18) | 4/17/2009 | 9.76 | 17.51 | 8.28 | 0.9074 | 9.23 | 0.63 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 9.76 | 17.90 | 8.35 | 0.9074 | 9.55 | 0.53 | 5.3 | NM | NM | NM | NM | NM | NM | NM | |
| | 9/4/2009 | 9.76 | 17.98 | 8.35 | 0.9074 | 9.63 | 0.52 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 9/10/2009 | 9.76 | 19.30 | 9.51 | 0.9074 | 9.79 | -0.66 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 9/16/2009 | 9.76 | 17.90 | 8.25 | 0.9074 | 9.65 | 0.62 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 9.76 | 17.90 | 8.84 | 0.9074 | 9.06 | 0.08 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 9.76 | 18.20 | 9.85 | 0.9074 | 8.35 | -0.86 | 9.8 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 9.76 | 14.99 | 8.86 | 0.9074 | 6.13 | 0.33 | 15.7 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-10** | 4/7/2009 | 10.56 | 8.74 | ND | NA | ND | 1.82 | 1.8 | 6.90 | 12.32 | 0.478 | -143 | 0.0 | 95.4 | 0.02 | |
| (3-13) | 4/17/2009 | 10.56 | 8.64 | ND | NA | ND | 1.92 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 10.56 | 8.10 | ND | NA | ND | 2.46 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 7/30/2009 | 10.56 | 8.04 | ND | NA | ND | 2.52 | NM | 6.94 | 18.44 | 0.54 | -135 | 5.47 | 0.0 | NM | |
| | 10/26/2009 | 10.56 | 8.20 | ND | NA | ND | 2.36 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/27/2009 | 10.56 | 8.20 | ND | NA | ND | 2.36 | NM | 6.71 | 17.93 | 0.78 | -180 | 0.00 | 5.50 | 0.04 | |
| | 1/20/2010 | 10.56 | 8.59 | ND | NA | ND | 1.97 | 0.0 | 6.51 | 14.69 | 1.54 | -196 | 0.70 | 3.70 | 0.08 | |
| | 1/22/2010 | 10.56 | 8.63 | ND | NA | ND | 1.93 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 10.56 | 8.28 | ND | NA | ND | 2.28 | 0.0 | 6.78 | 15.04 | 1.25 | 201 | 0.24 | 46.0 | 0.00 | |



**Kleinfelder**
One Corporate Drive, Suite 201, Bohemia, NY

**TABLE 1**
**GROUNDWATER GAUGING AND FIELD PARAMETERS SUMMARY**

Former Pratt Oil Works
Long Island City, New York

April, 2009 through April 21, 2010

| | | Gauging Data | | | | | | Field Parameters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Well ID** (screen Interval) | **Date** | **Top of Casing Elevation** (feet) | **Depth to Water** (feet) | **Depth to LNAPL** (feet) | **Specific Gravity** (g/cm3) | **LNAPL Thickness** (feet) | **Corrected GW Elevation** (feet) | **PID Reading** (ppmv) | **pH** (s.u.) | **Temperature** (ºC) | **Conductivity** (mS/cm) | **Oxidation-Reduction Potential** (mV) | **Dissolved Oxygen** (mg/L) | **Turbidity** (ntu) | **Salinity** (ppt) | **Comments** |
| **MW-11** | 4/7/2009 | 6.98 | 5.73 | ND | NA | ND | 1.25 | 0.0 | 4.62 | 10.54 | 29.6 | -242 | 0.00 | 77.1 | NM | |
| (2-17) | 4/17/2009 | 6.98 | 8.72 | ND | NA | ND | -1.74 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 6.98 | 7.98 | ND | NA | ND | -1.00 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 7/30/2009 | 6.98 | 8.57 | ND | NA | ND | -1.59 | NM | 6.87 | 18.76 | 26.60 | -221 | 5.49 | 6.9 | NM | |
| | 10/26/2009 | 6.98 | 8.15 | ND | NA | ND | -1.17 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/27/2009 | 6.98 | 7.34 | ND | NA | ND | -0.36 | NM | 6.71 | 17.88 | 30.90 | -291 | 0.00 | 0.00 | 1.94 | |
| | 1/21/2010 | 6.98 | 5.33 | ND | NA | ND | 1.65 | 0.0 | 6.42 | 11.58 | 28.70 | -254 | 1.34 | 3.20 | 1.75 | |
| | 1/22/2010 | 6.98 | 8.18 | ND | NA | ND | -1.20 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 6.98 | NM | ND | NA | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | Well destroyed |
| **MW-12** | 4/7/2009 | 6.67 | 8.26 | ND | NA | ND | -1.59 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| (2-16) | 4/17/2009 | 6.67 | 8.41 | 8.40 | 0.91** | 0.01 | -1.73 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 6.67 | NM | ND | NA | ND | NM | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 6.67 | 7.95 | 7.81 | 0.91** | 0.14 | -1.15 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 6.67 | 7.81 | 7.80 | 0.91** | 0.01 | -1.13 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 6.67 | 7.96 | ND | NA | ND | NM | 2.0 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-13** | 4/7/2009 | 7.82 | NM | ND | NA | NM | NM | 0.0 | 8.43 | 9.68 | 1.14 | -155 | 0.00 | 102 | 0.05 | |
| (1-8) | 4/17/2009 | 7.82 | 3.64 | ND | NA | ND | 4.18 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 7/29/2009 | 7.82 | 3.51 | ND | NA | ND | 4.31 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 7/30/2009 | 7.82 | 3.47 | ND | NA | ND | 4.35 | NM | 7.22 | 20.84 | 1.40 | -131 | 4.18 | 0.0 | NM | |
| | 10/26/2009 | 7.82 | 3.59 | ND | NA | ND | 4.23 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/27/2009 | 7.82 | 3.59 | ND | NA | ND | 4.23 | NM | 6.87 | 15.90 | 1.34 | -76 | 0.0 | 10.50 | 0.07 | |
| | 1/22/2010 | 7.82 | NM | ND | NA | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | Inaccessible |
| | 4/21/2010 | 7.82 | 3.70 | ND | NA | NM | NM | 0.0 | 7.34 | 12.31 | 1.40 | -166 | 0.00 | 2.70 | 0.10 | |
| **MW-14** | 7/29/2009 | 22.92 | 26.80 | 20.65 | 0.9086 | 6.15 | 1.71 | 10.9 | NM | NM | NM | NM | NM | NM | NM | |
| (7.5-27.5) | 10/26/2009 | 22.92 | 26.50 | 21.31 | 0.9086 | 5.19 | 1.14 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 22.92 | 26.98 | 21.70 | 0.9086 | 5.28 | 0.74 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 22.92 | 23.33 | 20.67 | 0.9086 | 2.66 | 2.01 | 4.7 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-15** | 7/28/2009 | 13.05 | 10.48 | ND | NA | ND | 2.57 | NM | 7.05 | 19.48 | 0.78 | -104 | 0.32 | 786 | NM | |
| (5.5-20.5) | 7/29/2009 | 13.05 | 10.59 | ND | NA | ND | 2.46 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 13.05 | 11.32 | ND | NA | ND | 1.73 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/28/2009 | 13.05 | NM | ND | NA | ND | NM | NM | 6.41 | 13.60 | 216.00 | -138 | 8.11 | 990 | 0.10 | |
| | 1/22/2010 | 13.05 | 11.91 | ND | NA | ND | 1.14 | 3.8 | NM | NM | NM | NM | NM | NM | NM | |
| | 1/26/2010 | 13.05 | 11.88 | ND | NA | ND | 1.17 | NM | 6.79 | 15.32 | 0.89 | -121 | 1.27 | 122 | 0.04 | |
| | 4/21/2010 | 13.05 | 10.79 | ND | NA | ND | 2.26 | 0.2 | 7.08 | 15.02 | 1.12 | -161 | 0.00 | 41.50 | 0.10 | |
| **MW-16** | 7/29/2009 | 24.12 | 21.00 | 20.91 | 0.91** | 0.09 | 3.20 | 0.2 | NM | NM | NM | NM | NM | NM | NM | |
| (10.5-30.5) | 10/26/2009 | 24.12 | 21.27 | 21.25 | 0.91** | 0.02 | 2.87 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 24.12 | 21.95 | 21.52 | 0.91** | 0.43 | 2.56 | 5.9 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 24.12 | 20.07 | 20.06 | 0.91** | 0.01 | 4.06 | 1.2 | NM | NM | NM | NM | NM | NM | NM | |

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Former Pratt Oil Works
Long Island City, New York

April, 2009 through April 21, 2010

| | | Gauging Data | | | | | | Field Parameters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Well ID** (screen Interval) | **Date** | **Top of Casing Elevation** (feet) | **Depth to Water** (feet) | **Depth to LNAPL** (feet) | **Specific Gravity** (g/cm3) | **LNAPL Thickness** (feet) | **Corrected GW Elevation** (feet) | **PID Reading** (ppmv) | **pH** (s.u.) | **Temperature** (ºC) | **Conductivity** (mS/cm) | **Oxidation-Reduction Potential** (mV) | **Dissolved Oxygen** (mg/L) | **Turbidity** (ntu) | **Salinity** (ppt) | **Comments** |
| **MW-17** | 7/29/2009 | 16.81 | 22.20 | 14.76 | 0.9122 | 7.44 | 1.40 | 3.5 | NM | NM | NM | NM | NM | NM | NM | |
| (8.5-25.5) | 10/26/2009 | 16.81 | 23.0 | 15.44 | 0.9122 | 7.56 | 0.71 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 16.81 | 22.35 | 16.02 | 0.9122 | 6.33 | 0.23 | 1.4 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 16.81 | 17.22 | 15.53 | 0.9122 | 1.69 | 1.13 | 1.6 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-18** | 9/24/2009 | 23.55 | 20.92 | ND | NA | ND | 2.63 | NM | 6.50 | 27.67 | 1.98 | -144 | 0.40 | 33.50 | NM | |
| (17.5-37.5) | 10/26/2009 | 23.55 | 21.32 | ND | NA | ND | 2.23 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/29/2009 | 23.55 | 21.76 | ND | NA | ND | 1.79 | NM | 6.59 | 14.84 | 1.63 | -126 | 0.0 | 159 | 0.08 | |
| | 1/22/2010 | 23.55 | 21.28 | ND | NA | ND | 2.27 | 0.5 | NM | NM | NM | NM | NM | NM | NM | |
| | 1/26/2010 | 23.55 | 21.40 | ND | NA | ND | 2.15 | NM | 6.63 | 14.45 | 2.00 | -133 | 1.29 | 47.50 | 0.10 | |
| | 4/21/2010 | 23.55 | 19.97 | ND | NA | ND | 3.58 | 1.9 | 7.63 | 15.92 | 1.73 | -212 | 0.00 | 60.00 | 0.10 | |
| **MW-19** | 9/24/2009 | 24.85 | 22.55 | 21.95 | 0.9087 | 0.60 | 2.85 | NM | NM | NM | NM | NM | NM | NM | NM | |
| (11.5-31.5) | 10/26/2009 | 24.85 | 23.05 | 22.00 | 0.9087 | 1.05 | 2.75 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 24.85 | 23.15 | 22.24 | 0.9087 | 0.91 | 2.53 | 7.9 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 24.85 | 21.55 | 20.86 | 0.9087 | 0.69 | 3.93 | 8.6 | NM | NM | NM | NM | NM | NM | NM | |
| **MW-20** | 7/27/2009 | 28.63 | 25.20 | ND | NA | ND | 3.43 | NS | 6.93 | 19.35 | 1.43 | -94 | 0.00 | 189 | NM | |
| (9.5-29.5) | 7/29/2009 | 28.63 | 21.03 | ND | NA | ND | 7.60 | 0.1 | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 28.63 | 21.61 | ND | NA | ND | 7.02 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/28/2009 | 28.63 | 21.57 | ND | NA | ND | 7.06 | NM | 6.24 | 16.43 | 1.14 | 0.44 | 0.00 | 83.20 | 0.06 | |
| | 1/21/2010 | 28.63 | 22.19 | ND | NA | ND | 6.44 | 0.0 | 6.53 | 13.86 | 1.53 | 0.99 | 0.50 | 98.00 | 0.08 | |
| | 1/22/2010 | 28.63 | 21.99 | ND | NA | ND | 6.64 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 28.63 | 18.07 | ND | NA | ND | 10.56 | 0.3 | 6.75 | 14.70 | 3.33 | -13.0 | 0.00 | 34.30 | 0.20 | |
| **MW-21** | 7/27/2009 | 16.63 | 14.50 | ND | NA | ND | 2.30 | NS | 6.96 | 18.45 | 1.22 | 190 | 4.93 | 17.8 | NM | |
| (10.5-25.5) | 7/29/2009 | 16.63 | 14.37 | ND | NA | ND | 2.26 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 16.63 | 14.10 | ND | NA | ND | 2.53 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 10/28/2009 | 16.63 | 14.02 | ND | NA | ND | 2.61 | NM | 6.61 | 5.76 | 1.07 | 144 | 1.07 | 12.70 | 0.05 | |
| | 1/21/2010 | 16.63 | 14.83 | ND | NA | ND | 1.80 | NM | 6.60 | 13.92 | 1.25 | 92 | 4.04 | 10.5 | 0.06 | |
| | 1/22/2010 | 16.63 | 14.61 | ND | NA | ND | 2.02 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 16.63 | 13.79 | ND | NA | ND | 2.84 | 1.4 | 6.63 | 13.81 | 1.16 | 68.00 | 5.20 | 1.60 | 0.10 | |
| **MW-22** | 7/29/2009 | 29.36 | 27.20 | 25.79 | 0.9092 | 1.41 | 3.44 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| (14.5-34.5) | 10/26/2009 | 29.36 | 28.40 | 26.15 | 0.9092 | 2.25 | 3.01 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 29.36 | 28.44 | 26.35 | 0.9092 | 2.09 | 2.82 | 5.8 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 29.36 | NM | NM | NA | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | Inaccessible |
| **MW-23** | 7/29/2009 | 19.05 | 23.85 | 17.09 | 0.9094 | 6.76 | 1.35 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| (10.5-24.5) | 10/26/2009 | 19.05 | 23.82 | 17.76 | 0.9094 | 6.06 | 0.74 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 19.05 | 23.65 | 18.39 | 0.9094 | 5.26 | 0.18 | 7.9 | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 19.05 | 22.36 | 17.57 | 0.9094 | 4.79 | 1.05 | 15.9 | NM | NM | NM | NM | NM | NM | NM | |

**TABLE 1**
**GROUNDWATER GAUGING AND FIELD PARAMETERS SUMMARY**

Former Pratt Oil Works
Long Island City, New York

April, 2009 through April 21, 2010

| | | Gauging Data | | | | | | Field Parameters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Well ID** (screen Interval) | **Date** | **Top of Casing Elevation** (feet) | **Depth to Water** (feet) | **Depth to LNAPL** (feet) | **Specific Gravity** (g/cm3) | **LNAPL Thickness** (feet) | **Corrected GW Elevation** (feet) | **PID Reading** (ppmv) | **pH** (s.u.) | **Temperature** (ºC) | **Conductivity** (mS/cm) | **Oxidation-Reduction Potential** (mV) | **Dissolved Oxygen** (mg/L) | **Turbidity** (ntu) | **Salinity** (ppt) | **Comments** |
| **MW-24** (5.5-25.5) | 7/29/2009 | 17.56 | 24.10 | 15.20 | 0.9034 | 8.90 | 1.50 | 0.0 | NM | NM | NM | NM | NM | NM | NM | |
| | 10/26/2009 | 17.56 | 24.25 | 15.79 | 0.9034 | 8.46 | 0.95 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 1/22/2010 | 17.56 | 24.75 | 16.31 | 0.9034 | 8.44 | 0.43 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 4/21/2010 | 17.56 | 22.60 | 15.10 | 0.9034 | 7.50 | 1.74 | 3.1 | NM | NM | NM | NM | NM | NM | NM | |

**Notes:**

~ - no standard or guidance value exists

<1.0 - Not detected at or above the laboratory reporting limit shown

ºC - degrees Celsius

F - degrees Fahrenheit

Corrected GW Elevation - calculated using the following formula:
(top of casing elevation - depth to water) + (LNAPL thickness * LNAPL specific gravity)

Depth to Water - measured in feet below land surface from top of casing

GW - Groundwater

LNAPL - Light non-aqueous phase liquid

mg/L - milligrams per liter (parts per million)

mS/cm - milliSiemens per centimeter

mV - millivolts

N/A - Not applicable

NA - Not analyzed

ND - Not detected

NM - Not monitored

NS - Not sampled

NSVD - Not surveyed to vertical datum

ntu - nephelometric turbidity units

ppmv - parts per million by volume

ppt - parts per thousand

s.u. - standard units

* - equipment malfunction

** - estimated value based on surrounding wells

**TABLE 2**
**LNAPL RECOVERY GAUGING DATA - MW-17**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** April 19, 2010
**Recovery Method:** Spill Buddy™ Portable LNAPL Recovery Pump

| Time (Minutes) | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovered (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovered (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0 | 0 | 16.81 | 15.43 | 20.58 | 5.15 | 0.84 | 1.38 | -3.77 |
| 8.00 | 0.00 | 0.00 | 0 | 0 | 16.81 | NM | NM | NM | NM | NM | NM |
| 15.00 | 0.20 | 0.20 | 0 | 0 | 16.81 | NM | NM | NM | NM | NM | NM |
| 28.00 | 1.00 | 1.20 | 0 | 0 | 16.81 | 17.65 | 20.00 | 2.35 | 0.38 | -0.84 | -3.19 |
| 38.00 | Start Recharge | | | | 16.81 | 19.33 | 19.85 | 0.52 | 0.08 | -2.52 | -3.04 |
| 39.00 | NA | NA | NA | NA | 16.81 | 18.91 | 19.57 | 0.66 | 0.11 | -2.10 | -2.76 |
| 40.00 | NA | NA | NA | NA | 16.81 | 18.61 | 19.60 | 0.99 | 0.16 | -1.80 | -2.79 |
| 41.00 | NA | NA | NA | NA | 16.81 | 18.37 | 19.46 | 1.09 | 0.18 | -1.56 | -2.65 |
| 42.00 | NA | NA | NA | NA | 16.81 | 18.07 | 19.04 | 0.97 | 0.16 | -1.26 | -2.23 |
| 43.00 | NA | NA | NA | NA | 16.81 | 17.84 | 18.86 | 1.02 | 0.17 | -1.03 | -2.05 |
| 44.00 | NA | NA | NA | NA | 16.81 | 17.65 | 18.53 | 0.88 | 0.14 | -0.84 | -1.72 |
| 45.00 | NA | NA | NA | NA | 16.81 | 17.48 | 18.68 | 1.20 | 0.20 | -0.67 | -1.87 |
| 46.00 | NA | NA | NA | NA | 16.81 | 17.33 | 18.25 | 0.92 | 0.15 | -0.52 | -1.44 |
| 47.00 | NA | NA | NA | NA | 16.81 | 17.23 | 18.45 | 1.22 | 0.20 | -0.42 | -1.64 |
| 48.00 | NA | NA | NA | NA | 16.81 | 17.14 | 18.13 | 0.99 | 0.16 | -0.33 | -1.32 |
| 49.00 | NA | NA | NA | NA | 16.81 | 17.03 | 18.04 | 1.01 | 0.16 | -0.22 | -1.23 |
| 50.00 | NA | NA | NA | NA | 16.81 | 16.93 | 17.94 | 1.01 | 0.16 | -0.12 | -1.13 |
| 51.00 | NA | NA | NA | NA | 16.81 | 16.84 | 17.65 | 0.81 | 0.13 | -0.03 | -0.84 |
| 56.00 | NA | NA | NA | NA | 16.81 | 16.58 | 17.38 | 0.80 | 0.13 | 0.23 | -0.57 |
| 61.00 | NA | NA | NA | NA | 16.81 | 16.41 | 17.19 | 0.78 | 0.13 | 0.40 | -0.38 |
| 66.00 | NA | NA | NA | NA | 16.81 | 16.30 | 17.15 | 0.85 | 0.14 | 0.51 | -0.34 |
| 71.00 | NA | NA | NA | NA | 16.81 | 16.30 | 17.04 | 0.74 | 0.12 | 0.51 | -0.23 |
| 86.00 | NA | NA | NA | NA | 16.81 | 16.00 | 16.85 | 0.85 | 0.14 | 0.81 | -0.04 |
| 101.00 | NA | NA | NA | NA | 16.81 | 15.93 | 16.68 | 0.75 | 0.12 | 0.88 | 0.13 |
| 116.00 | NA | NA | NA | NA | 16.81 | 15.83 | 16.53 | 0.70 | 0.11 | 0.98 | 0.28 |
| 188.00 | NA | NA | NA | NA | 16.81 | 15.76 | 16.35 | 0.59 | 0.10 | 1.05 | 0.46 |
| 218.00 | NA | NA | NA | NA | 16.81 | 15.72 | 16.22 | 0.50 | 0.08 | 1.09 | 0.59 |



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**TABLE 2**
**LNAPL RECOVERY GAUGING DATA - MW-17**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
LNAPL Volume = PI*$r^2$*LNAPL Thickness*7.48 (conversion factor)



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**TABLE 3**
**LNAPL RECOVERY GAUGING DATA - MW-24**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** April 19, 2010
**Recovery Method:** Spill Buddy™ Portable LNAPL Recovery Pump

| Time (Minutes) | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovered (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovered (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0 | 0 | 17.56 | 15.19 | 24.00 | 8.81 | 5.75 | 2.37 | -6.44 |
| 2.00 | NR | NR | 0 | 0 | 17.56 | 15.44 | 23.75 | 8.31 | 5.42 | 2.12 | -6.19 |
| 5.00 | NR | NR | 0 | 0 | 17.56 | 15.47 | 23.02 | 7.55 | 4.93 | 2.09 | -5.46 |
| 7.00 | NR | NR | 0 | 0 | 17.56 | 15.50 | 22.60 | 7.10 | 4.63 | 2.06 | -5.04 |
| 10.00 | NR | NR | 0 | 0 | 17.56 | 15.59 | 22.09 | 6.50 | 4.24 | 1.97 | -4.53 |
| 13.00 | 2.50 | 2.50 | 0 | 0 | 17.56 | 15.67 | 21.40 | 5.73 | 3.74 | 1.89 | -3.84 |
| 15.00 | NR | NR | 0 | 0 | 17.56 | 15.71 | 20.86 | 5.15 | 3.36 | 1.85 | -3.30 |
| 21.00 | 2.00 | 4.50 | 0 | 0 | 17.56 | 16.00 | 18.60 | 2.60 | 1.70 | 1.56 | -1.04 |
| 24.00 | NR | NR | 0 | 0 | 17.56 | 16.00 | 18.10 | 2.10 | 1.37 | 1.56 | -0.54 |
| 30.00 | NR | NR | 0 | 0 | 17.56 | 16.11 | 16.98 | 0.87 | 0.57 | 1.45 | 0.58 |
| 32.00 | 4.50 | 9.00 | 0 | 0 | 17.56 | 16.07 | 16.52 | 0.45 | 0.29 | 1.49 | 1.04 |
| 34.00 | Start Recharge | | | | 17.56 | 16.04 | 16.70 | 0.66 | 0.43 | 1.52 | 0.86 |
| 35.00 | NA | NA | NA | NA | 17.56 | 15.98 | 16.68 | 0.70 | 0.46 | 1.58 | 0.88 |
| 36.00 | NA | NA | NA | NA | 17.56 | 15.96 | 16.77 | 0.81 | 0.53 | 1.60 | 0.79 |
| 37.00 | NA | NA | NA | NA | 17.56 | 15.92 | 16.64 | 0.72 | 0.47 | 1.64 | 0.92 |
| 39.00 | NA | NA | NA | NA | 17.56 | 15.91 | 16.76 | 0.85 | 0.55 | 1.65 | 0.80 |
| 40.00 | NA | NA | NA | NA | 17.56 | 15.90 | 16.80 | 0.90 | 0.59 | 1.66 | 0.76 |
| 41.00 | NA | NA | NA | NA | 17.56 | 15.88 | 17.13 | 1.25 | 0.82 | 1.68 | 0.43 |
| 42.00 | NA | NA | NA | NA | 17.56 | NM | NM | NM | NM | NM | NM |
| 43.00 | NA | NA | NA | NA | 17.56 | 15.85 | 17.06 | 1.21 | 0.79 | 1.71 | 0.50 |
| 44.00 | NA | NA | NA | NA | 17.56 | 15.84 | 17.26 | 1.42 | 0.93 | 1.72 | 0.30 |
| 45.00 | NA | NA | NA | NA | 17.56 | NM | NM | NM | NM | NM | NM |
| 46.00 | NA | NA | NA | NA | 17.56 | 15.82 | 17.59 | 1.77 | 1.15 | 1.74 | -0.03 |
| 47.00 | NA | NA | NA | NA | 17.56 | NM | NM | NM | NM | NM | NM |
| 48.00 | NA | NA | NA | NA | 17.56 | 15.79 | 17.85 | 2.06 | 1.34 | 1.77 | -0.29 |
| 53.00 | NA | NA | NA | NA | 17.56 | 15.75 | 18.07 | 2.32 | 1.51 | 1.81 | -0.51 |
| 58.00 | NA | NA | NA | NA | 17.56 | 15.71 | 18.30 | 2.59 | 1.69 | 1.85 | -0.74 |
| 63.00 | NA | NA | NA | NA | 17.56 | 15.67 | 18.89 | 3.22 | 2.10 | 1.89 | -1.33 |



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**TABLE 3**
**LNAPL RECOVERY GAUGING DATA - MW-24**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** April 19, 2010
**Recovery Method:** Spill Buddy™ Portable LNAPL Recovery Pump

| **Time** (Minutes) | **LNAPL Recovered** (Gallons) | **Cumulative LNAPL** (Gallons) | **Water recovered** (Gallons) | **Cumulative Water** (Gallons) | **Top of Casing** (Feet) | **Depth to LNAPL** (Feet) | **Depth to Water** (Feet) | **LNAPL Thickness** (Feet) | **LNAPL Volume** (Gallons) | **LNAPL Elevation** (Feet) | **Groundwater Elevation** (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 78.00 | NA | NA | NA | NA | 17.56 | 15.58 | 19.71 | 4.13 | 2.69 | 1.98 | -2.15 |
| 93.00 | NA | NA | NA | NA | 17.56 | 15.47 | 20.53 | 5.06 | 3.30 | 2.09 | -2.97 |
| 108.00 | NA | NA | NA | NA | 17.56 | 15.40 | 21.08 | 5.68 | 3.71 | 2.16 | -3.52 |
| 123.00 | NA | NA | NA | NA | 17.56 | 15.37 | 21.55 | 6.18 | 4.03 | 2.19 | -3.99 |
| 138.00 | NA | NA | NA | NA | 17.56 | 15.32 | 21.91 | 6.59 | 4.30 | 2.24 | -4.35 |
| 153.00 | NA | NA | NA | NA | 17.56 | 15.30 | 22.19 | 6.89 | 4.50 | 2.26 | -4.63 |

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
LNAPL Volume = $PI*r^2*$LNAPL Thickness*7.48 (conversion factor)



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**TABLE 4**
**LNAPL RECOVERY GAUGING DATA - MW-17**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** April 27, 2010
**Recovery Method:** Spill Buster™ LNAPL Recovery Pump

| Time (Minutes) | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovered (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovered (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | NA | NA | 0 | 0 | 17.88* | 15.45 | 18.20 | 2.75 | 1.79 | 2.43 | -0.32 |
| 5 | 0.25 | 0.50 | 0 | 0 | 17.88* | NM | NM | NM | NM | NM | NM |
| 28 | 0.25 | 0.75 | 0 | 0 | 17.88* | NM | NM | NM | NM | NM | NM |
| 48 | 0.10 | 0.85 | 0 | 0 | 17.88* | NM | NM | NM | NM | NM | NM |
| 70 | 0.10 | 0.95 | 0 | 0 | 17.88* | NM | NM | NM | NM | NM | NM |
| 93 | 0.05 | 1.00 | 0 | 0 | 17.88* | NM | NM | NM | NM | NM | NM |
| 114 | 0.10 | 1.10 | 0 | 0 | 17.88* | NM | NM | NM | NM | NM | NM |
| 135 | 0.10 | 1.20 | 0 | 0 | 17.88* | NM | NM | NM | NM | NM | NM |
| 141 | NA | 1.20 | NA | NA | 17.88* | 15.70 | 15.84 | 0.14 | 0.09 | 2.18 | 2.04 |
| 143 | Start Recharge | | | | 17.88* | 15.69 | 15.91 | 0.22 | 0.14 | 2.19 | 1.97 |
| 144 | NA | NA | NA | NA | 17.88* | 15.68 | 15.90 | 0.22 | 0.14 | 2.20 | 1.98 |
| 145 | NA | NA | NA | NA | 17.88* | 15.69 | 15.85 | 0.16 | 0.10 | 2.19 | 2.03 |
| 146 | NA | NA | NA | NA | 17.88* | 15.67 | 15.84 | 0.17 | 0.11 | 2.21 | 2.04 |
| 147 | NA | NA | NA | NA | 17.88* | 15.68 | 15.84 | 0.16 | 0.10 | 2.20 | 2.04 |
| 148 | NA | NA | NA | NA | 17.88* | 15.68 | 15.85 | 0.17 | 0.11 | 2.20 | 2.03 |
| 149 | NA | NA | NA | NA | 17.88* | 15.68 | 15.86 | 0.18 | 0.12 | 2.20 | 2.02 |
| 150 | NA | NA | NA | NA | 17.88* | 15.67 | 15.85 | 0.18 | 0.12 | 2.21 | 2.03 |
| 155 | NA | NA | NA | NA | 17.88* | 15.66 | 15.85 | 0.19 | 0.12 | 2.22 | 2.03 |
| 160 | NA | NA | NA | NA | 17.88* | 15.66 | 15.84 | 0.18 | 0.12 | 2.22 | 2.04 |
| 165 | NA | NA | NA | NA | 17.88* | 15.65 | 15.80 | 0.15 | 0.10 | 2.23 | 2.08 |
| 170 | NA | NA | NA | NA | 17.88* | 15.64 | 15.77 | 0.13 | 0.08 | 2.24 | 2.11 |
| 175 | NA | NA | NA | NA | 17.88* | 15.63 | 15.76 | 0.13 | 0.08 | 2.25 | 2.12 |
| 180 | NA | NA | NA | NA | 17.88* | 15.63 | 15.78 | 0.15 | 0.10 | 2.25 | 2.10 |
| 195 | NA | NA | NA | NA | 17.88* | 15.62 | 15.79 | 0.17 | 0.11 | 2.26 | 2.09 |
| 210 | NA | NA | NA | NA | 17.88* | 15.62 | 15.78 | 0.16 | 0.10 | 2.26 | 2.10 |
| 225 | NA | NA | NA | NA | 17.88* | 15.62 | 15.80 | 0.18 | 0.12 | 2.26 | 2.08 |
| 240 | NA | NA | NA | NA | 17.88* | 15.61 | 15.79 | 0.18 | 0.12 | 2.27 | 2.09 |
| 255 | NA | NA | NA | NA | 17.88* | 15.61 | 15.84 | 0.23 | 0.15 | 2.27 | 2.04 |
| 270 | NA | NA | NA | NA | 17.88* | 15.61 | 15.90 | 0.29 | 0.19 | 2.27 | 1.98 |
| 285 | NA | NA | NA | NA | 17.88* | 15.60 | 15.90 | 0.30 | 0.20 | 2.28 | 1.98 |



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**TABLE 4**
**LNAPL RECOVERY GAUGING DATA - MW-17**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** April 27, 2010
**Recovery Method:** Spill Buster™ LNAPL Recovery Pump

| Time (Minutes) | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovered (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovered (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 310 | NA | NA | NA | NA | 17.88* | 15.60 | 15.82 | 0.22 | 0.14 | 2.28 | 2.06 |

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
LNAPL Volume = PI*$r^2$*LNAPL Thickness*7.48 (conversion factor)
* -TOC for MW-17 caclulated from original TOC 16.81 + 1.07 (height of 4-inch PVC riser needed for spill buster pump install)
TOC - top of casing
PVC - polyvinyl chloride



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**TABLE 5**
**LNAPL RECOVERY GAUGING DATA - MW-24**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** April 28, 2010
**Recovery Method:** Spill Buster™ LNAPL Recovery Pump

| Time (Minutes) | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovery (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovery (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | NA | NA | 0 | 0 | 18.63* | 16.07 | 23.87 | 7.80 | 5.09 | 2.56 | -5.24 |
| 2 | 0.25 | 0.25 | 0 | 0 | 18.63* | 16.23 | 24.05 | 7.82 | 5.10 | 2.40 | -5.42 |
| 4 | 0.50 | 0.75 | 0 | 0 | 18.63* | 16.3 | 24.12 | 7.82 | 5.10 | 2.33 | -5.49 |
| 6 | 0.50 | 1.25 | 0 | 0 | 18.63* | 16.32 | 23.75 | 7.43 | 4.85 | 2.31 | -5.12 |
| 8 | 0.50 | 1.75 | 0 | 0 | 18.63* | 16.36 | 23.26 | 6.90 | 4.50 | 2.27 | -4.63 |
| 10 | 0.50 | 2.25 | 0 | 0 | 18.63* | 16.42 | 22.35 | 5.93 | 3.87 | 2.21 | -3.72 |
| 12 | 0.75 | 3.00 | 0 | 0 | 18.63* | 16.46 | 22.08 | 5.62 | 3.67 | 2.17 | -3.45 |
| 14 | 0.50 | 3.50 | 0 | 0 | 18.63* | 16.49 | 21.86 | 5.37 | 3.50 | 2.14 | -3.23 |
| 16 | 0.50 | 4.00 | 0 | 0 | 18.63* | 16.61 | 21.55 | 4.94 | 3.22 | 2.02 | -2.92 |
| 18 | 0.50 | 4.50 | 0 | 0 | 18.63* | 16.57 | 21.25 | 4.68 | 3.05 | 2.06 | -2.62 |
| 20 | 0.25 | 4.75 | 0 | 0 | 18.63* | 16.36 | 20.80 | 4.44 | 2.89 | 2.27 | -2.17 |
| 25 | 1.00 | 5.75 | 0 | 0 | 18.63* | 16.70 | 20.12 | 3.42 | 2.23 | 1.93 | -1.49 |
| 30 | 1.00 | 6.75 | NA | NA | 18.63* | 16.81 | 19.10 | 2.29 | 1.49 | 1.82 | -0.47 |
| 35 | 1.25 | 8.00 | NA | NA | 18.63* | 16.95 | 18.00 | 1.05 | 0.69 | 1.68 | 0.63 |
| 40 | 1.50 | 9.50 | NA | NA | 18.63* | 16.87 | 17.30 | 0.43 | 0.28 | 1.76 | 1.33 |
| 45 | NM | NM | NA | NA | 18.63* | 16.80 | 17.12 | 0.32 | 0.21 | 1.83 | 1.51 |
| 50 | NM | NM | NA | NA | 18.63* | 16.74 | 17.99 | 1.25 | 0.82 | 1.89 | 0.64 |
| 55 | NM | NM | NA | NA | 18.63* | 16.69 | 18.50 | 1.81 | 1.18 | 1.94 | 0.13 |
| 60 | 0.50 | 10.00 | NA | NA | 18.63* | 16.78 | 18.90 | 2.12 | 1.38 | 1.85 | -0.27 |
| 65 | 1.00 | 11.00 | NA | NA | 18.63* | 17.03 | 17.47 | 0.44 | 0.29 | 1.60 | 1.16 |
| 70 | 1.50 | 12.50 | NA | NA | 18.63* | 16.87 | 16.96 | 0.09 | 0.06 | 1.76 | 1.67 |
| 75 | NM | NM | NA | NA | 18.63* | 16.80 | 17.79 | 0.99 | 0.65 | 1.83 | 0.84 |
| 80 | NM | NM | NA | NA | 18.63* | 16.76 | 17.98 | 1.22 | 0.80 | 1.87 | 0.65 |
| 85 | NM | NM | NA | NA | 18.63* | 16.72 | 18.22 | 1.50 | 0.98 | 1.91 | NM |
| 90 | NM | NM | NA | NA | 18.63* | 16.69 | 18.36 | 1.67 | 1.09 | 1.94 | 0.27 |
| 95 | 1.00 | 13.50 | NA | NA | 18.63* | 16.95 | 17.75 | 0.80 | 0.52 | 1.68 | 0.88 |
| 99 | 0.50 | 14.00 | NA | NA | 18.63* | 16.85 | 17.25 | 0.40 | 0.26 | 1.78 | 1.38 |



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**TABLE 5**
**LNAPL RECOVERY GAUGING DATA - MW-24**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** April 28, 2010
**Recovery Method:** Spill Buster™ LNAPL Recovery Pump

| Time (Minutes) | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovery (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovery (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 105 | NM | NM | NA | NA | 18.63* | 16.78 | 17.39 | 0.61 | 0.40 | 1.85 | 1.24 |
| 110 | NM | NM | NA | NA | 18.63* | 16.73 | 17.89 | 1.16 | 0.76 | 1.90 | 0.74 |
| 115 | NM | NM | NA | NA | 18.63* | 16.69 | 18.11 | 1.42 | 0.93 | 1.94 | 0.52 |
| 125 | 1.50 | 15.50 | NA | NA | 18.63* | 16.88 | 17.15 | 0.27 | 0.18 | 1.75 | 1.48 |
| 129 | NM | NM | NA | NA | 18.63* | 16.82 | 17.10 | 0.28 | 0.18 | 1.81 | 1.53 |
| 132 | NM | NM | NA | NA | 18.63* | 16.80 | 17.20 | 0.40 | 0.26 | 1.83 | 1.43 |
| 134 | NM | NM | NA | NA | 18.63* | 16.77 | 17.35 | 0.58 | 0.38 | 1.86 | 1.28 |
| 136 | NM | NM | NA | NA | 18.63* | 16.77 | 17.58 | 0.81 | 0.53 | 1.86 | 1.05 |
| 140 | NM | NM | NA | NA | 18.63* | 16.74 | 17.89 | 1.15 | 0.75 | 1.89 | 0.74 |
| 145 | NM | NM | NA | NA | 18.63* | 16.70 | 18.20 | 1.50 | 0.98 | 1.93 | 0.43 |
| 150 | NM | NM | NA | NA | 18.63* | 16.69 | 18.66 | 1.97 | 1.29 | 1.94 | -0.03 |
| 155 | NM | NM | NA | NA | 18.63* | 16.93 | 17.89 | 0.96 | 0.63 | 1.70 | 0.74 |
| 160 | 1.50 | 17.00 | NA | NA | 18.63* | 16.85 | 17.05 | 0.20 | 0.13 | 1.78 | 1.58 |
| 165 | Start Recharge | | | | 18.63* | 16.80 | 17.21 | 0.41 | 0.27 | 1.83 | 1.42 |
| 170 | NM | NM | NA | NA | 18.63* | 16.75 | 17.65 | 0.90 | 0.59 | 1.88 | 0.98 |
| 175 | NM | NM | NA | NA | 18.63* | 16.72 | 17.98 | 1.26 | 0.82 | 1.91 | 0.65 |
| 180 | NM | NM | NA | NA | 18.63* | 16.70 | 18.32 | 1.62 | 1.06 | 1.93 | 0.31 |
| 185 | NM | NM | NA | NA | 18.63* | 16.66 | 18.55 | 1.89 | 1.23 | 1.97 | 0.08 |
| 190 | NM | NM | NA | NA | 18.63* | 16.64 | 18.82 | 2.18 | 1.42 | 1.99 | -0.19 |
| 195 | NM | NM | NA | NA | 18.63* | 16.60 | 19.04 | 2.44 | 1.59 | 2.03 | -0.41 |
| 200 | NM | NM | NA | NA | 18.63* | 16.57 | 19.27 | 2.70 | 1.76 | 2.06 | -0.64 |
| 205 | NM | NM | NA | NA | 18.63* | 16.54 | 19.65 | 3.11 | 2.03 | 2.09 | -1.02 |
| 210 | NM | NM | NA | NA | 18.63* | 16.52 | 19.89 | 3.37 | 2.20 | 2.11 | -1.26 |
| 215 | NM | NM | NA | NA | 18.63* | 16.49 | 20.10 | 3.61 | 2.36 | 2.14 | -1.47 |
| 220 | NM | NM | NA | NA | 18.63* | 16.46 | 20.37 | 3.91 | 2.55 | 2.17 | -1.74 |
| 235 | NM | NM | NA | NA | 18.63* | 16.38 | 21.05 | 4.67 | 3.05 | 2.25 | -2.42 |
| 250 | NM | NM | NA | NA | 18.63* | 16.31 | 21.95 | 5.64 | 3.68 | 2.32 | -3.32 |



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**TABLE 5**
**LNAPL RECOVERY GAUGING DATA - MW-24**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** April 28, 2010
**Recovery Method:** Spill Buster™ LNAPL Recovery Pump

| Time (Minutes) | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovery (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovery (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 265 | NM | NM | NA | NA | 18.63* | 16.27 | 22.22 | 5.95 | 3.88 | 2.36 | -3.59 |
| 280 | NM | NM | NA | NA | 18.63* | 16.25 | 22.27 | 6.02 | 3.93 | 2.38 | -3.64 |

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
LNAPL Volume = PI*$r^2$*LNAPL Thickness*7.48 (conversion factor)
* -TOC for MW-24 caclulated from original TOC 17.56 + 1.07 (height of 4-inch PVC riser needed for spill buster pump install)
TOC - top of casing
PVC - polyvinyl chloride



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**TABLE 6**
**LNAPL RECOVERY GAUGING DATA - MW-14**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** May 3, 2010
**Recovery Method:** Xitech Pneumatic LNAPL Recovery Pump

| | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovered (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovered (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0 | 0 | 22.92 | 20.72 | 26.65 | 5.93 | 3.87 | 2.20 | -3.73 |
| 89.00 | 0.00 | 7.30 | 0 | 0 | 22.92 | NM | NM | NM | NM | NM | NM |
| 92.00 | Start Recharge | | | | 22.92 | 22.2 | 22.35 | 0.15 | 0.10 | 0.72 | 0.57 |
| 95.00 | NA | NA | NA | NA | 22.92 | 22.07 | 22.28 | 0.21 | 0.14 | 0.85 | 0.64 |
| 96.00 | NA | NA | NA | NA | 22.92 | 22.05 | 22.26 | 0.21 | 0.14 | 0.87 | 0.66 |
| 97.00 | NA | NA | NA | NA | 22.92 | 22.00 | 22.35 | 0.35 | 0.23 | 0.92 | 0.57 |
| 98.00 | NA | NA | NA | NA | 22.92 | 21.96 | 22.15 | 0.19 | 0.12 | 0.96 | 0.77 |
| 100.00 | NA | NA | NA | NA | 22.92 | 21.90 | 22.08 | 0.18 | 0.12 | 1.02 | 0.84 |
| 102.00 | NA | NA | NA | NA | 22.92 | 21.84 | 22.03 | 0.19 | 0.12 | 1.08 | 0.89 |
| 104.00 | NA | NA | NA | NA | 22.92 | 21.75 | 21.98 | 0.23 | 0.15 | 1.17 | 0.94 |
| 106.00 | NA | NA | NA | NA | 22.92 | 21.65 | 21.86 | 0.21 | 0.14 | 1.27 | 1.06 |
| 109.00 | NA | NA | NA | NA | 22.92 | 21.56 | 21.80 | 0.24 | 0.16 | 1.36 | 1.12 |
| 110.00 | NA | NA | NA | NA | 22.92 | 21.52 | 21.84 | 0.32 | 0.21 | 1.40 | 1.08 |
| 116.00 | NA | NA | NA | NA | 22.92 | 21.44 | 21.69 | 0.25 | 0.16 | 1.48 | 1.23 |
| 120.00 | NA | NA | NA | NA | 22.92 | 21.40 | 21.67 | 0.27 | 0.18 | 1.52 | 1.25 |
| 122.00 | NA | NA | NA | NA | 22.92 | 21.38 | 21.65 | 0.27 | 0.18 | 1.54 | 1.27 |
| 125.00 | NA | NA | NA | NA | 22.92 | 21.36 | 21.65 | 0.29 | 0.19 | 1.56 | 1.27 |
| 130.00 | NA | NA | NA | NA | 22.92 | 21.31 | 21.61 | 0.30 | 0.20 | 1.61 | 1.31 |
| 135.00 | NA | NA | NA | NA | 22.92 | 21.29 | 21.62 | 0.33 | 0.22 | 1.63 | 1.30 |
| 140.00 | NA | NA | NA | NA | 22.92 | 21.25 | 21.60 | 0.35 | 0.23 | 1.67 | 1.32 |
| 155.00 | NA | NA | NA | NA | 22.92 | 21.19 | 21.65 | 0.46 | 0.30 | 1.73 | 1.27 |
| 170.00 | NA | NA | NA | NA | 22.92 | 21.12 | 21.72 | 0.60 | 0.39 | 1.80 | 1.20 |
| 185.00 | NA | NA | NA | NA | 22.92 | 21.14 | 21.76 | 0.62 | 0.40 | 1.78 | 1.16 |
| 200.00 | NA | NA | NA | NA | 22.92 | 21.08 | 21.80 | 0.72 | 0.47 | 1.84 | 1.12 |
| 215.00 | NA | NA | NA | NA | 22.92 | 21.07 | 21.85 | 0.78 | 0.51 | 1.85 | 1.07 |
| 222.00 | NA | NA | NA | NA | 22.92 | 21.05 | 21.85 | 0.80 | 0.52 | 1.87 | 1.07 |



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**TABLE 6**
**LNAPL RECOVERY GAUGING DATA - MW-14**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
LNAPL Volume = PI*$r^2$*LNAPL Thickness*7.48 (conversion factor)



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**TABLE 7**
**LNAPL RECOVERY GAUGING DATA - MW-24**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** May 4, 2010
**Recovery Method:** Xitech Pneumatic LNAPL Recovery Pump

| | **LNAPL Recovered** (Gallons) | **Cumulative LNAPL Recovered** (Gallons) | **Water Recovered** (Gallons) | **Cumulative Water Recovered** (Gallons) | **Top of Casing** (Feet) | **Depth to LNAPL** (Feet) | **Depth to Water** (Feet) | **LNAPL Thickness** (Feet) | **LNAPL Volume** (Gallons) | **LNAPL Elevation** (Feet) | **Groundwater Elevation** (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0 | 0 | 17.56 | 15.11 | 23.89 | 8.78 | 5.73 | 2.45 | -6.33 |
| 166.00 | 0.00 | 17.43 | 0 | 0 | 17.56 | 15.9 | 16.10 | 0.20 | 0.13 | 1.66 | 1.46 |
| 167.00 | Start Recharge | | | | 17.56 | 15.88 | 16.20 | 0.32 | 0.21 | 1.68 | 1.36 |
| 168.00 | NA | NA | NA | NA | 17.56 | 15.87 | 16.13 | 0.26 | 0.17 | 1.69 | 1.43 |
| 169.00 | NA | NA | NA | NA | 17.56 | 15.86 | 16.3 | 0.44 | 0.29 | 1.70 | 1.26 |
| 170.00 | NA | NA | NA | NA | 17.56 | 15.85 | 16.36 | 0.51 | 0.33 | 1.71 | 1.20 |
| 171.00 | NA | NA | NA | NA | 17.56 | 15.85 | 16.42 | 0.57 | 0.37 | 1.71 | 1.14 |
| 172.00 | NA | NA | NA | NA | 17.56 | 15.84 | 16.48 | 0.64 | 0.42 | 1.72 | 1.08 |
| 173.00 | NA | NA | NA | NA | 17.56 | 15.82 | 16.64 | 0.82 | 0.53 | 1.74 | 0.92 |
| 174.00 | NA | NA | NA | NA | 17.56 | 15.81 | 16.62 | 0.81 | 0.53 | 1.75 | 0.94 |
| 175.00 | NA | NA | NA | NA | 17.56 | 15.80 | 16.75 | 0.95 | 0.62 | 1.76 | 0.81 |
| 177.00 | NA | NA | NA | NA | 17.56 | 15.79 | 16.85 | 1.06 | 0.69 | 1.77 | 0.71 |
| 181.00 | NA | NA | NA | NA | 17.56 | 15.76 | 17.04 | 1.28 | 0.84 | 1.80 | 0.52 |
| 186.00 | NA | NA | NA | NA | 17.56 | 15.72 | 17.43 | 1.71 | 1.12 | 1.84 | 0.13 |
| 191.00 | NA | NA | NA | NA | 17.56 | 15.69 | 17.70 | 2.01 | 1.31 | 1.87 | -0.14 |
| 197.00 | NA | NA | NA | NA | 17.56 | 15.66 | 18.08 | 2.42 | 1.58 | 1.90 | -0.52 |
| 203.00 | NA | NA | NA | NA | 17.56 | 15.53 | 18.35 | 2.82 | 1.84 | 2.03 | -0.79 |
| 210.00 | NA | NA | NA | NA | 17.56 | 15.59 | 18.74 | 3.15 | 2.06 | 1.97 | -1.18 |
| 212.00 | NA | NA | NA | NA | 17.56 | 15.56 | 18.88 | 3.32 | 2.17 | 2.00 | -1.32 |
| 223.00 | NA | NA | NA | NA | 17.56 | 15.51 | 19.40 | 3.89 | 2.54 | 2.05 | -1.84 |
| 228.00 | NA | NA | NA | NA | 17.56 | 15.48 | 19.70 | 4.22 | 2.75 | 2.08 | -2.14 |
| 242.00 | NA | NA | NA | NA | 17.56 | 15.42 | 20.18 | 4.76 | 3.11 | 2.14 | -2.62 |
| 257.00 | NA | NA | NA | NA | 17.56 | 15.35 | 20.75 | 5.40 | 3.52 | 2.21 | -3.19 |
| 272.00 | NA | NA | NA | NA | 17.56 | 15.29 | 21.02 | 5.73 | 3.74 | 2.27 | -3.46 |
| 287.00 | NA | NA | NA | NA | 17.56 | 15.24 | 21.56 | 6.32 | 4.12 | 2.32 | -4.00 |



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**TABLE 7**
**LNAPL RECOVERY GAUGING DATA - MW-24**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
LNAPL Volume = PI*$r^2$*LNAPL Thickness*7.48 (conversion factor)



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**TABLE 8**
**LNAPL RECOVERY GAUGING DATA - MW-17**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** May 11, 2010
**Recovery Method:** Enhanced Fluid Recovery Event

| | LNAPL Recovered (Gallons) | Cumulative LNAPL Recovered (Gallons) | Water Recovered (Gallons) | Cumulative Water Recovered (Gallons) | Top of Casing (Feet) | Depth to LNAPL (Feet) | Depth to Water (Feet) | LNAPL Thickness (Feet) | LNAPL Volume (Gallons) | LNAPL Elevation (Feet) | Groundwater Elevation (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | NA | NA | NA | NA | 16.81 | 15.56 | 21.30 | 5.74 | 0.94 | 1.25 | -4.49 |
| 15.00 | NA | NA | NA | NA | 16.81 | 15.44 | 21.00 | 5.56 | 0.91 | 1.37 | -4.19 |
| 35.00 | NA | NA | NA | NA | 16.81 | 15.36 | 20.70 | 5.34 | 0.87 | 1.45 | -3.89 |
| 55.00 | NA | NA | NA | NA | 16.81 | 15.30 | 20.30 | 5.00 | 0.82 | 1.51 | -3.49 |
| 85.00 | NA | NA | NA | NA | 16.81 | 15.21 | 20.15 | 4.94 | 0.81 | 1.60 | -3.34 |
| 115.00 | NA | NA | NA | NA | 16.81 | 15.40 | 19.55 | 4.15 | 0.68 | 1.41 | -2.74 |
| 145.00 | NA | NA | NA | NA | 16.81 | 16.15 | 17.80 | 1.65 | 0.27 | 0.66 | -0.99 |
| 175.00 | NA | NA | NA | NA | 16.81 | 16.40 | 16.50 | 0.10 | 0.02 | 0.41 | 0.31 |
| 205.00 | NA | NA | NA | NA | 16.81 | 16.70 | 16.71 | 0.01 | 0.00 | 0.11 | 0.10 |
| 215.00 | Test Stopped 1140-1155 | | | | 16.81 | NM | NM | NM | NM | NM | NM |
| 235.00 | NA | NA | NA | NA | 16.81 | 16.10 | 16.10 | 0.00 | 0.00 | 0.71 | 0.71 |
| 265.00 | NA | NA | NA | NA | 16.81 | ND | 16.30 | 0.00 | 0.00 | NA | 0.51 |
| 295.00 | Test Stopped | | | | 16.81 | NM | NM | NM | 0.00 | NM | NM |
| 300.00 | Start Recharge | | | | 16.81 | ND | 15.90 | 0.00 | 0.00 | NA | 0.91 |
| 308.00 | NA | NA | NA | NA | 16.81 | ND | 16.45 | 0.00 | 0.00 | NA | 0.36 |
| 310.00 | NA | NA | NA | NA | 16.81 | 16.29 | 16.32 | 0.03 | 0.00 | 0.52 | 0.49 |
| 316.00 | NA | NA | NA | NA | 16.81 | 16.27 | 16.31 | 0.04 | 0.01 | 0.54 | 0.50 |
| 329.00 | NA | NA | NA | NA | 16.81 | 16.24 | 16.30 | 0.06 | 0.01 | 0.57 | 0.51 |
| 336.00 | NA | NA | NA | NA | 16.81 | 16.22 | 16.30 | 0.08 | 0.01 | 0.59 | 0.51 |
| 345.00 | NA | NA | NA | NA | 16.81 | 16.20 | 16.27 | 0.07 | 0.01 | 0.61 | 0.54 |
| 355.00 | NA | NA | NA | NA | 16.81 | 16.18 | 16.27 | 0.09 | 0.01 | 0.63 | 0.54 |
| 370.00 | NA | NA | NA | NA | 16.81 | 16.20 | 16.30 | 0.10 | 0.02 | 0.61 | 0.51 |
| 385.00 | NA | NA | NA | NA | 16.81 | 16.20 | 16.31 | 0.11 | 0.02 | 0.61 | 0.50 |
| 400.00 | NA | NA | NA | NA | 16.81 | 16.21 | 16.32 | 0.11 | 0.02 | 0.60 | 0.49 |



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**TABLE 8**
**LNAPL RECOVERY GAUGING DATA - MW-17**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
LNAPL Volume = PI*$r^2$*LNAPL Thickness*7.48 (conversion factor)



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**TABLE 9**
**LNAPL RECOVERY GAUGING DATA - MW-24**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

**Date:** May 18, 2010
**Recovery Method:** Enhanced Fluid Recovery Event

| | **LNAPL Recovered** (Gallons) | **Cumulative LNAPL Recovered** (Gallons) | **Water Recovered** (Gallons) | **Cumulative Water Recovered** (Gallons) | **Top of Casing** (Feet) | **Depth to LNAPL** (Feet) | **Depth to Water** (Feet) | **LNAPL Thickness** (Feet) | **LNAPL Volume** (Gallons) | **LNAPL Elevation** (Feet) | **Groundwater Elevation** (Feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | NA | NA | NA | NA | 17.56 | 15.31 | 24.35 | 9.04 | 5.90 | 2.25 | -6.79 |
| 10.00 | NA | NA | NA | NA | 17.56 | 15.7 | 20.78 | 5.08 | 3.31 | 1.86 | -3.22 |
| 20.00 | NA | NA | NA | NA | 17.56 | 15.92 | 18.10 | 2.18 | 1.42 | 1.64 | -0.54 |
| 30.00 | NA | NA | NA | NA | 17.56 | 16.02 | 17.00 | 0.98 | 0.64 | 1.54 | 0.56 |
| 45.00 | NA | NA | NA | NA | 17.56 | 15.92 | 16.75 | 0.83 | 0.54 | 1.64 | 0.81 |
| 75.00 | NA | NA | NA | NA | 17.56 | 16.00 | 16.10 | 0.10 | 0.07 | 1.56 | 1.46 |
| 105.00 | NA | NA | NA | NA | 17.56 | 16.04 | 16.18 | 0.14 | 0.09 | 1.52 | 1.38 |
| 135.00 | Test Stopped 1140-1155 | | | | 17.56 | 16.06 | 16.22 | 0.16 | 0.10 | 1.50 | 1.34 |
| 150.00 | NA | NA | NA | NA | 17.56 | 16.18 | 16.50 | 0.32 | 0.21 | 1.38 | 1.06 |
| 180.00 | NA | NA | NA | NA | 17.56 | 16.02 | 16.10 | 0.08 | 0.05 | 1.54 | 1.46 |
| 210.00 | NA | NA | NA | NA | 17.56 | 16.02 | 16.15 | 0.13 | 0.08 | 1.54 | 1.41 |
| 255.00 | Test Stopped/Start Recharge | | | | 17.56 | 16.02 | 16.12 | 0.00 | 0.00 | 1.54 | 1.44 |
| 260.00 | NA | NA | NA | NA | 17.56 | 16.07 | 16.26 | 0.00 | 0.00 | 1.49 | 1.30 |
| 262.00 | NA | NA | NA | NA | 17.56 | 16.03 | 16.37 | 0.00 | 0.00 | 1.53 | 1.19 |
| 264.00 | NA | NA | NA | NA | 17.56 | 16.00 | 16.48 | 0.00 | 0.00 | 1.56 | 1.08 |
| 266.00 | NA | NA | NA | NA | 17.56 | 16.00 | 16.58 | 0.58 | 0.38 | 1.56 | 0.98 |
| 268.00 | NA | NA | NA | NA | 17.56 | 15.98 | 16.67 | 0.69 | 0.45 | 1.58 | 0.89 |
| 270.00 | NA | NA | NA | NA | 17.56 | 15.97 | 16.73 | 0.76 | 0.50 | 1.59 | 0.83 |
| 275.00 | NA | NA | NA | NA | 17.56 | 15.95 | 16.94 | 0.99 | 0.65 | 1.61 | 0.62 |
| 280.00 | NA | NA | NA | NA | 17.56 | 15.90 | 17.21 | 1.31 | 0.85 | 1.66 | 0.35 |
| 285.00 | NA | NA | NA | NA | 17.56 | 15.87 | 17.37 | 1.50 | 0.98 | 1.69 | 0.19 |
| 290.00 | NA | NA | NA | NA | 17.56 | 15.86 | 17.57 | 1.71 | 1.12 | 1.70 | -0.01 |
| 300.00 | NA | NA | NA | NA | 17.56 | 15.80 | 18.12 | 2.32 | 1.51 | 1.76 | -0.56 |
| 315.00 | NA | NA | NA | NA | 17.56 | 15.72 | 18.65 | 2.93 | 1.91 | 1.84 | -1.09 |
| 330.00 | NA | NA | NA | NA | 17.56 | 15.62 | 19.20 | 3.58 | 2.34 | 1.94 | -1.64 |
| 345.00 | NA | NA | NA | NA | 17.56 | 15.58 | 19.78 | 4.20 | 2.74 | 1.98 | -2.22 |
| 365.00 | NA | NA | NA | NA | 17.56 | 15.52 | 19.55 | 4.03 | 2.63 | 2.04 | -1.99 |

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
LNAPL Volume = PI*$r^2$*LNAPL Thickness*7.48 (conversion factor)



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**TABLE 10**
**LNAPL RECOVERY EVALUATION SUMMARY**

The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York

| Well ID | Date | Recovery Method | Cumulative LNAPL Recovered (Gallons) | Average Recovery Rate (gpm) | LNAPL Elevation Change (Feet) | Average Recharge Rate (gpm) |
|---|---|---|---|---|---|---|
| | 4/19/10 | Spill Buddy™ | 1.20 | 0.03 | 3.9 | (-0.0004) |
| | 4/27/10 | Spill Buster™ | 1.20 | 0.009 | 0.25 | 0.0004 |
| **MW-17** | 5/11/10 | EFR | 20.00* | 0.068 | 1.49 | 0.0002 |
| **MW-14** | 5/3/10 | Xitech Pump | 7.30 | 0.08 | 1.48 | 0.0032 |
| | 4/19/10 | Spill Buddy™ | 9.00 | 0.28 | 0.92 | 0.038 |
| | 4/28/10 | Spill Buster™ | 17.00 | 0.10 | 0.96 | 0.034 |
| | 5/4/10 | Xitech Pump | 17.43 | 0.10 | 0.79 | 0.035 |
| **MW-24** | 5/18/10 | EFR | 76.00* | 0.30 | 0.87 | 0.028 |

**Notes**

NA - not applicable
NM - not measured
LNAPL - Light non-aqueous phase liquid
gpm - gallons per minute
EFR - enhanced fluid recovery
* - total fluids



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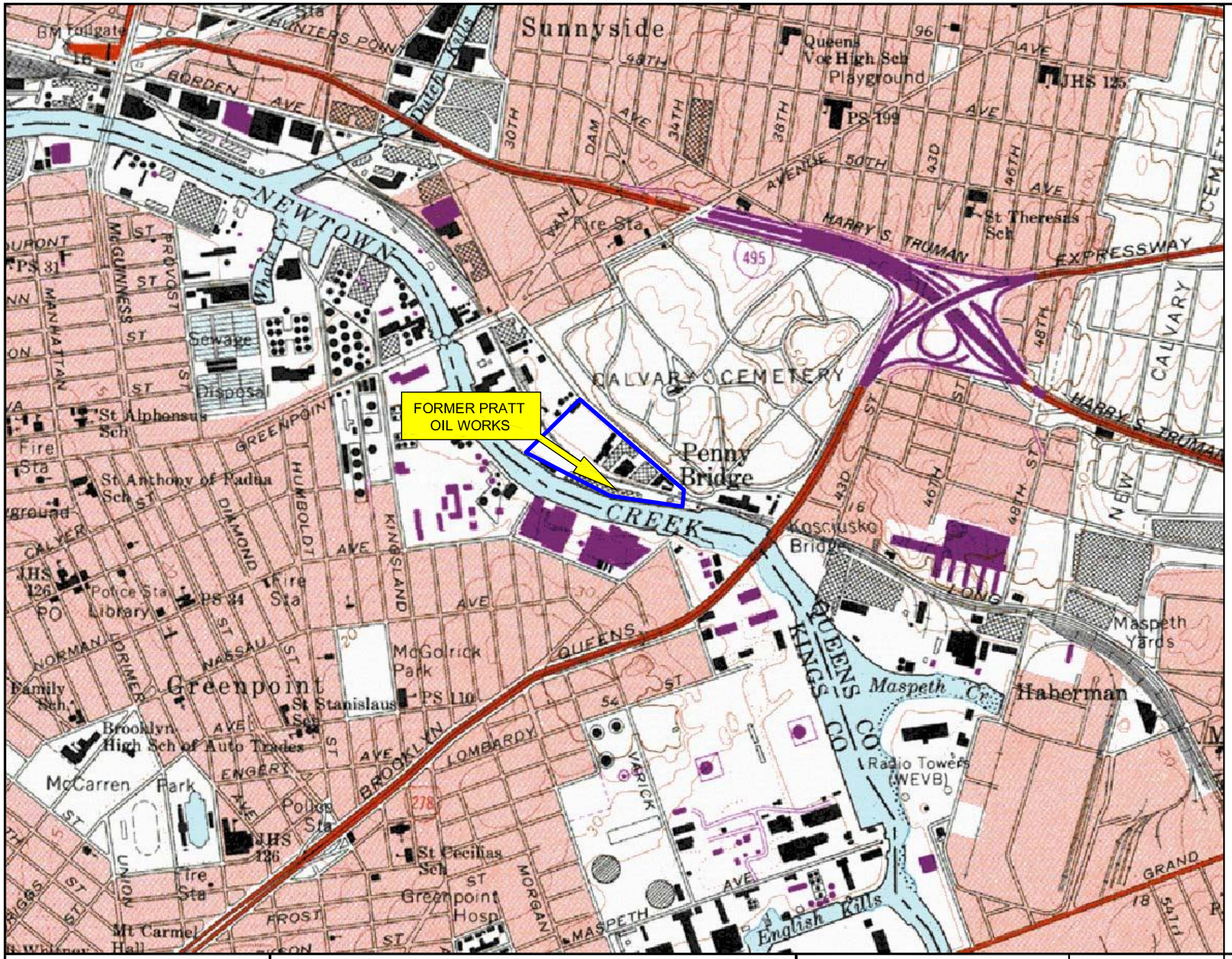
# FIGURES




0 500 1,000 2,000

SCALE (feet)

APPROXIMATE LOCATION OF FORMER PRATT OIL WORKS

N

LATITUDE: 40° 43' 47.32" N

LONGITUDE: 73° 56' 08.26" W


SOURCE:
USGS 7.5' SERIES TOPOGRAPHIC MAP,
"BROOKLYN, NY QUADRANGLE
PHOTOREVISED 1979"

QUADRANGLE LOCATION



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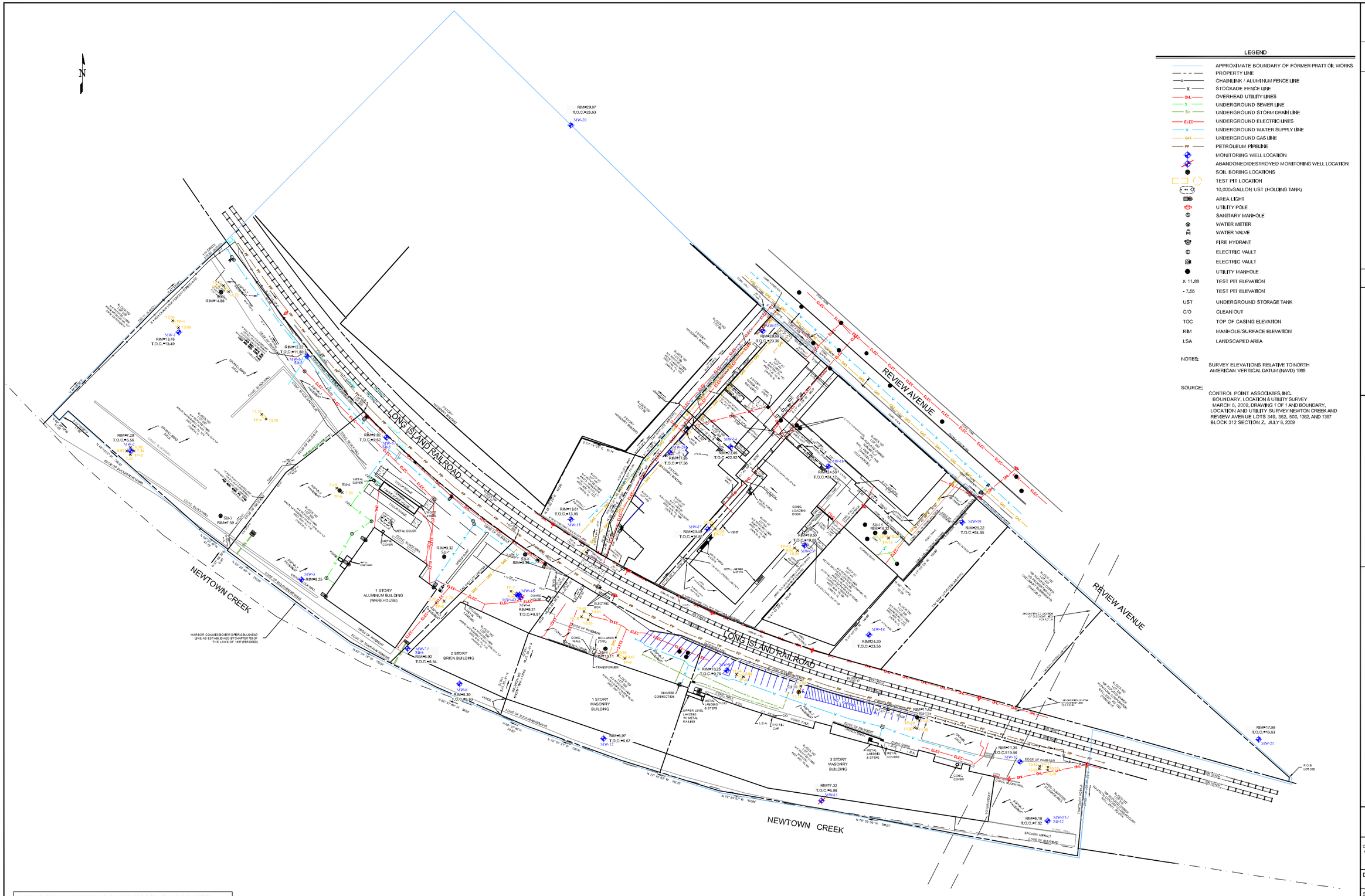
| | |
|---|---|
| PROJECT NO. | 108988 |
| DRAWN: | 05/19/2010 |
| DRAWN BY: | JR |
| CHECKED BY: | |
| FILE NAME: | |

**LOCUS PLAN**

FORMER PRATT OIL WORKS
THE INLAND PARCELS (TRACT I)
THE WATERFRONT PARCELS (TRACT II)
LONG ISLAND CITY, NEW YORK

FIGURE
1

BOHEMIA, NY




## LEGEND

- APPROXIMATE BOUNDARY OF FORMER PRATT OIL WORKS
- PROPERTY LINE
- CHAINLINK / ALUMINUM FENCE LINE
- STOCKADE FENCE LINE
- OVERHEAD UTILITY LINES
- UNDERGROUND SEWER LINE
- UNDERGROUND STORM DRAIN LINE
- UNDERGROUND ELECTRIC LINES
- UNDERGROUND WATER SUPPLY LINE
- UNDERGROUND GAS LINE
- PETROLEUM PIPELINE
- MONITORING WELL LOCATION
- ABANDONED/DESTROYED MONITORING WELL LOCATION
- SOIL BORING LOCATIONS
- TEST PIT LOCATION
- 10,000-GALLON UST (HOLDING TANK)
- AREA LIGHT
- UTILITY POLE
- SANITARY MANHOLE
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- ELECTRIC VAULT
- ELECTRIC VAULT
- UTILITY MANHOLE
- X 11.88 TEST PIT ELEVATION
- • 7.55 TEST PIT ELEVATION
- UST UNDERGROUND STORAGE TANK
- C/O CLEAN OUT
- TOC TOP OF CASING ELEVATION
- RIM MANHOLE/SURFACE ELEVATION
- LSA LANDSCAPED AREA

NOTES:

SURVEY ELEVATIONS RELATIVE TO NORTH AMERICAN VERTICAL DATUM (NAVD) 1988

SOURCE:

CONTROL POINT ASSOCIATES, INC.- BOUNDARY, LOCATION & UTILITY SURVEY MARCH 6, 2009, DRAWING 1 OF 1 AND BOUNDARY, LOCATION AND UTILITY SURVEY NEWTON CREEK AND REVIEW AVENUE LOTS 349, 352, 500, 1352, AND 1367 BLOCK 312 SECTION 2, JULY 6, 2009

THE EDUCATION LAW OF THE STATE OF NEW YORK PROHIBITS ANY PERSON ALTERING ANYTHING ON THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATIONS, UNLESS IT IS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. WHERE SUCH ALTERATIONS ARE MADE, THE PROFESSIONAL ENGINEER MUST SIGN, SEAL, DATE AND DESCRIBE THE FULL EXTENT OF THE ALTERATION ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS. (NYS EDUCATION LAW SECTION 7209-2)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 1 | | | |

KLEINFELDER ENGINEERING P.C.
ONE CORPORATE DRIVE
ORCHARD PARK, NEW YORK
PH. (631) 218-6512 FAX. (631) 218-6787
www.kleinfelder.com

ACAD FILE: FROW SITE PLAN WATERFRONT.dwg

PROJ. NO. 108888

DESIGNED BY: -

DRAWN BY: AR

CHECKED BY: -

# SITE PLAN

FORMER PRATT OIL WORKS
THE INLAND PARCELS (TRACT I)
THE WATERFRONT PARCELS (TRACT II)
LONG ISLAND CITY, NEW YORK

FOR REDUCED PLANS: ORIGINAL IN INCHES
0 0.5 1.0 1.5 2.0



DATE: 05/19/2010

SCALE: 1" = 60'

FIGURE 2


The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.

N

0 40 80
Feet
1 inch = 80 feet

KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com

| | |
|---|---|
| PROJECT NO. | 108988 |
| DRAWN: | 05/19/2010 |
| DRAWN BY: | J.R. |
| CHECKED BY: | |
| FILE NAME: | |

# AERIAL PLAN

FORMER PRATT OIL WORKS
THE INLAND PARCELS (TRACT I)
THE WATERFRONT PARCELS (TRACT II)
LONG ISLAND CITY, NEW YORK

FIGURE
3

# ATTACHMENT A

# ENGINEERING CERTIFICATION

## INTERIM REMEDIAL MEASURE FEASIBIBILITY STUDY REPORT

**The Inland Parcels (Tract I)**
**Former Pratt Oil Works**
**Long Island City, New York**

## ENGINEERING CERTIFICATION

This report has been reviewed by Kleinfelder Engineering, P.C. for accuracy, content and quality of presentation. The Education Law of the State of New York prohibits any person from altering anything in the report in anyway unless it is under the direction of the licensed professional engineer. Where such alterations are made, the professional engineer must sign, seal, date and describe the full extent of the alteration (NYS Education Law Section 7209-2).


Justin R. Moses, P.E.
Vice President and Secretary
Kleinfelder Engineering, P.C.

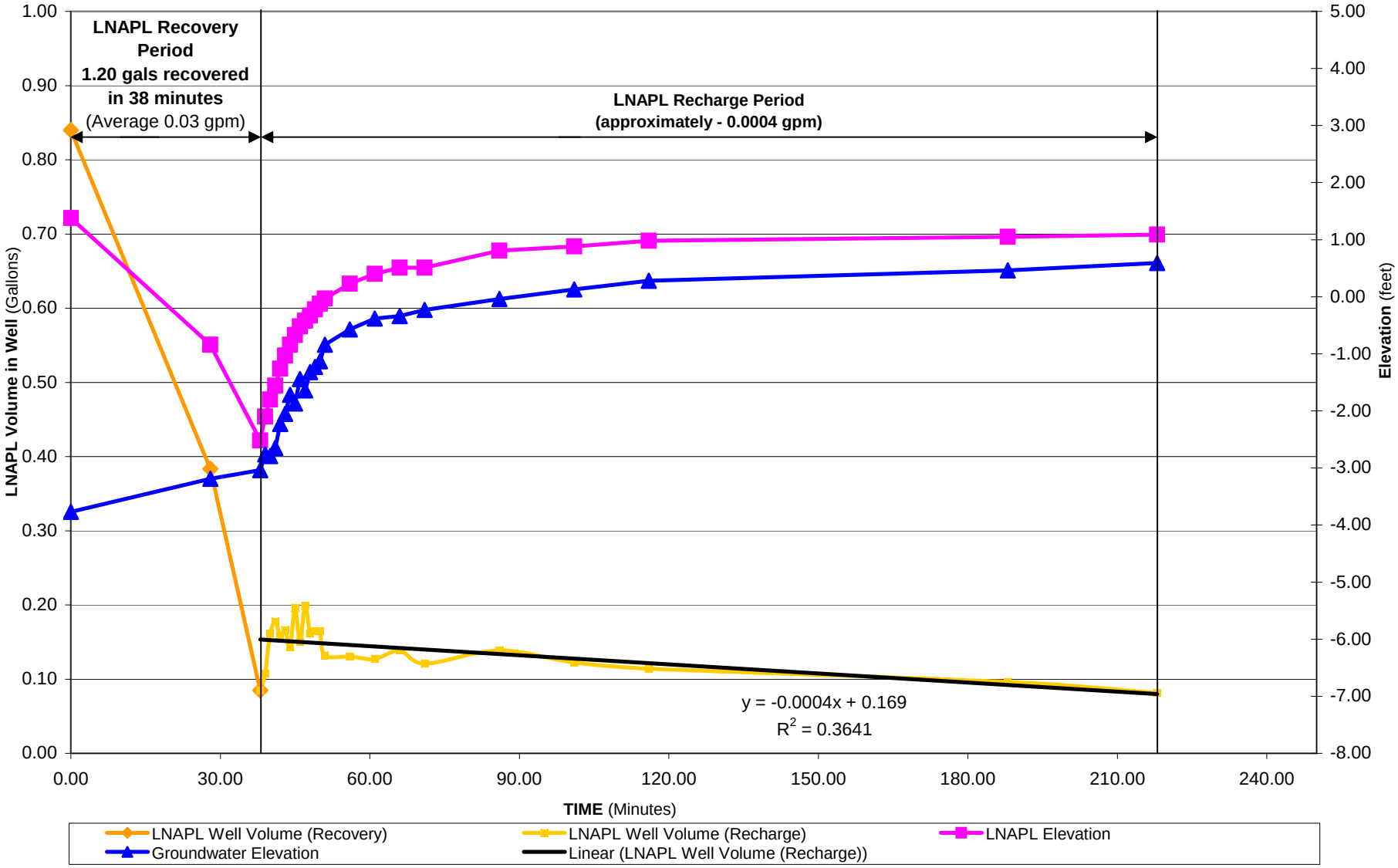
7/1/10
Date

# ATTACHMENT B

# LNAPL RECOVERY GRAPHS

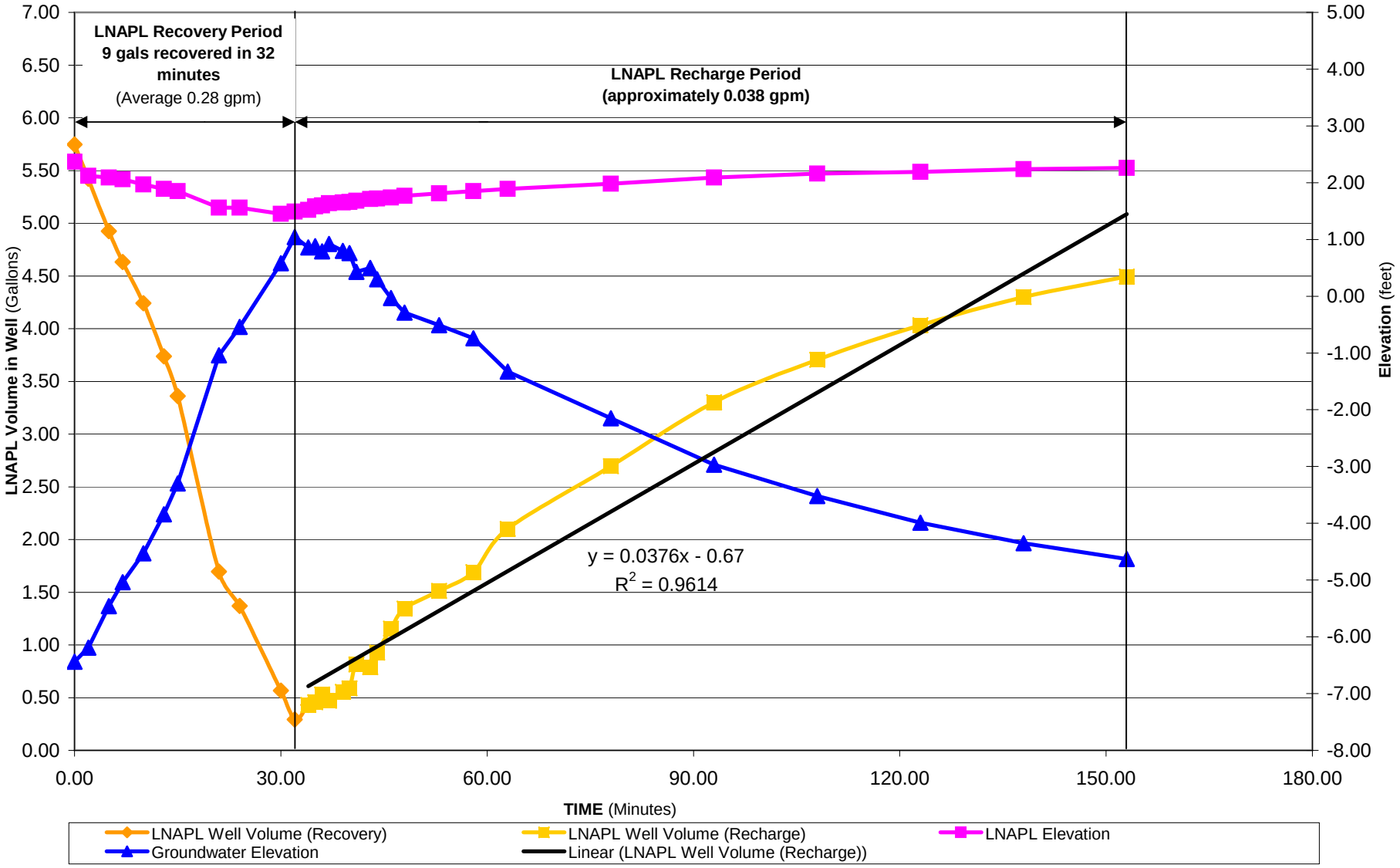
# FIGURE 1
## LNAPL RECOVERY Vs. TIME - MW-17

Spill Buddy™ Pump Event 4-19-10
The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York



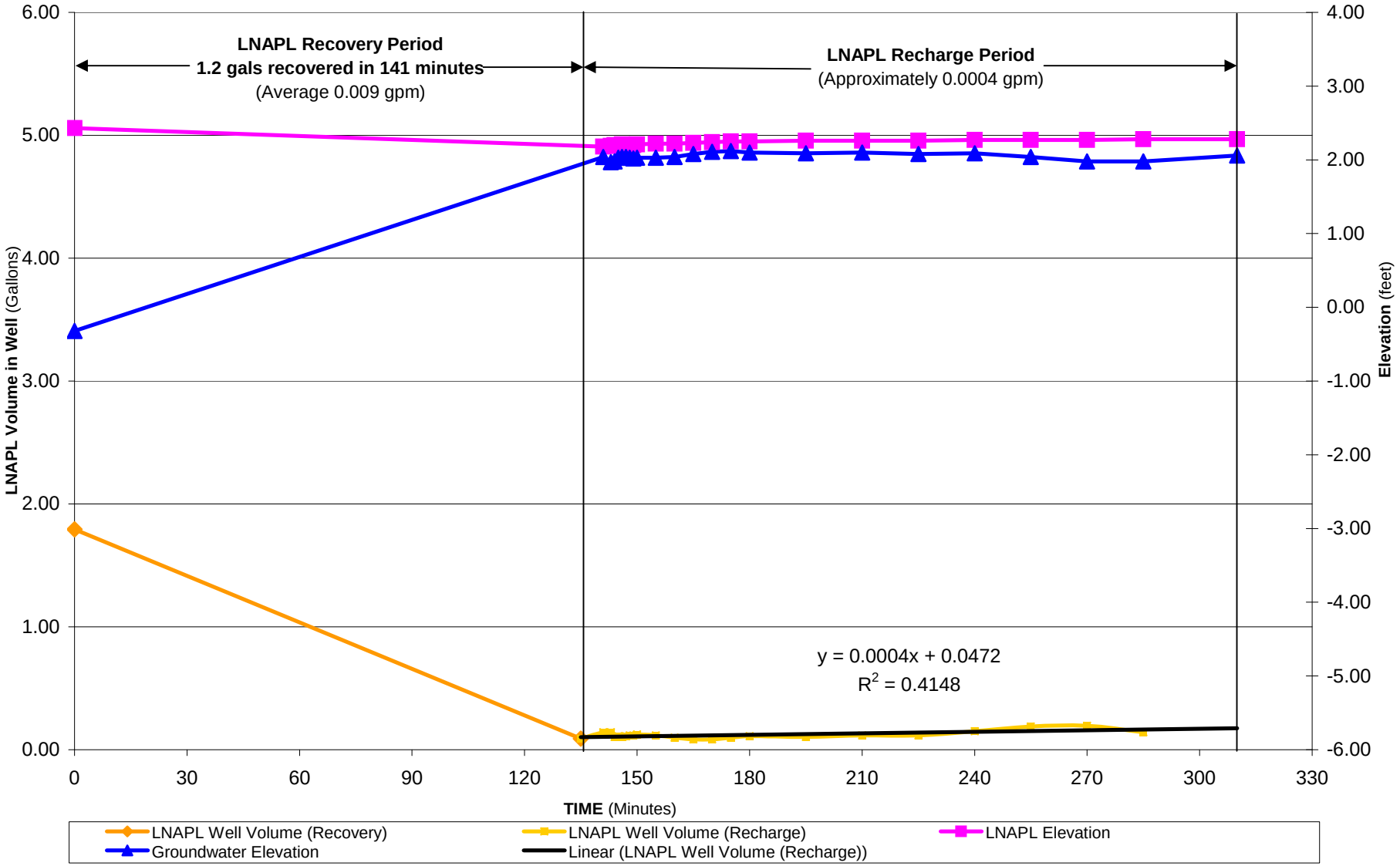
# FIGURE 2
## LNAPL RECOVERY Vs. TIME - MW-24

Spill Buddy™ Pump Event 4-19-10
The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York



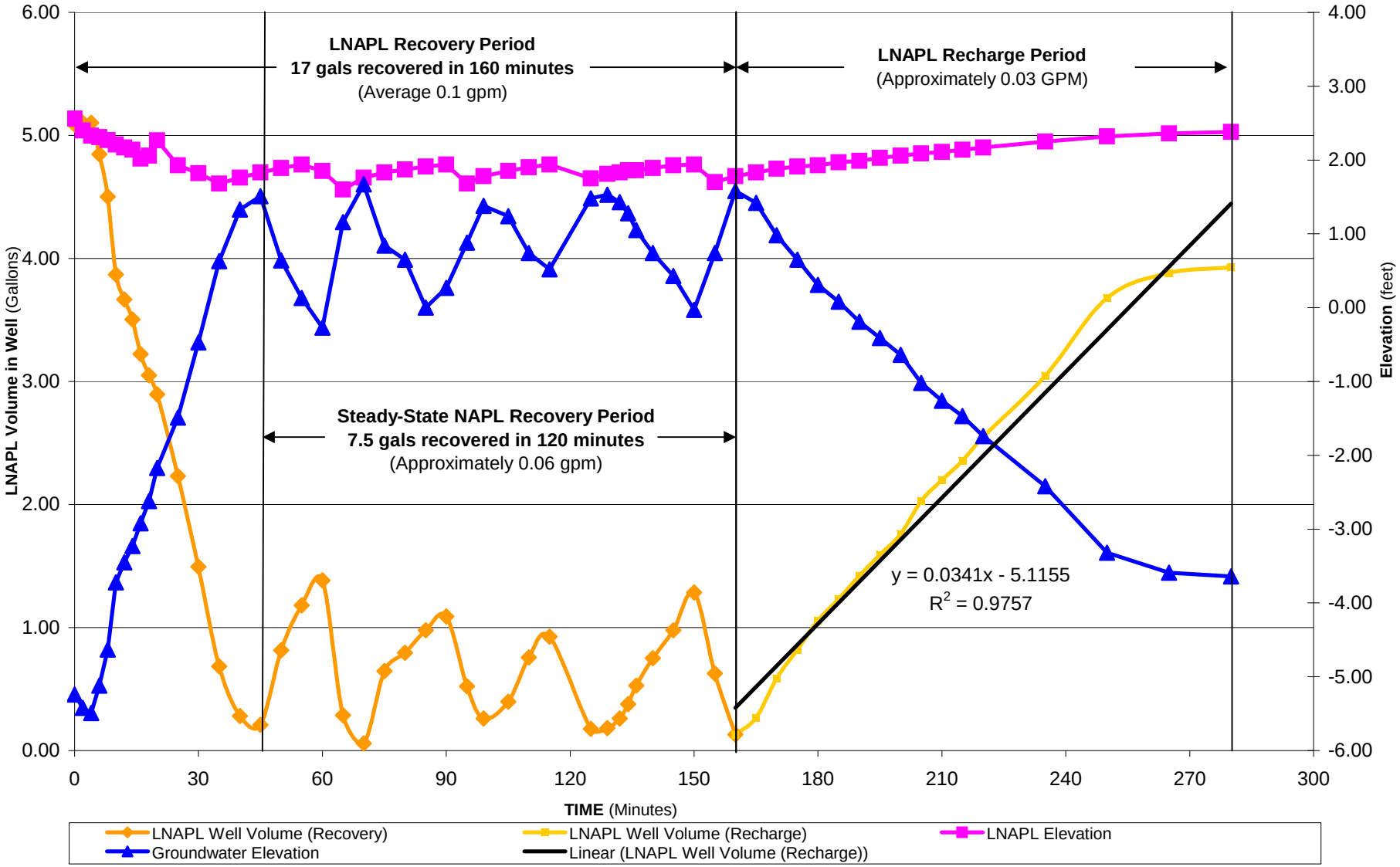
# FIGURE 3
## LNAPL RECOVERY Vs. TIME - MW-17

Spill Buster™ Pump Event 4-27-10
The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York



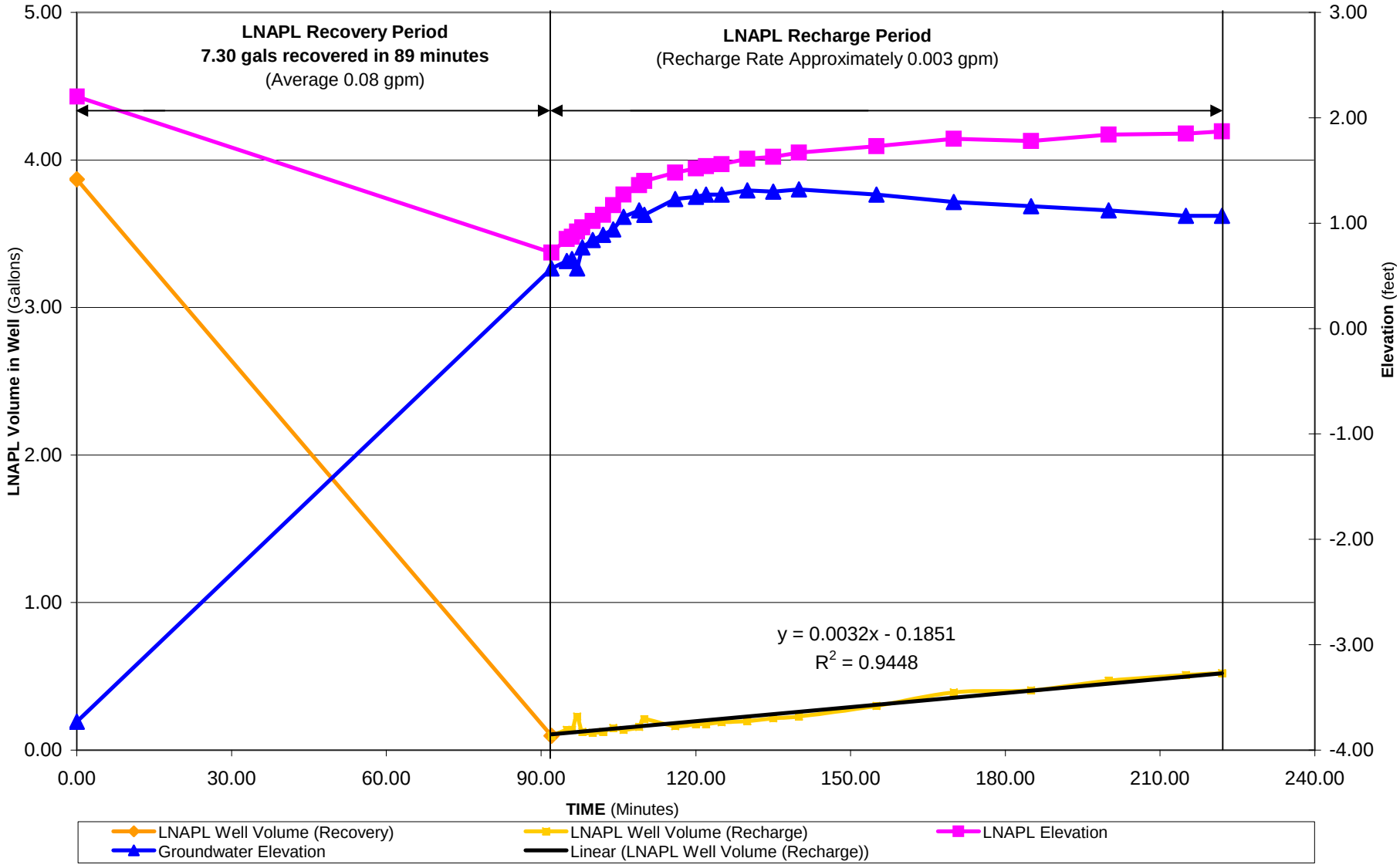
# FIGURE 4
## LNAPL RECOVERY Vs. TIME - MW-24

Spill Buster™ Pump Event 4-28-10
The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York



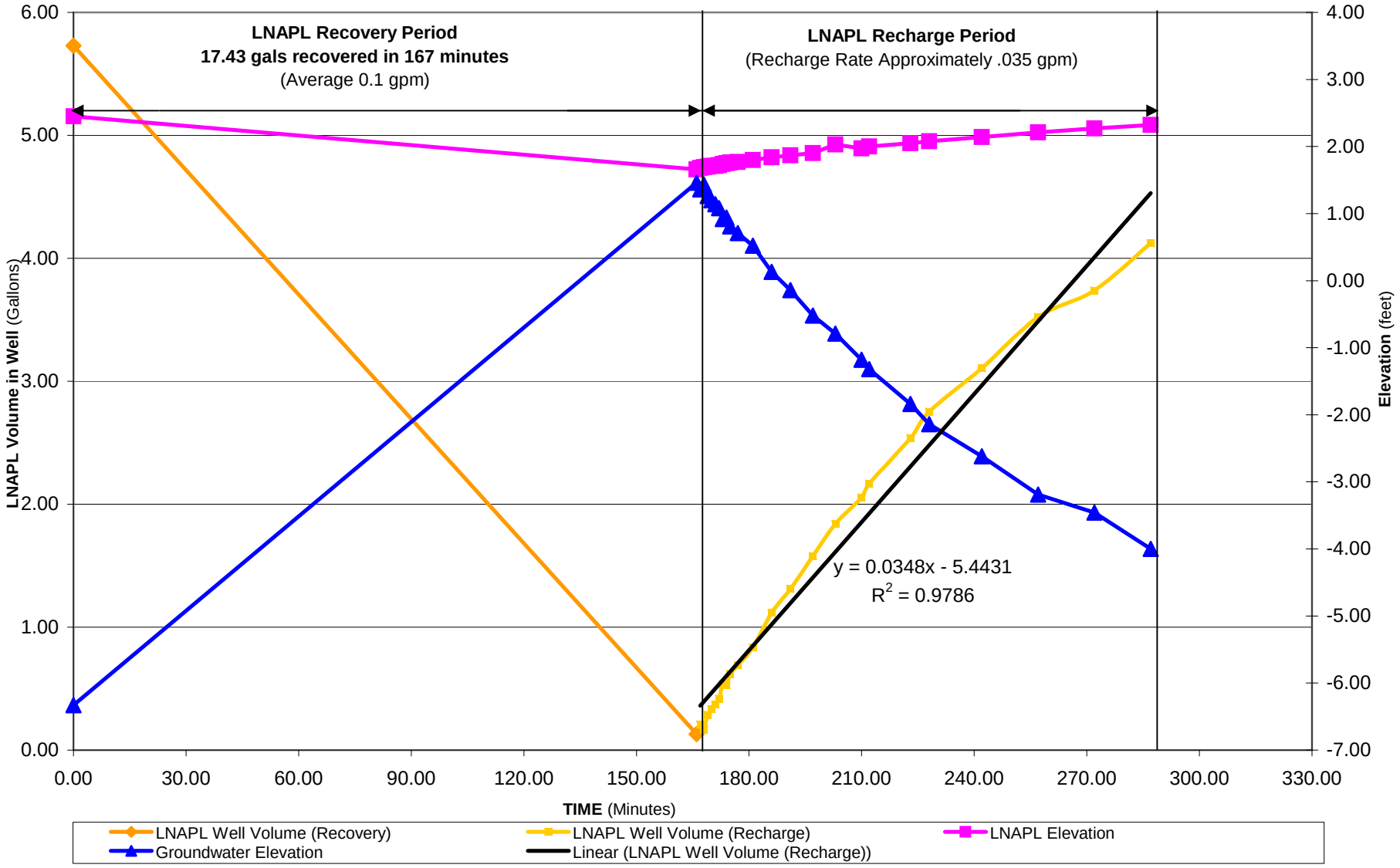
# FIGURE 5
## LNAPL RECOVERY Vs. TIME - MW-14

Pneumatic Pump Event 5-3-10
The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York



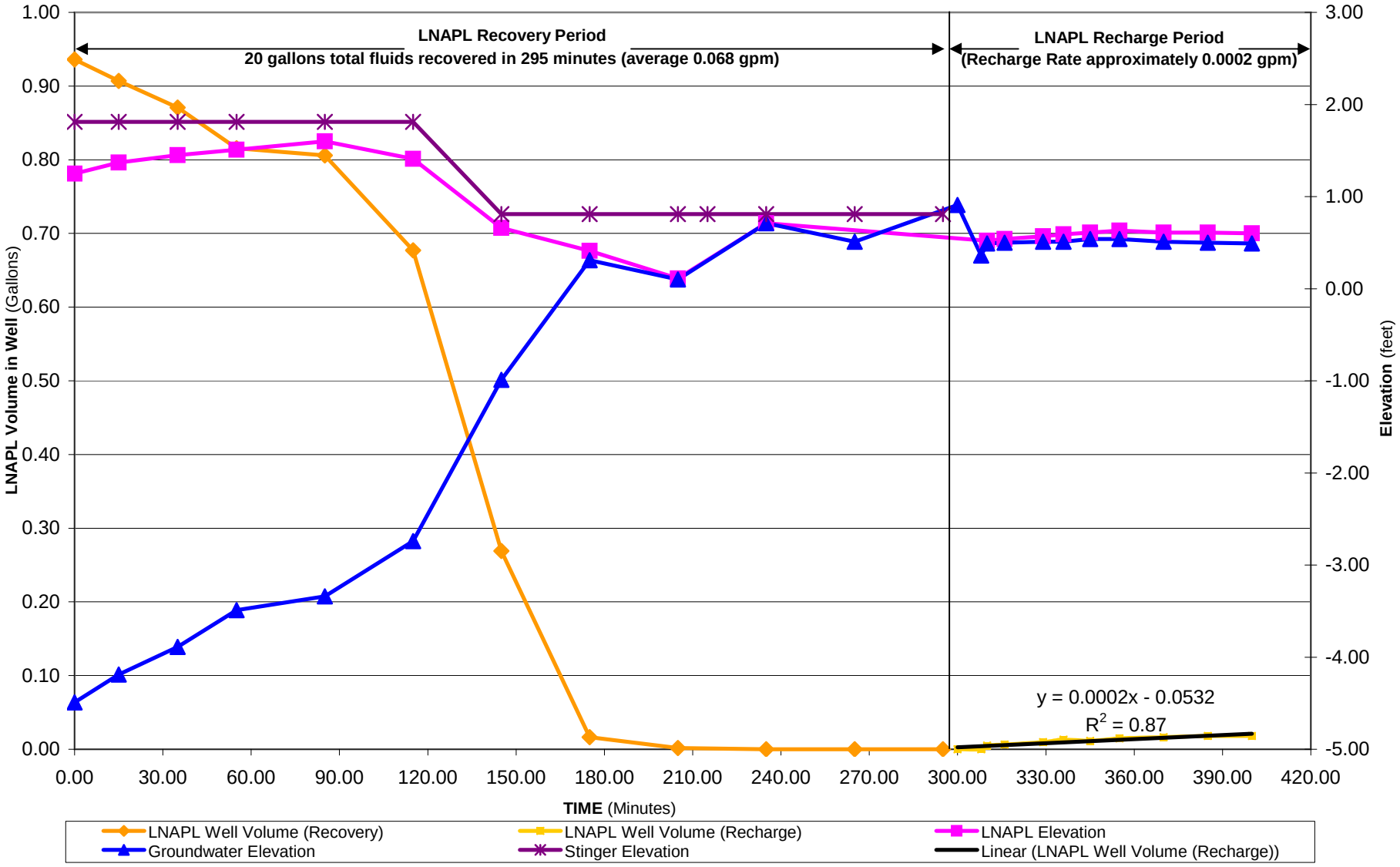
# FIGURE 6
## LNAPL RECOVERY Vs. TIME - MW-24

Pneumatic Pump Event 5-4-10
The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York



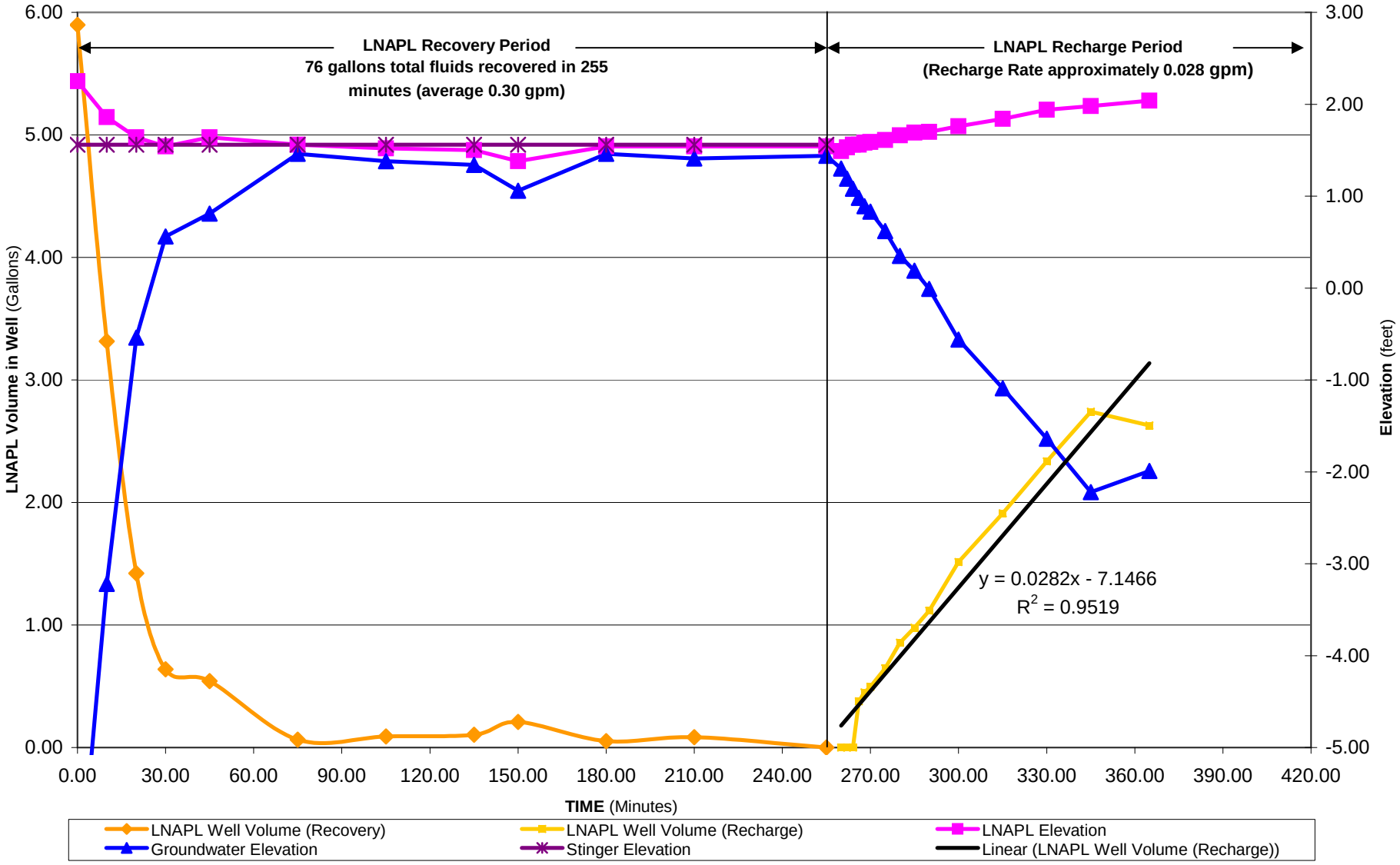
# FIGURE 7
## LNAPL RECOVERY Vs. TIME - MW-17

EFR Event 5-11-10
The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York



# FIGURE 8
## LNAPL RECOVERY Vs. TIME - MW-24

EFR Event 5-18-10
The Inland Parcels (Tract I)
Former Pratt Oil Works
Long Island City, New York



# ATTACHMENT C

# DISPOSAL MANIFESTS

Lorco Petroleum Services
450 South Front St.
Elizabeth, NJ 07202
(908) 820-8800
(800) 734-0910
FAX: (908) 820-8412

FILE

LORCO PETROLEUM SERVICES
www.lorcopetroleum.com

STANDARD COLLECTION ORDER FORM

760713

## GENERATOR/LOCATION

SALES ORDER #

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

TIME IN | TIME OUT

## BILL TO (IF DIFFERENT FROM LOCATION)

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

MANIFEST NUMBER

## SHIPPING INFORMATION

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

| NO. | TYPE | QTY. | UNIT | US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) | SALES REPRESENTATIVE |
|---|---|---|---|---|---|
| | | | | | |

## SERVICE SECTION

| ITEM # | DESCRIPTION | WASTE CODE | QUANTITY | UNIT PRICE | PRICE | TAX | LINE TOTAL |
|---|---|---|---|---|---|---|---|
| 40500 | USED OIL REMOVAL | | | | | | |
| 40300 | ANTIFREEZE REMOVAL | | | | | | |
| 40400 | OILY WATER DISPOSAL | | | | | | |
| 41100 | SLUDGE DISPOSAL | | | | | | |
| 41000 | GASOLINE/WATER | | | | | | |
| 40900 | DRUM DISPOSAL | | | | | | |
| 40611 | NEW 55 GAL DRUMS / 17H | | | | | | |
| 40515 | OIL WATER SEPARATOR SERVICE | | | | | | |
| 41513 | TANK WASHER | | | | | | |
| 41507 | TANK ENTRY | | | | | | |
| 41500 | TRANSPORTATION | | | | | | |
| 41508 | TRUCK AND OPERATOR | | | | | | |
| 41514 | ADDITIONAL LABOR | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | TOTAL | | | |

FILE

PARTS WASHER SERVICE INTERVAL _____ DAYS.
USED OIL CUSTOMER SERVICED EVERY 30 DAYS UNLESS OTHERWISE INDICATED.
USED OIL SERVICE INTERVAL _____ DAYS.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261, GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is ☐ used oil ☐ used antifreeze ☐ oily water ☐ oil filter ☐ parts washer solvent

☐ Other _____
Description

In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

X _____
Print Name | Title

X _____
Signature | Date

GENERATOR/CUSTOMER

**CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR CERTIFICATION**

I certify that this generator generates less than 100 kilograms of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month.

X _____
GENERATOR'S SIGNATURE

**NON CONDITIONALLY EXEMPT LARGE QUANTITY GENERATOR CERTIFICATION**

DEXSIL CDT TEST RESULTS

X _____ PPM

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES. INITIAL _____

$

**PAYMENT RECEIVED SECTION**

| CASH ☐ | TOTAL RECEIVED |
|---|---|
| CHECK NUMBER | |

In accordance with NJAC7:26-6.7b + 40CFR PART 279 LORCO has notified the US EPA of its location and used oil management activities.

X _____
Print Name

X _____
Signature | Date

LORCO REPRESENTATIVE

CUSTOMER

Lorco Petroleum Services
450 South Front St.
Elizabeth, NJ 07202
(908) 820-8800
(800) 734-0910
FAX: (908) 820-8412

FILE LORCO PETROLEUM SERVICES

www.lorcopetroleum.com

STANDARD COLLECTION ORDER FORM

760726

## GENERATOR/LOCATION

SALES ORDER #

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

TIME IN | TIME OUT

## BILL TO (IF DIFFERENT FROM LOCATION)

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

MANIFEST NUMBER

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| NO. | TYPE | QTY. | UNIT | US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) | SALES REPRESENTATIVE |
|---|---|---|---|---|---|
| | | | | | |

## SERVICE SECTION

| ITEM # | DESCRIPTION | WASTE CODE | QUANTITY | UNIT PRICE | PRICE | TAX | LINE TOTAL |
|---|---|---|---|---|---|---|---|
| 40500 | USED OIL REMOVAL | | | | | | |
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| 40400 | OILY WATER DISPOSAL | | | | | | |
| 41100 | SLUDGE DISPOSAL | | | | | | |
| 41000 | GASOLINE/WATER | | | | | | |
| 40900 | DRUM DISPOSAL | | | | | | |
| 40611 | NEW 55 GAL DRUMS / 17H | | | | | | |
| 40515 | OIL WATER SEPARATOR SERVICE | | | | | | |
| 41513 | TANK WASHER | | | | | | |
| 41507 | TANK ENTRY | | | | | | |
| 41500 | TRANSPORTATION | | | | | | |
| 41508 | TRUCK AND OPERATOR | | | | | | |
| 41514 | ADDITIONAL LABOR | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | TOTAL | | | |

PARTS WASHER SERVICE INTERVAL _____ DAYS.
USED OIL CUSTOMER SERVICED EVERY 30 DAYS UNLESS OTHERWISE INDICATED.
USED OIL SERVICE INTERVAL _____ DAYS.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261, GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is ☐ used oil ☐ used antifreeze ☐ oily water ☐ oil filter ☐ parts washer solvent

☐ Other _____
Description

In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

X _____
Print Name | Title

X _____
Signature | Date

GENERATOR/CUSTOMER

**CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR CERTIFICATION**

I certify that this generator generates less than 100 kilograms of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month.

X _____
GENERATOR'S SIGNATURE

**NON CONDITIONALLY EXEMPT LARGE QUANTITY GENERATOR CERTIFICATION**

DEXSIL CDT TEST RESULTS

X _____ PPM

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES. INITIAL _____

$

## PAYMENT RECEIVED SECTION

| CASH ☐ | TOTAL RECEIVED |
|---|---|
| CHECK NUMBER | |

In accordance with NJAC7:26-6.7b + 40CFR PART 279 LORCO has notified the US EPA of its location and used oil management activities.

X _____
Print Name

X _____
Signature | Date

LORCO REPRESENTATIVE

CUSTOMER

Lorco Petroleum Services
450 South Front St.
Elizabeth, NJ 07202
(908) 820-8800
(800) 734-0910
FAX: (908) 820-8412

LORCO PETROLEUM SERVICES

www.lorcopetroleum.com

STANDARD COLLECTION ORDER FORM

760735

## GENERATOR/LOCATION

SALES ORDER #

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

TIME IN | TIME OUT

## BILL TO (IF DIFFERENT FROM LOCATION)

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

MANIFEST NUMBER

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|---|---|---|---|---|---|
| | | | | | |

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| ITEM # | DESCRIPTION | WASTE CODE | QUANTITY | UNIT PRICE | PRICE | TAX | LINE TOTAL |
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| 40400 | OILY WATER DISPOSAL | | | | | | |
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| 41000 | GASOLINE/WATER | | | | | | |
| 40900 | DRUM DISPOSAL | | | | | | |
| 40611 | NEW 55 GAL DRUMS / 17H | | | | | | |
| 40515 | OIL WATER SEPARATOR SERVICE | | | | | | |
| 41513 | TANK WASHER | | | | | | |
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| 41508 | TRUCK AND OPERATOR | | | | | | |
| 41514 | ADDITIONAL LABOR | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | TOTAL | | | |

FILE

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USED OIL CUSTOMER SERVICED EVERY 30 DAYS UNLESS OTHERWISE INDICATED.
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Generator certifies that the waste is ☐ used oil ☐ used antifreeze ☐ oily water ☐ oil filter ☐ parts washer solvent

☐ Other _____
Description

In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

X _____
Print Name | Title

X _____
Signature | Date

GENERATOR/CUSTOMER

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I certify that this generator generates less than 100 kilograms of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month.

X _____
GENERATOR'S SIGNATURE

**NON CONDITIONALLY EXEMPT LARGE QUANTITY GENERATOR CERTIFICATION**

DEXSIL CDT TEST RESULTS

X _____ PPM

CUSTOMER

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. $ _____

INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES. INITIAL _____

**PAYMENT RECEIVED SECTION**

| CASH ☐ | TOTAL RECEIVED |
|---|---|
| CHECK NUMBER | |

In accordance with NJAC7:26-6.7b + 40CFR PART 279 LORCO has notified the US EPA of its location and used oil management activities.

X _____
Print Name

X _____
Signature | Date

LORCO REPRESENTATIVE