KLEINFELDER
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One Corporate Drive, Suite 201
Bohemia, NY
11716

p| 631.218.0612
f | 631.218.0787

kleinfelder.com

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June 2, 2009

Mr. Michael Haggerty
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B
625 Broadway
Albany, New York 12233-7016

Re: Supplemental Off-Site Subsurface Investigation and Remedial Action Plan Addendum
Mobil Service Station No. 12827 (17-QDM)
150-54 West 145th Street
New York, New York
PBS No. 2-157929
NYSDEC Case No. 07-51061

Dear Mr. Haggerty:

Kleinfelder East, Inc. (Kleinfelder) was retained by ExxonMobil Environmental Services Company (ExxonMobil), on behalf of ExxonMobil Oil Corporation, to prepare this Supplemental Off-Site Subsurface Investigation and Remedial Action Plan Addendum (Plan) for the above-referenced Mobil service station (Site) (Figure 1). This Plan has been prepared in response to discussions between the New York State Department of Environmental Conservation (NYSDEC), ExxonMobil, and A&C Development, LLC (A&C Development).

The Plan is intended to further investigate the nature and extent of subsurface hydrocarbons beneath the adjacent property, located at 2495 Adam Clayton Powell, Jr. Boulevard, and will revise the April 29, 2009 *Supplemental Off-Site Subsurface Investigation Letter (Adjacent Property)*, which was prepared in response to the April 29, 2009 on-site meeting. In addition to further investigating the subsurface conditions of the adjacent property, the Plan proposes the installation of additional air sparge (AS) and soil vapor extraction (SVE) wells to be connected to the proposed on-site AS/SVE remediation system. An AS/SVE remediation system was proposed in an April 19, 2009 *Remedial Action Plan* (RAP). To date, a NYSDEC response to the RAP has not been received.

The adjacent property is currently abandoned and previously operated as a grocery store. The adjacent property is currently undergoing renovations in order to re-open as a grocery store. Due to the time constraints associated with the pending re-opening of the grocery store, both investigation and the installation of remedial infrastructure (if necessary), will be conducted during the same time frame.

Upon receipt of NYSDEC written approval, the proposed work will be conducted according to the schedule included herein. Please provide written approval of the Plan at your earliest convenience. If you require additional information or clarification, please contact the undersigned at (631) 218-0612, or Mr. Charles Kolb of ExxonMobil at (516) 239-4654.

Very truly yours,
Kleinfelder East, Inc.

Dennis G. Shin, P.E.
Senior Project Manager

Michael Meyerhoefer
Project Manager

Enclosure

Copy: Mr. Kenneth J. Drake, ExxonMobil Environmental Services Company (Via Electronic Mail)
Mr. Charles Kolb, ExxonMobil Environmental Services Company (Via Electronic Mail)
Ms. Marie McGowan, ExxonMobil Corporation (Via Electronic Mail)
Mr. Gary Stumpf, ExxonMobil Corporation (Via Electronic Mail)
Mr. Richard Bryne, ExxonMobil Corporation (Via Electronic Mail)
Mr. Paul McCusker, McCusker, Anselmi, Rosen & Carvelli, P.C. (Via Electronic Mail)
Ms. Linda Shaw Esq, Knauf, Shaw, LLC. (Via US Mail)
Ms. Sandra Acosta, A&C Developers, LLC (Via US Mail)
File

KLEINFELDER One Corporate Drive, Suite 201, Bohemia, NY 11716 (631) 218-0612 (631) 218-0787 fax

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Bohemia, NY
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p| 631.218.0612
f | 631.218.0787

kleinfelder.com

Supplemental Off-Site Subsurface Investigation and Remedial Action Plan Addendum

Mobil Service Station No. 12827 (17-QDM)
150-54 West 145th Street
New York, New York

NYSDEC Case No. 07-51061

June 2, 2009

Prepared by:

Kleinfelder East, Inc.
One Corporate Drive, Suite 201
Bohemia, New York 11716
(631) 218-0612

Prepared for:

ExxonMobil Environmental Services Company
464 Doughty Boulevard
Inwood, New York 11096
(516) 239-4654

SUPPLEMENTAL OFF-SITE SUBSURFACE INVESTIGATION WORK PLAN AND REMEDIAL ACTION PLAN ADDENDUM

Mobil Service Station No. 12827 (17-QDM)
150-54 West 145th Street
New York, New York

QUALITY ASSURANCE/QUALITY CONTROL

The following personnel have reviewed this report for accuracy, content, and quality of presentation.

Dennis G. Shin, P.E.
Senior Project Manager

6/2/09
Date

Michael Meyerhoefer
Project Manager

6/2/09
Date

TABLE OF CONTENTS

LIST OF FIGURES

FIGURES

1.0 INTRODUCTION

Kleinfelder East, Inc. (Kleinfelder) was retained by ExxonMobil Environmental Services Company (ExxonMobil), on behalf of ExxonMobil Oil Corporation, to prepare this Supplemental Off-Site Subsurface Investigation and Remedial Action Plan Addendum (Plan) for Mobil Service Station No. 12827 (17-QDM), located at 150-54 West 145th Street, in New York, New York (Site) (Figure 1). This Plan has been prepared in response to discussions between the New York State Department of Environmental Conservation (NYSDEC), ExxonMobil, and A&C Development, LLC (A&C Development).

The Plan is intended to further investigate the nature and extent of subsurface hydrocarbons beneath the adjacent property, located at 2495 Adam Clayton Powell, Jr. Boulevard, and will revise the April 29, 2009 *Supplemental Off-Site Subsurface Investigation Letter (Adjacent Property)*, which was prepared in response to the April 29, 2009 on-site meeting. In addition to further investigating the subsurface conditions of the adjacent property, the Plan proposes the installation of additional air sparge (AS) and soil vapor extraction (SVE) wells to be connected to the proposed on-site AS/SVE remediation system. An AS/SVE remediation system was proposed in an April 19, 2009 *Remedial Action Plan* (RAP). To date, a NYSDEC response to the RAP has not been received.

The adjacent property is currently abandoned and previously operated as a grocery store. The adjacent property is currently undergoing renovations in order to re-open as a grocery store. Due to the time constraints associated with the pending re-opening of the grocery store, both investigation and the installation of remedial infrastructure (if necessary) will be conducted during the same time. Upon receipt of NYSDEC approval of the Plan, work will commence based upon the schedule included in Section 7.0.

2.0 SITE DESCRIPTION

The Site is an active Mobil service station situated on approximately one-quarter acre parcel of land, located on the south side of West 145th Street, between Lennox Avenue and Seventh Avenue (Adam Clayton Powell, Jr. Boulevard) in New York, New York. The location of the Site is indicated on Figure 1. The Site is covered entirely by concrete and asphalt. The Site consists of one single-story building, containing four automobile service bays and four multi-product dispenser islands. Currently, the Site is inactive, as underground storage tank (UST) replacement activities are being conducted. Gasoline was formerly stored in five 4,000-gallon capacity USTs. The five 4,000-gallon capacity USTs will be replaced with two 10,000-gallon capacity and one 8,000-gallon capacity USTs. The locations of pertinent Site features are indicated on Figure 2.

The Site is generally covered with asphalt, with the exception of concrete areas above the USTs and around the dispenser islands. Public utilities servicing the Site include subsurface sewer, water, electric, and telephone lines.

The Site is bordered to the south by residential apartment buildings with basements and bordered to the east by an Amerada Hess gasoline service station. West of the Site is a vacant single-story structure, formerly operated as a grocery store. The Site is bordered to the north by West 145th Street, beyond which are residential apartment buildings containing basements. A Getty service station is located northeast of the Site, across West 145th Street.

3.0 SUMMARY OF SITE ACTIVITIES

The following is a summary of activities performed at the Site between November 2007 and present:

November 2, 2007 The NYSDEC submitted a letter to ExxonMobil requesting an investigation of the Site due to soil and groundwater analytical data that was collected at the adjacent property (2495 Adam Clayton Powell, Jr. Boulevard). NYSDEC Case No. 07-06608 was assigned to the adjacent property on September 13, 2007, as a result of the findings of the Phase II conducted. NYSDEC Case No. 07-06608 was closed on March 5, 2009.

Specifically, the NYSDEC letter requested tightness testing of USTs and fill lines, and delineation of potential groundwater contamination via installation of monitoring wells. NYSDEC Case No. 07-51061 was assigned to the Site on November 2, 2007, as a result of the investigation on the adjacent property. NYSDEC Case No. 07-51061 remains open.

November 8, 2007 Crompco Corporation of Plymouth Meeting, Pennsylvania (Crompco), conducted tank and line testing at the Site. The results indicated that the tanks and lines tested tight. The tank test results were submitted to the NYSDEC in a November 19, 2007 correspondence.

December 14, 2007 A *Remedial Investigation Work Plan* (RIWP), proposing the installation of five soil borings/monitoring wells to evaluate subsurface soil and groundwater conditions at the Site was submitted to the NYSDEC. The RIWP was approved by the NYSDEC on January 9, 2008, with a revision to the proposed schedule. The NYSDEC required that the investigation commence within 45 days of approval, and the report of findings be submitted within 60 days of completion of field work.

January 11, 2008 The NYSDEC approved a Remedial Action Work Plan, dated January 5, 2008, which was submitted by Galli Engineering, on behalf of A&C Development Partners (owners of 2495 Adam Clayton Powell, Jr. Boulevard property).

February 20, 2008 A subsurface investigation (SI) was initiated at the Site consisting of the installation of five soil borings completed as monitoring wells MW-1 through MW-5. Laboratory analytical results indicated volatile organic compound (VOC) concentrations above NYSDEC Recommended Soil Cleanup Objectives (RSCOs) in two of ten soil samples collected, and semi-volatile organic compound (SVOC) concentrations above NYSDEC RSCOs in five of ten soil

samples collected. Groundwater laboratory analysis indicated VOCs above NYSDEC Water Quality Standards (WQS). The highest dissolved benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) concentrations were detected in monitoring wells MW-2 and MW-3, respectively. Laboratory analysis indicated three SVOCs above NYSDEC WQS. The methods and results of the SI were submitted to the NYSDEC in the April 18, 2008 *Subsurface Investigation Report* (SIR).

May 22, 2008 Liquid-phase hydrocarbon (LPH) was detected in monitoring well MW-2 (0.72 feet). The NYSDEC was notified via telephone conversation. On-going investigation and remediation of the LPH was conducted under the existing NYSDEC Case No. 07-51061. A sample of the LPH detected in monitoring well MW-2 was collected and analyzed by Accutest Laboratories of Dayton, New Jersey (Accutest), a New York State Department of Health (NYSDOH) approved laboratory (Environmental Laboratory Approval Program [ELAP] No. 10983) for ethanol in accordance with United States Environmental Protection Agency (USEPA) Method 8015B. Additionally, LPH fingerprinting was completed on the LPH sample. Laboratory analytical results indicated that ethanol was below laboratory reporting limits (BRL), and gas chromatography fingerprinting indicated that the LPH collected was a match for gasoline.

June 11, 2008 The NYSDEC approved the April 18, 2008 SIR, including the recommendations to investigate subsurface anomalies and conduct quarterly groundwater sampling. The NYSDEC approval letter required that additional delineation of soil and groundwater be completed with the installation of wells northeast and south-south east of monitoring well MW-2. The NYSDEC also required that a RAP be submitted upon completion of soil and groundwater delineation.

July 8, 2008 A *Supplemental Subsurface Investigation Work Plan* (SSIWP) was submitted to the NYSDEC in response to the NYSDEC's letter to ExxonMobil, dated June 11, 2008. The NYSDEC letter requested additional delineation of soil and groundwater in the vicinity of monitoring MW-2 and the submission of a RAP for the Site. The SSIWP proposed additional delineation of hydrocarbons in soil and groundwater on the western portion of the Site and an interim remedial measure (IRM) to address LPH present in monitoring well MW-2.

July 21, 2008 The NYSDEC submitted an e-mail stating that NYSDEC Case No. 07-51061 had been transferred from the regional office in Long Island City to the central office in Albany. Michael Haggerty replaced Jeffrey Voight as the NYSDEC case manager. The e-mail also approved the July 8, 2008 SSIWP, contingent upon the addition of three monitoring wells to determine the extent of LPH in monitoring well MW-2. Following a discussion with Kleinfelder on July 23, 2008, the NYSDEC approved the SSIWP with the addition of two monitoring wells, rather than three monitoring wells.

August 25, 2008 The NYSDEC submitted a letter to ExxonMobil requesting that enhanced fluid recovery (EFR) events be conducted on monitoring well MW-2, the UST distribution system be tested, groundwater samples from monitoring well MW-2 be analyzed for oxygenates, and the preparation of a Corrective Action Plan (CAP).

August 27, 2008 A supplemental subsurface investigation (SSI) was initiated at the Site, consisting of the excavation of soil test pits to investigate metallic anomalies and the installation of six soil borings/monitoring wells (MW-6 through MW-11). The soil test pits revealed the presence of 12 previously abandoned, concrete-encased, 550-gallon capacity USTs. Upon discovery of hydrocarbon-impacted

soil around the abandoned USTs, the NYSDEC was notified, and Case No. 08-06417 was assigned to the Site. NYSDEC Case No. 08-06417 was closed on January 26, 2009.

The SSI also consisted of the advancement and installation of six soil borings/monitoring wells (MW-6 through MW-11). Laboratory analytical results indicated that VOC concentrations were above NYSDEC RSCOs in eight of 12 soil samples collected. Monitoring well liquid-level gauging indicated that 0.79 foot, 0.94 foot, and 0.05 foot of LPH, respectively, was detected in monitoring wells MW-6, MW-10, and MW-11, respectively. Groundwater laboratory analysis indicated VOCs above NYSDEC WQS. A complete description of the methods and results of the SSI were submitted to the NYSDEC in a December 29, 2008 *Supplemental Subsurface Investigation Report* (SSIR), which was approved by the NYSDEC on January 26, 2009.

September 5, 2008 The NYSDEC submitted a letter to ExxonMobil requesting that a SI be conducted on 2495 Adam Clayton Powell, Jr. Boulevard to delineate the extent of off-site LPH.

September 12, 2008 A letter was submitted in response to the NYSDEC correspondence dated August 25, 2008. The letter indicated that EFR events would be initiated on a monthly basis at monitoring wells MW-1 and MW-2, that tightness testing of the USTs and associated distribution piping would be conducted, and that groundwater samples collected from monitoring wells MW-1 and MW-2 would be analyzed for tert-amyl methyl ether (TAME), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETEB), tert-amyl alcohol (TAA), tertiary-butyl alcohol (TBA), and ethanol along with BTEX and MTBE. Lastly, the correspondence indicated that the Site had not yet been fully characterized, and a CAP would be submitted once the Site was completely delineated.

September 16, 2008 Crompco conducted tank and line testing at the Site. The results indicated that the tanks and lines tested tight. The tank test results were submitted to the NYSDEC in the October 1, 2008 *Site Status Update Report* (SSUR).

September 29, 2008 Mobile remediation events (MRE) were initiated, consisting of EFR and vapor extraction through an internal combustion engine (ICE). Between September 29 and October 30, 2008, eight events were conducted on monitoring wells exhibiting measurable LPH. Approximately 19,701 gallons of groundwater, 227 gallons of LPH, and 814 pounds of total petroleum hydrocarbon (TPH) vapors were extracted through monitoring wells MW-6, MW-10, and MW-11.

October 2, 2008 An *Off-Site Subsurface Investigation Work Plan* (OSIWP), proposing the installation of six soil borings/monitoring wells on 2495 Adam Clayton Powell, Jr. Boulevard was submitted to the NYSDEC in response to the September 5, 2008 NYSDEC letter. The NYSDEC approved the OSSIWP on October 2, 2008; however, the NYSDEC also requested the development a work plan proposing the installation of off-site wells across West 145th Street.

October 6, 2008 An off-site subsurface investigation (OSSI) was initiated on October 6, 2008, with a Site inspection and geophysical investigation. On October 17, 2008, following execution of the access agreement with A&C Development, six soil borings, five of which were completed as monitoring wells MW-13 through MW-17, were advanced at the Site.

Laboratory analytical results indicated that VOC concentrations were above NYSDEC RSCOs in six of 12 soil samples collected. Groundwater laboratory

analysis indicated VOCs above NYSDEC WQS in the five off-site monitoring wells. A complete description of the methods and results of the SSI were submitted to the NYSDEC in a February 18, 2009 *Off-Site Subsurface Investigation Report* (OSSIR). The OSSIR also included a work plan to advance six off-site soil borings to be completed as groundwater monitoring wells along the south side of West 145th Street, the east side of Adam Clayton Powell, Jr. Boulevard, and the north side of West 144th Street. The OSSIR was conditionally approved by the NYSDEC on March 25, 2009, with a request of the advancement of four additional soil borings along the north side of West 145th Street. .

October 10, 2008 An *UST Removal Work Plan*, proposing the removal of ten of the 12 previously abandoned, concrete-encased, 550-gallon capacity USTs and the excavation of petroleum-impacted soil was submitted to the NYSDEC.

October 17, 2008 An access agreement was fully executed between ExxonMobil and A&C Development/2497 Realty Corporation, the owner of the adjacent property at 2495 Adam Clayton Powell, Jr. Boulevard. The access agreement referenced a limited scope of work consisting of a property inspection, geophysical investigation, SI with advancement of six soil borings/monitoring wells, monitoring well top of casing survey, and sample collection.

October 27, 2008 The NYSDEC submitted a letter to ExxonMobil indicating that the *UST Removal Work Plan* submitted on October 10, 2008, failed to address the NYSDEC requirements to remove source material as an IRM. The NYSDEC required a new work plan in the form of an IRM to remove source material. The NYSDEC also required that any remaining absorbed- and dissolved-phase hydrocarbons not addressed through excavation be addressed aggressively.

October 30, 2008 A *Supplemental Subsurface Investigation Work Plan* (SSIWP), in response to the NYSDEC October 2, 2008 request, was submitted to the NYSDEC, proposing the installation of three on-site soil borings/monitoring wells and four off-site soil borings/monitoring wells to delineate the nature and extent of liquid-, adsorbed-, and dissolved-phase hydrocarbons beneath the Site. The SSIWP also proposed the installation of two AS wells and two SVE wells for the purpose of feasibility testing. To date, a NYSDEC response to the SSIWP has not been received.

November 4, 2008 Operation of a temporary LPH recovery system commenced and was connected to monitoring wells MW-6, MW-10, and MW-11. The temporary LPH recovery system was dismantled and removed from the Site on January 23, 2009. During operation, the temporary LPH recovery system removed approximately 622 gallons of LPH from the subsurface.

November 10, 2008 An *IRM UST Removal Work Plan* (Work Plan) was submitted to the NYSDEC, proposing the removal of 12 abandoned, 550-gallon capacity USTs, five active 4,000-gallon capacity USTs, and excavation of petroleum-impacted soil to the extent mechanically feasible. The Work Plan was conditionally approved by the NYSDEC on November 24, 2008.

The conditions required by the NYSDEC were that the area of open excavation must be minimized at all times, vapor suppressant foam must be used to reduce odors/vapors, and ExxonMobil would assist the NYSDEC with Citizen Participation Efforts, which included adjacent property manager communication, an evaluation of surrounding building air intake vents, and the preparation and distribution of a Fact Sheet.

November 18, 2008 An *Underground Storage Tank Supplemental Subsurface Investigation Work Plan* was submitted to the NYSDEC, proposing the installation of six soil borings to characterize the nature and extent of absorbed-phase hydrocarbons immediately adjacent to the previously abandoned, concrete-encased, 550-gallon capacity USTs. The *Underground Storage Tank Supplemental Subsurface Investigation Work Plan* was approved by the NYSDEC on November 24, 2008.

November 24, 2008 An UST SSI was initiated at the Site, with the installation of six soil borings immediately adjacent to the previously abandoned, concrete-encased, 550-gallon capacity USTs. Laboratory analytical data indicated that VOC concentrations were above NYSDEC RSCOs in the 11 soil samples collected. The UST SSI also included the installation of one SVE and one AS wells for the purpose of feasibility testing. A description of the methods and results of the UST SSI were presented to the NYSDEC in the December 18, 2008 *IRM UST Removal Work Plan Amendment*.

December 9, 2008 A letter was submitted to the NYSDEC to address the NYSDEC comments in the November 24, 2008 conditional approval of the *IRM UST Removal Work Plan*. The letter also requested NYSDEC approval for an extension to the 30-day deadline to commence UST removal activities in order to facilitate the community participation efforts requested by the NYSDEC. The letter and extension were approved by the NYSDEC on December 18, 2008.

December 12, 2008 An AS/SVE pilot test was conducted at the Site. The results of the AS/SVE pilot test indicated that AS/SVE is an effective technology for remediating subsurface hydrocarbons. A description of the methods and results of the AS/SVE pilot test were presented in an AS/SVE Pilot Test Technical Memorandum, included in the December 18, 2008 *IRM UST Removal Work Plan Amendment*.

December 18, 2008 An *IRM UST Removal Work Plan Amendment* (Amendment) was submitted to the NYSDEC. The Amendment indicated that the depth of the excavation would be approximately 18 feet below grade (fbg), and the northern wall of sheeting/shoring would not be installed in order to adequately slope the excavation to facilitate the safe loading of soil into dump trucks. The Amendment was approved by the NYSDEC on December 23, 2008.

January 6, 2009 A *Community Air Monitoring Plan* (CAMP) was submitted to the NYSDEC, proposing the methods to protect downwind receptors from potential airborne VOC vapors and particulates that may migrate from the Site during ground-intrusive construction and investigative and remedial activities. The CAMP was approved by the NYSDEC on January 6, 2009.

January 8, 2009 During an on-site pre-construction meeting with the excavation subcontractor and shoring engineer, it was determined that the sheeting/shoring design as originally proposed was not structurally feasible. The excavation subcontractor and shoring engineer recommended that the shoring be designed as a completely enclosed box for stability. The revision to the sheeting and shoring design was approved by the NYSDEC during a January 14, 2009 meeting, and a figure illustrating the revised shoring layout was submitted to the NYSDEC via e-mail on January 22, 2009.

January 26, 2009 The IRM, including the excavation of USTs and soil, commenced.

February 5, 2009 LPH was detected in monitoring well MW-17 (0.05 foot), located on the adjacent property (2495 Adam Clayton Powell, Jr. Boulevard). The NYSDEC was notified,

and NYSDEC Case No. 08-12062 was assigned to the Site. The case was closed on February 6, 2009.

Additionally, monitoring wells MW-14 through MW-16 were inaccessible due to building construction at the adjacent property. An inspection of the construction revealed that an elevated floor was installed within the room that the wells were located. During an April 20, 2009 meeting, it was determined that the elevated concrete floor is permanent, and monitoring wells MW-14 through MW-16 are destroyed.

February 6, 2009 Kleinfelder and NYSDEC met with Bishop Roberts of the Saint Thomas Liberal Catholic Church, located at 137 West 144th Street in New York, New York, to discuss the potential to monitor vibrations on the church building during the installation and removal of sheeting and shoring. Bishop Roberts was presented with a draft access agreement to review.

February 12, 2009 An access agreement was fully executed between Kleinfelder and the Lennox Family Center, located at 141 West 144th Street in New York, New York, in order to monitor vibrations during the installation and removal of sheeting and shoring within the backyard of the building. An inspection of the south side of the retaining wall, which separates the Mobil service station from 141 West 144th Street, indicated that the retaining wall was not structurally sound, and the vibrations generated from the installation and removal of sheeting and shoring could cause damage to the wall.

March 3, 2009 ExxonMobil and A&C Development/2497 Realty Corp. executed an addendum to the original access agreement, including a scope of work to adhere vibration monitors, tell tales, and survey reflectors to the eastern facade of the building located at 2495 Adam Clayton Powell, Jr. Boulevard for the purpose of monitoring vibrations during the installation and removal of sheeting and shoring.

March 10, 2009 On-site activities of the IRM ceased due to the structural instability of the retaining wall located between the Mobil service station and the properties to the south. To date, five 4,000-gallon capacity, gasoline USTs, one 1,000-gallon capacity, fuel oil UST, gasoline distribution and vent piping, approximately 40 cubic yards of a subsurface foundation wall, and approximately 939 tons soil have been excavated and removed from the Site. The Site was backfilled to grade.

March 23, 2009 A proposal to proceed with the excavation of the abandoned USTs and over-excavation of soil without the use of sheeting and shoring was submitted to the NYSDEC. The proposal was submitted due to the structural instability of the retaining wall located between the Mobil service station and the properties to the south.

The NYSDEC approved the revision to the scope of work pending three contingencies as follows:

1. An AS/SVE system will be installed to address the remaining impacted soil.
2. Alternative soil vapor treatment may be required upon start-up of the SVE system.
3. Prepare a CAP for the AS/SVE system (including the A&C property).

March 30, 2009 A CAP was submitted to the NYSDEC. To date, a response to the CAP has not been received.

April 2, 2009 IRM activities resumed with the removal of a portion of the retaining wall. The IRM was completed on April 17, 2009, and included the removal of six 4,000-gallon USTs, one 1,000-gallon UST, twelve 550-gallon USTs, gasoline distribution and vent piping, and a total of approximately 2,260 tons of soil. A description of the methods and results of the IRM will be submitted to the NYSDEC under separate cover.

April 19, 2009 A RAP proposing the operation of an AS/SVE remediation system was submitted to the NYSDEC. Site Plans with Conceptual AS and SVE Radii of Influence are illustrated on Figures 3 and 4, respectively. To date, the NYSDEC has not provided a response to the RAP.

May 4, 2009 Supplemental off-site SI activities commenced with the installation of nine off-site soil borings/monitoring wells (MW-18 through MW-27). Monitoring well MW-23 was omitted, with NYSDEC approval, based on the field observations of the surrounding soil borings. The newly-installed monitoring wells are illustrated on Figure 2. A description of the methods and results will be submitted to the NYSDEC under separate cover.

4.0 SITE CHARACTERIZATION

The following subsections describe potential sensitive receptors, Site geology/hydrogeology, soil analytical data, and groundwater analytical data.

4.1 Potential Sensitive Receptors

Potential sensitive receptors in the vicinity of the Site include the following:

- Residential and commercial buildings with basements.
- Subsurface utilities located adjacent to the Site.
- Subway tunnel located within 300 meters of the Site, running under Lenox Avenue.

The closest school is PS 194 (Countee Cullen School), located approximately 265 meters southwest of the Site. The closest medical facility is the Alexander Hamilton Child Health Center, located approximately 407 meters southwest of the Site, and the closest daycare facility is the Association of Black Social Workers Day Care Center, located approximately 158 meters northeast of the Site. There are no surface-water bodies within 300 meters of the Site. The Harlem River is the closest surface-water body and is located approximately 410 meters east of the Site. A review of New York City Department of Environmental Protection (NYCDEP) and New York City Department of Health (NYCDOH) records indicates that there are no municipal or privately-owned potable water supply wells within 760 meters of the Site. The sources of water supply to the area are the Catskills and Delaware aqueduct systems located in upstate New York.

4.2 Site Geology and Hydrogeology

Regional geology consists predominantly of urban fill material and unconsolidated Pleistocene deposits overlying bedrock comprised of the Cambrian-Ordovician Inwood Marble formation. The Inwood Marble is composed predominantly of dolomitic marble, calcitic marble, quartzite, and shist. The overlying glacial deposits are comprised of glacial till and stratified drift. The thickness of the glacial deposits across the majority of Manhattan is limited to approximately 25 feet.

SI activities revealed that material from ground surface to approximately 10 fbg consists of medium- to fine-grained sand, coarse to fine gravel and pulverized rock fragments. Deposits observed from approximately 10 fbg to approximately 20 fbg consisted predominately of well-graded coarse- to fine-grained sand with some silt, some sub-rounded to rounded fine to coarse gravel, and rock fragments. Deposits observed from approximately 20 to approximately 25 fbg consisted of silty sand lenses. Underlying the silty sand and extending to the terminal depth of the borings, native deposits consisted of well-graded coarse- to fine-grained sand.

The NYSDEC classifies the aquifer in the vicinity of the Site as “GA.” The “GA” classification indicates that the aquifer contains fresh, non-saline groundwater. The depth to the uppermost aquifer (Upper Glacial Aquifer) is approximately 18 fbg.

On February 5, 2009, the groundwater monitoring well network was gauged with an electronic interface probe (EIP). LPH was detected in monitoring wells MW-6 (0.63 foot), MW-9, MW-10 (0.09 foot), MW-11 (0.06 foot), and MW-17 (0.05 foot). Depth to groundwater ranged from 15.08 fbg in monitoring well MW-17 to 25.07 fbg in monitoring well MW-13. The average horizontal hydraulic gradient is approximately 0.0041 feet per foot (ft/ft).

4.3 Soil Analytical Data

Between February 2008 and November 6, 2008, a total of 45 soil samples have been collected during SI activities. Twenty-seven of the 45 samples collected exhibited VOC concentrations above NYSDEC RSCOs. Sixteen samples exhibited SVOC concentrations above NYSDEC RSCOs. Of the samples that exhibited detectable VOC concentrations, BTEX concentrations ranged from 0.269 milligrams per kilogram (mg/kg) in soil sample MW-3 (25-27 fbg) to 1,876 mg/kg in soil sample MW-10 (18.5 to 20 fbg). MTBE concentrations in soil ranged from BRL to 3.57 mg/kg in soil sample MW-3 (25 to 27 fbg).

4.4 Groundwater Analytical Data

Monitoring and sampling of dissolved-phase hydrocarbons are conducted on a quarterly basis using the existing well network consisting of monitoring wells MW-1 through MW-11 and MW-13 through MW-17. The most recent groundwater samples were collected on February 5, 2009. Monitoring wells MW-14 through MW-16 were destroyed due to building construction at the adjacent property. In addition to BTEX and MTBE, groundwater samples were analyzed for ethanol and dissolved lead. The sample analytical results reported BTEX concentrations ranging from BRL in monitoring well MW-4 to 61,689 micrograms per liter (μg/L) in monitoring well MW-13, and MTBE concentrations ranging from BRL in monitoring well MW-13 to 1,000 μg/L in monitoring well MW-1. Laboratory analytical results indicated that ethanol concentrations were BRL in the seven groundwater samples collected. Additionally, laboratory analytical results indicated that dissolved lead was below the NYSDEC WQS for the seven groundwater samples collected. Dissolved lead concentrations ranged from BRL in monitoring wells MW-2, MW-4, MW-5, and MW-8 to 7.8 μg/L in monitoring well MW-13.

4.5 Liquid-Phase Hydrocarbon Analytical Data

Samples of LPH detected in monitoring wells MW-6, MW-9, MW-10, MW-11, and MW-17 were collected and analyzed by Accutest for specific gravity, MTBE in accordance USEPA Method 8260B, and ethanol in accordance with USEPA method 8015B. Additionally, gas chromatography LPH fingerprinting was completed on each LPH sample. Laboratory analytical results indicate that MTBE ranged from BRL in monitoring wells MW-10 and MW-17 to 58 mg/kg in monitoring well MW-6. Additionally, ethanol concentrations ranged from BRL in monitoring wells MW-6, MW-10, and MW-17 to 0.855 mg/kg in monitoring well MW-11. Lastly, gas chromatography fingerprinting indicates that the LPH in the five samples collected is a positive match for gasoline.

5.0 INTERIM REMEDIAL MEASURE

IRM activities commenced on January 26, 2009, and was conducted in accordance with the NYSDEC approved *IRM UST Removal Work Plan* and associated amendments, which were prepared in response to the NYSDEC October 27, 2008 letter addressed to ExxonMobil. IRM activities included the excavation of five 4,000-gallon capacity, gasoline USTs and associated distribution and vent piping, one 1,000-gallon capacity, fuel oil UST, 12 previously abandoned 550-gallon capacity USTs, and the excavation of petroleum hydrocarbon-impacted soil. A total of approximately 2,260 tons of soil was excavated and removed from the Site.

Following completion of IRM activities, new gasoline dispensing infrastructure will be installed. The new UST and distributions system will consist of one 8,000 gallon-capacity, double-wall fiberglass UST and

two 10,000-gallon capacity, double-wall fiberglass USTs. Double-wall fiberglass distribution, fill, and vent piping will also be installed.

A description of the methods and results of the IRM will be submitted to the NYSDEC under separate cover.

6.0 SUPPLEMENTAL OFF-SITE SUBSURFACE INVESTIGATION AND REMEDIAL ACTION PLAN ADDENDUM

In order to further investigate the nature and extent of subsurface hydrocarbons beneath the adjacent property located at 2495 Adam Clayton Powell, Jr. Boulevard, a maximum of eight soil borings are proposed. The soil borings will be completed as a combination of groundwater monitoring/AS remediation wells and groundwater monitoring/SVE remediation wells. Soil boring locations are illustrated on Figure 5. Soil boring locations are contingent upon obtaining approval of A&C Development and the necessary access, and may be adjusted due to both, as well as underground obstructions. The first phase will consist of the advancement of three soil borings (SB-28/AS-14/MW-28 through SB-30/AS-16/MW-30), to be completed as groundwater monitoring/AS remediation wells. The second phase, if necessary, will consist of the advancement of two soil borings (SB-31/SVE-9/MW-31 and SB-32/SVE-10/MW-32), to be potentially completed as groundwater monitoring/SVE remediation wells. The third stage, if necessary, will be the advancement of three additional soil borings (SB-33/AS-17/MW-33 through SB-35/AS-19/MW-34), to be potentially completed as groundwater monitoring/AS remediation wells.

Stages two and three are contingent upon the field observations and analytical data received from stage one. An evaluation of field observations and expedited analytical data will be performed and a recommendation will be submitted to the NYSDEC.

The proposed three-phased subsurface investigation will consist of the following scope of work:

- Securing access to the building, which may or may not include the installation of a bracing system to secure a concrete deck which overlies a portion of the building basement in order to access the Site with a drill rig.

- Conducting a geophysical survey to determine the locations of subsurface utility lines and infrastructure.

- Vacuum clearing soil boring/monitoring well locations to at least 6 fbg to avoid potential underground utilities.

- Advancement of a minimum of three to a maximum of eight soil borings to approximately 30 fbg, using hollow stem auger and/or air hammer drilling technology. The terminal depth of the soil borings will be evaluated in the field based on field observations. Drilling methods may be altered

based upon subsurface conditions. Soil samples will be collected continuously from the depth of vacuum clearing to the terminal depth of the borings. Soil samples will be geologically characterized and noted for the presence of sheen, odor, and staining. Additionally, soil samples will be qualitatively field-screened for the presence of VOCs with a photoionization detector (PID). Boring locations are contingent upon obtaining the necessary approval and access, and may be adjusted due to underground obstructions.

- Collection of at least two soil samples from each soil boring to be submitted to a NYSDOH certified laboratory for analysis of VOCs listed in the NYSDEC Spill Technology and Remediation Series (STARS) Memo No. 1, Table 1 in accordance with USEPA Method 8260B. Selection of soil samples for laboratory analysis will be biased toward the highest recorded PID screening value, visual, and/or olfactory observations.

Phase I

- Soil borings SB-28/AS-14/MW-28 through SB-30/AS-16/MW-30 will be completed as nested wells consisting of a 2-inch diameter groundwater monitoring well and a 2-inch diameter AS remediation well. The air sparge remediation well will be extended approximately 14 feet into the water table and will consist of 2 feet of schedule 80 poly vinyl chloride (PVC) 0.030-inch machine slotted screen connected to 34 feet of solid casing. Screen length and slot size may be adjusted based upon field observations. The groundwater monitoring well portion of the well nest will be constructed with approximately 15 feet of schedule 40 PVC solid casing and 15 feet of 0.030-inch machine slotted well screen. Monitoring well screen length and slot size may be adjusted based upon field observations. The annular space of each boring surrounding the screened portion of the wells will be filled with a washed sand filter pack to a level one foot above the lower extent of the PVC riser. Above the sand pack will be a 2-foot thick bentonite seal, followed by grout. The wells will be capped with a locking "j-plug" and completed at grade within a 12-inch diameter road box surrounded by a 2-foot by 2-foot concrete pad.

Phase II (If Necessary)

- Soil borings SB-31/SVE-9/MW-31 and SB-32/SVE-10/MW-32 (only if necessary) will be installed as 4-inch diameter groundwater monitoring/SVE remediation wells that will be constructed with approximately 10 feet of schedule 40 PVC solid casing and 20 feet of 0.030-inch machine slotted well screen. Well screen length and slot size may be adjusted based upon field observations. The annular space of each boring surrounding the screened portion of the well will be filled with a washed sand filter pack to a level two feet above the lower extent of the PVC riser. Above the sand pack will be a 2-foot thick bentonite seal, followed by grout to grade level. The wells will be capped with a locking "j-plug" and completed at grade within a 12-inch diameter road box surrounded by a 2-foot by 2-foot concrete pad.

Phase III (If Necessary)

- Soil borings SB-33/AS-17/MW-33 through SB-35/AS-19/MW-35 will be completed only if necessary and will be constructed in the same manner as described in *Phase I*.

The following portion of the scope of work will be conducted on monitoring/remedial wells installed:

- Development of installed wells to remove suspended particulates and establish hydraulic communication with the surrounding formation.

- Conducting a synoptic round of liquid-level gauging with an electronic interface probe to determine depth to water, LPH, if any, and bottom within the wells.

- Collection of groundwater samples from each monitoring well installed to be analyzed for BTEX, MTBE, and ethanol in accordance USEPA Method 8260B.

- Soil generated from the monitoring well installation will be contained in United States Department of Transportation (USDOT) approved 55-gallon drums. The drums will be transported for proper disposal at an approved facility.

Upon completing the advancement of soil borings and installation of well infrastructure, the wells will be scheduled for connection to the proposed remediation system. At this time, a final layout of remedial pipe and trench locations is not available. The final trench and pipe locations will be submitted to the NYSDEC under separate cover following negotiations and approval by A&C Development.

As it is likely that the proposed AS/SVE remediation system will not be completed and started by the time the adjacent property commences operation as a grocery store, it is proposed that the SVE wells within the adjacent building be connected to an interim blower. The interim SVE blower will induce negative pressure on the subsurface beneath the adjacent property, essentially providing subsurface depressurization of the structure. The interim SVE blower will be connected to the wells, and operation will commence by the time the grocery store opens for commercial business. Once the AS/SVE remediation system is operational, the operation of the interim SVE blower will be terminated.

As indicated in the April 19, 2009 RAP, the results from the feasibility study conducted at the Site on December 10, 2008 indicated that the SVE radius of influence (ROI) ranged from approximately 35 to 52 feet, while sparge ROI was approximately 15 feet. The locations of the proposed sparge points and SVE wells with their associated conceptual ROIs, as well as those conceptual ROIs proposed in the April 19, 2009 RAP are presented on Figures 6 and 7, respectively. As currently constructed, the eastern portion of the adjacent property does not fall within the extent of the AS conceptual ROI. However, due to the installation of a concrete deck which overlies the former locations of monitoring wells MW-14 through MW-16, remedial infrastructure can not be installed at this location.

7.0 PROJECT SCHEDULE

The off-site subsurface investigation will commence immediately upon receipt of NYSDEC written approval and/or confirmation that the drilling equipment can safely access the interior of the building, which ever occurs first. A report of findings will be submitted to the NYSDEC within 90 days of completion of field work. The NYSDEC will be notified via e-mail upon completion of field work with a due date.

8.0 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.

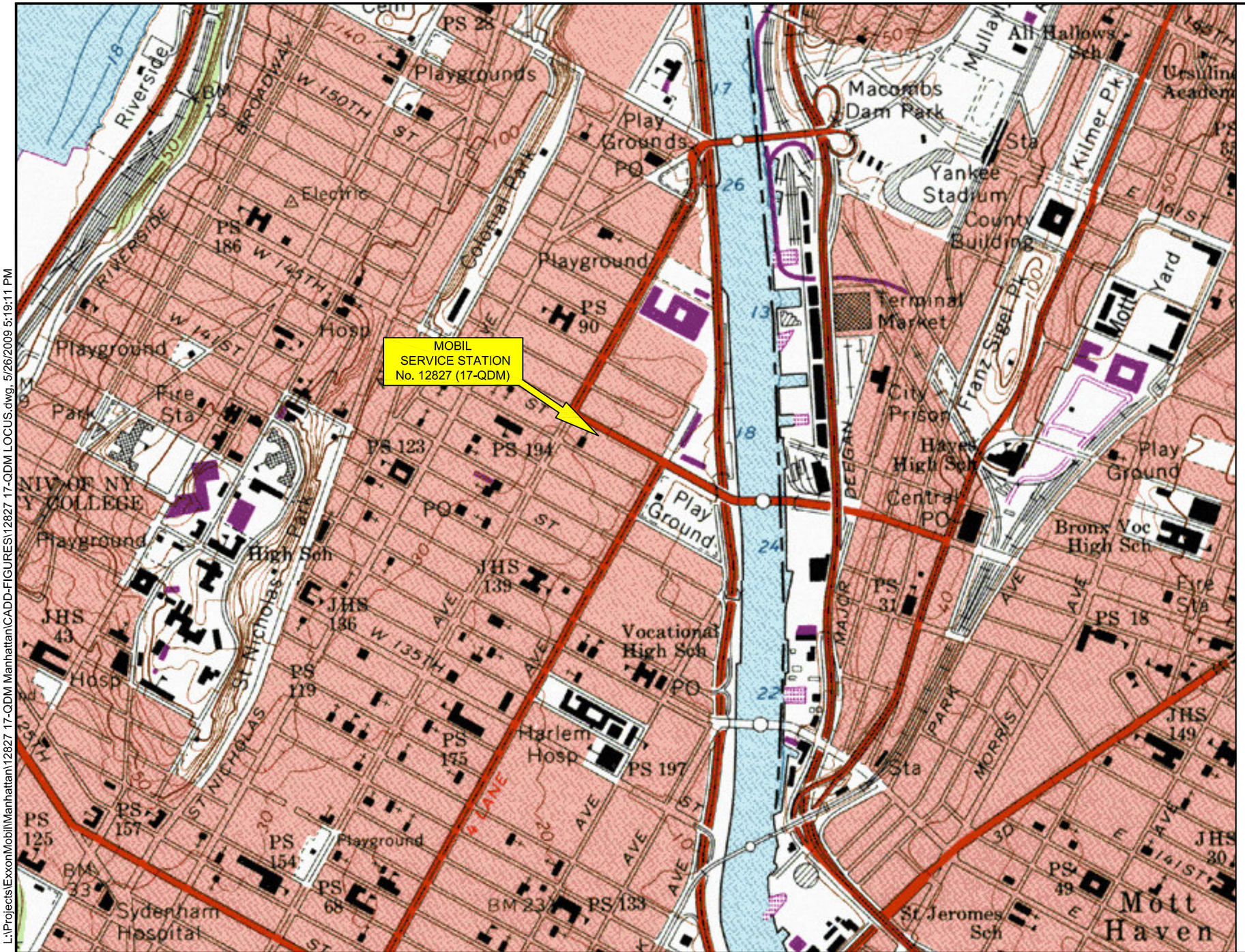
9.0 REFERENCES

New York State Department of Environmental Conservation, Recommended Soil Cleanup Objectives for Gasoline Contaminated and Fuel Oil Contaminated Soils, August 22, 2001.

New York State Department of Environmental Conservation, Soil Cleanup Consolidation – Further Clarifications Memorandum, July 10, 2001.

United States Geological Survey, 7.5-Minute Series Topographic Map, Flushing, New York Quadrangle, photo revised 1979.

FIGURES



0 450 900 1,800

APPROXIMATE SCALE (feet)

N

LATITUDE: 40° 49' 15.40" N

LONGITUDE: 73° 56' 16.97" W

USGS 7.5' SERIES TOPOGRAPHIC MAP,
"CENTRAL PARK, NY QUADRANGLE
PHOTOREVISED 1979"

QUADRANGLE
LOCATION

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PROJECT NO.	100529
DRAWN:	05/21/2009
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FILE NAME:	

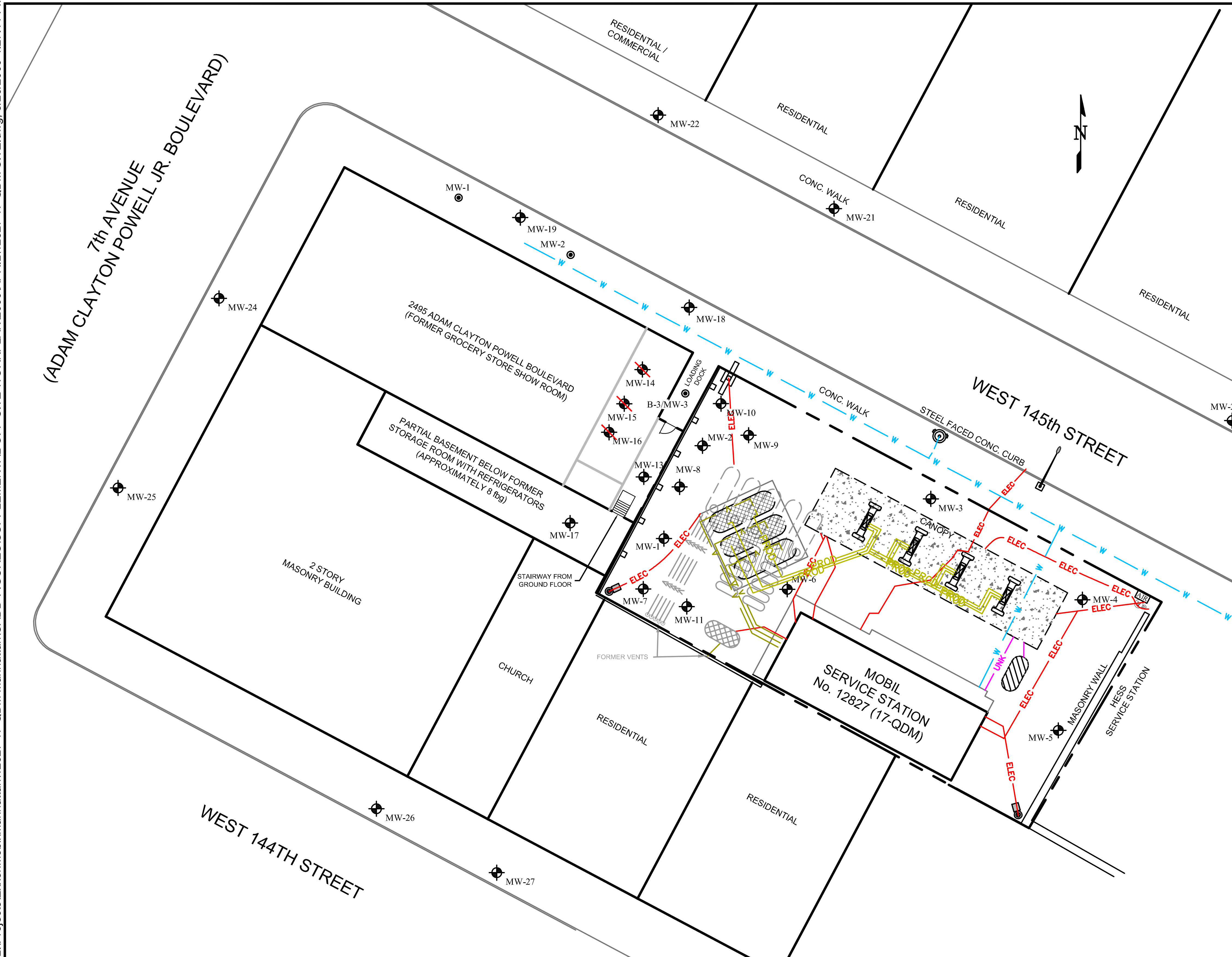
LOCUS PLAN

MOBIL SERVICE STATION No. 12827 (17-QDM)
150-54 WEST 145TH STREET
NEW YORK, NEW YORK

FIGURE
1

L:\Projects\ExxonMobil\Manhattan\12827 17-QDM Manhattan\CADD-FIGURES\12827 17-QDM LOCUS.dwg, 5/26/2009 5:19:11 PM

BOHEMIA, NY



LEGEND

	MONITORING WELL LOCATION
	ABANDONED / DESTROYED WELL LOCATION
	A&C DEVELOPMENT MONITORING WELL LOCATION
	PROPERTY LINE
ELEC	UNDERGROUND ELECTRIC LINES
PROD	UNDERGROUND PRODUCT PIPING
V	UNDERGROUND VENT LINE
V	FORMER UNDERGROUND VENT LINE
UNK	UNDERGROUND UNKNOWN UTILITY LINE
W	UNDERGROUND WATER SUPPLY LINE
	GUARD RAIL
V	VACUUM
AIR	AIR PUMP
	FIRE HYDRANT
	AREA LIGHT
	SIGN
	DISPENSER ISLAND
	STREET LIGHT
	4,000-GALLON GASOLINE UST
	FORMER 550-GALLON UST
	1,000-GALLON USED OIL UST
	FORMER 1,000-GALLON FUEL OIL UST
	8,000-GALLON DOUBLE-WALL FIBERGLASS UST SUPER (TO BE INSTALLED)
	10,000-GALLON DOUBLE-WALL FIBERGLASS UST REGULAR (TO BE INSTALLED)
	CONCRETE
UST	UNDERGROUND STORAGE TANK

0 20 40 80
SCALE (feet)

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FILE NAME:	

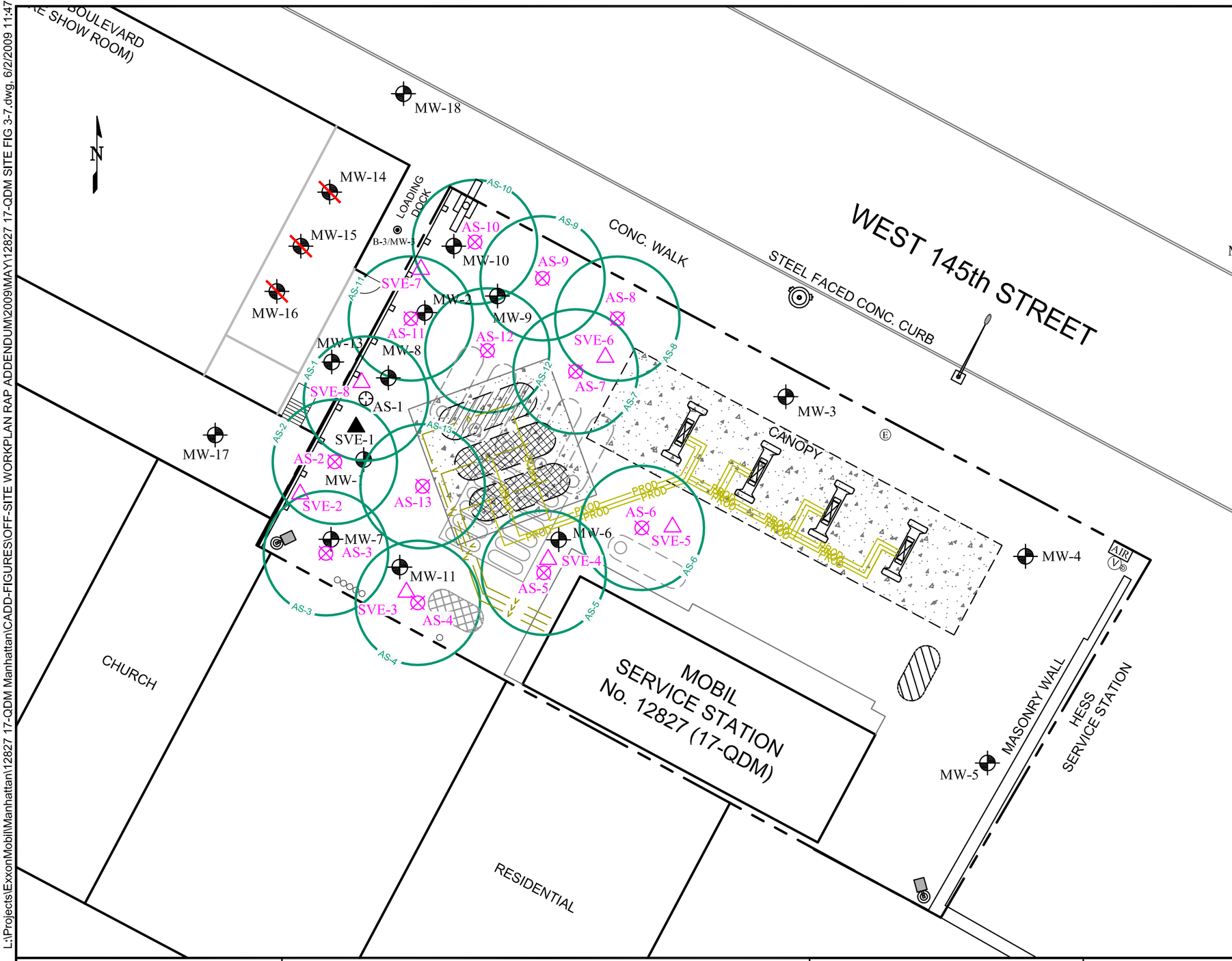
SITE PLAN

MOBIL SERVICE STATION No. 12827 (17-QDM)
150-54 WEST 145TH STREET
MANHATTAN, NEW YORK

FIGURE
2

L:\Projects\ExxonMobil\Manhattan\12827 17-QDM Manhattan\CADD-FIGURES\SUPPLEMENTAL OFF-SITE WORKPLAN\2009\APRIL\12827 17-QDM SITE.dwg, 5/26/2009 4:27:11 PM

BOHEMIA, NY



LEGEND

- MONITORING WELL LOCATION
- ABANDONED / DESTROYED WELL LOCATION
- SPARGE WELL LOCATION
- SOIL VAPOR EXTRACTION WELL
- PROPERTY LINE
- GUARD RAIL
- ELECTRIC VAULT
- VACUUM
- AIR PUMP
- FIRE HYDRANT
- AREA LIGHT
- SIGN
- DISPENSER ISLAND
- STREET LIGHT
- FORMER 4,000-GALLON GASOLINE UST
- FORMER 550-GALLON UST
- 1,000-GALLON USED OIL UST
- FORMER 1,000-GALLON FUEL OIL UST
- CONCRETE
- UST — UNDERGROUND STORAGE TANK
- 8,000-GALLON DOUBLE-WALL FIBERGLASS UST SUPER (TO BE INSTALLED)
- 10,000-GALLON DOUBLE-WALL FIBERGLASS UST REGULAR (TO BE INSTALLED)
- PROD — UNDERGROUND PRODUCT PIPING (TO BE INSTALLED)
- V — UNDERGROUND VENT LINE (TO BE INSTALLED)
- PROPOSED SOIL VAPOR EXTRACTION WELL
- PROPOSED AIR SPARGE WELL
- SPARGE RADIUS OF INFLUENCE (15 FEET)

0 25 50
SCALE (feet)

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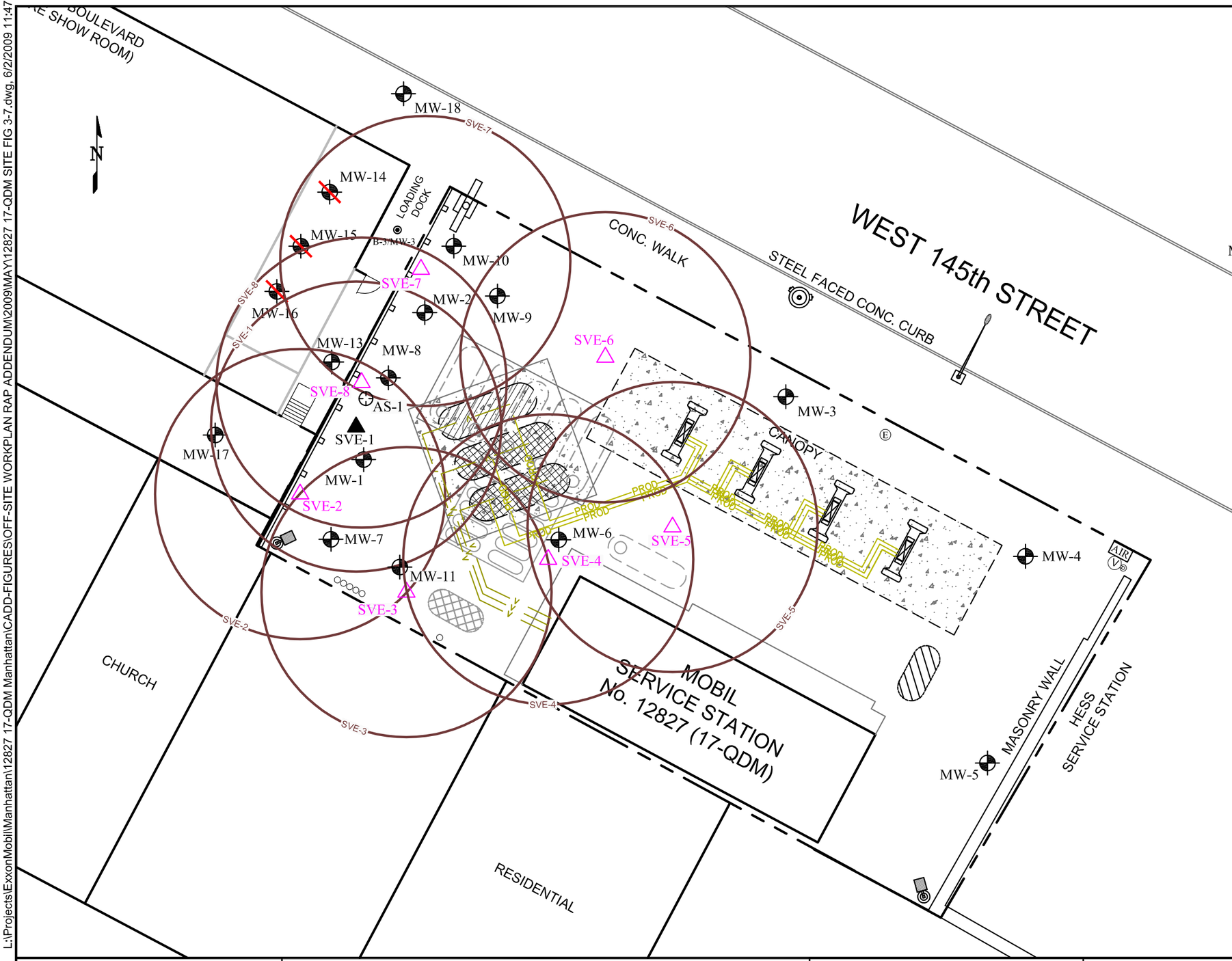
SITE PLAN WITH CONCEPTUAL AIR SPARGE RADII OF INFLUENCE

MOBIL SERVICE STATION No. 12827 (17-QDM)
150-54 WEST 145TH STREET
MANHATTAN, NEW YORK

FIGURE
3



LEGEND

- MONITORING WELL LOCATION
- ABANDONED / DESTROYED WELL LOCATION
- SPARGE WELL LOCATION
- SOIL VAPOR EXTRACTION WELL
- PROPERTY LINE
- GUARD RAIL
- ELECTRIC VAULT
- VACUUM
- AIR PUMP
- FIRE HYDRANT
- AREA LIGHT
- SIGN
- DISPENSER ISLAND
- STREET LIGHT
- FORMER 4,000-GALLON GASOLINE UST
- FORMER 550-GALLON UST
- 1,000-GALLON USED OIL UST
- FORMER 1,000-GALLON FUEL OIL UST
- CONCRETE
- UST — UNDERGROUND STORAGE TANK
- 8,000-GALLON DOUBLE-WALL FIBERGLASS UST SUPER (TO BE INSTALLED)
- 10,000-GALLON DOUBLE-WALL FIBERGLASS UST REGULAR (TO BE INSTALLED)
- PROD — UNDERGROUND PRODUCT PIPING (TO BE INSTALLED)
- V — UNDERGROUND VENT LINE (TO BE INSTALLED)
- PROPOSED SOIL VAPOR EXTRACTION WELL
- SOIL VAPOR EXTRACTION RADIUS OF INFLUENCE (35 FEET)

0 25 50
SCALE (feet)

NOTES:

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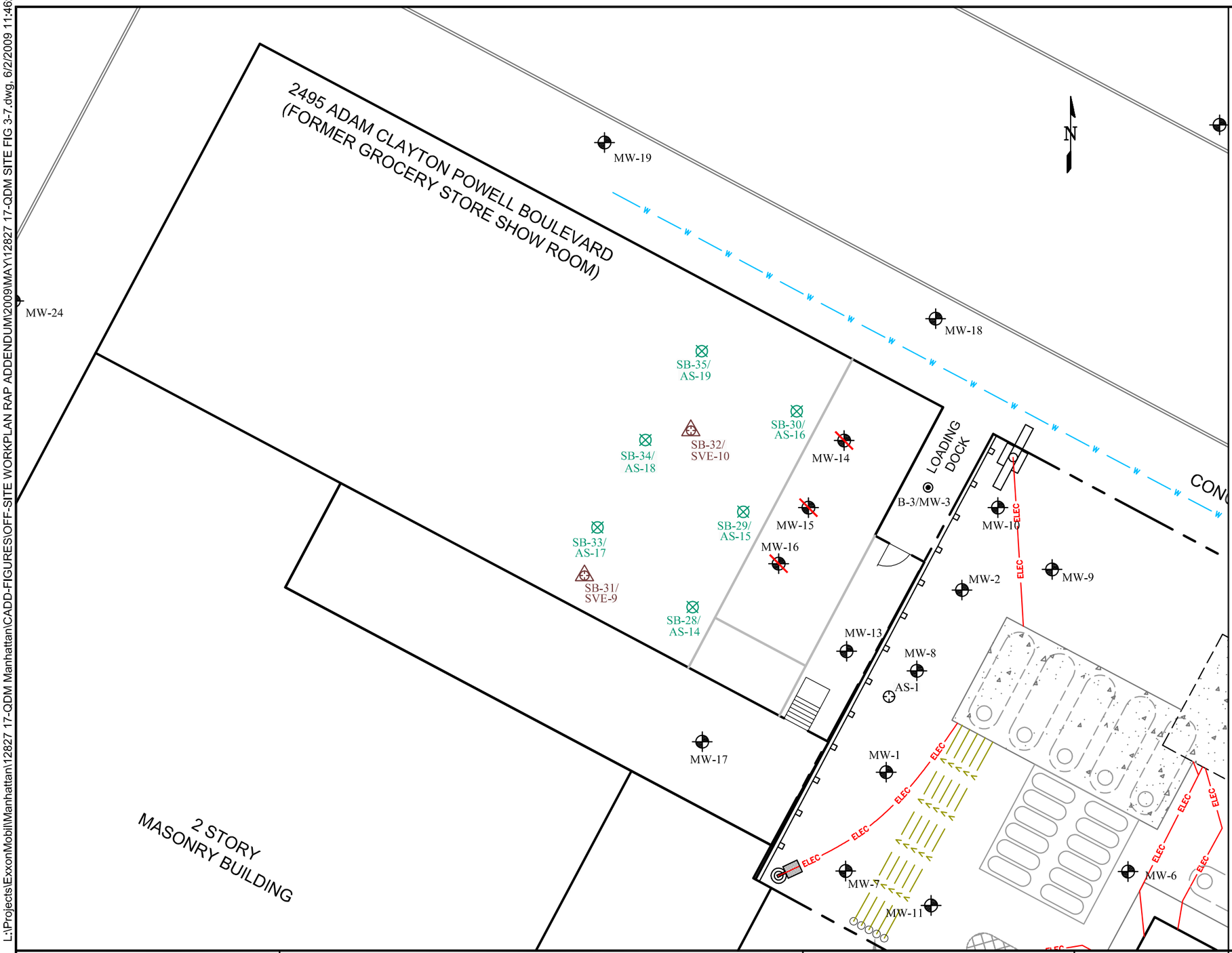
SITE PLAN WITH CONCEPTUAL SVE RADII OF INFLUENCE

MOBIL SERVICE STATION No. 12827 (17-QDM)
150-54 WEST 145TH STREET
MANHATTAN, NEW YORK

FIGURE
4



LEGEND

- MONITORING WELL LOCATION
- ABANDONED / DESTROYED WELL LOCATION
- A&C DEVELOPMENT MONITORING WELL LOCATION
- PROPERTY LINE
- ELEC — UNDERGROUND ELECTRIC LINES
- V — UNDERGROUND VENT LINE
- UNK — UNDERGROUND UNKNOWN UTILITY LINE
- W — UNDERGROUND WATER SUPPLY LINE
- GUARD RAIL
- V — VACUUM
- E — ELECTRIC VAULT
- AIR — AIR PUMP
- FIRE HYDRANT
- AREA LIGHT
- SIGN
- DISPENSER ISLAND
- STREET LIGHT
- FORMER 4,000-GALLON GASOLINE UST
- FORMER 550-GALLON UST
- 1,000-GALLON USED OIL UST
- FORMER 1,000-GALLON FUEL OIL UST
- CONCRETE
- UST — UNDERGROUND STORAGE TANK
- PROPOSED SOIL BORING / AIR SPARGE / MONITORING WELL LOCATION
- PROPOSED VAPOR EXTRACTION POINT / MONITORING WELL LOCATION

0 10 20 40
SCALE (feet)

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PROPOSED SOIL BORING LOCATIONS - ADJACENT PROPERTY

MOBIL SERVICE STATION No. 12827 (17-QDM)
150-54 WEST 145TH STREET
MANHATTAN, NEW YORK

FIGURE
5

L:\Projects\ExxonMobil\Manhattan\12827 17-QDM Manhattan\CADD-FIGURES\OFF-SITE WORKPLAN RAP ADDENDUM\2009\MAY\12827 17-QDM SITE FIG 3-7.dwg, 6/2/2009 11:46:48, BOHEMIA, NY

2495 ADAM CLAYTON POWELL BOULEVARD
(FORMER GROCERY STORE SHOW ROOM)

2 STORY
MASONRY BUILDING

MW-19
MW-24
MW-18
MW-17
MW-15
MW-16
MW-14
MW-13
MW-8
MW-1
MW-7
MW-11
MW-2
MW-10
MW-9
MW-6
B-3/MW-3

SB-35/ AS-19
SB-30/ AS-16
SB-32/ SVE-10
SB-34/ AS-18
SB-29/ AS-15
SB-33/ AS-17
SB-31/ SVE-9
SB-28/ AS-14

AS-19
AS-16
AS-18
AS-15
AS-17
AS-14
AS-10
AS-9
AS-11
AS-12
AS-8
AS-7
AS-1
AS-2
AS-13
AS-3
AS-5

LOADING DOCK

ELEC
PROD

N

LEGEND

- MONITORING WELL LOCATION
- ABANDONED / DESTROYED WELL LOCATION
- A&C DEVELOPMENT MONITORING WELL LOCATION
- PROPERTY LINE
- ELEC — UNDERGROUND ELECTRIC LINES
- V — UNDERGROUND VENT LINE
- UNK — UNDERGROUND UNKNOWN UTILITY LINE
- W — UNDERGROUND WATER SUPPLY LINE
- PROD — UNDERGROUND PRODUCT PIPING
- GUARD RAIL
- VACUUM
- ELECTRIC VAULT
- AIR PUMP
- FIRE HYDRANT
- AREA LIGHT
- SIGN
- DISPENSER ISLAND
- STREET LIGHT
- FORMER 4,000-GALLON GASOLINE UST
- FORMER 550-GALLON UST
- 1,000-GALLON USED OIL UST
- FORMER 1,000-GALLON FUEL OIL UST
- 8,000-GALLON DOUBLE-WALL FIBERGLASS UST SUPER (TO BE INSTALLED)
- 10,000-GALLON DOUBLE-WALL FIBERGLASS UST REGULAR (TO BE INSTALLED)
- CONCRETE
- UST — UNDERGROUND STORAGE TANK
- PROPOSED AIR SPARGE WELL
- PROPOSED SPARGE WELL AND VAPOR EXTRACTION POINT
- SPARGE RADIUS OF INFLUENCE (15 FEET)

0 10 20 40
SCALE (feet)

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PROPOSED SOIL BORING LOCATIONS WITH CONCEPTUAL AS RADII OF INFLUENCE - ADJACENT PROPERTY

MOBIL SERVICE STATION No. 12827 (17-QDM)
150-54 WEST 145TH STREET
MANHATTAN, NEW YORK

FIGURE
6

BOHEMIA, NY

2495 ADAM CLAYTON POWELL BOULEVARD
(FORMER GROCERY STORE SHOW ROOM)

2 STORY
MASONRY BUILDING

MW-19
MW-24
MW-18
MW-14
MW-15
MW-16
MW-2
MW-9
MW-13
MW-8
MW-17
MW-1
MW-7
MW-11
MW-6
MW-10
B-3/MW-3

SB-32/
SVE-10
SB-31/
SVE-9
SVE-10
SVE-7
SVE-8
SVE-1
SVE-9
SVE-2
SVE-6
SVE-4

LOADING
DOCK

ELEC
PROD

N

LEGEND

- MONITORING WELL LOCATION
- ABANDONED / DESTROYED WELL LOCATION
- A&C DEVELOPMENT MONITORING WELL LOCATION
- PROPERTY LINE
- ELEC — UNDERGROUND ELECTRIC LINES
- V — UNDERGROUND VENT LINE
- UNK — UNDERGROUND UNKNOWN UTILITY LINE
- W — UNDERGROUND WATER SUPPLY LINE
- GUARD RAIL
- V — VACUUM
- E — ELECTRIC VAULT
- AIR — AIR PUMP
- FIRE HYDRANT
- AREA LIGHT
- SIGN
- DISPENSER ISLAND
- STREET LIGHT
- FORMER 4,000-GALLON GASOLINE UST
- FORMER 550-GALLON UST
- 1,000-GALLON USED OIL UST
- FORMER 1,000-GALLON FUEL OIL UST
- 8,000-GALLON DOUBLE-WALL FIBERGLASS UST SUPER (TO BE INSTALLED)
- 10,000-GALLON DOUBLE-WALL FIBERGLASS UST REGULAR (TO BE INSTALLED)
- CONCRETE
- UST — UNDERGROUND STORAGE TANK
- PROPOSED SOIL VAPOR EXTRACTION WELL
- SOIL VAPOR EXTRACTION RADIUS OF INFLUENCE (35 FEET)

0 10 20 40
SCALE (feet)

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PROJECT NO.	100529
DRAWN:	06/02/2009
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FILE NAME:	

PROPOSED SOIL BORING LOCATIONS WITH CONCEPTUAL SVE RADII OF INFLUENCE - ADJACENT PROPERTY

MOBIL SERVICE STATION No. 12827 (17-QDM)
150-54 WEST 145TH STREET
MANHATTAN, NEW YORK

FIGURE
7