Environmental Resources Management

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15 November 2013

ERM Reference No. 0097881

Mr. Kevin Willis
Remedial Project Manager – Fulton Avenue Superfund Site
New York Remediation Branch
United States Environmental Protection Agency, Region II
290 Broadway, 20th Floor
New York, NY 10007-1866

Re: Revised Final Operable Unit 1 Remedial Design Work Plan Addendum
150 Fulton Avenue NPL Superfund Site - Operable Unit I
USEPA Consent Judgment No. CV–09–3917
DOJ Ref. No. 90–11–2–09329
Garden City Park Industrial Site NYSDEC#130073

Dear Mr. Willis:

On behalf of Genesco Inc. (Respondent), Environmental Resources Management, Inc. (ERM) is pleased to present the revised Final Operable Unit 1 (OU1) Remedial Design (RD) Work Plan Addendum for the Fulton Avenue Superfund Site.

While we do not concur with all the comments and/or issues raised in USEPA's 7 November 2013 conditional approval letter, this OU1 RD Work Plan Addendum has been revised in accordance with those comments in order to move the project forward. We intend to address the same at a later date.

This document presents the background, rationale, scope of work and schedule for a supplemental pre-design investigation the will include the performance of an additional 21 Waterloo Groundwater Profiler borings in the immediate vicinity and downgradient of the 150 Fulton Avenue property that will result in an additional 100+ groundwater samples. As noted therein, this is an addendum to the USEPA-approved October 2011 OU1 RD Work Plan and relies on the existing Quality Assurance Project Plan (QAPP) and Health and Safety Contingency Plan (HASCP) which are appended to that document.

I have emailed you and all those individuals on the carbon-copy list a digital link to download an electronic version of the document in Adobe PDF format. In accordance with your prior instructions, three hard copies are enclosed for your use.

Lastly, please note that upon receipt of the conditional approval, we immediately commenced preparatory activities which included communicating with key subcontractors essential to performing the work. We have learned that our Waterloo Groundwater Profiling subcontractor (Stone Environmental {Stone}) whom performed the previous work is fully booked through the end of 2013. Accordingly, we have confirmed with Stone 6 January 2014 mobilization date (weather dependent). In the meantime, we will press forward with other preparatory/mobilization activities so that if Stone's schedule should open up during December, we would be prepared to commence field operations. We will keep you informed of our progress, and may call upon you to represent USEPA should any issues arise during that process.

If you should you have any questions or wish to discuss the content of the documents, please do not hesitate to call me at (631) 756-8920.

Sincerely,

Chris W. Wenczel
Principal Consultant

cc: Douglas Fischer, USEPA
Sal Badalamenti, USEPA
Robert Kambic, USDOJ
Steven M. Scharf, P.E., NYSDEC
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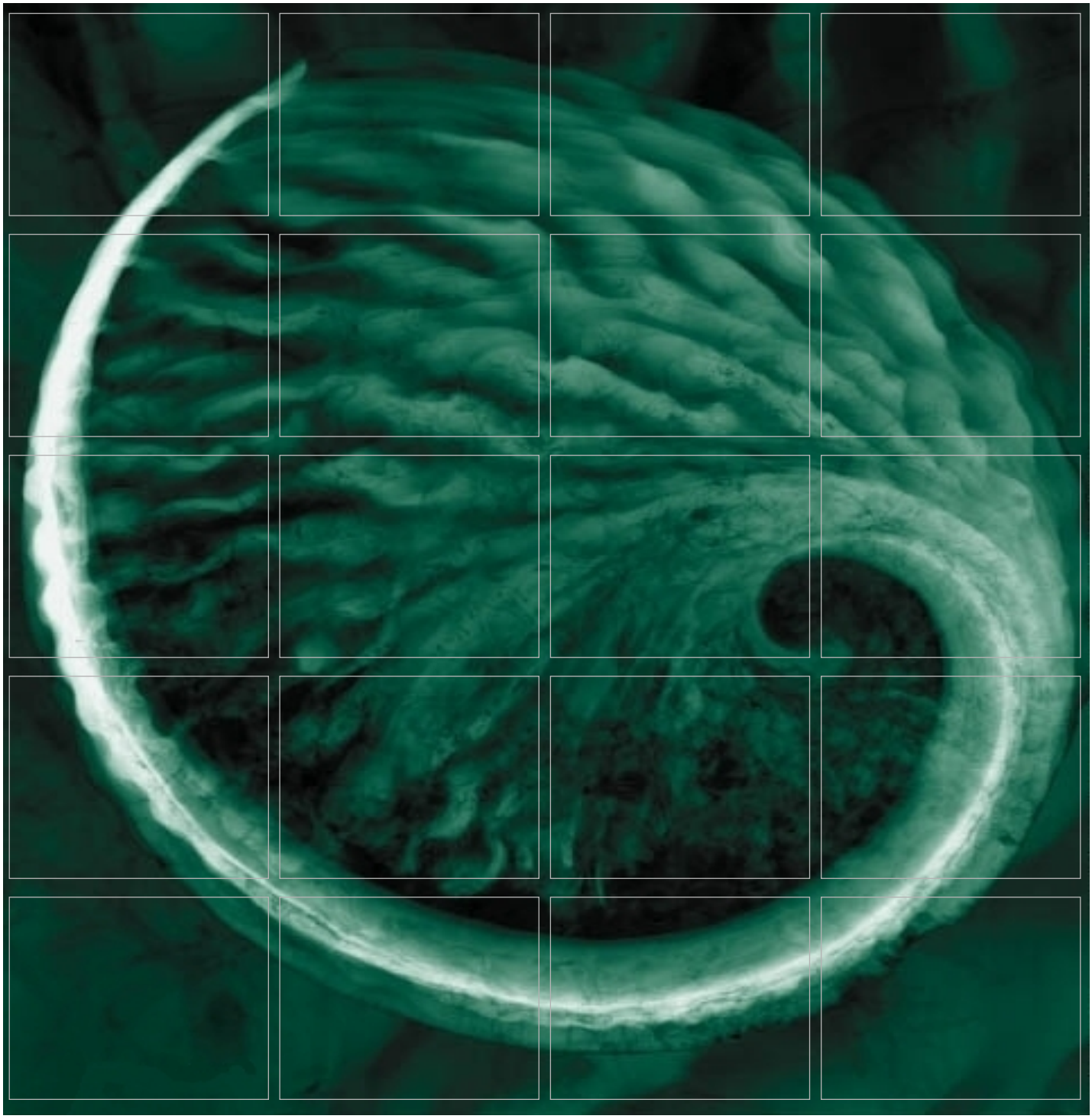
Matthew R. Jokajtys, Esq., Periconi, LLC
Roger Sisson, Esq., Genesco Inc.
James Perazzo, ERM



Operable Unit 1
Remedial Design Work Plan Addendum

Fulton Avenue Superfund Site
150 Fulton Avenue
Garden City Park, Nassau County, New York

November 2013

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TABLE OF CONTENTS

LIST OF ACRONYMS

ACRONYM	DEFINITION
AOC	Administrative Order on Consent
AS	Air Sparge (ing)
BGS	Below Ground Surface
BRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CJ	Consent Judgment
cVOC	Chlorinated Volatile Organic Compound
ERM	Environmental Resources Management
FS	Feasibility Study
Garden City	Incorporated Village of Garden City
GCPIA	Garden City Park Industrial Area
HASCP	Health and Safety Contingency Plan
RESPONDENT	Genesco Inc.
IRM	Interim Remedial Measure
ISCO	In-Situ Chemical Oxidation
NCDPW	Nassau County Department of Public Works
NCP	National Contingency Plan
NPL	National Priorities List
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
OU1	Operable Unit No. 1
PCE	Perchloroethene a.k.a. (Tetrachloroethene)
PRAP	Proposed Remedial Action Plan
PRPs	Potentially Responsible Parties
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RD	Remedial Design
RI	Remedial Investigation
ROD	Record Of Decision
SVE	Soil Vapor Extraction
TCE	Trichloroethene
TNH	Town of North Hempstead
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

This Operable Unit 1 (OU1) Remedial Design (RD) Work Plan Addendum for the Fulton Avenue Superfund Site presents the background, rationale, scope of work and schedule for a supplemental pre-design investigation originally proposed in ERM Consulting & Engineering's (ERM) 12 February 2013 letter to the United States Environmental Protection Agency (USEPA), and to which USEPA indicated concurrence in their letters of 22 March 2013 & 5 September 2013. This Addendum was requested by USEPA attorney Douglas Fisher in his 5 September 2013 letter.

This document is an addendum to the USEPA-approved October 2011 OU1 RD Work Plan and relies on the existing Quality Assurance Project Plan (QAPP) and Health and Safety Contingency Plan (HASCP) which are appended to that document.

1.1 BACKGROUND

The property located at 150 Fulton Avenue, Garden City Park, Nassau County, New York (hereinafter, "the Fulton Avenue Property") is owned by Gordon Atlantic Corporation. It is located within the Garden City Park Industrial Area (GCPIA), Village of Garden City Park, Town of North Hempstead (TNH), Nassau County, New York. Figure 1 shows the location of the 150 Fulton Avenue Property.

The Fulton Avenue Property has been identified as a contributing source of tetrachloroethene (PCE) contamination of groundwater beneath the Site creating PCE-dominant contamination in the Upper Glacial and Magothy aquifers which extends to the southwest, impacting certain public supply wells owned by the Incorporated Village of Garden City (Garden City). PCE is a chlorinated volatile organic compound (cVOC).

The Fulton Avenue Property was listed on the Registry of Inactive Hazardous Waste Disposal Sites in New York State (Registry) as Site Number 130073 in 1996. The USEPA also included the Fulton Avenue Property on the National Priorities List (NPL) of Federal Superfund Sites as part of USEPA's Fulton Avenue Superfund Site in April 1998.

In its listing, the New York State Department of Environmental Conservation (NYSDEC) defines the "Site" as the 0.8-acre Fulton Avenue Property and environmental conditions, including groundwater contamination that has migrated beyond the property boundary (the "NYSDEC Site").

In contrast, the USEPA 28 September 2007 Record of Decision (ROD) states:

"*The Fulton Avenue Superfund Site (the Site) includes a 0.8-acre property located at 150 Fulton Avenue, Garden City Park, Nassau County, New York (hereinafter, the Fulton Property), all contamination emanating from the Fulton Property, as well all other contamination impacting the groundwater in the vicinity of the Fulton Property including an overlapping trichloroethene (TCE)-dominant plume in the Upper Glacial and Magothy aquifers, whose origin is currently unknown, and all sources of this contamination.*"

For clarity, it should be noted that USEPA views the cVOC impacts in groundwater at Garden City public supply wells Nos. 9, 13 & 14 as the result of one regional plume containing contamination from multiple sources, some known and some unknown, as reported in the Remedial Investigation Report discussed below. Hereafter, this OU1 RD Work Plan will refer to TCE- or PCE-dominant portions of the plume.

Although NYSDEC assumed the role of lead regulatory agency, the NYSDEC and USEPA cooperatively oversaw the implementation of a Remedial Investigation and Feasibility Study (RI/FS) and an Interim Remedial Measure (IRM) described below. NYSDEC and USEPA agreed that USEPA would be designated as the lead agency for the Fulton Avenue Site at the conclusion of the RI/FS process.

The source of the PCE contamination at the Fulton Avenue Property was identified as a former drywell which was subject to an interim remedial measure (IRM) that involved soil/sediment removal, air sparging (AS) and soil vapor extraction (SVE). The former dry well was closed as part of the IRM. The IRM removed an estimated 10,000 lbs of PCE during its period of operation (1999 – 2001). A sub-slab depressurization system was installed beneath the building at the conclusion of the Soil IRM to mitigate the potential for intrusion of soil vapor containing residual PCE into the existing building.

Between 1999 and 2006, a Remedial Investigation (RI), Exposure Pathways Analysis, Baseline Risk Assessment, and a Feasibility Study (FS) (collectively an "RI/FS") was performed under a NYSDEC Administrative Order on Consent (AOC), Index # W1-0707-94-08 The RI/FS focused on environmental conditions at the Fulton Avenue Property and contamination that has migrated beyond the property boundary.

The RI and FS Reports were reviewed by NYSDEC and USEPA, and approved under the AOC. At that point in time, lead-agency status changed from NYSDEC to USEPA. USEPA subsequently developed a Proposed Remedial Action Plan (PRAP) for OU1 which, following a public comment period, was finalized and presented as the selected remedy in a Record of Decision (ROD) issued on 28 September 2007. The ROD describes EPA's preferred action which includes pumping and treatment and In-Situ Chemical Oxidation (ISCO) components to address groundwater at the Site which is primarily contaminated with PCE. EPA has designated this action as the first operable unit (OU1) of Site remediation.

During 2007 – 2009, USEPA issued a Statement of Work (SOW) for the OU1 Remedial Action (RA) and invited two potentially responsible parties (PRPs), Genesco Inc. and Gordon Atlantic Corporation to negotiate a consent judgment to implement the RA set forth in the OU1 ROD. One of the identified PRPs, Genesco Inc. (Respondent) agreed to implement the OU1 RA and entered into a proposed Consent Judgment (CJ) with USEPA.

The CJ (USEPA CJ No. CV–09–3917) and attached SOW were lodged with the United States District Court for the Eastern District of New York on 10 September 2009. Notice of the same inviting public comment was published in the Federal Register /Vol. 74, No. 179, 17 September 2009. On 18 November

2009, USEPA issued notice to proceed initiating the OU1 RD and subsequent implementation of the OU1 RA.

The OU1 RD Work Plan was prepared and set forth the objectives, performance standards, scopes of work, required deliverables and schedules for pre-design investigations, design activities, implementation and monitoring of the OU1 RA.

In October 2011, the OU1 RD Work Plan was conditionally approved by USEPA, and the final document was issued 27 October 2011. Appended to the OU1 RD Work Plan are a QAPP and HASCP. The QAPP presents the policies, organization, objectives, functional activities and specific quality assurance/quality control (QA/QC) activities designed to achieve the data quality goals associated with the OU1 RD and RA. The HASCP establishes ERM's occupational health and safety requirements, responsibilities and procedures to protect workers during the OU1 RD pre-design and design studies, groundwater monitoring and any OU1 RA construction activities.

The ROD outlines the ISCO portion of the Selected Remedy as follows:

"In-situ chemical oxidation technology would be applied as an initial enhancement in the area at and near 150 Fulton Avenue, Garden City Park (Fulton Property). Approximately 10 chemical injection wells will be placed in the high PCE area at and near the Fulton Property and two rounds of chemical injection are planned."

At the writing of the ROD, remaining source areas were believed to be present; however, their location(s) remained unknown. Thus, the ROD was non-specific as to the location and level of treatment required in these presumed source area(s) and rather left the specification of the design to be based upon additional pre-design studies and investigation.

During November – December 2011, ERM completed detailed pre-design investigations using high resolution techniques to identify and characterize subsurface groundwater intervals at and near the Fulton Avenue Property where remaining source area(s) of PCE were believed to be present.

These investigations were conducted within the former Soil IRM area, and surrounding and hydraulically downgradient of the Fulton Avenue property and included collection of groundwater samples from existing monitoring wells, Membrane Interface Probe (MIP) borings, and Waterloo Advanced Profiling System (Waterloo^{APS}) borings to collect groundwater intervals from discrete intervals.

The resultant information was evaluated to determine the current groundwater quality conditions, i.e., distribution of PCE within the Upper Glacial aquifer at and immediately downgradient of the Fulton Avenue property and the efficacy of ISCO to treat the same. The results of those investigations and corresponding evaluations were presented in the 30% Design Report Package that was submitted to USEPA on 22 February 2012.

Based upon ERM's analysis of present Site conditions, the 30% Design Report Package recommended against conducting further ISCO pre-design or design activities at the Fulton Avenue Site. The results of 2011 pre-design studies illustrate a considerably different situation than that envisioned in the ROD. The

RI/FS and ROD envisioned a residual source area located on the Fulton Avenue Property – potentially in the vicinity of the soil IRM (i.e., drywell release Site) or the immediate downgradient environs. The 2011 work confirms only low-level cVOC concentrations (almost all < 100 μg/l) in the Upper Glacial aquifer beneath the Fulton Avenue Property at concentrations consistent with known/unknown upgradient contributing sources discussed in the 2005 RI Report. There is no evidence of a rebound in cVOC concentrations in groundwater, but instead continued declining trend in those concentrations.

As discussed further herein, the first detected cVOC concentrations that significantly exceed New York State Groundwater Quality Standards (GWQS) Guidance Values (GV) are located at well pair GCPs 01 & 01D which is located downgradient of the Fulton Avenue Property, ~ 700 feet downgradient of the former Soil IRM (source) area. Historic monitoring at this location indicates a consistent, long-term declining trend in cVOC concentrations. GCP-01 is positioned immediately downgradient of properties where at least three former and/or existing businesses operated (or still operate) that were identified as potential users of cVOCs and potential contributors to the groundwater plume during the investigations conducted by the NYSDEC in the 1990s. Given the facts discussed above, the persistent levels of PCE in shallow groundwater at this location, in comparison to the levels observed at the 150 Fulton Avenue property legitimately raises questions as to the potential source(s) of the PCE at this location.

On 6 November 2012, USEPA issued a comment letter on the ISCO component of the remedy stating: *"EPA does not believe that the source area investigations conducted to date demonstrate the absence of a substantive source of PCE contamination in the vicinity of the source area dry well at 150 Fulton Avenue,"* and requested a meeting between USEPA technical staff and ERM to discuss additional field efforts that USEPA believes are needed to investigate potential remaining source material and, if necessary, to properly design the source area ISCO effort. The 6 November 2012 USEPA letter presented three points to support this statement. The technical meeting with ERM was convened on 10 December 2012 at USEPA's offices in New York City.

On 12 February 2013, ERM submitted on behalf of the Respondent a letter replying to the USEPA's 6 November 2012 letter and as a follow-up to the 10 December 2012 meeting. The letter addressed each of three key points set forth in the USEPA letter and offered a proposed field investigation which contemplates installation of an additional 21 Waterloo^{APS} Groundwater Profile Borings that would yield an additional 100+ groundwater samples for laboratory analysis.

On 5 September 2013, USEPA issued a letter which confirmed USEPA's agreement with the proposed field investigation and requested preparation of this OU1 RD Work Plan Addendum. ERM remains the Respondent's USEPA-approved Supervising Contractor with Mr. Chris Wenczel (ERM) and Mr. Jim Perazzo (ERM) continuing to serve as the Respondent's Project and Alternate Project Coordinators, respectively. USEPA's Project and Alternate Project Coordinators are Mr. Kevin Willis and Mr. Salvatore Badalamenti, respectively.

2.0 SCOPE OF WORK

It is recognized that USEPA desires supplemental data to evaluate whether ISCO should be retained as part of the selected remedy. Consequently, a supplemental groundwater investigation was proposed on behalf of the Respondent in ERM's 12 February 2013 letter.

Pursuant to USEPA review and comment conveyed in its 5 September 2013 letter, the following sections describe the scope of work for supplemental ISCO investigation that is required as part of this addendum.

2.1 SCOPE OF WORK FOR SUPPLEMENTAL ISCO INVESTIGATION

Additional Waterloo^{APS} borings will be installed in the area to the west and east of the 150 Fulton Avenue property. The Waterloo^{APS} is a subsurface data acquisition system that collects both groundwater samples and an integrated set of companion data in a single, continuous direct push. Companion data can include Continuous Index of Hydraulic Conductivity (Ik) record vs. depth, hydraulic head measurements, and physiochemical properties such as pH, specific conductance (SC), dissolved oxygen (DO), and oxidation/reduction potential (ORP).

The attached Figure 2 shows the approximate locations of 21 proposed Waterloo^{APS} boring locations. The actual number of profiling points and their locations will be based on field clearance conditions, i.e., overhead and underground utilities and the non-obstruction of service access driveways to local businesses. Prior to conducting subsurface investigation activities, ERM will conduct a rigorous subsurface utility evaluation, including review of available utility maps, contacting Dig Safe, and manual clearance of boreholes to a target depth of 4 feet using air knife and/or vacuum excavation techniques.

The December 2012 Waterloo^{APS} profiling results indicate that nearly all of the cVOC detections exceeding their respective GWQS or GV were detected in groundwater samples collected between 35 feet and 55 feet bgs, with almost no cVOCs detected deeper than 60 feet bgs. Consequently, each of the 21 additional Waterloo^{APS} borings will be installed to 60 feet bgs with groundwater samples collected at five-foot intervals focusing on the 35 – 60 foot bgs interval, resulting in five groundwater samples from each location for laboratory analysis of VOCs by EPA Method 8260B. Groundwater sampling and analytical protocols will be in accordance with the existing Quality Assurance Project Plan (QAPP) previously prepared for the OU1 Remedial Design.

The Waterloo^{APS} borings will be pressure grouted from the bottom of the borehole up to the ground surface. Horizontal coordinates relative to NYS State Plane NAD 83 Ft will be surveyed by ERM using a Trimble Pro-XRS GPS. Vertical coordinates will be surveyed by ERM relative to known monitoring well elevations.

2.2 *PERMITS, ACCESS & OTHER APPROVALS*

2.2.1 *Permits*

As provided in Section 121(e) of CERCLA and Section 300.400(e) of the NCP, no permit shall be required for any portion of the OU1 RA conducted entirely on-Site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work).

However, on this project, it has been customary to:

- Obtain road-opening and fire hydrant permits from the local municipalities and water districts; and
- Inform local law enforcement and businesses immediately adjacent to work zones as to the nature/schedule of field activities that will be performed by ERM's field team/subcontractors.

These actions were deliberately undertaken as a matter of communication, courtesy and cooperation with these entities, which has had proven positive benefits with the successful day-to-day execution of our work in the past.

Accordingly, these practices shall continue unless doing so becomes an impediment to successful completion of the work in a timely manner.

2.2.2 *Access & Other Approvals*

Access to the 150 Fulton Avenue property from the Gordon Atlantic Corporation will be critical to successfully complete the supplemental investigation. Other approvals may necessary for disposal of investigative derived wastes at properly permitted off-Site waste disposal facilities. Once those other approvals are identified, written requests will be prepared and submitted in a timely manner to obtain those approvals. If necessary, the approval process may include face to face meetings or other actions necessary to obtain all such permits or approvals in a timely manner.

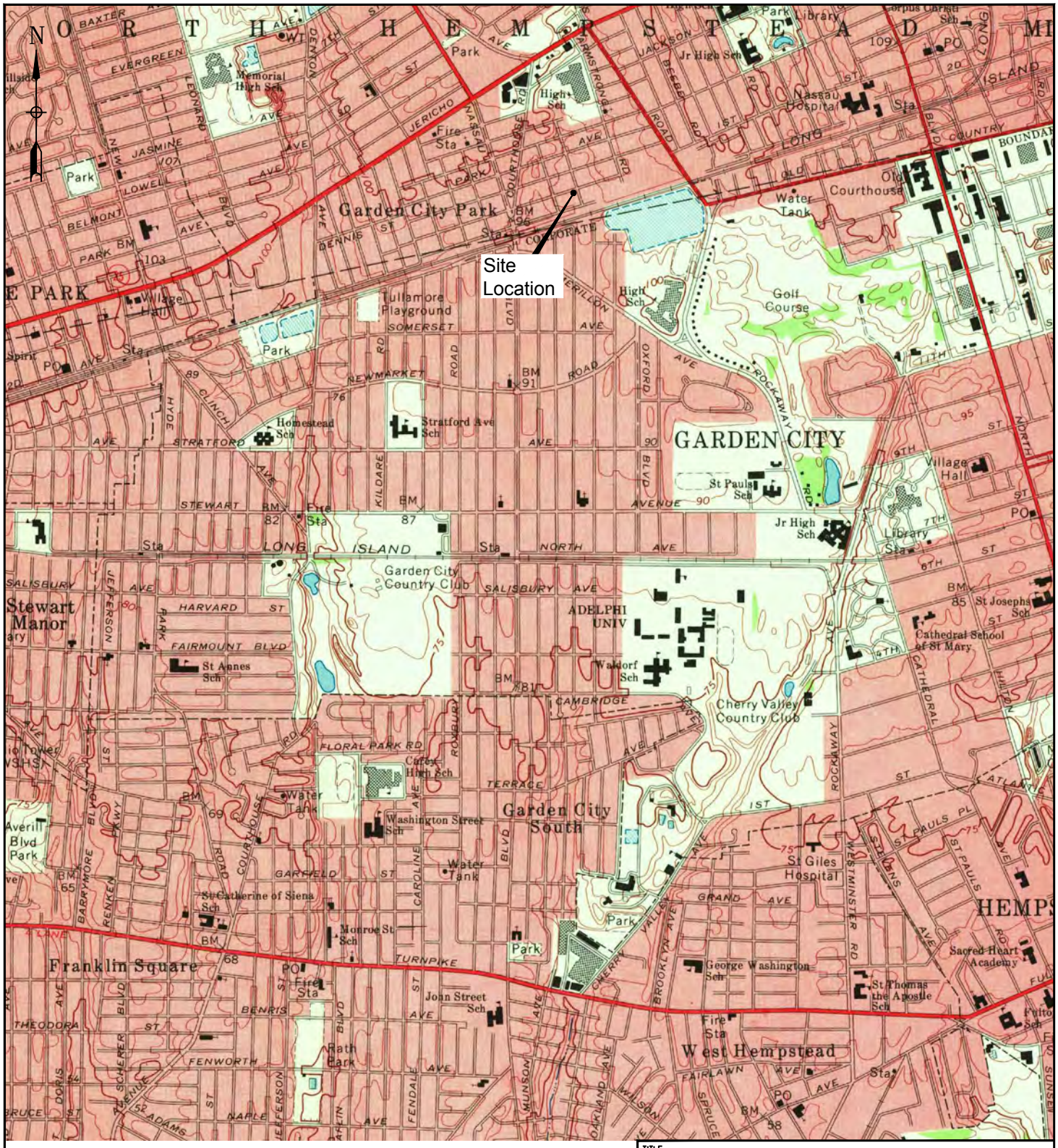
2.3 *TECHNICAL MEMORANDUM*

Following completion of the all field activities and receipt/validation of the laboratory data, ERM will prepare a technical memorandum. The narrative report will document Waterloo^{APS} borings and the sampling results, and using all available and relevant pre-design information provide relevant findings, interpretations, conclusions and recommendations for the ISCO component of the OU1 RA. The report will include tabular summaries, figures/charts, laboratory reports, field notes, soil boring logs, photographs and other supporting documentation.

3.0 SCHEDULE

A Gantt-format draft schedule for the supplemental investigation activities has been prepared showing key tasks critical path activities. The schedule in presented in number of months forward in time commencing with USEPA approval of this OU1 RD Work Plan Addendum. This schedule is contingent upon securing access to all advised permits (e.g., road opening permits from the Town of North Hempstead, hydrant permits from the Garden City Park Water District, etc.), subcontractor availability/schedule, limited weather delays, holidays, and cooperation of all interested parties including local business owners, Gordon-Atlantic, and USEPA.

LIST OF FIGURES



SOURCE: U.S.G.S. QUADRANGLE MAPS, LYNBROOK, N.Y., 1969

TITLE

Site Location Map
150 Fulton Avenue
Garden City Park, NY

PREPARED FOR

Genesco Inc.

Environmental Resources Management

FIGURE 1

DRAWN BY	SCALE	DATE	JOB NO.
EMF	AS SHOWN	02/14/12	0097881

\\Maextsan02\Data\cad\CAD\Drawings\Genesco\Fulton Ave\CAD Dwgs\30% Submittal\2011-02-10 - Fulton Avenue - 30% Design - Figure 1-1 - v01.dwg (02/15/2012 - 11:10am Melville)

Legend

- Site Boundary (Approximate)
- Proposed Waterloo Boring
- Air Sparge Well
- MIP
- Monitoring Well
- Vapor Extraction Well
- Waterloo APS

Notes:
MIP = Membrane Interface Probe
APS = Advanced Profiling System

MIP locations advanced between 6 - 14 December 2011.

Waterloo APS locations advanced between 14 and 21 December 2011.

0 50 100 200 Feet

1:1,000

FIGURE 2

Proposed Waterloo APS Borings
150 Fulton Avenue Property
Garden City Park, New York

ERM

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FIGURE 3
SUPPLEMENTAL ISCO INVESTIGATION SCHEDULE
FULTON AVENUE SUPERFUND SITE - REMEDIAL OPERABLE UNIT 1