MEMORANDUM

To: Laurie M. Rizzo
From: Christopher J. Canonica, P.E
Subject: Review of Cost Sections for EA Engineering, P.C. Work Assignment D004438-06

Date: 14 November 2006

I have reviewed the cost sections for the above referenced WA. The cost sections appear to be reasonable and satisfactorily completed. The following checklist outlines the review process and review comments:

	GENERAL COST REVIEW CHECKLIST	Yes	No	Comments
	Are the costs for Task 1 and the total budget within the budget provided?		X	NYSDEC Project Manager approved.
	Is there a complete set of 2.11 Schedules (a) through (h)?	X		
1.	**Schedule 2.11(a)**			
	Do rates for indirect and fee match contract rates? (Are sliding rates applicable?)	X		
	Do numbers add up?	X		
2.	**Schedule 2.11(b) - Direct Labor**			
	Are average reimbursement rates used for each year? (Check rates in contract vs. time period of WA.)	X		
	Are hours segregated by year?		X	Field work to be completed in 2006.
	Is total cost for each NSPE level shown?	X		
	Does total direct labor costs match amount on Schedule 2.11(a)?	X		
	Do total hours match hours on Schedule 2.11(h)?	X		
	Is the Principal's (NSPE level 9) time less than 2% of total time?	X		
3.	**Schedule 2.11(b-1) - Direct Administrative Labor Hours**			
	Is breakdown of Schedule 2.11(b-1) reasonable (i.e within acceptable guidelines - 4% overall budget and 2% for Principal defined in hours)? If not, did Consultant submit acceptable justification?	X		
4.	**Schedules 2.11(c) and (d) - Direct Non-Salary**			
	Are rates listed in Schedule 2.11(c) consistent with contract?	X		
	Are rates for in-house and/or miscellaneous costs in their contract? If not, are quotes included for any item (<u>including</u> equipment purchases & rentals; <u>excluding</u> air fare) >$1k? (For estimated cost, not unit cost).	X		
	Are there any unallowable costs? (e.g. telephone and shipping cannot be reimbursed as a direct cost if included in ICR.)		X	
	Are appropriate lodging/per diem rates used?	X		
	Are rates approved for consultant-owned equipment?	X		

	GENERAL COST REVIEW CHECKLIST	Yes	No	Comments
	Does total direct non-salary costs match amount on Schedule 2.11(a)?	X		
	Are other direct costs (# of travel days, lodging, and field equipment usage) reasonable based on field work schedule or supporting documentation from consultant?	X		
5.	**Schedule 2.11(e) - Cost-plus-fixed-fee subcontracts**			
	Is proposed subconsultant on standby? If not, does proposed subconsultant have DEC approved rates with another standby consultant?	X		
	Is subcontract contract active and do rates (salary, indirect and fee) match?	X		
	Is there a breakdown of direct non-salary costs (i.e, are additional Sch. 2.11's needed)?		X	
	Does total subcontract amount match Schedule 2.11(a)?	X		
	Has subcontractor justified/obtained adequate quotes for any subcontracted work? (Where subconsultant is not on standby.)			Not applicable.
	If applicable, are subconsultant contracts submitted and are they approvable?			Not applicable.
6.	**Schedule 2.11(f) - Unit Price Subcontracts**			
	Are proposed subcontractors on standby? If not, are there quotes for subcontracts >$1k? Bids should be comparable (quantities and items) and provide unit costs plus job total.		X	Unit costs were provided for data validation costs.
	Standby Drillers (Two phase process) - Are costs from at least 3 standbys compared? If not, an additional quote from a non-standby driller may be needed. Are proper unit costs and mob/demob costs used?	X		
	Standby Lab and Data Validators (Used on a rotational basis) - Do unit cost per sample match unit cost in standby contract?	X		
	Other - Standard solicitation rules (quotes) apply for services >$1k.			Not applicable.
	M/WBE - Are sole source M/WBE contracts <5k and cost reasonableness documented?	X		
	Is management fee calculated only on non-professional unit priced subs > $10k? Appropriate rate? Management is not allowed on professional engineering firms, architects, or surveyors, or other licensed professionals.	X		
7.	**Schedule 2.11(g) - Cost Control Report**			
	Do individual 2.11(g)s equal summary 2.11(g) and costs match 2.11(a).?	X		
8.	**Supplemental 2.11(g) - Cost Control Report (subs)**			
	Do schedules include all applicable subcontracts and management fee? (For Unit Price contracts only.)	X		
9.	**Schedule 2.11(h) - Summary of Labor Hours**			
	Do hours on 2.11(h) match those on 2.11(b)?	X		
10	**Supplemental Supporting Cost Information**			
	Has additional cost info. been supplied which has not been incorporated into WA budget documentation?		X	None needed.

Final Work Plan for a Site Characterization at AMW Materials Testing Site (1-52-189), North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C., and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211
(315) 431-4610

November 2006
EA Project No. 14368.06

Final Work Plan for a Site Characterization at AMW Materials Testing Site (1-52-189), North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C. and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211
(315) 431-4610

14 November 2006
Christopher J. Canonica, P.E., Program Manager — Date
EA Engineering, P.C.

14 November 2006
James C. Hayward, P.E., Project Manager — Date
EA Engineering, P.C.

14 November 2006
James Gatherer, Site Manager — Date
EA Science and Technology

November 2006
Project No.: 14368.06

CONTENTS

LIST OF FIGURES

1. INTRODUCTION

1.1 PROJECT BACKGROUND

The New York State Department of Environmental Conservation (NYSDEC) tasked EA Engineering, P.C. and its affiliate EA Science and Technology to perform a site characterization at the AMW Materials Testing site (NYSDEC Site No. 1-52-189) in the Hamlet of North Amityville, Suffolk County, New York (Figure 1).

The Work Assignment will be conducted under the NYSDEC State Superfund Standby Contract (Work Assignment No. D004438-6). An initial step in the site characterization is preparation of this Work Plan, which briefly describes the anticipated work activities. The elements of this Work Plan were prepared in accordance with the most recent and applicable guidelines and requirements of NYSDEC and the New York State Department of Health.

1.2 DESCRIPTION OF WORK TASKS

The primary focus of the site characterization is to evaluate site conditions on the property and at the storm water structures. The following tasks will be completed as part of the site characterization, and are briefly summarized below:

- Work Plan development
- Evaluation of stockpiled soils
- Evaluation of onsite media
- Evaluation of storm water structures
- Field documentation and reporting.

The results of the site characterization will also be used to assess and identify additional work (i.e., investigation of soil gas) which may be necessary in the future. The protocol for this effort will follow the NYSDEC Department of Remediation *Draft DER-10 Technical Guidance for Site Investigation and Remediation*, dated December 2002.

1.2.1 Work Plan Development (Task 1)

In conjunction with the development of this Work Plan, a kickoff meeting was held at the site on 14 September 2006. The purpose of the visit was to become familiar with the area and discuss proposed field work activities, which are presented in this Work Plan and associated appendices. Meeting attendees included representatives from the NYSDEC Division of Environmental Remediation and EA. The property owner was invited to the meeting by the NYSDEC but was unable to attend. Therefore, locked access gates could not be opened and inspection of the site was limited primarily to the area outside of the perimeter fence.

1.2.2 Evaluation of Stockpiled Soils (Task 2)

The activities to be performed under this task will involve evaluating the stockpile of material presently staged within the site boundaries.

1.2.3 Evaluation of Onsite Media (Task 3)

The activities to be performed under this task will involve the evaluation of the media at the site to determine if onsite soils and groundwater have been impacted. Areas of concern from historical activities are identified as wastewater treatment tanks, vapor degreaser, anodizing tanks, aboveground fuel oil storage tank, non-contact cooling water leaching pools, storm drains, and the stockpile of soils.

1.2.4 Evaluation of Storm Water Structures (Task 4)

The activities to be performed under this task will involve the evaluation of the media at the stormwater structures.

1.2.5 Field Documentation and Reporting (Task 5)

Following performance of sampling activities, a site plan will be developed which depicts general site features (i.e., buildings, roadways, utility poles, fences, etc.). The locations of all samples, existing monitoring wells, and new wells will be surveyed.

Field logbooks will be used during all onsite work. A dedicated field logbook will be maintained by the field technician overseeing the site activities. In addition to the logbook, any and all original sampling forms, and purge forms used during the field activities, will be submitted to NYSDEC as part of the final report. Field and sampling procedures, including installation of the soil vapor probe points, building surveys, etc., will be photo documented.

Upon completion of the field activities, a report will be prepared and submitted to NYSDEC that includes a summary of field and laboratory analytical data and presents the locations of field samples. The report will include evaluations and recommendations based on the findings. A draft report will be submitted for review followed by a final report. Additionally, an electronic data deliverable will be provided that contains the analytical results in the appropriate format.

1.3 WORK PLAN ORGANIZATION

This Work Plan is organized into the following sections:

- Section 1: Provides the overall approach and specific activities that will be performed during the site characterization at the AMW Materials Testing site

- Section 2: Presents the project organization and schedule

- Section 3: Identifies areas of work which will require subcontracting

- Section 4: Presents the utilization plan for Minority/Women-Owned Business Enterprise subcontractors

In addition, this Work Plan includes the following appendices:

- A Field Activities Plan (Appendix A), which summarizes the number and locations of the samples to be obtained.

- The site-specific Quality Assurance Project Plan (Appendix B), which includes specific procedures for the collection, analysis, and evaluation of data that will be legally and scientifically defensible.

- The site-specific Health and Safety Plan (Appendix C) which details site-specific hazards and levels of protective measures to be implemented in order to protect the safety and health of field personnel.

- The Community Air Monitoring Plan (Appendix D) which identifies air monitoring procedures to be followed during performance of field activities associated with the site characterization.

The budget for this Work Assignment (Schedule 2.11 in the Standby Contract) is provided in Appendix E. Supporting documentation for the Work Assignment budget is provided in Appendix F.

2. PROJECT ORGANIZATION AND SCHEDULE

2.1 PROJECT ORGANIZATION

The site characterization at the AMW Materials Testing site will be managed through an organized effort of scientific and engineering personnel and technical resources. These efforts will employ pre-approved field procedures, sampling techniques, and analytical methods to accomplish the project objectives. Effective program organization will accommodate these requirements while maintaining a manageable degree of control over these activities.

Figure 2 illustrates the project organization for the accomplishment of this effort. The key technical management of this investigation will be accomplished by the Project Manager and assigned project team. Additional individuals will be made available, if warranted. Areas of work which require subcontracting are discussed in Section 3.

2.2 PROJECT MANAGEMENT

EA will provide oversight, coordination, health and safety, field support, and evaluation of analytical data. EA will also be responsible for evaluation of analytical test results, which will be submitted to NYSDEC. The EA staff members involved in this project are detailed below:

- ***Christopher Canonica, P.E., EA Program Manager and Project Quality Assurance/Quality Control (QA/QC) Officer—***The QA/QC Officer will provide guidance on technical matters and review technical documents relating to the project. He will assess the effectiveness of the QA/QC program and recommend modifications when applicable. Additionally, the QA/QC Officer may delegate technical guidance to specially trained individuals under his direction.

- ***James Hayward, P.E., EA Project Manager***—The Project Manager provides overall coordination and preparation of the project within EA. This includes coordination with NYSDEC and NYSDOH, budget control, subcontractor performance, and allocation of resources and staffing to implement the site-specific Quality Assurance Project Plan, Health and Safety Plan, and Community Air Monitoring Plan.

- ***Robert Casey, EA Project QA/QC Coordinator—***The Project QA/QC Coordinator is responsible for project-specific supervision and monitoring of the QA/QC program. He will ensure that field personnel are familiar with and adhere to proper sampling procedures, field measurement techniques, sample identification, and chain-of-custody procedures. He will coordinate with the analytical laboratory for the receipt of samples and reporting of analytical results, and will recommend actions to correct deficiencies in the analytical protocol or sampling. Additionally, he will prepare QA/QC reports for management review.

- ***James Gatherer, EA Site Manager***—The Site Manager will serve as the onsite contact person for field investigations and tests. He will be responsible for coordinating the field activities; including inspecting and replacing equipment, preparing daily and interim reports, scheduling sampling, and coordinating shipment and receipt of samples and containers.

The Program Safety and Health Officer is also an integral part of the project implementation team.

- ***Kris Hoiem, EA Program Health and Safety Officer***—The Program Safety and Health Officer will be responsible for the development, final technical review, and approval of the HASP. In addition, he will provide authorization, if warranted, to modify personal protective equipment (PPE) requirements based on field conditions. He will also provide final review of all safety and health monitoring records and PPE changes to ensure compliance with the provisions of the Health and Safety Plan (HASP).

2.3 PROJECT SCHEDULE

The proposed schedule for completion of this Work Assignment is presented on Figure 3. The schedule includes tasks up to the completion of the report associated with this Work Assignment. The schedule assumes a field activity start date of 4 December 2006 (Evaluation of Stockpiled Soils). The schedule does not account, however, for delays due to unforeseen site conditions (i.e., inclement weather).

Every attempt will be made to adhere to the schedule presented. Unexpected delays will be documented and reported to NYSDEC in a timely fashion. In the event that the schedule needs to be modified, EA will contact NYSDEC for approval of the updated schedule.

3. SUBCONTRACTORS

Successful implementation of the field and reporting activities proposed in this Work Plan will require the following types of subcontractors:

- An offsite laboratory to analyze various environmental samples (groundwater, soil, surface water and sediment)
- A drilling contractor to install groundwater monitoring wells and temporary groundwater profiling points
- A surveyor to assist in the development of a site plan depicting general site features as well as the locations of all samples and monitoring wells
- A data validator to perform a usability analysis of the laboratory data associated with the field samples.

In accordance with the NYSDEC Subcontractor/Subconsultant Procurement Guidelines (Guidelines), EA has entered into Standby Subcontracts with analytical laboratories and well drillers; and Subconsultant Contracts with professional land surveyors and engineers. EA selected a professional land surveyor and analytical laboratory from a list of approved Standby Subcontractors/Subconsultants. The two-step process described in the Guidelines was followed for selection of a well driller, and a non-standby Women-Owned Business Enterprise (WBE) was selected for data validation. Since the total project value for data validation is less than $10,000, the data validator was selected based on one quote and demonstration of cost reasonableness.

EA selected YEC, Engineering, P.C. (YEC) from Valley Cottage, New York to provide professional land surveying services. YEC is a Minority-Owned Business Enterprise (MBE) under a cost-plus-fixed fee Subconsultant Contract to EA. YEC was selected based on their proximity to the site in relation to other Subconsultants under contract to EA.

EA also selected Hampton-Clarke, Inc. from Fairfield, New Jersey to provide analytical laboratory services. Hampton-Clarke is a WBE under a unit price Standby Subcontract to EA. They were selected on a rotational basis as required in the Guidelines.

EA has not entered into Standby Subcontracts with data validators. ChemWorld Environmental, Inc., a WBE from Rockville, Maryland was selected for data validation based on a single quote and comparison to other data validation rates EA has received for work under D004438. As the total project value for data validation is under $10,000, a single price quote is acceptable under the Guidelines.

EA followed the two-step selection process described in the Guidelines to procure a well driller. EA has entered into unit price Standby Subcontracts with four drilling companies. In order to

distribute this assignment, EA solicited quotes for mobilization/demobilization from each of the standby drillers:

- Parratt-Wolff, Inc., East Syracuse, New York
- Aztech Environmental Technologies, Inc., Ballston Spa, New York
- Nothnagle Drilling, Inc., Scottsville, New York
- Land Air Water Environmental Services, Inc. (LAW), Center Moriches, New York.

We received quotes from Parratt-Wolff, LAW, and Aztech. Nothnagle declined to provide a quote. EA selected LAW, a WBE, since they provided the lowest cost for mobilization/ demobilization and are located in close proximity to the project site. Quotes from each of the drillers are provided in Appendix F. In the case of Parrate-Wolff and Aztech, the quotes are in e-mail format. LAW's quote is in the format of a letter.

The following table summarizes our subcontracting under this work assignment:

Activity	Subcontractor	Projected Contract Amount ($)
Analytical Laboratory (Air/Soil/Water)	Hampton-Clarke	$17,455
Driller	Land Air Water Environmental	$13,220
Surveyor	YEC Engineering, P.C.	$3,444
Data Validation	ChemWorld Environmental	$1,778

In addition, a geologist from Louis Berger Group, Inc. (the team subcontractor to EA), will assist during performance of field activities by providing an NSPE Level II geologist. Louis Berger Group has a projected contract amount of $3,531.96.

4. MINORITY/WOMAN-OWNED BUSINESS ENTERPRISE UTILIZATION PLAN

It is understood that EA is required by NYSDEC to make Good Faith Efforts towards the realization of M/WBE-Equal Employment Opportunity (EEO) goals established under the Standby Contracts. In accordance with the Standby Contracts, EA prepared a Consultant/Contractor Detailed M/WBE-EEO Utilization Plan, which is Section 4.1 of this work plan. The M/WBE-EEO Utilization Plan identifies that EA's goals are to award 20 percent of the total contract costs to M/WBE firms. Specifically, the goals are to award 15 percent of the total contract costs to MBE firms ($9,750) and 5 percent of the total contract costs to WBE firms ($3,250). In addition, EA's goals are to have 10 percent of EA's workforce for the project be minority and 10 percent be female.

EA proposes the use of several subcontractors in conjunction with performance work at the site who are NYS certified M/WBEs, as identified below.

Subcontractor	Classification	Service to be Performed	Projected Contract Amount ($)	Award Date	Contract Start Date	Projected Completion Date
Hampton-Clarke, Inc.	WBE	Lab Analysis	$17,455.00	TBD	11/26/2006	11/27/2007
Land Air Water Environmental Service, Inc.	WBE	Well Drilling	$13,222.00	TBD	11/26/2006	11/27/2007
YEC Engineering, P.C.	MBE	Surveying	$3,443.84	TBD	11/26/2006	11/27/2007
ChemWorld Environmental, Inc.	WBE	Data Validation	$1,778.00	TBD	11/26/2006	11/27/2007

Approximately 45.1 percent of the total contract costs are proposed to be performed by WBE firms, which exceeds the Standby Contract WBE utilization goals. The MBE utilization goal is not anticipated to be met for this project, although approximately 4.8 percent of the total contract costs is proposed to be awarded to a MBE firm.

As identified in the M/WBE-EEO Utilization Plan, approximately 26.7 percent of EA's total contract hours for the project are proposed to be worked by female employees (Section 4.1). However, none of EA's total contract hours are anticipated to be worked by minority employees.

4.1 CONSULTANT/CONTRACTOR DETAILED M/WBE-EEO UTILIZATION PLAN

The plan consists of four forms, which are included in the following pages.

CONSULTANT/CONTRACTOR DETAILED M/WBE-EEO UTILIZATION PLAN
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
(THE M/WBE-EEO GOALS MUST BE PLACED ON THE ENTIRE PROJECT COST)

Consultant Name:	EA Engineering, P.C.						
Contract Type/Number:	Stand By D004438 I/D Services			Contract Award Date:			
Address:	6712 Brooklawn Parkway	City:	Syracuse	State:	New York	Zip Code:	13211-2158
Project Owner Name:	New York State Department of Environmental Conservation			Project/Grant No.:			
Address:	625 Broadway	City:	Albany	NY		Zip Code:	12233
Authorized Representative:				Title:			
Authorized Signature:							
AMW Materials Testing Site 1-52-189, EA Work Assignment D004438-6							

EEO AND M/WBE CONTRACT SUMMARY (MUNICIPAL FORCE ACCOUNT N/A)

M/WBE CONTRACT SUMMARY		%	Amount	EEO CONTRACT SUMMARY		%	No./Emp.	Wk./Hrs.
1.	Total Dollar Value of the Project	100	$71,888.27	6.	Total for all Employees			
2.	Total Dollar Value of the Prime Contract	100	$71,888.27	7.	Total Goal for Minority Employees	10		
3.	MBE Goal/Amount	15	$10,783.24	8.	Total Goal for Female Employees	10		
4.	WBE Goal/Amount	5	$3,594.41	9.	EEO Combined Totals	20		
5.	MBE/WBE Combined Totals	20	$14,377.65					

Office of Minority & Women's Business Programs Use Only

Proposed Goals		Date Approved	Date Disapproved	Initials
MBE (%)	EEO-Minorities (%)			
WBE (%)	EEO-Minorities (%)			

SECTION I - MBE INFORMATION: **In order to achieve the MBE Goals, New York State Certified MINORITY-OWNED firms are expected to participate in the following manner**

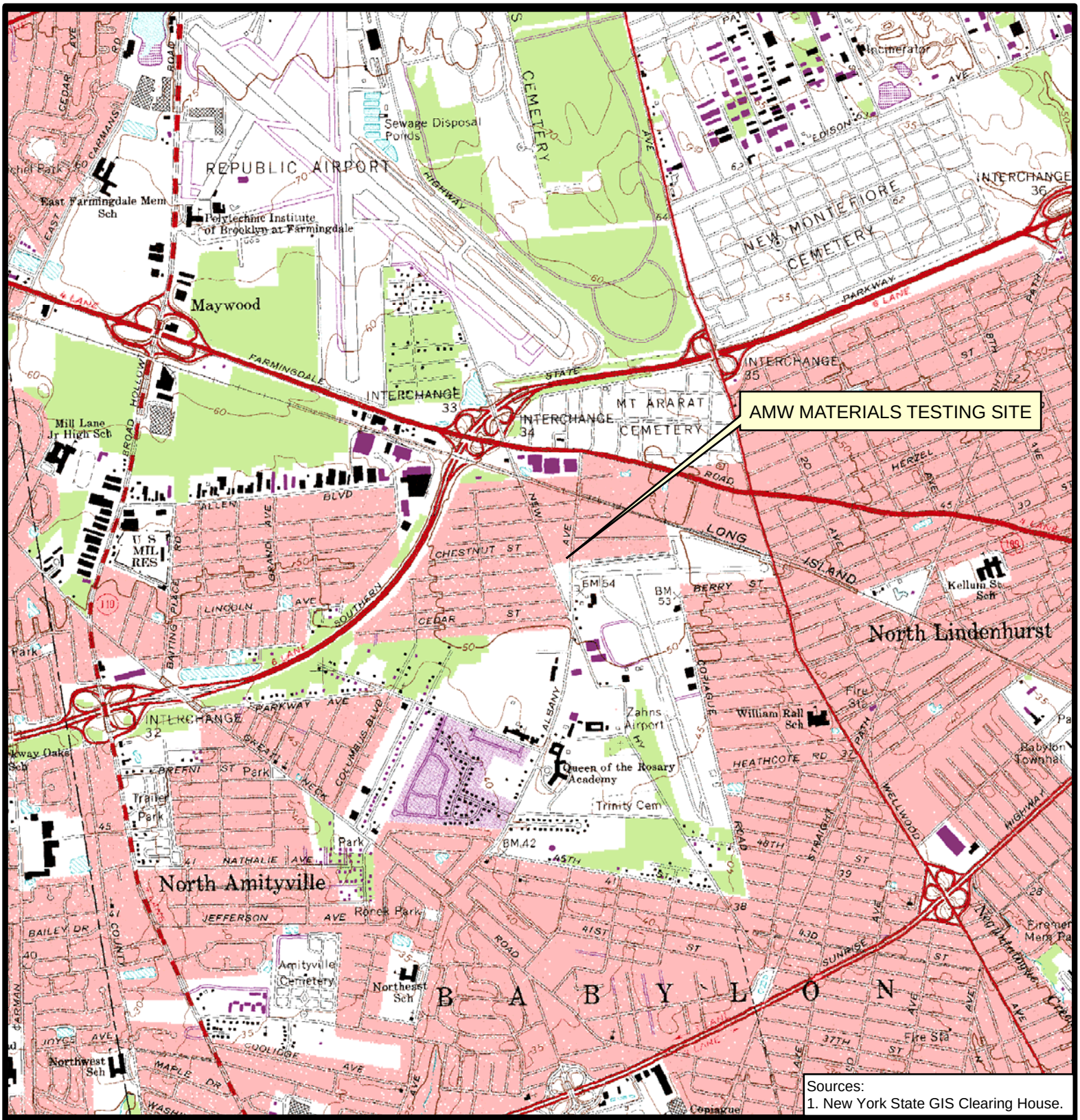
MBE Firm	Projected MBE Contract Amount and Award Date	Description of Work MBE	Contract Schedule/Start Date(s)	Contract Payment Schedule	Project Completion Date
Name: **YEC, Inc./YEC Engineering, P.C.** Address: **Clarkstown Executive Park 612 Corporate Way, Suite 4M** City: **Valley Cottage** State/Zip Code: **New York 10989** Telephone No.: **845-268-3203**	**$3,443.84** DATE: **TBD**	**Surveying**	**11/13/2006**		
Name: Address: City: State/Zip Code: Telephone No.:	DATE:				
Name: Address: City: State/Zip Code: Telephone No.:	DATE:				

SECTION II - WBE INFORMATION: **In order to achieve the WBE Goals, New York State Certified WOMEN-OWNED firms are expected to participate in the following manner**

	WBE Firm	Projected WBE Contract Amount and Award Date	Description of Work WBE	Contract Schedule/Start Date(s)	Contract Payment Schedule	Project Completion Date
Name:	**ChemWorld Environmental, Inc.**	**$1,778.00**	**Data Validation**	**11/13/2006**		
Address:	**14 Orchard Way North**					
City:	**Rockville**					
State/Zip Code:	**Maryland 20854**	DATE:				
Telephone No.:	**301-294-6144**	**TBD**				
Name:	**Hampton-Clarke, Inc.**	**$17,455.00**	**Analytical Laboratory**	**11/13/2006**		
Address:	**175 Route 46 West**		**Services**			
City:	**Fairfield**					
State/Zip Code:	**New Jersey 07004**	DATE:				
Telephone No.:	**973-244-9770**	**TBD**				
Name:	**Land, Air, Water Environmental Services, Inc.**	**$13,220.00**	**Drilling Services**	**11/13/2006**		
Address:	**32 Chichester Avenue**					
City:	**Center Moriches**					
State/Zip Code:	**New York 11934**	DATE:				
Telephone No.:	**631-874-2112**	**TBD**				

SECTION III - EEO INFORMATION: **In order to achieve the EEO Goals, Minorities and Females are expected to be employed in the following job categories for the specified amount of work hours.**

			All Employees		Minority Employees			
Job Categories		**Total Work Hours of Contract**	**Male**	**Female**	**African-American**	**Asian**	**Native American**	**Hispanic**
Officials/ Managers	VI	15	15	0	0	0	0	0
Professionals	IV/III	253	253	0	0	0	0	0
Technicians		0	0	0	0	0	0	0
Sales Workers		0	0	0	0	0	0	0
Office/Clerical	III/II/I	98	0	98	0	0	0	0
Craftsman		0	0	0	0	0	0	0
Laborers		0	0	0	0	0	0	0
Services/ Workers		0	0	0	0	0	0	0
Totals		366	268	98	0	0	0	0



AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

FIGURE 1
SITE LOCATION

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	JG	JG	JCH	AS SHOWN	OCTOBER 2006	1436806	I:\NAmity\Projects\Fig1NAmitySiteLocation.mxd

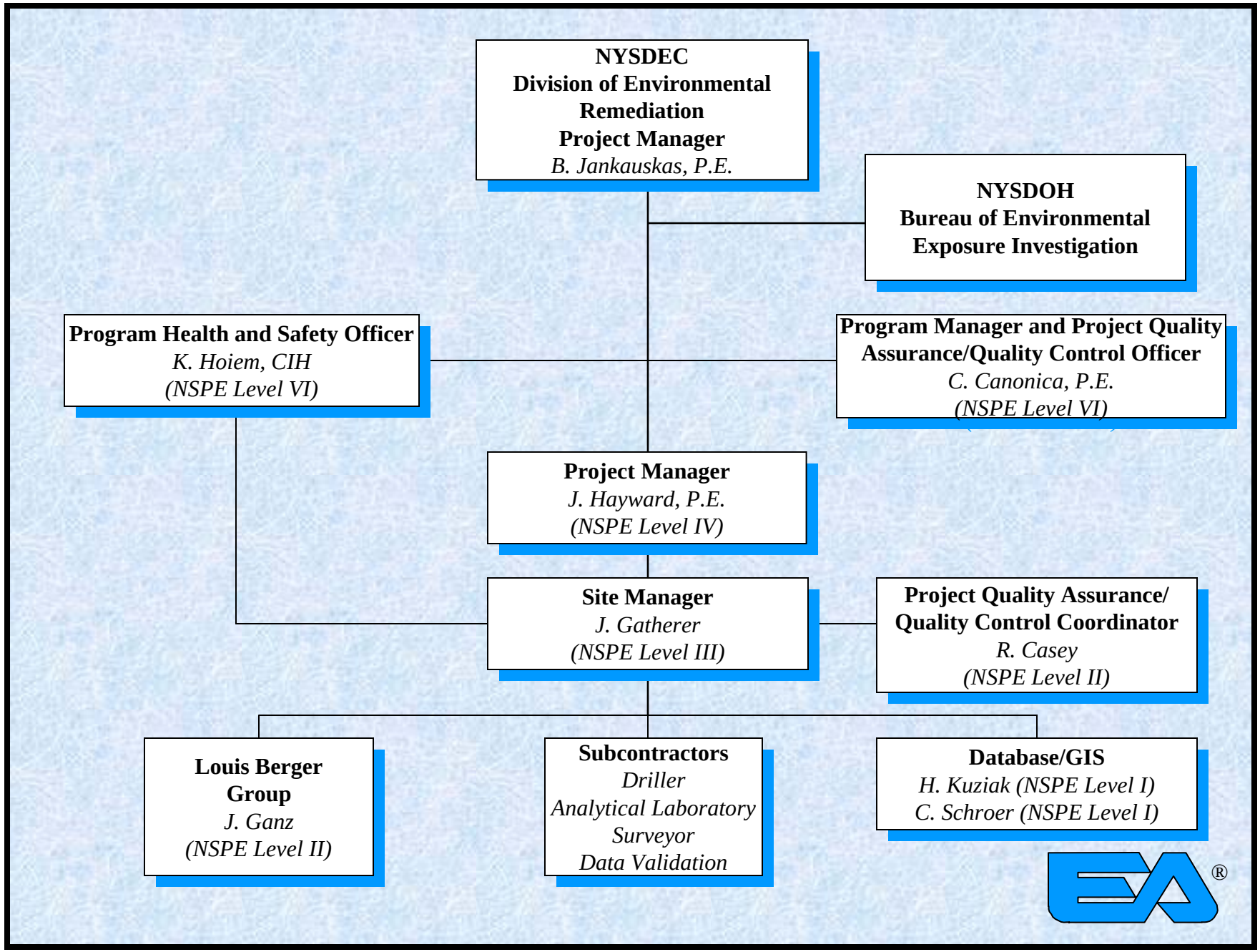
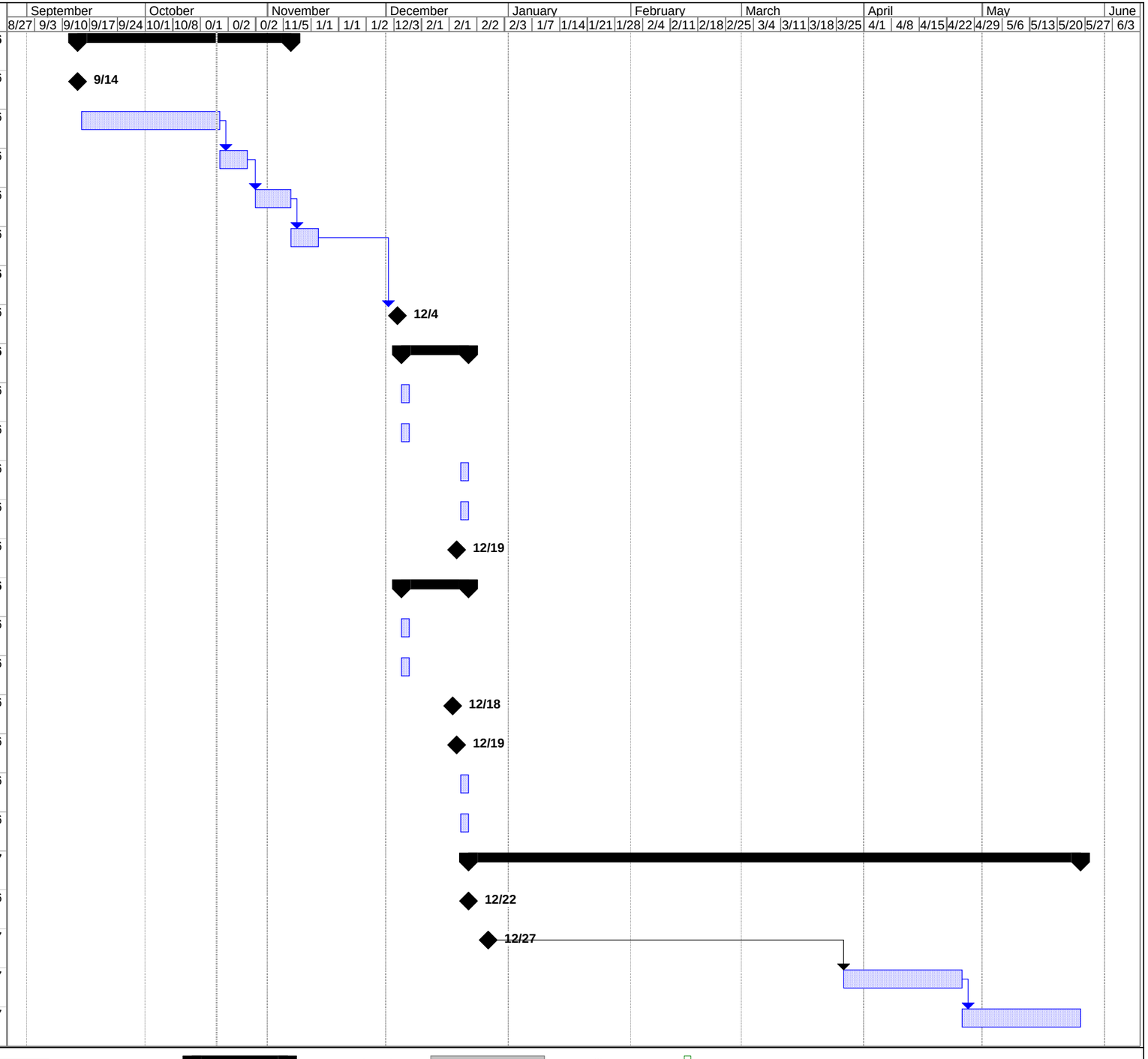


FIGURE 2. PROJECT ORGANIZATION CHART FOR SITE CHARACTERIZATION – AMW MATERIALS TESTING SITE

ID		Task Name	Duration	Start	Finish
1		**Task 1 - Work Plan Development**	**54 days?**	**Thu 9/14/06**	**Mon 11/6/06**
2		Site visit	1 day?	Thu 9/14/06	Thu 9/14/06
3		Prepare/Submit Draft Work Plan	35 days	Fri 9/15/06	Thu 10/19/06
4		Review Draft Work Plan	7 days	Fri 10/20/06	Thu 10/26/06
5		Prepare/Submit Final Work Plan	9 days	Sun 10/29/06	Mon 11/6/06
6		Notice to Proceed	7 days	Tue 11/7/06	Mon 11/13/06
7		**Task 2 Stockpile Assessment**	**1 day**	**Mon 12/4/06**	**Mon 12/4/06**
8		Stockpile Sampling	1 day	Mon 12/4/06	Mon 12/4/06
9		**Task 3 Evaluation of On-Site Media**	**17 days**	**Tue 12/5/06**	**Thu 12/21/06**
10		Well Installation	2 days	Tue 12/5/06	Wed 12/6/06
11		Well Development	2 days	Tue 12/5/06	Wed 12/6/06
12		Groundwater Profiling	2 days	Wed 12/20/06	Thu 12/21/06
13		Well Sampling	2 days	Wed 12/20/06	Thu 12/21/06
14		Storm Drain Sampling	1 day	Tue 12/19/06	Tue 12/19/06
15		**Task 4 Evaluate Stormwater Structures**	**17 days?**	**Tue 12/5/06**	**Thu 12/21/06**
16		Well Installation	2 days	Tue 12/5/06	Wed 12/6/06
17		Well Development	2 days	Tue 12/5/06	Wed 12/6/06
18		Recharge Basin Sampling	1 day?	Mon 12/18/06	Mon 12/18/06
19		Dry Well Sampling	1 day?	Tue 12/19/06	Tue 12/19/06
20		Groundwater Profiling	2 days	Wed 12/20/06	Thu 12/21/06
21		Well Sampling	2 days	Wed 12/20/06	Thu 12/21/06
22		**Task 5 - Field Documentation/Reporting**	**155 days?**	**Fri 12/22/06**	**Fri 5/25/07**
23		Perform Site Surveying	1 day?	Fri 12/22/06	Fri 12/22/06
24		Prepare/Submit Draft Report	90 days	Wed 12/27/06	Mon 3/26/07
25		Approve Draft Report	30 days	Tue 3/27/07	Wed 4/25/07
26		Prepare/Submit Final Report	30 days	Thu 4/26/07	Fri 5/25/07



Project: Amityville schedule
Date: Thu 10/19/06

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

Appendix A

Field Activities Plan

Field Activities Plan
AMW Materials Testing Site (1-52-189)
North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C., and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
(315) 431-4610

November 2006
EA Project No. 14368.06

Field Activities Plan
AMW Materials Testing Site (1-52-189)
North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C. and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
(315) 431-4610

Christopher J. Canonica, P.E., Program Manager — 14 November 2006 (Date)
EA Engineering, P.C.

James C. Hayward, P.E., Project Manager — 14 November 2006 (Date)
EA Engineering, P.C.

James Gatherer, Site Manager — 14 November 2006 (Date)
EA Science and Technology

November 2006
EA Project No. 14368.06

CONTENTS

Page

ATTACHMENT A: FIELD FORMS

LIST OF FIGURES

LIST OF TABLES

1. PROJECT BACKGROUND

The New York State Department of Environmental Conservation (NYSDEC) tasked EA Engineering, P.C., and its affiliate EA Science and Technology, to perform a site characterization at the AMW Materials Testing site in the Hamlet of North Amityville, Suffolk County, New York (Figure 1).

The site characterization will be conducted under the NYSDEC State Superfund Standby Contract (Work Assignment No. D004438-6). An initial step in the site characterization is preparation of this Field Activities Plan (FAP), which describes the anticipated field activities. The elements of this FAP were prepared in accordance with the most recent and applicable guidelines and requirements of NYSDEC and the New York State Department of Health. This FAP was developed as part of the Project Management Work Plan for the AMW Materials Testing site in North Amityville, New York.

2. DESCRIPTION OF FIELD ACTIVITIES

The primary focus of the site characterization is to evaluate site conditions on the property and at the stormwater structures. The following tasks will be completed as part of the site characterization:

- Stockpile evaluation
- Evaluation of onsite media
- Evaluation of stormwater structures
- Site surveying.

Details of each field activity are provided in subsequent sections of this FAP. The general locations of the areas of concern are identified on Figure 2.

3. STOCKPILE EVALUATION

The activities to be performed under this task will involve evaluating the stockpile of material presently staged within the site boundaries. The procedures to be performed under this task are detailed below, and the analytical samples required are summarized in Table 1.

3.1 STOCKPILE ASSESSMENT

The quantity of soils stockpiled at the site will be estimated. As per the requirements of the proposed soil disposal facility, a minimum of one composite soil sample will be collected for every 500 tons of stockpiled soil. Up to four grab samples will be collected to form each composite sample. Prior to compositing, one grab sample for every 500 tons of stockpiled soil will be collected for Target Compound List volatile organic compound (VOC) analysis. Composite soil samples will be analyzed for Toxicity Characteristic Leaching Procedure, polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), metals (including hexavalent chromium), and Resource Conservation and Recovery Act characteristics (ignitability, reactivity, corrosivity, and moisture content). Soil samples will be collected from a depth of approximately 3 ft below the top of the pile to properly evaluate the constituents. Soils will be classified as hazardous or non-hazardous material based on the analytical results. A recommendation on appropriate disposal methods will then be made based on the soil's hazardous/non-hazardous classification. Soil disposal will be handled under a separate work assignment after the stockpile is evaluated and alternatives to process the stockpile have been assessed.

Soil samples will be collected using a stainless steel hand auger or similar sampling equipment. Decontamination of non-dedicated equipment and tools used to collect samples for laboratory analysis will be completed in accordance with the procedures described in Section 6 of this FAP.

4. EVALUATION OF ONSITE MEDIA

The activities to be performed under this task will involve the evaluation of the media at the site to determine if onsite soils and groundwater have been impacted. Areas of concern from historical activities are identified as wastewater treatment tanks, vapor degreaser, anodizing tanks, aboveground fuel oil storage tank, non-contact cooling water leaching pools, storm drains, and the stockpile of soils as shown on Figure 4. The procedures to be performed under this task are detailed below, and the analytical samples required are summarized in Table 1.

4.1 MONITORING WELL INSTALLATION AND GROUNDWATER SAMPLING

Three soil borings will be completed to characterize areas of concern, underlying geology, and depth to groundwater at the site. Hollow-stem augers will be used to advance each borehole to the specified depth. The locations of the soil borings are shown on Figure 3. The rationale for installing each soil boring location is provided in the table below:

Location	Rationale
MW-6	To assess potential impacts to soil and groundwater in the vicinity of the vapor degreaser
MW-7	To assess potential impacts to soil and groundwater from excavated soil and stockpile area
MW-8	To assess potential impacts to soil and groundwater from anodizing tank area

A monitoring well will subsequently be installed at each soil boring location. **At least 5 days prior to ground-intrusive activities, the One-Call System and appropriate utility companies will be contacted in order to locate utilities in the areas proposed for subsurface investigation.** In addition, the site owner will be contacted to obtain any known information on underground or aboveground utilities present at the site.

4.1.1 Soil Sample Collection

Subsurface soil samples will be collected using decontaminated 2- or 3-in. diameter, 2.5-ft-long, continuous-drive, split-spoon samplers, which will be advanced with the augers during drilling. The nominal sampling interval for descriptive samples will be every 2 ft from ground surface to 10 ft below the water table. At each boring location, soil samples collected from immediately above the groundwater interface will be submitted for laboratory analysis. However, if visual contamination is observed at a particular soil sampling interval, soils from this interval will be submitted for laboratory analysis in lieu of soil samples collected from immediately above the groundwater interface. Soil samples will be analyzed for VOCs by U.S. Environmental Protection Agency (EPA) Method 8260B, SVOCs by EPA Method 8270C, pesticides/PCBs by EPA Methods 8081A/8082, metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A. Quality assurance/quality control samples will be collected at the frequency detailed in the Generic Quality Assurance Project Plan (QAPP), QAPP Addendum, and Table 1.

Decontamination of non-dedicated equipment and tools used to collect samples for laboratory analysis will be completed in accordance with the procedures described in Section 6. The procedures for soil sample collection for each specific sampling interval are as follows:

- **Collect Sample for VOC Analysis**—Samples for VOC analysis will be collected first to minimize potential loss of the VOCs. Sample containers will be immediately placed into coolers packed with ice to maintain a temperature of less than 4°C.

- **Soil Sample Characteristic Logging**—The field geologist will log the soil characteristics of the sample along with any other pertinent information in accordance with American Society for Testing and Materials D-2488-85. Particular consideration will be given to grain size distribution (relative percentages of different size materials), presence of lamination or layering, and soil consistency. An estimate of mineralogy will be made for coarser-grained material.

- **Container Headspace Monitoring**—A sample of soil from the specific interval will be retained in a laboratory-cleaned glass jar for container headspace.

- **Homogenization of Remaining Sample**—Once the soil sample for container headspace analysis has been filled and set aside, but prior to performing the container headspace monitoring, soil remaining from the specific sample interval will be homogenized prior to filling sample bottles. Soil to be homogenized will be quartered and thoroughly mixed in clean stainless steel bowls using dedicated stainless steel spatulas.

- **Collect Samples for Remaining Parameters Analysis**—After the soil has been thoroughly homogenized, it will be placed into laboratory-cleaned glass jars using decontaminated stainless steel implements. Sample containers will be labeled and sealed and immediately placed into temporary storage coolers packed with ice to maintain a temperature of less than 4°C.

- **Sample Packing**—After samples to be analyzed have been containerized, sample containers will be transferred from the temporary storage coolers into sample shipping coolers packed with bagged ice to maintain a temperature of less than 4°C. Quality assurance and quality control samples will be filled from the same discrete sample (sample undergoing VOC analysis) or composite mixture as the field samples.

4.1.2 Well Installation

Following soil boring, a monitoring well will be installed at each soil boring location. Each well will be screened to intersect the groundwater interface. Well construction will be performed according to the procedures described below. The actual well completion data will be recorded on the Field Record of Monitoring Well Construction form provided in Attachment A. A Daily Drilling Report will also be completed, and is provided in Attachment A.

Each monitoring well will be constructed with a 10-ft length of 2-in. inner diameter threaded Schedule 40 polyvinyl chloride flush-joint casing with a 10-ft machine slotted 0.010-in. well screen. The annulus around the well screen will be backfilled with No. 1 Morie sand. The sand pack will extend 1-2 ft above the well screen. A bentonite seal will be placed above the sand pack to form a minimum 2-ft seal. Cement/bentonite grout will be placed to within 3 ft of the surface. Each well will have a vented cap and there will be a locking cover. It is anticipated that the monitoring wells will be flush-mounted. A cement pad will be installed to channel surface water away from the well. The monitoring well identifications will begin with MW-06.

4.1.3 Well Development

The newly installed wells will be developed in order to remove silt from the well screen and to ensure that representative groundwater samples are collected. Wells will be developed immediately following the installation of each well.

Each well will be alternately mechanically surged with a surge block and pumped clear of sediment with a submersible pump. Low yielding wells may be hand bailed, as necessary. If the addition of water is required to facilitate surging and bailing, water from that well or water from the approved potable water source will be used, and at least as much water as was introduced during development will be removed from each well. Care will be taken during surging to ensure that low pressures within the well casing do not cause implosion of the screen. At the end of that time, the well will be continuously pumped using a submersible, pneumatic drive positive displacement or bladder pump for a maximum of one hour.

Water quality data (temperature, pH, specific conductivity, and turbidity) will be recorded on the Field Record of Well Development form provided in Attachment A. Turbidity will be measured as soon as the sample is brought to the surface. Pumping will continue until these parameters have stabilized (less than 0.2 pH units or a 10 percent change for the other parameters between four consecutive readings) and the turbidity does not exceed 50 nephelometric turbidity units. The purged groundwater derived from well development will be managed in accordance with the procedures outlined in Section 7.

4.1.4 Groundwater Sampling

Fourteen days after installation and development of the proposed monitoring wells, an initial round of groundwater samples will be collected from the monitoring well locations. Groundwater samples will be collected from the newly installed monitoring wells and existing monitoring wells. Prior to the start of the groundwater sampling event, water levels will be collected from the monitoring well network to prepare a groundwater contour map and evaluate groundwater flow patterns. In addition, an oil/water interface probe will be used to measure product thickness (if any) in the groundwater monitoring wells.

Groundwater samples collected from the three onsite monitoring wells (MW-6, MW-7, and MW-8) will be analyzed by an approved Environmental Laboratory Analytical Program-certified laboratory for VOCs, SVOCs, pesticides/PCBs, and metals in accordance with the NYSDEC

Analytical Services Protocols. Groundwater samples will be analyzed for VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, PCBs by EPA Method 8082, metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A.

Purge water will be discharged to the ground surface away from the well, unless otherwise directed by NYSDEC. If non-aqueous phase liquid or an odor is observed, or if directed by NYSDEC, the purge water must be containerized, handled, and disposed of as detailed in Section 7. Decontamination of non-dedicated equipment and tools used to collect samples for laboratory analysis will be completed in accordance with the procedures described in Section 6.

The following procedures will be used for monitoring well groundwater sampling:

- Wear appropriate personal protective equipment as specified in the Generic Health and Safety Plan and Health and Safety Plan Addendum. In addition, samplers will use new sampling gloves for the collection of each sample.

- Unlock and remove well cap.

- Obtain photoionization detector readings and record in field logbook.

- Measure the static water level in the well with an electronic water level indicator. The water level indicator will be washed with Alconox detergent and water, then rinsed with deionized water between individual wells to prevent cross-examination. Decontamination fluids will be containerized.

- Calculate the volume of water in the well.

- Place polyethylene sheeting around well casing to prevent contamination of sampling equipment in the event sampling equipment is dropped.

- Purge 3-5 well volumes of water from well, using one of three methods described below. Purged water will be containerized separately from decontamination fluids.

  — Bail with a dedicated, disposable polyethylene bailer.

  — Pump with a centrifugal pump using new polyethylene tubing dedicated to each well. Set intake slightly below the surface level of the groundwater and start pump; continue to lower the intake line through the well to just above screen depth ensuring that all standing water in the well has been purged.

  — Pump with a submersible pump equipped with: (1) a check valve to avoid backflush, and (2) new polyethylene tubing dedicated to each well. Set intake at the surface

level of the groundwater and start pump; continue to lower the intake line ensuring that all standing water in the well has been purged.

- Allow field parameters of pH, reduction-oxidation potential, dissolved oxygen, specific conductivity, and temperature to stabilize before sampling. Purging will be complete if the following conditions are met:

  — Consecutive pH readings are ±0.2 pH units of each other

  — Consecutive water temperatures are ±0.5°C of each other

  — Consecutive measured specific conductance is ±10 percent of each other.
  If these parameters are not met after purging a volume equal to 3-5 times the volume of standing water in the well, the EA Project Manager will be contacted to determine the appropriate action(s).

- If the well goes dry before the required volumes are removed, the well may be sampled when it recovers (recovery period up to 24 hours).

- Obtain sample from well with a bailer suspended on new, clean nylon twine. The sampling will be performed with a new bailer dedicated to each individual well.

- Collect the sample aliquot for VOC analysis first by lowering and raising the bailer slowly to avoid agitation and degassing, and then collecting sample aliquots for the SVOCs, pesticides/PCBs, and metals analysis and carefully pour directly into the appropriate sample bottles. Sample bottles containing appropriate preservative for the parameter to be analyzed will be obtained from the laboratory.

- Obtain field measurement of pH, dissolved oxygen, temperature, and specific conductivity, and turbidity, and record in field logbook. The instruments will be decontaminated between wells to prevent cross-contamination.

- Place analytical samples in cooler and chill to 4°C. Samples will be shipped to the analytical laboratories within 24 hours.

- If a centrifugal or submersible pump is used, it will be decontaminated following the procedure in Section 7, and the polyethylene suction/discharge line will remain in the well to be used during future sampling events.

- Re-lock well cap.

- Fill out field logbook, sample log sheet, labels, custody seals, and chain-of-custody forms.

A Monitoring Well Gauging, Purging, and Sampling Form is provided in Attachment A. Groundwater samples will be placed in appropriate sample containers, sealed, and submitted to the laboratory for analysis. The samples will be labeled, handled, and packaged following the procedures described in Generic QAPP and QAPP Addendum. Quality assurance/quality control samples will be collected at the frequency detailed in the Generic QAPP, QAPP Addendum, and Table 1.

4.2 GROUNDWATER PROFILING

Groundwater quality at the site will be assessed by vertically profiling the groundwater column at one location. A temporary sampling point installed via direct-push methods will be used to obtain groundwater samples from discrete sampling intervals. The location of the temporary sampling point is shown on Figure 3. Groundwater samples will be collected every 10 ft from the groundwater interface (approximately 20 ft below ground surface [bgs]) to an approximate depth of 70 ft bgs or direct-push refusal. Groundwater samples will be analyzed for VOCs by EPA Method 8260B. Additionally, a groundwater sample will be collected from the deepest sampling interval and analyzed for metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A. Each borehole will be sealed from the base of the borehole to ground surface prior to mobilizing to the next groundwater profile point.

Direct-push groundwater sampling will be accomplished using the truck-mounted hydraulic probe system. This method involves the use of a direct-push water sampling probe, which is pushed under hydraulic pressure to the selected sample depth without boring a pilot hole. The sample probe is a 1.0- to 1.4-in. outside diameter steel probe with either slotted screen sections or an expendable point attached. The following steps will be taken when sampling groundwater with the direct-push method:

1. Upon arrival at the site, the direct-push sampler will be decontaminated in accordance with the procedures described in Section 6 and allowed to air dry.

2. After decontamination, the first section of the direct-push probe will be assembled.

3. The direct-push probe is pushed or, if necessary, driven to the desired sample depth and then pulled up several inches (3-6 in.) to open the screen to facilitate groundwater collection.

4. Dedicated polyethylene tubing with a bottom check valve, or a stainless steel mini-bailer, will be inserted down the open bore of the direct-push probe to collect the groundwater sample. The groundwater sample will be collected using either the “waterra” method or a peristaltic pump.

5. The direct-push probe will then be backed out of the hole using the system hydraulic cylinder. The direct-push probes should be pulled straight out to prevent the direct-push point from bending. The direct-push probes will then be disassembled prior to decontamination. The direct-push probe assembly will be decontaminated after each use.

The O-rings and piston screen will be checked for wear and abrasion. The O-rings will be changed as necessary (after approximately every 3-4 samples) or after evidence of high levels of VOCs have been encountered. If the screen does not need to be replaced, it may be left attached to the probe assembly during decontamination.

6. Direct-push groundwater locations will be backfilled as necessary with bentonite chips or pellets to seal the borehole.

The samples will be labeled, handled, and packaged following the procedures described in Generic QAPP and QAPP Addendum. Quality assurance/quality control samples will be collected at the frequency detailed in the Generic QAPP, QAPP Addendum, and Table 1.

4.3 EVALUATION OF SOIL/SEDIMENT WITHIN THE STORM DRAINS

Sediment samples will be collected from three storm drain locations to determine the concentration of VOCs and metals present. One sediment sample will be collected from each storm drain. Figure 4 shows the location of the storm drains in the vicinity of the site. It is anticipated that sediment samples will be collected from approximately 2 ft below the base of the structure. Sediment samples will be analyzed for VOCs by EPA Method 8260B and metals by EPA Method ILM05.0.

Soil samples will be collected using a stainless steel hand auger or similar sampling equipment. Decontamination of non-dedicated equipment and tools used to collect samples for laboratory analysis will be completed in accordance with the procedures described in Section 6.

The samples will be labeled, handled, and packaged following the procedures described in Generic QAPP and QAPP Addendum. Quality assurance/quality control samples will be collected at the frequency detailed in the Generic QAPP, QAPP Addendum, and Table 1.

5. EVALUATION OF OFF-SITE STORMWATER STRUCTURES

The activities to be performed under this task will involve the evaluation of the media at the stormwater structures. The procedures to be performed under this task are detailed below, and the analytical samples required are summarized in Table 1.

5.1 UPGRADIENT MONITORING WELL INSTALLATION AND GROUNDWATER SAMPLING

One soil boring will be completed to characterize the underlying geology and depth to groundwater upgradient of the site and the drywells that were impacted by fire control water. Hollow-stem augers will be used to advance each borehole to the specified depth. The location of the upgradient soil boring is shown as MW-9 on Figure 3. A monitoring well will subsequently be installed at the upgradient soil boring location.

5.1.1 Soil Sample Collection

Procedures for soil sample collection are outlined in Section 4.1.1. Soil samples will be collected for screening and characteristic logging. However, no soil samples collected from the upgradient soil boring location will be submitted for laboratory analysis unless visible contamination is observed.

5.1.2 Well Installation

Procedures for well installation are outlined in Section 4.1.2.

5.1.3 Well Development

Procedures for well development are outlined in Section 4.1.3.

5.1.4 Groundwater Sampling

Procedures for groundwater sampling are outlined in Section 4.1.4.

Groundwater samples collected from the off-site monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-9) will be analyzed for VOCs and metals. In addition, the groundwater samples collected from MW-2 and MW-4 will be analyzed for hexavalent chromium. Table 1 summarizes the number of groundwater samples anticipated to be collected during the groundwater sampling effort. Figure 3 shows the locations of the existing and proposed monitoring well locations.

5.2 GROUNDWATER PROFILING

Groundwater quality adjacent to the drywells located at the intersection of Albany and Seabro avenues will be assessed by vertically profiling the groundwater column at one location. The location of the temporary sampling point is shown on Figure 3. A temporary sampling point installed via direct-push methods will be used to obtain groundwater samples from discrete sampling intervals. Groundwater samples will be collected every 10 ft from the groundwater interface (approximately 20 ft bgs) to an approximate depth of 70 ft bgs or direct-push refusal. Groundwater samples will be analyzed for VOCs by EPA Method 8260B. Additionally, a groundwater sample will be collected from the deepest sampling interval and analyzed for metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A. Each borehole will be sealed from the base of the borehole to ground surface prior to mobilizing to the next groundwater profile point.

Direct-push groundwater sampling will be accomplished using the procedures outlined in Section 4.2.

5.3 EVALUATION OF SOIL/SEDIMENT WITHIN DRYWELL STRUCTURES

Sediment samples will be collected from approximately five drywell locations, identified as DW1, DW2, DW7, DW13, and DW14, to determine the concentration of VOCs and metals present. One sediment sample will be collected from each storm drain. Figure 5 shows the location of the drywells in the vicinity of the site. Samples will be collected from approximately 2 ft below the base of the structure. Sediment samples will be analyzed for VOCs by EPA Method 8260B and metals by EPA Method ILM05.0.

Soil samples will be collected using a stainless steel hand auger or similar sampling equipment. Decontamination of non-dedicated equipment and tools used to collect samples for laboratory analysis will be completed in accordance with the procedures described in Section 6.

The samples will be labeled, handled, and packaged following the procedures described in Generic QAPP and QAPP Addendum. Quality assurance/quality control samples will be collected at the frequency detailed in the Generic QAPP, QAPP Addendum, and Table 1.

5.4 EVALUATION OF SOIL/SEDIMENT WITHIN THE RECHARGE BASIN

Up to seven sediment samples will be collected from locations within the recharge basin to determine the concentration of VOCs and metals present. Figure 6 shows the location of the recharge basin in the vicinity of the site. Samples will be collected from approximately 6 to 12 in. bgs. All sediment samples will be analyzed for VOCs by EPA Method 8260B, metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A. If water is present within the recharge basin, one surface water sample will be collected for VOCs, and metals, in addition to the sediment samples.

Sediment samples will be collected using a stainless steel hand auger or similar sampling

equipment. Decontamination of non-dedicated equipment and tools used to collect samples for laboratory analysis will be completed in accordance with the procedures described in Section 6.

The samples will be labeled, handled, and packaged following the procedures described in Generic QAPP and QAPP Addendum. Quality assurance/quality control samples will be collected at the frequency detailed in the Generic QAPP, QAPP Addendum, and Table 1.

6. DECONTAMINATION PROCEDURES

Decontamination of equipment and personnel will be performed for safety and health precautions to avoid cross-contamination of samples subjected to chemical analysis, and to limit the migration of contaminants offsite and between work areas on the site.

Drilling and sampling equipment will be initially decontaminated at the pre-designated decontamination pad (to be determined prior to the drilling crew arriving onsite). Final decontamination of drill rigs will also be conducted at the decontamination pad prior to departing the site.

Equipment used to advance and sample borings will be decontaminated prior to use and between each boring location at the decontamination pad. This equipment includes, but is not limited to, the drill rig, drill rods, hollow-stem augers, and split-spoon samplers. Cleaning will consist of scraping and scrubbing to remove encrusted materials followed by a steamwash. Decontamination of equipment will be conducted at the decontamination pad or in the field, as appropriate. Decontamination fluids will be managed according to procedures described in Section 7.

Decontamination procedures for reusable sampling equipment will be decontaminated as described below before and after each use:

- Wash with potable water and laboratory-grade detergent (e.g., Alconox® detergent)
- Rinse with potable water
- Rinse with deionized water.

If visible contamination is present a steam cleaner shall be utilized to decontaminate field equipment.

During groundwater sampling, one rinsate blank per day will be collected to document the thoroughness of decontamination procedures. The rinsate blank is a water sample collected after having been poured through or over a decontaminated piece of sampling equipment.

7. STORAGE AND DISPOSAL OF INVESTIGATIVE-DERIVED WASTE

EA is responsible for the proper storage, handling, and disposal of investigative-derived waste, including personal protective equipment, and solids and liquids generated during the well drilling, well development, and well sampling activities. All drummed materials will be clearly labeled as to their contents and origin. All investigative-derived waste will be managed in accordance with NYSDEC-Department of Environmental Remediation Technical Administrative Guidance Memorandum 4032.

Accordingly, handling and disposal will be as follows:

- Liquids generated from contaminated equipment decontamination that exhibit visual staining, sheen, or discernable odors will be collected in drums or other containers at the point of generation. They will be stored in the staging area. A waste subcontractor will then remove the drums and dispose at an offsite location.

- Liquid generated during well purging or a decontamination activity that does not exhibit visible staining, sheen, or discernable odors will be discharged to an unpaved area on the Site, where it can percolate into the ground.

- Concrete dust will be collected in shop vacuums and disposed of as non-regulated solid waste, unless photoionization detector readings or visual indications of contamination are noted during field operations.

- Soil from drilling operations that do not exhibit visible staining, sheen, or discernable odors will be disposed of onsite.

- Soil from drilling operations that exhibit visible staining, sheen, or discernable odors will be staged onsite until an appropriate treatment/disposal procedure has been determined after the completion of the feasibility study.

- Used protective clothing and equipment that is suspected to be contaminated with hazardous waste will be placed in plastic bags, packed in 55-gal ring-top drums, and transported to the drum staging area.

- Non-contaminated trash and debris will be placed in a trash dumpster and disposed of by a local garbage hauler.

- Non-contaminated protective clothing will be packed in plastic bags and placed in a trash dumpster for disposal by a local garbage hauler.

8. DATA VALIDATION/DETERMINATION OF USABILITY

The collection and reporting of reliable data is a primary focus of the sampling and analytical activities. Laboratory and field data will be reviewed to determine the limitations, if any, of the data and to assure that the procedures are effective and that the data generated provides sufficient information to achieve the project objectives. A qualified independent third party will evaluate the analytical data according to NYSDEC-Department of Environmental Remediation Data Usability Summary Report guidelines.

9. SITE SURVEY AND BASE MAP PREPARATION

This task will be performed by a licensed New York State surveyor and include surveying of monitoring well locations, and preparing a site base map. To ensure the collection of consistent elevation data, each of the existing monitoring wells will be included in the site survey. The site survey will include a temporary monitoring point that will be established as part of this site characterization. The elevations of all monitoring well casings should be established to within 0.01 ft based on the National Geodetic Vertical Datum. A permanent reference point should be placed in all interior polyvinyl chloride casings to provide a point to collect future groundwater elevation measurements. Soil boring and soil/sediment sampling locations will be located using a high precision global positioning system unit.

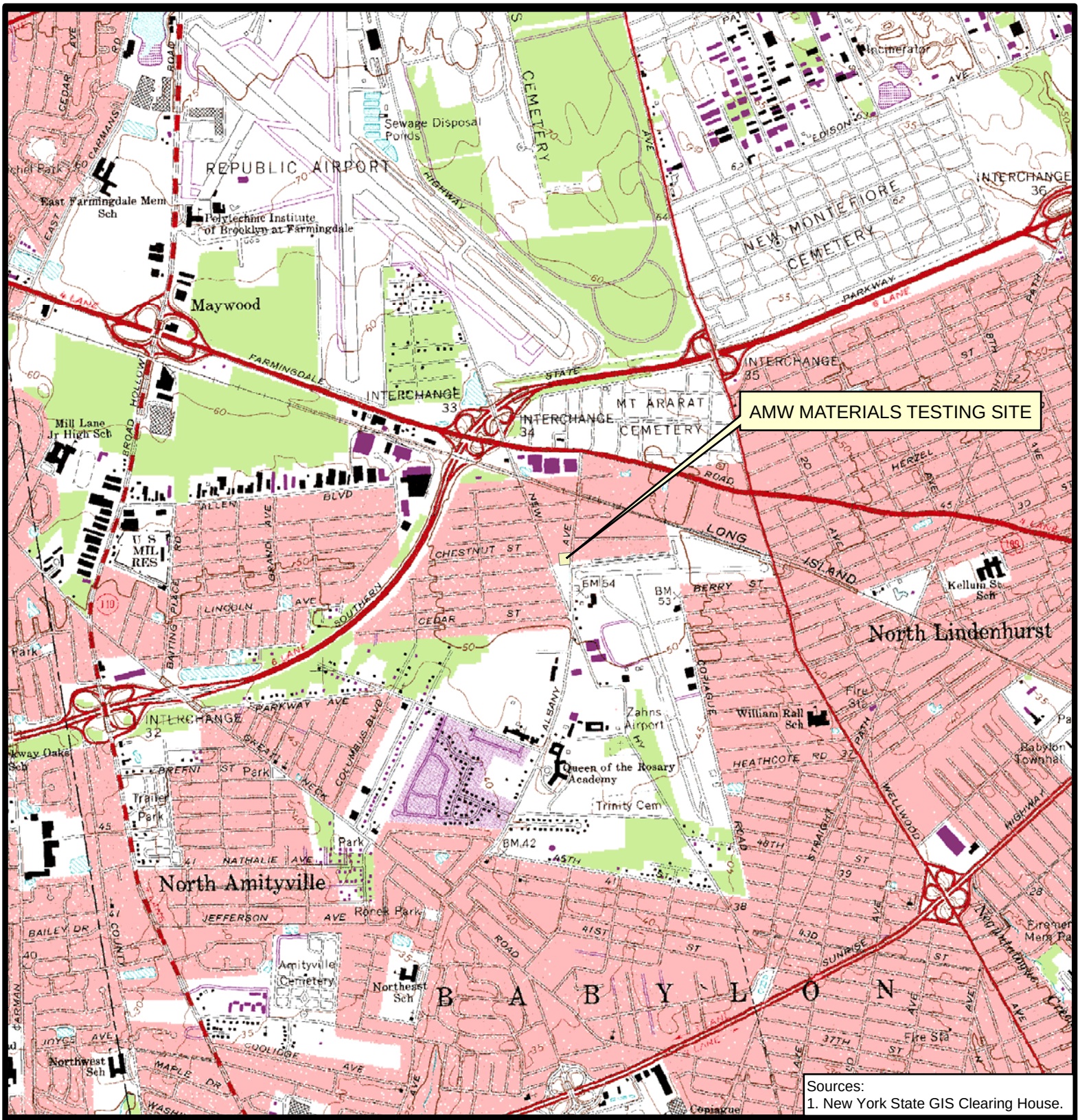
A detailed site plan utilizing recent aerial photography to depict general site features (i.e., buildings, roadways, utility poles, fences, addresses, etc.) within the vicinity of the site will be developed. The site map should include all area important features associated with the investigation (i.e., surface water drainage, above and underground storage tanks, buildings, drywells, cesspools). The base map will subsequently be used to accurately plot all sampling locations including soil borings, monitoring wells, and all other sample locations.

With respect to the site survey and base map preparation, the following assumptions have been made:

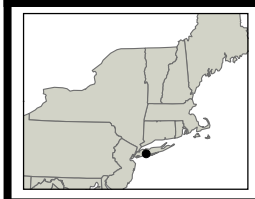
- The estimated survey area will include the whole site boundary and extend south to the recharge basin and north to the proposed upgradient monitoring well. All elevations will be referenced to the North American Vertical Datum 88. All horizontal locations will be referenced to the North American Datum 83.

- Three blueline copies of the site base map will be submitted to NYSDEC.

- The site map will be provided in AutoCAD, Version 12 or higher, and ArcMap™ 9.1.



Sources:
1. New York State GIS Clearing House.



0 0.125 0.25 0.5 0.75 1 Miles

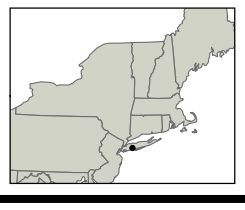
N

AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

FIGURE 1
SITE LOCATION

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	JG	JG	JCH	AS SHOWN	OCTOBER 2006	1436806	I:\NAmity\Projects\Fig1NAmitySiteLocation.mxd

Sources:
1. New York State GIS Clearing House (Half-Foot Natural Color Aerial Photography from 2001).
2. New York State Department of Environmental Conservation.



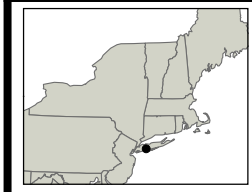
0 100 200 400 600 800
Feet

N

AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

FIGURE 2
SITE LAYOUT

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	JG	JG	JCH	AS SHOWN	OCTOBER 2006	14368.06	I:\NAmity\Projects\Fig2NAmitySiteLayout.mxd



0 62.5 125 250 375 500 Feet

N

AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

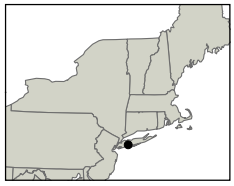
FIGURE 3
PROPOSED MONITORING WELL AND GROUNDWATER PROFILE LOCATIONS

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	JG	JG	JCH	AS SHOWN	OCTOBER 2006	1436806	I:\NAmity\Projects\Fig1NAmitySiteLocation.mxd

Legend

▲ Proposed Storm Drain Sediment Sampling Locations

Sources:
1. New York State Department of Environmental Conservation.



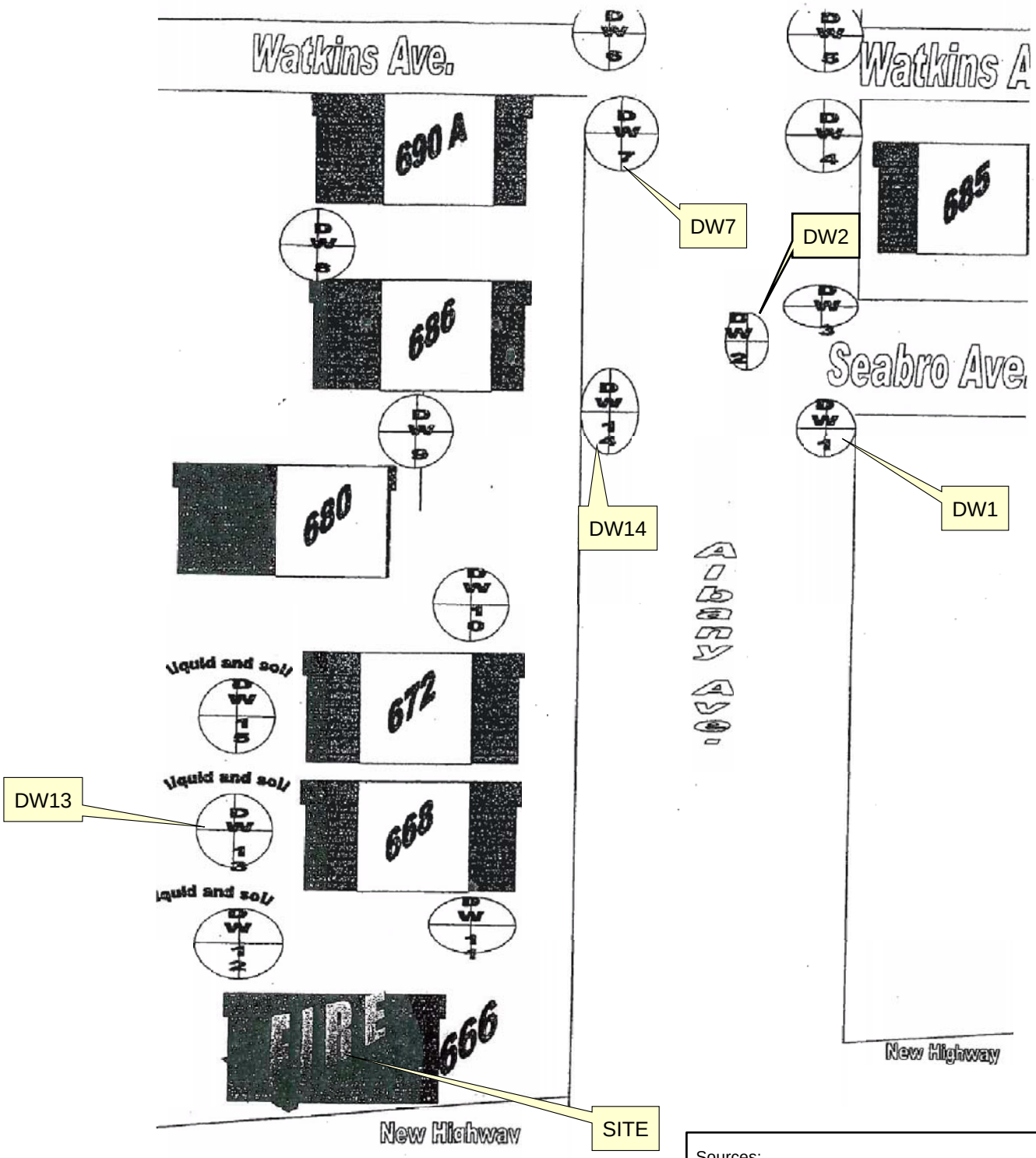
0 10 20 40 60 80 Feet

N

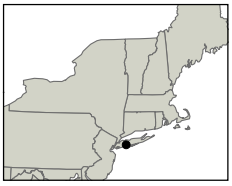
AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

FIGURE 4
STORM DRAIN SEDIMENT SAMPLING LOCATIONS

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	JG	JG	JCH	AS SHOWN	OCTOBER 2006	1436806	I:\NAmity\Projects\Fig4NAmityStrmDrain.mxd



Sources:
1. New York State Department of Environmental Conservation.



NOT TO SCALE

N

AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

FIGURE 5
PROPOSED DRY WELL
SEDIMENT SAMPLING LOCATIONS

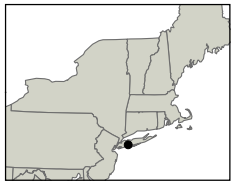
PROJECT MGR: JCH	DESIGNED BY: JG	CREATED BY: JG	CHECKED BY: JCH	SCALE: AS SHOWN	DATE: OCTOBER 2006	PROJECT NO: 1436806	FILE NO: I:\NAmity\Projects\ Fig1NAmitySiteLocation.mxd

Legend

- Proposed Recharge Basin Sediment Sampling Locations
- Existing Monitoring Well

RECHARGE BASIN

Sources:
1. New York State GIS Clearing House (Half-Foot Natural Color Aerial Photography from 2001).
2. New York State Department of Environmental Conservation.



0 12.5 25 50 75 100 Feet

N

AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

FIGURE 6
RECHARGE BASIN SEDIMENT SAMPLING LOCATIONS

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	JG	JG	JCH	AS SHOWN	OCTOBER 2006	1436806	I:\NAmity\Projects\Fig6NAmityRchBasin.mxd

TABLE 1 SITE CHARACTERIZATION ANALYTICAL PROGRAM

	Sample Matrix	TCLP 1311[a]	VOC 8260B[a,b]	SVOC 8270C[a,b]	Pesticides 8081A[a,b]	PCB 8082[a,b]	Metals ILM05.0[a,b]	Hexavalent Chromium 7196A[a,b]	RCRA Characteristics[c]
STOCKPILE ASSESSMENT (Section 3.1)									
No. of Samples	Soil	5	5	5	5	5	5	5	5
Field Duplicate		---	---	---	---	---	---	---	---
Rinsate Blank [d]		---	---	---	---	---	---	---	---
Trip Blank [e]		---	---	---	---	---	---	---	---
MS/MSD		---	---	---	---	---	---	---	---
Total No. of Analyses		**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
SOIL BORING SAMPLING (Section 4.1.1)									
No. of Samples	Soil	---	3	3	3	3	3	---	---
Field Duplicate		---	1	1	1	1	1	---	---
Rinsate Blank[d]		---	---	---	---	---	---	---	---
Trip Blank[e]		---	---	---	---	---	---	---	---
MS/MSD		---	1	1	1	1	1	---	---
Total No. of Analyses		---	**5**	**5**	**5**	**5**	**5**	---	---

(a) Soil samples will be analyzed for TCLP by EPA Method 1311, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, PCBs by EPA Method 8082, metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A.

(b) Surface water and groundwater samples will be analyzed for VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, PCBs by EPA Method 8082, metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A.

(c) RCRA characteristics for soil samples include ignitability by American Society for Testing and Materials E-502-84, reactivity by EPA Methods 9010 and 9030, corrosivity by EPA Method 9040, and moisture content by American Society for Testing and Materials D-2216.

(d) One rinsate blank per day of sampling with a field device that requires field decontamination.

(e) Trip blanks are required for VOC sampling of aqueous media at a rate of one per sample shipment.

NOTE: TCLP = Toxicity Characteristic Leaching Procedure.
VOC = Volatile organic compound.
SVOC = Semivolatile organic compound.
PCB = Polychlorinated biphenyl.
RCRA = Resource Conservation and Recovery Act.
MS/MSD = Matrix spike/matrix spike duplicate.
EPA = U.S. Environmental Protection Agency.
Dashes (---) indicate no sample taken.
Laboratory quality control samples will be collected at a rate of 1 per 20 samples, per matrix.
Sample identification will include the site number and provide a unique alpha numeric code for each medium sampled. Sample identifications will be consistent with previous sample events.
Preliminary sample results will be provided in 2 weeks, and final sample results will be provided within the standard turnaround time of 30 days.

	Sample Matrix	TCLP 1311[a]	VOC 8260B[a,b]	SVOC 8270C[a,b]	Pesticides 8081A[a,b]	PCB 8082[a,b]	Metals ILM05.0[a,b]	Hexavalent Chromium 7196A[a,b]	RCRA Characteristics[c]
MONITORING WELL SAMPLING (Sections 4.1.4 and 5.1.4)									
No. of Samples	Aqueous	---	9	3	3	3	9	5	---
Field Duplicate		---	1	1	1	1	1	1	---
Rinsate Blank[d]		---	1	1	1	1	1	1	---
Trip Blank[e]		---	1	---	---	---	---	---	---
MS/MSD		---	1	1	1	1	1	1	---
Total No. of Analyses		---	**13**	**6**	**6**	**6**	**12**	**8**	---
GROUNDWATER PROFILING (Sections 4.2 and 5.2)									
No. of Samples	Aqueous	---	12	---	---	---	2	2	---
Field Duplicate		---	1	---	---	---	1	---	---
Rinsate Blank[d]		---	1	---	---	---	1	---	---
Trip Blank[e]		---	1	---	---	---	---	---	---
MS/MSD		---	1	---	---	---	1	---	---
Total No. of Analyses		---	**16**	---	---	---	**5**	**2**	---
STORMWATER STRUCTURE SAMPLING (Sections 4.3, 5.3, and 5.4)									
No. of Samples	Aqueous	---	1	---	---	---	---	---	---
Field Duplicate		---	---	---	---	---	---	---	---
Rinsate Blank[b]		---	---	---	---	---	---	---	---
Trip Blank[c]		---	1	---	---	---	---	---	---
MS/MSD		---	---	---	---	---	---	---	---
Total No. of Surface Water Analyses[f]		---	**2**	---	---	---	**---**	**---**	---
No. of Samples	Sediment	---	15	---	---	---	15	7	---
Field Duplicate		---	1	---	---	---	1	1	---
Rinsate Blank[d]		---	---	---	---	---	---	---	---
Trip Blank[e]		---	---	---	---	---	---	---	---
MS/MSD		---	1	---	---	---	1	1	---
Total No. of Sediment Analyses		---	**17**	---	---	---	**17**	**9**	---

(f) Sampling media will be based on site conditions (e.g., presence of surface water).

Attachment A

Field Forms

DAILY DRILLING REPORT

Contractor: _____ Date: _____
Drilling Equipment: _____ Weather: _____
Crew Members _____

Drill Time Log

Category	Total Hours	A.M.							P.M.												A.M.				
		6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5
Mob/Demob																									
Drilling – Overburden																									
Drilling – Rock																									
Well Installation																									
Development/Testing																									
Grouting																									
Steam/Decon																									
Down Time																									
Standby																									
Other:																									

Remarks:

Consumable: Describe nature, quantity, size, etc.		
Item or Service	Quantity	Notes

Borehole No.	From (ft)	To (ft)	Footage Drilled (ft)	Method, Size, etc.

Comments:

Inspector:	Consultant's Representative:
Driller:	Contractor's Representative:

EA Engineering, P.C.
EA Science and

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Project Name:	Project No.:	Date:
EA Personnel:	Purge Method:	
Weather/Temperature/Barometric Pressure:		Time:

Well No.:	Well Condition:
Well Diameter:	Measurement Reference:
Well Volume Calculations	
A. Depth to Water (ft):	D. Well Volume/ft:
B. Total Well Depth (ft):	E. Total Well Volume (gal) [C*D]:
C. Water Column Height (ft):	F. Five Well Volumes (gal):

Parameter	Beginning	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes
Time (minutes)						
Depth to Water (ft)						
Purge Rate (gpm)						
Volume Purged (gal)						
pH						
Temperature (°C)						
Conductivity (Φmhos/cm)						
Dissolved Oxygen (mg/L)						
Turbidity						

TOTAL QUANTITY OF WATER REMOVED (gal):
COMMENTS AND OBSERVATIONS:

EA Engineering, P.C.
EA Science and

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Project Name:	Project No.:	Date:
EA Personnel:	Well ID:	

Parameter	6 Volumes	7 Volume	8 Volumes	9 Volumes	10 Volumes	11 Volumes
Time (minutes)						
Depth to Water (ft)						
Purge Rate (gpm)						
Volume Purged (gal)						
pH						
Temperature (°C)						
Conductivity (Φmhos/cm)						
Dissolved Oxygen (mg/L)						
Turbidity						

Parameter	12 Volumes	13 Volume	14 Volumes	15 Volumes	16 Volumes	17 Volumes
Time (minutes)						
Depth to Water (ft)						
Purge Rate (gpm)						
Volume Purged (gal)						
pH						
Temperature (°C)						
Conductivity (Φmhos/cm)						
Dissolved Oxygen (mg/L)						
Turbidity						

COMMENTS AND OBSERVATIONS:

FIELD RECORD OF MONITORING WELL CONSTRUCTION

(ALL MEASURMENTS FROM GROUND SURFACE)

SIT NAME/LOCATION:	PROJECT:
DATE INSTALLED: STARTED: COMPLETED:	LOCATION: (COORDINATES OR STATION)
ELEVATION TOP OF BORING:	SIGNATURE OF INSPECTOR:
ELEVATION TOP OF CASING:	HOLE No. (AS SHOWN ON DRAWING TITLE AND FILE No.)
DEPTH TO WATER:	DATE/TIME:
DRILLING METHOD:	

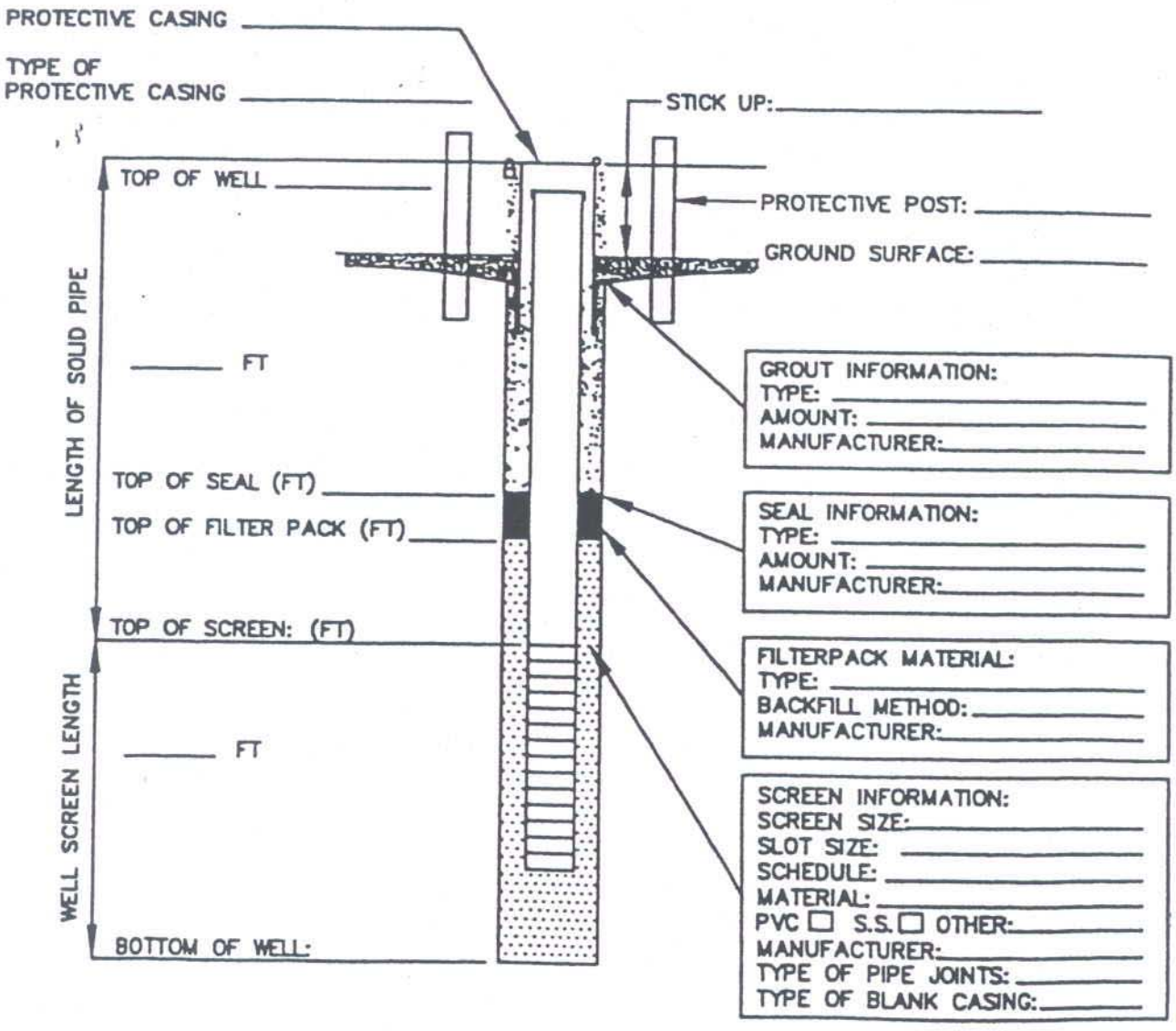


FIGURE --- FIELD RECORD OF MONITORING WELL CONSTRUCTION

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Appendix B

Site-Specific
Quality Assurance Project Plan

Quality Assurance Project Plan Addendum
AMW Materials Testing Site (1-52-189)
North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C., and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
(315) 431-4610

November 2006
EA Project No. 14368.06

Quality Assurance Project Plan Addendum
AMW Materials Testing Site (1-52-189)
North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C. and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
(315) 431-4610

14 November 2006
Christopher J. Canonica, P.E., Program Manager — Date
EA Engineering, P.C.

14 November 2006
James C. Hayward, P.E., Project Manager — Date
EA Engineering, P.C.

14 November 2006
James Gatherer, Site Manager — Date
EA Science and Technology

November 2006
EA Project No. 14368.06

CONTENTS

LIST OF TABLES

1. PURPOSE AND OBJECTIVES

1.1 PURPOSE

A Generic Quality Assurance Project Plan (QAPP) (EA 2006a)[1] has been developed for field activities performed under the New York State Department of Environmental Conservation (NYSDEC) Standby Contract Nos. D004438 and D004441. This QAPP Addendum is for the Site Characterization Work Assignment for the AMW Materials Testing Site, North Amityville, Suffolk County, New York (NYSDEC Site No. 1-52-189). This QAPP Addendum is to supplement the Generic QAPP with site-specific procedures for the collection, analysis, and evaluation of data that will be legally and scientifically defensible.

1.2 QUALITY ASSURANCE PROJECT PLAN OBJECTIVES

This QAPP Addendum provides site-specific information and standard operating procedures applicable to all work performed at the site that is not included in the Generic QAPP. The information includes definitions and generic goals for data quality and required types and quantities of quality assurance/quality control (QA/QC) samples. The procedures address sampling and decontamination protocols; field documentation; sample handling, custody, and shipping; instrument calibration and maintenance; auditing; data reduction, validation, and reporting; corrective action requirements; and QA reporting. The Field Activities Plan contains a site description and information on site field activities, i.e., sample locations, sampling procedures, analytical methods, and reporting limits.

1. EA Engineering, P.C. 2006a. Generic Quality Assurance Project Plan for Work Assignments under NYSDEC Contract Nos. D004438 and D004441. June.

2. PROJECT ORGANIZATION AND RESPONSIBILITIES

While all personnel involved in an investigation and the generation of data are implicitly a part of the overall project management and QA/QC program, certain members of the Project Team have specifically designated responsibilities. Project personnel responsibilities are summarized below.

2.1 EA ENGINEERING, P.C. AND ITS AFFILIATE EA SCIENCE AND TECHNOLOGY

EA will provide oversight, coordination, health and safety, field support, and evaluation of analytical data. Field support will be provided during subsurface soil sampling. EA will also be responsible for evaluation of analytical test results, which will be submitted to NYSDEC. The EA staff involved in this project are as follows:

- ***Tom Porter, P.G., Project QA/QC Officer***—The QA/QC Officer will provide guidance on technical matters and review technical documents relating to the project. He will assess the effectiveness of the QA/QC program and recommend modifications when applicable. Additionally, the QA/QC Officer may delegate technical guidance to specially trained individuals under his direction.

- ***Jim Hayward, P.E., Project Manager***—The Project Manager provides overall coordination and preparation of the project within EA. This includes coordination with NYSDEC and New York State Department of Health, budget control, subcontractor performance, implementation of the QAPP, and allocation of resources and staffing to implement both the QA/QC program and the site Health and Safety Plan.

- ***Robert Casey, Project QA/QC Coordinator***—The Project QA/QC Coordinator is responsible for project-specific supervision and monitoring of the QA/QC program. He will ensure that field personnel are familiar with and adhere to proper sampling procedures, field measurement techniques, sample identification, and chain-of-custody procedures. He will coordinate with the analytical laboratory for the receipt of samples and reporting of analytical results, and will recommend actions to correct deficiencies in the analytical protocol or sampling. Additionally, he will prepare QA/QC reports for management review.

- ***James Gatherer, Site Manager***—The Site Manager will serve as the onsite contact person for field investigations and tests. He will be responsible for coordinating the field activities, including inspecting and replacing equipment, preparing daily and interim reports, scheduling sampling, and coordinating shipment and receipt of samples and containers.

The Program Health and Safety Officer is also an integral part of the project implementation team.

- ***Kris Hoiem, CIH, Program Health and Safety Officer***—The Program Safety and Health Officer will be responsible for the development, final technical review, and approval of the Health and Safety Plan. In addition, he will provide authorization, if warranted, to modify personal protective equipment requirements based on field conditions. He will also provide final review of all health and safety monitoring records and personal protective equipment changes to ensure compliance with the provisions of the Health and Safety Plan.

2.2 LABORATORY

Laboratory analyses for this project will be performed by Hampton-Clarke, Inc., in Fairfield, New Jersey, under a subcontract agreement with EA. Hampton-Clarke, Inc. will have sample analysis and review responsibilities on this project. The laboratory will have its own provisions for conducting an internal QA/QC review of the data before they are released to EA. The laboratory's contract supervisors will contact EA's Project Manager with any sample discrepancies or data concerns.

Hard copy and electronic data deliverable formatted QA/QC reports will be filed by the analytical laboratories when data are submitted to EA. Corrective actions will be reported to the EA Project Manager along with the QA/QC report (Section 9 of the Generic QAPP). The laboratory may be contacted directly by EA or NYSDEC personnel to discuss QA concerns. EA will act as laboratory coordinator on this project, and all correspondence from the laboratory will be coordinated with EA's Project Manager.

3. SAMPLING RATIONALE, DESIGNATION, AND CONTAINERS

3.1 SAMPLING RATIONALE

The sampling rationale presented for each planned field activity is detailed in the Field Activities Plan (EA 2006b)[2]. The rationale and frequency of the QC samples collected are discussed in the Generic QAPP. The remedial investigation laboratory program, illustrated in Table 1, includes the number of samples for each sample location, as well as QA/QC samples. The frequency of QA/QC samples is expressed as a percentage of the total number of samples collected for that matrix. The Generic QAPP also includes analytical methods and reporting limits.

3.2 SAMPLE DESIGNATION

Field samples collected from the site will be assigned a unique sample tracking number. Sample designation will be an alpha-numeric code, which will identify each sample by the site identification, matrix sampled, location number, sequential sample number, and date of collection. Each sampling location will be identified with a 2-digit number. Sequential sample numbers at each location for samples will begin with 01 and increase accordingly. For soil borings, the top depth of the sample interval will be used as the sample number. The final portion of the sample tracking number will be the sample date.

The following terminology will be used for the sample identification:

- **Stockpiled Soil Samples**—SITE ID[3]-SS-xx (for stockpiled soils)
- **Soil Samples**—SITE ID-SB-xx (for subsurface soil samples)
- **Groundwater Samples**—SITE ID-GW-01 through GW-11 (for new and existing monitoring wells)
- **Groundwater Profiling Samples**—SITE ID-GP-01-xx through GP-02-xx (for groundwater samples)
- **Surface Water and Sediment Samples**
  - SITE ID-SW-xx (for surface water samples)
  - SITE ID-SED-xx (for sediment samples).
- **Drywell and Storm Drain Samples**
  - SITE ID-DW-xx (for drywell samples)

2. EA Engineering, P.C. 2006b. Field Activities Plan for AMW Materials Testing Site (Site No. 1-52-189), North Amityville, New York. October.
3. Site ID No. 1-52-189.

— SITE ID-SD-xx (for storm drain samples).

3.3 SAMPLE CONTAINERS

Table 2 outlines the types of sample containers and preservatives required for sample collection. Samples will be collected without acid preservation as this is known to reduce MEK concentrations.

4. ANALYTICAL LABORATORY

The data collected during this investigation will be used to determine the presence and concentration of certain analytes in soil, surface water/sediment, and groundwater.

Groundwater, surface water/sediment, and soil samples collected during execution of the Generic QAPP and this QAPP Addendum will be submitted to Hampton-Clarke, Inc., in Fairfield, New Jersey. This laboratory is New York State Department of Health Environmental Laboratory Analytical Program-certified, meeting specifications for documentation, data reduction, and reporting.

5. ANALYTICAL TEST PARAMETERS

This QAPP Addendum will require the following analyses for each matrix:

- Soil samples will be analyzed for Toxicity Characteristic Leaching Procedure by U.S. Environmental Protection Agency (EPA) Method 1311, volatile organic compounds by EPA Method 8260B, semivolatile organic compounds by EPA Method 8270C, pesticides by EPA Method 8081A, polychlorinated biphenyls by EPA Method 8082, and metals by EPA Contract Laboratory Program ILM05.0. General chemistry for soil samples will include ignitability by American Society for Testing and Materials E-502-84, reactivity by EPA Methods 9010 and 9030, corrosivity by EPA Method 9040, and moisture content by American Society for Testing and Materials D-2216. Results will be reported in mg/Kg.

- Sediment samples will be analyzed for volatile organic compounds by EPA Method 8260B, metals by EPA Contract Laboratory Program ILM05.0, and hexavalent chromium by EPA Method 7196A. Results will be reported in mg/Kg.

- Surface water and groundwater samples will be analyzed for volatile organic compounds by EPA Method 8260B, semivolatile organic compounds by EPA Method 8270C, pesticides by EPA Method 8081A, polychlorinated biphenyls by EPA Method 8082, metals by EPA Contract Laboratory Program ILM05.0, and hexavalent chromium by EPA Method 7196A. Results will be reported in µg/L.

6. ANALYTICAL DATA VALIDATION

The laboratories will review data prior to its release from the laboratories. Objectives for review are in accordance with the QA/QC objectives stated in the Generic QAPP. The laboratories are required to evaluate their ability to meet these objectives. Outlying data will be flagged in accordance with laboratory standard operating procedures, and corrective action will be taken to rectify the problem.

In order to ensure the validity of analytical data generated by a project, it will be validated by ChemWorld Environmental, Inc., who is independent from the analysts and the project. The Generic QAPP addresses implementation of independent validation.

TABLE 1 SITE CHARACTERIZATION ANALYTICAL PROGRAM

	Sample Matrix	TCLP 1311[a]	VOC 8260B[a,b]	SVOC 8270C[a,b]	Pesticides 8081A[a,b]	PCB 8082[a,b]	Metals ILM05.0[a,b]	Hexavalent Chromium 7196A[a,b]	RCRA Characteristics[c]
STOCKPILE ASSESSMENT (Section 3.1)									
No. of Samples	Soil	5	5	5	5	5	5	5	5
Field Duplicate		---	---	---	---	---	---	---	---
Rinsate Blank [d]		---	---	---	---	---	---	---	---
Trip Blank [e]		---	---	---	---	---	---	---	---
MS/MSD		---	---	---	---	---	---	---	---
Total No. of Analyses		**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
SOIL BORING SAMPLING (Section 4.1.1)									
No. of Samples	Soil	---	3	3	3	3	3	---	---
Field Duplicate		---	1	1	1	1	1	---	---
Rinsate Blank[d]		---	---	---	---	---	---	---	---
Trip Blank[e]		---	---	---	---	---	---	---	---
MS/MSD		---	1	1	1	1	1	---	---
Total No. of Analyses		---	**5**	**5**	**5**	**5**	**5**	---	---

(a) Soil samples will be analyzed for TCLP by EPA Method 1311, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, PCBs by EPA Method 8082, metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A.

(b) Surface water and groundwater samples will be analyzed for VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, PCBs by EPA Method 8082, metals by EPA Method ILM05.0, and hexavalent chromium by EPA Method 7196A.

(c) RCRA characteristics for soil samples include ignitability by American Society for Testing and Materials E-502-84, reactivity by EPA Methods 9010 and 9030, corrosivity by EPA Method 9040, and moisture content by American Society for Testing and Materials D-2216.

(d) One rinsate blank per day of sampling with a field device that requires field decontamination.

(e) Trip blanks are required for VOC sampling of aqueous media at a rate of one per sample shipment.

NOTE: TCLP = Toxicity Characteristic Leaching Procedure.
VOC = Volatile organic compound.
SVOC = Semivolatile organic compound.
PCB = Polychlorinated biphenyl.
RCRA = Resource Conservation and Recovery Act.
MS/MSD = Matrix spike/matrix spike duplicate.
EPA = U.S. Environmental Protection Agency.
Dashes (---) indicate no sample taken.
Laboratory quality control samples will be collected at a rate of 1 per 20 samples, per matrix.
Sample identification will include the site number and provide a unique alpha numeric code for each medium sampled. Sample identifications will be consistent with previous sample events.
Preliminary sample results will be provided in 2 weeks, and final sample results will be provided within the standard turnaround time of 30 days.

	Sample Matrix	TCLP 1311[a]	VOC 8260B[a,b]	SVOC 8270C[a,b]	Pesticides 8081A[a,b]	PCB 8082[a,b]	Metals ILM05.0[a,b]	Hexavalent Chromium 7196A[a,b]	RCRA Characteristics[c]
MONITORING WELL SAMPLING (Sections 4.1.4 and 5.1.4)									
No. of Samples	Aqueous	---	9	3	3	3	9	5	---
Field Duplicate		---	1	1	1	1	1	1	---
Rinsate Blank[d]		---	1	1	1	1	1	1	---
Trip Blank[e]		---	1	---	---	---	---	---	---
MS/MSD		---	1	1	1	1	1	1	---
Total No. of Analyses		---	**13**	**6**	**6**	**6**	**12**	**8**	---
GROUNDWATER PROFILING (Sections 4.2 and 5.2)									
No. of Samples	Aqueous	---	12	---	---	---	2	2	---
Field Duplicate		---	1	---	---	---	1	---	---
Rinsate Blank[d]		---	1	---	---	---	1	---	---
Trip Blank[e]		---	1	---	---	---	---	---	---
MS/MSD		---	1	---	---	---	1	---	---
Total No. of Analyses		---	**16**	---	---	---	**5**	**2**	---
STORMWATER STRUCTURE SAMPLING (Sections 4.3, 5.3, and 5.4)									
No. of Samples	Aqueous	---	1	---	---	---	---	---	---
Field Duplicate		---	---	---	---	---	---	---	---
Rinsate Blank[b]		---	---	---	---	---	---	---	---
Trip Blank[c]		---	1	---	---	---	---	---	---
MS/MSD		---	---	---	---	---	---	---	---
Total No. of Surface Water Analyses[f]		---	**2**	---	---	---	**---**	**---**	---
No. of Samples	Sediment	---	15	---	---	---	15	7	---
Field Duplicate		---	1	---	---	---	1	1	---
Rinsate Blank[d]		---	---	---	---	---	---	---	---
Trip Blank[e]		---	---	---	---	---	---	---	---
MS/MSD		---	1	---	---	---	1	1	---
Total No. of Sediment Analyses		---	**17**	---	---	---	**17**	**9**	---

(f) Sampling media will be based on site conditions (e.g., presence of surface water).

TABLE 2 SAMPLE CONTAINERS, PRESERVATION, AND HOLDING TIMES

Parameter	Matrix	Container Type/Size	Sample Volume	Preservation	Maximum Holding Time from Verifiable Time of Sample Receipt
Target Compound List volatile organic compounds	Soil	One 125-mL wide-mouth glass vial with Teflon-lined cap	125 mL	Minimize headspace, cool to 4°C	7 days
	Water	Two 40-mL glass vials with Teflon-lined Septa	80 mL	No headspace, cool to 4°C	7 days
Target Compound List semivolatile organic compounds	Water	Two 1-L amber glass with Teflon-lined cap	2 L	Cool to 4°C	Extract within 5 days, analyze within 40 days following the start of extraction
TO-15	Air	One 6-L Summa® Canister	6 L	None	30 days
Polychlorinated biphenyls	Soil	One 250-mL wide-mouth glass jar with Teflon-lined cap	250 mL	Cool to 4°C	Extract within 14 days, analyze within 40 days following the start of the extraction
	Water	Two 1-L amber glass with Teflon-lined cap	2 L	Cool to 4°C	Extract within 7 days, analyze within 40 days following the start of extraction
Metals	Soil	One 8-oz wide-mouth glass vial with Teflon-lined cap	8 oz	Cool to 4°C	180 days (26 days for mercury)
	Water	One 500-mL plastic	500 mL	Cool 4°C	180 days (26 days for mercury)
Pesticides	Soil	One 250-mL wide-mouth glass jar with Teflon-lined cap	250 mL	Cool 4°C	7 days; analyze within 40 days from extraction
	Water	Two 1-L amber glass with Teflon-lined cap	2 L	Cool to 4°C	7 days; analyze within 40 days from extraction
Hexavalent chromium	Soil	One 8-oz wide-mouth glass vial with Teflon-lined cap	8 oz	Cool to 4°C	24 hours
	Water	500 mL	500 mL	Cool to 4°C	24 hours

Appendix C

Site-Specific
Health and Safety Plan

Health and Safety Plan Addendum
AMW Materials Testing Site (1-52-189)
North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C., and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
(315) 431-4610

November 2006
EA Project No. 14368.06

Health and Safety Plan Addendum
AMW Materials Testing Site (1-52-189)
North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C. and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
(315) 431-4610

14 November 2006
Christopher J. Canonica, P.E., Program Manager — Date
EA Engineering, P.C.

14 November 2006
James C. Hayward, P.E., Project Manager — Date
EA Engineering, P.C.

14 November 2006
James Gatherer, Site Manager — Date
EA Science and Technology

November 2006
EA Project No. 14368.06

CONTENTS

LIST OF FIGURES

1. INTRODUCTION

1.1 GENERAL

A Generic Health and Safety Plan (HASP) (EA 2006)[1] has been developed for field activities performed under the New York State Department of Environmental Conservation (NYSDEC) Standby Contract Nos. D004438 and D004441. This HASP Addendum is to supplement the Generic HASP with site-specific information to protect the health and safety of personnel while performing field activities to complete the Site Characterization Work Assignment for the AMW Materials Testing Site, North Amityville, Suffolk County, New York (NYSDEC Site No. 1-52-189).

This HASP Addendum describes the safety organization, procedures, and protective equipment that have been established based on an analysis of potential physical, chemical, and biological hazards. Specific hazard control methodologies have been evaluated and selected to minimize the potential for accidents or injuries to occur. One copy of the Generic HASP and this HASP Addendum will be maintained for use during the scheduled field sampling effort. The copies will be made available for site use and employee review at all times.

This HASP Addendum addresses regulations and guidance practices set forth in the Occupational Safety and Health Administration Standards for Construction Industry, 29 Code of Federal Regulations (CFR) 1926, including 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response and 29 CFR 1926.59, Hazardous Communications.

The following are provided as attachments:

- Attachment A: Worker Training and Physical Examination Record
- Attachment B: Health and Safety Plan Review Record
- Attachment C: Site Entry and Exit Log
- Attachment D: Accident Investigation Report
- Attachment E: Emergency Telephone Numbers and Hospital Directions
- Attachment F: Emergency Equipment Available Onsite
- Attachment G: Map to Hospital
- Attachment H: Personal Protective Equipment Activity Record
- Attachment I: Material Safety Data Sheets.

NOTE: This site-specific HASP Addendum should be left open to display Attachment E (Emergency Telephone Numbers and Hospital Directions) and made available to site personnel in a conspicuous location for the duration of field activities in the event of an emergency.

1. EA Engineering, P.C. 2006. Generic Health and Safety Plan for Work Assignments under NYSDEC Contract Nos. D004438 and D004441. June.

1.2 SITE AND FACILITY DESCRIPTION

The AMW Materials Testing site (herein identified as the site) is located at 666 Albany Avenue in the Hamlet of North Amityville, Suffolk County, New York (Figure 1). The site covers approximately 0.46 acres, and portions of a masonry building are located on the property. The remaining portions of the site are mainly covered by vegetation, debris, and a stockpile of contaminated soil. A fence is located along the property boundary and the gate utilized to access the site is locked.

The surrounding area is predominantly zoned commercial to the east and residential properties to the west. The site is bordered to the north by a commercial property, to the east by Albany Avenue and a vacant wooded lot, and to the south and west by residential properties.

1.3 SITE HISTORY

The facility was utilized as a metal refinishing company that served the aircraft industry. An inventory of known chemicals consisted of 40 gal of tetrachloroethene, 50 lb of chromic acid, a 1,000-gal chromic acid tank reportedly with 12 oz of chromium per gallon, a 1,000-gal alodine anodize 1200S tank, and 140 gal of methyl ethyl ketone.

On 9 October 2000, a major fire consumed the entire structure causing the chemicals to be released to the environment. An estimated 1,800,000 gal of water was utilized by the fire department to extinguish the fire. The chemicals present onsite at the time of the fire were mobilized by the large quantity of water used by the fire department. The subsequent run-off of contaminated fire control water from the site impacted stormwater structures in the vicinity of the site. Contaminated water flowed north toward approximately 14 drywells located along Albany Avenue and within the adjacent properties as well as south along Albany Avenue toward a stormwater drain located near New Highway, which discharged to a recharge basin located approximately 1,000 ft south of the site at the intersection of New Highway and Albany Avenue (Major Braxton Memorial Avenue).

NYSDEC Spill Response was contacted by the fire department and requested to respond immediately. Spill Response assigned Spill No. 0008040 to the release. Environmental samples were collected on 9 October 2000 by Suffolk County Environmental Laboratory from locations where fire control water was observed. Six surface water samples were collected adjacent to the site along Albany Avenue and one surface water sample and one soil sample were collected at a recharge basin located approximately 1,000 ft to the south. Laboratory results indicated elevated concentrations of chromium, methyl ethyl ketone, tetrachlorethene, and 1,1,1-trichloroethane present in soil and water samples.

1.4 POLICY STATEMENT

EA will take every reasonable step to provide a safe and healthy work environment; and to eliminate or control hazards in order to minimize the possibility of injuries, illnesses, or accidents to site personnel. EA and EA subcontractor employees will be familiar with the

Generic HASP and this HASP Addendum for the project activities they are involved in. Prior to entering the site, the Generic HASP and this HASP Addendum will be reviewed and an agreement to comply with the requirements will be signed by EA personnel, subcontractors, and visitors (Attachment B).

Operational changes that could affect the health and safety of the site personnel, community, or environment will not be made without approval from the Project Manager and Program Health and Safety Officer. This document will be periodically reviewed to ensure that it is current and technically correct. Any changes in site conditions and/or the scope of work will require a review and modification to the HASP Addendum. Such changes will be documented in the form of a revision to this addendum.

2. KEY PERSONNEL

The following table contains information on key project personnel:

Title	Name	Telephone No.
Program Health and Safety Officer	Kris Hoiem, CIH	732-404-9370
Program Manager	Chris Canonica, P.E.	315-431-4610
Quality Assurance/Quality Control Officer	Tom Porter, P.G.	315-431-4610
Project Manager	Jim Hayward, P.E.	315-431-4610
Quality Assurance/Quality Control Coordinator	Robert Casey	315-431-4610
Site Manager/Site Health and Safety Officer	James Gatherer	845-565-8100
NYSDEC Project Manager	Brian Jankauskas, P.E.	518-402-9620

3. SCOPE OF WORK

This HASP Addendum was developed to designate and define site-specific health and safety protocols applicable to project activities to be implemented and followed during field activities and consulting work at the AMW Materials Testing Site, North Amityville, New York. The scope of work covered by this HASP Addendum includes the following activities:

- Subsurface drilling
- Sampling of soil, sediment, surface water, and groundwater
- Handling and storage of investigative-derived waste
- Site surveying.

4. POTENTIAL HAZARD ANALYSIS

Based upon the above field activities, the following potential hazard conditions may be anticipated:

- The use of mechanical equipment such as drill rigs, powered augers, and hammer drills can create a potential for crushing and pinching hazards due to movement and positioning of the equipment: movement of lever arms and hydraulics; entanglement of clothing and appendages in exposed drives and augers; and impact of steel tools, masts, and cables should equipment rigging fail, or other structural failures occur during hydraulic equipment operation and drilling mast extension and operation. Heavy equipment work must be conducted only by trained, experienced personnel. If possible, personnel must remain outside the turning radius of large, moving equipment. At a minimum, personnel must maintain visual contact with the equipment operator. When not operational, equipment must be set and locked so that it cannot be activated, released, dropped, etc.

- Equipment can be energized due to contact with overhead or underground electrical lines, utilities impaired by excavation of communication or potable/wastewater lines, or a potential for fire or explosion may occur due to excavation of below ground propane/ natural gas lines. Prior to commencement of invasive operations, a drilling/excavation permit will be obtained and the area will be inspected and flagged. Personnel should be aware that although an area may be cleared, it does not mean that unanticipated hazards will not appear. Safe distances will be maintained from live electrical equipment as specified in Generic HASP. Workers should always be alert for unanticipated events such as snapping cables, digging into unmarked underground utilities, etc. Such occurrences should prompt involved individuals to halt work immediately and take appropriate corrective measures to gain control of the situation.

- Work around large equipment often creates excessive noise. Noise can cause workers to be startled, annoyed, or distracted; can cause physical damage to the ear, pain, and temporary and/or permanent hearing loss; and can interfere with communication. If workers are subjected to noise exceeding an 8-hour time-weighted average sound level of 85 dBA, hearing protection will be selected with an appropriate noise reduction rating to comply with 29 CFR 1910.95 and to reduce noise below levels of concern.

- Personnel may be injured during physical lifting and handling of heavy equipment, construction materials, or containers. Additionally, personnel may encounter slip, trip, and fall hazards associated with excavations, manways, and construction debris and materials. Precautionary measures should be taken in accordance with the Generic HASP and this HASP Addendum.

- Field operations conducted during the winter months can impose excessive heat loss to personnel conducting strenuous activities during unseasonably cold weather days and can impose cold-related illness symptoms during unseasonably cold weather days or when wind chill is high. In addition, heavy rains, electrical storms, and high winds may create extremely dangerous situations for employees.

- Entry into a confined space in support of this project is forbidden. However, it is not anticipated that confined space entry will be required during the completion of the field activities.

- Field investigation activities intended to define potential sources of environmental contamination often require employees to be in direct proximity or contact with hazardous substances. Employees may be exposed through inhalation of toxic dusts, vapors, or gases. Normal dust particulates from surficial soil may have adsorbed or absorbed toxic solvents, petroleum compounds, or toxic metal salts or metal particulates. Air monitoring equipment will be used to monitor airborne organic vapors and particulates. Water collected during well development and groundwater sampling activities may also contain toxic vapors, liquids, and gases and be inhaled during normal operations, or may be splashed onto the skin or eyes. Ingestion of toxic materials contained in dusts or particulates can be ingested if eating, smoking, drinking, and gum chewing are permitted prior to personnel washing their hands and face or removing contaminated work clothing and personal protective equipment. Some chemicals may be absorbed directly through the skin. Personal protective equipment, properly designed for the contaminants of concern, will always be provided and worn when a potential for skin contact is present.

The potential contaminants of concern that may be present at the site include, but are not limited to, chromium, methyl ethyl ketone, tetrachloroethane, and 1,1,1-trichloroethane. Material safety data sheets for these chemicals are provided in Attachment I.

5. PERSONAL PROTECTIVE EQUIPMENT

Based upon currently available information, it is anticipated that Level D protection will be required for currently anticipated conditions and activities. If at any time the sustained level of total organic vapors in the worker breathing zone exceeds 5 ppm above background, site workers will evacuate the area and the condition will be brought to the attention of the Site Health and Safety Officer. Efforts will then be undertaken to mitigate the source of the vapors. Once the sustained level of total organic vapors has decreased to below 5 ppm above background, site workers will be allowed to continue activities at the direction of the Site Health and Safety Officer.

The personal protective equipment components for use during this project are detailed in the Generic HASP. The components of Level D personal protective equipment are summarized below.

- **Level D Personal Protective Equipment**—Level D will be worn for initial entry onsite and initially for all activities and will consist of the following:

  — Coveralls or appropriate work clothing

  — Steel-toe, steel-shank safety boots/shoes

  — Waders (for sediment sampling)

  — Hard hats (when overhead hazards are present or as required by the Site Health and Safety Officer)

  — Chemical resistant gloves (nitrile/neoprene) when contact with potentially contaminated soil or water is expected

  — Safety glasses with side shields

  — Hearing protectors (during drilling or other operations producing excessive noise)

  — Boot covers (optional unless in contact with potentially contaminated soil or water)

  — Polycoated coveralls (when contact with contaminated soil and water is anticipated, e.g., when surging/pumping wells and pressure-washing equipment).

Insulated clothing, hats, etc. must be worn when temperatures or wind chill fall below 40°F.

6. SITE CONTROL AND SECURITY

Only authorized personnel will be permitted to conduct field activities. Authorized personnel include those who have completed hazardous waste operations initial training, as defined under Occupational Safety and Health Administration Regulations 29 CFR 1910.120/29 CFR 1926.65, have completed their training or refresher training within the past 12 months, and have been certified by a physician as fit for hazardous waste operations.

6.1 SAFE WORK PRACTICES

Safe work practices that will be followed by site workers include, but are not limited to, the following rules:

- Working before or after daylight hours without special permission is prohibited.
- Do not enter restricted or posted areas without permission from the Site Health and Safety Officer.
- Smoking is limited to designated areas.
- Possessing, using, purchasing, distributing, or having controlled substances in their system throughout the day or during meal breaks is prohibited.
- Consuming or possessing alcoholic beverages is prohibited.
- Good housekeeping – employees will be instructed about housekeeping throughout field activities.
- Sitting or kneeling in areas of obvious contamination is prohibited.
- Avoid overgrown vegetation and tall grass areas.

6.2 DAILY STARTUP AND SHUTDOWN PROCEDURES

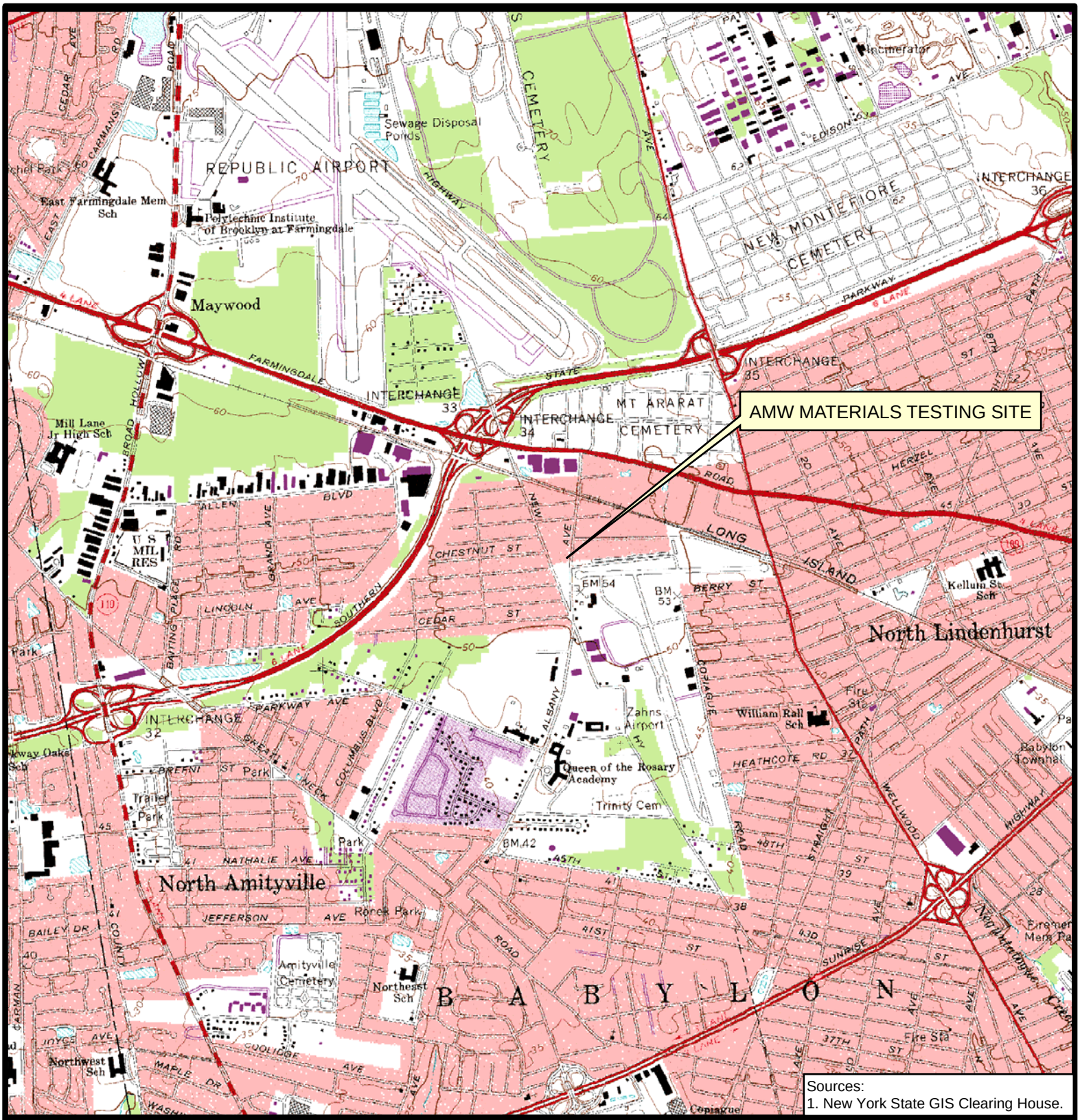
The following protocols will be followed daily prior to start of work activities:

- The Site Health and Safety Officer will review site conditions to determine if modification of work and safety plans is needed.
- Personnel will be briefed and updated on new safety procedures as appropriate.

- Safety equipment will be checked for proper function.

- The Site Health and Safety Officer will ensure that the first aid kit is adequately stocked and readily available.

- The Contractor is responsible for the security of its own equipment. Onsite equipment and supplies will be locked and secure.



AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

FIGURE 1
SITE LOCATION

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	JG	JG	JCH	AS SHOWN	OCTOBER 2006	1436806	I:\NAmity\Projects\Fig1NAmitySiteLocation.mxd

Attachment A

Worker Training and Physical Examination Record

ATTACHMENT A

WORKER TRAINING AND PHYSICAL EXAMINATION RECORD

SITE: AMW Materials Testing Site, North Amityville, New York

Name	OSHA 40-Hour Hazardous Waste Operations Training		OSHA Hazardous Waste Supervisor Training	CPR (date of expiration)	First Aid (date of expiration)	Date of Last Physical Examination
	Initial	Annual				
EA PERSONNEL						
Tom Porter, P.G.	2/3/89	3/22/01	3/3/89	---	---	6/12/01
James Hayward, P.E.	1/28/94	9/27/06	7/1/94	7/8/06	7/8/08	3/30/04
Robert Casey	11/1/01	3/11/05	---	5/1/04	5/1/05	10/26/04
James Gatherer	1/4/99	9/19/05	---	3/08	3/09	1/01
Kurt Ilker, P.G.	5/19/95	9/19/05	1/22/97	3/08	3/09	8/12/04
Richard Waterman	8/88	1998	2/94	3/04	3/05	---
Kris Hoiem, CIH	4/3/87	12/15/01	5/31/92	2/13/96	2/13/96	7/14/00
SUBCONTRACTOR OR ADDITIONAL PERSONNEL						
---	---	---	---	---	---	---
---	---	---	---	---	---	---

NOTE: Prior to performing work at the site, this Health and Safety Plan Addendum must be reviewed and an agreement to comply with the requirements must be signed by all personnel, including contractors, subcontractors, and visitors. Contractors and subcontractors are ultimately responsible for ensuring that their own personnel are adequately protected. In signing this agreement, the contractors and subcontractors acknowledge their responsibility for the implementation of the Health and Safety Plan Addendum requirements. All personnel onsite shall be informed of the site emergency response procedures and any potential safety or health hazards of the operations.

Attachment B

Health and Safety Plan Addendum
Review Record

ATTACHMENT B

HEALTH AND SAFETY PLAN ADDENDUM REVIEW RECORD

I have read the Health and Safety Plan Addendum for this site and have been briefed on the nature, level, and degree of exposure likely as a result of participation in this project. I agree to conform to all the requirements of this Plan.

SITE: AMW Materials Testing Site, North Amityville, New York			
Name	Signature	Affiliation	Date

Attachment C

Site Entry and Exit Log

ATTACHMENT C

SITE ENTRY AND EXIT LOG

SITE: AMW Materials Testing Site, North Amityville, New York				
Name	Date	Time of Entry	Time of Exit	Initials

Attachment D

Accident/Loss Report

ACCIDENT/LOSS REPORT

THIS REPORT MUST BE COMPLETED BY THE INJURED EMPLOYEE OR SUPERVISOR AND FAXED TO EA CORPORATE HUMAN RESOURCES WITHIN 24 HOURS OF ANY ACCIDENT. THE FAX NUMBER IS **(410) 771-1780**.

NOTE WHENEVER AN EMPLOYEE IS SENT FOR MEDICAL TREATMENT FOR A WORK RELATED INJURY OR ILLNESS, PAGE 4 OF THIS REPORT MUST ACCOMPANY THAT INDIVIDUAL TO ENSURE THAT ALL INVOICES/BILLS/CORRESPONDENCE ARE SENT TO HUMAN RESOURCES FOR TIMELY RESPONSE.

A. DEMOGRAPHIC INFORMATION:

NAME OF INJURED EMPLOYEE:_____
HOME ADDRESS:_____
HOME PHONE:_____ DATE OF BIRTH:_____
AGE:_____ SEX: M F
MARITAL STATUS:_____ NAME OF SPOUSE (if applicable)_____
SOCIAL SECURITY NUMBER:_____ DATE OF HIRE:_____
NUMBER OF DEPENDENTS:_____
EMPLOYEES JOB TITLE:_____
DEPT. REGULARLY EMPLOYED:_____
WAS THE EMPLOYEE INJURED ON THE JOB: Y N
PRIMARY LANGUAGE OF THE EMPLOYEE: _____

B. ACCIDENT/INCIDENT INFORMATION:

DATE OF ACCIDENT:_____ TIME OF ACCIDENT:_____
REPORTED TO WHOM: _____ NAME OF SUPERVISOR_____
EXACT LOCATION WHERE ACCIDENT OCCURRED (**including street, city, state and County**):
_____
_____
EXPLAIN WHAT HAPPENED (include what the employee was doing at the time of the accident and how the accident occurred): _____
_____
_____
_____

DESCRIBE THE INJURY AND THE SPECIFIC PART OF THE BODY AFFECTED (i.e., laceration, right hand, third finger):
_____
_____

OBJECT OR SUBSTANCE THAT DIRECTLY INJURED EMPLOYEE:_____
_____
NUMBER OF DAYS AND HOURS EMPLOYEE USUALLY WORKS PER WEEK:_____
IS THE EMPLOYEE EXPECTED TO LOSE AT LEAST ONE FULL DAY OF WORK?_____
DOES THE EMPLOYEE HAVE A PREVIOUS CLAIM? Y N if yes, STATUS Open Closed
WAS THE EMPLOYEE ASSIGNED TO RESTRICTED DUTY? _____

C. ACCIDENT INVESTIGATION INFORMATION

WAS SAFETY EQUIPMENT PROVIDED? Y N If yes, was it used? Y N
WAS AN UNSAFE ACT BEING FORMED ? Y N If yes, describe_____
WAS A MACHINE PART INVOLVED? Y N If yes, describe _____
WAS THE MACHINE PART DEFECTIVE? Y N If yes, in what way _____
WAS A 3RD PARTY RESPONSIBLE FOR THE ACCIDENT/INCIDENT? Y N
If yes, list Name, address and phone number_____
_____
WAS THE ACCIDENT/INCIDENT WITNESSED? Y N
If yes, list Name, address and phone number: _____
_____

D. PROVIDER INFORMATION

WAS FIRST AID GIVEN ON SITE? Y N
If yes, what type of medical treatment was given _____
PHYSICIAN INFORMATION (if medical attention was administered)
NAME:_____
ADDRESS (incl. City, state and zip):_____
PHONE:_____

HOSPITAL ADDRESS (incl. Name, address, city, state, zip code & phone)
_____
_____

WAS THE EMPLOYEE HOSPITALIZED? Y N If yes, on what date_____
WAS THE EMPLOYEE TREATED AS AN OUTPATIENT, RECEIVE EMERGENCY TREATMENT OR AMBULANCE SERVICE? _____

PLEASE ATTACH THE PHYSICIANS WRITTEN RETURN TO WORK SLIP

***NOTE* A PHYSICIANS RETURN TO WORK SLIP IS REQUIRED PRIOR TO ALLOWING THE WORKER TO RETURN TO WORK**

E. AUTOMOBILE ACCIDENT INFORMATION (complete if applicable)

AUTHORITY CONTACTED AND REPORT #_____
EA EMPLOYEE VEHICLE YEAR, MAKE AND MODEL_____

V.I.N._____ PLATE/TAG #_____
OWNER'S NAME AND ADDRESS:_____
_____
DRIVER'S NAME AND ADDRESS: _____
_____
RELATION TO INSURED:_____DRIVER'S LICENSE #_____
DESCRIBE DAMAGE TO YOUR PROPERTY:_____
_____
_____
DESCRIBE DAMAGE TO OTHER VEHICLE OR PROPERTY:_____
_____
_____
OTHER DRIVER'S NAME AND ADDRESS: _____
_____
OTHER DRIVER'S PHONE:_____
OTHER DRIVER'S INSURANCE COMPANY AND PHONE:_____
_____
LOCATION OF OTHER VEHICLE:_____
NAME, ADDRESS AND PHONE OF OTHER INJURED PARTIES:_____
_____
_____
WITNESSES

NAME:_____ PHONE:_____
ADDRESS:_____
STATEMENT:_____
_____
SIGNATURE: _____

NAME:_____ PHONE:_____
ADDRESS:_____
STATEMENT:_____
_____
SIGNATURE: _____

F. ACKNOWLEDGEMENT

NAME OF SUPERVISOR:_____
DATE OF THIS REPORT: _____ REPORT PREPARED BY:_____

I have read this report and the contents as to how the accident/loss occurred is accurate to the best of my knowledge.

Signature: _____ Date: _____
Injured Employee

I am seeking medical treatment for a work related injury/illness.

Please forward all bills/invoices/correspondence to:

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

11019 McCORMICK ROAD

HUNT VALLEY, MD 21031

ATTENTION: Michele Bailey
HUMAN RESOURCES

(410) 584-7000

INCIDENT REPORT

THIS REPORT IS TO BE COMPLETED WHEN A NEAR MISS OCCURS THAT COULD HAVE POTENTIALLY RESULTED IN SERIOUS PHYSICAL HARM. PLEASE FAX THIS FORM TO EA HUMAN RESOURCES DEPARTMENT AT **(410) 771-1780**.

EXPLAIN WHAT HAPPENED (include what the employee was doing at the time the near miss and how it occurred:) _____

REPORT PREPARED BY: _____ DATE:_____

Attachment E

Emergency Telephone Numbers and Hospital Directions

ATTACHMENT E

EMERGENCY TELEPHONE NUMBERS AND HOSPITAL DIRECTIONS

SITE: AMW Materials Testing Site, North Amityville, New York	
Police: Suffolk County Police Department	9-1-1
Fire: Amityville Fire Department	9-1-1
Ambulance:	9-1-1
Hospital: Massapequa General Hospital	(516) 520-6000
New York Regional Poison Control Center: Winthrop University Hospital 259 First Street Mineola, New York 11501	800-222-1222

Directions to Massapequa General Hospital, 750 Route 107, Oyster Bay, New York

1. Start at **666 Albany Avenue, Amityville** going toward **Seabro Avenue** – go **0.3** mi
2. Turn **left** on **Babylon Farmingdale Road (Route 109)** – go **0.2** mi
3. Continue to follow **Route 109 West** – go **0.1** mi
4. Take ramp onto **Southern Parkway West** toward **New York** – go **4.3** mi
5. Take Exit **29N/Route 107 North** toward **Hicksville** – go **0.2** mi
6. Turn **right** on **Hicksville Road (Route 107)** – go **0.1** mi
7. Arrive at **Massapequa General Hospital**.

Total trip is 5.3 mi, travel time is approximately 7 minutes.

Program Safety and Health Officer: ***Kris Hoiem, CIH***	(410) 771-4950
Program Manager: ***Christopher Canonica, P.E.***	(315) 431-4610
EA Project Manager ***Jim Hayward, P.E.***	(315) 431-4610
In case of spill, contact *Jim Hayward, P.E.*	(315) 431-4610
EA Medical Services EMR 4360 Chamblee Dunwoody Road, Suite 202 Atlanta, Georgia 30341 ***Contact: Dr. Elayne F. Theriault***	(800) 229-3674
Field Manager/Site Health and Safety Officer: ***Kurt Ilker, P.G.***	(845) 565-8100
In case of accident or exposure incident, contact Corporate Health and Safety Officer ***Peter Garger, CIH***	(410) 584-7000

Attachment F

Emergency Equipment Available Onsite

ATTACHMENT F

EMERGENCY EQUIPMENT AVAILABLE ONSITE

Type of Equipment	Location
Communications Equipment	
Mobile Telephone	In EA vehicle
Medical Support Equipment	
First Aid Kits	In EA vehicle
Eye Wash Station	In EA vehicle
Fire Fighting Equipment	
Fire Extinguishers	In EA vehicle

Attachment G

Map to Hospital

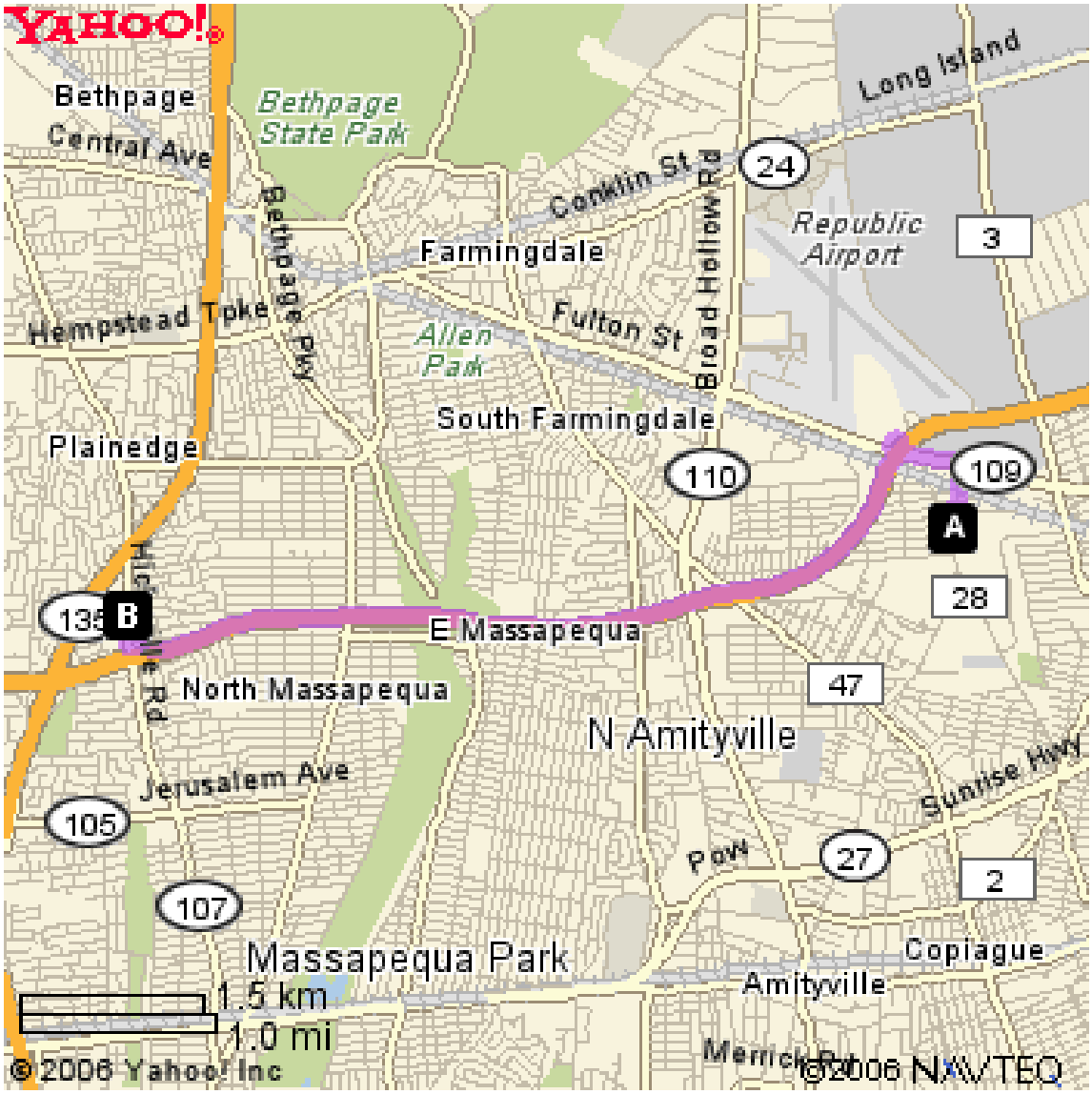
ATTACHMENT G

MAP TO HOSPITAL

Directions to Massapequa General Hospital, 750 Route 107, Oyster Bay, New York

1. Start at **666 Albany Avenue, Amityville** going toward **Seabro Avenue** – go **0.3** mi
2. Turn **left** on **Babylon Farmingdale Road (Route 109)** – go **0.2** mi
3. Continue to follow **Route 109 West** – go **0.1** mi
4. Take ramp onto **Southern Parkway West** toward **New York** – go **4.3** mi
5. Take Exit **29N/Route 107 North** toward **Hicksville** – go **0.2** mi
6. Turn **right** on **Hicksville Road (Route 107)** – go **0.1** mi
7. Arrive at **Massapequa General Hospital**.

Total trip is 5.3 mi, travel time is approximately 7 minutes.



Attachment H

Personal Protective Equipment
Activity Record

ATTACHMENT H

PERSONAL PROTECTIVE EQUIPMENT ACTIVITY RECORD

SITE: AMW Materials Testing Site, North Amityville, New York		
Weather Condition:		Onsite Hours: From To
Changes in Personal Protective Equipment Levels[(a)]	Work Operations	Reasons for Change
Site Health and Safety Plan Addendum Violations	Corrective Action Specified	Corrective Action Taken (yes/no)
Observations and Comments:		
Completed by: _____ Site Health and Safety Officer Date		
(a) Only the Site Health and Safety Officer may change personal protective equipment levels, using only criteria specified in the Health and Safety Plan Addendum.		

Attachment I

Material Safety Data Sheet

Safety (MSDS) data for 1,1,1-trichloroethane

General

Synonyms: methyl chloroform, methyltrichloromethane, chlorothene, chlorten, NCI-C04626

Molecular formula: CH_3CCl_3
CAS No: 71-55-6
EC No: 200-756-3

Physical data

Appearance: colourless liquid with a mild ether-like odour
Melting point: -33 C
Boiling point: 74 C
Specific gravity: 1.32
Vapour pressure: 100 mm Hg at 20 C
Flash point: none
Flammable limits: 7.5% - 15%
Autoignition temperature: 536 C

Stability

Stable. Substances to be avoided include water, strong bases, aluminium and its alloys, magnesium and its alloys, chemically active metals, strong oxidizing agents. Reacts violently with sodium and potassium. Flammable.

Toxicology

Harmful by inhalation, ingestion and through skin absorption. Irritant. Possible mutagen. Possible risk of harm to the unborn child. Prolonged exposure may cause dermatitis. Toxic gases are evolved on combustion.

Toxicity data

(The meaning of any abbreviations which appear in this section is given here.)

ORL-RAT LD50 9600 mg kg^{-1}

Risk phrases

(The meaning of any risk phrases which appear in this section is given here.)
R20 R21 R22 R59.

Environmental information

May cause damage to the ozone layer.

Personal protection

Safety glasses. Good ventilation.

Safety phrases

(The meaning of any safety phrases which appear in this section is given here.)
S24 S25 S59 S61.

[Return to Physical & Theoretical Chemistry Lab. Safety home page.]

Safety (MSDS) data for tetrachloroethylene

General

Synonyms: perchloroethylene, ethylene tetrachloride, 1,1,2,2-tetrachloroethylene
Molecular formula: C_2Cl_4
CAS No: 127-18-4
EC No:

Physical data

Appearance: colourless liquid with ether-like odour
Melting point:
Boiling point: 121 C
Vapour density: 5.8
Vapour pressure:
Specific gravity: 1.62
Flash point:
Explosion limits:
Autoignition temperature:

Stability

Stable. Incompatible with strong oxidizing agents, alkali metals, aluminium.

Toxicology

Skin and eye irritant. Harmful if inhaled or ingested and in contact with skin. This chemical has been reported to cause cancer in laboratory animals. Typical TLV 50 ppm.

Toxicity data

(The meaning of any abbreviations which appear in this section is given here.)
ORL-RAT LD50 8850 mg kg^{-1}

Risk phrases

(The meaning of any risk phrases which appear in this section is given here.)
R20 R21 R22.

Personal protection

Safety glasses. Good ventilation.

[Return to Physical & Theoretical Chemistry Lab. Safety home page.]

Education and Training

Comenius - European Cooperation on School Education

Hands-on Science (H-Sci) Project: Chemical Safety Database

Chemical Safety Data: Methanol

Common synonyms	Methyl alcohol, wood alcohol, meths
Formula	CH_3OH
Physical properties	Form: colourless liquid with a characteristic smell Stability: Stable, but very flammable Melting point: -98 C Boiling point: 64.7 C Flash point: 11 C Explosion limits 6% - 36% Water solubility: miscible in all proportions Specific gravity: 0.79
Principal hazards	*** Methanol is toxic. If ingested or inhaled it can cause a wide range of harmful effects, from sickness, heart and liver damage to reproductive harm, blindess or death. *** Methanol is often a component in "bootleg" liquor (illegally brewed and distilled alcohol) and there have been numerous cases in the past in which the consumption of such a drink has been fatal. *** Methanol is very flammable. The pure liquid catches fire easily and aqueous solutions containing a significant amount of methanol can also catch fire. *** The flame above burning methanol is virtually invisible, so it is not always easy to tell whether a methanol flame is still alight. *** The explosion limits for methanol (the lower and upper percentage limits of methanol in an air-methanol mixture giving a vapour that can explode) are unusually wide.

Safe handling	Always wear safety glasses. Remove any source of ignition from the working area. Don't forget that a hot air gun, a hot plate or even a radiator may be sufficiently hot to ignite the vapour. You should not breathe in the vapour, so use a fume cupboard if available. If this is not possible, ensure that the area in which you work is very well ventilated.
Emergency	Eye contact: Immediately flush the eye with plenty of water. Continue for several minutes and call for medical help. Skin contact: A person whose clothes are soaked in methanol will be at serious risk from fire, so immediately remove any contaminated clothing and store well away from a source of ignition (preferably outside). Wash exposed skin with soap and water. If the skin reddens or appears damaged, or if methanol may have been swallowed, call for medical aid. If swallowed: Call for immediate medical help; if the quantity swallowed is significant urgent medical action is vital.
Disposal	Trace amounts of methanol can be flushed down a sink with a large quantity of water, unless local rules prohibit this. Larger amounts should be collected in a non-chlorinated waste solvent container for disposal.
Protective equipment	Safety glasses. If you need gloves, butyl rubber is a suitable material.
Further information	Methanol Chemicals in the HSci database More extensive safety data

Link to the Oxford HSci web site

Oxford, January 8, 2004

Education and Training

Comenius - European Cooperation on School Education

Hands-on Science (H-Sci) Project: Chemical Safety Database

Chemical Safety Data: 2-propanol

Common synonyms	Isopropanol, isopropyl alcohol, rubbing alcohol
Formula	$CH_3CHOHCH_3$
Physical properties	Form: colourless liquid with an alcohol smell Stability: Stable, but highly flammable Melting point: -89 C Water solubility: high Specific gravity: 0.79 Flash point: 12 C
Principal hazards	2-propanol is very flammable. It can be ignited by flames, but also by contact with such items as hot plates or hot air guns.
Safe handling	Wear safety glasses. Make sure that the area in which you work is well ventilated, so that it is not possible for high concentrations of the vapour to form. Work well away from possible sources of ignition, such as hot plates and Bunsen burners.
Emergency	Eye contact: Immediately flush the eye with plenty of water. If irritation persists, call for medical help. Skin contact: Wash off with soap and water. Remove any contaminated clothing in a safe area. Be especially careful if a large volume of 2-propanol has been spilled on clothes, since there is the risk of very serious burns if the clothing catches fire. If the skin reddens or appears damaged, call for medical aid. If swallowed: Call for medical help.

Disposal	Small amounts of 2-propanol can be flushed down a sink with a large quantity of water, unless local rules prohibit this. However, this material constitutes a fire risk; if large amounts of it are flushed down a sink dangerous concentrations may build up in the vapour phase in sewers. If any 2-propanol is poured into a sink, check that it is thoroughly flushed away. If some remains, a high concentration may build up in the air within the sink, presenting a fire risk.
Protective equipment	Safety glasses. If you need to use protective gloves, neoprene, nitrile or butyl rubber are suitable.
Further information	2-propanol Chemicals in the HSci database More extensive safety data

Safety (MSDS) data for 2-butanone

General

Synonyms: methylacetone, ethyl methyl ketone, methyl ethyl ketone, MEK, butanone, MEETCO
Molecular formula: C_4H_8O

CAS No: 78-93-3
EINECS No: 201-159-0

Physical data

Appearance: colourless liquid
Melting point: -87 C
Boiling point: 80 C
Vapour density: 2.49 (air = 1)
Vapour pressure: 71 mm Hg at 20 C
Density (g cm^{-3}): 0.805
Flash point: -3 C
Explosion limits: 1.8% - 10.1%
Autoignition temperature: 515 C
Water solubility:

Stability

Stable. Highly flammable. Incompatible with oxidizing agents, bases, strong reducing agents. Protect from moisture.

Toxicology

Severe eye irritant. Can cause CNS depression. Skin irritant. May be harmful by ingestion, inhalation or through skin contact. May cause dermatitis.

Toxicity data

(The meaning of any abbreviations which appear in this section is given here.)

ORL-RAT LD50 2737 mg kg^{-1}
IHL-RAT LC50 23500 mg/m3/8h

IPR-RAT LD50 607 mg kg^{-1}
ORL-MUS LD50 4050 mg kg^{-1}
IHL-MAM LC50 38 g m^{-3}
IHL-MUS LC50 32 g/m3/4h

Irritation data

(The meaning of any abbreviations which appear in this section is given here.)
EYE-HMN 350 ppm
SKN-RBT 500 mg/24 mod
SKN-RBT 402 mg/24h mld
SKN-RBT 14 mg/24h open mld

Risk phrases

(The meaning of any risk phrases which appear in this section is given here.)
R11 R36 R37.

Transport information

(The meaning of any UN hazard codes which appear in this section is given here.)
Hazard class: 3.0. UN No 1193. Packing group: II

Personal protection

Safety glasses, adquate ventilation.

Safety phrases

(The meaning of any safety phrases which appear in this section is given here.)
S9 S16 S25 S33.

[Return to Physical & Theoretical Chemistry Lab. Safety home page.]

Safety (MSDS) data for chromium hydroxide

General

Synonyms:
Molecular formula:
CAS No: 12626-43-6
EC No:

Physical data

Appearance:
Melting point:
Boiling point:
Vapour density:
Vapour pressure:
Specific gravity:
Flash point:
Explosion limits:
Autoignition temperature:

Stability

Toxicology

No toxicological data available.

Personal protection

Chromium (VI) compounds are suspected human carcinogens. All chromium compounds should be handled with caution, and chromium (VI) compounds handled in a manner appropriate for carcinogens.

[Return to Physical & Theoretical Chemistry Lab. Safety home page.]

Appendix D
Community Air Monitoring Plan

Community Air Monitoring Plan
AMW Materials Testing Site (1-52-189)
North Amityville, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C., and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
(315) 431-4610

November 2006
EA Project No. 14368.06

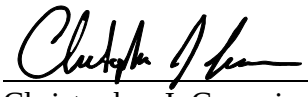
Community Air Monitoring Plan
AMW Materials Testing Site (1-52-189)
North Amityville, New York

Prepared for

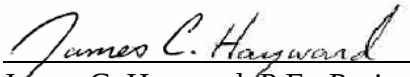
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

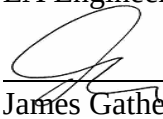
EA Engineering, P.C. and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
(315) 431-4610



14 November 2006
Christopher J. Canonica, P.E., Program Manager — Date
EA Engineering, P.C.



14 November 2006
James C. Hayward, P.E., Project Manager — Date
EA Engineering, P.C.



14 November 2006
James Gatherer, Site Manager — Date
EA Science and Technology

November 2006
EA Project No. 14368.06

CONTENTS

LIST OF FIGURES

1. INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC) tasked EA Engineering, P.C., and its affiliate EA Science and Technology (EA), to develop and implement a site characterization study for the AMW Materials Testing site (NYSDEC Site No. 1-52-189).

The site characterization will be conducted under the NYSDEC State Superfund Standby Contract (Work Assignment No. D004438-6). This Community Air Monitoring Plan was prepared as a requirement of the Site Characterization Work Plan. The elements of this Community Air Monitoring Plan were prepared in accordance with the NYSDEC *Draft DER-10 Technical Guidance for Site Investigation and Remediation* (NYSDEC 2002)[1].

1.1 SITE DESCRIPTION

The AMW Materials Testing site is located at 666 Albany Avenue in the Hamlet of North Amityville, Suffolk County, New York (Figure 1). The site covers approximately 0.46 acres, and portions of a masonry building are located on the property. The remaining portions of the site are mainly covered by vegetation, debris, and a stockpile of contaminated soil. A fence is located along the property boundary and the gate utilized to access the site is locked.

The surrounding area is predominantly zoned commercial to the east and residential properties to the west. The site is bordered to the north by a commercial property, to the east by Albany Avenue and a vacant wooded lot, and to the south and west by residential properties.

1.2 SITE BACKGROUND

The facility was utilized as a metal refinishing company that served the aircraft industry. An inventory of known chemicals consisted of 40 gal of tetrachloroethene, 50 lb of chromic acid, a 1,000-gal chromic acid tank reportedly with 12 oz of chromium per gallon, a 1,000-gall alodine anodize 1200S tank, and 140 gal of methyl ethyl ketone.

On 9 October 2000, a major fire consumed the entire structure, causing the chemicals to be released to the environment. An estimated 1,800,000 gal of water was utilized to extinguish the fire by the fire department. The chemicals present onsite at the time of the fire were mobilized by the large quantity of water used by the fire department. The subsequent run-off of contaminated fire control water from the site impacted stormwater structures in the vicinity of the site. Contaminated water flowed north toward approximately 14 drywells located along Albany Avenue and within the adjacent properties, as well as south along Albany Avenue toward a

1. New York State Department of Environmental Conservation (NYSDEC). 2002. Draft DER-10 Technical Guidance for Site Investigation and Remediation. December.

stormwater drain located near New Highway, which discharged to a recharge basin located approximately 1,000 ft south of the site at the intersection of New Highway and Albany Avenue (Major Braxton Memorial Avenue).

NYSDEC Spill Response was contacted by the fire department and requested to respond immediately. Spill Response assigned Spill No. 0008040 to the release. Environmental samples were collected on 9 October 2000 by Suffolk County Environmental Laboratory from locations where fire control water was observed. Six surface water samples were collected adjacent to the site along Albany Avenue and one surface water sample and one soil sample were collected at a recharge basin located approximately 1,000 ft to the south. Laboratory results indicated elevated concentrations of chromium, methyl ethyl ketone, tetrachlorethene, and 1,1,1-trichloroethane present in soil and water samples.

1.3 MONITORING

Real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the work area will be necessary. Monitoring activities will consist of a combination of continuous and periodic monitoring, which will be performed dependent upon the type of activity being conducted at the site, as discussed below.

1.3.1 Continuous Air Monitoring

Continuous monitoring for VOCs and particulates will be required for all ground intrusive activities associated with the site characterization. Ground intrusive activities are anticipated to include the installation of soil borings and groundwater monitoring wells.

VOCs will be monitored at the downwind perimeter of the immediate work area on a continuous basis. Upwind concentrations should be measured at the start of each work day and periodically thereafter to establish background conditions. The monitoring work will be performed using a MiniRAE 2000 or equivalent, which is appropriate to measure the types of contaminants known or suspected to be present at the site. The MiniRAE 2000 will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The MiniRAE 2000 is capable of calculating 15-minute running average concentrations, which will be compared to the levels specified in Section 1.4.1.

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the work area at temporary particulate monitoring stations. The particulate monitoring will be performed using a Thermo MIE pDR-1000 DataRam or equivalent. The Thermo MIE pDR-1000 DataRam is a real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes for comparison to the airborne particulate action level. The Thermo MIE pDR-1000 DataRam is equipped with an audible alarm to indicate exceedance of the action level. In addition to using the Thermo MIE pDR-1000 DataRam, fugitive dust migration will be visually assessed during all work activities.

1.3.2 Periodic Air Monitoring

Periodic monitoring for VOCs will be required during non-intrusive activities associated with the site characterization. Non-intrusive activities are anticipated to include the collection of soil samples, groundwater samples from new and existing monitoring wells, and surface water/ sediment samples. Periodic monitoring during sample collection will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well bailing/purging, and taking a reading prior to leaving a sample location.

1.4 ACTION LEVELS AND RESPONSE

This section identifies the action levels and corresponding responses for concentrations of VOCs and particulates detected during the field activities associated with the site characterization.

1.4.1 Volatile Organic Compounds

If the ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 ppm above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.

If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be stopped, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 ft downwind of the work zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less (but in no case less than 20 ft), is below 5 ppm over background for the 15-minute average.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shut down.

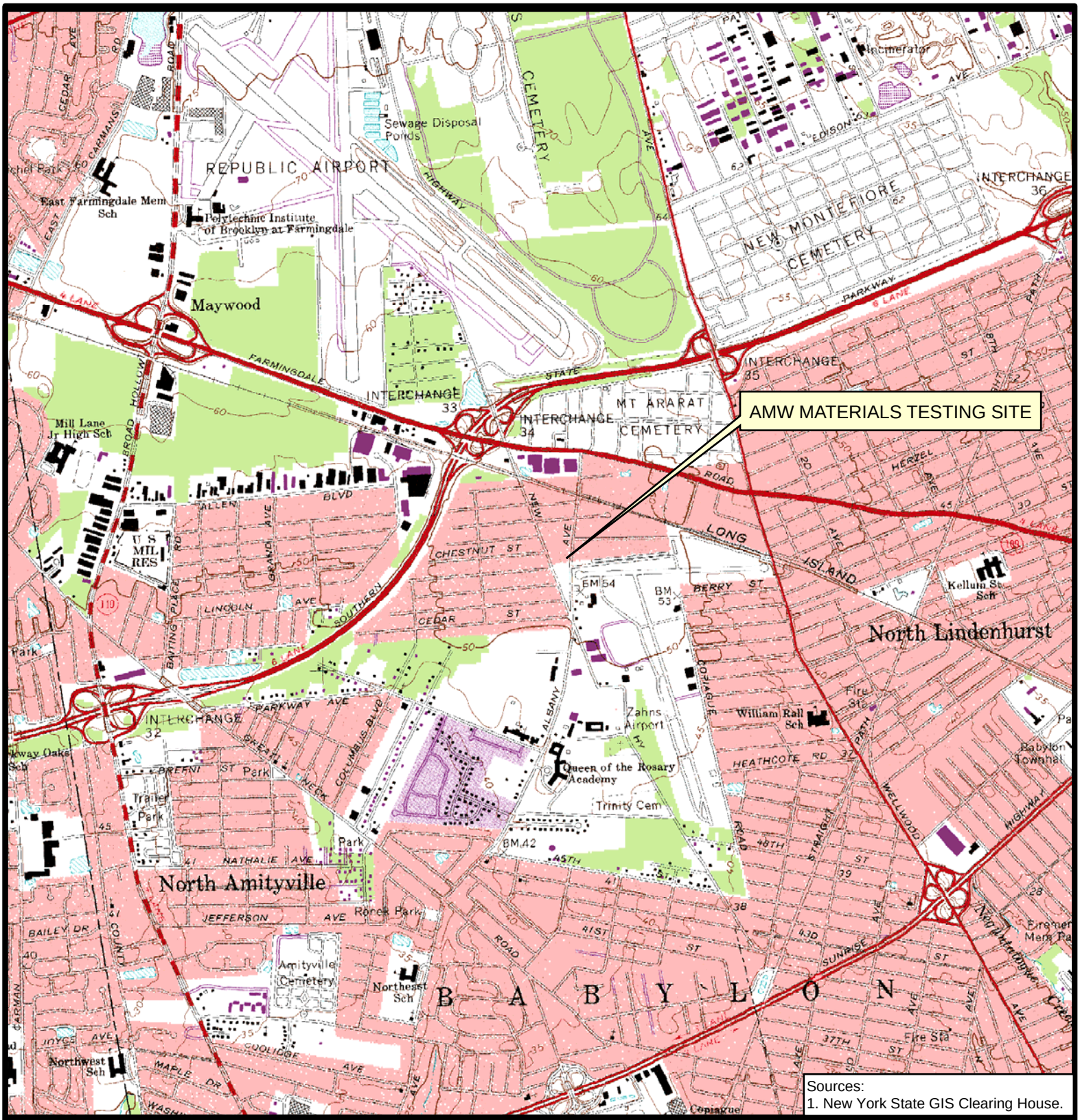
All 15-minute readings will be recorded and be available for NYSDEC and New York State Department of Health personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

1.4.2 Particulates

If the downwind PM-10 particulate level is 100 $\mu g/m^3$ greater than background (upwind perimeter) for the 15-minute period, or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 $\mu g/m^3$ above upwind level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m^3 of the upwind level and in preventing visible dust migration.

Similar to the VOC readings, all particulate readings will be recorded and be available for NYSDEC and New York State Department of Health personnel to review.



AMW MATERIALS TESTING SITE (1-52-189)
NORTH AMITYVILLE, NASSAU COUNTY, NEW YORK

FIGURE 1
SITE LOCATION

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
JCH	JG	JG	JCH	AS SHOWN	OCTOBER 2006	1436806	I:\NAmity\Projects\Fig1NAmitySiteLocation.mxd

Appendix E
Work Assignment Budget

Schedule 2.11 (a)

Summary of Work Assignment Price

Work Assignment Number D004438-06

1)	Direct Salary Costs (Schedules 2.10(a) and 2.11(b))			$9,669.10
2)	Indirect Costs (Schedule 2.10(g))			$14,740.54
3)	Direct Non-Salary Costs (Schedule 2.10(b)(c)(d) and 2.11(c)(d)			$4,718.50
4)	Subcontract Costs			
	Cost-Plus-Fixed-Fee Subcontracts (Schedule 2.10(e) and 2.11(e)			
	Name of Subcontractor		**Services To Be Performed**	**Subcontract Price**
	i)	YEC Inc.	Surveying Professional Services	*$3,443.84*
	ii)	Louis Berger & Associates, P.C.	Engineering Professional Services	*$3,531.96*
A)	**Total Cost-Plus-Fixed-Fee Subcontracts**			$6,975.80
	Unit Price Subcontracts (Schedule 2.10(f) and 2.11(f)			
	Name of Subcontractor		**Services To Be Performed**	**Subcontract Price**
	i)	Hampton-Clarke, Inc.	Laboratory Other Analyses	*$17,455.00*
	ii)	ChemWorld Environmental, Inc.	Data validation	*$1,778.00*
	iii)	Land, Air, and Water Environmental Services, Inc.	Drilling Services	*$13,220.00*
B)	**Total Unit Price Subcontracts**			$32,453.00
5)	Subcontract Management Fee			$1,622.65
6)	Total Subcontract Costs (Lines 4A + 4B + 5)			$41,051.45
7)	Fixed Fee (Schedule 2.10(h))			$1,708.68
8)	Total Work Assignment Price (Lines 1 + 2 + 3 + 6 + 7)			$71,888.27

Engineer/Contract #	EA Engineering, P.C. D004438	**Date Prepared**	14-Nov-06
Project Name	Site Characterization at AMW Materials Testing Site		
Work Assignment No.	D004438-06		

Schedule 2.11 (b)
Direct Labor Hours Budgeted

Labor Classification	*IX*	*VIII*	*VII*	*VI*	*V*	*IV*	*III*	*II*	*I*	*Admin.*	*Total Direct Labor Hrs.*
2006 Average Salary Rates*		62.09	52.41	47.23	43.12	34.41	25.01	21.13	16.56		
Task 1						25	54	2		30	111
Task 2						3	12			12	27
Task 3						11	76			12	99
Task 4						6	12			12	30
Task 5				4		10	24	8	8	45	99
Task 6										0	0
Task 7										0	0
Task 8										0	0
Task 9										0	0
Task 10										0	0
Task 11										0	0
Task 12										0	0
Total Hours	0	0	0	4	0	55	178	10	8	111	366
Total Direct Labor Cost ($)	0.00	0.00	0.00	188.92	0.00	1,892.55	4,451.78	211.30	132.48	2,792.07	9,669.10

* For multiple years use one average salary rate row for each year and each years subtotal Labor Cost.

Engineer/Contract # EA Engineering, P.C. D004438 **Date Prepared** 14-Nov-06

Project Name Site Characterization at AMW Materials Testing Site

Work Assignment No. D004438-06

Schedule 2.11 (b-1)
Direct Administrative Labor Hours Budgeted

Labor Classification	*IX*	*VIII*	*VII*	*VI*	*V*	*IV*	*III*	*II*	*I*	*Total No. of Direct Labor Hrs.*
2006 Average Salary Rates*		62.09	52.41	47.23	43.12	34.41	25.01	21.13	16.56	
Task 1				2		4	4	12	8	30
Task 2				2		4		6		12
Task 3				2		4		6		12
Task 4				2		4		6		12
Task 5				3		4	4	12	22	45
Task 6										0
Task 7										0
Task 8										0
Task 9										0
Task 10										0
Task 11										0
Task 12										0
Total Hours	0	0	0	11	0	20	8	42	30	111
Total Direct Labor Cost ($)	0.00	0.00	0.00	519.53	0.00	688.20	200.08	887.46	496.80	2,792.07

* For multiple years use one average salary rate row for each year and each years subtotal Labor Cost.

Contract/Project administrative hours would include (subject to contract allowability) but not necessarily be limited to the following activities:

1) Work Plan Budget Development
- Conflict of Interest Check
- Budget schedules & supporting documentation

2) Review work assignment (WA) progress
- Conduct progress reviews
- Prepare monthly project report
- Update WA progress schedule
- Prepare M/WBE Utilization Report

3) Contractor Application for Payment (CAP)
- Oversee and prepare monthly CAP

4) Program Management
- Prepare monthly cost control report
- Cost control reviews
- Staffing plans
- Manage subcontracts
- NSPE list update
- Equipment inventory

5) Miscellaneous
- Conduct Health and Safety Reviews
- Word processing and graphic artists
- Report editing

Contract/Project administration hours would not include:
- QA/QC reviews
- Technical oversight by management
- Develop subcontracts
- Work plan development
- Review of deliverables

Schedule 2.11 (c)

Direct Non-Salary Costs

Engineer: EA Engineering, P.C.
Contract No: D004438
Project Name: Site Characterization at AMW Materials Testing Site
Work Assignment No.: D004438-06

Item		Maximum Reimbursement Rate	(Specify Unit)	Est. No. of Units	Total Estimated Cost ($)
A)	**In-house Costs**				
1)	8.5 x 11 print/copy (black and white)	$0.05	$/page	2500	$125.00
2)	8.5 x 11 print/copy (color)	$0.75	$/page	10	$7.50
3)	Microcomputer GIS (Arc/info)	$6.25	$/hour	0	$0.00
4)	Microcomputer Graphics/CADD	$1.50	$/hour	8	$12.00
5)	Personal Protective Equipment (Level C)	$27.00	$/man-day	0	$0.00
6)	Personal Protective Equipment (Level D)	$13.00	$/man-day	11	$143.00
7)	Equipment Purchased Under Contract	$0.00	Lump Sum	1	$0.00
8)	Consultant Owned Equipment	$1,655.00	Lump Sum	1	$1,655.00
9)	Vendor Rented Equipment	$0.00	Lump Sum	1	$0.00
10)	Site Dedicated Equipment	$0.00	Lump Sum	1	$0.00
11)	Consumable Supplies	$40.00	Lump Sum	1	$40.00
12)	Shipping - Submittals	$50.00	each	3	$150.00
13)	Shipping - Samples	$50.00	each	7	$350.00
				In-house Costs Total	$2,482.50
B)	**Miscellaneous**				
	Travel:				
	Per diem: Suffolk County	$64.00	day	9	$576.00
	Lodging: Suffolk County	$126.00	night	6	$756.00
	Local Mileage:	$0.445	mile	800	$356.00
	Air/Tolls		LS		$548.00
				Miscellaneous Total	$2,236.00
	Total Direct Non-Salary Costs		**$4,718.50**		

*See Schedule 2.10(b) for rates.

Work Assignment No. D004438-06

Schedule 2.11(d) 1

Equipment Purchased Under the Contract

Item	Est. Purchase Price ($)	O&M Rate* ($/Month)	Term of Usage (Months)	Est. Usage Cost ($) (Col. 2 + [3 x 4]))
0	0	0	0	$0.00

TOTAL **$0.00**

* The O&M rate is reimbursable only while the equipment is in the custody of the Engineer.

Work Assignment No. D004438-06

Schedule 2.11(d) 2

Maximum Reimbursement Rates for Consultant Owned Equipment

Item	Purchase Price ($) x 85%	Usage Rate* ($/Unit of Time)		Capital Recovery** Rate ($/Unit of Time)	O&M Rate ($/Unit of Time)	Est. Usage (Unit of Time)	Est. Usage Cost ($) (Col. 3 x 6)
MiniRAE 2000 with 10.67 eV Lamp-Datalogging		0	200 Week	0	0	1	$200.00
YSI 6820 with Flow Cell with NEW 650 Display		0	150 Day	0	0	2	$300.00
MIE DR-2000 DataRAM Real-Time Aerosol Monitor		0	450 Week	0	0	1	$450.00
Grundfos Redi-Flo2 2-in. Pump 100 ft with Controller		0	95 Day	0	0	2	$190.00
Generator 3,000 - 5,000 watts		0	45 Day	0	0	2	$90.00
Solinst 122 or Heron H.01L Interface Probe 100 ft		0	45 Day	0	0	5	$225.00
MiniRAE 2000 with 10.67 eV Lamp-Datalogging		0	200 Week	0	0	1	$200.00
						TOTAL	**$1,655.00**

Work Assignment No. D004438-06

Schedule 2.11(d) 3

Maximum Reimbursement Rates for Vendor-Rented Equipment

Item	Reimbursement Rate ($)	Unit of Time	Est. Usage (Unit of Time)	Est. Usage Cost ($) (Col. 2 x 3)
0	0	0	0	$0.00

TOTAL **$0.00**

* Reimbursement will be made at the Maximum Reimbursement rate or the actual rental rate, whichever is less.

Work Assignment No. D004438-06

Schedule 2.11(d) 4

Site-Dedicated Equipment

Item	Estimated Quantity	Unit Cost ($)	Total Budgeted Cost (Col . 2 x 3) ($)
	0	0	$0.00

TOTAL **$0.00**

Work Assignment No. D004438-06

Schedule 2.11(d) 5

Consumable Supplies

Item	Estimated Quantity	Unit Cost ($)	Total Budgeted Cost (Col . 2 x 3) ($)
Low Value Equipment (field hour)	10	$0.80	$8.00
Low Value Equipment (field hour)	40	$0.80	$32.00
Low Value Equipment (field hour)	20	$0.80	$16.00
		TOTAL	**$56.00**

Schedule 2.11(e)

Cost-Plus-Fixed-Fee Subcontracts

Work Assignment Number D004438-06

Name of Subcontractor	**Services to be Performed**	**Subcontract Price**
YEC Inc.	Surveying Professional Services	$3,443.84

A) Direct Salary Costs

Professional Responsibility Level	**Labor Classification**	**Ave. Reimbursement Rate ($/Hr.)**	**Max. Reimbursement Rate ($/Hr.)**	**Est. No. of Hours**	**Total Est. Direct Salary Cost (Ave. Reimb. Rate x Est. # of Hrs.)**
NSPE I	Technician/ Draftsperson (NSPE I)	$21.11	$23.66	0 12	$253.32
NSPE II	Senior Technician/ Staff Engineer/ Scientist/Geologist/Sr. Draftsperson (NSPE II)	$23.30	$26.11	0 12	$279.60
NSPE V	Senior Geologist/ Scientist/Engineer/ Licensed Surveyor (NSPE V)	$41.77	$45.94	0 10	$417.70
NSPE VII	Principal (NSPE VIII)	$63.16	$68.23	0 1	$63.16
Total Direct Salary Costs					$1,013.78

Footnotes:

1) The labor rate averages and maximums shall be adjusted by a rate equal to the increase in the CPI index CUURA101SAO-"All Urban Consumers-new York-Northern N.J.-Long Island" for the previous year. This index is published by the U.S. Department of Labor's Bureau of Labor Statistics. The adjustment will be calculated every January and will be effective for subsequent work assignment billing and budgeting purposes.

2) Schedule 2.10(a) may be re-negotiated after four (4) years at the request of either party. Any revision as a result of renegotiation will be subject to the approval of the Office of the State Comptroller.

3) The maximum annual escalation is limited to 5%.

4) Reimbursement will be limited to the lesser of either of the individual's actual hourly rate or the maximum rate for each labor category.

5) Reimbursement will be limited to the maximum reimbursement rate for the professional responsibility level of the actual work performed.

6) Only those labor classifications indicated with an asterisk will be entitled to overtime.

7) Reimbursement for technical time of principals, owners, and officers will be limited to the maximum reimbursement rate of that category, the actual hourly labor rate paid, or the State M-6 rate, whichever is lower.

8) Maximum reimbursement rates may be exceeded for work assignment activities that are under the jurisdiction of the Schedule of Prevailing Wage Rates set by the New York State Department of Labor.

Schedule 2.11(e)
(continued)

B) Indirect Costs

Indirect costs shall be paid based on a percentage of direct salary costs incurred which shall not exceed a maximum of **117.00%** or the actual rate calculated in accordance with 48 CFR Federal Acquisition Regulation, whichever is lower.

Amount budgeted for indirect costs is:

Total Indirect Costs	$1,186.12

C) Maximum Reimbursement Rates for Direct Non-Salary Costs

Item			*Max. Reimbursement Rate (Specify Unit)*		*Est. # of Units*	*Total Estimated Cost*
1) Travel						
Per diem:	Suffolk County		$64.00	day	0	$0.00
Lodging:	Suffolk County		$126.00	night	0	$0.00
Local Mileage:			$0.445	mile	110	$48.95
Tolls:			$20.000	day	1	$20.00
					Travel Total	$68.95
2) Supplies						
GPS Sub	0	0	750	day	1	$750.00
Level D Safety Equipment (per 2 man crew)	0	0	15	day	2	$30.00
Survey Equip Rental	0	0	65	day	1	$65.00
					Supplies Total	$845.00
Total Direct Non-Salary Costs						$913.95

D) Fixed Fee

The fixed fee is:

Total Fixed Fee	$329.99

Schedule 2.11(e)

Cost-Plus-Fixed-Fee Subcontracts

Work Assignment Number D004438-06

Name of Subcontractor	**Services to be Performed**	**Subcontract Price**
Louis Berger & Associates, P.C.	Engineering Professional Services	$3,531.96

A) Direct Salary Costs

Professional Responsibility Level	**Labor Classification**	**Ave. Reimbursement Rate ($/Hr.)**	**Max. Reimbursement Rate ($/Hr.)**	**Est. No. of Hours**	**Total Est. Direct Salary Cost (Ave. Reimb. Rate x Est. # of Hrs.)**
NSPE II	Senior Technician/ Staff Engineer/ Scientist/Geologist/Sr. Draftsperson (NSPE II)	$23.87	$24.69	0 33	$787.71
NSPE II	Senior Technician/ Staff Engineer/ Scientist/Geologist/Sr. Draftsperson (NSPE II)	$23.87	$24.69	0 12	$286.44
Total Direct Salary Costs					$1,074.15

Footnotes:

1) The labor rate averages and maximums shall be adjusted by a rate equal to the increase in the CPI index CUURA101SAO-"All Urban Consumers-new York-Northern N.J.-Long Island" for the previous year. This index is published by the U.S. Department of Labor's

2) Schedule 2.10(a) may be re-negotiated after four (4) years at the request of either party. Any revision as a result of renegotiation will be subject to the approval of the Office of the State Comptroller.

3) The maximum annual escalation is limited to 5%.

4) Reimbursement will be limited to the lesser of either of the individual's actual hourly rate or the maximum rate for each labor category.

5) Reimbursement will be limited to the maximum reimbursement rate for the professional responsibility level of the actual work performed.

6) Only those labor classifications indicated with an asterisk will be entitled to overtime.

7) Reimbursement for technical time of principals, owners, and officers will be limited to the maximum reimbursement rate of that category, the actual hourly labor rate paid, or the State M-6 rate, whichever is lower.

8) Maximum reimbursement rates may be exceeded for work assignment activities that are under the jurisdiction of the Schedule of Prevailing Wage Rates set by the New York State Department of Labor.

Schedule 2.11(e)
(continued)

B) Indirect Costs

Indirect costs shall be paid based on a percentage of direct salary costs incurred which shall not exceed a maximum of **133.87%** or the actual rate calculated in accordance with 48 CFR Federal Acquisition Regulation, whichever is lower.

Amount budgeted for indirect costs is:

Total Indirect Costs	$1,437.96

C) Maximum Reimbursement Rates for Direct Non-Salary Costs

Item		*Max. Reimbursement Rate (Specify Unit)*		*Est. # of Units*	*Total Estimated Cost*
1) Travel					
Per diem:	Suffolk County	$64.00	day	4	$256.00
Lodging:	Suffolk County	$126.00	night	3	$378.00
Local Mileage:		$0.445	mile	400	$178.00
				Travel Total	$812.00
2) Supplies					
Low Value Equipment (field hour)		30	$0.80		$24.00
Low Value Equipment (field hour)		10	$0.80		$8.00
				Supplies Total	$32.00
Total Direct Non-Salary Costs					$844.00

D) Fixed Fee 7.00%

The fixed fee is:

Total Fixed Fee	$175.85

Schedule 2.11(f)

Unit Price Subcontracts

Work Assignment Number D004438-06

Name of Subcontractor	**Services to be Performed**	**Subcontract Price**	**Management Fee**
Hampton-Clarke, Inc.	Laboratory Other Analyses	$17,455.00	$872.75

Item	**Max. Reimbursement Rate (Specify Unit)**		**Est. No. of Units**	**Total Est. Cost**
Non-Aqueous TCLP by EPA SW-846 Methods	$470.00	ea	5	$2,350.00
Non-Aqueous Corrosivity by NYSDEC ASP Vol. 2, Part XV Cat B	$3.00	ea	5	$15.00
Non-Aqueous Ignitability by NYSDEC ASP Vol. 2, Part XV Cat B	$13.00	ea	5	$65.00
Non-Aqueous Reactivity by NYSDEC ASP Vol. 2, Part XV Cat B	$35.00	ea	5	$175.00
Non-Aqueous Moisture Content by ASTM E203	$0.00	ea	5	$0.00
Aqueous VOC by EPA SW-846 Method 8260B	$75.00	ea	31	$2,325.00
Non-Aqueous VOC by EPA SW-846 Method 8260B	$75.00	ea	27	$2,025.00
Aqueous SVOC by EPA SW-846 Method 8270C	$180.00	ea	6	$1,080.00
Non-Aqueous SVOC by EPA SW-846 Method 8270C	$180.00	ea	10	$1,800.00
Aqueous Pesticides w/ PCBs by EPA SW-846 Method 8081A/8082	$100.00	ea	11	$1,100.00
Non-Aqueous Pesticides w/ PCBs by EPA SW-846 Method 8081A/8082	$100.00	ea	10	$1,000.00
Aqueous Metals by ILM05.0	$100.00	ea	17	$1,700.00
Non-Aqueous Metals by ILM05.0	$100.00	ea	22	$2,200.00
Aqueous Hexavalent Chromium by EPA SW-846 Method 7196A	$36.00	ea	10	$360.00
Non-Aqueous Hexavalent Chromium by EPA EPA SW-846 Method 7196	$90.00	ea	14	$1,260.00
Subtotal Subcontract Price				$17,455.00
Subcontract Management Fee				$872.75
TOTAL				$18,327.75

Schedule 2.11(f)

Unit Price Subcontracts

Work Assignment Number D004438-06

Name of Subcontractor	**Services to be Performed**	**Subcontract Price**	**Management Fee**
ChemWorld Environmental, Inc.	Data validation	$1,778.00	$88.90

Item	**Max. Reimbursement Rate (Specify Unit)**		**Est. No. of Units**	**Total Est. Cost**
Aqueous VOC by EPA SW-846 Method 8260B	$22.00	ea	22	$484.00
Non-Aqueous VOC by EPA SW-846 Method 8260	$22.00	ea	18	$396.00
Aqueous SVOC by EPA SW-846 Method 8270C	$23.00	ea	3	$69.00
Non-Aqueous SVOC by EPA SW-846 Method 8270C	$23.00	ea	3	$69.00
Aqueous Pesticides w/ PCBs by EPA SW-846 Method 8081A/8082	$16.00	ea	3	$48.00
Non-Aqueous Pesticides w/ PCBs by EPA SW-846 Method 8081A/8082	$16.00	ea	3	$48.00
Aqueous Metals by ILM05.0	$20.00	ea	11	$220.00
Non-Aqueous Metals by ILM05.0	$20.00	ea	18	$360.00
Aqueous Hexavalent Chromium by EPA SW-846 Method 7196	$6.00	ea	7	$42.00
Non-Aqueous Hexavalent Chromium by EPA SW-846 Method 7196	$6.00	ea	7	$42.00
Subtotal Subcontract Price				$1,778.00
Subcontract Management Fee				$88.90
TOTAL				$1,866.90

Schedule 2.11(f)

Unit Price Subcontracts

Work Assignment Number D004438-06

Name of Subcontractor	Services to be Performed	Subcontract Price	Management Fee
Land, Air, and Water Environmental Services, Inc.	Drilling Services	$13,220.00	$661.00

Item	Max. Reimbursement Rate (Specify Unit)		Est. No. of Units	Total Est. Cost
Drilling Services	$13,220.00	Lump Sum	1	$13,220.00
Subtotal Subcontract Price				$13,220.00
Subcontract Management Fee				$661.00
TOTAL				$13,881.00

SCHEDULE 2.11(g)

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer:	EA Engineering, P.C.	**Page:**	1 of 1
Contract No:	D004438	**Date Prepared:**	14-Nov-06
Project Name:	Site Characterization at AMW Materia	**Billing Period:**	
Work Assignment No.:	D004438	**Invoice No.**	
Task#/Name:	Summary		
Complete:			

	Expenditure Category	*A* *Costs Claimed This Period*	*B* *Paid To Date*	*C* *Total Disallowed To Date*	*D* *Total Costs Incurred to Date (A+B+C)*	*E* *Estimated Costs To Completion*	*F* *Estimated Total Work Assignment Price (A+B+E)*	*G* *Approved Budget*	*H* *Estimated Under/Over (G-F)*
1	Direct Salary Costs				$0.00		$9,669.10		($9,669.10)
2	Indirect Costs				$0.00		$14,740.54		($14,740.54)
3	Subtotal Direct Salary Costs and Indirect Costs				$0.00		$24,409.64		($24,409.64)
4	Travel				$0.00		$2,236.00		($2,236.00)
5	Other Non-Salary Costs				$0.00		$2,482.50		($2,482.50)
6	Subtotal Direct Non-Salary Costs				$0.00		$4,718.50		($4,718.50)
7	Subcontractors				$0.00		$41,051.45		($41,051.45)
8	Total WA Cost				$0.00		$70,179.59		($70,179.59)
9	Fixed Fee 7%				$0.00		$1,708.68		($1,708.68)
10	Total WA Price				$0.00		$71,888.27		($71,888.27)

Program Manager(Engineer) _____ Date: _____

SCHEDULE 2.11(g)

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer:	EA Engineering, P.C.	**Page:**	1 of 1
Contract No:	D004438	**Date Prepared:**	14-Nov-06
Project Name:	Site Characterization at AMW Materials Testing Site	**Billing Period:**	
Work Assignment No.:	D004438-06	**Invoice No.**	
Task#/Name:	Task 1 - Work Plan Development		
Complete:			

	Expenditure Category	*A* *Costs Claimed This Period*	*B* *Paid To Date*	*C* *Total Disallowed To Date*	*D* *Total Costs Incurred to Date (A+B+C)*	*E* *Estimated Costs To Completion*	*F* *Estimated Total Work Assignment Price (A+B+E)*	*G* *Approved Budget*	*H* *Estimated Under/Over (G-F)*
1	Direct Salary Costs				$0.00		$2,971.23		($2,971.23)
2	Indirect Costs				$0.00		$4,529.64		($4,529.64)
3	Subtotal Direct Salary Costs and Indirect Costs				$0.00		$7,500.87		($7,500.87)
4	Travel				$0.00		$564.00		($564.00)
5	Other Non-Salary Costs				$0.00		$75.00		($75.00)
6	Subtotal Direct Non-Salary Costs				$0.00		$639.00		($639.00)
7	Subcontractors				$0.00		$0.00		$0.00
8	Total WA Cost				$0.00		$8,139.87		($8,139.87)
9	Fixed Fee 7%				$0.00		$525.06		($525.06)
10	Total WA Price				$0.00		$8,664.93		($8,664.93)

Program Manager(Engineer) _____ Date: _____

SCHEDULE 2.11(g)

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer:	EA Engineering, P.C.	**Page:**	1 of 1
Contract No:	D004438	**Date Prepared:**	14-Nov-06
Project Name:	Site Characterization at AMW Materials Testing Site	**Billing Period:**	
Work Assignment No.:	D004438-06	**Invoice No.**	
Task#/Name:	Task 2 - Evaluation of Stockpiled Soils		
Complete:			

	Expenditure Category	*A* *Costs Claimed This Period*	*B* *Paid To Date*	*C* *Total Disallowed To Date*	*D* *Total Costs Incurred to Date (A+B+C)*	*E* *Estimated Costs To Completion*	*F* *Estimated Total Work Assignment Price (A+B+E)*	*G* *Approved Budget*	*H* *Estimated Under/Over (G-F)*
1	Direct Salary Costs				$0.00		$762.23		($762.23)
2	Indirect Costs				$0.00		$1,162.02		($1,162.02)
3	Subtotal Direct Salary Costs and Indirect Costs				$0.00		$1,924.25		($1,924.25)
4	Travel				$0.00		$291.00		($291.00)
5	Other Non-Salary Costs				$0.00		$121.00		($121.00)
6	Subtotal Direct Non-Salary Costs				$0.00		$412.00		($412.00)
7	Subcontractors				$0.00		$5,596.50		($5,596.50)
8	Total WA Cost				$0.00		$7,932.75		($7,932.75)
9	Fixed Fee 7%				$0.00		$134.70		($134.70)
10	Total WA Price				$0.00		$8,067.45		($8,067.45)

Program Manager(Engineer) _____ Date: _____

SCHEDULE 2.11(g)

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer:	EA Engineering, P.C.	**Page:**	1 of 1
Contract No:	D004438	**Date Prepared:**	14-Nov-06
Project Name:	Site Characterization at AMW Materials Testing Site	**Billing Period:**	
Work Assignment No.:	D004438-06	**Invoice No.**	
Task#/Name:	Task 3 - Evaluation of On-Site Media		
Complete:			

	Expenditure Category	*A* *Costs Claimed This Period*	*B* *Paid To Date*	*C* *Total Disallowed To Date*	*D* *Total Costs Incurred to Date (A+B+C)*	*E* *Estimated Costs To Completion*	*F* *Estimated Total Work Assignment Price (A+B+E)*	*G* *Approved Budget*	*H* *Estimated Under/Over (G-F)*
1	Direct Salary Costs				$0.00		$2,638.15		($2,638.15)
2	Indirect Costs				$0.00		$4,021.86		($4,021.86)
3	Subtotal Direct Salary Costs and Indirect Costs				$0.00		$6,660.01		($6,660.01)
4	Travel				$0.00		$1,026.00		($1,026.00)
5	Other Non-Salary Costs				$0.00		$1,741.00		($1,741.00)
6	Subtotal Direct Non-Salary Costs				$0.00		$2,767.00		($2,767.00)
7	Subcontractors				$0.00		$25,097.67		($25,097.67)
8	Total WA Cost				$0.00		$34,524.68		($34,524.68)
9	Fixed Fee 7%				$0.00		$466.20		($466.20)
10	Total WA Price				$0.00		$34,990.88		($34,990.88)

Program Manager(Engineer) _____ Date: _____

SCHEDULE 2.11(g)

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer:	EA Engineering, P.C.	**Page:**	1 of 1
Contract No:	D004438	**Date Prepared:**	14-Nov-06
Project Name:	Site Characterization at AMW Materials Testing Site	**Billing Period:**	
Work Assignment No.:	D004438-06	**Invoice No.**	
Task#/Name:	Task 4 - Evaluation of Stormwater Structures		
Complete:			

	Expenditure Category	*A* *Costs Claimed This Period*	*B* *Paid To Date*	*C* *Total Disallowed To Date*	*D* *Total Costs Incurred to Date (A+B+C)*	*E* *Estimated Costs To Completion*	*F* *Estimated Total Work Assignment Price (A+B+E)*	*G* *Approved Budget*	*H* *Estimated Under/Over (G-F)*
1	Direct Salary Costs				$0.00		$865.46		($865.46)
2	Indirect Costs				$0.00		$1,319.39		($1,319.39)
3	Subtotal Direct Salary Costs and Indirect Costs				$0.00		$2,184.85		($2,184.85)
4	Travel				$0.00		$355.00		($355.00)
5	Other Non-Salary Costs				$0.00		$326.00		($326.00)
6	Subtotal Direct Non-Salary Costs				$0.00		$681.00		($11,509.17)
7	Subcontractors				$0.00		$8,490.38		($8,490.38)
8	Total WA Cost				$0.00		$11,356.23		($11,356.23)
9	Fixed Fee 7%				$0.00		$152.94		($152.94)
10	Total WA Price				$0.00		$11,509.17		($11,509.17)

Program Manager(Engineer) _____ Date: _____

SCHEDULE 2.11(g)

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Engineer:	EA Engineering, P.C.	**Page:**	1 of 1
Contract No:	D004438	**Date Prepared:**	14-Nov-06
Project Name:	Site Characterization at AMW Materials Testing Site	**Billing Period:**	
Work Assignment No.:	D004438-06	**Invoice No.**	
Task#/Name:	Task 5 - Field Documentation and Reporting		
Complete:			

	Expenditure Category	*A* *Costs Claimed This Period*	*B* *Paid To Date*	*C* *Total Disallowed To Date*	*D* *Total Costs Incurred to Date (A+B+C)*	*E* *Estimated Costs To Completion*	*F* *Estimated Total Work Assignment Price (A+B+E)*	*G* *Approved Budget*	*H* *Estimated Under/Over (G-F)*
1	Direct Salary Costs				$0.00		$2,432.03		($2,432.03)
2	Indirect Costs				$0.00		$3,707.63		($3,707.63)
3	Subtotal Direct Salary Costs and Indirect Costs				$0.00		$6,139.66		($6,139.66)
4	Travel				$0.00		$0.00		$0.00
5	Other Non-Salary Costs				$0.00		$219.50		($219.50)
6	Subtotal Direct Non-Salary Costs				$0.00		$219.50		$0.00
7	Subcontractors				$0.00		$1,866.90		($1,866.90)
8	Total WA Cost				$0.00		$8,226.06		($8,226.06)
9	Fixed Fee 7%				$0.00		$429.78		($429.78)
10	Total WA Price				$0.00		$8,655.84		($8,655.84)

Program Manager(Engineer) _____ Date: _____

SCHEDULE 2.11(g) - Supplemental

Cost Control Report For Subcontracts

Engineer:	EA Engineering, P.C.	**Page:**	1 of 1
Contract No:	D004438	**Date Prepared:**	14-Nov-06
Project Name:	Site Characterization at AMW Materials Testing Site	**Billing Period:**	
Work Assignment No.:	D004438-06	**Invoice No.**	

	Subcontract Name	*A Subcontract Costs Claimed this Application Inc. Resubmittals*	*B Subcontract Costs Approved for Payment on Previous Applications*	*C Total Subcontract Costs to Date (A plus B)*	*D Subcontract Approved Budget*	*E Management Fee Budget*	*F Management Fee Paid*	*G Total Costs to Date (C plus F)*
1	YEC Inc.			$0.00	$3,443.84	NA	NA	$0.00
2	Louis Berger & Associates, P.C.			$0.00	$3,531.96	NA	NA	$0.00
3	Hampton-Clarke, Inc.			$0.00	$17,455.00	$872.75		$0.00
4	ChemWorld Environmental, Inc.			$0.00	$1,778.00	$88.90		$0.00
5	Land, Air, and Water Environmental Services, Inc.			$0.00	$13,220.00	$661.00		$0.00
6								
7								
8	TOTALS	$0.00	$0.00	$0.00	$39,428.80	$1,622.65		$0.00

Project Manager _____ Date: _____

Notes:
1) Costs listed in Columns A, B, C, & D do not include any management fee costs.
2) Management fee is applicable to only properly procured, satisfactorily completed, unit price subcontracts over $10,000.
3) Line 11, Column G should equal Line 7 (Subcontractors), Column D of Summary Cost Control Report.

SCHEDULE 2.11(h)

MONTHLY COST CONTROL REPORT
SUMMARY OF LABOR HOURS
Number of Direct Labor Hours Expended to Date/Estimated Number of Direct Labor Hours to Completion

Engineer:	EA Engineering, P.C.	**Date Prepared:**	14-Nov-06
Contract No:	D004438	**Billing Period:**	
Project Name:	Site Characterization at AMW Materials Testing Site	**Invoice No.:**	
Work Assignment No.:	D004438-06		

NSPE Labor Classification	**IX Exp/Est***		**VIII Exp/Est**		**VII Exp/Est**		**VI Exp/Est**		**V Exp/Est**		**IV Exp/Est**		**III Exp/Est**		**II Exp/Est**		**I Exp/Est**		**Total No. of Direct Labor Hours Exp/Est**	
Task 1	0.0		0.0		0.0		2.0		0.0		29.0		58.0		14.0		8.0		111.0	
Task 2	0.0		0.0		0.0		2.0		0.0		7.0		12.0		6.0		0.0		27.0	
Task 3	0.0		0.0		0.0		2.0		0.0		15.0		76.0		6.0		0.0		99.0	
Task 4	0.0		0.0		0.0		2.0		0.0		10.0		12.0		6.0		0.0		30.0	
Task 5	0.0		0.0		0.0		7.0		0.0		14.0		28.0		20.0		30.0		99.0	
																			0.0	
																			0.0	
																			0.0	
																			0.0	
																			0.0	
																			0.0	
																			0.0	
																			0.0	
																			0.0	
Total Hours	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0	0.0	75.0	0.0	186.0	0.0	52.0	0.0	38.0	0.0	366.0

* Expended/Estimated

Schedule 2.11(i)

Monthly Cost Control Report
*Equipment Inventory Control Form**

Engineer EA Engineering, P.C. ***Contract No.*** D004438

1) Equipment Description _____
Purchase Date _____
Purchase Price _____
Dates & Location of Use Since Last Report (Identify WA) _____
Present Storage Location _____
Condition of Equipment _____
Responsible Person and Phone No. _____

2) Equipment Description _____
Purchase Date _____
Purchase Price _____
Dates & Location of Use Since Last Report (Identify WA) _____
Present Storage Location _____
Condition of Equipment _____
Responsible Person and Phone No. _____

3) Equipment Description _____
Purchase Date _____
Purchase Price _____
Dates & Location of Use Since Last Report (Identify WA) _____
Present Storage Location _____
Condition of Equipment _____
Responsible Person and Phone No. _____

4) Equipment Description _____
Purchase Date _____
Purchase Price _____
Dates & Location of Use Since Last Report (Identify WA) _____
Present Storage Location _____
Condition of Equipment _____
Responsible Person and Phone No. _____

* This form must be completed for all Department owned equipment in the custody of the Engineer and submitted as part of the Monthly Cost Control Report.

Appendix F
Supporting Documentation
for the Work Assignment Budget

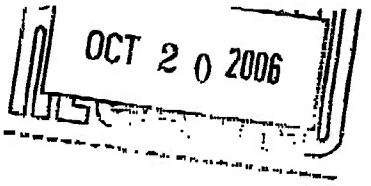
Post-it® Fax Note 7671 | Date 10/20 | pages 3

To C. Caronica	From James Gatherer
Co./Dept.	Co.
Phone #	Phone #
Fax #	Fax #

LAND, AIR, WATER ENVIRONMENTAL SERVICES

32 CHICHESTER AVE. PO BOX 372 CENTER MORICHES, NY 11934

October 17, 2006



EA ENGINEERING, SCIENCE & TECHNOLOGY
Attn: James Gatherer
3 Washington Center
Newburgh, NY 12550

Subject: Amityville Soil boring time and cost estimate according to Subcontract Nos: CIDIQ06048 in support of your NYSDEC subcontract NYSDEC D004441

Dear Mr. Gatherer:

The following is Land, Air, Water Environmental Services, Inc.'s (LAWES) cost and time estimate for the performance of a soil boring project at your Amityville site.

Specifically the scope of work as LAWES understands it, will be to perform the one-call utility notification (required by NYSPSC prior to performing any boring or excavating services), and mobilize to the location both a drill rig and crew to perform the well installation services and a Geoprobe rig and crew to perform the groundwater profile sampling.

The Geoprobe scope of work will be to bore through unconsolidated soils to a depth of 80' below grade utilizing 1 ½" rods with an extendable screen. Once the rods have been driven to the termination depth the rods will be backed up 4' and the screen exposed. The sample interval will be sampled utilizing 3/8" poly tubing with a foot check valve and a peristaltic pump. The rods will then be extracted to the next sampling interval and the sampling process repeated. Two borings are anticipated to be performed in this manner with sampling intervals of 80', 70', 60', 50', 40', and 30' below grade respectively. Upon completion of sampling activities grout will be mixed up and poured into any remaining open borehole. Borings performed through concrete or asphalt will be patched. Each boring will be pre-cleared by hand to 5' below grade. All rods and samplers will be deconned with a liquinox wash and rinse between sampling events. Decon liquids and excess sample and purge water are anticipated to be drummed.

The drilling scope of work will be to mobilize a hollow stem auger rig and crew to install (4) 2" x 30' Sch 40 PVC monitoring wells. Prior to performing the soil boring services the borings will be cleared by hand to a depth of 5' below grade. A 2" Sch 40 PVC monitoring well will be installed in each of the borings. The wells will be screened from 20' – 30' with Sch 40 PVC flush joint #10 slot screen. The wells will be gravel packed from 1' below the screen to 2' above the screen with a Morie #1 gravel pack. A fine sand seal of Morie #00 sand will be installed above the gravel pack and a flexible bentonite seal will be emplaced above the sand seal. Each well will be backfilled from the bentonite seal to grade with drill cuttings and will be finished at grade with a locking J-plug, lock, and a bolt down manhole. All augers, rods, and spoons will be deconned prior to beginning the drilling services and after boring by steam cleaning or liquinox wash and rinse. Well development will be by pumping and surging with a submersible pump. All excess drill cuttings, development water, and decon liquids will be drummed in DOT 17-H drums and will be staged at the subject site. Split spoon samples will be taken continuously from 5' to termination depth.

October 17, 2006

J. Gatherer/EA ENGINEERING- Amityville, NY time/cost estimate as per Contract No: CIDIQ06048

The cost to perform the above noted scope of work based upon utilizing the rates listed in Subcontract Agreement between LAWES and EA ENGINEERING, SCIENCE, AND TECHNOLOGY - Subcontract Nos: CIDIQ06047 & CIDIQ06048 are estimated as follows:

Amityville Geoprobing: (2) 80' soil borings with groundwater vertical profile samples obtained:

ESTIMATED GEOPROBING COSTS			
ITEM	**UNIT COST**	**ESTIMATED UNITS**	**ESTIMATED COST**
Mobilization	$400/each	1 each	$400
Tracked Geoprobe 66DT & 2-man crew	$2,000/day	2 days	$4,000
Overtime, after 8 hours on site – rig & crew	$300/hour	0 hours	$0
Vactron unit, hydro-jet & operator	$1,400/day	0 days	$0
DOT 17H drums	$60/drum	1 drum	$60
Temporary decon pad	$400/each	0 each	$0
Asphalt/concrete patch	$30/bag	1 bag	$30
Bentonite chips	$30/bag	2 bags	$60
		SUB TOTAL	**$4,560**
Suffolk County Sales tax @ 8.625%	$0 tax	Municipal	$0
TOTAL ESTIMATED PROBING COSTS:			**$4,560**

Amityville Well Installation: (4) 2" x 30' Sch 40 PVC monitoring wells installed:

ESTIMATED DRILLING COSTS			
ITEM	**UNIT COST**	**ESTIMATED UNITS**	**ESTIMATED COST**
Mobilization	$400/each	1 each	$400
Truck mounted Rig & crew up to 8 hrs on site	$2,000/day	2 days	$4,000
Overtime, after 8 hours on site – rig & crew	$300/hour	0 hours	$0
Vactron unit, hydro-jet & operator	$1,400/day	0 days	$0
Extra day of well development	$1,600/day	0 days	$0
Sch 40 PVC 2" flush joint casing	$12/foot	80 feet	$960
Sch 40 PVC 2" flush joint screen	$12/foot	40 feet	$480
2" J-plugs	$25/each	4 each	$100
8" flush mount covers	$250/each	4 each	$1,000
50 lb. bags of well sand	$20/bag	36 bags	$720
Bentonite chips	$30/bag	4 bags	$120
DOT 17H drums	$60/drum	8 drums	$480
Temporary decon pad	$400/each	1 each	$400
		SUB TOTAL	**$8,660**
Suffolk County Sales tax @ 8.625%	$0 tax	Municipal	$0
TOTAL ESTIMATED DRILLING COSTS:			**$8,660**

October 17, 2006

J. Gatherer/EA ENGINEERING- Amityville, NY time/cost estimate as per Contract No: CIDIQ06048

The time to complete the above noted scope of work is estimated as follows:

ESTIMATED TIME LINE IN DAYS:

TASK:	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Mobilization Geoprobe	X				
pre-clear (2) borings	X				
(2) 80' Geoprobe borings	X	X			
Restoration probe holes	X	X			
Mobilization drill rig			X		
(4) 2" x 30' monitoring wells			X	X	
Well development				X	

Please note that all times and quantities listed above are estimated only - actual times and quantities utilized will be dependent upon site and subsurface conditions. Any change in scope, units or standby time will incur additional charges. All work will be billed as per Subcontract No: CIDIQ06048.

EA ENGINEERING, SCIENCE & TECHNOLOGY (EA) will be responsible for locating and labor and equipment access to each boring location, all required permits, accepting custody of all samples from the drill master, site health and safety, all regulatory-client-owner or tenant interfacing, maintaining and proper closure of the monitoring wells, and management and disposal of wastes. All waste will remain on site. Land, Air, Water Environmental Services, Inc. is a certified Woman Owned Business Enterprise (WBE) and all work supplied will be nonunion. LAWES will take the standard industry precaution of calling in the one-call utility notification based upon information to be supplied by EA and pre-clearing borings to 5' below grade by hand. LAWES will not be responsible for damage to improperly or un-marked utilities or constructions on the site. This project is not a prevailing wage project.

Terms of this project will as per Subcontract No: CIDIQ06048. Should you have any questions or comments concerning this cost and time estimate or the scope of work as understood by LAWES please feel free to call and I will be happy to be of assistance.

Sincerely yours,

John M. Lamprecht
V. President

JML:mm
Page 3.

DATA VALIDATION (ChemWorld)

- add'l unit cost for hex chrome analyses

Hayward, Jim

From: Kuziak, Heidi
Sent: Friday, October 20, 2006 9:43 AM
To: Hayward, Jim
Subject: FW: Standby prices / Hex. Chromium

From: chemworld@comcast.net [mailto:chemworld@comcast.net]
Sent: Friday, October 20, 2006 9:12 AM
To: Kuziak, Heidi
Subject: Re: Standby prices / Hex. Chromium

Hi Heidi,

Please include a price for **Hexavalent Chromium at $6 for the Full Validation Unit Price and $3 for a DUSR Unit Price.** Thank you for the opportunity to provide you the cost information. I look forward to working with you and EA, in the near future. I can be flexible with the turn around time of your work, if this is helpful for your project.

Andrea S.

Andrea P. Schuessler, CHMM

ChemWorld Environmental, Inc.

14 Orchard Way North

Rockville, MD 20854

301-294-6144 Phone and FAX

Email chemworld@comcast.net

ChemWorld Environmental, Inc.

10/20/2006

Feldman, Tina

From: Canonica, Christopher
Sent: Friday, October 20, 2006 1:45 PM
To: Feldman, Tina
Subject: FW: North Amityville

From: Gatherer, James
Sent: Friday, October 20, 2006 1:44 PM
To: Canonica, Christopher; Hayward, Jim
Subject: FW: North Amityville

...this is what I got from Parratt-Wolffe

From: Joel Parratt [mailto:jparratt@pwinc.com]
Sent: Friday, October 13, 2006 9:29 AM
To: Gatherer, James
Subject: RE: North Amityville

We could drill the 80 foot holes with conventional methods and geoprobe the shallow holes with one rig, but not the other way around.

From: Gatherer, James [mailto:jgatherer@eaest.com]
Sent: Friday, October 13, 2006 9:25 AM
To: Joel Parratt
Subject: RE: North Amityville

Joel,
Thanks for getting back to me. Another question. If we wanted to do the 2 80-ft points with a geoprobe, and install the 4 soil borings/monitoring wells using conventional HSA methods, would that involve having 2 rigs on site, and if so, would that change your mob/demob costs?
James Gatherer
Geologist
EA Engineering
3 Washington Center
Newburgh, NY 12550
Tel: 845-565-8100 x1014

From: Joel Parratt [mailto:jparratt@pwinc.com]
Sent: Friday, October 13, 2006 8:20 AM
To: Gatherer, James
Cc: Bill Morrow
Subject: North Amityville

James,

Bill asked me if I could respond to your e-mail regarding North Amityville.

In response to your question regarding geoprobing to 80' - we would not attempt this with any equipment that we have, however we could drill using conventional methods.

Our mobilization charge for this project would be $4000.

We would charge the following rates for pre-pack well installations (10' screen - $140, 10' riser - $20).

Please feel free to call me if you should have any questions.

Thanks,
Joel

Joel V. Parratt
Parratt-Wolff, Inc.
5879 Fisher Road
P.O. Box 56
East Syracuse, NY 13057
Phone: (315) 437-1429 ext. 23
Toll free: (800) 782-7260
Fax: (315) 437-1770

Feldman, Tina

From: Canonica, Christopher
Sent: Friday, October 20, 2006 1:49 PM
To: Feldman, Tina
Subject: FW: NYS DEC Standby Contract/North Amityville
Attachments: image001.jpg; image002.jpg

From: Gatherer, James
Sent: Friday, October 20, 2006 1:45 PM
To: Canonica, Christopher; Hayward, Jim
Subject: FW: NYS DEC Standby Contract/North Amityville

...and this is what I got from Aztech

From: Matt Darcangelo [mailto:mdarcangelo@aztechtech.com]
Sent: Monday, October 16, 2006 8:02 PM
To: Gatherer, James
Cc: Fil Fina, III; Mary Passaretti
Subject: RE: NYS DEC Standby Contract/North Amityville

James,

The mobilization fee will be $1,650. It is my intent to send 2 people down in one truck towing the rig on a trailer. If we have the flexibility I would like to be able to bill the small track rate for the job considering that is what we are sending. The two people will be necessary for the HSA work and it makes more sense to send them together for the probing portion. Having a helper there should make the 80' probe holes go faster too.

If you have any questions please call me. It will be best to reach me on my cell phone (518) 365-3333 the next three days.

Thank you for the opportunity.

Matt Darcangelo, PE
Aztech Technologies, Inc.
5 McCrea Hill Road
Ballston Spa, NY 12020
518.885.5383
518.885.5385 (fax)
mdarcangelo@aztechtech.com

Woman-Owned Business
www.aztechtech.com

Aztech Technologies, Inc. is a joint venture between
Passaretti Geological & Environmental Consultants, Inc. and F.L. Fina, PE, PC.

From: Gatherer, James [mailto:jgatherer@eaest.com]
Sent: Thursday, October 12, 2006 12:54 PM
To: Matt Darcangelo
Subject: NYS DEC Standby Contract/North Amityville

Hi Matt,

I'm contacting you regarding a job we have in North Amityville, NY. The job includes the following tasks:

- Groundwater sampling at 2 locations using geoprobe. Samples will be collected every 10-ft from 80 to 30-ft below grade.
- Installation of 4 soil borings to 30-ft below grade using either geoprobe or conventional drilling methods with subsequent well installation (10-ft screens)

I believe we have a stand-by contract with you for our DEC work. However, there will be some costs outside of those included in the list of services provided in the contract. We would need costs for the following:

- Mob/Demob time to the site
- Installation of pre-pack wells to approximately 30-ft with 10-ft screen lengths using geoprobe methods. We are considering this method as an alternative to installing the four 30-ft borings.

Also, I'm interested in finding out what type of rigs you have available for the work, and if you think getting down to 80-ft and installing 4 wells with a geoprobe rig is feasible for this area. Give me a call at your convenience.

Thanks,
James Gatherer
Geologist
EA Engineering, Science & Technology
3 Washington Center
Newburgh, NY 12550
Tel: 845-565-8100 x1014