REMEDIAL DESIGN WORK PLAN

NEW CASSEL INDUSTRIAL AREA SITE
OPERABLE UNIT NO. 3
TOWN OF NORTH HEMPSTEAD
NASSAU COUNTY, NEW YORK
SITE NO. 1-30-043

WORK ASSIGNMENT NO. D004446-6

Prepared For

New York State Department of Environmental Conservation

July 2007

DVIRKA AND BARTILUCCI
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Dvirka and Bartilucci
CONSULTING ENGINEERS

330 Crossways Park Drive, Woodbury, New York 11797-2015
516-364-9890 • 718-460-3634 • Fax: 516-364-9045
e-mail: findingsolutions@db-eng.com

July 17, 2007

Mr. Joseph Jones
New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau A
625 Broadway, 11th Floor
Albany, NY 12233-7015

Re: New Cassel Industrial Area Site
Operable Unit No. 3
New Cassel, New York
NYSDEC Work Assignment No. D004446-6
D&B Job No. 2564

Dear Mr. Jones:

Enclosed please find four final copies of the document entitled:

"Remedial Design Work Plan
New Cassel Industrial Area Site
Operable Unit No. 3
July 2007"

The enclosed incorporates revisions outlined in the Final Draft Remedial Design Work Plan submitted via e-mail on May 1, 2007, which was intended to address comments provided in your correspondence dated April 2, 2007 on the draft work plan submitted via e-mail by Dvirka and Bartilucci Consulting Engineers (D&B) on November 8, 2006. The comments and responses listed below are in the same order as presented in your letter:

Comment No. 1:

"On page 2-8, first paragraph: The ROD for Utility Manufacturing site was only for on-site contamination. The off-site remedial investigation is on going at this time."

Response to Comment No. 1:

Acknowledged. The work plan has been revised accordingly.

Comment No. 2:

"On page 3-11, end of Task 2: In-well stripping depends on the establishment of a circulation cell within the aquifer. Subsurface lithology may inhibit establishment of the circulation cell. After the results of the geophysical logging and slug testing are obtained, a determination must be made as to the suitability of the subsurface conditions for in-well stripping. Therefore, data taken up to this point should be compiled in a pre-design report and submitted to the Department with either recommendations to proceed the in-well air stripping remedy, or recommendations appropriate to proceed with the alternate technology specified in the ROD."

Response to Comment No. 2:

Acknowledged. The work plan has been modified to include a pre-design investigation report summarizing the results of investigation activities (e.g., groundwater sampling results, permeability testing results, geophysical logging, etc.). The data obtained will be evaluated and recommendations on whether or not existing site conditions are favorable for the in-well air stripping remedy will be made at this time.

Comment No. 3:

"On page 3-11, section 3: These formal submissions are reduced to a pre-final and the final version of the contract documents. Communications between D&B and Department contract managers will facilitate the reduction of drafts."

Response to Comment No. 3:

Acknowledged. The work plan has been modified accordingly to only include the submission of pre-final and the final version of the contract documents to the New York State Department of Environmental Conservation (NYSDEC) for review and comment.

Comment No. 4:

"On page 3-12, section 3.3: Note that, in the event that the pre-design report is not favorable to in-well air stripping, the design may be for a pump and treat technology. Consequently, the specifications need to be either for an in-well air stripping remedy or an extraction and treatment system. Please indicate the specification content for both remedies."

Response to Comment No. 4:

D&B acknowledges that if the results of the pre-design investigation demonstrate that in-well air stripping is not favorable, pump and treat technology will be considered as an alternative remedy. Please note, however, that the design of a pump and treat system will require additional effort when compared to the effort required for the preparation of a performance-based design for an in-well air stripping technology. Furthermore, given the uncertainties associated with the alternate remedy (e.g., treatment building location, point of discharge, discharge requirements, level and type of treatment required, etc.) it is practically impossible to determine the level of effort at this time. As such, it is recommended that design efforts for a pump and treat alternative be identified at a later date as part of a work plan amendment should a pump and treat technology be considered as an alternate remedy.

Comment No. 5:

> *"On page 3-12, section 3.3: It should be noted that, in the event of an unsuccessful pilot test, no payment will be made to the contractor by the Department."*

Response to Comment No. 5:

Upon preparation of the design documents for the construction of the site-specific remedy, D&B will work with the NYSDEC to develop appropriate language for the implementation of the required pilot test.

Comment No. 6:

> *"On page 3-12, section 3.3: Institutional controls will not be the responsibility of the contractor, and this requirement must not be included in the specifications."*

Response to Comment No. 6:

Acknowledged. The work plan has been revised accordingly.

Comment No. 7:

> *"On page 3-12, section 3.3: A health and safety plan must be provided for the pilot study."*

Response to Comment No. 7:

Acknowledged. The design documents will include requirements for the Contractor to submit a site-specific health and safety plan applicable to all facets of the work, including, but not necessarily limited to, the pilot study.

Comment No. 8:

"On page 3-13, section 3.3.1: The first submission should be a pre-final design.

Response to Comment No. 8:

Acknowledged. The work plan has been revised accordingly to only include the submission of pre-final and final versions of the contract documents to the NYSDEC for review and comment.

Comment No. 9:

"On page 3-13, section 3.3.2: The first submission should be a pre-final design."

Response to Comment No. 9:

Acknowledged. The work plan has been revised accordingly to only include the submission of pre-final and final versions of the contract documents to the NYSDEC for review and comment.

Comment No. 10:

"On page 3-14, section 3.3.3: A PE registered in NYS must sign and seal the final design."

Response to Comment No. 10:

Acknowledged. The work plan has been revised accordingly to indicate that the final design documents will be signed and sealed by a New York State registered professional engineer.

Comment No. 11:

"On page 3-14, section 3.3.3: A PE registered in NYS must sign and seal the cost estimate."

Response to Comment No. 11:

Acknowledged. The work plan has been modified accordingly to indicate that the project cost estimate will be signed and sealed by a New York State registered professional engineer.

Comment No. 12:

"On page 3-15, section 3.5: D&B must determine potential bidders. Note that the technologies are patented."

Response to Comment No. 12:

Acknowledged. The work plan has been revised accordingly.

Comment No. 13:

"On page 3-15, section 3.5.2: D&B will send out the addenda."

Response to Comment No. 13:

Acknowledged. However, per the requirements of the work assignment, please note that that the Engineer will be responsible for the preparation of any necessary addenda to performance specifications and plans for timely transmittal by the NYSDEC to prospective bidders. As this has been the procedure on several other NYSDEC projects for preparation and distribution of addenda, the work plan has not been changed.

Comment No. 14:

"On page 3-15, section 3.5.2: Since 75 copies of the contract are to be prepared, 75 copies of the addenda will be provided."

Response to Comment No. 14:

Acknowledged. The work plan has been revised accordingly to include the submittal of 75 copies of the addenda to NYSDEC for distribution.

Comment No. 15:

"On page 4-1, section 4.1: The contract is for the New Cassel Industrial Area, not for the Fumex Sanitation Site."

Response to Comment No. 15:

Acknowledged. The work plan has been revised accordingly to reference the New Cassel Industrial Area.

Comment No. 16:

"All groundwater samples should be analyzed for volatile organic compounds using EPA method 8260. Detection limits should be less than or equal to 1.0 microgram per liter."

Response to Comment No. 16:

Acknowledged. The work plan has been revised accordingly to include that all groundwater samples will be analyzed for volatile organic compounds using USEPA method 8260. Detection limits for these samples will be less than or equal to 1.0 microgram per liter.

In addition, the enclosed work plan has also been revised to incorporate items discussed during our conference call on April 24, 2007 (i.e., site survey), as well as comments forwarded via e-mail on June 15, 2007 from the NYSDEC Contract Manager, Ralph Burger, with regard to Schedule 2.11 forms provided in Section 5.0 of the submitted work plan.

If you have any questions and/or comments please do not hesitate to contact me at (516) 364-9890.

Very truly yours,

Frank DeVita
Project Manager

FD/MD/all
cc: R. Burger (NYSDEC)
R. Walka (D&B)
M. Wright (D&B)
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REMEDIAL DESIGN WORK PLAN

NEW CASSEL INDUSTRIAL AREA SITE
OPERABLE UNIT NO. 3

SITE NO. 1-30-043

TOWN OF NORTH HEMPSTEAD
NASSAU COUNTY, NEW YORK

WORK ASSIGNMENT NO D004446-6

Prepared for:

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK

Prepared by:

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
WOODBURY, NEW YORK

JULY 2007

REMEDIAL DESIGN WORK PLAN
NEW CASSEL INDUSTRIAL AREA SITE (OU3)
TOWN OF NORTH HEMPSTEAD, NEW YORK

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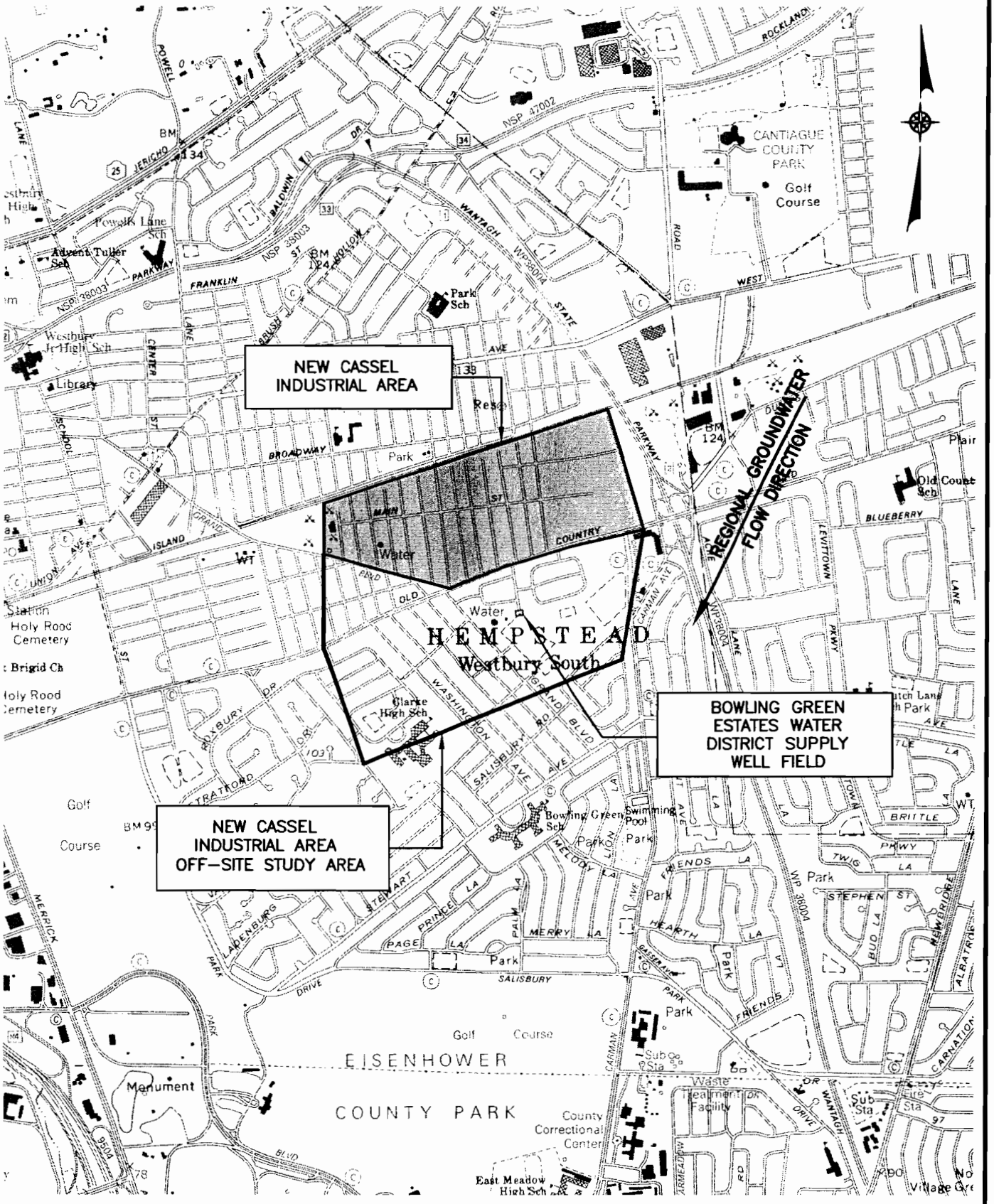
Section 1

1.0 INTRODUCTION

As part of New York State's program to investigate and remediate hazardous waste sites, the New York State Department of Environmental Conservation (NYSDEC) has issued a work assignment to Dvirka and Bartilucci Consulting Engineers (D&B) of Woodbury, New York, under its Superfund Standby Contract with the NYSDEC to provide design services for remediation of Off-site Groundwater south of the New Cassel Industrial Area, Operable Unit No. 3 (OU-3). The New Cassel Industrial Area (NCIA) is located in the Town of North Hempstead, Nassau County, New York. It encompasses approximately 170 acres of land bounded by the Long Island Railroad to the north, Frost Street to the east, Old County Road to the south and Grand Boulevard to the southwest. The NCIA is a Class 2 New York State Superfund site, Registry No. 1-30-043. Originally, the NCIA Registry No. 1-30-043 included 17 separate Class 2 sites. Of the 17 Class 2 sites, three were investigated and delisted from the Registry, two were investigated, remediated and delisted from the registry, and another site was investigated, remediated and reclassified as a Class 4 site. In general, the area where the need for groundwater remediation has been identified includes the commercial and residential areas located south of Old Country Road and Grand Boulevard (see Figure 1-1). Three commingled volatile organic compound plumes are located in this area and are migrating in the direction of regional groundwater flow, which is roughly to the southwest. The scope of work includes:

- Performance of pre-design field activities and engineering design study;
- Preparation of engineering design plans and specifications; and
- Assistance in citizen participation activities and construction pre-award services.

This Work Plan includes a detailed description of tasks, schedule and budget for the project. The work plan also identifies key project milestones and presents the project team organizational structure. The work described in this Work Plan is being performed with funds allocated under the New York State Superfund Program.



NEW CASSEL INDUSTRIAL AREA
REMEDIAL DESIGN WORK PLAN

SITE LOCATION MAP

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

FIGURE 1-1

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Section 2

2.0 BACKGROUND

2.1 Site Location and Description

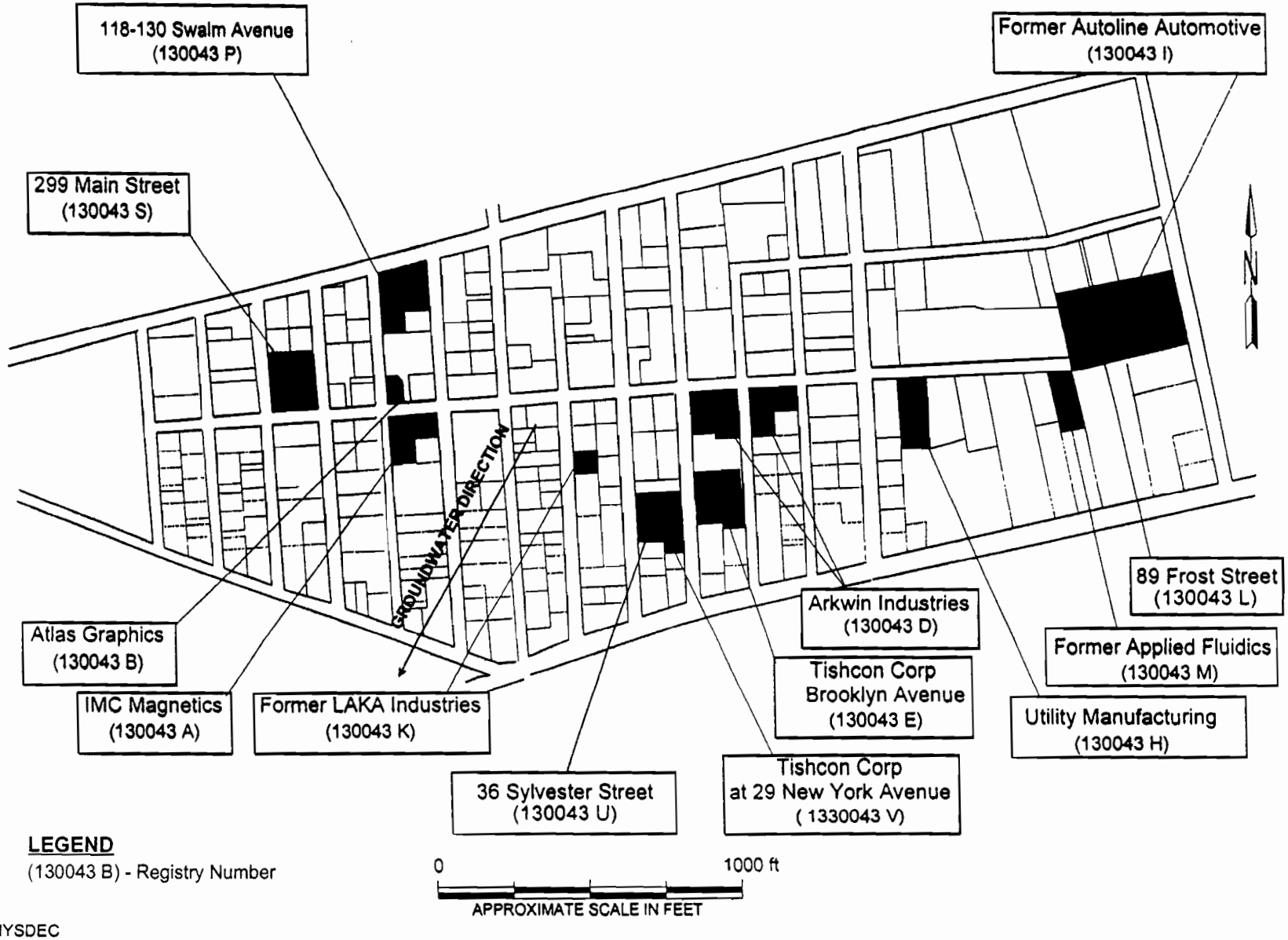
The New Cassel Industrial Area (NCIA) is located in the Town of North Hempstead, Nassau County, New York. It encompasses approximately 170 acres of land. It is bounded by the Long Island Railroad to the north, Frost Street to the east, Old Country Road to the south, and Grand Boulevard to the southwest. The NCIA is a heavily developed industrial and commercial area. Development in this area dates back to the 1950s and many of the properties have housed various businesses over the years. The topography is generally flat.

A total of seventeen (17) sites within the NCIA were listed as Class 2 sites in the New York State Registry of Inactive Hazardous Waste Disposal Sites (the Registry). The listing of the 17 Class 2 sites occurred between May 1995 and September 1999. Of the 17 Class 2 sites, three were investigated and delisted, two were investigated, remediated and delisted from the Registry and a third was investigated, remediated and reclassified as a Class 4 site. Operable Unit No. 3 (OU-3), which is the subject of this Remedial Design Work Plan, consists of off-site groundwater primarily located to the south of the NCIA. The remaining operable units are associated with the individual sites located within the NCIA, and are described in Section 2.2 below. Figure 2-1 depicts the location of the Class 2 sites within the NCIA.

OU-3 consists of off-site groundwater contamination that has migrated from the Class 2 sites within the NCIA. In general terms, this area includes the commercial and residential areas south of Old Country Road and Grand Boulevard. The properties along Old Country Road are primarily commercial with residential neighborhoods to the south. The area south of Grand Boulevard and the area north of the NCIA are also residential areas.

2.2 Site History

The NCIA was first developed during the early 1950s. Past light industrial activities conducted within the NCIA have resulted in extensive volatile organic compound (VOC)



SOURCE: NYSDEC

RLA/DWGS/NEWCASSELIND2564(11/02/06)

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

NEW CASSEL INDUSTRIAL AREA
REMEDIAL DESIGN WORK PLAN

LOCATIONS OF CLASS 2 SITES IN THE NEW CASSEL INDUSTRIAL AREA

FIGURE 2-1

contamination of groundwater within and in the vicinity of the NCIA. The NCIA was first recognized as an area with widespread groundwater contamination during a county-wide groundwater investigation conducted by the Nassau County Department of Health (NCDH) in 1986. In 1988, the NYSDEC listed the NCIA as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York. In order to identify the sources of the contamination within the NCIA, and hence the responsible parties, the NYSDEC conducted Preliminary Site Assessments (PSAs) within the NCIA. Field investigations were completed in Fall 1994, Fall 1995 and Fall 1996. The NYSDEC also collected several soil and groundwater samples in December 1998, January 1999 and December 1999.

Based on the findings of these PSAs, a total of 17 sites were identified and listed as Class 2 sites in the Registry between May 1995 and September 1999. Of the 17 Class 2 sites, three were investigated and delisted from the Registry, two were investigated, remediated and delisted from the registry, and another site was investigated, remediated and reclassified as a Class 4 site. As described below, remedial activities have been conducted at several of the sites by the NYSDEC and/or individual potentially responsible parties (PRPs). Individual site descriptions, operational/disposal histories and remedial histories for sites at which past practices have led to inappropriate disposal of hazardous waste are provided below.

2.2.1 IMC Magnetics (Site No. 1-30-043A)

This site is located at 570 Main Street in the western part of the NCIA. The site is a little over two acres, with one manufacturing building and a paved parking area covering most of the area. The site was occupied by IMC Magnetics, Inc. (IMC) from the early 1950s until 1992. Products made during IMC's occupation of the site included induction motors, fans and blowers, stepper motors and other rotating machines. Soil and groundwater at the site are contaminated with chlorinated hydrocarbons, petroleum hydrocarbons and metals. This site was listed on the Registry as a Class 2 site in 1995. Further investigations at this site revealed that the soil and groundwater were contaminated with chlorinated VOCs. IMC initiated operation of a soil vapor extraction (SVE) system in October 1997 to remediate on-site soil contamination. The Record of

Decision (ROD) for OU-1, On-Site Soil Contamination, incorporating the SVE system, was issued in January of 1998. A focused on-site groundwater Remedial Investigation (RI) and Feasibility Study (FS) at this site confirmed the presence of an on-site chlorinated VOC groundwater plume. The ROD for OU-2, On-Site Groundwater, was issued by NYSDEC in March 2000. The remedy selected for groundwater remediation at this site is in-situ oxidation using hydrogen peroxide injection. Treatment began in December 2001 and is on-going. This site is considered to be a contributor to the western groundwater plume at the NCIA site.

2.2.2 Atlas Graphics, Inc. (Site No. 1-30-043B)

The Atlas Graphics, Inc. (Atlas) site is located at 567 Main Street in the western part of the NCIA. The site is approximately one acre, which is comprised mainly of one manufacturing building and a paved parking area. The building was constructed in 1950, and was used as a warehouse for construction vehicles until 1977. In 1977, the property was purchased by Atlas Graphics, Inc., which currently operates a photo engraving manufacturing operation at the site. This operation uses a reported 312 gallons per year of trichloroethene (TCE). At the time of its purchase, the building was connected to a cesspool for its sanitary waste disposal. In 1977, there was a documented discharge of approximately 50 gallons of TCE to the cesspool.

The Atlas site was listed on the Registry as a Class 2 site in 1995. The analytical results for this site indicated that elevated levels of TCE were found on-site in both the soil and groundwater. The ROD for this site, issued in February 2000, selected air sparging/soil vapor extraction (AS/SVE) as the remedy to address the on-site contaminated soil and groundwater. The system was constructed in October 2000 and has been treating on-site groundwater since November 2000. This site is considered to be a contributor to the western groundwater plume.

2.2.3 Tishcon Corporation (Site No. 1-30-043C)

The Tishcon Corporation (Tishcon) site is located at 125 State Street in the central part of the NCIA. The site is approximately one acre and is occupied by a two-story building. Tishcon was a tenant in this location from 1984 to 1996. Tishcon produced dietary supplements and

vitamin products in the form of powders and tablets. The powders and tablets were produced in a dry blending process. From 1985 to 1993, the chemicals methylene chloride, 1,1,1-trichloroethane (TCA) and methanol were used in the tablet coating process. Equipment used in the process was washed in the driveway where the storm drains are located.

Based on the presence of chlorinated VOCs and metals in four storm drains at the site, the NCDH requested that contaminated sediment be removed from the storm drains and a distribution box on the property in August 1993. The site was placed on the Registry in 1995. The excavation and restoration of the contaminated source areas of two storm drains and a distribution box was completed as an Interim Remedial Measure (IRM) in October 1997. The ROD for the site was issued in January of 1998 and required the excavation and restoration of the remaining contaminated source area. Excavation and disposal of this material was conducted in spring of 1999. In March of 2000, the site was reclassified as a Class 4 site, indicating that the site was properly closed with required monitoring. This site is considered to be a contributor to the central groundwater plume.

2.2.4 Arkwin Industries (Site No. 1-30-043D)

The Arkwin Industries (Arkwin) site includes a number of individual lots located at 648, 656, 662 and 670 Main Street and 66 Brooklyn Avenue in the central part of the NCIA. The site is approximately four acres and is occupied by five separate buildings. Arkwin began operations at the NCIA in 1955. Arkwin receives metal stock which is then machined, fabricated, degreased, polished, painted and assembled into finished products. Arkwin used TCA, tetrachloroethene and other solvents in their production process.

Based on the presence of chlorinated VOCs and petroleum hydrocarbons in the soil and groundwater at the site, the Arkwin site was added to the Registry as a Class 2 site in May 1995. Contaminated soil was excavated in June 1997 as part of an IRM. A No Further Action ROD for OU-1, On-Site Soil, was issued in January 1998. A focused RI/FS for on-site groundwater (OU-2) was subsequently conducted. The RI results indicated the presence of several VOCs and their breakdown products at concentrations above groundwater standards in both the Upper

Glacial aquifer (UGA) and the Magothy aquifer. The focused FS evaluated a number of remedial alternatives for the contaminated groundwater. Based on the FS, the NYSDEC selected AS/SVE as the remedy for the groundwater. The ROD for OU-2 was issued in December 1999. A pilot test for AS/EVE was conducted in July 2002, and continuous operation of the system began in December 2002. This site is considered to be a contributor to the central groundwater plume.

2.2.5 Tishcon Corporation Brooklyn Avenue (Site No. 1-30-043E)

The Tishcon Corporation Brooklyn Avenue (Tishcon Brooklyn Avenue) site is located at 30-36 New York Avenue and 30-33 Brooklyn Avenue in the central part of the NCIA. The site is approximately 1.5 acres, and is almost entirely occupied by a single structure. Tishcon has occupied this site since 1982. As part of their gelatin capsule manufacturing process, the Tishcon Corporation used TCA to remove mineral oil from the gelatin capsules. In May 1997, Tishcon phased out the use of TCA and incorporated a closed loop, petroleum-based process.

Based on information obtained from a NCIA-wide PSA, Tishcon was added to the Registry as a Class 2 site in 1995. Sampling results showed high levels of chlorinated VOCs (including TCA) in the soils and groundwater. An IRM completed in November 1997 removed contaminated soil from an out-of-service cesspool, a sealed storm drain, and an exterior floor drain. A ROD for OU-1, On-site Soil, was issued by the NYSDEC in January 1998. This ROD required the installation of an AS/SVE system to address remaining on-site soil and groundwater contamination. Construction of the on-site AS/SVE system was completed in December 1999, and system operation began in January 2000. A focused off-site groundwater FS was finalized in September 1999. The ROD for OU-2, Off-site Groundwater, was issued in March 2000. The selected remedy consists of installation of an AS/SVE system to remediate VOC contamination in the off-site groundwater near Old Country Road. Pilot tests for the selected remedy were conducted in July 2002, and full system installation was scheduled to begin in the fall of 2003. This site is considered to be a contributor to the central groundwater plume.

2.2.6 Former Tishcon Corporation (Site No. 1-30-043F)

The former Tishcon Corporation site is located at 68 Kinkel Street in the central part of the NCIA. The one-quarter acre site is occupied by a single story, 2-bay garage. In 1982 and 1983, Tishcon encapsulated materials at this site, utilized 1,650 gallons of trichloroethene (TCE), 8,000 gallons of methylene chloride and 3,000 gallons of shellac in its manufacturing process. This site was added to the Registry as a Class 2 site in 1995. A State Superfund investigation was completed in July 1996. In January 1997, a ROD requiring no action was issued for this site. The site was delisted from the Registry in December 1997.

2.2.7 Metpar Steel Corporation (Site No. 1-30-043G)

The Metpar Steel Corporation (Metpar) site is located at 95, 97 and 99 State Street in the central part of the NCIA. Metpar manufactures metal toilet components. This site was listed on the Registry in 1995. The RI for the site was completed in July 1996 and a ROD was issued in January 1997, requiring no action. The site was delisted from the Registry in December 1997.

2.2.8 Utility Manufacturing/Wonder King Site (Site No. 1-30-043H)

The Utility Manufacturing/Wonder King site is located at 700 - 712 Main Street in the eastern part of the NCIA. The site is approximately one acre in size, most of which is occupied by a single building. The remainder of the site is paved. The original building on this site was constructed in 1967. The property was leased to Radalabs, which manufactured communications equipment. In 1975, Utility Manufacturing sublet part of the building. In February 1976, Utility Manufacturing became the sole occupant. Utility Manufacturing manufactures a variety of cleaning and lubricating products. A NYSDEC monitoring well sampling program and a PSA confirmed that soil and groundwater were contaminated with tetrachloroethylene (PCE) and other related VOCs at concentrations above standards and guidelines. Consequently, the NYSDEC listed the site as a Class 2 site in 1996. A subsequent field investigation was completed in May 1998 and included the collection of soil samples as well as the installation and sampling of monitoring wells. The NYSDEC required Utility Manufacturing to conduct an

additional investigation to delineate the on-site groundwater contamination (completed December 2000) and implement an IRM (AS/SVE) to remediate on-site groundwater. The AS/SVE system was constructed and began operation in November 2001. A ROD for this site, including continued operation of the AS/SVE system and no further action, was issued in March 2003 to address on-site contamination. This site is considered to be a contributor to the eastern groundwater plume.

2.2.9 Former LAKA Industries, Inc. (Site No. 1-30-043K)

The former LAKA Industries, Inc. (LAKA) site is located at 62 Kinkel Street in the central part of the NCIA. The site is entirely paved or covered with the footprint of a one story building with the exception of a small landscaped area on the west side of the building. The LAKA Tool and Stamping Company, Inc., occupied the site from 1971 to 1978, performing precision metal stamping operations as a defense contractor. LAKA Industries, Inc., the parent company, operated the site from 1979 to 1984 as a machine shop specializing in tools, dies and precision stamping. Both companies used TCE and lubricating oils. As the NCIA was not serviced by public sewers until the 1980s, subsurface disposal was the common means of waste disposal in the area. The site was added to the Registry as a Class 2 site in 1996. A focused RI/FS was conducted to define the nature and extent of contamination at the site.

The RI (finalized May 1999) confirmed that contamination existed in the vicinity of an on-site cesspool and that an additional source area existed in a catch basin located downgradient of the site. The NYSDEC issued a ROD for On-site Soils in February 2000. The ROD selected excavation of the cesspool and the source area, and did not include any groundwater remediation. The selected remedy was implemented in May 2001. This site is considered to be a contributor to the central groundwater plume.

2.2.10 Frost Street Sites: Former Autoline Automotive (Site No. 1-30-043I), 9 Frost Street (Site No.1-30-043L), Former Applied Fluidics (Site No. 1-30-043M)

The Frost Street sites include three adjacent sites which are located at 89 Frost Street, 101 Frost Street and 770 Main Street in the eastern part of the NCIA. The NYSDEC designated the sites as Class 2 sites in 1996.

Former Autoline Automotive (Site No. 1-30-043I)

The former Autoline Automotive site is located at 101 Frost Street in the eastern part of the NCIA. The site is approximately one acre, most of which is occupied by a one-story building. The rest of the site is paved. Several tenants occupied the building at this site including a toy warehouse, a home laboratory supply company, a textiles manufacturer and an automobile ignition parts manufacturer. National Bassen Textiles, which occupied the property from 1974 to 1983, had documented use of degreasers and other unknown chemicals. Autoline Automotive occupied the site from 1984 to 1992, manufacturing ignition wires and wire harness sets.

89 Frost Street (Site No. 1 -3O-043L)

This site is located at 89 Frost Street in the eastern part of the NCIA. This site is entirely paved. The 55,000 sq. ft structure which formerly occupied the site was constructed in 1968 and rented by several facilities. Adchem Corporation, a double coated adhesive tape manufacturer, occupied the site from 1971 to 1973. Unicord, a manufacturer of music amplifiers, occupied the site from 1980 to 1987. Marvex Corporation, a processing and finishing company, occupied the site sometime during the life of the structure, although the exact time period is unknown. The last known occupant of the building was Korg Electronics from 1988 to 1994.

Former Applied Fluidics (Site No. 1 -30-043M)

The former Applied Fluidics site is located at 770 Main Street in the eastern part of the NCIA. The site is approximately one acre, and is currently occupied by a department store built in 1998. The rest of the site is paved. Applied Fluidics occupied this site from 1974 to 1982.

Applied Fluidics was a defense contractor that manufactured research instruments and leak detectors. The company used TCE, paint thinners and petroleum distillates. The building was demolished in 1998 and excavated to a depth of 20 feet below ground surface (bgs) as part of the redevelopment of the site. All drainage structures were removed.

In 1998, a State funded RI/FS was conducted at the Frost Street sites. The investigation determined that the VOC contaminants of concern were PCE, TCE and xylene. Based on the FS, NYSDEC issued three separate RODs in March 2000 that described the selected remedies for the contaminated soils at each of the three sites. The remedies consist of:

- SVE for deep soils with excavation and off-site disposal of surface soil for the Former Autoline site.
- SVE for deep soils for the 89 Frost Street site.
- No Action for the Former Applied Fluidics site.

The groundwater contamination was addressed as a combined operable unit since the contamination resulting from the three Frost Street sites commingle, such that the contamination from an adjacent site forms a common plume of VOC contamination. Based on the March 2000 RI/FS, the NYSDEC issued a ROD requiring the installation of an AS/SVE system to address VOC contamination in the groundwater source areas and an in-well vapor stripping system to address the deeper contamination along Old Country Road. The PRP for these sites signed a Remedial Design/Remedial Action consent order in January 2003 to implement the soil and groundwater remedies selected in the March 2000 RODs. These three sites are considered to be contributors to the eastern groundwater plume.

2.2.11 118 - 130 Swalm Street Site (Site No. 1-30-043P)

This site is located at 118 - 130 Swalm Street in the western part of the NCIA. The site is approximately 3 acres in size, with a one story building. The property is bordered by the Long Island Railroad to the north. Tenants of the Swalm Street site include All Records Distributors from 1971 to 1974, Allomatic industries from 1979 to 1992, Louis Jordan Labs (a vitamin

manufacturer) from 1978 to 1980, and Varitek from 1979 to 1992. The current tenant, Liqui-Mark has occupied the building since 1994. The site was listed on the Registry as a Class 2 site in 1997. Field work was completed in January 1999. RI results indicated low levels of VOC contamination in on-site cesspools and that the groundwater contamination had decreased over time. Additional investigation near the cesspool located in the southwest corner of the site and at the drains inside the building was undertaken in April of 2001. Additional groundwater sampling was carried out during September 2002.

Based on the results of the RI, a Proposed Remedial Action Plan (PRAP) addressing on-site soil and groundwater at this site is expected in the fall of 2003. This site is considered to be a contributor to the western groundwater plume.

2.2.12 99 Main Street Site (Site No. 1-30-043S)

This site is located at 299 Main Street in the western part of the NCIA. The site is approximately two acres in size and is occupied by a one story building. The site was developed between 1950 and 1962 and is currently occupied by One Stop Auto and Truck Center. The property was formerly used as a junk yard and a transportation company (dates unknown). Island Transport Corporation used large quantities of petroleum-related compounds including gasoline and approximately 275 gallons of TCE between July and December 1978 to clean trucks. The NYSDEC listed the 299 Main Street site on the Registry as a Class 2 site in 1997. Field work was completed in October 1999 and a draft focused RI report was submitted which indicated the soils and groundwater at the site were contaminated with chlorinated compounds, predominantly TCE. Additional investigations were undertaken in the spring of 2001, and the RI report was finalized in September 2001. Contamination was found in an on-site injection well and in an equipment repair bay within the building. Based on the RI results, the PRP submitted an IRM work plan which included removal of contaminated material from the site and installation of an AS/SVE system, which began in the spring of 2003 and is scheduled to be completed in the fall of 2003. This site is considered to be a contributor to the western groundwater plume.

2.2.13 Northeast Corner of Hopper and Main Streets (Site No. 1-30-043T)

This site is located at the intersection of Hopper and Main Streets in the western part of the NCIA. There are no permanent structures located on the property. The site was added to the Registry as a Class 2 site in 1997. The site was investigated from December 1998 to January 1999. No on-site contamination was found, and a ROD requiring no action at this site was issued in February 2000. The site was delisted from the Registry in December 2000.

2.2.14 36 Sylvester Street Site (Site No. 1-30-043U)

This site is located at 36 Sylvester Street in the central part of the NCIA. The site is approximately one half acre and is occupied by a one-story building. The site was initially developed in 1952 with a one story masonry building. The building covers most of the lot, with the exception of alleys on the north and south sides of the property, and a loading area on the east side. Historically, the site was used for industrial applications that included the manufacturing of precision machinery. Former occupants of the site include American Express Warehousing Corporation, Universal Transistor Products Corporation, National Machinery Exchange and National Gear Products. The property was occupied by National Gear Products from 1980 to 1996 and is currently occupied by GEL-TEC (a division of Tishcon Corporation). The results of the PSA indicated that past site operations have contaminated the groundwater beneath and downgradient of the site with TCA. The NYSDEC listed the site as a Class 2 site on the Registry in 1999. The NYSDEC negotiated a Consent Order with the PRP to conduct a RI/FS which was signed in March of 2000. An IRM to remove contaminated material from an on-site drywell was completed in May 2002. Based on the results of the IRM, a no further action ROD was signed in March 2003, and the site was delisted from the Registry in September 2003. This site is considered to be a contributor to the central groundwater plume.

2.2.15 Tishcon Corporation Site at 29 New York Avenue (Site No. 1-30-043V)

This site is located at 29 New York Avenue in the central part of the NCIA, is approximately one acre in size and is occupied by a single building. The site was developed in

1952, and was used to manufacture electronic equipment until the late 1970s, after which it was occupied by Tishcon from 1979 through 1991. The site was sold to Equity 1 Associates in 1991. This site was listed on the Registry as a Class 2 site in 1995 as part of the Tishcon Corporation Brooklyn Avenue site. The 29 New York Avenue site was investigated further as part of another PSA conducted in 1996. A soil/sediment sample from an on-site catch basin contained TCA and related compounds at concentrations above cleanup guidelines.

Based on these results, the NYSDEC listed the Tishcon Corporation 29 New York Avenue site as a separate Class 2 site on the Registry in March 1998. The RI report was received by NYSDEC in December 1999. An IRM was carried out in August 2000, consisting of the remediation of a cesspool at the site. Based on the results of the IRM, a no further action ROD for this site was signed in March 2002, and the site was delisted from the Registry in December 2002. This site is considered to be a contributor to the central groundwater plume.

2.3 Operable Unit No. 3 Remedial Investigation

The purpose of the RI was to define the nature and extent of groundwater contamination that is migrating from all Class 2 sites within the NCIA. State funded remedial investigations at the NCIA began in 1995. Major investigations included the sampling of 41 groundwater monitoring wells in the summer of 1996 by NYSDEC personnel, additional groundwater monitoring during the summer of 1997 which included the sampling of eleven hydropunch locations south of Old Country Road and Grand Boulevard, and the installation of two pairs of early warning groundwater monitoring wells upgradient of the Bowling Green Water District (BGWD) public water supply wells in the summer of 1998. The next phases of the off-site groundwater investigation were conducted during April 1999, August 1999, and the final phase was conducted during January 2000. These last three phases consisted of the sampling from 41 existing groundwater monitoring wells, several hydropunch points, and installation of four new monitoring wells. A report entitled Remedial Investigation for Off-site Groundwater in the New Cassel Industrial Area, September 2000, has been prepared which describes the field activities and findings of the RI in detail. The following activities were conducted during the RI:

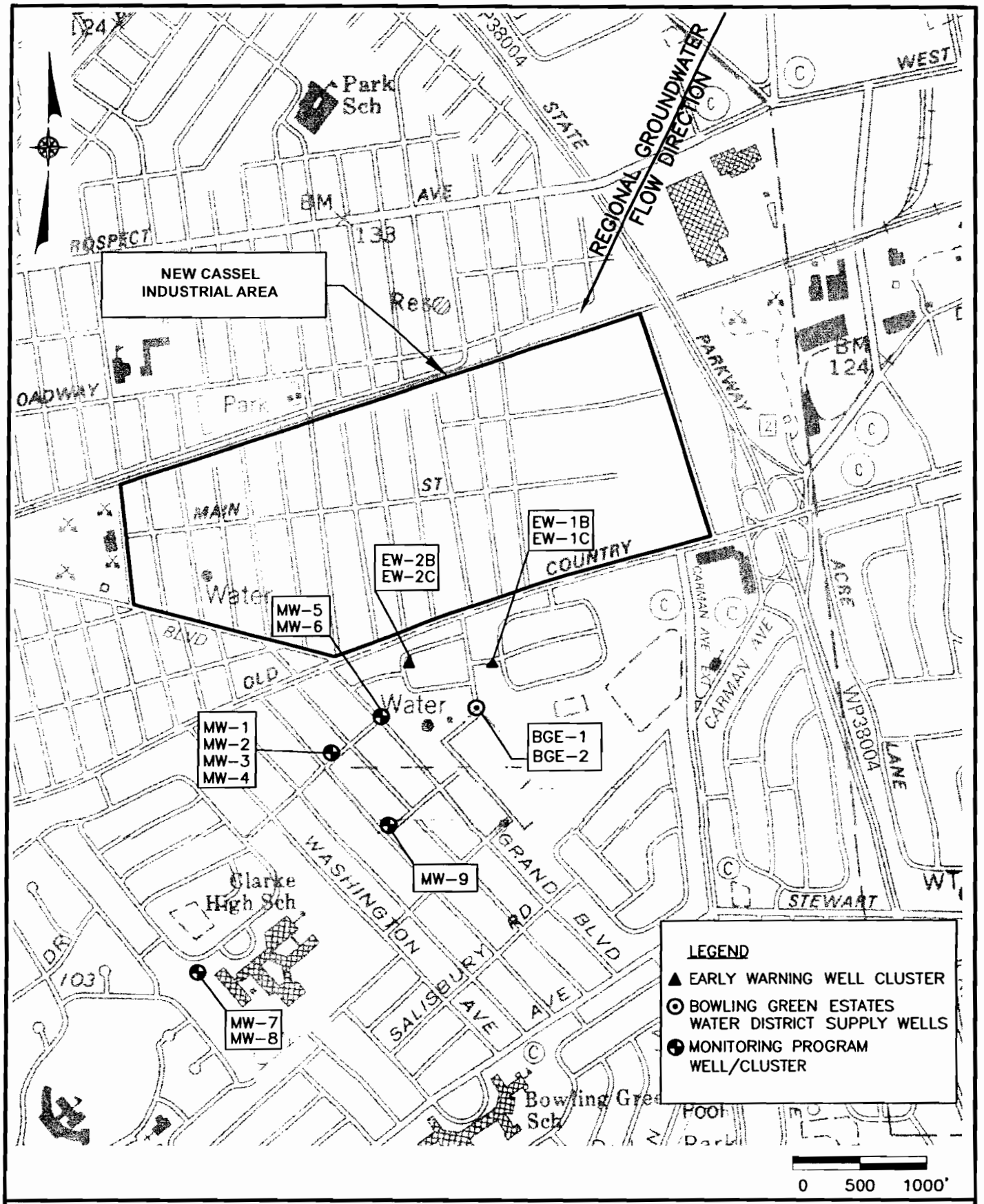
- Installation of four shallow monitoring wells and fifteen hydropunch locations downgradient of the NCLA (summer 1996).
- Five rounds of groundwater monitoring well sampling. The first round (summer 1996) sampled 41 existing wells, including the four new shallow wells.
- The second round (summer 1997) sampled the same wells as the first round, and eleven hydropunch locations south of Old Country Road.
- Installation and sampling of early warning monitoring wells south of Old Country Road and upgradient of the BGWD public water supply wells (July 1998).
- Sampling of 41 existing wells and the four BGWD early warning wells, and installation and sampling of four new monitoring wells (spring 1999).
- Sampling of 41 existing groundwater monitoring wells, plus the four BGWD early warning wells (summer 1999).
- Sampling of 22 existing monitoring wells and the four BGWD early warning wells (January 2000).

After the completion of the RI report in September 2000, the BGWD early warning monitoring wells were monitored on a quarterly basis until early 2003. In addition, eight monitoring wells (one well quadruplet and two well couplets) were installed to the southwest of the BGWD production wells in October 2001, and an additional 300 foot deep monitoring well was installed in July 2002 (see Figure 2-2 for the location of these wells).

Based on the RI results, groundwater south of Old Country Road at the NCIA exceeds the groundwater standards, and considering potential public health and environmental exposure routes, the groundwater south of Old Country Road requires remediation. More complete information can be found in the RI report.

2.3.1 Site Geology and Hydrogeology

The Upper Pleistocene deposits (poorly sorted sand and gravel) that make up the Upper Glacial aquifer (UGA) are found from grade to a depth of approximately 80 feet below ground surface (bgs). The UGA is an unconfined aquifer consisting of poorly sorted sands and gravel. The Magothy aquifer is located beneath the UGA and consists of finer sands, silt and small



NEW CASSEL INDUSTRIAL AREA
REMEDIAL DESIGN WORK PLAN

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WELL LOCATION MAP

FIGURE 2-2

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amounts of clay. At the NCIA sites, there are no other hydrogeologic units located between the UGA and the underlying Magothy formation. In general, the top of the Magothy formation is found at least 100 feet bgs. However, based on observations made during installation of RI wells, the Magothy is sometimes found at significantly shallower depths (60 to 80 feet bgs) in the NCIA than in many other areas of Long Island. The UGA and the Magothy are in direct hydraulic connection. However, clay lenses are often found in the upper Magothy in this area. The depth of the water table is between 55 and 65 feet bgs in the NCIA, and groundwater flows in a south-southwesterly direction. Both the UGA and the Magothy have been designated as Sole Source aquifers and are protected under state and federal legislation.

2.3.2 Nature of Contamination

As described in the RI report, more than 1,850 groundwater samples were collected at the NCIA since 1996, from over 100 separate monitoring wells, approximately 25 hydropunch locations, and over 50 geoprobe locations to characterize the nature and extent of contamination. The investigation included on-site sampling for individual sites within the NCIA, as well as work performed for the NCIA off-site groundwater investigation. The main category of contaminants which exceeds standards, criteria and guidelines (SCGs) is VOCs.

The VOCs of concern are PCE, TCA and TCE. Also present are smaller quantities of the breakdown products of PCE and TCE, as well as an assortment of minor concentrations of other VOCs. For more detailed descriptions, please refer to the RI Report.

In October 2003, the NYSDEC issued a ROD for OU-3. In order to eliminate or mitigate the significant threats to human health and the environment caused by the migration of contaminants off-site from the NCIA via groundwater, the following remedy was selected:

- A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation, and maintenance and monitoring of the remedial program. Any uncertainties identified during the RI/FS process will be resolved;

- Installation of one 225-foot vapor stripping well with ancillary systems, for the purpose of a pilot study to determine the radius of influence, and the number of additional stripping wells needed;

- Based on the pilot test data, the effectiveness of the in-well vapor stripping system will be evaluated. If, for engineering or economic reasons, in-situ treatment should prove to be less practical, ex-situ extraction and treatment (treatment at the surface, possibly at a centralized location) will be substituted without impairing the overall effectiveness of treatment system;

- Based on the results of the pilot test, design and installation of three additional 225-foot vapor stripping wells, four 200-foot vapor stripping wells, and three 140-foot vapor stripping wells, plus their ancillary systems. The actual number and locations of these wells will be determined by the pilot test results;

- Operation and maintenance of the treatment system until the remediation goals are achieved or the NYSDEC and NYSDOH determine that further operation of the treatment system is not necessary;

- Continued monitoring of two existing BGWD public water supply wells, located directly downgradient of the NCIA;

- Installation of nine new monitoring wells at locations downgradient of Old Country Road;

- Implementation of a long-term groundwater monitoring program requiring quarterly sampling of nine new and thirteen existing monitoring wells for the first 2 years and periodically thereafter; and

- Institutional controls in the form of existing use restrictions limiting the use of groundwater as potable or process water without necessary water quality treatment as determined by the NCDH from the affected areas.

Section 3

3.0 SCOPE OF WORK

The services to be provided by D&B under this work assignment are comprised of five tasks. These tasks include preparation of a remedial design work plan (Task 1); conducting a pre-design investigation (Task 2); preparation of plans and specifications (contract documents) for procurement of a remedial contractor (Task 3); assistance in citizen participation activities (Task 4); and pre-award services for the NYSDEC (Task 5). Each of these tasks is described in detail in the following sections.

3.1 Task 1 - Work Plan Preparation

This task involves preparation of draft and final versions of this Project Management Work Plan (PMWP) and participation in a preliminary scoping meeting at the site with representatives of the NYSDEC. This task also includes review of site background information provided by NYSDEC and development of a scope of work for the pre-design investigation. The following reports will be reviewed to gain a thorough understanding of the site conditions and components of the selected design.

1. November 2003 Record of Decision
2. September 2000 Final RI/FS Report
3. Groundwater Monitoring Reports

3.1.1 Health and Safety Plan

A Health and Safety Plan (HASP) will be prepared under this task that will address the site-specific hazards to on-site personnel and the community, and define strategies to handle these hazards. The HASP will include the following:

1. A purpose (i.e., the HASP has been designed to protect the health and safety of on-site personnel and the surrounding community during remedial investigation activities at the site or that adherence to the HASP will minimize the possibility that personnel

at the site or the surrounding community will be injured or exposed to site-related contaminants during the field activities);

2. A discussion of the intent to make prior notification, if applicable, to local police, fire and potential emergency responders advising them of the remedial investigation activities and schedule of events, and an intent to notify adjacent property owners so that necessary precautions are taken, such as closing windows and air-conditioning vents;

3. A section on community health and safety including methods by which the public will be contacted in the event of an emergency and a corresponding evacuation procedure, monitoring information and contaminant action levels;

4. Site worker personal protection equipment;

5. A discussion of Community Air Monitoring with real-time air monitoring for volatile organic compounds (VOCs) and particulates at the perimeter of each designated work zone during ground intrusive activities. The intent is to provide a measure of protection for site workers and the downwind community from potential exposure to airborne contaminant releases as a direct result of work activities. Action levels for particulates and VOCs will be discussed. Because intrusive activities may potentially release airborne contaminants in the form of dust or vapors, continuous real-time monitoring will be performed at the downwind perimeter of each exclusion/work zone when ground intrusive activities are in progress. Particulate monitoring will not be necessary when work is performed in a non-source area, unless dust is being generated. When invasive field work is crating dust or is being conducted in a source area, community air monitoring will be performed in accordance with the NYSDOH Generic Community Air Monitoring Plan;

6. A discussion of methods to cordon off work areas to preclude unauthorized access and minimize potential exposure/injuries.

3.1.2 Quality Assurance Project Plan

A Quality Assurance Project Plan (QAPP) will be prepared and approved by NYSDEC prior to commencement of fieldwork. Deviations from protocols specified in the QAPP will be subject to NYSDEC approval. All laboratory analytical work will be performed by a NYSDOH ELAP-approved laboratory certified in all categories of Analytical Services Protocol (ASP), Contract Laboratory Protocol (CLP), and Solid and Hazardous Waste analytical testing.

3.2 Task 2 - Pre-design Investigation

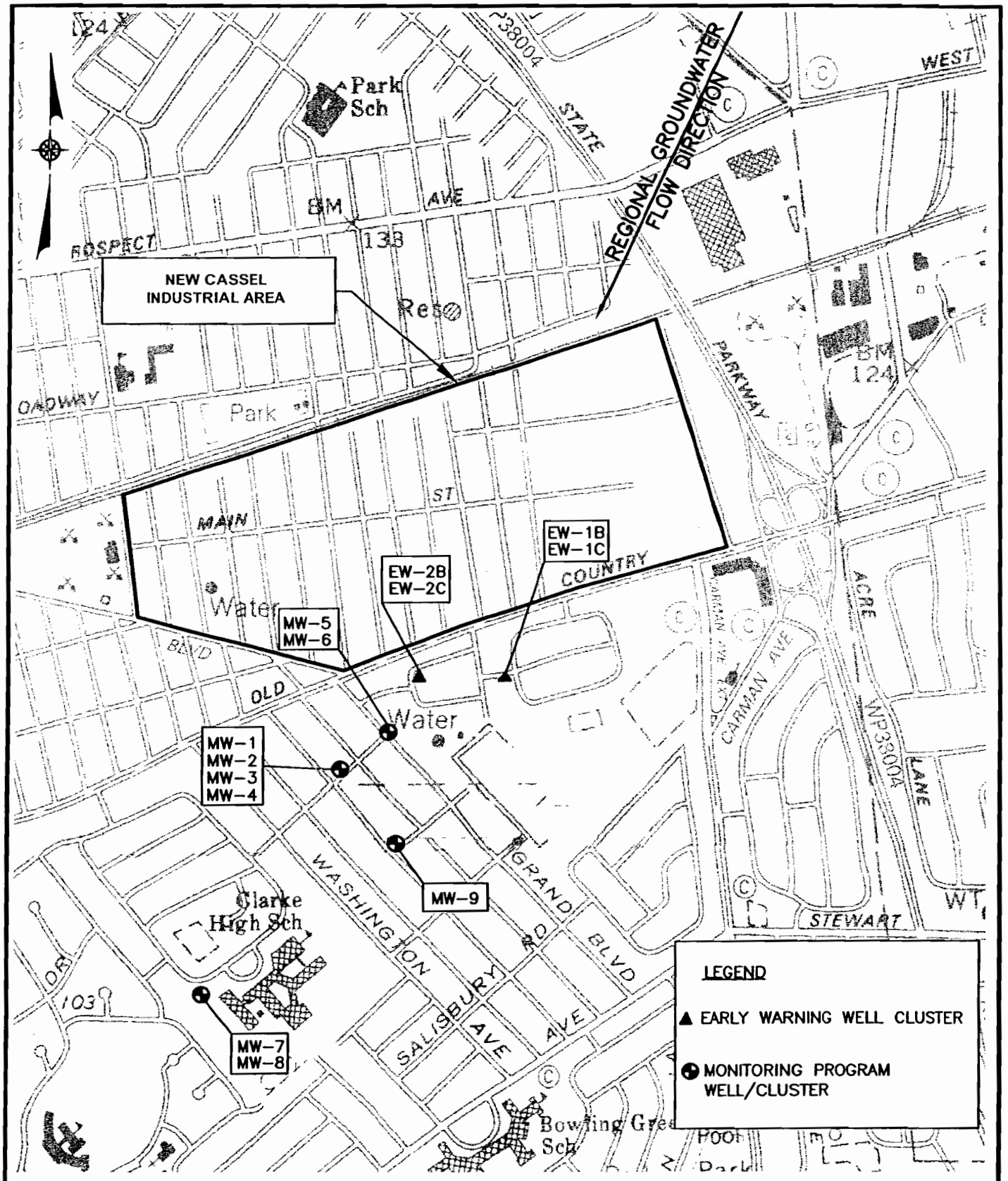
A pre-design investigation will be conducted to provide information necessary to complete the remedial design for the NCIA OU-3. This investigation will include groundwater quality assessment, geologic profiling, and soil testing. It is assumed that access to the project area for all investigation work described below will be coordinated by the NYSDEC.

3.2.1 Scoping Session

Under this task, D&B, in coordination with the NYSDEC, will hold a scoping session with all affected parties to review the major elements of the proposed remedy. It should be noted that the proposed remedy will likely be installed in fully developed residential and/or commercial areas, where there is limited potential for the placement of the required treatment wells. Based on our conversations with the NYSDEC, it is our current understanding that the treatment wells associated with the final remedy will likely be confined within subsurface vaults within public streets, public property or rights-of-way. As a result, coordination with local Town and County agencies will be imperative for a successful project. It will be the intent of this scoping session to ascertain any regulations which may be applicable, any restrictions which may be imposed and any permits which may be required by local agencies currently having jurisdiction over the roadways, rights-of-way and utilities which may be affected by the project. Obtaining this information in the early stages of the pre-design investigation will be important so that the subsequent investigation and design activities can be tailored to meet any requirements which may be imposed on the project.

3.2.2 Existing Monitoring Well Sampling

Existing groundwater monitoring wells MW-1 through MW-9 and Bowling Green Water District early warning wells EW-1B, EW-2B, EW-1C and EW-2C will be sampled to obtain current plume delineation information and information necessary to select subsequent sample locations (see Figure 3-1). Each sample will be analyzed for VOCs, ferrous iron, manganese, magnesium, calcium, total organic carbon, alkalinity, chlorides, nitrates, sulfates, carbon dioxide



NEW CASSEL INDUSTRIAL AREA
REMEDIAL DESIGN WORK PLAN

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WELL LOCATION MAP

FIGURE 3-1

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and methane. Field measurements of pH, temperature, oxidation-reduction potential (ORP), specific conductivity, turbidity and dissolved oxygen will be collected during purging and at time of sample collection.

Prior to sampling, the depth to water in each of the monitoring wells will be measured to calculate the volume of standing water in the well. Water level measurements will be collected using an electric water level indicator. Water levels will not be measured in the four early warning wells since dedicated pumps are installed in these wells and the casings are not accessible. Depth to water will be estimated at these locations based on groundwater elevation information in the area.

Each monitoring well and early warning well will be purged to remove the standing water inside the well prior to sample collection. A minimum of three casing volumes will be removed to ensure the water being sampled is representative of the aquifer. The wells will be purged using submersible pumps (dedicated or decontaminated) and new dedicated discharge tubing. It is assumed that all purge water will be discharged to the Nassau County sanitary sewer system via a nearby manhole.

During purging, pH, conductivity, temperature, turbidity, dissolved oxygen and ORP will be monitored at intervals determined by the amount of water necessary for adequate purging. When the values of the field parameters have stabilized to within 10 percent for at least two readings and a minimum of three casing volumes has been removed, and the turbidity of the water is less than 50 NTUs, purging will be considered complete.

Groundwater samples will be collected from the dedicated discharge tubing after purging. Groundwater samples will be collected at a maximum flow rate of approximately 1 gallon per minute (gpm). Samples for VOC analysis will be collected first, followed by the remaining parameters. Detection limits for VOC analysis shall be less than or equal to 1.0 micrograms per liter. All samples will be stored in an ice cooler and will be shipped under chain of custody procedures to the laboratory within 48 hours after collection.

Appropriate Quality Assurance/Quality Control (QA/QC) samples will be collected. These will include matrix spike samples, matrix spike duplicate samples and trip blanks.

Decontamination of the submersible pump used for purging the monitoring wells will be performed in accordance with procedures described in the QAPP (to be submitted separately). Decontamination of the submersible pumps for the four early warning wells will not be performed, since these pumps are dedicated to each well.

3.2.3 Temporary Well Installation and Hydropunch Sampling

In order to evaluate off-site groundwater quality, vertical profile groundwater sampling will be conducted using two separate methods: temporary wells and hydropunch sampling. Each sampling method is described below.

Seven temporary wells will be installed. At each location, 3 1/4-inch diameter hollow stem augers will be advanced to approximately 285 feet below grade and the borehole will be geophysically logged to provide stratigraphic information (see Section 3.2.5). A temporary 2-inch diameter well with 5 feet of 0.010-inch slot well screen will be placed inside the augers. The augers will be removed from the borehole, allowing for formation to collapse around the well. Approximately three well casing volumes will be purged from the temporary well using a submersible pump and a groundwater sample will be collected from the pump discharge at the lowest sustainable flow rate. The well will then be retracted at 20-foot intervals and the process repeated until the water table is reached (approximately 45 feet below grade), for a total of approximately 91 groundwater samples from the seven locations. The submersible pump will be decontaminated before its first use on-site, between samples and prior to being removed from the site. Upon completion of sampling, the temporary well will be removed and any remaining open space in the borehole will be backfilled with cement/bentonite grout and completed at grade with the original surface (soil, asphalt or concrete). It is assumed that all purge water generated from the temporary wells will be discharged to the Nassau County sanitary sewer system via a nearby manhole.

Two soil borings will be constructed to a depth of 500 feet below grade. At each location, the mud rotary drilling method with an 8-inch diameter bit will be utilized. Hydropunch groundwater samples will be collected at 20-foot intervals from the water table (approximately 45 feet below grade), to the terminal depth of the boring at 500 feet below grade. A total of approximately 48 groundwater samples will be collected from the two locations. The hydropunch sampler will be decontaminated before its first use on-site, between samples and prior to being removed from the site. After completion of the hydropunch sampling, the borehole will be geophysically logged to provide stratigraphic information. Upon completion of geophysical logging, the borehole will be grouted with cement/bentonite grout and completed at grade with the original surface.

Drilling equipment (augers, drill rods, bits and tools) will be decontaminated between uses. A portable decontamination pad will be constructed at the Bowling Green Water District well field. Decontamination fluids and purge water will be collected and discharged into the Nassau County sanitary sewer system. Drill cuttings generated during the field program will be contained in lined roll-off containers. Drilling fluids generated from the mud rotary drilling will be contained in 55-gallon drums. The roll-off containers and the 55-gallon drums will be staged at the Bowling Green Water District well field for subsequent off-site disposal. It is assumed for budgetary purposes that the drums will not be removed until all drilling work has been completed.

Each groundwater sample collected from the temporary wells and the hydropunch samples will be analyzed for VOCs, ferrous iron, alkalinity, manganese, magnesium and calcium. Detection limits for VOC analysis shall be less than or equal to 1.0 micrograms per liter. For any sample with a turbidity greater than 50 NTUs, dissolved metals will be analyzed and the samples will be filtered by the laboratory. Field measurements of pH, temperature, ORP, conductivity, turbidity and dissolved oxygen will also be performed on the groundwater samples.

3.2.4 Permeability Testing

The vertical and horizontal hydraulic conductivities represent two of the key aquifer characteristics necessary for the design of groundwater recirculation wells. As a result, an attempt will be made during the pre-design investigation to measure these parameters.

Subsurface soil samples will be collected from the nine soil borings used for the construction of temporary wells and the hydropunch sampling. Two subsurface soil samples from the saturated zone of each boring will be analyzed for permeability analysis by ASTM Method D422. These samples will each be collected using a dedicated Shelby tube. It is estimated from each boring location, one Shelby tube sample will be collected from a depth between 100 and 200 feet below grade, and one Shelby tube sample will be collected from a depth between 200 and 500 feet below grade.

It should be noted that Shelby tube sampling is typically used to collect samples from apparent confining layers. D&B will be attempting to collect samples within the portion of the aquifer which will be targeted for treatment, regardless of the nature of the soils. As a result, the potential exists for poor recovery in this method of sampling due to the potential lack of cohesiveness of the sands to be sampled. However, the vertical conductivity of the aquifer is an essential parameter for the design of recirculation wells, and collecting representative cores for ex-situ testing is the most appropriate method of determining this parameter.

Slug tests will be conducted at five selected existing monitoring wells to obtain estimates of hydraulic conductivity for the key permeable hydraulic units that will be targeted for treatment. Wells will be selected for testing based upon the results of the monitoring well, temporary well and hydropunch sampling programs. If it is determined, based upon the results of previous sampling and geologic profiling, that slug testing needs to be conducted in locations where existing monitoring wells are not present, D&B will provide the NYSDEC with a cost for completing the testing in these areas. The field procedures to be used in the slug testing are described below.

Slug tests will be used to obtain estimates of hydraulic conductivity at five selected monitoring wells.

Field Equipment

1. Water level indicator
2. Data logger
3. In-situ transducers
4. Electrical tape
5. Stop watch
6. Field notebook
7. Steel tape with weight
8. 3/8-inch or larger polypropylene cord
9. Closed-volume 3- to 4-inch diameter, aluminum slugs 36 to 66 inches in length
10. Plastic sheeting

Procedure

1. Ensure all well geometry parameters are known and recorded. The minimum parameters needed are total well depth, screen length, casing radius, borehole radius and aquifer thickness.
   - If total well depth is known and well is in equilibrium, then proceed to Step 2.
   - If total well depth is not known, measure total well depth using a weighted steel tape. Allow well to return to equilibrium.
2. Measure depth to water in the well using an electrically conductive probe on a calibrated tape (hereinafter called sounder probe). Calculate the height of water standing in the well.
3. Lower a transducer probe into the well until the top of the probe is about 8 feet below the water surface. (Objective is to place top of probe at least several inches below the bottom of the closed slug that will be introduced; so if a long slug will be used, consider the length of the slug to determine depth to set transducer.)

4. Secure the transducer cable by taping the cable to the outside surface of the well stick-up or protective casing. Use electrical tape or duct tape, or some similar tape. Check the security of the cable; it should not be able to slip.

5. Tie one end of an unused nylon cord to the top of the closed-volume slug. Measure the length of cord needed to lower the slug into the well so that the top of the slug is not submerged. Mark the cord length that will correspond to the top-of-the-well casing when the slug is lowered.

6. A field team member (#1) inputs the initial head value in the Hermit data recorder. The value can be assigned as the equilibrium depth-to-water or as zero.

7. Another field team member (#2) lowers the slug into the well casing without allowing it to touch the water surface.

8. Field team member (#1) is stationed at the data recorder. Member (#1) acts as "starter" for the test initiation. On (#1's) verbal mark, the data recorder will start collecting data (by pressing start), and field team member (#2) (holding the slug) will lower it swiftly and smoothly into the well until the previously set mark on the cord (see Step 4) is at the top of the well casing.

9. Field team member (#1) is responsible for acquiring real-time depth to water measurements, if possible, using the sounder and a stop watch. The stop watch is started on the verbal start mark (Step 8). Depth to water is measured at will and the corresponding elapsed time is recorded.

10. Tie off or tape the slug's cord so that the slug is secured at constant depth in the well casing. Allow the well to return to complete equilibrium. Measure the depth to water periodically to follow progress toward equilibrium; the water should return to 90% or more of the initial head value measured in Step 2.

    Do not simply assume that two consecutive readings at the initial measurement constitute a return to equilibrium. Be patient at this step; it is imperative that the well returns to equilibrium before attempting slug removal. In some recovering wells, the slug is allowed to rest overnight. It would be reasonable to perform a slug injection test in another well before attempting the slug removal test in a well immediately following a slug injection test.

11. When the field team members are satisfied that the well is at about 90% or greater of pretest level, the slug removal is performed in a manner similar to that described in Step 7 through 11 above.

12. Field team member (#1) inputs the initial head value in the data recorder. The value can be assigned as the equilibrium depth-to-water or as zero.

13. Field tem member (#1), stationed at the data recorder, acts as a "starter" for the test initiation. On (#1's) verbal mark, the data recorder will start collecting data (by pressing start), and field team member (#2) (holding the slug cord) will pull the slug swiftly and smoothly out of the wall.

14. Field team member (#1), responsible for acquiring real-time depth to water measurements using the sounder and stop watch, starts the stop watch on the verbal start mark (Step 15). Depth-to-water is measured at will, and the corresponding elapsed time is recorded.

    This activity is a real-time confirmation that the test is proceeding as expected. If any part of this activity interferes with smooth conduct of the slug injection/removal, it should be discontinued.

15. If available, a field printer should be used to print recorded test data before the transducer cable is removed. Inspection of the data may reveal drastic anomalies requiring retesting.

16. The exterior surfaces of the slug, the transducer and its cable should be thoroughly decontaminated with an alconox and water wash and a de-ionized water rinse before their reuse. The cord used to lower and raise the slug will be discarded after use.

3.2.5 Geophysical Logging

To characterize the lithology of the site area, geophysical logging will be conducted in all seven boreholes constructed for the temporary wells and the two boreholes constructed for hydropunch sampling. The geophysical logging will be conducted through the hollow stem augers prior to installation of the temporary wells. For the two 500-foot borings used for the hydropunch sampling, geophysical logging will be conducted inside the borehole filled with drilling fluids.

3.2.6 Site Survey

A site survey of the project site and surrounding area will be prepared utilizing Geographic Information System (GIS) mapping, obtained from the Nassau County Department of Public Works (NCDPW), to establish a baseline survey for design purposes related to the construction of the site-specific remedy. Approximated dimensions and locations, as applicable, of the following shall be included/shown on the site survey:

- Buildings;
- Traffic Signals;
- Contour lines;
- Integrated Planimetric Features;
- Road Centerlines;
- Public Water Supply Wells;
- Recharge Basins;
- Water Supplier District Boundaries;
- Drainage Areas;
- Sanitary Sewer System;
- Railroad;
- Lots;
- Parcels;
- Lot Lines; and
- Zip Code Boundaries.

Upon completion of pre-design investigation activities, the site survey will be updated to also include approximate locations of temporary well points utilized throughout the performance of the investigation activities. Temporary well points will be field-located using available references (e.g., structures, fire hydrants, traffic signs) from the NCDPW GIS maps.

Additionally, ground surface elevations of each temporary well location will be obtained by a certified land surveyor licensed to practice in the State of New York. The basis for this information shall be in accordance with the New York State Plane Coordinate System (North American Datum [NAD] 1983). The scope of surveying services required is not defined at this time and is dependant upon the results of the pre-design investigation. As a result, costs for

completing the Site Survey will be obtained by D&B after completion of the Pre-Design Investigation. Upon soliciting costs for the performance of required services, a bid tabulation will be forwarded to the NYSDEC for approval recommending the lowest bidder qualified to perform the work.

3.2.7 Pre-Design Investigation Report

A Pre-Design Investigation Report will be prepared after the completion of field activities and prior to the preparation of design documents for the selected remedy. The Pre-Design Investigation Report will consist of documentation of field activities, notations of deviations from the work plan (if any), a presentation of the data collected, interpretation of the data, conclusions related to the suitability of subsurface conditions for the remedy selected in the ROD, along with any recommendations supporting the need to proceed with an alternate technology specified in the ROD. Three copies of the draft Pre-Design Investigation Report will be provided to the NYSDEC for review and comment. For budget purposes, it is assumed that one set of comments will be addressed by D&B prior to the preparation of the final Pre-Design Investigation Report.

3.3 Task 3 - Plans and Specifications (Contract Documents)

Pre-final (90%) and final (100%) specifications and drawings will be prepared for the purpose of competitively bidding the remedial construction in conformance with the NYSDEC Standard Contract Documents. The design documents will conform to the selected remedy in the Record of Decision, and will conform to New York State laws, rules, regulations and guidelines. As noted below, this task includes optional items that may be conducted at the request of the NYSDEC.

The specifications will contain contractor submittal requirements, including preparation of a project schedule; site-specific sampling and analysis plan (SAP); quality assurance/quality control (QA/QC) plan; and a site-specific health and safety plan (HASP) which will include a community air monitoring plan; and operations, maintenance and monitoring plan. The specifications will also include requirements for mobilization/demobilization, site preparation

and restoration, waste disposal and management, and site security. In addition, the Contract Documents will contain a bid sheet, estimated quantities for each bid item, and a maximum time period for substantial completion and final completion.

The design documents will specify requirements for the following:

- Site preparation;
- Performance-based specification for the installation and operation of in-well vapor stripping wells with localized vapor treatment for the purposes of conducting a pilot study to determine minimum design parameters to ensure the implementation of a successful remedy. Upon preparation of the design documents for the construction of the site-specific remedy, D&B will work with the NYSDEC to develop appropriate language for the implementation of the required pilot test.
- Termination of the contract for convenience based upon the results of the pilot study;
- Performance-based specification for the installation of in-well vapor stripping wells with localized vapor treatment to achieve remedial goals;
- Maintenance and protection of traffic (as required);
- Various permit requirements;
- Construction of new monitoring wells for long term groundwater monitoring program;
- Noise, odor and dust controls;
- Restoration of on-site and off-site remediated areas.

3.3.1 Pre-Final Design Submittal (90% Complete)

The pre-final design submittal will consist of a complete set of drawings, a complete specifications package, bid forms, measurement and payment provisions, and NYSDEC Standard Contract Documents, and will be submitted to the NYSDEC when the design is approximately 90% complete. A Limited Site Data Summary Report will be submitted to the NYSDEC as part of the pre-final design submittal. This report will describe site conditions and provide analytical data to assist bidders.

Supporting documentation, including the basis for design, supporting data and documentation, and design calculations, will be provided with the pre-final design submittal. A list of potentially impacted property owners and/or those persons with potential property rights, and an updated tax map, will also be provided, along with a preliminary list of anticipated temporary or permanent easements, rights-of-way and permits necessary to perform the remediation, and identification of non-property permits with which the remediation must be in substantial compliance. It is assumed that NYSDEC will obtain the necessary permits, access agreements and/or easements, although D&B will prepare permit applications, if required.

Three copies of the pre-final design package will be provided to NYSDEC for review and comment. Comments received will be incorporated into subsequent versions of the design package.

3.3.2 Final Design Submittal (100% Complete)

Upon completion of the design documents, one copy of the final plans and specifications will be submitted to NYSDEC for final review. After approval, 75 copies of the Contract Documents will be provided to the NYSDEC. In addition, an electronic copy in Portable Document Format (PDF) will be provided. The final drawings and specifications will be sealed and signed by a professional engineer licensed to practice in New York State. For budget purposes, it is assumed that each set of the Contract Documents will be comprised of 1,000 double-sided pages and ten 30-inch by 40-inch drawings.

3.3.3 Project Cost Estimate

A detailed construction, operation and maintenance cost estimate for the project will be prepared under this subtask. The estimate will be prepared on a bid item basis, consistent with the bid schedule in the Contract Documents, in order to provide a cost estimate for each bid item. A draft project cost estimate will be submitted with the pre-final design documents. Based upon comments from the NYSDEC, D&B will revise and submit the final cost estimate with the final

drawings and specifications. The final project cost estimate will be sealed and signed by a Professional Engineer licensed to practice in New York State.

3.4 Task 4 - Citizen Participation Activities

If requested, D&B will assist the NYSDEC with public participation activities. For budgeting purposes, it is assumed that D&B will prepare a presentation and attend one public meeting to answer questions regarding the project design, construction techniques and project schedule. D&B will also prepare minutes of the meeting and will provide them to the NYSDEC within 2 working days of the public meeting.

3.5 Task 5 - Pre-Award Services

D&B will provide pre-award services in conjunction with the competitive bidding of the remedial construction project, if requested by the NYSDEC. The services under this task have been organized into three subtasks as described below. It is assumed that advertising for bids and distribution of bid documents and any addenda will be performed by the NYSDEC. D&B will provide assistance, as needed, with the content of advertisements and addenda. Additionally, D&B will attempt to identify potential bidders as part of this task.

3.5.1 Pre-Bid Conference

D&B will attend and assist the NYSDEC with a mandatory on-site pre-bid conference and site walkover. At the pre-bid conference, D&B will emphasize to the prospective bidders important aspects of the project. D&B will prepare and submit meeting minutes for the pre-bid conference and respond to technical questions regarding the plans and specifications.

3.5.2 Addenda

D&B will prepare written responses to questions raised at the pre-bid conference and any necessary addenda to the plans and specifications for the timely transmittal by the NYSDEC to the

prospective bidders. D&B will provide up to 75 copies of addenda to the NYSDEC for distribution to the bidders. For budget purposes, it is assumed that one addendum will be prepared.

3.5.3 Bid and Submittal Review

Following the receipt of bids, D&B will perform a technical evaluation of the bids and prepare a tabulation of the bid prices that will be submitted to the NYSDEC. Additionally, as part of this subtask, D&B will review the apparent lowest bidder's technical pre-award submittals to determine conformance with the requirements of the Contract Documents. The review will include evaluation of the apparent lowest bidder's 5-day submittals and 14-day submittals.

Section 4

4.0 PROJECT MANAGEMENT

4.1 Project Schedule and Key Milestones/Reports

A project schedule for remedial design for the New Cassel Industrial Area Site is provided in Figure 4-1. Key milestones are identified in order to monitor work progress. Specific deadlines for completion of tasks and subtasks are established throughout the project to ensure timely completion of work. The following is the list of the milestones for this project:

1. Submittal of Draft Work Plan
2. Submittal of Pre-Final Contract Documents and Pre-Final Cost Estimate
3. Submittal of Final Contract Documents and Final Cost Estimate

4.2 Project Management, Organization and Key Technical Personnel

Dvirka and Bartilucci Consulting Engineers will be the prime consultant responsible for preparation of the remedial design. Subcontractors that are expected to be used on the project include the following:

- Delta Well and Pump Company, Inc. - drilling, temporary well sampling and gamma logging
- Brookside Environmental, Inc. - waste disposal
- Mitkem Corporation (MBE) - chemical analyses
- Jamaica Blueprint Company, Inc. (WBE) - document reproduction

The project organization, illustrating both management and project responsibility functions for the project team and key personnel, is provided in Figure 4-2.

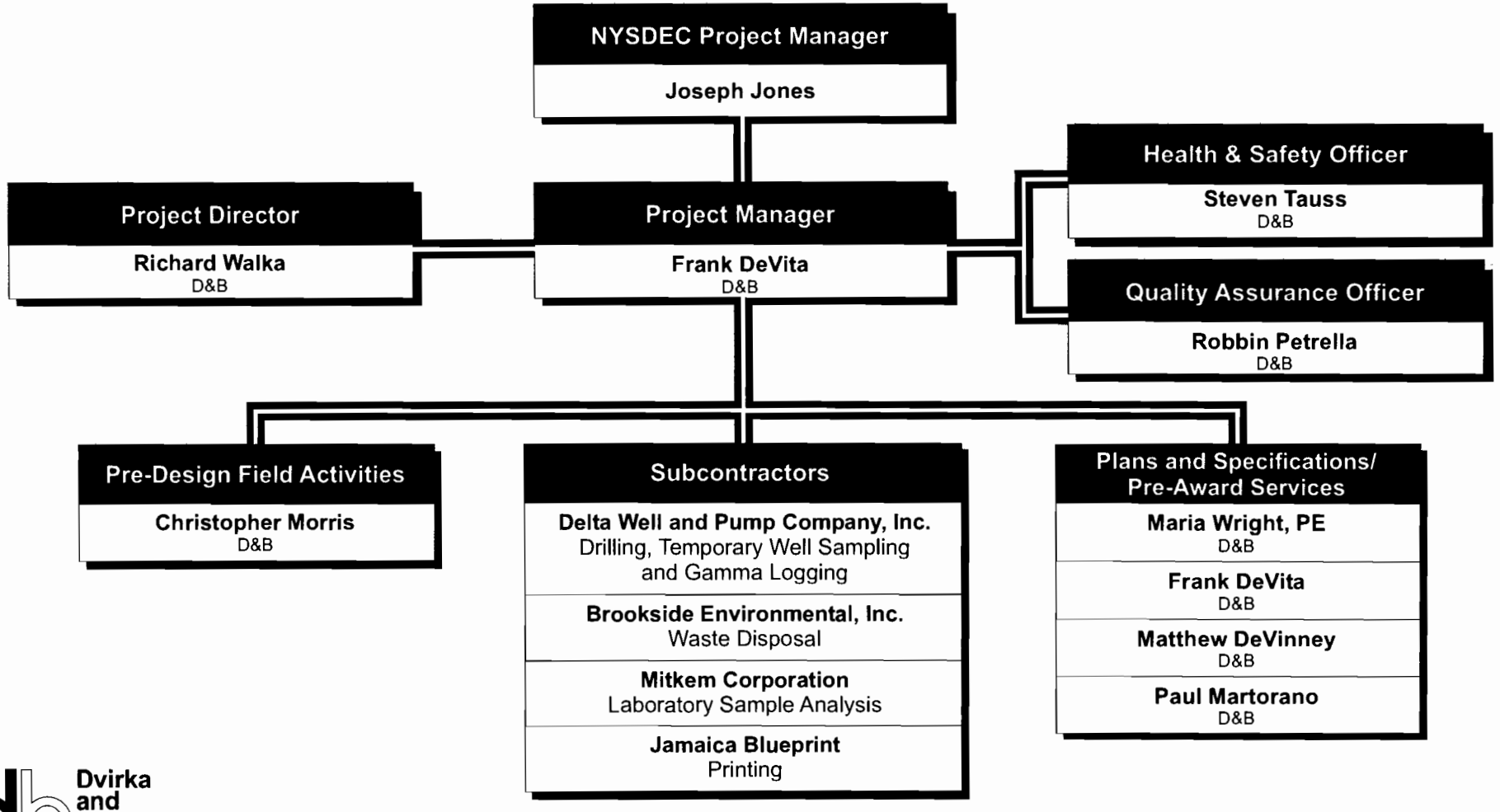
Figure 4-1
PROJECT SCHEDULE
NEW CASSEL INDUSTRIAL AREA OU-3 SITE REMEDIAL DESIGN

	Task	Start Date	Duration (weeks)	Completion Date
Task 1 - Work Plan Preparation		8/4/06		
1	Work Assignment Acceptance		1	8/11/06
2	Preparation of Draft Work Plan		12	11/3/06
3	NYSDEC Review of Draft Work Plan		22.00	4/2/07
4	Preparation of Final Work Plan		4	5/1/07
5	NYSDEC Review of Final Work Plan		10	7/12/07
6	Notice to Proceed		2	7/27/07
Task 2 - Pre-Design Investigation		8/3/07		
7	Scoping Session		1	8/10/07
8	Existing Monitoring Well Sampling		1	8/17/07
9	Temporary Well Installation and Hydropunch Sampling		22	1/18/08
10	Permeability Tests		1	1/25/08
11	Site Survey		2	2/8/08
12	Pre-Design Investigation Report		6	3/21/08
Task 3 - Plans and Specifications		3/21/08		
13	Pre-Final (90%) Design		8	5/16/08
14	NYSDEC Review		4	6/13/08
15	Final (100%) Design		8	8/8/08
16	NYSDEC Review		4	9/5/08
Task 4 - Citizen Participation Activities				
17	Preparation of Presentation			[1]
18	Public Meeting			[1]
19	Meeting Minutes			[1]
Task 5 - Pre-Award Services				
20	Copying of Bid Documents			[1]
21	Pre-Bid Conference			[1]
22	Addendum to Contract Documents (if required)			[1]
23	Bid and Submittal Review			[1]

[1] Schedule to be determined.

REMEDIAL DESIGN
NEW CASSEL INDUSTRIAL AREA OPERABLE UNIT NO. 3
TOWN OF NORTH HEMPSTEAD, NEW YORK

PROJECT TEAM ORGANIZATION CHART



Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

FIGURE 4-2

Section 5

5.0 SCHEDULE 2.11 FORMS

Schedule 2.11 (a)

Summary of Work Assignment Price
New Cassel Industrial Area (OU3)

Work Assignment Number D004446-6

1.	Direct Salary Costs (Schedules 2.10 (a) and 2.11(b))	$87,580
2.	Indirect Costs (Schedule 2.10 (g))	$132,245
3.	Direct Non-Salary Costs (Schedules 2.11 (c)and (d))	$17,788
	Subcontract Costs	
	Cost-Plus-Fixed-Fee Subcontracts (Schedules 2.11(e))	
	Emilcott Associates, Inc.	$2,881
4.	Total Cost-Plus-Fixed-Fee Subcontracts	$2,881

Unit Price Subcontracts (Schedules 2.11(f))

Name of Subcontractor	Services To Be Performed	Subcontract Price
Delta Well and Pump (WBE)	Drilling Services	$327,730
Mitkem Corporation (MBE)	Sample Analysis	$38,504
Jamaica Blueprint Co., Inc. (WBE)	Reproduction Services	$9,722
Brookside Environmental Inc.	Waste Disposal	$20,022

5.	Total Unit Price Subcontracts	$395,978
6.	Subcontract Management Fee	$20,549
7.	Total Subcontract Costs (lines 4 + 5 + 6)	$419,408
8.	Fixed Fee (Schedule 2.10 (h))	$25,280
9.	Total Work Assignment Price (lines 1 + 2 + 3 + 7 +8)	$682,301

SCHEDULE 2.11 (b)
SUMMARY
New Cassel Industrial Area (OU3)
WORK ASSIGNMENT NUMBER D004446-6

Average NSPE Wage Rates	IX	VIII	VII	VI	V	IV	III	II	I	TOTAL HOURS
as of January 1, 2006	$61.60	$54.95	$51.32	$45.44	$36.10	$33.51	$29.09	$23.13	$18.10	
as of January 1, 2007	$63.45	$56.60	$52.86	$46.80	$37.18	$34.52	$29.96	$23.82	$18.64	
as of January 1, 2008	$65.99	$58.86	$54.97	$48.68	$38.67	$35.90	$31.16	$24.78	$19.39	
Task 1	2	2	0	36	14	20	170	10	0	254
Task 2	4	2	0	60	16	160	1,332	18	0	1,592
Task 3		10	0	76	16	0	526	88	0	716
Task 4	4	0	0	0	8	0	38	3	0	53
Task 5	2	4	0	6	4	0	126	16	0	158
Total Hours	12	18	0	178	58	180	2,192	135	0	2,773
Subtotal 2006 Hours	2	2	0	36	14	20	170	10	0	254
Subtotal 2007 Hours	8	12	0	136	40	160	1,896	109	0	2,361
Subtotal 2008 Hours	2	4	0	6	4	0	126	16	0	158
Total Hours	12	18	0	178	58	180	2,192	135	0	2,773
Total Direct Labor Cost	$763	$1,025	$0	$8,293	$2,147	$6,193	$65,681	$3,225	$0	$87,326

SCHEDULE 2.11 (b)-1
Direct Administrative Labor Hours Budgeted
New Cassel Industrial Area (OU3)
WORK ASSIGNMENT NUMBER D004446-6

Average NSPE Wage Rates	IX	VIII	VII	VI	V	IV	III	II	I	TOTAL HOURS
as of January 1, 2006	$61.60	$54.95	$51.32	$45.44	$36.10	$33.51	$29.09	$23.13	$18.10	
as of January 1, 2007	$63.45	$56.60	$52.86	$46.80	$37.18	$34.52	$29.96	$23.82	$18.64	
as of January 1, 2008	$65.99	$58.86	$54.97	$48.68	$38.67	$35.90	$31.16	$24.78	$19.39	
Task 1	0.5	0	0	0	0.5	0	5	8	0	14
Task 2	0	0	0	0	0	0	1	12	0	13
Task 3	0	0	0	0	0	0	1	36	0	37
Task 4	0	0	0	0	0	0	1	3	0	4
Task 5	0	0	0	0	0	0	1	16	0	17
Subtotal 2006 Hours	0.5	0	0	0	0.5	0	5	8	0	14
Subtotal 2007 Hours	0	0	0	0	0	0	3	51	0	54
Subtotal 2008 Hours	0	0	0	0	0	0	1	16	0	17
Total Hours	0.5	0	0	0	0.5	0	9	75	0	85
Total Direct Labor Cost	$31	$0	$0	$0	$18	$0	$265	$1,781	$0	$2,095

Dvirka & Bartilucci Consulting Engineers
New Cassel Industiral Area Remedial Design
Work Assignment Number: D004446-6

BREAKDOWN OF ADMINISTRATIVE LOE HOURS ON SCHEDULE 2.11(b-1)

ADMIN ACTIVITY	WORK PLAN DEVELOPMENT														REVIEW WORK ASSIGNMENT (WA) PROGRESS													
	Conflict of Interest Checks						Prepare 2.11 Schedules								Conduct Progress Reviews						Prepare Monthly Report & Update Schedules							
NSPE	IX	VIII	VII	VI	V	IV	VIII	VII	VI	V	IV	III	II	I	VIII	VII	VI	V	IV	III	VIII	VII	VI	V	IV	III	II	I
TASK 1	0.5											4														1		
TASK 2																										1		
TASK 3																										1		
TASK 4																										1		
TASK 5																										1		
TOTAL	0.5	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0

ADMIN ACTIVITY	REVIEW WORK ASSIGNMENT (WA) PROGRESS														CAP PREPARATION											
	MBE/WBE Activities								Program Management						Prepare Monthly Cost Control Report & CAP								Oversee CAP			
NSPE	VIII	VII	VI	V	IV	III	II	I	IX	VIII	VII	VI	V	IV	VIII	VII	VI	V	IV	III	II	I	IX	VIII	VII	VI
TASK 1				0.5																	2					
TASK 2																					2					
TASK 3																					12					
TASK 4																					1					
TASK 5																					4					
TOTAL	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0.0	0	0	0

ADMIN ACTIVITY	MISCELLANEOUS																Total Adm. LOE (hrs)								
	Update NSPE List								Equipment Use and Inventory				Word Proc. and Report Preparation												
NSPE	VIII	VII	VI	V	IV	III	II	I	IV	III	II	I	IV	III	II	I	IX	VIII	VII	VI	V	IV	III	II	I
TASK 1															6		0.5	0.0	0.0	0.0	0.5	0.0	5.0	8.0	0.0
TASK 2															10		0.0	0.0	0.0	0.0	0.0	0.0	1.0	12.0	0.0
TASK 3															24		0.0	0.0	0.0	0.0	0.0	0.0	1.0	36.0	0.0
TASK 4															2		0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0
TASK 5															12		0.0	0.0	0.0	0.0	0.0	0.0	1.0	16.0	0.0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	0	0.5	0.0	0.0	0.0	0.5	0.0	9.0	75.0	0.0

SCHEDULE 2.11 (c)
DIRECT NON-SALARY COSTS
SUMMARY
New Cassel Industrial Area (OU3)
Work Assignment No. D004446-6

ITEM	MAXIMUM REIMBURSEMENT RATE	UNIT	ESTIMATED NUMBER OF UNITS	TOTAL ESTIMATED COSTS
TRAVEL				
Transportation (Personal Car)	$0.485	mile	400	$194.00
Van Rental	$400.00	week	16	$6,400.00
Gas	$50.00	week	16	$800.00
MISCELLANEOUS EXPENSES				
Printing	$50.00	report	0	$0.00
Photographs/Slides*	$200.00	set	2	$400.00
Level D Safety Equipment	$16.62	$/person/day	120	$1,994.40
OUTSIDE SERVICES				
Express Mail (Standard Package)	$15.00	package	4	$60.00
Express Mail (Medium Package)	$35.00	package	3	$105.00
Express Mail (Large Package)	$250.00	package	1	$250.00
Sample Shipping	$75.00	shipment	30	$2,250.00
TOTAL DIRECT NON-SALARY COSTS				$12,453.40

* Includes photo finishing, slides and any other costs not associated with in-house capabilities.

Schedule 2.11(c)1
Direct Non-Salary Costs
New Cassel Industrial Area (OU3)

Item	Reimbursement* Rate	Est. No. of Units (Task 1)	Total Cost (Task 1)	Est. No. of Units (Task 2)	Total Cost (Task 2)	Est. No. of Units (Task 3)	Total Cost (Task 3)	Est. No. of Units (Task 4)	Total Cost (Task 4)	Est. No. of Units (Task 5)	Total Cost (Task 5)	Estimated No. of Units	Total Estimated Cost
A. Miscellaneous (Travel)													
1. Transportation	$0.485 /mile	50	$24.25	200	$97.00	50	$24.25	50	$24.25	50	$24.25	400	$194.00
2. Van Rental	$400.00 /week	0	$0.00	16	$6,400.00	0	$0.00	0	$0.00	0	$0.00	16	$6,400.00
3. Gas	$50.00 /week	0	$0.00	16	$800.00	0	$0.00	0	$0.00	0	$0.00	16	$800.00
Subtotal (Travel)			$24.25		$7,297.00		$24.25		$24.25		$24.25		$7,394.00
B. Miscellaneous (Expenses)													
1 Express Mail (Standard Package)	$15.00 /package	1	$15.00	1	$15.00	0	$0.00	1	$15.00	1	$15.00	4	$60.00
2 Express Mail (Medium Package)	$35.00 /package	0	$0.00	0	$0.00	3	$105.00	0	$0.00	0	$0.00	3	$105.00
3 Express Mail (Large Package)	$250.00 /package	0	$0.00	0	$0.00	1	$250.00	0	$0.00	0	$0.00	1	$250.00
4 Sample Shipping	$75.00 /package	0	$0.00	30	$2,250.00	0	$0.00	0	$0.00	0	$0.00	30	$2,250.00
5. Photographs/Slides	$200.00 Lump Sum	0	$0.00	1	$200.00	0	$0.00	0	$0.00	1	$200.00	2	$400.00
6. Printing	$50.00 /report	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
7. Level D Safety Equipment	$16.62 $/person/day	0	$0.00	120	$1,994.40	0	$0.00	0	$0.00	0	$0.00	120	$1,994.40
8. Level C Safety Equipment	$40.00 $/person/day	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
9. Level B Safety Equipment	$50.00 $/person/day	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
Subtotal (Misc. Expenses)			$15.00		$4,459.40		$355.00		$15.00		$215.00		$5,059.40
TOTAL			$39.25		$11,756.40		$379.25		$39.25		$239.25		**$12,453.40**

* See Schedule 2.10(b) for rates.

SCHEDULE 2.11 (d) 1

EQUIPMENT PURCHASED UNDER THE CONTRACT
SUMMARY
New Cassel Industrial Area (OU3)
Work Assignment No. D004446-6

ITEM	ESTIMATED PURCHASE PRICE	O&M RATE ($/per month)	TERM OF USAGE (MONTHS)	ESTIMATED USAGE COST (COL. 2 + [3X4])
None				$0
			TOTAL	$0

Schedule 2.11 (d) 2
Summary

Maximum Reimbursement Rates for Consultant/Subconsultant - Owned Equipment
New Cassel Industrial Area (OU3)
Work Assignment No. D004446-6

ITEM	PURCHASE PRICE X 85%	USAGE RATE ($/day)	CAPITAL RECOVERY RATE ($/Unit of Time)	O & M RATE ($/Unit of Time)	ESTIMATED USAGE (days)	ESTIMATED USAGE COST (Col. 3x6)
None						$0
					TOTAL	$0

Notes:
Usage Rate = Capital Recovery Rate + O&M rate

The maximum usage rate for an item of equipment reverts to the O&M rate when the total usage reimbursement exceed 85% of the purchase price.

SCHEDULE 2.11 (d) 3
EQUIPMENT
VENDOR RENTED
SUMMARY
New Cassel Industrial Area (OU3)
Work Assignment No. D004446-6

ITEM	MAXIMUM REIMBURSEMENT RATE	TIME PERIOD	ESTIMATED USAGE (period of time)	ESTIMATED USAGE COST (Col. 2 X 3)
In-Situ Mini Troll	$200.00	per week	1	$200.00
Hand Held PC	$200.00	per week	1	$200.00
Horiba U22 Water Quality Meter	$250.00	per week	7	$1,750.00
MIE Miniram Digital Dust Indicator	$180.00	per week	7	$1,260.00
Generator	$60.00	per day	5	$300.00
			Total	$3,710.00

SCHEDULE 2.11 (d) 4
SUMMARY
EXPENDABLE SUPPLIES
New Cassel Industrial Area (OU3)
Work Assignment No. D004446-6

ITEM	ESTIMATED QUANTITY	UNITS	UNIT COST	TOTAL BUDGETED COST (COL. 2 X 3)
Polyethylene tubing	1,500	feet	$0.25	$375.00
			TOTAL	$375.00

SCHEDULE 2.11 (d) 5
CONSUMABLE SUPPLIES
SUMMARY
New Cassel Industrial Area (OU3)
Work Assignment No. D004446-6

ITEM	ESTIMATED QUANTITY	UNITS	UNIT COST	TOTAL BUDGETED COST (COL. 2 X 3)
Miscellaneous Supplies*	5	L.S.	$250.00	$1,250.00
			TOTAL	$1,250.00

*Miscellaneous supplies include, but are not necessarily limited to, bailers, rope, ice, sample packing materials, scoops, garbage bags, ziplock bags, electrical tape, plastic sheeting, polypropylene cord, batteries, etc.

Schedule 2.11 (e)
Cost-Plus-Fixed Fee Subcontracts

Work Assignment Number D004446-6

Name of Subcontractor: Emilcott Associates, Inc.

Services to be Performed: Develop SSHASP, Review Contractor's SSHASP for conformance with Contract Documents

Subcontract Price: $2,881.44

A. Direct Salary Costs

Professional Responsibility Level	Labor Classification	Average Reimbursement Rate ($/hr)	Maximum Reimbursement Rate ($/hr)	Estimated No. of Hours	Total Estimated Direct Salary
Senior PM	VI	$45.00	$45.00	24	$1,080.00
EH&S Consultant	II	$24.00	$24.00	0	$0.00
Total Direct Salary Costs					$1,080.00

Footnotes:

1) These rates will be held firm until December 31, 2006

2) Reimbursement will be limited to the lesser of either the individual's actual hourly rate

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

4) Only those labor classifications indicated with an asterisk (*) will be entitled to o

5) Reimbursement for technical time of principals, owners and officers will be limited to the
maximum reimbursement rate of that labor category, the actual hourly rate paid,

6) The maximum rates in each labor category can be modified only by mutual agreement

B. Indirect Salary Costs

Indirect costs shall be paid on a percentage of direct salary costs incurred which shall not of 132 % or the actual rate calculated in accordance with 48 Federal Acquisition Regulation, whichever is lower.

Amount budgeted for indirect costs is $ 1,425.60

C. Maximum Reimbursement Rates for Direct Non-Salary Costs

Item	Maximum Reimbursement Rates (specify unit)	Est. No. of Units	Total Estimated Cost
Travel	$0.375 /mile		$0.00
Field equipment	$40 /day		$0.00
Total Direct Non-Salary Costs			$0.00

D. Fixed fee (15% of direct plus indirect labor costs) $ 375.84

SCHEDULE 2.11 (f) 1
UNIT PRICE SUBCONTRACTS
SUMMARY
New Cassel Industrial Area (OU3)
Work Assignment No. D004446-6

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMENT FEE
Mitkem Corporation	Sample Analysis	$38,504	$1,925

Item	Method	Maximum Reimbursement Rate	Estimated Units	Total Estimated Cost
Soil				
Hydrometer and Grain Size Analysis	ASTM D422	$150.00 per sample	18	$2,700.00
Groundwater				
Volatile Organic Compounds	EPA SOW OLM04.2 (6/00 ASP)	$74.00 per sample	152	$11,248.00
Manganese	6/00 ASP 243.2	$14.00 per sample	139	$1,946.00
Magnesium	6/00 ASP 242.1	$14.00 per sample	139	$1,946.00
Ferrous Iron	SM 3500	$50.00 per sample	152	$7,600.00
Calcium	6/00 ASP 215.1	$14.00 per sample	139	$1,946.00
Total Organic Carbon	6/00 ASP 415.1	$30.00 per sample	13	$390.00
Alkalinity	6/00 ASP 310.1	$15.00 per sample	152	$2,280.00
Chlorides	6/00 ASP 325.3	$15.00 per sample	13	$195.00
Nitrates	6/00 ASP 352.1	$15.00 per sample	13	$195.00
Sulfates	6/00 ASP 375.4	$20.00 per sample	13	$260.00
Carbon Dioxide	SM 4500	$15.00 per sample	13	$195.00
Methane	RSK 175	$55.00 per sample	13	$715.00
QA/QC Samples				
Groundwater				
Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank				
Volatile Organic Compounds	EPA SOW OLM04.2 (6/00 ASP)	$74.00 per sample	24	$1,776.00
Manganese	6/00 ASP 243.2	$14.00 per sample	21	$294.00
Magnesium	6/00 ASP 242.1	$14.00 per sample	21	$294.00
Ferrous Iron	SM 3500	$50.00 per sample	24	$1,200.00
Calcium	6/00 ASP 215.1	$14.00 per sample	21	$294.00
Total Organic Carbon	6/00 ASP 415.1	$30.00 per sample	3	$90.00
Alkalinity	6/00 ASP 310.1	$15.00 per sample	24	$360.00
Chlorides	6/00 ASP 325.3	$15.00 per sample	3	$45.00
Nitrates	6/00 ASP 352.1	$15.00 per sample	3	$45.00
Sulfates	6/00 ASP 375.4	$20.00 per sample	3	$60.00
Carbon Dioxide	SM 4500	$15.00 per sample	3	$45.00
Methane	RSK 175	$55.00 per sample	3	$165.00
Trip Blank				
Volatile Organic Compounds	EPA SOW OLM04.2 (6/00 ASP)	$74.00 per sample	30	$2,220.00
		SUBTOTAL		**$38,504.00**
		SUBCONTRACT MANAGEMENT FEE		**$1,925**
		TOTAL		**$40,429.20**

SCHEDULE 2.11 (f) 2
UNIT PRICE SUBCONTRACTS
SUMMARY
New Cassel Industrial Area
Work Assignment Number: D004446-6

NAME OF SUBCONTRACTOR
Delta Well and Pump Company, Inc.

SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMENT FEE
Drilling, Temporary Well Sampling and Gamma Logging	$327,730	$16,387

	Item		Maximum Reimbursement Rate	Estimated No. of Units	Total Estimated Costs
1.	A. MOBILIZATION/DEMOBILIZATION,	Lump Sum	$12,000.00	1	$12,000.00
	B. MUD ROTARY PORTABLE PIT SET UP	Lump Sum	$7,500.00	2	$15,000.00
	C. SECURITY FOR DRILL RIG AND MUD PIT	Per Hour	$40.00	972	$38,880.00
	D. CONSTRUCTION AND REMOVAL OF DECON PAD	Lump Sum	$900.00	1	$900.00
	E. SOUND BARRIER FOR MUD ROTARY DRILLING	Linear Foot	$20.00	64	$1,280.00
	F. WELL/BORING SET-UP	Per Well/Boring	$250.00	9	$2,250.00
2	HOLLOW STEM AUGER DRILLING				
	(1) 0-50 FEET IN DEPTH				
	C. 3.25" ID HOLLOW STEM AUGERS	Lineal Foot	$18.00	350	$6,300.00
	(2) 50-100 FEET IN DEPTH				
	B. 3.25" ID HOLLOW STEM AUGERS	Lineal Foot	$18.00	350	$6,300.00
	(3) 100-200 FEET IN DEPTH				
	B. 3.25" ID HOLLOW STEM AUGERS	Lineal Foot	$22.00	700	$15,400.00
	(4) 200-285 FEET IN DEPTH				
	B. 3.25" ID HOLLOW STEM AUGERS	Lineal Foot	$40.00	595	$23,800.00
	MUD ROTARY				
	(2) 0-50 FEET IN DEPTH				
	C. 8-INCH DIAMETER BIT	Lineal Foot	$50.00	100	$5,000.00
	(2) 50-100 FEET IN DEPTH				
	C. 8-INCH DIAMETER BIT	Lineal Foot	$50.00	100	$5,000.00
	(2) 100-200 FEET IN DEPTH				
	C. 8-INCH DIAMETER BIT	Lineal Foot	$50.00	200	$10,000.00
	(2) GREATER THAN 200 FEET IN DEPTH				
	C. 8-INCH DIAMETER BIT	Lineal Foot	$50.00	600	$30,000.00
6.	BOREHOLE SAMPLING				
	SHELBY TUBE SAMPLING				
	C. 100-200 FOOT IN DEPTH	Per Sample	$400.00	9	$3,600.00
	D. GREATER THAN 200 FOOT IN DEPTH	Per Sample	$450.00	9	$4,050.00
	BOREHOLE SAMPLING				
	HYDRO PUNCH SAMPLING				
	A. 0-50 FOOT IN DEPTH	Per Sample	$225.00	2	$450.00
	B. 50-100 FOOT IN DEPTH	Per Sample	$275.00	4	$1,100.00
	C. 100-200 FOOT IN DEPTH	Per Sample	$300.00	10	$3,000.00
	D. GREATER THAN 200 FOOT IN DEPTH	Per Sample	$350.00	32	$11,200.00
	BOREHOLE GAMMA LOGGING				
	A. 285- FOOT BORINGS	Lump Sum	$300.00	7	$2,100.00
	B. 500-FOOT BORINGS	Lump Sum	$500.00	2	$1,000.00
7.	BOREHOLE ABANDONMENT				
	A. 4 TO 8 INCH DIAMETER BOREHOLE	Per Foot	$10.00	1,350	$13,500.00
8.	VERTICAL PROFILE INSTALLATION				
	A. 2-INCH STAINLESS STEEL SCREEN (TYPE 304)	Per Foot	$40.00	5	$200.00
	B. 2-INCH SCHEDULE STEEL	Per Foot	$6.00	295	$1,770.00
16.	VERTICAL PROFILE GROUNDWATER SAMPLING (1)				
	(ITEM BILLED USING WELL DEVELOPMENT HOURLY COSTS)				
	SUBMERSIBLE PUMP TO PURGE/COLLECT SAMPLE	Per Hour	$200.00	224	$44,800.00
19.	BACKHOE EXCAVATOR (2)				
	TO TRANSPORT SOIL CUTTINGS TO ROLL- OFF CONTAINER				
	A. MOBILIZATION AND DEMOBILIZATION	Lump Sum	$1,200.00	1	$1,200.00
	B. RUBBER TIRE BACKHOE	Per Hour	$125.00	220	$27,500.00
21.	WATER HAULING (3)				
	(INCLUDES LABOR AND VEHICLE WITH MINIMUM OF 500 GALLON				
	CAPACITY TO SUPPLY AND TRANSPORT WATER)	Per Day	$900.00	28	$25,200.00
15.	CONTAINERIZATION OF DRILLING MATERIAL AND STAGING				
	A. PROVIDE CLEAN EMPTY DOT APPROVED 55 GALLON DRUMS WITH SEALS, BUNGS AND LIDS	Per 55 Gallon Drum	$50.00	70	$3,500.00
	B. FILLING, MOVING AND STAGING 55 GALLON DRUMS ON-SITE ON PALLETS	Per 55 Gallon Drum	$30.00	70	$2,100.00
	C. MOVE FILLED DRUMS TO SECONDARY LOCATION WITHIN 1 MILE OF DRILL SITE	Per 55 Gallon Drum	$35.00	70	$2,450.00
20.	SITE RESTORATION				
	A. TOPSOIL	Cubic Yard	$30.00	5	$150.00
	B. GRASS SEEDING	Square Yard	$15.00	10	$150.00
	C. ASPHALT PAVING	Bag (60 lbs.)	$25.00	36	$900.00
21.	SPECIALTY ITEMS (Road and Hydrant Permits)	Per Permit	$300.00	9	$2,700.00
22.	STANDBY TIME	Per Hour	$150.00	20	$3,000.00
		SUBTOTAL			$327,730.00
		SUBCONTRACT MANAGEMENT FEE			$16,387
		TOTAL			$344,116.50

Notes:
(1) Estimated hours based on collection of 13 groundwater samples over a 4 day 8-hour period at each tempoary vertical profile well.
(2) Backhoe/Excavator to be used 2 hours a day for a duration of 110 days, to transport soil to roll - off containers. Within 1 mile of drill site.
(3) Water Hauling is estimated for 2 hours a day for a duration of a 110 days.

SCHEDULE 2.11 (f) 3
UNIT PRICE SUBCONTRACTS
SUMMARY
NEW CASSEL INDUSTRIAL AREA
Work Assignment Number D004446-6

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMEN FEE
Brookside Environmental Inc.	**Waste Disposal**	**$20,022**	**$1,001**

Item	Maximum Reimbursement Rate	Estimated No. of Units	Total Estimate Costs
15 cubic yard container - Delivery	$600.00 Per event	3 Events	$1,800
15 cubic yard container - Rental	$18.00 Per day	154 Days	$2,772
15 cubic yard container - Removal	$1,100.00 Per event	3 Events	$3,300
Disposal of non-hazardous drill cuttings	$60.00 Per ton	80 Tons	$4,800
Disposal of non-hazardous drill cuttings	$85.00 Per drum	70 Drums	$5,950
Disposal characterization sampling and analysis	$350.00 Per sample	4 Samples	$1,400
	SUBTOTAL		**$20,022**
	SUBCONTRACT MANAGEMENT FEE		**$1,001.10**
	TOTAL		**$21,023**

SCHEDULE 2.11 (f) 4
UNIT PRICE SUBCONTRACTS
SUMMARY
New Cassel Industrial Area (OU3)
Work Assignment No. D004446-6

NAME OF SUBCONTRACTOR	SERVICES TO BE PERFORMED	SUBCONTRACT PRICE	MANAGEMENT FEE
Jamaica Blueprint Company, Inc.	**Printing**	**$9,722**	**$486**

Item	Maximum Reimbursement Rate	Estimated No. of Units	Total Estimated Costs
Draft Plans and Specifications (30%)			
Specifications, 1,000 double-sided sheets each	$105 per set	7 sets	$735
Drawing Sets, 10 drawings each	$14 per set	7 sets	$95
Draft Plans and Specifications (60%)			
Specifications, 1,000 double-sided sheets each	$105 per set	7 sets	$735
Drawing Sets, 10 drawings each	$14 per set	7 sets	$95
Draft Final Plans and Specifications			
Specifications, 1,000 double-sided sheets each	$105 per set	7 sets	$735
Drawing Sets, 10 drawings each	$14 per set	7 sets	$95
Draft Plans and Specifications			
Specifications, 1,000 double-sided sheets each	$85 per set	77 sets	$6,541
Drawing Sets, 10 drawings each	$9 per set	77 sets	$693

SUBTOTAL	**$9,722**
SUBCONTRACT MANAGEMENT FEE	**$486**
TOTAL	**$10,208**

Project Name: New Cassel Industrial Area (OU3)
Work Assignment No.: D004446-6
Task No./Name: All Tasks
Complete: 0.00%

SCHEDULE 2.11 (g)
SUMMARY

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$87,580	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	$132,245	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	$219,825	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	$7,394	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$10,394	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$17,788	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	$398,859	0.00
7a. Management Fee	0.00	0.00	0.00	0.00	0.00	0.00	$20,549	0.00
8. Total Work Assignment Cost	0.00	0.00	0.00	0.00	0.00	0.00	$657,021	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	$25,280	0.00
10. Total Work Assignment Price	0.00	0.00	0.00	0.00	0.00	0.00	$682,301	0.00

Project Manager (Engineer) _____ Date _____

Project Name: New Cassel Industrial Area (OU3)
Work Assignment No.: D004446-6
Task No./Name: 1/Work Plan Development
Complete: 0.00%

SCHEDULE 2.11 (g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$8,221	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	$12,414	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	$20,635	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	$24	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$15	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$39	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	$2,161	0.00
7a. Management Fee	0.00	0.00	0.00	0.00	0.00	0.00	$0	0.00
8. Total Work Assignment Cost	0.00	0.00	0.00	0.00	0.00	0.00	$22,835	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	$2,373	0.00
10. Total Work Assignment Price	0.00	0.00	0.00	0.00	0.00	0.00	$25,208	0.00

Project Manager (Engineer) _____ Date _____

Project Name: New Cassel Industrial Area (OU3)
Work Assignment No.: D004446-6
Task No./Name: 2/Pre-Design Investigations
Complete: 0.00%

SCHEDULE 2.11 (g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$49,632	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	$74,944	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	$124,576	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	$7,297	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$9,794	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$17,091	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	$386,256	0.00
7a. Management Fee	0.00	0.00	0.00	0.00	0.00	0.00	$20,063	0.00
8. Total Work Assignment Cost	0.00	0.00	0.00	0.00	0.00	0.00	$547,986	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	$14,326	0.00
10. Total Work Assignment Price	0.00	0.00	0.00	0.00	0.00	0.00	$562,312	0.00

Project Manager (Engineer) _____ Date _____

Project Name: New Cassel Industrial Area (OU3)
Work Assignment No.: D004446-6
Task No./Name: 3/Performance Specifications
Complete: 0.00%

SCHEDULE 2.11 (g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$22,829	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	$34,471	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	$57,300	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	$24	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$355	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$379	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	$9,722	0.00
7a. Management Fee	0.00	0.00	0.00	0.00	0.00	0.00	$486	0.00
8. Total Work Assignment Cost	0.00	0.00	0.00	0.00	0.00	0.00	$67,887	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	$6,589	0.00
10. Total Work Assignment Price	0.00	0.00	0.00	0.00	0.00	0.00	$74,476	0.00

Project Manager (Engineer) _____ Date _____

Project Name: New Cassel Industrial Area (OU3)
Work Assignment No.: D004446-6
Task No./Name: 4/Citizen Participation
Complete: 0.00%

SCHEDULE 2.11 (g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$1,761	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	$2,660	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	$4,421	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	$24	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$15	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$39	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	$0	0.00
7a. Management Fee	0.00	0.00	0.00	0.00	0.00	0.00	$0	0.00
8. Total Work Assignment Cost	0.00	0.00	0.00	0.00	0.00	0.00	$4,460	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	$508	0.00
10. Total Work Assignment Price	0.00	0.00	0.00	0.00	0.00	0.00	$4,969	0.00

Project Manager (Engineer) _____ Date _____

Project Name: New Cassel Industrial Area (OU3)
Work Assignment No.: D004446-6
Task No./Name: 5/Pre-Award Services
Complete: 0.00%

SCHEDULE 2.11 (g)

Date Prepared:
Billing Period:
Invoice No.:

MONTHLY COST CONTROL REPORT
SUMMARY OF FISCAL INFORMATION

Expenditure Category	A Costs Claimed This Period	B Paid To Date	C Total Disallowed To Date	D Total Costs Incurred To Date (A+B+B1)	E Estimated Costs To Completion	F Total Work Assignment Price (A+B+E)	G Approved Budget	H Estimated Under/(Over) (G-F)
1. Direct Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$5,137	0.00
2. Indirect	0.00	0.00	0.00	0.00	0.00	0.00	$7,757	0.00
3. Subtotal Direct Salary Costs and Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	$12,894	0.00
4. Travel	0.00	0.00	0.00	0.00	0.00	0.00	$24	0.00
5. Other Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$215	0.00
6. Subtotal Direct Non-Salary Costs	0.00	0.00	0.00	0.00	0.00	0.00	$239	0.00
7. Subcontractors	0.00	0.00	0.00	0.00	0.00	0.00	$720	0.00
7a. Management Fee	0.00	0.00	0.00	0.00	0.00	0.00	$0	0.00
8. Total Work Assignment Cost	0.00	0.00	0.00	0.00	0.00	0.00	$13,853	0.00
9. Fixed Fee	0.00	0.00	0.00	0.00	0.00	0.00	$1,483	0.00
10. Total Work Assignment Price	0.00	0.00	0.00	0.00	0.00	0.00	$15,336	0.00

Project Manager (Engineer) _____ Date _____

SCHEDULE 2.11 (g) SUPPLEMENTAL
MONTHLY COST CONTROL REPORT
SUBCONTRACTS

	Subcontract Name	Subcontract Costs Claimed This Application Incl. Resubmittals	Subcontract Costs Approved for Payment on Previous Application	Total Subcontract costs to Date (A plus B)	Subcontract Approved Budget	Management Fee Budget	Management Fee Paid	Total Costs To Date
1.	Delta Well and Pump (WBE)	$0	$0	$0	$327,730	$16,386.50	$0	$0
2.	Mitkem Corporation (MBE)	$0	$0	$0	$38,504	$1,925.20	$0	$0
3.	Jamaica Blueprint Co., Inc. (WBE)	$0	$0	$0	$9,722	$486.08	$0	$0
4.	Brookside Environmental Inc.	$0	$0	$0	$20,022	$1,001.10	$0	$0
5.	Emilcott Associates Inc.	$0	$0	$0	$2,881	$0	$0	$0
6	To Be Determined	$0	$0	$0	$15,000	$750.00	$0	$0
	Total				$413,859	$20,549		

Schedule 2.11 (h)

Project Name: New Cassel Industrial Area (OU3)
Work Assignment No.: D004446-6

Date Prepared:
Billing Period
Invoice No.

Monthly Cost Control Report
Summary of Labor Hours
Expended to Date/Estimated To Completion

NSPE Labor Classification	IX EXP/EST	VIII EXP/EST	VII EXP/EST	VI EXP/EST	V EXP/EST	IV EXP/EST	III EXP/EST	I & II EXP/EST	ADMIN/ SUPPORT	TOTAL NUMBER OF DIRECT LABOR HOURS EXP/EST
Task 1	0/ 2	0/ 2	0/ 0	0/ 36	0/ 14	0/ 20	0/ 170	0/ 10	0/ 14	0/ 254
Task 2	0/ 4	0/ 2	0/ 0	0/ 60	0/ 16	0/ 160	0/ 1,332	0/ 18	0/ 13	0/ 1,592
Task 3	0/	0/ 10	0/ 0	0/ 76	0/ 16	0/ 0	0/ 526	0/ 88	0/ 37	0/ 716
Task 4	0/ 4	0/ 0	0/ 0	0/ 0	0/ 8	0/ 0	0/ 38	0/ 3	0/ 4	0/ 53
Task 5	0/ 2	0/ 4	0/ 0	0/ 6	0/ 4	0/ 0	0/ 126	0/ 16	0/ 17	0/ 158
TOTAL HOURS	0/ 12	0/ 18	0/ 0	0/ 178	0/ 58	0/ 180	0/ 2,192	0/ 135	0/ 85	0/ 2,773

MBE/WBE
UTILIZATION PLAN
SUMMARY
New Cassel Industrial Area
Work Assignment No. D004446-66

Areas to be Subcontracted	Subcontractor Name	MBE/WBE	Total Subcontract Value	% MBE/WBE Utilization
1. Mitkem	Laboratory Services	MBE	$38,504	5.6%
2. Delta Well and Pump	Drilling Services	WBE	$327,730	48.0%
3. Reproduction Services	Jamaica Blueprint Co., Inc.	WBE	$9,722	1.4%

Total MBE Utilization	MBE Subcontract Value / Total Contract Value	=	$38,504 / $682,301	5.6%
Total WBE Utilization	WBE Subcontract Value / Total Contract Value	=	$337,452 / $682,301	49.5%
Total MBE/WBE Utilization	MBE/WBE Subcontract Value / Total Contract Value	=	$375,956 / $682,301	55.1%