BAYONNE ENERGY CENTER, LLC

FEBRUARY 2011 MODIFICATION TO SEGMENT 2 ENVIRONMENTAL MANAGEMENT & CONSTRUCTION PLAN

FOR SEGMENT 2 CONSTRUCTION ACTIVITIES

AT THE NEW YORK LANDFALL:
Installation of the Transition Vaults, Upland Cable, and Electrical Interconnection
IN NEW YORK WATERS:
Installation of the Submarine Cable System

February 2011 Modification to Submarine Cable Route

Prepared For:

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ESS Project No. P273-026.04

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TABLE OF CONTENTS

PROJECT TERMINOLOGY

ACRONYMS

SECTION PAGE

THE SEGMENT 2 ENVIRONMENTAL MANAGEMENT & CONSTRUCTION PLAN BELOW (AS REVISED AUGUST 2, 2010) CONTINUES IN EFFECT EXCEPT WHERE SUPERSEDED IN PREFACE, NEW SECTION 1.4, REVISED SECTIONS 4.1, 5.1 AND 5.8 AND TABLE 2-1, AND WHERE NOTED IN FIGURES AND APPENDICES BELOW:

TABLE OF CONTENTS (Continued)

SECTION **PAGE**

TABLE OF CONTENTS (Continued)

SECTION **PAGE**

TABLES

FIGURES

TABLE OF CONTENTS (Continued)

SECTION **PAGE**

APPENDICES

BAYONNE ENERGY CENTER PROJECT TERMINOLOGY

Area of Potential Effect	Areas which may be affected directly or indirectly by the Project. May be specifically defined for resource type under consideration.
Astoria Generating Gowanus Station	The electric generation station owned by Astoria Generating, a US PowerGen company, adjacent to and southwest of the Gowanus Substation.
Bayonne Energy Center	A generating facility to be constructed in Bayonne, New Jersey, and to be operated by Bayonne Energy Center LLC.
Bayonne Energy Center LLC	The Applicant, a Delaware corporation owned as a joint venture between an affiliate of ArcLight Capital Partners, LLC and Hess Corporation.
Bayonne Energy Center Project	The Generating Facility, Transmission Cable System, Transition Vaults, and AC interconnections, up to the Gowanus Substation. Also referred to as the BEC Project.
Con Edison	Consolidated Edison Company of New York, Inc.
Electrical Interconnection	The point of interconnection between the Upland Transmission Cable and the Gowanus Substation.
Federal Channel	Navigation channels maintained by the US Army Corps of Engineers. Also referred to as Federal Navigation Projects.
Generating Facility	A new 512 MW dual fuel-fired simple cycle, mid-merit generating plant to be constructed by BEC in Bayonne, New Jersey. Also referred to as the Facility Site or Bayonne Energy Center.
Gowanus Substation	Con Edison Gowanus Substation.
New Jersey Landfall	The area at which the Submarine Transmission Cable transitions to the Upland Transmission Cable at the site in Bayonne, New Jersey.
New Jersey Project Area	The Generating Facility, the New Jersey Landfall, Transition Stations and associated facilities, and the immediate environment in New Jersey.
New York Landfall	The Transition Vaults, Upland Transmission Cable Route and Electrical Interconnection to the Gowanus Substation in the borough of Brooklyn, New York.

New York Project Area	The Submarine and Upland Transmission Cable System Route, Transition Vaults, and associated facilities, and the immediate environment in New York State.
New York Upland Transmission Cable Route	That portion of the Transmission Cable System Route between the Transition Vaults (located near the New York Landfall) and the Gowanus Substation. The Upland Transmission Cable will be underground.
New York Upland Project Area	The Upland Transmission Cable Route, Transition Vaults, and associated facilities, and the immediate environment.
Project	The Submarine and Upland Transmission Cable Systems, Transition Vaults, and AC interconnections in New York, up to the Gowanus Substation.
Project Area	The Project and immediate environment in both New York and New Jersey.
Submarine Transmission Cable	The portion of the Transmission Cable System located in the bed of the Kill Van Kull, Upper New York Bay, and Gowanus Bay. Also referred to as Submarine Cable.
Submarine Transmission Cable Route	An approximate 6.4 mile route across in the Kill Van Kull, Upper New York Bay, and Gowanus Bay, making landfall in Bayonne, New Jersey and at the Transition Vaults in the borough of Brooklyn, New York.
Transmission Cable System	One circuit, containing 3 AC cables (in separate trenches) and three fiber optic cables, connecting the Bayonne Energy Center in Bayonne, New Jersey and Con Edison's Gowanus Substation in the borough of Brooklyn, New York. Also referred to as Cable System.
Transmission Cable System Route	The alignment of the linear Transmission Cable System, including both the Submarine and Upland Transmission Cable Routes.
Transition Vaults	Three adjacent underground structures in which the Upland Transmission Cable will be anchored, and transitioned to Submarine Transmission Cable.
Upland Transmission Cable	That portion of the Transmission Cable System located underground on land between the Transition Vaults and the Electrical Interconnection. Also referred to as Upland Cable.

BAYONNE ENERGY CENTER PROJECT
SEGMENT 2 EM&CP ACRONYMS

BEC	Bayonne Energy Center, LLC
EM&CP	Environmental Management and Construction Plan
ESS	ESS Group, Inc.
HDD	Horizontal Directional Drill
HDPE	High Density Polyethylene
IA	Interconnection Agreement
kV	kilovolt
LURP	Land Use Regulation Program
MSDS	Material Safety Data Sheets
MW	Megawatt
NJDEP	New Jersey Department of Environmental Protection
NYCDOT	New York State Department of Transportation
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDPS	New York State Department of Public Service
NYSOGS	New York State Office of General Services
NYSPSC	New York State Public Service Commission
OPRHP	New York State Office of Parks, Recreation and Historic Preservation
OSHA	Occupational Safety and Health Administration
PLGR	Pre-Lay Grapnel Run
SPDES	State Pollutant Discharge Elimination System
USACE	U.S. Army Corps of Engineers
VTC	Vessel Traffic Control

PREFACE FEBRUARY 2011 ROUTE MODIFICATION

Bayonne Energy Center LLC (BEC) submits this February 2011 modification to its approved Environmental Management and Construction Plan (EM&CP) for Segment 2 construction activities (as revised August 2, 2010) of the Bayonne Energy Center Project (the BEC Project). This modification describes two planned minor Submarine Cable Route deviations in New York waters that are the minimum necessary to avoid obstructions encountered along two short portions of the route during pre-construction activities. The studies conducted to evaluate the obstructions and the planned route deviations, and consultations with technical staff at New York State Department of Public Service (NYSDPS) and New York State Department of Environmental Conservation (NYSDEC) are fully described in the new Section 1.4. The certified route and the planned route modifications are shown on new Figure 1-1A. The planned route modifications represent a small (approximately 2%) increase in the overall length of the BEC Submarine Cable Route. In New York waters, the planned route adjustments increase the submarine cable route length by approximately 800 feet.

To convey this modification information efficiently and to avoid redundancy, the new information is provided in this Preface, in Section 1.4, on the several new or revised figures as noted in the Table of Contents, Appendix B3 (the Submarine Installation Manual), Appendix G (Suspended Sediment and Water Quality Monitoring Plan), and Appendix H (Pre- and Post-Installation Benthic Community and Sediment Monitoring Plan). This new information supersedes that provided in the approved Segment 2 EM&CP (revised August 2, 2010). All other portions of the approved Segment 2 EM&CP (revised August 2, 2010) remain in effect. Hard copy recipients are provided with instructions on updating their binders in the cover letter; CD recipients should discard previous CDs and retain the one dated February 2011.

1.0 INTRODUCTION/PURPOSE

Bayonne Energy Center LLC (BEC) submits this Environmental Management and Construction Plan (EM&CP or Plan) for Segment 2 of the Bayonne Energy Center Project (the BEC Project). The purpose of the EM&CP is to serve as a construction document for activities in New York, with an emphasis placed on public safety, environmental protection and mitigation measures. This EM&CP follows the conditions identified in the New York State Public Service Commission (NYSPSC) November 12, 2009 Opinion and Order Granting Certificate of Environmental Compatibility and Public Need, Case 08-T-1245 (the Certificate), pursuant to Article VII of the New York State Public Service Law (a copy of the Certificate is provided in Appendix A). Table 1-1 includes references to locations within this EM&CP addressing each ordering paragraph and/or condition in the Certificate pertaining to the Segment 2 activities described in Section 1.2.

BEC will construct, operate, and maintain the Bayonne Energy Center Project (the BEC Project), a new 512 megawatt (MW) electric generating facility to be located in Bayonne, New Jersey, and a new 345 kilovolt (kV) AC submarine electric transmission cable system routed from Bayonne, New Jersey to Brooklyn, New York. The new Generating Facility will be a natural gas fired simple cycle generating plant.

The portion of the BEC Project that was granted the Certificate of Environmental Compatibility and Public Need under Article VII in November 2009 is the construction, operation and maintenance of the Submarine and Upland Transmission Cable System between the New York-New Jersey state line in Upper New York Bay and the point of interconnection with the existing Con Edison Gowanus Substation in Brooklyn, New York.

1.1 General Statement of Compliance with Certificate Conditions

In accordance with Certificate Condition 31, BEC will submit copies of this modified EM&CP to the following:

- NYSPSC (5 copies and one CD);
- NYSDEC (3 CDs);
- Region 2 of NYSDEC (1 CD);
- Any other New York State agency (and its relevant regional offices) which requests the document (1 copy each);
- Con Edison (2 CDs);
- New York City Economic Development Corporation (1 CD); and
- Active parties on the service list who request the document (1 copy each).

BEC will also place copies of the EM&CP in at least one public library or other convenient location in New York City (Brooklyn Public Library, Grand Army Plaza) for inspection by the public, as well as in the Commission's New York City offices. Contemporaneously with the submission and service of the EM&CP, BEC will provide notice, in accordance with Certificate Conditions 31 and 32, and, in the case of the February 2011 Modification, Condition 34, that the EM&CP has been filed.

Certificate Condition 32 requires BEC to provide written notice to all active parties to this proceeding, each person considered potentially affected by the EM&CP, and all statutory parties to this proceeding. Copies of the notice must be included with each copy of the EM&CP, and are provided in Appendix A. Certificate Condition 33 requires that both the written and newspaper notices contain the following information, at a minimum:

- Statement that the EM&CP has been filed;
- General description of the Transmission Facility and the EM&CP;
- Listing of the locations where the EM&CP is available for public inspection;
- Statement that any person desiring additional information about a specific geographical location or specific subject may request it from BEC;

- Name, address, and telephone number of BEC's representative;
- Address of the NYSPSC; and
- Statement that any person may comment on the EM&CP by filing written comments with the NYSPSC and BEC within 30 days of the filing date of the EM&CP or within 30 days of the date of the newspaper notice, whichever is later.

A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice will be submitted to the NYSPSC at the time the EM&CP is filed (included behind the title page of this document) and will be a condition precedent to approval of the EM&CP.

Notice procedures required by Condition 34 were followed with respect to this February 2011 modification to the approved Segment 2 EM&CP.

BEC will provide its construction contractors with complete copies of the Certificate, the approved EM&CP, the Section 401 Water Quality Certification, and any permit issued pursuant to Section 404 of the federal Clean Water Act and Section 10 of the federal Rivers & Harbors Act as required by Certificate Condition 41. To the extent that the listed documents are available before contracts for construction services are executed, such copies shall be provided to the BEC Contractors prior to execution of such contract.

1.2 EM&CP Segmentation

BEC is submitting the EM&CP in two segments so that the schedules for preparation, review, and approval of the EM&CP can be aligned with the construction schedule described in Section 4.8. The anticipated construction schedule for Segment 2 activities is provided in Appendix D.

The Segment 1 EM&CP, which was submitted on February 1, 2010 and approved by the New York State Public Service Commission on March 21, 2010, pertains to those portions of the Project related to work at the New York Landfall in the area between the seaward end of the three temporary cofferdams and the area of the planned Transition Vaults. Specifically, Segment 1 included installation of the temporary cofferdams, dredging within the temporary cofferdams, and horizontal directional drilling (HDD) of three boreholes to contain the electric cables between the planned Transition Vaults and the cofferdams.

The Segment 2 EM&CP includes those portions of the Project related to work between the New York-New Jersey state line in Upper New York Bay and the point of Electrical Interconnection within the Con Edison Gowanus Substation in Brooklyn, New York. Specifically, Segment 2 includes a pre-construction grapnel run, construction of the Upland Cable and Transition Vaults, installation of the Submarine Transmission Cable via jet plow embedment, construction of the Electrical Interconnection within the Gowanus Substation, removal of the temporary cofferdams, and backfilling of the dredged temporary cofferdam area with clean sand.

Construction activities related to improvements to be made by Con Edison to the Gowanus Substation are not part of the BEC Project or its Certificate, and therefore are not included in the EM&CP. However, these are summarized in Section 2.4.

1.3 Minor Route Deviation in Gowanus Bay as of August 2010

In connection with BEC's application to the New York State Office of General Services (NYSOGS) for an Interim Permit for the Use of State Owned Property, BEC received new survey information delineating the boundaries of privately owned underwater lands near the certified Submarine Cable Route. This new information indicates that a small portion of the certified Submarine Cable Route in Gowanus Bay is within the boundaries of a previous grant by the State of underwater lands to a private owner.

Therefore, as part of the Segment 2 EM&CP, BEC is advising NYSPSC that the Submarine Cable Route in Gowanus Bay will deviate from the certified Submarine Cable Route, as allowed by Certificate Conditions 29 and 30. Figure 1-1A shows the planned route deviation, together with the subsequent minimum necessary submarine route deviations as of February 2011 (further described below). This minor route deviation will move the route out of the identified private property area, will avoid a potential obstruction identified through side-scan sonar, which BEC's marine archaeology consultant recommended avoiding, and will adjust the turning angle of the route as it approaches the temporary cofferdams to allow jet plow embedment of the cables to take place without interference with nearby private property interests. The planned route deviation is the minimum extent necessary for engineering reasons, and will maintain compliance with requirements for depth of installation.

This route deviation was approved by NYSPSC as part of its approval of the Segment 2 EM&CP as revised August 2, 2010.

1.4 Minor Route Deviations in Upper New York Bay as of February 2011

BEC commenced pre-construction route clearance operations along the permitted submarine cable route in July 2010. These route clearance operations began with a pre-lay grapnel run (PLGR) along each of the three cable phase centerlines to clear potential near-surface obstructions to installation of the cable such as debris, lines, towing cables, fishing nets, tires, miscellaneous timbers, trash, etc. from the cable phase centerlines. The PLGR identified and removed numerous discarded objects from the harbor bottom. In areas where the PLGR indicated a potential obstruction but was not able to remove the obstruction, additional diver investigations were performed.

The diver investigations were performed over four months to identify the nature of the potential near-surface obstructions recorded during the PLGR. The divers were used to determine if the obstructions encountered during the PLGR were man-made debris, changes in bottom type, or other geologic obstructions. The diver investigations included visual observations and sediment probing. In many cases, the diver identified the obstruction as modern man-made debris. Debris was removed from the bottom by a barge-mounted crane. In total, BEC removed approximately 17 tons of debris from the harbor bottom, including steel wire, rope, tires, anchors, pipes, rail car axles, miscellaneous timbers, and bagged refuse. Items removed from the sea bottom were disposed of in

accordance with applicable regulations. These areas are now clear of debris that could adversely affect the jet plow installation of the submarine cables.

The PLGR also identified several areas where bottom sediment conditions or debris fields may limit the ability of the jet plow to install the submarine cable. Each of these areas was reviewed by BEC and its Project Team. After this review and additional diver and grapnel run investigations, some of these areas were determined to be acceptable for the jet plow, and it was determined certain other portions of the route should be adjusted to avoid the remaining potentially problematic areas. Figure 1-1A illustrates the locations and extent of the proposed route adjustments, along with the certified route . Each of the two modified areas in New York waters are described briefly below:

NY-1: This route adjustment is located in the area where the BEC Submarine Cable Route crosses the New Jersey-New York state line and Anchorage Channel. Initial debris removal efforts removed the frame of a railroad car from the bottom in this area. Further diver investigations found debris piles (concrete block, rebar, wood) in an area approximately 230 feet by 210 feet in size. The proposed route adjustment shifts the BEC Submarine Cable Route approximately 175 feet north of the permitted route.

NY-2: This route adjustment is located at the southern end of Red Hook Channel in New York State waters. PLGR and diver investigation indicated areas of very dense clay material and sedimentary rock in the mid-channel and eastern side of the channel. These materials were not encountered on the west side of the channel. BEC used additional diver investigations to investigate possible route adjustments and determine the extent of the dense materials encountered along the permitted route. These investigations led to the proposed route adjustment alignment, which is approximately 1,000 feet west of the permitted route.

BEC presented the proposed route adjustments to staff at NYSDPS and NYSDEC at a meeting in Albany on December 8, 2010. The proposed route adjustments represent a small (approximately 2%) increase in the overall length of the BEC submarine cable route. In New York waters, the proposed route adjustments increase the Submarine Cable Route length by approximately 800 feet.

Additional field investigations to further assess constructability within the route deviations were conducted in December 2010 and January 2011. Geophysical survey data was collected in December 2010 over the limited portions of the route deviation corridors that were not previously surveyed. The data was analyzed for geologic conditions and manmade obstructions, and was also assessed by a marine archaeologist for the presence or absence of potentially significant submerged cultural resources. No potentially significant submerged cultural resources were identified within either of the two adjusted route corridor areas in New York waters. One area north and outside NY-1 was recommended for avoidance by the marine archaeologist. The delineation of that area has been provided to the construction contractors as a No Seafloor Disturbance zone, and avoidance will be monitored during construction by an Environmental Inspector. The marine archaeologists' findings were submitted to the State Historic Preservation Office of the New York Office of Parks, Recreation and Historic Preservation on February 15, 2011 for review and comment.

Two borings were advanced to 20 feet below the mudline along the route deviation in Red Hook Channel at locations selected in consultation with NYSDEC. Sediment samples were collected and analyzed to assess physical properties, consistent with previously approved protocols. Sediment samples were also collected and tested for total polyaromatic hydrocarbons (PAH) as requested by NYSDEC on December 23, 2010. The sediment testing results were submitted to NYSDPS and NYSDEC, and BEC consulted with both agencies regarding the results.

Based upon the results of the total PAH sediment analysis, NYSDEC requested that one analyte (phenanthrene) be added to the suite of parameters to be analyzed for during construction-related water quality monitoring. This parameter has been added to the Suspended Sediment/Water Quality Monitoring Plan (revised February 21, 2011), which is provided in Appendix G. BEC will comply with all water monitoring requirements in Certificate Conditions 58 and 61a, and in the § 401 Water Quality Certification, and will add water quality monitoring for phenanthrene, as requested by NYSDEC. The NYSDEC recommended a standard/guidance concentration value for phenanthrene, in addition to the other values for other chemical parameters already included in Certificate Condition 61 and the § 401 Water Quality Certification. This addition has been incorporated into the Suspended Sediment/Water Quality Monitoring Plan (revised February 21, 2011) in Appendix G.

NYSDEC also requested one additional pre- and post-installation benthic sampling location on the modified route along the eastern edge of Red Hook Flats. This additional sampling location has been added to Figure 1 of the Pre- and Post-Installation Benthic Community and Sediment Monitoring Plan (revised February 2011), in Appendix H. Six benthic samples will now be collected and analyzed during pre- and post-installation monitoring, as noted in the revised Plan.

BEC has thoroughly evaluated the conditions in these areas as described above and has determined that the proposed route adjustments constitute the minimum deviations necessary for environmental and engineering reasons, in accordance with Certificate Conditions 29 and 30:

> **Certificate 29:** Deviation from the certified Transmission Cable Route, to the minimum extent necessary, shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a specific provision of the Joint Proposal (to the extent not superseded in this Certificate) or this Certificate would be created.
>
> **Certificate 30:** Deviation from the design depth, height, and location of structures, to the minimum extent necessary, shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a specific provision of the Joint Proposal (to the extent not superseded in this Certificate) or this Certificate would be created.

The potential environmental impacts associated with installation of the submarine cable along the proposed route adjustments are similar in nature to those reviewed during the Project's permitting process. The proposed route deviations are the minimum extent necessary for engineering reasons, and will maintain compliance with requirements for depth of installation.

2.0 STATUS OF OTHER PERMITS AND INTERCONNECTION AGREEMENT

BEC Project construction activities will be subject to conditions set forth in several local, state, and federal regulatory permits. BEC and its Contractors are required to review, understand, and comply with any and all applicable permit conditions, and will be responsible for obtaining all work permits required to complete the work prior to commencement of construction. Copies of all applicable permits must be maintained on-site during all construction activities. This section provides the status of permits requested by BEC. Table 2-1 lists the status of all applicable permits, certificates and authorizations, updated through February 14, 2011. Copies of the following permits for the Project are included in Appendix C (as a CD) and summarized in the sections below:

- Article VII Certificate and 401 Water Quality Certification issued by the NYSPSC (also in Appendix A).
- U.S. Army Corps of Engineers (USACE) New York District Individual Permit under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.
- New York City Department of Transportation Revocable Consent.
- The NYSOGS easement valuation and interim permit.
- United States Coast Guard (USCG) Permit to Establish a Private Aid-to-Navigation.
- New Jersey Waterfront Development Individual Permit and § 401 Water Quality Certification.

Copies of all other permits, certificates and authorizations obtained up to February 14, 2011 are included as a CD in Appendix C of the Segment 2 EM&CP. Copies of permits received after that date will continue to be provided to NYSPSC within 15 days of receipt.

2.1 New York Permits

The New York State Department of State issued a letter of General Concurrence of the BEC Project's consistency with the State's Coastal Zone Management policies on March 31, 2009.

The Article VII Certificate was issued by the NYSPSC on November 12, 2009. Concurrently, the 401 Water Quality Certification was issued by the NYSPSC.

The New York City Department of Transportation Revocable Consent for placement of the BEC Project beneath and along the 25TH Street Pier in Brooklyn, New York was issued on March 23, 2010.

NYSOGS issued BEC an Interim Permit for the Use of State Owned Property on April 14, 2010, authorizing the construction of the transmission cable system in New York State-owned underwater land.

2.2 New Jersey Permits

A Major Site Plan Approval Resolution was issued by the City of Bayonne Planning Board for the Generating Facility in Bayonne, NJ on April 23, 2009.

An Air Pollution Control Operating Permit (Permit No. BOP080001) was issued by the New Jersey Department of Environmental Protection (NJDEP) for the Generating Facility in Bayonne, NJ on September 24, 2009.

A Waterfront Development Individual Permit Upland, Waterfront Development Individual Permit In-Water, and Water Quality Certificate (Permit No. 0901-08-0001.1 WFD 080002, WFD 080003) was issued by the New Jersey Department of Environmental Protection (NJDEP) Land Use Regulation Program (LURP) on January 12, 2010.

2.3 Federal Permits

A No Hazard to Navigation Determination was issued by the Federal Aviation Administration for the Generating Facility on February 27, 2009.

The USACE New York District issued the BEC Project an Individual Permit under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act on April 12, 2010. This permit was modified on August 25, 2010 by the USACE New York District to reflect the certified August 2010 route deviation.

BEC received a Permit to Establish a Private Aid-to-Navigation from the USCG for the navigation aids that will be used to mark the temporary cofferdams at the New York Landfall in April 2010.

2.4 Interconnection Agreement

The BEC Project is in the process of securing an Interconnection Agreement (IA) with NYISO and Con Edison. A draft three-Party IA with appendices is currently under review by Con Edison and NYISO. The BEC Project has completed a System Reliability Impact Study which was approved by the NYISO identifying specific direct connect upgrades required within the Con Edison Gowanus Substation to support the BEC Project. The BEC Project has been approved as part of the NYISO Class Year (CY) 2009 and is participating in the NYISO CY 2009 Facilities Study, which is expected to be completed in September 2010.

As part of the BEC Project's Electrical Interconnection, BEC is providing substantial reliability upgrades for the Gowanus Substation, in the form of a new eight breaker ring bus which will be a major improvement of the 345 kV Gowanus Substation. This work will be done under separate agreements for engineering, procurement and construction and will be performed under the review process and various protocols of Con Edison. This work is not subject to Article VII approval.

Engineering and procurement work on improvements to the Gowanus Substation has begun, and BEC and Con Edison plan for construction of the improvements to begin once engineering and procurement are completed. BEC will be responsible for most of the work, though certain improvements will be performed by Con Edison. All work will be performed in accordance with Con Edison policies and standards. The BEC transmission system is expected to be partially connected to the Substation and delivering electricity on a pre-commercial testing basis by October 2011, with a full connection and completion of upgrade work by the end of March 2012.

3.0 SEGMENT 2 WORK DESCRIPTION

Section 3.0 contains summary information relative to the construction of the Segment 2 activities, which will occur at the New York Landfall and within the waters of Upper New York Bay. More detailed information is provided by BEC's Contractor, ABB/Caldwell Marine International, LLC (ABB/CMI), in the three Installation Manuals provided as a single CD in Appendix B of this document. The manuals are titled:

- Appendix B1: ABB/CMI Installation Manual for the NY Infrastructure on the Bayonne Energy Center 345 kV Submarine Cable System revised March 22, 2010 (describes Transition Vaults and Cofferdam Removal).
- Appendix B2: ABB/CMI Installation Manual for the Underground Cable Installation Portion of the Bayonne Energy Center 345 kV Submarine Cable System dated March 16, 2010 (describes Underground Cables).
- Appendix B3: ABB/CMI Installation Manual for the Marine Cable Installation and Burial Portion of the Bayonne Energy Center 345 kV Submarine Cable System dated March 11, 2010, revised February 17, 2011 (describes Submarine Cables).

Each component of Segment 2 is described in Sections 3.1 through 3.6. The Segment 2 upland components and the landfall (the Transition Vaults and the three Upland Cables) will be installed underground (except for a portion of the Electrical Interconnection) in a previously developed industrial area that has no public access. This approach will minimize use of undeveloped land or natural resource areas, minimize permanent impacts to open spaces, and minimize disruption to community and neighborhood resources and services.

Pursuant to Condition 22, the Transmission Facility must be compatible with adjacent facilities. The planned use of the area for an electric utility and Electrical Interconnection is similar to the existing Gowanus Substation use. The Project conforms to the New York City Zoning requirements and New York City's Local Waterfront Revitalization Program.

Existing utilities are known to exist within the Upland work areas for Segment 2 activities. Con Edison and Dig Safe will be contacted in advance of construction to identify the presence and location of underground utilities. Once the upland cables are installed, they will be encased within a concrete duct bank, with the top of each duct bank buried 36 inches below finished grade. The duct bank will be installed by a Con Edison-qualified contractor experienced in high voltage utilities (see Section 5.0 of the Installation Manual in Appendix B1 of this document).

All laboratory analyses conducted to support BEC Project efforts in New York State will be performed by a laboratory certified by the New York State Department of Health.

3.1 Pre-Lay Grapnel Runs

In accordance with International Cable Protection Committee Ltd's recommendations (see Appendix P in ABB/CMI marine manual in Appendix B3) and standard industry practice, the surveyed route

corridor will be cleared of debris prior to installation of the Submarine Transmission Cables, so that cable burial may take place with minimal hindrance to installation and navigation and operational risk. A pre-lay grapnel run will be performed along each of the three cable phase centerlines to clear potential obstructions to installation of the cable such as debris, lines, towing cables, fishing nets, etc. from the cable phase centerlines. Smaller objects will be removed from the sea bottom either with the grapnel or by divers during this operation. Removal of larger objects will require the mobilization of different equipment such as a crane to exhume and lift the obstruction from the seabed. Items removed from the sea bottom will be disposed of in accordance with applicable regulations. Methodology for the pre-lay grapnel runs is presented in Section 6.1 of the Installation Manual for the Marine Cable (Appendix B3).

The obstruction removal operation will take place before jet plow embedment of the Submarine Transmission Cable begins. The pre-lay grapnel run is expected to be performed between late July and November, as shown on the construction schedule in Appendix D.

3.2 Transition Vaults

Three Transition Vaults will be constructed on the vacant portion of the Gowanus Substation property. The Transition Vaults will be located near the landward end of the three conduits that were directionally drilled during Segment 1 from the locations of the Transition Vaults out to temporary cofferdam structures located offshore of the 25th Street Pier and landward of the U.S. Pierhead Line. Locations of the Transition Vaults are shown on Figure 3-1. The purpose of the Transition Vaults is to protect and facilitate the pulling of the Submarine Transmission Cable and to enclose the splice with the Upland Transmission Cable. Construction methodology for the Transition Vaults is summarized in Section 6.1 of this document and described in detail in Section 8 of the Installation Manual for the NY Infrastructure in Appendix B1. A typical detail of the Transition Vaults is also provided in Section 8 of the Installation Manual for the NY Infrastructure in Appendix B1.

3.3 Upland Cable Installation

From the Transition Vaults in New York, the Upland Transmission Cable will be installed underground in concrete duct banks, and under existing facilities located entirely on Con Edison property, for approximately 800 feet to the Gowanus Substation. Each of the three underground power cables will have 345 kV XLPE cable cores with a metallic sheath of lead and an outer sheath of HDPE. A fiber optic cable will be installed in a separate conduit with each of the underground single phase power cables. The location of the Upland Cable is shown on Figure 3-1, and details for the Upland Cable duct bank are shown on Figures 3-2, 3-3, and 3-4. Additional information is presented in Sections 4.0 through 8.0 of the Installation Manual for the Underground Cable in Appendix B2.

Immediately landward of the Transition Vaults, the underground cables will be contained within three individual duct banks approximately 33 feet apart. Then the single duct banks will converge into one combined duct bank. The base of the duct banks will be approximately five feet below finished grade. The top of the duct banks will be approximately 3 feet below finished grade.

Near the point of interconnection within the Substation, the cable system will transition to an aboveground system for approximately 20 to 25 feet. Hawkeye LLC will perform the high voltage work (limited to duct bank and upland cable installation prior to the actual point of interconnect) at the Gowanus Substation as a subcontractor to ABB, which will be responsible for managing and supervising Hawkeye's work. Hawkeye is an approved Con Edison contractor and will conduct its work in accordance with Con Edison guidelines.

There are no overhead transmission lines proposed to service the Project.

3.4 Submarine Cable Installation

The 345 kV Submarine Transmission Cable in the Kill Van Kull, Upper New York Bay, and Gowanus Bay is a single circuit, as shown on Figure 1-1A. Each of the three phases of the Submarine Transmission Cable System will be installed in its own trench separated by a minimum of 33 feet (10 m) using jet plow embedment methods. As a result, three jet plow embedment passes will be required to install the Submarine Transmission Cable. As part of the laying operation, a fiber-optic cable will be bundled to each of the three phase cables. The Submarine Transmission Cable will be buried to the depths specified in Special Conditions (B), (C), and (S) of the Project's USACE Individual Permit (included in Appendix C) issued on April 12, 2010.

The portion of the 6.4-mile overall Submarine Transmission Cable Route that will be installed with jet plow embedment is approximately 6.3 miles long. The portion of the route that will be installed with jet plow embedment within New York waters is approximately 2.5 miles in length, and the portion of the route that will be installed with horizontal directional drilling (HDD) in New York waters and upland is approximately 0.1 miles in length.

ABB will utilize a Dynamically Positioned barge equipped with an integrated navigation system as the Cable Laying Vessel (CLV). Coupled with Differential Global Positioning System (DGPS), this system will ensure that the Submarine Transmission Cable Route is followed in real time and that all cable lay data is gathered and recorded in digital format for As-Built drawings and final report generation. The CLV will be mobilized from Port Elizabeth, NJ, which is where the cable will be loaded onto the CLV after it is transported from ABB's manufacturing facility in Karlskrona, Sweden.

A pre-lay grapnel run will be conducted to clear the route corridor of obstructions, as described in Sections 3.1 and 6.3.1 and in Section 6.1 of the Installation Manual in Appendix B3. Just prior to commencement of installation activities, jet plow trials will be conducted in New York State waters to test operation of the jet plow and to begin implementation of the Suspended Sediment/Water Quality Monitoring Plan for Jet Plow Embedment Operations (provided in Appendix G).

The construction methodology for installing the Submarine Transmission Cable is summarized in Section 6.3 and described in detail in Sections 6.0 and 7.0 of the Installation Manual for the Marine Cable in Appendix B3.

The use of concrete mattresses or dredging to install the Submarine Cable is not anticipated; however, should their use become necessary, a plan will be submitted as an addendum to this

Segment 2 EM&CP in advance to NYSDPS as required by Article VII Certificate Condition 37d. This plan will be subject to a 30 day public comment period and subsequent ruling by NYSPSC. If BEC determines that dredging will be required in the New York portion of the route, BEC will provide information on the volume of material to be removed, the proposed equipment and procedures for dredging, and the interim and ultimate placement of the dredge material to DPS and DEC. In this event, all dredged material would be disposed of at an approved facility.

3.5 Electrical Interconnection

The BEC Project will connect to the NYISO electrical grid at the Gowanus Substation at 25th Street and 3rd Avenue in Brooklyn, New York by means of a new 345 kV electric cable.

From the takeoff point at the Transition Vaults at the New York Landfall, the underground cable circuit will follow the perimeter of the adjacent Gowanus Substation and then turn southwest to the termination structure that will be located near a breaker position on a new Con Edison-constructed 345 kV ring bus arrangement in the Gowanus Substation. The location of the Electrical Interconnection within the Gowanus Substation is shown on Figure 3-1. The Upland Cable will terminate as an aboveground cable as shown in the details in Figure 3-3.

The steel two-legged termination structure, mounted on pier-type or pile-supported concrete foundations, will mount the three 14-foot tall termination devices (also called “potheads”), to the bottom of which the three cables will terminate. Con Edison will interconnect with the top of the terminations, usually done by means of bare metallic cables, or “jumpers”, connected to the nearest structure in the projected ring bus configuration. The Electrical Interconnection design is shown on Figure 3-6.

3.6 Temporary Cofferdam Removal

The temporary cofferdams will be removed following installation of the submarine cables and HDD operations. Prior to installation of the Submarine Transmission Cable, the cofferdam sheeting will be cut to a level just above the mud line and the cut sheets removed. After the Submarine Transmission Cable has been installed, the remaining temporary cofferdam sheeting will be removed and the temporary cofferdams will be backfilled with approximately 960 cubic yards (approximately 320 cubic yards per cofferdam) of clean suitable material. New York Sand and Stone will supply NYSDEC-certified “virgin source” sand from their facility adjacent to the upland site at 75 25th Street, Brooklyn, NY 11232 for use as backfill in the temporary cofferdam locations. BEC will provide documentation confirming the proposed fill materials for the cofferdam locations from New York Sand and Stone are from a NYSDEC certified “virgin source” 30 days prior to the use of the material to fill the cofferdams.

The cofferdams are planned for removal in late summer 2011 (See the anticipated construction schedule in Appendix D).

4.0 PRE-CONSTRUCTION CONSIDERATIONS

This section describes the general procedures that will be followed prior to the commencement of construction.

4.1 Relevant New York Permit Conditions

The following pre-installation requirements, notifications, and submittals are required by the issued Article VII Certificate for Segment 2 activities located within New York:

- **Condition #3** -The Certificate Holder shall not commence site preparation and construction of the Transmission Facility prior to receiving all necessary permits, certifications, and approvals required for the Project, including but not limited to, those issued from the State of New Jersey for the New Jersey portion of the Transmission Link and the new 512 megawatt multi-unit simple-cycle natural gas-fired (with ultra low sulfur diesel oil as a backup fuel) generating facility to be located in Bayonne, New Jersey, a work permit from the New York State Office of General Services for use of state-owned lands under water, and the Department of the Army Permit required for construction in navigable waters of the United States. The Certificate Holder shall provide copies of said permits, certifications, and approvals to the Commission within 15 days of receipt.

- **Condition #4** - Construction of the project on the property of Con Edison shall not begin until the Certificate Holder has received the necessary easements, access agreements or consents from Con Edison to permit such construction.

- **Condition #26** – The Certificate Holder shall not begin site preparation or construction with respect to any portion of the Transmission Facility (except for surveying, boring, and such other related activities necessary to prepare final design plans) before it has submitted to the Commission, and the parties identified in Condition 31, below, and the Commission has approved, an EM&CP for the relevant portion of the Project.

- **Condition #28 –** The environmental protection measures contained in the § 401 Water Quality Certification, in the Joint Proposal (to the extent not superseded by this Certificate), and the Application (to the extent not superseded by this Certificate) shall be incorporated into the EM&CP and applied during construction, operation, and maintenance of the certified Transmission Facility. Applicable provisions of the EM&CP and orders approving the EM&CP shall be included in contracts associated with the design and construction of the Transmission Facility.

- **Condition #31 –** The Certificate Holder shall: submit five copies of the EM&CP to the Commission; serve three copies on the Staff of the New York State Department of Environmental Conservation ("NYSDEC"), one copy on the Region 2 office of the NYSDEC, and at least one copy on any other New York State agency (and its relevant regional offices) which requests the document; serve one copy on active parties on the service list who request the document; and place copies for inspection by the public in at least one public library or other convenient location in each municipality in New York State in which construction will take place. Contemporaneously

with the submission and service of the EM&CP, the Certificate Holder shall provide notice, in the manner specified below, that the EM&CP has been filed.

- **Condition #32 -** The Certificate Holder shall serve written notices of the filing of the EM&CP on all active parties to this proceeding, on each person on the Commission's service list considered potentially affected by the subject matter in the EM&CP, and on all statutory parties to this proceeding, and shall attach a copy of the notice to each copy of the EM&CP. Further, the Certificate Holder shall publish the notice in a newspaper or newspapers of general circulation in the vicinity of the Transmission Facility.

- **Condition #33 -** The written notice and the newspaper notice shall contain, at a minimum, the following: a statement that the EM&CP has been filed; a general description of the Transmission Facility and the EM&CP; a listing of the locations where the EM&CP is available for public inspection; a statement that any person desiring additional information about a specific geographical location or specific subject may request it from the Certificate Holder; the name, address, and telephone numbers of the Certificate Holder's representative; the address of the Commission, and a statement that any person may comment on the EM&CP by filing written comments with the Commission and the Certificate Holder within 30 days of the filing date with the Commission of the EM&CP (or within 30 days of the date of the newspaper notice, whichever is later). A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice shall be submitted to the Commission at the time the EM&CP is filed and shall be a condition precedent to approval of the EM&CP.

- **Condition #39 –** The Certificate Holder shall make available to the public a toll free or local phone number of an agent or employee where complaints may be received during the construction of the certified facilities. In addition, the phone number of the Secretary of the Commission and the phone number of the Commission's Environmental Compliance Section shall also be provided in the event there are questions or concerns. A log shall be maintained that lists at least the date of any complaint, identity and contact information for the complaining party, the date of the Certificate Holder's response, and a description of the outcome. Phone logs shall be made available to DPS upon its request. During DPS's compliance inspections, the Certificate Holder shall report to DPS every complaint that is then unresolved.

- **Condition #40 -** No less than two weeks before commencing site preparation, the Certificate Holder shall give notice of the commencement of site preparation to local officials and emergency personnel. The Certificate Holder shall also provide such notice for dissemination to local media and for display in appropriate public places (such as general stores, post offices, community centers and conspicuous community bulletin boards). The notice shall contain: a map and a description of the Transmission Facility in the local area; the anticipated date for start of construction and the name, address and local or toll-free telephone number of an employee or agent of the Certificate Holder; a statement that the Transmission Facility is under the jurisdiction of the New York State Public Service Commission, which is responsible for enforcing compliance with environmental and construction conditions, and which may be contacted at an address and

telephone number to be provided in the notice. The notice shall be written in language reasonably understandable to the average person. Upon distribution, a copy shall be submitted to the Secretary of the Commission and NYSDEC Staff.

- **Condition #41 -** The Certificate Holder shall provide construction contractors with complete copies of the Certificate, the approved EM&CP, the Section 401 Water Quality Certification, and any permit issued pursuant to Section 404 of the federal Clean Water Act and Section 10 of the federal Rivers & Harbors Act. To the extent that the listed documents are available before contracts for construction services are executed, such copies shall be provided to the contractors prior to execution of such contracts.

- **Condition #42 -** The Certificate Holder shall notify all construction contractors that the Commission may seek to recover penalties for violation of the Certificate, not only from the Certificate Holder, but also from its construction contractors, and that construction contractors may also be liable for other fines, penalties, and environmental damage.

- **Condition #43 -** The Certificate Holder shall inform the Secretary, DPS, and NYSDEC at least five business days before commencing construction of the Transmission Facility.

- **Condition #57 -** During the jet plow trials and the installation, the Certificate Holder shall implement the Suspended Sediment/Water Quality Monitoring Plan for Jet Plow Embedment Operations ("Monitoring Plan") attached [to the Certificate] as Attachment 1. The Certificate Holder shall operate the jet plow (subject to the approval of the field representatives of DPS Staff) in accordance with the operating conditions determined through the jet plow trials described in Attachment 1 to minimize suspension of *in-situ* sediments.

- **Condition #64.a. –** A pre- and post-installation sediment monitoring plan shall be submitted in the EM&CP after consultation with NYSDEC Staff and DPS Staff. The results of that consultation shall be reported in the plan submission. The plan shall provide that surficial sediment samples (top two centimeters) will be collected and analyzed prior to and subsequent to the completion of jet plow installation of the cable system, and that post-installation sampling shall commence promptly after the completion of the jet plow installation process. Specific methods and equipment shall be described to ensure the top two centimeters of ambient sediment are adequately collected, retained and sequestered for analysis. Samples shall be collected and analyzed for arsenic, cadmium, copper, lead, mercury, total PCBs (using a congener-specific method, as outlined in the USACE/EPA Regional Testing Manual for Dredged Materials), and total polycyclic aromatic hydrocarbons ("PAH"). Surficial sediment samples shall be collected at stations located approximately 50 and 100 meters up-current and down-current from the planned route, such locations to be determined after consultation with NYSDEC Staff and DPS Staff. At least five locations spaced evenly along the route shall be identified from which the sampling stations shall be established (total of 20 samples).

- **Condition #65.a. –** A pre- and post-installation benthic community monitoring plan shall be submitted in the EM&CP after consultation with NYSDEC Staff and DPS Staff. The results of that

consultation shall be reported in the plan submission. The plan shall provide for periodic benthic monitoring at locations to be determined after consultation with NYSDEC Staff and DPS Staff, within an area extending approximately one hundred feet (100') on either side of the jet plowed trench for up to 18 months after completion of jet plow installation. The plan shall provide for one pre-installation benthic monitoring and at least one post-installation monitoring during the same season.

- **Condition #66 –** A mitigation plan shall be submitted in the EM&CP after consultation with NYSDEC Staff and DPS Staff to accommodate and address the impacts to benthic habitat. The results of that consultation shall be reported in the plan submission. Since remediation of the impacted habitat and benthic community is impracticable, the mitigation plan shall provide criteria developed after consultation with DPS and NYSDEC Staff for determining when mitigation is necessary, and a method and schedule for implementation of mitigation measures.

In addition to the NYS Article VII permit conditions listed above, the following pre-installation requirements, notifications and submittals are required by the § 401 Water Quality Certification issued by the New York State Public Service Commission in conjunction with the NYS Article VII Certificate and any EM&CP as approved.

- **Condition #1 -** No in-water work shall commence until all pre-construction conditions relating to such work contained in the Certificate have been met to the satisfaction of the New York State Public Service Commission.

- **Condition #5 -** BEC shall provide a copy of this certification to the U.S. Army Corps of Engineers along with a copy of the application, Joint Proposal, Certificate, EM&CP, and order approving the EM&CP (and all subsequent EM&CPs and approval orders) in Case 08-T-1245 so that the U.S. Army Corps of Engineers will have a complete record of the conditions that apply hereto.

- **Condition #6 -** BEC shall provide to all construction contractors complete copies of the Article VII Certificate, the approved EM&CP, and this certification.

4.1.1 Pre-Installation Sediment and Benthic Community Monitoring

As required in NYS Article VII Certificate Conditions 64a and 65a, BEC prepared a Pre- and Post-Installation Benthic Community and Sediment Monitoring Plan in consultation with NYSDEC and DPS staff (see Appendix H). The plan for the permitted route was approved by NYSDEC and DPS staff on May 5, 2010 and April 12, 2010, respectively. The plan was revised to incorporate the modified route and add one additional benthic sampling location, as requested by NYSDEC. The revised plan dated February 2011 is also included in Appendix H. In accordance with the approved plan, benthic community and surficial sediment chemistry sampling will be conducted approximately 30 days prior to cable system installation following the methods described in the plan and summarized below.

Benthic macroinvertebrate samples will be collected for one pre-installation monitoring event and at least one post-installation monitoring event during the same season. Benthic community

samples will be collected in duplicate at a total of six locations along the proposed cable route and two additional locations off the cable route for each monitoring event. Each original benthic macroinvertebrate sample will be sorted and preserved for taxonomic identification to the lowest practical taxonomic level.

Surficial sediment samples (top two centimeters) will be collected for one pre-installation and one post-installation monitoring event. Surficial sediment samples will be collected at stations located approximately 50 and 100 meters on each side of the planned route at five locations yielding a total of 20 samples. In addition, one of the sediment samples will be collected in duplicate (field duplicate) and one of the samples will be designated for laboratory QA/QC (matrix spike/matrix spike duplicate (MS/MSD) or matrix spike/lab duplicate (MS/Dup)) analysis. Sediment samples will be shipped to a NYS-certified laboratory and analyzed for the following chemical parameters specified in NYS Article VII Certificate Condition 64a: arsenic, cadmium, copper, lead, mercury, total PCBs (using a congener-specific method, as outlined in the USACE/EPA Regional Testing Manual for Dredged Materials), and total polycyclic aromatic hydrocarbons ("PAH").

4.1.2 Pre-Installation Jetting Trials

A pre-installation trial operation of the jet plow equipment to be used for the submarine cable system will be conducted in the project area to simulate expected operating conditions in accordance with the Suspended Sediment/Water Quality Monitoring Plan provided in Appendix G. The pre-installation jetting trial is planned to take place in the area shown on Figure 4-1. The location of the jet plow trials shown in Figure 4-1 was selected because of its central location along the route, the large watersheet area available for maneuvering the cable laying vessel and the survey vessels, the representative nature of the sediment type in this area when compared to other portions of the route, and the fact that the tidal currents flow across rather than parallel to the route. The maximum predicted suspended sediment concentrations were predicted by the numerical model to occur near the mouth of Gowanus Bay. Gowanus Bay is also where sampling indicated the presence of Class C sediments. BEC elected to avoid using the Gowanus Bay area for the jet plow trials to limit the suspension of the Type C sediments in this area to only that necessary for installation of the cable. In addition, conducting the trials in the area shown in Figure 4-1 will allow BEC's contractor to refine its operating pressures and methodologies prior to conducting jetting operations in Gowanus Bay.

TSS and water quality sampling methods and means implemented in the jetting trials may be modified for the cable installation event based on the results of the pre-installation trial methods. Any modification to the parameters specifically described in the approved monitoring plan will be subject to NYSDEC and NYSDPS review. During the jet plow trials, water samples will be collected at multiple times and locations within a given tidal cycle to generate data necessary to develop a calibration curve for calibration of the equipment to be used in monitoring the cable installation. The calibration process will utilize a statistical regression type analysis. Once calibration procedures have been completed, a working calibration curve will be generated and provided to NYSDEC Staff and NYSDPS Staff for their review prior to the commencement of cable

installation. The calibration curve will be continuously updated based on data collected during the actual cable installation activities.

As specified in the approved monitoring plan, BEC will work cooperatively with NYSDEC Staff and NYSDPS Staff to immediately review the results of the real-time data measurements during the jet-plow installation trials to evaluate whether the preferred operating conditions result in TSS Concentrations meeting the TSS threshold guidance criterion.

If the jet plow trials demonstrate that such criterion is satisfied, BEC will commence jet plow installation of the submarine cable system immediately after the completion of the jet plow installation trials and upon notification to NYSDEC or NYSDPS staffs of the jet plow trial monitoring results.

If the jet plow trials demonstrate that the preferred operating conditions result in real-time TSS concentrations, measured 500 feet down-current of the jet plow, that exceed the TSS concentrations at the up-current background station by more than 200 mg/L, BEC will report such conditions to the Independent Inspector and work with the representatives of NYSDPS and NYSDEC to evaluate and implement reasonable modifications to the jet plow operating conditions to minimize *in-situ* sediment resuspension associated with the jet plow installation procedure. A consultation period not to exceed three (3) days will be allocated for NYSDEC and NYSDPS evaluation of the data and BEC implementation of reasonable modifications prior to commencement of jet plow installation. Jet plow installation will not commence until written consent of the NYSDPS Staff Director, Office of Energy Efficiency and the Environment is received following notice and consultation with NYSDEC.

BEC will notify NYSDEC and NYSDPS staffs when a start date and time for jet plow installation has been determined and will keep NYSDEC and NYSDPS staffs informed of progress and any changes in the jet plow installation schedule.

The complete description of jet plow trial methods and compliance requirements are described in detail in Appendix G and in Article VII Certificate Conditions 57, 58 and 60.

4.2 Relevant USACE Permit Conditions

The following pre-installation requirements, notifications and submittals are required by the issued USACE permit in New York:

- **Special Condition (K)** – The permittee shall submit to Jeff Yunker (Jeff.M.Yunker@uscg.mil) of the U.S. Coast Guard's Waterways Management Division a completed Coast Guard Sector New York Project Notification Form (attached) a minimum of 30 days prior to the start date of the project, or, if it is impracticable to submit such form 30 days prior to the start date, the permittee shall submit the form and obtain the U.S. Coast Guard's approval of its submitted form prior to the commencement of work. Included in this form should be the latitude and longitude positions for any additional requested test borings or sampling locations associated with the project and the foot print for the cable laying vessel and associated anchor/buoys.

- **Special Condition (L)** – The permittee shall notify Jeff Yunker (Jeff.M.Yunker@uscg.mil) of the U.S. Coast Guard's Waterways Management Division a minimum of 30 days prior to any requested movement of the Federal Channel marker buoys, if necessary for the completion of the project.

- **Special Condition (M)** – The permittee shall submit to Jeff Yunker (Jeff.M.Yunker@uscg.mil) of the U.S. Coast Guard's Waterways Management Division the latitude and longitude position for each turning point in each of the 3 power cables at least 30 days prior to briefing the Port of NY/NJ Harbor Operations committee.

- **Special Condition (N)** – Prior to the installation of the submarine cable, the permittee shall perform a briefing to the Port of NY/NJ Harbor Operations steering committee and/or the Port of NY/NJ Harbor Operations full committee and include a detailed description and proposed timeline of the power cable installation.

- **Special Condition (P) – The permittee shall verify to USACE, in writing, that it has** transmitted the notifications and presentations required by the USCG and NOAA as described in Special Conditions (K) through (O), and (T) within (5) days of making each notification. Verification shall be delivered to the following address: Chief, Regulatory Branch, New York District Corps of Engineers, Jacob K. Javits Federal Building, New York, NY 10278-0090.

- **Special Condition (T)** – Work impacting the federal channels and facility berthing areas must be kept to a minimum and may be delayed due to the needs of shipping. Specific requirements for the installation vessel(s) will be established by the U.S. Coast Guard after the contractor provides installation details to (Jeff.M.Yunker@uscg.mil). A pre-installation meeting will be scheduled by the U.S. Coast Guard with the contractor and representatives from the maritime industry prior to the beginning of cable installation.

4.3 Other Regulatory Notifications

The Waterfront Development Permit issued by the New Jersey Department of Environmental Protection requires that BEC notify NJDEP in writing at least seven days prior to beginning any work approved by the Waterfront Development Permit.

4.4 Easement Requirements and Land Owner Coordination

The New York City Department of Transportation (NYCDOT) has issued a Revocable Consent Agreement to BEC to allow the construction, operation, and maintenance of the Transmission Cable under and along the 25TH Street Pier in Brooklyn, which is owned by the City of New York. The Revocable Consent requires BEC to submit "working plans which shall include and show in detail the method of construction of the Structure [Submarine Transmission Cable] and the mode of protection or changes in all structures required by the construction, alteration, deactivation, or removal of the same" to NYCDOT. BEC provided the NYCDOT with the required information prior to the commencement of construction activities within City owned property.

BEC is presently in discussions with Con Edison regarding a draft easement required for installation, operation, and maintenance of the Upland Cable. The final easement will contain the requirements for notifications to be made to Con Edison.

4.5 Site Security/Site Marking

The upland site is private property or City-owned property dedicated to private use, and abuts private properties in a heavily industrialized area. There are no public walkways or public access on or adjacent to the site. The site is currently secured by existing fences and locked gates. These security measures will be maintained during Segment 2 activities. Work areas will be surrounded by construction fencing and/or erosion controls until construction is completed and disturbed surfaces are stabilized.

4.6 Site Preparation, Access, and Parking

4.6.1 Upland Segment 2 Activities

Site Preparation: The upland site contains no mature vegetation, and has a generally level gravel-packed surface. Portions of the Upland Cable Route and the Electrical Interconnection will be located within the developed Con Edison Gowanus Substation. Site preparation activities are expected to be minimal and will include clearing and proper disposal of any trash or debris from the work area. No grubbing, filling or significant grading will be necessary. Existing utilities will be identified and protected as described in Section 5.10.

Prior to construction, the Segment 2 work areas will be surrounded by construction fencing and erosion controls as described in Section 5.3. Further descriptions of erosion control measures are provided in Section 5.3.

Site Access: Vehicles supporting Segment 2 upland construction-related activities will access the site from city streets, in accordance with applicable traffic restrictions and vehicular regulations. Access routes from points south are shown on Figure 4-2. Access routes from points north are shown on Figure 4-3. No disruption to local traffic is expected, and no traffic restrictions or controls will be necessary.

Parking: Construction-related parking will be on the site and the adjacent Con Edison site. The BEC Contractor will coordinate with Con Edison and comply with its parking requirements.

4.6.2 Marine Segment 2 Activities

At the New York landfall, the upland cable will pass through the three duct banks (one per cable) and then through the Transition Vaults, which provide a common connection point for the seaward conduit and landward duct bank. Installation of the submarine cable will begin in New York and continue according to the predetermined route until it transitions to upland cable at the New Jersey Landfall. For additional details about the installation of the submarine cable see Section 6.2 of the Submarine Cable Installation Manual in Appendix B3.

All access for installation of the submarine cable and removal of the temporary cofferdams will be from the water. Vessels will comply with navigation protocols described in Section 7.4 of this document. The two floating private aids to navigation installed during Segment 1 will be removed when the cofferdams are removed.

4.7 Staging Areas

At the New York upland site, all equipment used to perform the duct bank construction and Transition Vault installation will be staged onsite where it will be secured within a locked, gated fence. For additional information see Sections 5.0 and 8.0 of the Installation Manual in Appendix B1.

Staging for the submarine cable activities will occur in Elizabethport, New Jersey. The cable will be stored in a cable tank on the cable laying barge until installation. Please refer to Section 6.1.3.3 of the Submarine Cable Installation Manual in Appendix B3 for additional details.

4.8 Construction Schedule

The Project will comply with Article VII Certificate Condition 49, which states that construction within navigable waters in New York shall not occur between December 1 of any calendar year and May 31 of the following calendar year, except that construction of the temporary cofferdam (addressed in the Segment 1 EM&CP) may be performed after March 31 and before November 15 of any calendar year. Once construction of the cofferdam is completed, work can proceed within it with no habitat or time-of-year restrictions.

As indicated on the Anticipated Construction Schedule in Appendix D, construction of Segment 2 activities at the upland site is planned to start with installation of Transition Vaults in mid-July 2010. Construction of the duct bank system will commence in mid-September 2010. This work is expected take approximately two months, followed by transportation of the cables and support equipment to the site for the cable pulling activities. Completion of the upland activities and the electrical interconnection is planned to occur by mid-August 2011.

For the submarine work, activities related to the pre-lay grapnel run are scheduled to commence between late July and November 2010. The Submarine Cable installation will take place in 2011. The cable laying vessel will finish loading Cable 1 in New Jersey by the end of May, 2011, followed by jet plow trials at the beginning of June. Jet plow embedment of the Submarine Cable will begin following the completion of the jet plow trials. Installation of each cable between Brooklyn and Bayonne is expected to take approximately 10 days. At the end of each 10 day period, the installation vessel will return to Elizabethport for three days to load the next cable to be installed. Jet plow embedment of the Submarine Cable is expected to be complete in mid-July 2011. The temporary cofferdams will be removed following completion of submarine cable installation activities.

The Project will comply with Article VII Condition 13, which states that upland construction work outside the walls of buildings whose exterior walls and roof are substantially complete shall take place between 7:00 a.m. and 6:00 p.m., as required by Section 24-222 of the New York City Administrative Code. For certain construction phases and activities, additional work hours may be

necessary. As noted in the Certificate, nothing shall preclude BEC from making necessary arrangements for the extension of works hours with appropriate authorities of the City of New York. BEC will comply with the Construction Noise Mitigation Plan in Appendix E. DPS Staff shall be notified at least 24 hours in advance if planned weekend, evening, or holiday upland construction becomes necessary. As noted in the Certificate, this condition is not intended to prohibit nighttime construction reasonably necessary to comply with restrictions on daytime construction on or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started.

For upland construction activities, the Project will comply with Article VII Condition 14, which states that deliveries related to construction shall take place between 7:00 a.m. and 6:00 p.m., except that, to the extent required to accommodate oversized delivery pursuant to a New York City Department of Transportation ("NYCDOT") permit, the Transmission Facility shall be exempt from restrictions limiting delivery to 7:00 a.m. to 6:00 p.m. As noted in the Certificate, this condition is not intended to prohibit nighttime deliveries reasonably necessary to facilitate compliance with restrictions on daytime construction on or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started.

For example, certain operations such as cable pulling operations are conducted over continuous periods that typically will begin and end during the scheduled 12-hour work days. Specific conditions that could warrant nighttime work and deliveries may include an unforeseen equipment breakdown when these continuous operations are occurring. An equipment breakdown could require an immediate nighttime delivery of materials for repair. Following the repair, operations to stabilize and preserve the borehole or continue pulling the conduit may need to be done, and may extend into nighttime hours. Although equipment will be maintained and operated to avoid breakdowns, contingency planning in the event of breakdown is necessary. Such events are examples of "construction activities that require a continuous work effort once started", as noted in Conditions 13 and 14.

Submarine cable laying operations will occur 24 hours per day, seven days per week as each of the three cables is installed between Brooklyn and Bayonne.

5.0 CONSTRUCTION CONSIDERATIONS

This section lists the relevant permit conditions and summarizes the general procedures that will be followed during construction. Construction details are provided in the Installation Manuals in Appendix B.

5.1 Relevant New York Permit Conditions

The following conditions related to construction are required by the issued Article VII Certificate for Segment 2 activities located within New York:

- **Condition #11** – The Certificate Holder shall comply with all federally-issued permits and approvals, including, but not limited to, permits issued by the Army Corps of Engineers.

- **Condition #12 -** The Certificate Holder shall design, engineer and construct the Transmission Facility such that its operation shall comply with the interim electromagnetic field ("EMF") standards established by the Commission in Opinion No. 78-13 (issued on June 19, 1978) and the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facility (issued September 11, 1990).

- **Condition #13 -** Upland construction work outside the walls of buildings whose exterior walls and roof are substantially complete shall take place between 7:00 a.m. and 6:00 p.m. as required by Section 24-222 of the New York City Administrative Code. For certain construction phases and activities, additional work hours may be necessary. Nothing herein shall preclude the Certificate Holder from making necessary arrangements for the extension of works hours with appropriate authorities of the City of New York. Noise mitigation procedures shall follow those set forth in the approved Environmental Management and Construction Plan ("EM&CP"). DPS Staff shall be notified at least 24 hours in advance if planned weekend, evening, or holiday upland construction becomes necessary. This condition is not intended to prohibit nighttime construction reasonably necessary to comply with restrictions on daytime construction on or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started.

- **Condition #14 -** Deliveries related to construction shall take place between 7:00 a.m. and 6:00 p.m., except that, to the extent required to accommodate oversized delivery pursuant to a New York City Department of Transportation ("NYCDOT") permit, the Transmission Facility shall be exempt from restrictions limiting delivery to 7:00 a.m. to 6:00 p.m. This condition is not intended to prohibit nighttime deliveries reasonably necessary to facilitate compliance with restrictions on daytime construction on or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started.

- **Condition #15 -** The Certificate Holder shall keep local fire department and emergency management teams apprised of chemicals and waste on site during construction and operation.

- **Condition #16 -** The Certificate Holder shall take appropriate measures as outlined in the EM&CP to minimize fugitive dust and airborne debris from construction activity.

- **Condition #17 -** The Certificate Holder shall take appropriate measures as outlined in the EM&CP to prevent and respond to spills of fuels and other contaminants.

- **Condition #18 -** The Certificate Holder shall instruct its contractors to park in designated areas that do not interfere with normal traffic, cause any safety hazard, or interfere with existing land uses.

- **Condition #19 -** The Certificate Holder or its appropriate contractor shall periodically consult with NYCDOT regarding traffic conditions near the project site, and shall make good faith efforts to minimize the impact of the construction of the Transmission Facility on traffic circulation in the area.

- **Condition #20 -** To the extent required in connection with the delivery of oversized Transmission Facility components, the Certificate Holder or its suppliers shall obtain any necessary permits from NYCDOT.

- **Condition #21 -** The Certificate Holder shall engineer and construct its facilities to be fully compatible with the operation and maintenance of nearby electric, gas, telecommunication, water, sewer, and related facilities; details of such other facilities and measures to protect the integrity, operation, and maintenance of those facilities shall be presented in the EM&CP.

- **Condition #23 -** The Certificate Holder shall comply with the requirement for the protection of underground facilities set forth in 16 NYCRR Part 753.

- **Condition #24 -** The Certificate Holder shall coordinate and schedule construction and maintenance activities to avoid or minimize, to the extent practicable, impacts to navigation and use of port facilities.

- **Condition #29 –** Deviation from the certified Transmission Cable Route, to the minimum extent necessary, shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a specific provision of the Joint Proposal (to the extent not superseded in this Certificate) or this Certificate would be created.

- **Condition #30 -** Deviation from the design depth, height, and location of structures, to the minimum extent necessary, shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a specific provision of the Joint Proposal (to the extent not superseded in this Certificate) or this Certificate would be created.

- **Condition #34 –** The Certificate Holder shall report any proposed changes in the approved EM&CP to DPS Staff, NYSDEC Staff, and to the Independent Inspector (as defined below). DPS Staff will refer to the Secretary of the Commission (or a designee) reports of any proposed changes that do not cause substantial change in environmental impact or are not related to issues decided during the proceeding. DPS will refer all other proposed changes in the EM&CP to the Commission for approval. Upon being advised that DPS will refer a proposed change to the Commission, the Certificate Holder shall notify all affected statutory parties, active parties that have requested (before the approval of the EM&CP) to be so notified, as well as property owners or lessees whose property is affected by the proposed change. The notice shall describe the original conditions and the requested change and state that documents supporting the request are available for inspection at specified locations, and state that persons may comment by writing or calling (followed by written confirmation) the Commission within 15 days of the notification date. Any delay in receipt of written confirmation shall not delay Commission action on the proposed change. The Certificate Holder shall not execute any proposed change until it receives oral or written approval from the Commission or its designee, except in emergency situations threatening personal injury, property damage or severe adverse environmental impact or as specified in the EM&CP.

- **Condition #44 –** The Certificate Holder shall provide DPS and NYSDEC with bi-weekly status reports summarizing the previous two weeks' construction and indicating construction activities and locations scheduled for the next four weeks.

- **Condition #46 -** The Certificate Holder shall confine construction and subsequent maintenance to the certified Transmission Cable Route and approved additional work areas, as detailed in the EM&CP.

- **Condition #49 -** Construction within navigable waters shall not occur between December 1 of any calendar year and May 31 of the following calendar year, except that construction of the temporary cofferdam may be performed after March 31 and before November 15 of any calendar year. Once construction of the cofferdam is completed, work can proceed within it with no habitat or time-of-year restrictions. After prior consultation with DPS and NYSDEC Staff, however, the Certificate Holder may petition the Commission for a modification of this construction window provided copies of the petition are served on all active parties to this proceeding that have requested (before the approval of the EM&CP) to be so served. The results of the consultation and recommendations of NYSDEC shall be reported in the petition.

- **Condition #50 -** The following in-water activities may be undertaken at any time: benthic, geotechnical and archeological sampling and testing; marine surveys; mobilization and demobilization of vessels and equipment used for cofferdam construction, dredging, and cable embedment; dredging within the cofferdam; post-construction surveys and sampling; locating and marking utility crossings and preparations to effect utility crossings; and, on prior notice to DPS and NYSDEC, emergency maintenance work.

- **Condition #51 -** The Certificate Holder shall use the jet plow embedment technique for the seabed installation of the proposed Transmission Facility. The Certificate Holder shall install the Submarine Transmission Cables at a burial depth consistent with the requirements of the Certificate Holder's U.S. Army Corps of Engineers permit, except where utility lines are crossed or where geologic or topographic features prevent burial at such depth. Utility crossings shall be executed consistent with standard industry practices as identified for each such crossing in the EM&CP.

- **Condition #56 –** In-water activities shall be undertaken in a manner that minimizes the potential for interference with navigation.

- **Condition #57 -** During the jet plow trials and the installation, the Certificate Holder shall implement the Suspended Sediment/Water Quality Monitoring Plan for Jet Plow Embedment Operations. ("Monitoring Plan") attached [to the Certificate] as Attachment 1. The Certificate Holder shall operate the jet plow (subject to the approval of the field representatives of DPS Staff) in accordance with the operating conditions determined through the jet plow trials described in Attachment 1 to minimize suspension of *in-situ* sediments.

- **Condition #58 -** TSS and water quality monitoring shall be conducted during jet plow embedment at transects specified according to the Monitoring Plan by collecting real-time data using Acoustic Doppler Current Profiler and Optical Backscatter Sensor instrumentation and by collecting water samples at various depths for laboratory analysis of: TSS; hardness; total PCBs; total mercury; and total and dissolved arsenic, cadmium, copper and lead according to the methods and method detection limits identified in the Monitoring Plan. Monitoring activities shall be conducted downcurrent of jetting operations and at a background/control station up-current of the jetting operations as follows: (a) TSS monitoring shall be performed at all transects identified in the Monitoring Plan during jet plow embedment of each of the three cables that will comprise the Submarine Transmission Cable; and (b) water quality sampling shall be performed at the upcurrent transect and at one designated down-current compliance transect during the jet plow embedment of the first cable installed only, due to the minimal distance (33 feet) between the cables. These TSS and water quality samples shall be collected at three depth intervals (nearsurface, mid-depth, and near bottom). Additional monitoring of the successive cables may be required for TSS or water quality, if exceedances occurred during the first monitoring events.

- **Condition #59 -** Compliance-related conditions for TSS and water quality parameters are described in Conditions 60 and 61, respectively.

- **Condition #60 -** Total Suspended Sediment Control and Monitoring:

  a. The Certificate Holder shall work cooperatively with NYSDEC Staff and NYSDPS Staff to immediately review the results of the real-time data measurements during the jet-plow installation trials to evaluate whether the operating conditions result in TSS concentrations meeting the TSS threshold guidance criterion. If the jet plow trials demonstrate that the operating conditions result in TSS concentrations, measured 500 feet down-current of the jet plow, exceeding the TSS concentrations at the up-current background station by more than 200 mg/L, the Certificate Holder shall report such conditions to the Independent Inspector and work with the representatives of NYSDPS, and NYSDEC staff to evaluate and implement reasonable and feasible modifications to the jet plow operating conditions to further reduce in-situ sediment resuspension associated with the jet plow installation procedure. NYSDPS and NYSDEC staffs' review of this information shall be completed and reported to the Certificate Holder within one business day of submission, so as not to unduly delay the commencement of installation of the submarine cable system.

  b. If, during jet plow installation of the cable, the near-bottom, mid-depth, or near-surface TSS concentrations measured 500 feet down-current of the operating jet plow exceed the TSS concentrations at the corresponding up-current background station by more than 200 mg/L, then NYSDPS Staff, NYSDEC Staff and the Independent Inspector shall be notified as soon as possible, and reasonable and feasible jet-plow operation mitigation measures shall be implemented after consultation with the field representatives of NYSDPS, NYSDEC and the Independent Inspector. These measures may include changing the rate of advancement of the jet plow, modifying hydraulic jetting pressures, or varying them, if possible, along the blade length, or implementing

other reasonable operational controls that may reduce suspension of in-situ sediments. These mitigation measures shall be implemented to reduce TSS concentration as much as possible, but not in a manner that would stop or unreasonably delay the progress of work to install the submarine cable system. Nothing in this section is intended to require that hydraulic jetting pressures be reduced to levels which would not allow burial to the depths specified herein through a single installation pass.

- **Condition #61 -** Water Quality Limits and Monitoring:

  a. During the jet plow installation of the cable, the concentrations of the chemical constituents listed in the table below measured in the samples collected 500 feet downcurrent of the jet plow shall not exceed the greater of: (A) the levels set forth in the table below or (B) 1.3 times the highest ambient background level measured during the same sampling day at the up-current background station at the same depth as the downcurrent sample.

Constituent	Standard or Guidance Value (ug/L)
Dissolved arsenic	36
Dissolved cadmium	7.7
Dissolved copper	7.9
Dissolved Lead	204
Total Mercury	0.05
PCBs per aroclor	0.2
Phenanthrene	14

  b. All water quality laboratory analyses required in this Certificate must be conducted by a laboratory certified by the New York State Department of Health. If the compliance criteria described in Condition 62(a) are exceeded at any time during the installation, additional water quality sampling shall take place at the location of the exceedance for subsequent cable installation passes. If mercury contamination is detected in the field blanks, additional sampling shall be required using EPA method 1669.

  Note: As described in Section 1.4, the NYSDEC recommended a standard/guidance concentration value for phenanthrene, in addition to the other values for chemical parameters already included in Certificate Condition 61 and the § 401 Water Quality Certification. This addition has been incorporated into the Suspended Sediment/Water Quality Monitoring Plan (revised February 21, 2011) in Appendix G, and will be monitored for accordingly.

- **Condition #62 -** Nothing in this Certificate and its appendices shall limit either (a) the authority of NYSDEC to monitor the environmental and health impacts resulting from the construction and operation of the project and to enforce applicable provisions of the Environmental Conservation Law (including those which provide for summary abatement authority) and applicable implementing regulations governing the environmental and health impacts resulting from such

construction and operation, or (b) any defenses to such enforcement that the Certificate Holder may be able to assert under applicable law.

- **Condition #70 –** Should archeological materials be encountered during construction, the Certificate Holder shall stabilize the area and cease construction activities in the immediate vicinity of the find and protect the same from further damage. Within twenty-four hours of such discovery, the Certificate Holder shall notify DPS and the New York State Office of Parks, Recreation, and Historic Preservation ("OPRHP") to determine the best course of action. No construction activities shall be permitted in the vicinity of the find until such time as the significance of the resource has been evaluated and the need for, and the scope of, impact mitigation have been determined.

- **Condition #71 -** Should human remains or evidence of human burials be encountered during the conduct of archeological data recovery fieldwork or during construction, all work in the immediate vicinity of the find shall be immediately halted and the remains shall be protected from further damage. Within twenty-four hours of any such discovery, the Certificate Holder shall notify DPS and OPRHP. All archaeological/burial encounters and their handling shall be reported in the status reports required by Condition 44, above.

- **Condition #72** - The Certificate Holder is authorized to construct and agrees to design, engineer, and construct the interconnection facilities in support of the Transmission Facility as provided in the System Reliability Impact Study ("SRIS") approved by the New York Independent System Operator ("NYISO"), the Transmission Planning and Advisory Subcommittee ("TPAS"), the NYISO Operating Committee, and the NYISO Class Year 2009 Annual Transmission Reliability Assessment Study ("ATRAS"), and in accordance with the applicable and published planning and design standards and best engineering practices of NYISO, Consolidated Edison Company of New York, Inc. ("Con Edison"), the New York State Reliability Council ("NYSRC"), Northeast Power Coordinating Council ("NPCC"), North American Electric Reliability Council ("NERC"), and North American Electric Reliability Organization ("NAERO"), and successor organizations depending upon where the facilities are to be built and depending on which standards and practices are applicable. Specific requirements shall be those required by the NYISO Operating Committee and TPAS in the approved SRIS and by any interconnection or facilities modification agreements made with Con Edison and/or NYISO.

- **Condition # 73** - The Certificate Holder shall work with Con Edison, and any successor Transmission Owner (as defined in the NYISO agreement), to ensure that, with the addition of the Transmission Facility (as defined in the Interconnection Agreement among NYISO, the Certificate Holder and Con Edison), the system shall have power system relay protection and appropriate communication capabilities to ensure that operation of the electric transmission system is adequate under NPCC Bulk Power System Protection Criteria, and meets the protection requirements at all times of the NERC, NPCC, NYSRC, NYISO, and Con Edison, and any successor Transmission Owner (as defined in the NYISO agreement). The Certificate Holder shall ensure compliance with applicable NPCC criteria and shall be responsible for the costs to verify that the

relay protection system is in compliance with applicable NPCC, NYISO, NYSRC, and Con Edison criteria.

- **Condition #90 –** After commencement of construction of the certificated Transmission Facilities, the Certificate Holder shall provide the DPS Staff and Con Edison with a monthly report on the progress of construction and an update of the construction schedule (these reports may be coordinated and consolidated with the reports required under Condition 44, above).

- **Condition #91 –** The Certificate Holder shall file with the Commission, 18 months after the commencement of construction of the certified Transmission Facility, a detailed progress report. Should that report indicate that construction will not be completed within six months, the Certificate Holder shall include in the report an explanation of the circumstances contributing to the delay and a demonstration showing why construction should be permitted to proceed. In these circumstances, an order to show cause will not be issued by the Commission, but a hearing will be held before the Commission takes any action to amend the Certificate if required by Public Service Law Section 123(2), or to revoke or suspend the Certificate.

In addition to the NYS Article VII permit conditions listed above, the following construction-related water quality conditions are required by the § 401 Water Quality Certification issued by the New York State Public Service Commission in conjunction with the NYS Article VII Certificate and any EM&CP as approved.

- During the jet plow installation of the cable, the concentrations of the chemical constituents listed below, as measured in the samples collected 500 feet down-current of the jet plow shall not exceed the greater of: (A) the levels set forth in the table below or (B) 1.3 times the highest ambient background level measured during the same sampling day at the up-current background station at the same depth as the down-current sample.

Constituent	Standard or Guidance Value (ug/L)
Dissolved arsenic	36
Dissolved cadmium	7.7
Dissolved copper	7.9
Dissolved Lead	204
Total Mercury	0.05
PCBs per aroclor	0.2
Phenanthrene	14

- All water quality laboratory analyses required in this Certification must be conducted by a laboratory certified by the New York State Department of Health. If the compliance criteria described above are exceeded at any time during the installation, additional water quality

sampling shall take place at the location of the exceedance for subsequent cable installation passes.

- As described in Section 1.4, the NYSDEC recommended a standard/guidance concentration value for phenanthrene, in addition to the other values for chemical parameters already included in the Certificate Condition 61 and the § 401 Water Quality Certification. This addition has been incorporated into the Suspended Sediment/Water Quality Monitoring Plan (revised February 21, 2011) in Appendix G, and will be monitored for accordingly.

5.1.1 Burial Depth Requirements and Contingencies

Burial depth requirements were issued in the USACE permit and are described in Section 5.2.1. The Project will comply with Article VII Certificate Condition 51, which require the Submarine Transmission Cables to be installed at a burial depth consistent with the requirements of the Certificate Holder's USACE permit, except where utility lines are crossed or where geologic or topographic features prevent burial at such depth. Utility crossings shall be executed consistent with standard industry practices as identified for each such crossing in the EM&CP. The USACE permitted burial depths for the Project's Submarine Cable System is described in Section 5.2.1.

The Project will also comply with Article VII Condition 52, which states that "In the event that the burial depth consistent with the requirements of the Certificate Holder's U.S. Army Corps of Engineers permit has not been substantially achieved in an area other than a utility crossing, due to geologic or topographic features, following the post-installation inspection provided for in Condition 37(a), the Certificate Holder shall report the actual depth, propose a plan for achieving an adequate burial depth or protection level given the location, submit it to NYSDEC and DPS for review, and commit to a reasonable schedule for implementation of the approved plan".

Article VII Condition 53, provides that "So long as the Certificate Holder complies with the requirements of Condition 52, failure to achieve the burial depth consistent with the requirements of the Certificate Holder's U.S. Army Corps of Engineers permit shall not be a basis for an order to cease installation of the remaining cable sections, an order not to energize, or an order to cease operation. No direction to not energize or to cease operation shall be given, except upon application for an order to the Commission, which the Commission may grant or deny only after affording the Certificate Holder an opportunity to show cause why such order should not be granted".

5.1.2 Jet Plow Embedment

The Project will comply with Article VII Certificate Conditions 57 through 63 which require suspended sediment and water quality monitoring during jet plow trials and jet plow embedment. The TSS and water quality monitoring and compliance requirements are summarized in Section 5.1.2.1 and 5.1.2.2.

5.1.2.1 Monitoring of TSS and Water Quality

During the jet plow trials and jet plow installation, BEC will implement the Suspended Sediment/Water Quality Monitoring Plan, attached as Appendix G. This plan was prepared in consultation with NYSDEC and NYSDPS and was approved and incorporated as Attachment 1 to the issued Article VII Certificate. BEC will operate the jet plow in accordance with the operating conditions determined through the jet plow trials described in Appendix G to minimize suspension of *in-situ* sediments. Equipment, transect distances, water sample collection, water quality parameters, and general collection and analysis methods required are described in detail in Appendix G. These requirements are also described in Article VII Certificate Conditions 57 and 58. Tidal current data will be recorded at the time of water quality monitoring based on predicted tide information and visual observations, and this information will be used by the field crew to determine up- and down-current transects.

BEC will submit a final report summarizing the results of the sediment/water quality monitoring program to NYSDEC and NYSDPS within six months of the completion of installation as required in Article VII Certificate Condition 63. Reporting requirements are described in more detail in Section 7.0 of Appendix G. In addition, within one year of completion of the jet plow installation, BEC will submit a report comparing the actual monitoring results obtained during installation with the SSFATE model predictions presented in the Article VII application in accordance with Article VII Certificate Condition 63.

5.1.2.2 Compliance with TSS and Water Quality Criteria

BEC will follow the compliance requirements outlined in Certificate Condition 60 and 61 during the TSS and water quality monitoring program. This includes reviewing the results of the real-time data measurements during the jet plow trials to evaluate whether the operating conditions result in TSS concentrations meeting the TSS threshold guidance criterion. Any exceedance of the TSS guidance criterion during the trials or during jet plow installation shall be reported to the Independent Inspector, NYSDEC staff and NYSDPS staff and reasonable and feasible modifications to the jet plow operating conditions will be implemented after consultation with the aforementioned contacts (see Condition 60 and Appendix G for complete compliance TSS requirements).

Water quality analysis will be performed at one down-current and one up-current transect location as specified in Appendix G for chemical constituents listed in Certificate Condition 58. As described in Section 1.4, phenanthrene will be added to the water quality analysis, as requested by NYSDEC. When laboratory results are received, the concentration of chemical constituents collected 500 feet down-current of the jet plow will be assessed for compliance with thresholds specified in Certificate Condition 61(a) and in the 401 Water Quality Certification. As required by Certificate Condition 61(b) and the 401 Water Quality Certification, water quality sample analysis will be conducted by a laboratory certified by the New York State Department of Health. Additional compliance criteria are included in Article VII Certificate Conditions 61(b) and 62 and in the 401 Water Quality Certification.

5.1.2.3 Time-of-Year Restrictions

The Project will comply with Article VII Certificate Condition 49, which states that construction within navigable waters in New York shall not occur between December 1 of any calendar year and May 31 of the following calendar year, except that construction of the temporary cofferdam (addressed in the Segment 1 EM&CP) may be performed after March 31 and before November 15 of any calendar year. Once construction of the cofferdam is completed, work can proceed within it with no habitat or time-of-year restrictions. The anticipated construction schedule and allowable construction windows are shown on Appendix D. After prior consultation with DPS and NYSDEC Staff, however, the Certificate Holder may petition the Commission for a modification of this construction window provided copies of the petition are served on all active parties to this proceeding that have requested (before the approval of the EM&CP) to be so served. The results of the consultation and recommendations of NYSDEC shall be reported in the petition.

As noted in Article VII Certificate Condition 50, the following in-water activities may be undertaken at any time: benthic, geotechnical and archeological sampling and testing; marine surveys; mobilization and demobilization of vessels and equipment used for cofferdam construction, dredging, and cable embedment; dredging within the cofferdam; post-construction surveys and sampling; locating and marking utility crossings and preparations to effect utility crossings; and, on prior notice to DPS and NYSDEC, emergency maintenance work.

5.2 Relevant USACE Permit Conditions

The USACE permit for the BEC Project was issued on April 12, 2010. The permit was provided to the NYSDPS within 15 days of receipt as required in Article VII Condition 3. Permit conditions relevant to Segment 2 of the Project are listed below and will be specifically brought to the BEC Contractor's attention.

- ~~**Special Condition (B)** – The submarine transmission cable shall be installed to a minimum of 17 feet below the following authorized Federal Navigation Channel project depths, except as provided below:~~

  ~~1. Kill Van Kull Federal Navigation Channel (-50 foot Mean Low Water (MLW));~~

  ~~2. Pierhead Federal Navigation Channel (-20 foot MLW);~~

  ~~3. Port Jersey Federal Navigation Channel (-50 foot MLW);~~

  ~~4. Anchorage Federal Navigation Channel (-45 foot MLW);~~

  ~~5. The submarine transmission cable shall be installed to a minimum of 15 feet below the authorized depth in the Buttermilk Federal Navigation Channel, except in Area A as shown on Sheets 11 and 19 of the plans attached to the USACE Permit where it shall be a minimum of 13 feet below authorized depth.~~

- **Special Condition (B)** (Revised August 25, 2010) – The submarine transmission cable shall be installed to a minimum of 17 feet below the following authorized Federal Navigation Channel project depths, except as provided below:

  1. Kill Van Kull Federal Navigation Channel (-50 foot Mean Low Water (MLW));
  2. Pierhead Federal Navigation Channel (-20 foot MLW);
  3. Port Jersey Federal Navigation Channel (-50 foot MLW);
  4. Anchorage Federal Navigation Channel (-45 foot MLW);
  5. The submarine transmission cable shall be installed to a minimum of 15 feet below the authorized depth in the Buttermilk Federal Navigation Channel, except in Area A as shown on Sheets 11 and 19 of the [USACE] permit plans where it shall be a minimum of 13 feet below authorized depth.
  6. The submarine transmission cable shall be installed to a minimum of 15 feet below the authorized depth of the Gowanus Bay and Red Hook Federal Navigation Channels, except between stations 295+00 through approximately 313+00 as shown on Sheets 13, 14, 22 and 23 of the [USACE] permit plans where it shall be a minimum of 8 feet below the authorized depth of the Red Hook and Bay Ridge Federal Navigation Channels.

- ~~**Special Condition (C)** – The submarine transmission cable shall be installed a minimum of 15 feet below the present bottom depth of the Federal Navigation Channel slopes for those portions of the submarine transmission cable alignment that extends along the Red Hook, Bay Ridge and Gowanus Bay Federal Navigation Channels; in charted anchorage areas designated as 20G, 20F and 20E; and in areas outside Federal Channels, with the exception of within approximately 600 feet of the New Jersey landfall where the submarine transmission cable shall be installed to a minimum depth of 4 feet below the present bottom.~~

- **Special Condition (C)** (Revised August 25, 2010) – The submarine transmission cable shall be installed a minimum of 15 feet below the present bottom depth in the charted anchorage areas designated as 20G, 20F and 20E; and in areas outside Federal Channels, with the exception of within approximately 600 feet of the New Jersey landfall where the submarine transmission cable shall be installed to a minimum depth of 4 feet below the present bottom.

- **Special Condition (G)** – All jet plow submarine cable installation activities shall be completed between June 1 and November 30 of any calendar year.

- **Special Condition (H**) – Survey and sampling work, marking and locating of the utility crossing mobilization and demobilization of equipment can be done at any time.

- **Special Condition (J)** – The permittee shall maintain a copy of this permit on all water borne vessels engaged in the installation of the submarine transmission cable, as authorized by this permit.

- Sp**ecial Condition (Q)** – A closed clamshell environmental bucket shall be used to dredge all soft, fine-grained material. The closed clamshell environmental bucket shall be used until refusal, at which time a clam shell digging bucket or dredge excavator may be used for hard material.

- **Special Condition (S)** – In the event that, during the course of the submarine cable installation, the permittee encounters a situation in which, due to geologic conditions, topographic features, or buried obstructions, the permitted burial depths within the limits of the Federal Navigation channels have not been achieved but are within 10% of the authorized burial depth, the permittee shall provide the Corps of Engineers, New York District Regulatory Branch with the location, length, and achieved depth no later than the next business day for review (exceedance of greater than 10% shall be considered a non-compliance matter and shall warrant immediate notification to the New York District, Chief of Western Permits Section at (917) 790-8418). This provision does not apply to the Buttermilk Channel segment of the submarine cable. The Corps of Engineers will use this information to determine if any remedial measures are warranted. Notifications shall be addressed or faxed to the following: Chief, Western Permits Section, New York District Corps of Engineers, Jacob K. Javits Federal Building, New York, NY 10278-0090, Fax (212) 264-4260.

5.2.1 Burial Depth Requirements and Contingencies

The Project will comply with USACE Special Conditions (B), (C), and (S) as described above, which pertain to burial depth of the Submarine Cable.

5.2.2 Jet Plow Embedment

The Project will comply with jet plow-related conditions as described in Sections 5.2.1 and 5.2.3.

5.2.3 Time-of-Year Restrictions

The Project will comply with USACE Special Condition (G) which allows jet plow submarine cable installation activities to be completed between June 1 and November 30 of any calendar year. Survey and sampling work, marking and locating of the utility crossing mobilization and demobilization of equipment can be done at any time as stated in USACE Special Condition (H).

5.3 Erosion and Sedimentation Controls

No inland wetlands are located on the construction site at the New York Landfall. New erosion and sedimentation controls will be installed prior to the commencement of Segment 2 construction activities. Silt fencing (or a continuous straw bale dike) will be installed around down-gradient sides of Segment 2 work areas at the Transition Vaults and along the Upland Cable trenches, as shown on Figure 5-1. Details of the types of erosion and sedimentation controls are shown on Figures 5-2 and 5-3.

These erosion control measures will demarcate the limits of work, form work envelopes and provide additional assurances that construction debris will not enter off-site resource areas. Siltation barriers will remain in place until disturbed areas are appropriately stabilized.

The sedimentation controls will be inspected by BEC on a regular basis and after all precipitation events and will be repaired or replaced by the BEC Contractor, as necessary, during construction. In addition, regularly scheduled inspections of sedimentation controls at the New York Landfall will be performed by the contractor weekly and after every storm event. Sedimentation controls will be maintained until the construction area has been stabilized, and all areas have been either converted to impervious surfaces or re-vegetated.

Tracking of sediments off-site by construction equipment and delivery vehicles shall be minimized at all times. Potable water is available on site to clean equipment and vehicles as needed, and to minimize off-site tracking of sediments and dust generation.

Segment 2 construction will be conducted to minimize or avoid impacts to water quality in Gowanus Bay. No excavated soils or materials will be directly discharged or released to marine or tidal waters in Gowanus Bay. If a spill of oil or hazardous materials is inadvertently released during Segment 2 activities, the BEC Contractor will notify the appropriate agencies and initiate spill response and clean-up procedures as detailed in the Installation Manuals in Appendix B1 and B2.

Excavated soils generated during the installation of the Upland Cables and Transition Vaults will be temporarily stored and stockpiled in designated containment areas on the site (see Section 6.2.3 of the Installation Manual for the NY Infrastructure in Appendix B1). The soil will be tested for reuse. If acceptable, the soil will be used to backfill for Upland Cable trenches and Transition Vaults or disposed of at an approved upland disposal site. The BEC Contractor will be required to locate approved off-site receivers for all unusable excavated materials from all excavations The BEC Contractor will provide BEC with all documentation, including proof of proper disposal, regarding disposed materials.

Marine suspended sediment controls and monitoring during installation of the Submarine Cables by jet plow embedment are described in Sections 5.1.2.1 and 5.1.2.2.

5.4 Stormwater Management

Certificate Condition 36(u) requires that the EM&CP include a notice of intent to exercise authority under the general stormwater State Pollutant Discharge Elimination System (SPDES) permits for construction activities. The estimated total BEC Project land disturbance at the New York Landfall, including both direct and indirect disturbances associated with both Segment 1 and Segment 2 activities, is approximately 0.7 acres. Since the estimated direct land disturbance is less than 1 acre (approximately 0.2 acres), filing a notice of intent under the general stormwater SPDES permit for construction is not required. Therefore, it is not necessary to include a notice of intent in the EM&CP.

The generally flat project site at the New York Landfall, combined with the limited disturbance during activities for both Segments 1 and 2, will limit the potential for stormwater runoff to be generated. During construction, stormwater from the construction site will be filtered through the silt fencing (or equivalent erosion/sedimentation controls) that will be installed around the work areas at the site and

will be allowed to dissipate into the underlying or surrounding soils. Erosion and sedimentation controls will be established and maintained as described above in Section 5.3.

5.5 Spill Prevention, Control, and Countermeasures

To reduce the risk of accidental spills to the environment during Segment 2 activities, Spill Prevention Plans and Emergency Spill Response Plans have been prepared for the Project by the BEC Contractor for both marine- and land-based operations to minimize impacts to the environment.

5.5.1 Land-based Construction

The Spill Prevention Plan to minimize the risk of spills or releases during upland activities is presented in Section 9.3 and Appendix H of the Installation Manual for the Underground Cable in Appendix B2. Emergency Response Plans to guide responses in the event of an accidental spill are presented in Section 8.7 and Appendix G of the Installation Manual for the Underground Cable in Appendix B2.

In brief, the Spill Prevention Plan details practices that will be implemented by the BEC Contractor to reduce the risk of spills or releases of petroleum product during on-site refueling of construction equipment, including monitoring, use of absorbent pads during refueling, use of equipment in good condition, and halting of fueling operations in the event of a leak until the cause has been identified and repaired.

The Plan also includes procedures for lawful storage and disposal of hazardous materials. These include the appropriate training of site personnel in the handling and transportation of hazardous materials, proper labeling and securing on-site storage of hazardous materials, and disposal of hazardous materials used or generated in compliance with relevant acts and regulations.

To minimize environmental impacts in the event of a land-based spill, Emergency Spill Response Procedures have been developed by the BEC Contractor to ensure safety, stop the spill, secure the area, contain the spill, notify and report as needed, and clean up the spill. Emergency response spill response equipment appropriate to the quantities and types of materials to be used during Segment 2 activities will be supplied by the BEC Contractor and kept on-site during land-based Segment 2 activities. Additional measures and information are provided in Appendix G of the Installation Manual in Appendix B2.

5.5.2 Marine-based Construction

The Spill Prevention Plan to minimize the risk of spills or releases during marine activities is presented in Section 9.5 and Appendix H of the Installation Manual for the Underground Cable in Appendix B3. Emergency Response Plans to guide responses in the event of an accidental spill are presented in Appendix G of the Installation Manual for the Submarine Cable in Appendix B3.

In brief, the Spill Prevention Plan details practices that will be implemented by the BEC Contractor to reduce the risk of spills or releases of petroleum product during marine activities. The Plan also includes procedures for lawful storage and disposal of hazardous material. These

include the appropriate training of site personnel in the handling and transportation of hazardous materials, proper labeling and securing on-site storage of hazardous materials, and disposal of hazardous materials used or generated in compliance with relevant acts and regulations.

To minimize environmental impacts in the event of a marine-based spill, Emergency Spill Response Procedures have been developed by the BEC Contractor to ensure safety, stop the spill, secure the area, contain the spill, notify and report as needed, and clean up the spill. Emergency response spill response equipment appropriate to the quantities and types of materials to be used during Segment 2 activities will be supplied by the BEC Contractor and kept on-site during marine-based Segment 2 activities. Additional measures and information are provided in Appendix G of the Installation Manual in Appendix B3.

5.6 Soil Management

Soils excavated for installation of the Transition Vaults and the duct banks for the Upland Cable will be managed in accordance with applicable terms specified in the pending easement agreement between Con Edison and BEC, Con Edison policies and procedures, and applicable NYSDEC guidance and regulations. Approximately 1,700 cubic yards of soil are estimated to be excavated to install these structures. BEC's construction contractor will be responsible for the on-site management of excavated soils. BEC will stockpile and analyze any soils excavated to install the Transition Vaults and Upland Cables at the New York Landfall that exhibit evidence of contamination separately from other excavated soils. Soils will be temporarily stockpiled adjacent to the excavations and placed on and covered with polyethylene sheeting within the work area. These will also be sampled and analyzed separately from soils not exhibiting evidence of contamination. Soils will be managed in accordance with the soil management plan in the Segment 2 EM&CP (at Section 5.6 and Appendix B1, Section 6.2.3). The list of parameters provided in Section 5.6 and Appendix B1, Section 6.2.3, are the parameters that the soil disposal facility (Clean Earth Inc. of Carteret, New Jersey) requires prior to accepting material at its facility. The majority of the approximately 1,700 cubic yards of soil are anticipated to be re-used as backfill material within the excavations after the structures have been installed. Soils excavated at the New York Landfall and planned for re-use will be analyzed for the full list of parameters in 6 NYCRR Part 375 and TAGM 4046 (or its successor).

The stockpiled soils will be sampled and analyzed by HamptonClarke-Veritech Laboratory (HC-V), located in Fairfield, New Jersey. HC-V holds current state certifications in New York, New Jersey, Pennsylvania, Kentucky, Connecticut and West Virginia, and is also certified by the National Environmental Laboratory Accreditation Conference (NELAC). Composite soil samples will be collected from the stockpiles by trained HC-V laboratory field technicians, using techniques described in Section 5.6 of the Segment 2 EM&CP, and in compliance with applicable HC-V, Clean Earth, and regulatory procedures.

Duplicate samples will be collected, and both trip and field blanks will be prepared. Samples will be placed in clean sample jars, stored in iced containers maintained at 4 degrees Centigrade, and transported to the HC-V Laboratory under strict chain-of-custody procedures. All the analyses required for either disposal by Clean Earth, Inc., the soil disposal contractor, or re-use in New York,

based upon the analytical results, will be conducted by HC-V, in accordance with accepted EPA analytical procedures for each methodology. Additional information about quality control/quality assurance and HC-V procedures can be found at the laboratory's web site at http://www.hcvlab.com/.

The disposal contractor, Clean Earth, Inc. (CEI), will be responsible for off-site disposal of the remaining soils (estimated at approximately 600 cubic yards). Eight-point composite samples of soils to be characterized will be collected and laboratory-tested in accordance with CEI's requirements to determine off-site disposal or re-use options. Each composite sample will be taken from eight representative locations, mixed in a clean bowl, and then collected into clean containers. Sample locations will be selected in accordance with standard professional sampling practices, with the sampler using best engineering judgment to determine that samples are taken in such a manner that adequately characterizes the soil as a whole. Samples will be submitted and analyzed at an accredited laboratory for the following parameters (CEI's acceptance criteria), to determine suitability for off-site re-use or disposal:

- Ignitability
- Corrosivity
- Reactivity (Sulfide and Cyanide)
- Method 8260 – Volatile Organics
- Method 8270 – Semi-Volatile Organics
- PCBs
- TCLP Metals
- TCLP Organics

If the analytical testing results show that the remaining soils are suitable for re-use within New York State, pursuant to applicable New York State regulations and guidance (at TAGM 4046 or its successor and 6 NYCRR Part 375), inquiries will be made to New York Sand and Stone, a building materials supplier that operates at an adjacent property, to determine if they can accept such soil for re-use. Alternatively, another appropriate off-site location will be identified for re-use of the remaining soils. If the analytical testing results show that the remaining soils are not suitable for re-use within New York State, then CEI will identify out-of-state facilities that can dispose of or recycle such soils. Other than for backfilling of the transition vaults and the duct banks excavations, soils are not proposed for re-use on the site.

Soil management is not applicable to the submarine cable installation as the sediment suspended by the jet plow will naturally settle back into the installation trench. Upon removal of the temporary cofferdams, clean sand will be used to backfill the excavations to the pre-existing seafloor grade. New York Sand and Stone will supply NYSDEC-certified "virgin source" sand from their facility adjacent to the upland site at 75 25th Street, Brooklyn, NY 11232 for use as backfill at the locations of the former temporary cofferdams.

5.7 Groundwater Dewatering

The elevations of Segment 2 activities at the upland site should provide sufficient separation from groundwater to minimize the need for dewatering during construction. There may, however, be areas of the excavations where additional depth is required to cross under or avoid possible obstructions. If groundwater is encountered in these areas, it will be removed in accordance with Con Edison's practices for dewatering, as described below, and applicable regulations.

If encountered, groundwater would be removed from excavations in a manner such that erosion and transportation of sediment is minimized. Dewatering of a trench or vault excavation would be performed by means of a pump with a discharge hose. The discharge hose would empty into a dewatering settling basin. The dewatering effluent would first discharge into a filter bag (called a dirtbag), placed upon crushed stone. The dirtbag would filter out sediment from the water. The downstream edge of the dewatering settling basin would be bordered by haybales. The settling basin would be of sufficient size to safely contain and control the maximum flow anticipated.

Groundwater dewatering is not applicable to the submarine cable installation.

5.8 Archaeological Contingency

No cultural resources were identified within the Project's Area of Potential Effect for Segment 2 upland activities on the pier at the New York Landfall. The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) concurred with this finding in a letter dated May 13, 2008.

The two marine archaeology survey reports issued in July and October 2008 identified a total of 5 submerged targets in New York waters that had geophysical signatures suggestive of potentially significant submerged cultural resources within the 300-foot-wide survey corridor for the proposed Submarine Cable system. These five targets were recommended for avoidance. The OPRHP concurred with these findings in a letter dated October 14, 2008. In addition, the revised Figure 5-4, submitted with this February 2011 modification, shows the location of one additional Jet Plow Avoidance Area recommended by the project's marine archaeologist, in conjunction with surveys of the NY-1 and NY-2 route adjustments. The findings have been submitted to OPRHP. The delineations of all the avoidance areas in New York waters, described as areas of no seafloor disturbance (including anchoring), have been provided to the BEC Contractor and are shown on Figure 5-4, as revised. Avoidance will be monitored by the Independent Inspector during construction (see Section 9.0).

Pursuant to Article VII Condition 70, should previously unrecorded archaeological materials be encountered during construction, the BEC Contractor will stabilize the area and cease construction activities in the immediate vicinity of the find and protect same from further damage. Within 24 hours of such a discovery, BEC will notify NYSDPS and the OPRHP to determine the best course of action. No construction activities will be permitted in the vicinity of the find until such time as the significance of the resource has been evaluated and the need for, and scope of, further assessments have been determined.

Pursuant to Article VII Condition 71, should human remains or evidence of human burials be encountered during construction, all work in the immediate vicinity of the find shall be immediately halted and the remains shall be protected from damage. Within 24 hours of such discovery, BEC will notify NYSDPS and OPRHP. All such finds and handling will be reported in the status reports required by Condition 44.

5.9 Hazardous Material Handling and Disposal

BEC's Contractor will comply with its Hazardous Material Storage and Disposal procedures in the Spill Prevention Plan in Appendix H of the Installation Manuals in Appendices B1 and B2 and in Appendix G of the Installation Manual in Appendix B3. These procedures include proper training of site personnel, availability on site of applicable Material Safety Data Sheets (MSDS) for hazardous materials used on site; secure storage and proper labeling of any hazardous materials on site; and disposal of any hazardous materials used or generated in accordance with applicable regulations.

As described in Section 5.6 above, excavated soils will be laboratory tested before being approved for disposal or possible reuse.

5.10 Existing Utility Protection

Upland utilities located along the Upland Cable Route will be located to the extent possible with input from Con Edison. Prior to construction, the contractor will identify utilities by excavating either by hand or a vacuum truck. During construction, excavation either by hand or by vacuum truck will be used in the vicinity of utility crossings. Care will be taken during trench excavation to protect and support exposed utilities and other underground structures, in accordance with all governing agency requirements, including the requirements of Con Edison. In addition, trenching operations will meet all requirements of the Occupational Health and Safety Administration (OSHA, 29 CFR Part 1926 and other applicable regulations).

Based on available information, BEC does not anticipate crossing other utilities that would affect the burial of the Submarine Cable. Locations of existing cables and pipelines provided by NYSOGS show two existing crossings along the Submarine Transmission Cable Route. These include a water tunnel and an abandoned former communication cable. The water tunnel is located 900 feet below MLW, and extends from the Erie Basin to northern Staten Island near Tompkinsville. The tunnel intersects Anchorages 21A, 21B, 21C and 23A as it passes through several channels. The water tunnel is owned by the NYC Board of Water Supply, and the Submarine Transmission Cable will pass well over the tunnel. Near the Federal Channel limit of the Buttermilk Channel, the route will cross the location of an inactive, abandoned surface-laid submarine communication cable that formerly connected Fort Wadsworth and Governors Island. The presence of the water tunnel and the abandoned former communication cable are not expected to affect the installation of the Submarine Cable.

5.11 Invasive Species Control

The upland site is a vacant filled pier covered by broken asphalt, packed gravel, fill and sparse herbaceous vegetation (grasses). During Segment 2, the Environmental Inspector will monitor for

new invasive species throughout the limits of the HDD work area used during Segment 1. Any introduction of new invasive species on disturbed soils will be hand-pulled or sprayed by a licensed contractor registered in the State of New York.

During construction, the site will be maintained in a neat and orderly condition, and all trash and debris will be removed as appropriate and transported and disposed of by an approved trash service provider, to reduce risk of nuisance rodents.

6.0 ANTICIPATED CONSTRUCTION METHODS

General procedures that will be followed during construction of Segment 2 activities are detailed in the Installation Manuals in Appendix B of this document. The following Installation Manuals are provided in Appendix B of the EM&CP:

- Appendix B1: Installation Manual for the NY Infrastructure revised March 22, 2010 (describes Transition Vaults and cofferdam removal).
- Appendix B2: Installation Manual for the Underground Cable dated March 16, 2010 (describes Underground Cables).
- Appendix B3: Installation Manual for the Marine Cable dated March 11, 2010, revised February 17, 2011 (describes Submarine Cables).

The sections below provide a summary of where the detailed information related to Transition Vault construction, Upland Cable installation, Submarine Cable installation, making the electrical interconnection, and temporary cofferdam removal can be found in the Installation Manuals. Construction operations will be performed in accordance with the relevant permit conditions and construction considerations described in Section 5.0.

6.1 Transition Vaults

Construction methods for cofferdam installation are described in Section 7.0 of the Installation Manual for the NY Infrastructure (Appendix B1). Three precast Transition Vaults will be placed between the HDD HDPE conduits and the upland cable duct bank to provide a common connection point for the seaward conduit and landward duct bank as shown in Figure 3-1 of this document. Section 8.0 of the Installation Manual (Appendix B1) describes the purpose and dimensional characteristics of the Transition Vaults, pre-installation procedures, materials and equipment, mobilization procedures, and the sequence of events required for Transition Vault construction.

6.2 Upland Cable Installation

Construction methods for Upland Cable installation are described in Section 5.0 of the Installation Manual for the NY Infrastructure (see Appendix B1) (duct bank construction) and Section 7.0 of the Installation Manual for the Underground Cable (see Appendix B2). Approximately 800 feet of Upland Cable will be installed in concrete duct banks between the Transition Vaults and the Electrical Interconnection as shown in Figure 5-1 of the Installation Manual for the Underground Cable.

Section 7.0 of the Installation Manual for the Underground Cable describes pre-installation procedures, the sequence of events required for Upland Cable construction, splicing, and termination.

6.3 Submarine Cable Installation

Construction methods for Submarine Cable installation are described in Section 6.0 of the Installation Manual for the Marine Cable provided in Appendix B3. The specialized equipment to be used to install the Submarine Cable is described in Section 7.0 of the Installation Manual for the Marine Cable.

6.3.1 Pre-Lay Grapnel Run

Construction methods for the pre-lay grapnel run that will be used for pre-installation route clearance are described in Section 6.1 of the Installation Manual for the Marine Cable (Appendix B3).

6.3.2 Pre-Installation Jetting Trials

The pre-installation jetting trials are described in the Suspended Sediment/Water Quality Monitoring Plan in Appendix G of this document. As described in Section 6.1.6 of the Installation Manual for the Marine Cable (Appendix B3), the jetting trials will take place after completion of the sea trials (vessel commissioning and systems checks) described in Section 6.1.5 of the Installation Manual for the Marine Cable.

6.3.3 Cable Pulling and Splicing

Construction methods for Submarine Cable pulling are described in Section 6.2 of the Installation Manual for the Marine Cable (Appendix B3), and methods for Upland Cable pulling are described in Section 7.3 of the Installation Manual for the Underground Cable (Appendix B2).

The underground cable system comprises three 345 kV Cross-linked Polyethylene (XLPE) cables with a metallic sheath of lead and an outer sheath of High Density Polyethylene (HDPE). The transition from the Submarine Cable to the Upland Cable will be achieved using a pre-molded sheath sectionalized joint (the “splice”) installed in a Transition Vault. It consists of two principal parts: i.e., a pre-molded XLPE cable splice, and a water tight metal enclosure for mechanical and moisture protection of the joint. The Submarine and Underground Cables are installed in the “splice”, surrounded by the metal enclosure. The sectionalized joint enables testing of the integrity of the cable’s outer sheath.

6.3.4 Jet Plow Embedment

Construction methods for Submarine Cable installation using jet plow embedment are described in Section 6.2 and Section 7.3 of the Installation Manual for the Marine Cable (Appendix B3).

6.4 Electrical Interconnection

The BEC Project will connect to the NYISO electrical grid at the Gowanus Substation at 25th Street and 3rd Avenue in Brooklyn, New York by means of a new 345 kV electric cable. The location of the Electrical Interconnection within the Gowanus Substation is shown on Figure 3-1. The Upland Cable will terminate as an aboveground cable as shown in the details in Figure 3-3.

The steel two-legged termination structure, mounted on pier-type or pile-supported concrete foundations, will mount the three 14-foot tall termination devices (also called "potheads"), to the bottom of which the three cables will terminate. Con Edison will interconnect with the top of the terminations, usually done by means of bare metallic cables, or "jumpers", connected to the nearest structure in the projected ring bus configuration. The Electrical Interconnection design is shown on Figure 3-6.

6.5 Temporary Cofferdam Removal

Construction methods for temporary cofferdam removal are described in Section 7.0 of the Installation Manual for the NY Infrastructure (Appendix B1).

6.6 Utility Crossings

Upland utilities located along the Upland Cable Route will be located to the extent possible with input from Con Edison. Prior to construction, the contractor will identify utilities by excavating either by hand or a vacuum truck. During construction, excavation either by hand or by vacuum truck will be used in the vicinity of utility crossings. Care will be taken during trench excavation to protect and support exposed utilities and other underground structures, in accordance with all governing agency requirements, including the requirements of Con Edison. In addition, trenching operations will meet all requirements of the Occupational Health and Safety Administration (OSHA, 29 CFR Part 1926 and other applicable regulations).

Based on available information, BEC does not anticipate crossing other utilities that would affect the burial of the Submarine Cable (see Section 5.10).

7.0 PUBLIC HEALTH AND SAFETY

This section describes potential public health concerns and the actions that will be taken to minimize impacts to the community. Potential areas of concern include exposure to airborne debris, noise, protection of pedestrians and vehicles on public ways, protection of navigation within Gowanus Bay and Upper New York Harbor, and provisions for lighting and protection of public areas during construction activities.

7.1 Fugitive Dust and Airborne Debris Control

Fugitive dust and airborne debris control measures are not expected to be necessary during Segment 2 upland activities. Any excavated soils transported by truck from the site will be covered to

minimize airborne debris. Municipal water will be available on site if dust control measures are warranted.

No fugitive dust and airborne debris control measures will be necessary during installation of the Submarine Transmission Cable.

7.2 Noise

Pursuant to Paragraph 69 of the Joint Proposal, a Construction Noise Mitigation Plan has been prepared in accordance with the requirements of 15 RCNY Section 28-100, and is provided in Appendix E. Upon commencement of construction, the Construction Noise Mitigation Plan will be implemented and maintained by the BEC Contractor.

7.3 Maintenance and Protection of Traffic

No public roads traverse or abut the upland work area and the area has no public access. Vehicles supporting Segment 2 upland construction-related activities will access the site from city streets, in accordance with applicable laws and regulations. Access routes to the upland site for construction vehicles are shown on Figures 4-2 (from points south) and 4-3 (from points north).

The Submarine Cable installation is a marine-based activity. Therefore, there is no need for maintenance and protection of traffic for this activity.

7.4 Protection of Navigation

To coordinate with and protect marine vessels navigating in the vicinity of the Segment 2 installation of the Submarine Transmission Cables, the BEC Contractor will undertake specific notification measures, as described in Appendix R of the Installation Manual in Appendix B3. Prior to commencing operations, a Local Notice to Mariners will be issued to the Port Authority, Vessel Traffic Control (VTC) and USCG regarding:

- Vessels and equipment on site.
- Work areas.
- VHF contact channels for project vessels.
- Nature of the work.
- Identification and position of temporary can buoys at anchor locations (if necessary).

The following additional safety measures will be undertaken by the BEC Contractor during Segment 2 marine activities:

- Construction vessels will monitor VHF channels 16, 13 and the project working channel at all times while cable is being installed.

- BEC's Contractor will post standard day shapes & lighting in accordance with the USCG regulations.

- At a minimum, daily reports will be made to the VTC regarding the schedule and nature of planned activities.
- Marine traffic will be notified of work activities via USCG communications and Local Notice to Mariners.

7.5 Protection of Public Areas

The upland site is private property or City-owned property dedicated to private use, and abuts private properties in a heavily industrialized area. There are no public walkways or public access on or adjacent to the site. The site is currently secured by existing fences and locked gates, which will be maintained during Segment 2 activities.

Potential impacts to public uses of the navigable waters during installation of the Submarine Transmission Cables will be minimized by compliance with the measures listed in the preceding section. Installation activities will be temporary and localized; there will be no permanent impacts to public marine areas.

7.6 Lighting

Portable night lighting may be needed during Segment 2 upland and marine operations, but will be temporary and focused onto specific work areas as described in Section 6.2.2 of the Installation Manual in Appendix B1. There are no residential areas abutting or in the vicinity of the site, and therefore limited use of lighting will have no effect on nearby receptors.

7.7 Electromagnetic Fields (EMF)

In accordance with Certificate Condition 12, the Transmission Facility will be designed, engineered, and constructed such that its operation will comply with the EMF standards established by the New York Public Service Commission in Opinion No. 78-13 (issued on June 19, 1978) and the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued September 11, 1990).

As required by Certificate Condition 36t, BEC is providing a certification by a professional engineer licensed by the State of New York at ABB, Inc. stating that, if constructed in accordance with the final design plans, the Transmission Facility comply with the electromagnetic and magnetic field standards referenced in Condition 12. This certification is provided in Appendix J of this document. Also provided in Appendix J are the EMF standards and guidelines for New York, and diagrams referenced in the EMF certification.

8.0 POST-CONSTRUCTION CONSIDERATIONS

This section addresses Certificate conditions pertaining to environmental issues following completion of Segment 2 construction activities.

8.1 Relevant New York Permit Conditions

The following conditions related to construction are required by the issued Article VII Certificate for Segment 2 activities located within New York:

- **Condition #22** - The Certificate Holder shall coordinate maintenance of its facilities with those of any adjacent utility facilities.

- **Condition # 25 –** Within one year after the in-service date of the Transmission Facility, the Certificate Holder shall provide DPS Staff with as-built drawings of the Transmission Facility, a map showing the location of the Transmission Facility, and a list of coordinates identifying the submarine cable location and achieved burial depths.

- **Condition #38 –** The Certificate Holder may conduct the maintenance work contemplated in Condition 37 at any time with twenty four (24) hour prior notice to DPS and NYSDEC, provided that it is conducted within the certified right-of-way, as granted by the New York State Office of General Services, and within the authorized construction window. For work that must be undertaken outside either the certified right-of-way or the authorized construction window, prior approval by the Commission shall be required, except in cases of an emergency.

- **Condition #45 –** Within ten days after the Transmission Facility is in service, the Certificate Holder shall notify the Commission of that fact.

- **Condition #48 –** Within ten days of the completion of final restoration, the Certificate Holder shall notify the Commission that all restoration has been completed in compliance with the EM&CP.

- **Condition #52 –** In the event that the burial depth consistent with the requirements of the Certificate Holder's U.S. Army Corps of Engineers permit has not been substantially achieved in an area other than a utility crossing, due to geologic or topographic features, following the post-installation inspection provided for in Condition 37(a), the Certificate Holder shall report the actual depth, propose a plan for achieving an adequate burial depth or protection level given the location, submit it to NYSDEC and DPS for review, and commit to a reasonable schedule for implementation of the approved plan.

- **Condition #53 –** So long as the Certificate Holder complies with the requirements of Condition 52, failure to achieve the burial depth consistent with the requirements of the Certificate Holder's U.S. Army Corps of Engineers permit shall not be a basis for an order to cease installation of the remaining cable sections, an order not to energize, or an order to cease operation. No direction to not energize or to cease operation shall be given, except upon application for an order to the Commission, which the Commission may grant or deny only after affording the Certificate Holder an opportunity to show cause why such order should not be granted.

- **Condition #63 –** Within six months of the completion of installation, the Certificate Holder shall prepare and submit to the NYSDEC and NYSDPS a final report summarizing the results of the

suspended sediment/water quality monitoring program. Within one year of the completion of installation, the Certificate Holder shall prepare and submit to the NYSDEC and the NYSDPS an analysis comparing the actual monitoring results obtained during installation with the previous SSFATE model predictions.

- **Condition #64.b. –** The Certificate Holder shall submit to the NYSDEC and DPS Staffs, within six months from the date of completion of the installation, a report which provides the analytical results, and compares them to pre-installation chemical concentrations in surficial sediments located along the approved route.

- **Condition #65.b. –** The results of each periodic post-installation benthic community monitoring event shall be submitted to NYSDEC and NYSDPS Staffs within four months of the completion of the monitoring event.

8.1.1 Immediate Post-Installation Inspection

Pursuant to Condition 37a, this Section presents BEC's Immediate Post-Installation Inspection Plan for the Submarine Cable.

BEC's Contractor will use installation equipment and methodologies designed such that positioning and depth of burial are accurately measured, displayed, and recorded in real time during the cable installation. The onboard survey, navigation, and plow/cable monitoring systems utilize Differential Global Positioning System (DGPS) technology and will be used to verify that the cables are installed in the correct location and buried to the required depth. Detailed descriptions of these systems are provided in Section 7.5 of the Installation Manual provided in Appendix B3.

The jet plow is designed as a simultaneous lay and burial tool in which the cable is physically threaded through the jet plow. The use of this type of jet plow incorporates the post-installation inspection into the cable installation process, as the depth of burial and positioning of the cable is very accurately reported during installation.

BEC is required under Special Condition S of its USACE permit to report to the USACE New York District the location, length, and achieved depth for any deviations from the burial depths specified in the USACE permit. The USACE will use that information to determine if any remedial measures are warranted for such deviations. Depending on USACE's determination as to the need for, and purpose of, remedial measures, BEC will assess the appropriate methods and timing for implementing such measures.

BEC will report such depth deviations to DPS and NYSDEC along with any plan for remedial measures prepared in response to USACE's determination, in compliance with Certificate Condition 52.

Pursuant to Certificate Condition 25, within one year after the in-service date of the Transmission Facility, BEC will provide DPS Staff with as-built drawings of the Transmission Facility, a map

showing the location of the Transmission Facility, and a list of coordinates identifying the submarine cable location and achieved burial depths.

8.1.2 Post-Installation Sediment and Benthic Community Monitoring

As required in NYS Article VII Certificate Conditions 64a and 65a, BEC prepared a Pre- and Post-Installation Benthic Community and Sediment Monitoring Plan in consultation with NYSDEC and NYSDPS staff. This plan is attached as Appendix H and was approved by NYSDEC and NYSDPS staff on May 5, 2010 and April 12, 2010, respectively. In accordance with the approved plan, post-installation surficial sediment sampling will be conducted within 30 days after completion of submarine cable system installation and post-installation benthic community sampling will be conducted approximately 12 months after the pre-installation benthic community sampling event. In the event that the first post-installation benthic monitoring results indicate that the benthic communities have not recovered according to the evaluation criteria described in Appendix H, then a second post-installation monitoring survey will be conducted approximately 12 months after the first post-installation benthic community survey.

Sampling and analysis methods for benthic community and surficial sediment chemistry are the same as those described for the pre-installation event in Section 4.1.1. The approved Benthic Community and Sediment Monitoring Plan is included as Appendix H and describes the complete sampling and analysis methods to be followed during the post-installation survey events.

8.1.3 Post-Installation Benthic Habitat Mitigation Plan

As required in NYS Article VII Certificate Conditions 66, BEC prepared a Benthic Habitat Mitigation Plan in consultation with NYSDEC and NYSDPS staff. The final plan, which is provided in Appendix I, presents the proposed criteria for determining whether additional mitigation to minimize impacts to benthic habitat and organisms resulting from construction activities is necessary.

8.2 Relevant USACE Permit Conditions

USACE permit conditions relevant to post-construction are:

- **Special Condition (O)** – The permittee shall notify the National Oceanic and Atmospheric Administration of the project completion and specifications so they may initiate the appropriate chart modifications. The information may be faxed to (301)713-4516 or mailed to the following address: National Oceanic and Atmospheric Administration, National Ocean Service, N/CS261, Marine Chart Division, Nautical Data Branch, Station 7317, 1315 East-West Highway, Silver Springs, MD 20910-3282.

- **Special Condition (R)** – Within 6 months from completion of the authorized activities the permittee shall submit to USACE a post-installation survey showing the as-built depth and location of the submarine cable, with federal channel lines shown. Deviations from authorized

depth or location of the submarine cable must be reported to the USACE New York District. This information will be delivered to the address provided in Special Condition (P).

- **Special Condition (U)** – The permittee shall remove the submarine cable authorized herein from the waterways within 2 years of the cable being removed from service. The permittee may apply to the Corps of Engineers to leave the inactive cable in place, if leaving the cable would not result in long-term adverse impact to the harbor and/or harbor resources, and the cable would not unreasonably interfere with other uses of the seabed.

- **Special Condition (V)** – The permittee shall post high visibility signage, on weatherproof placard of no less than 4 feet by 4 feet, along the shorelines where the submarine cable enters/exits a waterway, warning of the presence of a cable crossing.

8.3 Clean-up and Restoration

The BEC Contractor will ensure that the construction site is in a clean, stabilized condition upon completion of Segment 2 activities. All excess material and equipment will be removed from the construction site, and construction debris will be disposed of appropriately. Residual material from excavations deemed not suitable for re-use on-site will be disposed of in accordance with all applicable regulations, as described in the Installation Manuals provided in Appendix B.

All disturbed areas on the upland site will be restored to preconstruction conditions. Erosion and sedimentation controls, including silt fencing, will be removed and disposed of appropriately. The BEC Contractors will be required to locate off-site receivers for all such materials. Because the work area is covered primarily with packed gravel and/or pavement, a seed mixture will not be applied.

After the temporary cofferdams are removed, the excavations will be backfilled with clean sand material. New York Sand and Stone will supply NYSDEC-certified "virgin source" sand from their facility adjacent to the upland site at 75 25th Street, Brooklyn, NY 11232 for use as backfill in the temporary cofferdam locations.

8.4 Other Regulatory Notifications

As described above, both the Article VII Certificate and the USACE permit required post-construction notifications and submittals to be made. BEC will make the required notifications and submit the required materials in the timeframes specified.

8.5 Submarine Cable Maintenance

Pursuant to Condition 37b, this section presents BEC's Maintenance Plan for the Submarine Cable that describes the standard to be used to determine, based upon inspection results, if and what relocation, reburial and/or added protection measures are required;

BEC is required under Special Condition S of its USACE permit to report to the USACE New York District the location, length, and achieved depth for any deviations from the burial depths specified in the USACE permit. The USACE will use that information to determine if any remedial measures are

warranted for such deviations. Depending on USACE's determination as to the need for, and purpose of, remedial measures, BEC will assess the appropriate methods and timing for implementing such measures.

Pursuant to Condition 38, BEC will provide DPS and NYSDEC with 24-hour prior notice for maintenance work to be conducted within the certified right-of-way and within the authorized construction window. BEC will obtain prior approval from the Commission for maintenance work that must be undertaken outside the certified right-of-way and authorized construction window, except in cases of an emergency.

8.6 Submarine Cable Decommissioning

Pursuant to Condition 37c, this Section presents BEC's Decommissioning Plan for the Submarine Cable in the event the cable is permanently de-energized.

Under BEC's USACE permit, the revocable consent issued to BEC by NYCDOT, and the expected terms of BEC's easement from NYSOGS, the Submarine Transmission Cable may be left in place once it is permanently de-energized, subject to the agencies' discretion. BEC anticipates that at the end of the cable's useful life, BEC will apply for the agencies' approval to leave the cable in place, upon a demonstration, as set forth in the USACE permit, that the cable's presence will not result in long-term adverse impact to the harbor and/or harbor resources, and that the cable will not unreasonably interfere with other uses of the seabed.

9.0 COMPLIANCE PLAN

This section addresses environmental oversight of Segment 2 construction activities, including clean-up and restoration.

9.1 Independent Inspector

In accordance with Certificate Condition 36(w) of the Certificate, BEC has contracted with ESS Group, Inc. to serve as the Independent Inspectors to monitor compliance with applicable environmental regulations during the construction of Segments 1 and 2 of the Project in New York State. Pursuant to Certificate Conditions 36(w)(i)-(iii), BEC has provided to DPS the following information about its Independent Inspection program prior to the commencement of Segment 1 construction activities:

- The name(s) of the independent inspector(s) ("Independent Inspectors") and a statement of qualifications for each inspector demonstrating sufficient knowledge and experience in environmental matters to complete the inspections and audits.

- A certification confirming the independence of the inspector(s) from the Certificate Holder and certifying the authority of the inspector(s) to "stop work" in cases of non-compliance or imminent environmental or safety hazard. The Independent Inspector is an independent entity with ownership that is separate from the ownership of BEC and has no corporate business connection to BEC other than contract(s) to perform environmental and engineering services under the Final EM&CP Segment 1 and Segment 2 plans.

- Provision for deployment of more than one inspector in the event that two or more major field operations are undertaken simultaneously, such that at least one inspector shall be assigned to each construction area, the same inspector shall not be assigned to both in-water and on-land activities simultaneously, and no inspector shall be assigned to more than two active construction areas, or to in-water and on-land activities, at any one time.

An Environmental Observation Report form in Appendix F provides a checklist of matters to inspect for compliance, including the specific items or locations to be inspected, the type of inspection to be employed (e.g., visual, auditory, testing by instrument), and acceptability criteria to be applied by the inspector(s).

In the event that a non-compliance issue is encountered during EM&CP Segment 2 construction activities, the Independent Inspector will assess the issue and if it is determined that the issue at hand is an imminent environmental or safety hazard, he/she will immediately issue a "stop work" order. If it is determined that there is no imminent environmental or safety hazard, the Inspector will document the situation and notify the construction supervisor of the non-compliance and inform him/her of the appropriate compliance standard. The Inspector will detail in his/her daily report the non-compliance, the notification to the construction supervisor, and the remedial actions taken by the Contractor to correct the issue. When necessary, the Independent Inspector will notify the appropriate regulatory agencies of the non-compliance.

In accordance with Condition 68, the Independent Inspector and appropriate inspection personnel of the Certificate Holder shall be on site at the start-up of each field operation and at all times during environmentally sensitive phases of construction, including construction in waterbodies and waterfront areas. The Independent Inspector and appropriate inspection personnel of the Certificate Holder will be equipped with sufficient documentation, and transportation and communication equipment to effectively monitor contractor compliance with the provisions of this Certificate, subsequent Orders in this proceeding, applicable sections of the Public Service Law, and the Commission-approved EM&CP.

To comply with Condition 36(w)(vi), following the start of pre-construction activities, monthly environmental audits will take place using the checklist in Appendix F, and will include a written explanation of any problems and remedial actions that occurred during the prior month. The checklist will be signed by the Inspector and an authorized representative of BEC, and will be submitted before the 10th of each month to DPS and NYSDEC (covering the prior month).

To comply with Condition 36(w)(vii), annual environmental audits of those portions of the Transmission Facility in New York will be submitted to DPS, NYSDEC and applicable agencies on or about the first and second anniversaries of the start of operation of the Transmission Facility.

9.2 Construction Crew

The construction crew for Segment 2 activities will consist of equipment operators and laborers.

BEC Contractors and crews will be required to understand and follow the requirements contained in this EM&CP. Copies of the EM&CP, the Certificate, and applicable environmental regulations will be provided to all BEC Contractors and will be available on-site. Adherence to applicable conditions, terms, and requirements of these documents will be a condition in any construction contract entered into by BEC and any third party.

In accordance with Condition 42, BEC will notify all construction contractors that the NYSPSC may seek to recover penalties for violation of the Certificate from both BEC and its Contractor, and that construction contractors may also be liable for other fines, penalties, and environmental damage.

9.3 Construction Supervision and Inspection

The organization of the BEC Contractor's installation teams and descriptions of the BEC Contractor's reporting process are provided in the Installation Manuals for the specific type of activity (Appendices B1 through B3).

Supervision and inspection of construction activities will be thorough and responsive to changing on-site conditions. A construction supervisor will be present on-site for the duration of the construction activities and will direct construction crews in their daily activities and coordinate material deliveries and handling in accordance with the procedures established in this document.

BEC will organize and conduct site compliance audit inspections for NYSDPS as needed, but not less frequently than once a month, during the site preparation, cofferdam construction and HDD drilling and cable pulling, cable-laying, upland excavation, construction, and restoration phases of the project as required by Condition 69.

BEC and its Contractors will regard NYSDPS representatives (certified pursuant to Public Service Law Section 8) as the Commission's designated representatives in the field. In the event of any emergency resulting from the specific construction or maintenance activities that violate or threaten to violate the terms of the Certificate or any other order in this proceeding, such NYSDPS representatives may issue a stop-work order for that location or activity. Provisions regarding stop-work orders are described in Condition 67.

Phone logs will be kept by BEC that list the date of any complaints and concerns (expressed by the public or government officials), contact information for the complaining party, the date of BEC's response, measures taken to resolve the complaints, and the outcome. Phone logs will be made available to NYSDPS upon request. BEC will report every unresolved complaint during each inspection by NYSDPS personnel.

BEC will provide NYSDPS and NYSDEC with bi-weekly status reports summarizing the previous two weeks' construction and indicating construction activities and locations scheduled for the next four weeks as required by Condition 44.

Pursuant to Condition 90, BEC will provide the NYSDPS Staff and Con Edison with a monthly report on the progress of construction and an update of the construction schedule (these reports may be coordinated and consolidated with the reports required under Condition 44 as described above).

BEC submits the following anticipated schedule for the monthly audits during Segment 1 and Segment 2 construction activities as required by Condition 36w(vi). The audit checklists and descriptions of problems identified will be provided to NYSDPS and NYSDEC within one week of the date of the monthly audit. Each submission will be signed by the Independent Inspectors and an authorized BEC representative. Please note that the proposed dates outlined below may shift due to changes in the construction schedule.

Audit Identification	Anticipated Audit Date
Segment 1	
Construction Audit 1	On or about May 1, 2010
Construction Audit 2	On or about June 1, 2010
Construction Audit 3	On or about July 1, 2010
Construction Audit 4	On or about August 1, 2010
Segment 2	
Construction Audit 5	On or about September 1, 2010
Construction Audit 6	On or about October 1, 2010
Construction Audit 7	On or about November 1, 2010
Construction Audit 8	On or about December 1, 2010
Construction Audit 12	On or about April 1, 2011
Construction Audit 13	On or about May 1, 2011
Construction Audit 14	On or about June 1, 2011
Construction Audit 15	On or about July 1, 2011
Construction Audit 16	On or about August 1, 2011
Final Construction Audit	On or about September 1, 2011

The BEC Contractor's proposed procedures for responding to and correcting problems identified during routine inspections or the monthly audit are described in Section 9.0 and Appendix L of the Installation Manual (Appendix B1).