

APPENDIX A
CASE 10-T-0139
AGENCY CORRESPONDENCE
ASTORIA HVDC CONVERTER STATION - SEGMENT 22

Stephen Hoskins

From: Laura Darling <ldarling@youngsommer.com>
Sent: Wednesday, December 28, 2022 1:16 PM
To: Smith, Matthew (DPS); Behnke, Heather (DPS); Rahm, Patrick J (DEC); Gaidasz, Karen M (DEC); Crounse, Sita X (DEC); Maraglio, Matthew (DOS)
Cc: Gregory Liberman; Stephen Hoskins; Elisabeth Kidane; Mat Davis; Josh Bagnato; Greg Pitts; bob.harrison; Kendall Watts; Adrian Allen; Vrata Patel
Subject: Case 10-T-0139, Converter Station Preliminary Site Plans, Wetland Report and Waterbody Inventory

[EXTERNAL SENDER]

DPS, DEC and DOS Staffs,

Pursuant to Certificate Conditions 24, 113(a) and 114(a), below is a link to documents related to the CHPE Astoria Converter Station Segment – we anticipate filing the EM&CP for the Converter Station on or about **January 30, 2023**.

The below linked folder includes:

- A letter report regarding wetlands and waterbodies on this site, with Attachments A-D, to satisfy CCs 113(a) and 114(a)
- Preliminary site plans, preliminary drawings of foundations, elevations, renderings, stormwater control, and noise control measures, intended to satisfy CC 24 *[please note, these materials have also been provided to the New York City Department of Buildings, as required by CC 24]*
- Shapefiles related to the above

The documents and related shapefiles can be accessed here:

 [CHPE Converter Station 30-day Presubmission](#)

Please feel free to reach out with any questions, or if you have difficulty accessing the documents.

Sincerely,

Laura Bomyea Darling
Associate Attorney
Young / Sommer LLC
ATTORNEYS AT LAW
office: 518.438.9907 Ext. 249
fax: 518.438.9914

ldarling@youngsommer.com

Executive Woods, Five Palisades Drive, Albany, NY 12205

www.youngsommer.com

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Comments:

Attached is the draft EM&CP for CHPE project's Astoria HVDC Converter Station

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Filename	Description	File Size	SHA-256 Checksum
 2022-11-29_CHPE Astoria Converter Station-Wetland Memorandum.pdf		127.9 KB	BBC9F620038573ECAAF0ABF3367C81C21C5619416110D9D2A0FF8F7B4063F52E2
 Attachment A - Site Map.pdf		1.2 MB	3A1408A0291DF7740EE3FDEE36DDB4D400A911F21AC323AAF1A278FE0FE342DA
 Attachment B - Site Plan.pdf		933.0 KB	8CAA175707A41A3F0711E158A9627186B3E806B247575CAF94C67DFC3C8647BA
 Attachment C - Converter Station Photolog.pdf		4.1 MB	5ED97A73B8725DD874C806C984B664BE4C5140A844DBBE84B25CF47B1D26456A
 Attachment D - Soil Map.pdf		945.1 KB	FFC58D2D1C274836B3DC96D770F41C3E5FC6F938EBDF0E5AC23E9860D0EFD07F
 CHPE Army Corps Cover Letter.pdf		192.3 KB	44CAF51B75AD9529B1810D5F4A839B6D8FFA667CE31E3E339B8A8783A3933813

Showing 1 to 6 of 6 entries



Department of Energy

Washington, DC 20585

March 17, 2021

Tim Sullivan
Biologist
U.S. Fish and Wildlife Service
New York Field Office
3817 Luker Road
Cortland, NY 13045
Via email tim_r_sullivan@fws.gov

**SUBJECT: Champlain Hudson Power Express Project
Re-initiation of Section 7 Consultation - Request for Concurrence
Docket No. DOE/EIS-0447-SA-01; Docket No. PP-481-1**

Dear Mr. Sullivan:

In the letter dated December 4, 2020, the U.S. Department of Energy (DOE) described CHPE LLC's application to DOE to amend their existing Presidential Permit ([PP-481](#)) for the Champlain Hudson Power Express Project (the Project) and requested re-initiation of informal consultation pursuant to Section 7 of the Endangered Species Act (ESA) as amended (16 U.S.C. 1531 et seq.). In addition to the minor route modifications and proposed relocation of the site of the converter station described in that letter, on January 15, 2021, CHPE LLC filed a supplement to its Amendment Application requesting that the capacity of the Project be increased from 1000 megawatts (MW), as currently permitted, to 1250 MW ([86 FR 11960; March 1, 2021](#)). Thank you for meeting with DOE several times regarding the above, most recently on March 4, 2021.

The December 4, 2020 consultation re-initiation letter described the informal ESA Section 7 consultation process in detail, which was previously concluded in 2014. The USFWS concurred with DOE's determination in our Biological Assessment that the Project "may affect, but is not likely to adversely affect" the endangered Indiana bat (*Myotis sodalis*), the endangered Karner blue butterfly (*Lycaeides melissa samuelis*), or the threatened northern long-eared bat (*Myotis septentrionalis*) or critical habitat in a letter dated September 10, 2014. It is DOE's determination that the proposed changes do not alter this effects determination, or your analysis thereof. DOE requests your updated concurrence with this determination.

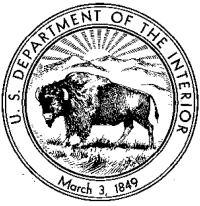
Thank you for your engagement in this consultation. DOE looks forward to your response and would be pleased to speak with you again at any time. I can be reached by email at Melissa.Pauley@hq.doe.gov or phone at 202-586-2942.

Sincerely,

Melissa Pauley

Melissa Pauley
Policy Analyst
Energy Resilience Division, OE-20
Office of Electricity
U.S. Department of Energy

cc: Stephan A. Ryba, Chief-Regulatory Branch, NY District, USACE
Josh Bagnato, Vice President, Project Development, Transmission Developers, Inc.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

3817 Luker Road
Cortland, New York 13045



March 29, 2021

Ms. Melissa Pauley, Policy Analyst
Energy Resilience Division
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Ms. Pauley:

This is in response to your March 17, 2021 letter requesting concurrence pursuant to Section 7(a)(2) of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) for the proposed Champlain Hudson Power Express project, a long-distance electric transmission line planned in eastern New York state. As lead federal agency, the U.S. Department of Energy (DOE) is considering the approval of a Presidential Permit to construct, operate, and maintain the project. In your letter, DOE has asked the U.S. Fish and Wildlife Service (Service) to review the most recent information on the revised project. The project purpose is to transmit electricity generated from renewable sources in Canada to New York City.

In October, 2014, the DOE issued a Presidential Permit (PP-362) to Champlain Hudson Power Express, Inc. (CHPE) to construct, operate, maintain, and connect the project to the electric network. The project was also approved by other federal, state, and local authorizations at that time but was never constructed. On September, 25, 2020, CHPE submitted an application to DOE to amend PP-362, with project modifications. The revised project would be authorized under PP-481.

Consultation history

The Project was introduced to the Service in 2010 with the submittal of a permitting overview document and request for information on federally-listed species. Numerous other documents and information exchanges were provided to the Service over a multi-year period and we submitted comments on a Draft Environmental Impact Statement (DEIS) in December, 2013. After revisions, this subsequently led to the completion and publication of a Final EIS/Biological Assessment (FEIS/BA) dated August, 2014. The potential environmental effects of the project, including those to federally-listed species, were analyzed in the FEIS/BA. In a letter dated September 10, 2014, the Service concurred with the BA in our Biological Opinion (BO). Specifically, the Service concurred with DOE's determination that the project *may affect, but is not likely to adversely affect* three federally-listed species (described below).

In a letter dated December 4, 2020, the DOE requested to reinitiate section 7 consultation with the Service for a revised project design, including shifts in alignment, increased capacity, and a relocated converter station. Representatives of CHPE, DOE, and the Service met on January 8, 2021 to discuss the revised project. During this meeting, some project details were unavailable but were later provided via electronic mail on February 10, 11, and 25, 2021. Finally, we met again on March 4, 2021, to discuss the location of a bald eagle nest in relation to the project alignment. We appreciate DOE's efforts to provide us with a complete project description.

Project description

The original project consisted of a buried 336-mile long, 1000-megawatt direct current transmission line to be located in 16 counties in New York State, from the Canadian Border at Lake Champlain and generally following the Hudson River south to New York City. As mentioned above, since the approval of the PP-362 CHPE has modified the project in several ways. The project was modified in October, 2020 to include a shift in the alignment at 8 locations resulting in an additional total length of approximately 5.1 miles. These shifts were to avoid sensitive resources and address community concerns, among others.

The revised project consists of a 341.1 mile-long, underground 1250-megawatt cable. The cable size or construction footprint would not substantially change from what was previously reviewed and approved, except in those areas of the proposed alignment shifts. CHPE states that the installation methods and project operation would also not change. The location of the new converter station in Queens would require an additional 0.5 acre of land disturbance and the buried cable from the river to the station has shifted, however it is all within an urban environment. In addition, CHPE has indicated that the previously agreed upon impact minimization and conservation measures and commitments, as described in the FEIS/BA, will remain in place for the revised project.

As mentioned, the project alignment will change in 8 areas to avoid natural and social resources. Even in these areas of change, the project will still follow and be constructed within existing road, railroad, and utility rights of way. A majority of the project will follow a route under Lake Champlain and the Hudson River as previously described and evaluated.

Updated ESA review

Pursuant to the ESA, the DOE in 2014 determined that the project will result in *no effect* to the federally-listed threatened bog turtle (*Clemmys* [= *Glyptemys*] *muhlenbergii*), northern wild monkshood (*Aconitum noveboracense*), small whorled pogonia (*Isotria medeoloides*), endangered piping plover (*Charadrius melodus*), roseate tern (*Sterna dougallii dougallii*), or proposed threatened red knot (*Calidris canutus rufa*), or the federal candidate for listing, the New England cottontail (*Sylvilagus transitionalis*), as no suitable habitat for these species occurs along the project site. The red knot was listed by the Service as threatened in 2015. However, the listing status does not change the fact that there is no known habitat for the species in the project area and does not change the previous DOE determination. The New England cottontail is no longer a federal candidate for listing. We have no additional comments on these species.

In addition, the DOE previously determined that the proposed *project may affect, but is not likely to adversely affect*, the endangered Indiana bat (*Myotis sodalis*), Karner blue butterfly (*Lycaeides melissa samuelis*), or the proposed (at that time) endangered northern long-eared bat (*Myotis*

septentrionalis). The northern long-eared bat was subsequently listed by the Service as a threatened species in 2015.

Based upon the revised project description, a majority of the project will be sited within water. However, a portion does follow a land route between Lake Champlain at Dresden and the Hudson River at Cementon. The land route is collocated with road, utility, and railroad rights of way; however, some vegetation removal, including trees, will be required. These rights of way are currently managed for infrastructure purposes and subject to continual disturbance. Once installed, maintenance of the project right of way will be similar to what is currently being implemented. Given the linear nature of tree removal, the fact that the upland portion of the project will follow many existing transportation rights of way, and the proposed conservation measure of conducting tree removal between October 31 and March 31, we do not anticipate any measurable impacts to the northern long-eared bat. Therefore, we concur with your determination for the revised project.

The DOE has indicated that the construction and operation of the project *will not adversely affect* the Indiana bat as well. Because the conservation measure of removing trees when the bats are not present (October 31 to March 31) will be used for this project and the existing disturbed nature of the transportation rights of way where the project will be sited on land, we concur with the determination for the revised project.

The Karner blue butterfly occurs in the project area at two known general locations. Several sites within these locations contain patches of wild blue lupine (*Lupinus perennis*), an important food source for the larval stage of Karner blue butterfly. The project sponsor has agreed to drill and install the transmission cable 10 feet below these areas. Areas of lupine would be fenced to prevent intrusion of construction activity and no impact is expected to these areas. An environmental monitor will ensure the protection of these areas as well. No pesticides or herbicides would be used in lupine areas and coordination with the Service would be initiated if work near lupine habitat is expected. Given that there will be no direct impact to lupine habitat and conservation measures such as fencing and monitoring and no herbicides or pesticides will be used, we concur with the DOE's updated determination that the revised project *may affect but will not likely adversely affect* the Karner blue butterfly.

Summary

The DOE has analyzed the potential environmental effects of a revised CPHE project, including those to federally-listed species. DOE has confirmed that the analysis provided in the FEIS/BA is still applicable with the exception of those recent changes provided to the Service under the request to reinitiate ESA consultation. In addition, DOE has found that the project will have *no effect* on bog turtle, northern wild monkshood, small whorled pogonia, endangered piping plover, roseate tern, or red knot. The project is within the range of three listed species, the Indiana bat, northern long-eared bat, and the Karner blue butterfly and potential habitat may be found in the project area but based upon the project description, including avoidance and minimization measures as well as conservation measures, the DOE has determined that the project *will not adversely affect these species*. We concur with that determination.

No further coordination or consultation under the ESA is required with the Service at this time. Should project plans change, or if additional information on listed or proposed species or critical

habitat becomes available, this determination may be reconsidered. The most recent compilation of federally-listed and proposed endangered and threatened species in New York is available for your information. Until the proposed projects are complete, we recommend that you check our website regularly to ensure that listed species presence/absence information for the proposed projects is current.*

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the ESA. This response does not preclude additional Service comments under other legislation.

Any additional information regarding the proposed projects and their potential to impact listed species should be coordinated with both this office and with the New York State Department of Environmental Conservation.

Thank you for the opportunity to review this project. If you require additional information or assistance please contact Tim Sullivan at 607-753-9334.

Sincerely,

**DAVID
STILWELL**

David A. Stilwell
Field Supervisor

 Digitally signed by DAVID
STILWELL
Date: 2021.03.29 15:21:29
-04'00'

*Additional information referred to above may be found on our website at:
<http://www.fws.gov/northeast/nyfo/es/section7.htm>

cc: NYSDEC, New Paltz, Ray Brook, and Schenectady, NY (Env. Permits)
NYSDEC, Albany, NY (Wildlife Diversity)



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2022-AEA-18583-OE

Issued Date: 01/10/2023

Mat Davis
CHPE LLC
600 Broadway
Albany, NY 12207

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Power Plant Astoria CHPE Converter station
Location:	New York, NY
Latitude:	40-47-13.00N NAD 83
Longitude:	73-54-02.30W
Heights:	15 feet site elevation (SE)
	87 feet above ground level (AGL)
	102 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- ☐ At least 10 days prior to start of construction (7460-2, Part 1)
☒ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 07/10/2024 unless:

- the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- extended, revised, or terminated by the issuing office.
- the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6068, or Dianne.Marin@FAA.GOV. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-AEA-18583-OE.

Signature Control No: 565306826-567839961

(DNE)

Dianne Marin
Technician

Attachment(s)
Case Description
Map(s)

Case Description for ASN 2022-AEA-18583-OE

Construction of a High Voltage Direct current converter station & AC yard



(2022-05-17) CHPE Astoria, FDNY Introduction Meeting

Tuesday, May 17, 2022 2:00 PM



ATTENDEES

- ✓ Kam Chan, Director (FDNY) kam.chan@fdny.nyc.gov
- ✓ Winnie Lei (FDNY) Assistant Deputy Director winnie.lei@fdny.nyc.gov
- ✓ Alexander Eng (FDNY) alexander.eng@fdny.nyc.gov
- ✓ Kulik Lyudmila (FDNY) Lyudmila.Kulik@fdny.nyc.gov
- ✓ Rocco Bonavita (FDNY) rocco.bonavita@fdny.nyc.gov
- ✓ Manuel Costales (FDNY) Manuel.costales@fdny.nyc.gov
- ✓ Sandy Camacho, (FDNY) sandy.camacho@fdny.nyc.gov
- ✓ Paul Ashworth (Kiewit) Paul.Ashworth@kiewit.com
- ✓ Jeff Klinkhardt (Kiewit) Jeff.klinkhardt@kiewit.com
- ✓ Brendan Donnelly (Kiewit) brendan.donnelly@kiewit.com
- ✓ Elisabeth Kidane (Kiewit) elisabeth.kidane@kiewit.com
- ✓ Adrian Allen (Kiewit) adrian.allen@kiewit.com
- ✓ Farzin Habibbeigi (Hitachi) farzin.habibbeigi@hitachienergy.com

MEETING NOTES:

1. Meeting started with introductions of personnel from FDNY, Kiewit and Hitachi.
2. Elisabeth Kidane (Kiewit) started the meeting with an introduction to the project.
 - Astoria convertor station is a part of a larger project -CHPE or Champlain Hudson Power Express project which is a construction of a 1000 megawatt high voltage direct current electric transmission line along Lake Champlain, Hudson river, and NYC.
 - Astoria convertor station is part of a renewable power transmission project that will deliver clean power from the Hertel Station in Quebec to New York City
 - The Astoria Converter Station will convert the high voltage DC electricity to AC for local distribution. Project was initiated as part of a Federal requirement to bring clean energy to New York City and its surrounding region. It is a consortium partnership project between Kiewit and Hitachi-In which both parties Engineering, procuring and construct the station for their relative scopes. The Owner is Transmission Developer Inc (TDI)
 - (FDNY - define High voltage?)
 - (KIEWIT - 400KV incoming, 345KV outgoing)
 - The Converter will be located on the East River adjacent to ConEdison's Astoria facility in queens. (Site map & Station layout was shown)
 - The Converter station is not a ConEd Facility but is private project by TDI
 - It will be connected to an existing 345KV Astoria substation owned by NYPA(con ed)
 - Converter station will be unmanned, except for servicing.
 - The station is comprised of several building and are generally unmanned
 - Project is scheduled to be complete by 12/15/2025
3. Jeff Klinkhart, Fire protection Engineer Lead gave an overview for the preliminary fire protection design

Site

- Site is proposed to have Fire department access as per NYC fire code
- Hydrants will be provided
- Fire water supply will come from fire pumps and fire water tanks

Convertor Building

- Building construction Type IIB, Group F-1 occupancy per NYBC 503.1.1
- (FDNY wants us to look into the construction type classification closer. They believe it need to be 1B)
- Kiewit to look into code section and clarify
- No automatic Sprinkler protection (given the presence of high voltage electricity)
- Proposed Fire rated separation and Post-event smoke purge
- Proposed Air-sampling smoke detection within each converter hall
- Building will have manual pull stations and occupant notification outside

Service Building

- 2 Story, Building construction Type IIB, Group F-1 occupancy per NYBC 503.1.1
- (FDNY wants us to look into the construction type classification closer. They believe it need to be 1B)
- Kiewit to look into code section and clarify
- Proposed automatic sprinkler and clean agent in select rooms
- Proposed Fire Extinguisher
- Proposed Spot-type combination smoke/heat detection, Manual pull stations, Audible/visual occupant notification
- Building will have fire rated separations, post-fire smoke purge and ventilation of battery charging area

Transformer area

- Proposed 3 (three) oil insulated transformers
- Proposed automatic sprinkler protection (deluge), linear heat detection system
- Proposed Secondary containment,
- Proposed fire wall separations between transformers and a physical separation (transformer to transformer and building to transformer)

Storage Enclosure

- Building construction Type IIB- Occupancy :Low hazard storage , Group S-2 per NYBC 503.1.1
- Proposed Automatic sprinkler protection and will be equipped with Fire extinguishers
- Proposed Fire Alarm- Enclosure will have Manual pull stations, Spot-type combination smoke/heat detection
- Proposed Audible/visual occupant notification and suppression system interface

Auxiliary Areas (MVS/Relay enclosures)

- Relay and MVS Enclosures- Type II-B construction NYBC 503.1.1
(FDNY wants us to look into the construction type classification closer. They believe it need to be 1B)
Kiewit to look into code section and clarify
- Enclosures will have manual pull stations and Spot-type combination smoke/heat detection
- Audible/visual occupant notification and will be equipped with Fire extinguishers

FDNY Questions/Comments:

1. Project need to meet zoning requirements
 - *Kiewit intends to meet all zoning requirements for this project*
2. Is the site privately owned?
 - *Yes, the site was recently purchased by TDI*
3. Is the facility accessible to the Fire dept
 - *Yes the site will be provided with fire access road*
4. Kiewit/Hitachi need to make sure project is in compliance with the necessary fire code section
 - *Kiewit intends to comply with all applicable codes*
5. *Design team needs to make sure there is proper drainage at the site*
 - *Kiewit intend to provide sufficient drainage to handle site drainage*
6. *Will fire hydrants tap into the city water grid?*
 - *Fire hydrants inside station will be privately owned and maintained*

Meeting with FDNY – 11/1/2022

Monday, January 10, 2022 5:31 PM

ATTENDEES

- ☒ Elisabeth Kidane – KEG Design Manager
- ☒ Adrian Allen – KEG Deputy Design Manager
- ☒ Vrata Patel – KEG Deputy Design Manager
- ☒ Brendan Donnelly – KEG Fire Protection
- ☒ Jeff Klinkhardt – KEG Fire Protection
- ☒ Kendall Watts – KEG Project Manager
- ☒ Abbas Family – WTG Permit Expiditer
- ☒ Alexander Carlson – SSA
- ☒ Alexander Eng
- ☒ Anders Eriksson – Hitachi Energy
- ☒ Sandy Bishay- WSP
- ☒ Farzin Habibbeigi – Hitachi Energy
- ☒ Joseph Fonzi -
- ☒ Greg Pitts - TDI
- ☒ Lyudmila Kulik – FDNY
- ☒ Mat Davis – TDI
- ☒ Snehal Parmar – SNC
- ☒ Yash Patel – FDNY
- ☒ Rocco – FDNY
- ☒ Roger Lemos – TDI
- ☒ Suresh Subramanian – Hitachi Energy
- ☒ Paul Ashworth – KEG

MEETING NOTES:

Meeting started with Introductions of personnel from FDNY, TDI, Kiewit and Hitachi

Elisabeth Kidane (Kiewit) started the meeting with introduction to project.

- a. NFPA 850 2010 is a base for the fire protection design. (NYC Fire Code references the 2010 edition of NFPA 850, however, the client spec states that we follow the most recent edition so we are following NFPA 850 2020 edition. There are no NYC amendments to NFPA 850.)
 - i. Per FDNY: Kiewit must also design to NYC Fire Department Rules
 - 1. Kiewit: Is there a particular FDNY rule(s) for fire pump or fire water supply requirements?
 - a. FDNY did not indicate specific FDNY rules. Stated to follow NFPA 13, NFPA 14, NFPA 20
 - b. FDNY will not review this system until formally submitted for review
 - 2. Kiewit: FDNY rules have been reviewed twice, and no rules applicable to fire water supply were found.
- b. Kiewit is using the Seagrave truck for the basis of turning movement for the fire truck. This is the size of FDNY we have identified in our research. Kiewit is looking to confirm that this is the proper FDNY truck to design to.
 - i. Using the HL 93 truck as basis for general truck movement for rigging and delivery
 - ii. Ask Captain of FDNY to check which truck to use as basis for turning movements and accessibility
 - 1. All fire access drawings must be submitted to city planning dept
- c. Kiewit provided summary of all active fire protection systems on site (sprinklers, clean agent, fire alarm, hydrants, fire pump etc) and some passive fire protection features (fire barriers, fire walls, containment, etc),
- d. Kiewit will be providing Fire Protection Design Basis Document per NFPA 850 as part of the plan review documents. This document explains the fire hazards and fire protection strategy for the entire project.
- e. 180,000 gal fire water tank on site, sized for 2-hrs of fire water supply
 - i. Provides water for double interlock system at Service Building, transformer deluge system, Storage Enclosure sprinkler system and fire hydrants
 - ii. FDNY did not comment on use of double-interlock pre-action sprinkler system.
- f. Site has private hydrant system – all new fire hydrant
 - i. The diesel fire pump is also supplying hydrant system
 - ii. Follow NFPA 24 2013 Fire Pump
 - iii. NFPA 22 2013 for Fire Water Tank
 - iv. We are not creating a new connection at 20th Ave – there is an existing connection that the tank farm uses
- g. Diesel fire pump is supplied by fire water tank filled from existing private main, which is connected to city main on 20th Ave
 - i. Per FDNY: Need 2 connection to the city main.
 - ii. Per Kiewit: 2 connection points only required for high hazard occupancy
 - iii. Per FDNY: We are connecting to unreliable water supply. Connection to salt water supply is considered to be the most reliable.
 - iv. Per Kiewit: NFPA 22 storage water tank that can be filled within 8 hours is considered a reliable water supply
- h. Per FDNY: Will this site be pulling private main water or salt water? Per Kiewit: Private water main, not salt water.
- i. Is Kiewit planning on filing water separation system with DOB – yes
- j. Each battery room has nickel cadmium type batteries of 100kW capacity
 - i. Per FDNY: See Fire Code Section 608 to see what we need to comply with
 - ii. Per Kiewit: This code section has been reviewed in relation to fire protection requirements.

Post meeting clarifications:

- FDNY is concerned that we don't have 2 sources of water to feed our sprinklers and hydrant; they characterized our water supply as unreliable and suggested using river water (salt water) as a second source of supply.

Kiewit response:

Per these NYC codes only the following situations specifically require a secondary fire water supply. The Astoria project currently does not meet any of these criteria.

- High rise buildings [NYCBC Section 903.3.5.2]
- Group H occupancy buildings [NYCBC Appendix Q (amendment to NFPA 13, Chapter 24)]
- Group M occupancy buildings with floor area >20,000 SF [NYCBC Appendix Q (amendment to NFPA 13, Chapter 24)]
- Group A-1 occupancy with stages are >1,000 SF or stage height >45 feet [NYCBC Appendix Q (amendment to NFPA 13, Chapter 24)]

NFPA 850 Section 7.2.2 states that "At least one reliable water supply should be provided. The Fire Protection Design Basis Document should identify the need for multiple supply sources". **We will further clarify/explain our thought process regarding a single supply in the Fire Protection Design Basis document which will be submitted to the DoB and FDNY. We also encourage review and feedback from TDI/WSP as to whether they agree with this fire protection strategy from the owner's risk perspective.**

- FDNY indicated they have a city-wide plan that the water pressure at all hydrants shall be no higher than street pressure.

Kiewit response:

Fire Hydrant Pressure:

- Kiewit was not able to find any NYC requirements that state that hydrants shall be at "normal" water main/city pressure. Kiewit reviewed the documents listed below.
 - NYC Building Code, including amendments to NFPA standards in Appendix B
 - NYC Fire Code, including amendments to NFPA standards in Appendix Q
 - FDNY Rules
 - Rules of the City of New York, Title 15: Department of Environmental Protection (DEP) – Chapters 18, 20, and 22
 - NYC DEP Standard Sewer and Water Main Specifications
 - NYC DEP Hydrant Specification Bulletin 21-002
- The FDNY comment makes sense if our hydrants were on a city main, but they are not – they are on a private dedicated fire water main. The "concern" from FDNY might be that when the department arrives on location they are expecting city pressure at all hydrants and not 100+ psi from a fire pump. But again, there is nothing Kiewit found in NYC criteria or standard codes that prohibit this.
- **We can separate the fire hydrants from the fire water main that supplies the multiple sprinkler systems on site per your comment below, however, this would be a redesign for the civil team. Additionally, based on our not-great water flow test if FDNY thinks our water supply isn't reliable one could argue that it is better to have the hydrants supplied by the fire water tank and fire pump as currently designed.**

- The diesel fire pump described in the presentation is an change from electrical pump which was previously indicated in both the preliminary specifications and one-line diagrams. FDNY made comments about fuel storage and fuel burning permits in reference to a diesel pump. the permits will be required to be maintained throughout the operating life of the facility.

Kiewit response:

The change to a diesel generator was initiated by Hitachi. They asked Kiewit to consider diesel operated fire pumps due to its many advantages for the project, like reducing size of the Aux power transformers, reducing the size main diesel generator and reduced protection scheme and complexity of design. P Also, based on the comments made by FDNY questioning the reliability of our water supply, having a diesel pump might help make our case We can set up a call to further clarify if required.

ACTION ITEMS:

No.	Action Items	Responsible Discipline	Due Date	Status
1	Research NYC DEP requirements for private water main criteria related to fire water supply.	Fire Protection - Brendan Donnelly	ASAP	In Progress.
2	Triple check NYC BC and FC requirements regarding fire water supply. Incorporate additional information into Fire Protection Design Basis Document further explaining our design decisions.	Fire Protection - Brendan Donnelly	11/23/2022	Not Started.
3				