Dewatering Plan

Case 18-T-0604

September 2021

Prepared for:

South Fork Wind, LLC

Prepared by:

Stantec Consulting Services Inc.

South Fork Wind | Powered by Ørsted & Eversource

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LIST OF ATTACHMENTS

Abbreviations

bgs	below grade surface
Certificate	Certificate of Environmental Compatibility and Public Need
DPS	New York State Department of Public Service
EDR	Environmental Data Resource Inc.
EM&CP	Environmental Management and Construction Plan
ft	feet
GZA	Goldberg-Zoino Associates GeoEnvironmental, Inc.
HDD	horizontal directional drill
HWPWP	Hazardous Waste and Petroleum Work Plan
kV	kilovolts
LIRR	Long Island Railroad
m	meters
MCL	maximum contaminant level
ng/L	nanograms per liter (parts per trillion)
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
PFAS	polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
POTW	publicly owned treatment works
SFEC	South Fork Export Cable
SFW	South Fork Wind, LLC
SGV	Standards and Guidance Value

SWPPP	Stormwater Pollution Prevention Plan
TJB	Transition Joint Bay
USEPA	U.S. Environmental Protection Agency

1.0 INTRODUCTION

South Fork Wind, LLC (SFW) will construct, operate, and maintain the South Fork Export Cable (SFEC) in support of the South Fork Wind Farm, which will be constructed 35 miles (30 nautical miles, 56 kilometers) east of Montauk Point. The SFEC will be an alternating current electric cable (138 kilovolts [kV]) that will extend from the South Fork Wind Farm in federal offshore waters to coastal New York State (NYS) waters and inland to the existing mainland electric grid located in the Town of East Hampton, New York. This Dewatering Plan is part of the Environmental Management and Construction Plan (EM&CP) for the SFEC components subject to Article VII of the New York Public Service Law, including the following, hereafter referred to as "the Project":

- SFEC-NYS: the submarine segment of the export cable buried beneath the seabed from the boundary of NYS waters (3 nautical miles offshore) to a sea-to-shore transition vault located in the Town of East Hampton on Long Island, Suffolk County, New York. The SFEC-NYS includes the sea-to-shore transition via horizontal directional drilling (HDD).

- SFEC-Onshore: the terrestrial underground segment of the export cable from the sea-to-shore transition vault to the SFEC-Interconnection Facility where the SFEC will interconnect with the Long Island Power Authority electric transmission and distribution system in the Town of East Hampton, New York.

- SFEC-Interconnection Facility: a new onshore facility, primarily consisting of a transformer and a 69-kV interconnection cable that will connect to the 69-kV bus in the existing Long Island Power Authority East Hampton Substation in the Town of East Hampton, New York.

The purpose of the Dewatering Plan is to provide a scope of work for SFW's designated Contractor to properly manage groundwater and/or stormwater (water) removed from excavations where construction activities may require dewatering to take place. The scope of work is designed to fulfill the requirements of the Certificate of Environmental Compatibility and Public Need (Certificate). This Dewatering Plan is intended to provide guidance for the identification, characterization, and management of groundwater and/or stormwater (fluids) that may be encountered during Project activities involving excavation or subsurface construction. The guidance includes preliminary information regarding the locations and types of anticipated dewatering activities and their resulting geohydrologic influences; sampling, treatment, and disposal protocols for areas of identified or potential groundwater contamination; and Best Management Practices for erosion and sediment control.

Dewatering operations may be required to facilitate excavations below the groundwater table or to remove accumulated stormwater from within open excavations. Due to precipitation events, snowmelt, and/or changes in depth to groundwater, which may be seasonally or tidally influenced, precise dewatering locations will be refined throughout the design process and may be subject to change in accordance with observed field conditions. The information included within this report is based off initial design.

Based on the sampling results from the Initial Hazardous Waste and Petroleum Work Plan (HWPWP), SFW has elected to perform dewatering with vacuum trucks or pumps with hoses, which will transfer the dewatered fluids to frac tanks for staging within the Project area pending characterization. Staging areas and demonstration of property access rights are included in the EM&CP Appendix A, Onshore Plan and Profile Drawings. Once approval is obtained, the water will be transferred by vacuum truck for off-site disposal at a local Publicly Owned Treatment Works (POTW) facility. SFW will inform New York State Department of Public Service (DPS) Staff of the selected POTW that will be used prior to the start of construction. Documentation regarding approval of the POTW to accept the water and documentation (bills of lading) of transport and disposal will be filed for review by DPS Staff. SFW does not anticipate discharging dewatered fluids to the ground surface, groundwater, surface water, or storm drains. The Initial HWPWP is provided as an attachment to the Final HWPWP in Appendix H of the EM&CP.

Dewatering activities will be temporary in nature and will be mobilized and positioned accordingly as construction progresses. SFW does not anticipate installing permanent dewatering equipment or temporary and/or permanent wells or points to lower the groundwater table.

SFW does not anticipate that temporary water withdrawals for the purposes of construction will average equal to or greater than 100,000 gallons per day in any consecutive 30-day period, therefore the water withdrawal activities will not be regulated pursuant to Title 6 of the New York Codes, Rules, and Regulations §§ 601.3 and 601.6.

The Dewatering Plan is not intended to take the place of contract documents, including detailed design drawings and specifications, for construction of the Project; however, contract documents will be in conformance with the EM&CP. Drawings and specifications can be found in Appendices A and B of the EM&CP (Onshore Plan and Profile Drawings and Offshore Cable Installation Work Plan, respectively). Final means, methods, and locations of dewatering, based on the guidance provided in the Final Dewatering Plan and applicable federal, state, and local regulations, are to be provided by the Contractor prior to implementation.

2.0 SUMMARY OF GROUNDWATER INVESTIGATIONS

A subsurface investigation, referred to as the Initial HWPWP Environmental Sampling, was conducted by Goldberg-Zoino Associates GeoEnvironmental, Inc. (GZA) between December 2020 and January 2021. The investigation was conducted in general conformance with the requirements presented in the Certificate and the Initial HWPWP – Environmental Sampling Scope of Work (included as an attachment to the EM&CP Appendix H – Final HWPWP). The findings from the investigation are summarized below. A complete investigation report prepared by GZA, including narrative description of the groundwater investigation, field sampling activities, sample analytical results, quality assurance/quality control sampling results, and conclusions, are included within Attachment A.

2.1 TOWN ROADS

Concentrations of iron, manganese, and sodium were detected above the NYS Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA waters in groundwater samples collected along the Town Roads (NYSDEC, 2004). These metals are commonly occurring, and the detections are likely representative of natural background levels.

Chloroform was detected in one sample, collected from well BH-03 located along Wainscott Northwest Road, at a concentration exceeding its SGV. Chloroform is a common by-product of the chlorination of potable water supplies.

In August 2020, New York State Department of Health (NYSDOH)established a public water system maximum contaminant level (MCL) of 10 nanograms per liter (ng/L) for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). NYSDOH has not established a MCL for total polyfluoroalkyl substances (PFAS). Concentrations of PFOA or PFOS above 10 ng/L were detected in the following wells:

- 50 ng/L of PFOA was detected in MW-4A located along Beach Lane. The total PFAS concentration was 190.4 ng/L.
- 14.7 ng/L of PFOS was detected in MW-15A located along Wainscott Northwest Road, north of the Montauk Highway intersection. The total PFAS concentration was 41.3 ng/L.

2.1.1 Areas of Potential PFAS Contaminated Sites

As specified in the Certificate, samples collected must be analyzed for PFAS in locations where fires have occurred since 1940 and where other PFAS contaminated sites were identified based upon due diligence and research of historical and public records (as detailed in Attachment B). The locations of the identified suspect fires and contaminated sites are depicted in Attachment C.

The following fires were accounted for in the Initial HWPWP sampling program:

- Two fire incidents were identified along Wainscott Stone Road though the precise locations of the fires could not be determined.
    - Two fire incidents were identified along Beach Lane though the precise locations of the fires could not be determined.
    - Two fire incidents were identified along Montauk Highway in Wainscott though the precise locations of the fires could not be determined.
    - One fire incident at 75 Wainscott Northwest Road.

Furthermore, the following PFAS contaminated sites were accounted for in the Initial HWPWP sampling program:

- The East Hampton Airport, which includes the former firefighting training facility currently occupied by the East Hampton Police Department, is located at 200 Daniels Hole Road, north adjacent to and upgradient of the Project area. This site is located to the northwest of the Long Island Railroad (LIRR) corridor where cable will be installed.
- Wainscott Sand and Gravel, located at Georgica Drive in East Hampton, east adjacent to the Project area along Wainscott Northwest Road.

These potentially contaminated sites were not identified as impacting groundwater near the Town Roads based on the sampling results from the Initial HWPWP. However, potential influence on PFAS contaminated sediments is discussed below in Section 3.4 and a treatment and disposal plan is included as Section 3.8.

2.2 LONG ISLAND RAILROAD CORRIDOR

Two samples, collected from MW-21B and MW-26B, contained iron and manganese at concentrations exceeding their SGVs. Iron and manganese are both commonly occurring metals and the detections are likely representative of background conditions.

Low-level estimated concentrations of PFAS compounds were detected in all the samples collected along the LIRR; however, the concentrations of PFOA and PFOS were well below the NYSDOH MCL of 10 ng/L.

2.2.1 Areas of Potential PFAS Contaminated Sites

As discussed in Section 2.1.1, the East Hampton Airport, which includes the former firefighting training facility currently occupied by the East Hampton Police Department, is located at 200 Daniels Hole Road, to the northwest of the LIRR corridor. The location of this site is depicted in Attachment C. This potentially contaminated site was not identified as impacting groundwater near the LIRR based on the groundwater sampling results from the Initial HWPWP, as summarized in Section 2.2.

2.3 SFEC-INTERCONNECTION FACILITY

Ten borings (SB-32A through SB-35C) and three existing geotechnical wells were sampled in the vicinity of the proposed substation and potential 69-kV routes. Groundwater samples were collected and submitted to a laboratory for chemical analysis as specified in Attachment C. Observed stratigraphy generally consisted of 4 to 9 inches (10 to 23 centimeters) of topsoil, followed by native soils consisting predominantly of sand with lesser amounts of silt and gravel. No fill, urban fill components such as ash and cinders or construction and demolition debris, staining, odors, elevated photoionization detector readings or other obvious indications of contamination were observed during soil boring installations.

Iron was detected at concentrations exceeding its SGVs (NYSDEC, 2004). Iron is a commonly occurring metals and the detections are likely representative of background conditions. Additionally, in sample SUB-10, seven other metals were detected above SGVs, which were analyzed as total metals. An elevated turbidity above 50 nephelometric turbidity units was detected in the sample collected from SUB-10. Given the high turbidity, the lab filtered the sample and analyzed for dissolved metals. None of the metals, except sodium, exceeded SGVs in the dissolved metal analysis; thus, the total metal exceedances were likely due to the elevated turbidity level.

Chloroform was detected in one sample collected from SUB-8 at a concentration exceeding its SGV. Chloroform is a common by-product of the chlorination of potable water supplies.

PFAS compounds were detected in all samples collected; however, the concentrations of PFOA and PFOS were well below the NYSDOH MCL of 10 ng/L. Total PFAS concentrations ranged from 1.57 ng/L to 357.32 ng/L. The highest concentration was detected in SUB-8 with the highest individual PFAS compound, 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2), having a concentration of 331 ng/L. As described in Section 3.1, dewatering at the SFEC-Interconnection Facility is not an anticipated requirement. However, potential influence on PFAS contaminated sediments is discussed below in Section 3.4 and a treatment and disposal plan is included as Section 3.8.

PFOS = 331 ng/L that is > 30-times the MCL of 10 ng/L!
(Si Kinsella, Sep 2021)

Imidacloprid was detected in two samples collected from MW-32A (0.12 ug/L) and SUB-10 (0.07 ug/L). NYSDEC has not established SGVs for Imidacloprid; however, NYSDOH10 New York Codes, Rules, and Regulations Part 5 drinking water standard for Unspecified Organic Contaminants is 50 ug/L for an individual substance. The concentrations detected are well below this standard.

2.3.1 Areas of Potential PFAS Contaminated Sites

No potentially PFAS contaminated sites were identified near the SFEC-Interconnection Facility based upon due diligence and research of historical and public records conducted per the Certificate.

Note: Where is the source of of perfluorooctanesulfonic acid (PFOS) contamination (of 331 ng/L)?
(Si Kinsella, Sep 2021)

3.0 DEWATERING ACTIVITIES

3.1 POTENTIAL AREAS OF DEWATERING

Dewatering locations will occur where Contractors expect to encounter water during excavations; SFW does not expect to install wells to be used for dewatering. Potential dewatering locations, along with the anticipated depth to groundwater and approximate depth of excavation, are detailed in the sections below and shown in Attachment C. A full summary of depth to groundwater measurements from the Initial HWPWP is included within the complete investigation report prepared by GZA included as Attachment A.

3.1.1 HDD Transition Joint Bay Interface

The anticipated depth of excavation for the HDD Transition Joint Bay (TJB) Interface (HDD/TJB Interface) pit is 10 feet (ft) (3 meters [m]) below grade surface (bgs). The depth of the groundwater table was measured in nearby wells, ranging from 5 to 8.0 ft (1.5 to 2.4 m) bgs in geotechnical observation well HDD-02, and recorded at 8.4 ft (2.6 m) bgs in monitoring well MW-2A. Due to this wide range of data and uncertainty surrounding seasonal and tidal influences on the groundwater table, SFW installed a water table elevation data logger within well MW-2A in February 2021 to better understand local groundwater fluctuation and its impact on the design of dewatering and construction processes at the HDD/TJB Interface. The locations of the HDD/TJB Interface pit (MH-01/TJB), geotechnical observation well HDD-02, and monitoring well MW-2A are shown in Attachment C.

Based on current data, it is expected that dewatering will be required to facilitate the installation of the HDD/TJB Interface. A maximum of two frac tanks will be used to store dewatered fluids on-site. After characterization and notice of approval to proceed, the fluids will be transported by vacuum truck for off-site disposal at the selected POTW.

3.1.2 Town Roads

In general, the maximum depth of excavation for the cable installed along the Town Road corridor is approximately 5 to 12 ft (1.5 to 3.7 m) bgs, with manhole installations extending to approximately 12 ft (3.7 m) bgs. Nearby depth-to-groundwater measurements range from 5.8 to 28.8 ft (1.8 to 8.8 m) bgs. Dewatering may be required between the MH-01/TJB and SB/MW-3A between and at the MH-01/TJB, as shown in Attachment C.

3.1.3 Long Island Railroad Corridor

In general, the maximum depth of excavation for the cable installed along the LIRR corridor is approximately 2 to 12 ft (0.6 to 3.7 m) bgs, with manhole installations extending to approximately 12 to 14 ft (3.7 to 4.3 m) bgs. Nearby depth-to-groundwater measurements range from 9.4 to 20.2 ft (2.9 to 6.2 m) below grade. Dewatering may be required at and adjacent to the roadway crossing for Daniels Hole Road, manhole MH-07, manhole MH-08 and the roadway crossing for Stephen Hands Path, as shown in Attachment C.

3.1.4 SFEC-Interconnection Facility

In general, the maximum depth of excavation for the cable installed at the SFEC-Interconnection Facility is approximately 4 to 14 ft (1.2 to 4.2 m) below grade, for manholes depth extends to 14 ft (4.2 m) below grade, and for proposed foundations 20 ft (6.1 m) below grade. Nearby depth-to-groundwater measurements range from 36.6 to 39.2 ft (11.2 to 11.9 m) below grade. Because the observed water table is well below the anticipated maximum depth of excavation, dewatering operations are not likely to be required at the SFEC-Interconnection Facility.

3.2 POTENTIAL INFLUENCE ON WATER SUPPLY WELLS

Environmental Data Resource Inc. (EDR), a third-party database company, conducted a search for water supply wells within 500 ft (152 m) of the Project area using federal, state, and public water supply system databases (EDR, 2021). The Well Search Report is attached as Attachment C.

One water supply well was identified within the search radius by EDR as shown in Attachment C (Figure 1). The location of the reported well was not field verified. This well is located approximately 1,920 ft (585 m) north of an area that may require dewatering. This identified water supply well is in the vicinity of well SB-5A and manhole 2 (MH-02). The maximum cable installation depth in this vicinity is approximately 5 to 9 ft (1.5 to 2.7 m) bgs and the manhole is approximately 12 ft (3.7 m) bgs. Measured groundwater depths range from 16.2 to 17.2 ft (4.9 to 5.2 m) bgs in this area. Therefore, it is not expected that dewatering activities will be required in this area of the water supply well. However, should dewatering be required near this location, water will only be drawn down to the base of excavation (estimated maximum depth of 12 ft [3.7 m] bgs). Due to the short pumping duration, minimal anticipated drawdown, and the transient nature of dewatering operations, the potential effect on this water supply well is considered negligible.

3.3 POTENTIAL DRAWDOWN OF WATER TABLE

SFW does not anticipate the installation and/or operation of long-term or permanent dewatering activities consisting of well point systems, recovery wells, or other groundwater table suppression systems for this Project. Dewatering activities, when required, are expected to be temporary and will move along with the pace of construction. SFW anticipates the onshore cable to be installed at an approximate rate of 100 ft (30.5 m) per day and each of the vaults to be installed in approximately four to five days. Open excavations that may require dewatering at the HDD/TJB Interface and SFEC-Interconnection Facility may be longer in duration. Dewatering activities are not expected to be continuous for the duration of the construction work and will be dependent on the location of work, depth to groundwater, and depth of excavation. Dewatering will be minimized to the extent practicable. Due to minimal anticipated drawdown based upon these considerations, the radius of influence surrounding dewatering activities is presumed to be negligible.

3.4 POTENTIAL INFLUENCE ON PFAS CONTAMINATED SITES

As presented in Section 2.1.1, potential PFAS contaminated sites were identified and accounted for in the Initial HWPWP sampling program. These sites included:

- Two fire incidents were identified along Wainscott Stone Road though the precise locations of the fires could not be determined;
- Two fire incidents were identified along Beach Lane though the precise locations of the fires could not be determined;
- Two fire incidents were identified along Montauk Highway in Wainscott; though the precise locations of the fires could not be determined;
- A fire occurred at 75 Wainscott-Northwest Road;
- The East Hampton Airport, which includes the former firefighting training facility currently occupied by the East Hampton Police Department, is located at 200 Daniels Hole Road, north adjacent to and upgradient of the Project area; and
- Wainscott Sand and Gravel, located at Georgica Drive in East Hampton, east adjacent to the Project area along Wainscott Northwest Road.

Dewatering is not anticipated to be required at the SFEC-Interconnection Facility. Because dewatering activities within the Town Roads and LIRR are anticipated to have minimal effects on the groundwater table, dewatering is not expected to draw in contaminants from the above-identified sites. Observed groundwater depths and maximum depths of excavation in the Town Roads and LIRR corridor are discussed in Sections 3.1.2 and 3.1.3 and summarized on Figures 1 and 2 of Attachment C. The two potential areas that may require dewatering on the Town Roads are presented on Figure 1 of Attachment C. The two potential areas that may require dewatering on the LIRR corridor are presented on Figure 2 of Attachment C. In general, the maximum depth of excavation for the cable installed along the Town Road corridor is approximately 5 to 12 ft (1.5 to 3.7 m) bgs, with manhole installations extending to approximately 12 ft (3.7 m) bgs in relation to nearby depth-to-groundwater measurements range from 5.8 to 28.8 ft (1.8 to 8.8 m) bgs. The maximum depth of excavation for the cable installed along the LIRR corridor is approximately 2 to 12 ft (0.6 to 3.7 m) bgs, with manhole installations extending to approximately 12 to 14 ft (3.7 to 4.3 m) bgs with nearby depth-to-groundwater measurements range from 9.4 to 38.3 ft (2.9 to 11.7 m) below grade.

3.5 METHOD OF DEWATERING

Because dewatering is expected to be minimal and planned to be accomplished without the installation of well points or extraction wells, implementation of additional measures to minimize the need for or the extent, intensity, and/or volume of dewatering is not anticipated at this time.

At this time, the following dewatering activities are anticipated:

- The TJB excavation may be encased in sheet piles with a mud mat poured at the bottom to seal off the work area from tidal influence (as well as concrete trough run from the HDD entry pit it to the TJB excavation, depending on the length) or use other means of making a watertight seal.

- Vacuum trucks or pumps will be utilized to dewater the excavation and transport the dewatered fluids to Laydown Areas (see Attachment C for locations) for holding within frac tanks (refer to Section 3.9 for erosion and sediment controls which may be used for secondary containment).
- The Laydown Areas will contain one or more approximately 22,000-gallon capacity portable frac tanks, or similar. The frac tanks will only be moved when empty.
- Separate frac tanks will be used for each dewatering location; water from different excavations will not be mixed.
- When no further fluids will be added to a respective frac tank, the frac tank will be sampled in accordance with the waste characterization requirements of the selected POTW treatment and disposal facility (see Section 3.7). One sample from each frac tank will also be analyzed for emerging contaminants according to the most recent version of the NYSDEC Guidelines for Sampling and Analysis of 1,4-Dioxane and PFAS. Samples must be submitted to a NYSDOHELAP-certified laboratory for analysis.
- When the characterization results are received, the Contractor will solicit approval from the POTW to dispose of the water at their facility. If the results indicate PFAS contamination above the allowable NYSDOH MCL of 10 parts per trillion for PFOA and PFOS; or the allowable U.S. Environmental Protection Agency (USEPA) Health Advisory Water Quality Standard of 70 parts per trillion for total PFOA and PFOS; or guidance values for PFAS in effect at the time of dewatering operations; or exceeds the POTW's pre-treatment standards for these contaminants, the water will be treated and retested in accordance with Section 3.8.3.
- When approval from the facility is received, the frac tank waters will be transferred to vacuum trucks for transportation and discharge. A Bill of Lading will accompany each load.
- The Contractor will document all dewatering activities, including but not limited to all activity dates, dewatered excavation locations, respective volumes, frac tank sample results, facility approval for acceptance of a respective frac tank, and countersigned Bills of Lading. All closeout documentation will be required by the Contractor, including a Construction Closure Report to document "cradle to grave" disposal of the excavation waters.

3.6 ANTICIPATED PUMPING RATES, VOLUMES AND DURATION

Anticipated pumping rates and volumes for a vacuum truck and frac tank are summarized below:

- A vacuum truck's pumping capacity varies and depends on hose diameter, static head, friction losses due to length of hose, etc., but is typically in the range of 20 to 200 gallons per minute.
- A large vacuum truck can carry about 4,000 gallons of water.
- A typical frac tank holds approximately 22,000 gallons of water.

The installation and operation of long-term or permanent dewatering activities consisting of well point systems, recovery wells, or other groundwater table suppression systems are not anticipated for this Project. Dewatering activities, when required, are expected to be temporary and will move along with the pace of construction and will be dependent on the location of work, depth to groundwater, and depth of excavation.

3.7 SAMPLING PLAN

3.7.1 Influent and Effluent

Based on the results of the groundwater samples collected during the Initial HWPWP, it is anticipated that excavation water can be transported and disposed of at a POTW without pre-treatment; as such, sampling of influent (pre-treatment) and effluent (post-treatment) is not considered likely. The sampling results from the Initial HWPWP will need to be transmitted to and discussed with the POTW to confirm. The POTW will identify if additional waste characterization sampling and analyses is required to evaluate acceptance of the fluids at their facility.

As presented in Section 3.5, one sample from each frac tank will also be analyzed for emerging contaminants. Should PFOS and/or PFAS be detected in a frac tank, treatment and effluent sampling will be required as presented in Section 3.8.3.

3.7.2 Emerging Contaminants

Sampling, disposal, and construction activities must be performed in a manner consistent with NYSDEC standards, criteria, or guidance in effect at the time of such activities, including but not limited to NYSDEC Part 375 Remedial Program's Sampling Protocol for 1,4-Dioxane and PFAS.

3.7.3 Unanticipated Conditions

Additional frac tanks and/or vacuum trucks will be mobilized if the volume of dewatering is greater than anticipated at a given excavation location; however, if the required pump rate exceeds the capacity of the vacuum truck-frac tank operation and/or the volume exceeds the approved disposal volume at the selected POTW, different means and methods for dewatering may be utilized.

If any excavation or containerized water is found to exhibit a sheen or odor, it will be disposed of off-site at a permitted facility. If excavation water is found to exhibit these characteristics, field observations will be documented and the water staged in a separate frac tank. All containerized water will be sampled for waste characterization to solicit approval for transport and disposal at a permitted disposal or wastewater treatment facility. In these situations, sampling frequency and analyses will depend on the types, conditions and quantities of water encountered. The associated chemical analysis of samples obtained must adequately characterize the water per current NYSDEC regulations and/or permitted disposal or wastewater treatment facility requirements, depending on the intended destination of the water.

Analysis of samples collected for waste characterization purposes will be analyzed by an environmental testing laboratory accredited to perform the required analyses under the NYSDOH Environmental Laboratory Approval Program.

If a fluid is found to be hazardous, the containerized fluid will be properly transported and disposed of off-site at a properly permitted facility.

SFW will inform DPS Staff of the selected POTW and/or permitted disposal or wastewater treatment facility that will be used prior to the start of construction. Documentation regarding field observations, approval of the disposal facility to accept the water and documentation (bills of lading or hazardous waste manifest) of transport and disposal will be filed for review by DPS Compliance Staff. SFW will obtain lab data and tabulated results, as well as provide proof of the ability to provide proper disposal to DPS Staff prior to disposal.

Furthermore, the NYS Department of Transportation (NYSDOT) will have the right to terminate or restrict discharge flow conveyed into the NYSDOT drainage system during and after storm events to prevent overburdening of the NYSDOT drainage system. As such, prior to any proposed discharge into the NYSDOT drainage system, SFW will provide this Dewatering Plan and the following information to NYSDOT:

- Method of conveyance
- Discharge flow rate
- Duration of discharge
- Water sampling

3.8 TREATMENT AND DISPOSAL PLAN

3.8.1 Effluent Limits

Water that is generated from the dewatering excavations are required meet the following applicable regulations, standards, criteria, and guidance values:

- Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Re-issued June 1998, January 1999 Errata, April 2000 Addendum, June 2004 Addendum
- NYSDOH MCL of 10 parts per trillion for PFOA and PFOS
- USEPA Health Advisory Water Quality Standard of 70 parts per trillion for total PFOA and PFOS

These standards, criteria, and guidance values are numerically presented in the GZA complete investigation report previously described and included as Attachment A.

3.8.2 Publicly Owned Treatment Works

Based on the results of the groundwater samples collected during the Initial HWPWP, it is anticipated that excavation water can be transported and disposed of at a POTW. The POTW will be contacted to discuss the Project, the quantity of water that can be transported to their facility and discharged on a daily basis, waste characterization sampling and analyses of the groundwater that may be required, pre-treatment contaminant concentration limits (including PFAS) they can accept, and general instructions and procedures for submission of waste characterization results, completion of a NoWaste Profile (if required by a selected facility), approval process, etc. At this time, a POTW treatment facility has not been selected.

3.8.3 PFAS

All water from dewatering operations will be pumped into one or more frac tanks and tested for emerging contaminants according to the most recent version of NYSDEC's Guidelines for Sampling and Analysis of 1,4-Dioxane and PFAS. All water from a frac tank that is found to contain PFAS will be treated with granular activated carbon. All water from the frac tanks will be disposed of at a POTW in accordance with the POTW's standards or guidance values in effect at the time of dewatering operations.

3.9 EROSION AND SEDIMENT CONTROLS

Best Management Practices to minimize erosion and sediment will be implemented during dewatering activities. Temporary erosion control measures (i.e., straw bale and/or silt fence barriers), as outlined in the Municipal Separate Storm Sewer System (MS4)-approved Stormwater Pollution Prevention Plan (SWPPP) provided under separate cover, and in compliance with the State Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Construction Activities, will be used.

SFW will comply with these requirements in connection with all construction and dewatering activities. SFW will install, and thereafter inspect daily and repair promptly, temporary erosion control measures in accordance with any and all provisions for such measures in the SWPPP and in any other stormwater and erosion control plans.

4.0 REFERENCES

Environmental Data Resource Inc. (EDR). 2021. Well Search Report Inquiry Number 6347968.2W, January 28, 2021.

New York State Department of Environmental Conservation (NYSDEC). 2004. *Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations,* Re-issued June 1998, January 1999 Errata, April 2000 Addendum, June 2004 Addendum.

ATTACHMENTS

Attachment A SUMMARY REPORT OF FINDINGS OF ENVIRONMENTAL SAMPLES FROM THE INITIAL HAZARDOUS WASTE AND PETROLEUM WORK PLAN

Attachment B PUBLIC RECORDS WATER SUPPLY WELL SEARCH REPORT

Attachment C BORING MONITORING WELL LAYOUT PLAN AND POTENTIAL LAYDOWN AREA FIGURES