AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, ***DAVIS BUILDING, 3RD FLOOR***
MONTPELIER, VT 05620-3522

Permit No.: 3-1199
PIN: NS75-0006
NPDES No.: VT0000264

DRAFT
AMENDED[1] DISCHARGE PERMIT

In compliance with the provisions of the Vermont Water Pollution Control Act as amended (10 V.S.A. chapter 47), the Vermont Water Pollution Control Permit Regulations as amended (Environmental Protection Rules, Chapter 13), the federal Clean Water Act as amended (33 U.S.C. §1251 *et seq.*), and implementing federal regulations,

NorthStar Nuclear Decommissioning Company, LLC
5C Fanaras Drive
Salisbury, MA 01951

(hereinafter referred to as the "Permittee") is authorized by the Secretary of the Agency of Natural Resources (hereinafter referred to as the "Secretary") to discharge from a facility located at:

320 Governor Hunt Road
Vernon, Vermont

to the Connecticut River, Class B at the point of discharge in accordance with the following conditions.

This permit shall become effective on **[Month Day, Year]**

This permit and the authorization to discharge shall expire on March 31, 2022

Peter Walke, Commissioner
Department of Environmental Conservation

By:_____ Date:_____
Amy Polaczyk, Wastewater Program Manager
Watershed Management Division

[1] ***Amended sections of the permit are in bold and italics***

I. SPECIAL CONDITIONS

A. EFFLUENT LIMITS

1. Discharge Point S/N 001

a. During the term of this permit, the Permittee is authorized to discharge from outfall serial number S/N 001 ***(located at Latitude 42.77759 and Longitude -72.51195)***: ***groundwater dewatering during decommissioning activities*** to the Connecticut River. Such discharges shall be limited and monitored by the Permittee as specified below:

Discharge Scenario A (Table 1):

EFFLUENT CHARACTERISTICS	*DISCHARGE LIMITATIONS*		*MONITORING REQUIREMENTS*	
	Monthly Average	*Maximum Day*	*Measurement Frequency*	*Sample Type*
Flow	*---*	*57,000 GPD*	*daily*	*calculated*
Antimony-124	*See Condition I.A.2.*		*1 × discharge*	*grab*
Antimony-126	*See Condition I.A.2.*		*1 × discharge*	*grab*
Barium-133	*See Condition I.A.2.*		*1 × discharge*	*grab*
Beryllium-7	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cadmium-109	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cerium-139	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cerium-141	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cerium-144	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cesium-134	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cesium-136	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cesium-137	*See Condition I.A.2.*		*1 × discharge*	*grab*
Chromium-51	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cobalt-57	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cobalt-58	*See Condition I.A.2.*		*1 × discharge*	*grab*
Cobalt-60	*See Condition I.A.2.*		*1 × discharge*	*grab*
Iodine-131	*See Condition I.A.2.*		*1 × discharge*	*grab*
Manganese-54	*See Condition I.A.2.*		*1 × discharge*	*grab*
Mercury-203	*See Condition I.A.2.*		*1 × discharge*	*grab*
Potassium-40	*See Condition I.A.2.*		*1 × discharge*	*grab*
Ruthenium-103	*See Condition I.A.2.*		*1 × discharge*	*grab*
Ruthenium-106	*See Condition I.A.2.*		*1 × discharge*	*grab*
Silver-110m	*See Condition I.A.2.*		*1 × discharge*	*grab*
Strontium-85	*See Condition I.A.2.*		*1 × discharge*	*grab*
Tin-113	*See Condition I.A.2.*		*1 × discharge*	*grab*
Yttrium-88	*See Condition I.A.2.*		*1 × discharge*	*grab*
Zinc-65	*See Condition I.A.2.*		*1 × discharge*	*grab*
Fe-55	*See Condition I.A.2.*		*1 × month*	*grab*
Ni-63	*See Condition I.A.2.*		*1 × month*	*grab*
Sr-90	*See Condition I.A.2.*		*1 × month*	*grab*
Tritium	*See Condition I.A.2.*		*1 × discharge*	*grab*
pH	*6.5-8.5 s.u.*		*1 × week*	*grab*
Turbidity	*10 NTU*		*1 × week*	*grab*

Samples collected in compliance with the monitoring requirements specified above shall be collected from the 10,000-gallon tank in the Turbine Building prior to discharge to the Cooling Tower Basin and outfall S/N 001.

2. ***<u>Discharge Scenario A (Startup Phase)</u>: Each effluent characteristic shall be limited to the extent required to satisfy the radiological health limit of 5 millirems pursuant to Part 5 Chapter 3 of the Vermont Radiological Health Rule. Groundwater collected during the startup phase shall be collected in 10,000-gallon batches and sampled in a representative manner to demonstrate none of the radiological constituents sampled once per discharge in Table 1 are present above the Lower Limits of Detection (LLD) prior to discharge (See Attachment A). Laboratory analysis procedures make it impracticable to analyze Hard to Detect Radionuclides (HTDs) prior to every discharge. As such, monthly sampling for Fe-55, Ni-63, and Sr-90 will be used to evaluate the discharge. Batch sampling shall take place until a steady state of hydraulic charge has been established.***

3. ***The discharge shall cease if results of radiological parameters are detected. If any of the constituents listed in Attachment A are detected above the corresponding LLD, the Permittee shall notify the Secretary immediately. The Secretary will then determine whether the discharge should be moderated to prevent an exceedance of the actual discharge limitation and may reopen the discharge permit to include specific effluent limits.***

4. ***Discharge Scenario A shall be applied until the system has reached steady state as described in Condition I.A.6. Discharge Scenario A shall also be applied during any subsequent period that the system is not in steady state.***

5. ***Steady state shall be achieved as soon as reasonably possible, but no later than 30 days after beginning dewatering operations.***

6. ***Steady state means that groundwater levels remain consistent. For the purpose of this permit "consistent" means less than 6 inches of variation in head in any of the observation wells (OW-1, OW-2, and OW-3) for 48 consecutive hours. During dewatering operations, changes greater than or equal to ± 6 inches in head in any of the observation wells (OW-1, OW-2, and OW-3) within one week indicates that the system is no longer in steady state.***

Discharge Scenario B (Table 2):

EFFLUENT CHARACTERISTICS	*DISCHARGE LIMITATIONS*		*MONITORING REQUIREMENTS*	
	Monthly Average	*Maximum Day*	*Measurement Frequency*	*Sample Type*
Flow	*---*	*57,000 GPD*	*daily*	*calculated*
Antimony-124	*See Condition I.A.7.*		*1 × quarter*	*grab*
Antimony-126	*See Condition I.A.7.*		*1 × quarter*	*grab*
Barium-133	*See Condition I.A.7.*		*1 × quarter*	*grab*
Beryllium-7	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cadmium-109	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cerium-139	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cerium-141	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cerium-144	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cesium-134	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cesium-136	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cesium-137	*See Condition I.A.7.*		*1 × quarter*	*grab*
Chromium-51	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cobalt-57	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cobalt-58	*See Condition I.A.7.*		*1 × quarter*	*grab*
Cobalt-60	*See Condition I.A.7.*		*1 × quarter*	*grab*
Iodine-131	*See Condition I.A.7.*		*1 × quarter*	*grab*
Manganese-54	*See Condition I.A.7.*		*1 × quarter*	*grab*
Mercury-203	*See Condition I.A.7.*		*1 × quarter*	*grab*
Potassium-40	*See Condition I.A.7.*		*1 × quarter*	*grab*
Ruthenium-103	*See Condition I.A.7.*		*1 × quarter*	*grab*
Ruthenium-106	*See Condition I.A.7.*		*1 × quarter*	*grab*
Silver-110m	*See Condition I.A.7.*		*1 × quarter*	*grab*
Strontium-85	*See Condition I.A.7.*		*1 × quarter*	*grab*
Tin-113	*See Condition I.A.7.*		*1 × quarter*	*grab*
Yttrium-88	*See Condition I.A.7.*		*1 × quarter*	*grab*
Zinc-65	*See Condition I.A.7.*		*1 × quarter*	*grab*
Fe-55	*See Condition I.A.7.*		*1 × quarter*	*grab*
Ni-63	*See Condition I.A.7.*		*1 × quarter*	*grab*
Sr-90	*See Condition I.A.7.*		*1 × quarter*	*grab*
Tritium	*See Condition I.A.7.*		*1 × quarter*	*grab*
pH	*6.5-8.5 s.u.*		*1 × quarter*	*grab*
Turbidity	*10 NTU*		*1 × quarter*	*grab*

Samples collected in compliance with the monitoring requirements specified above shall be collected from the 10,000-gallon tank in the Turbine Building prior to discharge to the Cooling Tower Basin and outfall S/N 001.

7. ***<u>Discharge Scenario B (Steady-State Discharge)</u>: Each effluent characteristic shall be limited to the extent required to satisfy the radiological health limit of 5 millirems pursuant to Part 5 Chapter 3 of the Vermont Radiological Health Rule. Groundwater collected during the steady-state phase shall be sampled quarterly in a representative manner to demonstrate none of the radiological constituents are present above the LLD in Attachment A.***

8. ***The discharge shall cease if results of radiological parameters are detected. If any of the constituents listed in Attachment A are detected above the corresponding LLD, the Permittee shall notify the Secretary immediately. The Secretary will then determine whether the discharge should be moderated to prevent an exceedance of the actual discharge limitation and may reopen the discharge permit to include specific effluent limits.***

9. ***If the discharge ceases for 30 days or more, Discharge Scenario A limits and sampling frequencies shall be enforced until a steady state has been established as prescribed by Condition I.A.6.***

10. ***The State of Vermont ("the State") shall have the right to request and obtain confirmatory facility site inspections, measurements, samples, and results throughout decommissioning and site restoration. Without limiting the Right of Entry set forth in General Condition II.B.1., these samples are to be collected by the State or their contractor at the same time that NorthStar or its contractor is conducting sampling and according to the same protocols in the approved QAPP.***

11. ***These conditions shall supersede the authorizations, effluent limitations, and monitoring requirements for outfall serial numbers S/N 003 and S/N 009 as specified in Conditions I.A.2. and I.A.3. of discharge permit No. 3-1199 issued on January 28, 2019 as the direct discharge of process wastewater has been eliminated.***

12. **Special Conditions**

    a. The effluent shall not have concentrations or combinations of contaminants including oil, grease, scum, foam, or floating solids which would cause a violation of the Vermont Water Quality Standards.

    b. The effluent shall not cause visible discoloration of the receiving waters.

13. **REAPPLICATION**

    If the Permittee desires to continue to discharge after the expiration of this permit, the Permittee shall reapply on the application forms then in use at least 180 days before this permit expires. Reapply for a Discharge Permit by: **September 30, 2021.**

14. **OPERATING FEES**

    This discharge is subject to operating fees as required by V.S.A. § 2822.

B. MONITORING AND REPORTING

1. **Sampling and Analysis**

   The sampling, preservation, handling, and analytical methods used shall conform to the test procedures published in Title 40 of the Code of Federal Regulations (C.F.R.) Part 136. The Permittee shall use sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 for the analysis of the pollutants or pollutant parameters required under this Section.

   Samples shall be representative of the volume and quality of effluent discharged over the sampling and reporting period. All samples are to be taken during normal operating hours. The Permittee shall identify the effluent sampling location used for each discharge. A description of the effluent sample location is included in Condition I.A.

2. **Reporting**

   The Permittee is required to submit monthly reports of monitoring results as required in Condition I.A. and operational parameters on Discharge Monitoring Report (DMR) form

WR-43 or through an electronic reporting system made available by the Secretary. Reports are due on the 15th day of each month, beginning with the month following the effective date of this permit.

Unless waived by the Secretary, the Permittee shall electronically submit its DMRs via Vermont's online electronic reporting system. The Permittee shall electronically submit additional compliance monitoring data and reports specified by the Secretary. When the Permittee submits DMRs using an electronic system designated by the Secretary, which requires attachment of scanned DMRs in PDF format, it is not required to submit hard copies of DMRs. The link below shall be used for electronic submittals:

https://anronline.vermont.gov/

If, in any reporting period there has been no discharge, the Permittee must submit that information by the report due date. All reports shall be signed:

a. In the case of corporations, by a principal executive officer of at least the level of vice president, or his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the permit form originates and the authorization is made in writing and submitted to the Secretary;

b. In the case of a partnership, by a general partner;

c. In the case of a sole proprietorship, by the proprietor; or

d. In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

3. **Recording of Results**

The Permittee shall maintain records of all information resulting from any monitoring activities required, including:

a. The exact place, date, and time of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The dates and times the analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques and methods used, including sample collection handling and preservation techniques;

f. The results of such analyses;

g. The records of monitoring activities and results, including all instrumentation and calibration and maintenance records;

h. The original calculation and data bench sheets of the operators who performed analysis of the influent or effluent pursuant to requirements of this permit; and

i. For analyses performed by contract laboratories:

a. The detection level reported by the laboratory for each sample; and

b. The laboratory analytical report including documentation of the QA/QC and analytical procedures.

When "non-detects" are recorded, the method detection limit shall be reported and used in calculating any time-period averaging for reporting on DMRs.

4. **Additional Monitoring**

If the Permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form WR-43. Such increased frequency shall also be indicated.

II. GENERAL CONDITIONS

A. MANAGEMENT REQUIREMENTS

1. Facility Modification / Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties pursuant to 10 V.S.A. chapters 47, 201, and/or 211. Any anticipated facility alterations or expansions or process modifications which will result in new, different, or increased discharges of any pollutants must be reported by submission of a new permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Secretary of such changes. Following such notice, the permit may be modified, pursuant to Condition II.B.4. of this permit, to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

a. The Permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

b. In the event the Permittee is unable to comply with any of the conditions of this permit due, among other reasons, to:

i. Breakdown or maintenance of waste treatment equipment (biological and physical-chemical systems including all pipes, transfer pumps, compressors, collection ponds or tanks for the segregation of treated or untreated wastes, ion

exchange columns, or carbon absorption units);

ii. Accidents caused by human error or negligence;

iii. Any unanticipated bypass or upset which exceeds any effluent limitation in the permit;

iv. Violation of a maximum day discharge limitation for any of the pollutants listed by the Secretary in this permit; or

v. Other causes such as acts of nature, the Permittee shall provide notice as specified in subdivisions (c) and (d) of this subsection.

c. Pursuant to 10 V.S.A. §1295, notice for "untreated discharges," as defined.

i. Public notice. For "untreated discharges" an operator of a wastewater treatment facility (WWTF) or the operator's delegate shall as soon as possible, but no longer than one hour from discovery of an untreated discharge from the WWTF, post on a publicly accessible electronic network, mobile application, or other electronic media designated by the Secretary an alert informing the public of the untreated discharge and its location, except that if the operator or his or her delegate does not have telephone or internet service at the location where he or she is working to control or stop the untreated discharge, the operator or his or her delegate may delay posting the alert until the time that the untreated discharge is controlled or stopped, provided that the alert shall be posted no later than four hours from discovery of the untreated discharge.

ii. Secretary notification. For "untreated discharges" an operator of a WWTF shall within 12 hours from discovery of an untreated discharge from the WWTF notify the Secretary and the local health officer of the municipality where the facility is located of the untreated discharge. The operator shall notify the Secretary through use of the Department of Environmental Conservation's online event reporting system. If, for any reason, the online event reporting system is not operable, the operator shall notify the Secretary via telephone or email. The notification shall include:

(1) The specific location of each untreated discharge, including the body of water affected. For combined sewer overflows, the specific location of each untreated discharge means each outfall that has discharges during the wet weather storm event.

(2) Except for discharges from a WWTF to a separate storm sewer system, the date and approximate time the untreated discharge began.

(3) The date and approximate time the untreated discharge ended. If the untreated discharge is still ongoing at the time of reporting, the entity reporting the untreated discharge shall amend the report with the date and approximate time the untreated discharge ended within three business days of the untreated discharge ending.

(4) Except for discharges from a WWTF to a separate storm sewer system, the approximate total volume of sewage and, if applicable, stormwater that was released. If the approximate total volume is unknown at the time of reporting, the entity reporting the untreated discharge shall amend the report with the approximate total volume within three business days.

(5) The cause of the untreated discharge and a brief description of the noncompliance, including the type of event and the type of sewer structure involved.

(6) The person reporting the untreated discharge.

d. For any noncompliance not covered under Condition II.A.2.b. of this permit, an operator of a WWTF or the operator's delegate shall notify the Secretary within 24 hours of becoming aware of such condition and shall provide the Secretary with the following information, in writing, within five days:

i. Cause of noncompliance;

ii. A description of the non-complying discharge including its impact upon the receiving water;

iii. Anticipated time the condition of noncompliance is expected to continue or, if such condition has been corrected, the duration of the period of noncompliance;

iv. Steps taken by the Permittee to reduce and eliminate the non-complying discharge; and

v. Steps to be taken by the Permittee to prevent recurrence of the condition of noncompliance.

3. Operation and Maintenance

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

a. The Permittee shall, at all times, maintain in good working order and operate as efficiently as possible all treatment and control facilities and systems (and related appurtenances) installed or used by the Permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the Permittee only when the operation is necessary to achieve compliance with the conditions of this permit; and

b. The Permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit.

4. Quality Control

The Permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements or shall ensure that both activities will be conducted. The Permittee shall keep records of these activities and shall provide such records upon request of the Secretary. The Permittee shall analyze any additional samples as may be required by the Secretary to ensure analytical quality control.

5. Bypass

The bypass of facilities (including pump stations) is prohibited, except where authorized under the terms and conditions of an Emergency Pollution Permit issued pursuant to 10 V.S.A. § 1268. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the activity in order to maintain compliance with the conditions of this permit.

6. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State, the environment, or human health resulting from noncompliance with any condition specified in this permit, including accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, all calibration and maintenance of instrumentation records and all original chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a minimum of three years, and shall be submitted to the Secretary upon request. This period shall be extended during the course of unresolved litigation regarding the discharge of pollutants or when requested by the Secretary.

8. Solids Management

Collected screenings, sludges, and other solids removed in the course of treatment and control of wastewaters shall be stored, treated and disposed of in accordance with 10 V.S.A. chapter 159 and with the terms and conditions of any certification, interim or final, transitional operation authorization, or order issued pursuant to 10 V.S.A. chapter 159 that is in effect on the effective date of this permit or is issued during the term of this permit.

9. Emergency Pollution Permits

Maintenance activities, or emergencies resulting from equipment failure or malfunction including power outages, which result in an effluent which exceeds the effluent limitations specified herein, shall be considered a violation of the conditions of this permit, unless the Permittee's discharge is covered under an emergency pollution permit under the provisions of 10 V.S.A. § 1268. The Permittee shall notify the Secretary of the emergency situation by the next working day, unless notice is required sooner under Condition II.A.2.

10 V.S.A. § 1268 reads as follows:

> When a discharge permit holder finds that pollution abatement facilities require repairs, replacement, or other corrective action in order for them to continue to meet standards specified in the permit, the holder may apply in the manner specified by the Secretary for an emergency pollution permit for a term sufficient to effect repairs, replacements, or other corrective action. The Secretary shall proceed in accordance with chapter 170 of this title. No emergency pollution permit shall be issued unless the applicant certifies and the Secretary finds that:
>
> (1) there is no present, reasonable alternative means of disposing of the waste other than by discharging it into the waters of the State during the limited period of time of the emergency;
>
> (2) the denial of an emergency pollution permit would work an extreme hardship upon the applicant;
>
> (3) the granting of an emergency pollution permit will result in some public benefit;
>
> (4) the discharge will not be unreasonably harmful to the quality of the receiving waters; and
>
> (5) the cause or reason for the emergency is not due to willful or intended acts or omissions of the applicant.

Application shall be made to the Secretary at the following address: Agency of Natural Resources, Department of Environmental Conservation, One National Life Drive, ***Davis Building, 3rd Floor***, Montpelier VT 05620-3522.

10. Power Failure

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the Permittee shall either:

a. Provide an alternative power source sufficient to operate the wastewater control facilities, or if such alternative power source is not inexistence,

b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The Permittee shall allow the Secretary or authorized representative, upon the presentation of proper credentials:

a. To enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. To have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;

c. To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. To sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

2. Transfer of Ownership or Control

This permit is not transferable without prior written approval of the Secretary. All application and operating fees must be paid in full prior to transfer of this permit. In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the Permittee shall provide a copy of this permit to the succeeding owner or controller and shall send written notification of the change in ownership or control to the Secretary **at least 30 days in advance of the proposed transfer date**. The notice to the Secretary shall include a written agreement between the existing and new Permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them. The Permittee shall also inform the prospective owner or operator of their responsibility to make an application for transfer of this permit.

This request for transfer application must include as a minimum:

a. A properly completed application form provided by the Secretary and the applicable processing fee.

b. A written statement from the prospective owner or operator certifying:

i. The conditions of the operation that contribute to, or affect, the discharge will not be materially different under the new ownership;

ii. The prospective owner or operator has read and is familiar with the terms of the permit and agrees to comply with all terms and conditions of the permit; and

iii. The prospective owner or operator has adequate funding to operate and maintain the treatment system and remain in compliance with the terms and conditions of the permit.

c. The date of the sale or transfer.

The Secretary may require additional information dependent upon the current status of the facility operation, maintenance, and permit compliance.

3. Confidentiality

Pursuant to 10 V.S.A. § 1259(b):

Any records or information obtained under this permit program that constituents trade secrets under 1 V.S.A. § 317 (c)(9) shall be kept confidential, except that such records or information may be disclosed to authorized representatives of the State and the United States when relevant to any proceedings under this chapter.

Claims for confidentiality for the following information will be denied:

a. The name and address of any permit applicant or Permittee.

b. Permit applications, permits, and effluent data.

c. Information required by application forms, including information submitted on the forms themselves and any attachments used to supply information required by the forms.

4. Permit Modification, Suspension, and Revocation

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance shall not stay any permit condition.

The Permittee shall provide to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Secretary upon request, copies of records required to be kept by this permit.

5. Toxic Effluent Standards

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Clean Water Act for a toxic pollutant which is present in the Permittee's discharge and such

standard or prohibition is more stringent than any limitation upon such pollutant in this permit, then this permit shall be modified or revoked and reissued, pursuant to Condition II.B.4. of this permit, in accordance with the toxic effluent standard or prohibition and the Permittee so notified.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under 10 V.S.A. §1281.

7. Civil and Criminal Liability

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Except as provided in "Bypass" (Condition II.A.5.) and "Emergency Pollution Permits" (Condition II.A.9.), nothing in this permit shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance. Civil and criminal penalties for noncompliance are provided for in 10 V.S.A. Chapters 47, 201, and 211.

8. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

9. Property Rights

Issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

10. Other Information

If the Permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Secretary, it shall promptly submit such facts or information.

11. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

12. Authority

This permit is issued under authority of 10 V.S.A. §§1258 and 1259 of the Vermont Water Pollution Control Act, the Vermont Water Pollution Control Permit Regulation, and Section 402 of the Clean Water Act, as amended.

III.

A. OTHER REQUIREMENTS

This permit shall be modified, suspended, or revoked to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit, or

2. Controls any pollutant not limited in the permit.

The permit as modified under this paragraph shall also contain any other requirements of the Vermont Water Pollution Control Act then applicable.

B. DEFINITIONS

For purposes of this permit, the following definitions shall apply.

Agency – means the Vermont Agency of Natural Resources.

Annual Average – means the highest allowable average of daily discharges calculated as the sum of all daily discharges (mg/L, lbs. or gallons) measured during a calendar year divided by the number of daily discharges measured during that year.

Average – means the arithmetic means of values taken at the frequency required for each parameter over the specified period.

Bypass – means the intentional diversion of waste streams from any portion of the treatment facility.

The Clean Water Act – means the federal Clean Water Act, as amended (33 U.S.C. § 1251, *et seq*.).

Composite Sample – means a sample consisting of a minimum of one grab sample per hour collected during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportionally to flow over that same time period.

Daily Discharge – means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in pounds the daily discharge is calculated as

the total pounds of pollutants discharged over the day. For pollutants with limitations expressed in mg/L the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge – means the placing, depositing, or emission of any wastes, directly or indirectly, into an injection well or into the waters of the State.

Grab Sample – means an individual sample collected in a period of less than 15 minutes.

Incompatible Substance – means any waste being discharged into the treatment works which interferes with, passes through without treatment, or is otherwise incompatible with said works or would have a substantial adverse effect on the works or on water quality. This includes all pollutants required to be regulated under the Clean Water Act.

Instantaneous Maximum – means a value not to be exceeded in any grab sample.

Major Contributing Industry – means one that: (1) has a flow of 50,000 gallons or more per average work day; (2) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (3) has in its wastes a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of the Clean Water Act; or (4) has a significant impact, either singly or in combination with other contributing industries, on a treatment works or on the quality of effluent from that treatment works.

Maximum Day or **Maximum Daily Discharge Limitation –** means the highest allowable "daily discharge" (mg/L, lbs. or gallons).

Mean – means the arithmetic mean.

Monthly Average or **Average Monthly Discharge Limitation** – means the highest allowable average of daily discharges (mg/L, lbs. or gallons) over a calendar month, calculated as the sum of all daily discharges (mg/L, lbs. or gallons) measured during a calendar month divided by the number of daily discharges measured during that month.

NPDES – means the National Pollutant Discharge Elimination System.

Secretary – means the Secretary of the Agency of Natural Resources or the Secretary's duly authorized representative.

Septage – means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Untreated Discharge – means (1) combined sewer overflows from a WWTF; (2) overflows from sanitary sewers and combined sewer systems that are part of a WWTF during dry weather flows, which result in a discharge to waters of the State; (3) upsets or bypasses around or within a WWTF during dry or wet weather conditions that are due to factors unrelated to a wet weather storm event and that result in a discharge of sewage that has not been fully treated to waters of the State; and (4) discharges from a WWTF to separate storm sewer systems.

Waste – means effluent, sewage or any substance or material, liquid, gaseous, solid, or radioactive, including heated liquids, whether or not harmful or deleterious to waters.

Waste Management Zone – means a specific reach of Class B waters designated by a permit to accept the discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings. Throughout the receiving waters, water quality criteria must be achieved but increased health risks exist in a waste management zone due to the authorized discharge.

Waters – means all rivers, streams, creeks, brooks, reservoirs, ponds, lakes, springs, and all bodies of surface waters, artificial or natural, which are contained within, flow through, or border upon the State or any portion of it.

Weekly average or **Average Weekly Discharge Limitation** – means the highest allowable average of daily discharges (mg/L, lbs. or gallons) over a calendar week, calculated as the sum of all daily discharges (mg/L, lbs. or gallons) measured during a calendar week divided by the number of daily discharges measured during that week.

Whole Effluent Toxicity (WET) – means the aggregate toxic effect of an effluent measured directly by a toxicity test.

Wastewater Treatment Facility (WWTF) – means a treatment plant, collection system, pump station, and attendant facilities permitted by the Secretary for the purpose of treating domestic, commercial, or industrial wastewater.

VERMONT
DEPARTMENT OF HEALTH

ATTACHMENT A

VT Department of Health Radiological Analysis Tables

The Department's nominal Lower Limits of Detection (LLD) for gamma spectroscopy tests are presented below in Table 1 and Table 2. Additionally, all samples will be analyzed for tritium with a nominal LLD of 500 picocuries per liter (pCi/L).

Table 1: Health Department Gamma Spectroscopy Calculated Lower Limits of Detection

Radioactive Element	*Calculated Lower Limit of Detection: Water (pCi/L or pCi/kg)*
Antimony-124	*3*
Antimony-126	*3*
Barium-133	*4*
Beryllium-7	*24*
Cadmium-109	*48*
Cerium-139	*3*
Cerium-141	*4*
Cerium-144	*16*
Cesium-134	*4*
Cesium-136	*3*
Cesium-137	*4*
Chromium-51	*24*
Cobalt-57	*2*
Cobalt-58	*3*
Cobalt-60	*3*
Iodine-131	*3*
Manganese-54	*4*
Mercury-203	*3*
Potassium-40	*48*
Ruthenium-103	*3*
Ruthenium-106	*29*
Silver-110m	*3*
Strontium-85	*4*
Tin-113	*4*
Yttrium-88	*4*
Zinc-65	*6*

Table 2: Health Department Gamma Spectroscopy Calculated Lower Limits of Detection for Hard to Detect Radionuclides (HTDs)

Radioactive Element	*Calculated LLD*
Fe-55	***20 pCi/L***
Ni-63	***5.0 pCi/L***
Sr-90	***1.0 pCi/L***

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, ***DAVIS BUILDING, 3RD FLOOR***
MONTPELIER, VT 05620-3522
AMENDED[1] FACT SHEET
(August 2020)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

PERMIT NO: 3-1199
PIN: NS75-0006
NPDES NO: VT0000264

NAME AND ADDRESS OF APPLICANT:

NorthStar Nuclear Decommissioning Company, LLC
5C Fanaras Drive
Salisbury, MA 01951

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

NorthStar Nuclear Decommissioning Company, LLC
320 Governor Hunt Road
Vernon, Vermont 05354

RECEIVING WATER: Connecticut River

CLASSIFICATION: Class B. Class B waters are suitable for swimming and other forms of water-based recreation; irrigation of crops and other agricultural uses; good aesthetic value; aquatic biota and aquatic habitat; boating, fishing, and other recreational uses; public water source with filtration and disinfection or other required treatment.

I. Action, Type of Facility, and Discharge Location

Applicant NorthStar Nuclear Decommissioning Company, LLC filed its application to amend NPDES Discharge Permit No. 3-1199 with the Secretary of the Vermont Agency of Natural Resources ("Secretary") on January 22, 2020. Applicant is engaged in decommissioning activities of the Vermont Yankee Nuclear Power Station, a nuclear electrical generating station that ceased power production in December 2014. This permit was most recently amended in 2019 with respect to decommissioning activities. The continuing discharge from the facility to the Connecticut River consists of dewatering activities to capture groundwater prior to migrating into the Turbine Building basement while decommissioning activities are taking place.

[1] ***Amended sections of the fact sheet are in bold and italics***

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters is based on state and federal laws and regulations, the discharge permit application, and the recent self-monitoring data.

III. Limitations and Conditions

The effluent limitations and the monitoring requirements may be found on the following pages of the permit:

Effluent Limitations:	***Pages 2 – 4 of 17***
Monitoring Requirements:	***Pages 2 – 5 of 17***

IV. Facility Description and Background

NorthStar Nuclear Decommissioning Company, LLC owns the Facility, which is a former nuclear power station in Vernon, Vermont. The Facility is located on the west shore of Vernon Pool, an impoundment of the Connecticut River created by Vernon Dam. The dam and Vernon Station, a hydroelectric facility, are located approximately 0.75 miles downstream from the Facility. The Facility, which began operation in 1972, ceased all electric generating activities in December of 2014 and has been permanently defueled.

The cessation of electric generating activities has drastically changed the Facility's surface water intake and use. The Facility's discharges were historically dominated by non-contact circulating water drawn from the river which resulted in a large heat load discharged into the river.

The Permittee's current National Pollutant Discharge Elimination System (NPDES) permit was issued in ***2019*** and regulates the Facility's withdrawal of water from the Vernon Pool in the Connecticut River for cooling purposes, as well as the discharge of pollutants to the Connecticut River. The current permit contains conditions regarding the water withdrawal from the Connecticut River by the Facility's Service Water intake structure as well as effluent limitations and conditions for each of the outfalls.

Since the cessation of electricity generation activities, the discharge volume is less than 99% of historical discharge volume levels. The only remaining thermal load to the river is associated with the Service Water system, which primarily performs the necessary nuclear safety function of feeding the spent fuel pool cooling system, and because of radioactive decay, the thermal load will continue to decline at an exponential rate. Thus, this draft permit differs significantly from the current permit because it reflects the modified operations of the closed Facility.

The draft permit retains effluent limitations for discharge (S/N 001): ***groundwater dewatering activities***.

Dewatering activities will be conducted in order to prevent groundwater from infiltrating into the Turbine Building basement during the decommissioning process. During dewatering activities, groundwater will be collected for analysis in accordance with two discharge scenarios outlined in the draft permit. Groundwater collected during Discharge Scenario A or "startup phase" will be collected in a 10,000-gallon tank located in the Turbine Building. Batch sampling will be conducted as outlined in Table 1 of the draft permit prior to discharge.

Groundwater will flow from the Turbine Building tank to the Cooling Tower Basin via discharge lines prior to being released to discharge structure S/N 001. Discharge Scenario A shall be applied until a steady state of hydraulic recharge has been achieved.

Discharge Scenario B or "steady state phase" sampling requirements will be implemented once the system has established hydraulic steady state conditions. Groundwater sampling requirements during Discharge Scenario B are outlined in Table 2 of the draft permit. There will be no operational changes with the system between the two discharge scenarios. During Discharge Scenario B, groundwater will enter the 10,000-gallon tank in the Turbine Building and flow to the Cooling Tower Basin via discharge lines prior to being released to discharge structure S/N 001. If the system is unable to maintain hydraulic steady state conditions as outlined in the draft permit, Discharge Scenario A shall be applied until steady state conditions are achieved.

V. Permit Basis and Explanation of Effluent Limitation Derivation

Service Water Intake Structure: The Service Water intake structure is located in a reinforced concrete bulkhead north of the Facility that extends downward about 30 feet below normal river surface elevation. The bulkhead was designed with two separate forebays to serve each the Circulating Water (CW) and Service Water (SW) systems. The entrance to each bay is protected from debris intrusion by fixed screens (bar racks). The screen openings are 3" by 3/8" rectangular vertical bars. A traveling water screen system provides basic fish and debris handling at the Facility's water intake structure. A traveling screen consists of 54 fiberglass basket elements that are chain-driven in a continuous loop. Each basket is formed from 0.080" diameter stainless steel wire cloth with 3/8" openings.

After shutdown of electricity generation activities at the Facility, the CW system (design intake flow of 518.4 million gallons per day (MGD)) was no longer necessary and there was a sharp reduction in the volume of water withdrawn from the river.

Historically, the SW system had a maximum design intake capacity of 17.3 MGD (four pumps each with a capacity of 4.3 MGD). The SW system has been modified for shutdown conditions, so that a single SW pump is supplying the safety-related needs of the Facility. Therefore, the total intake flow has been reduced from a maximum design intake capacity of 17.3 MGD to 4.3 MGD, only 21% of which will be used to cool the spent fuel storage pool. This reduced intake flow is calculated to have a maximum through-screen velocity of 0.04 fps. A second pump is maintained as a backup pump.

The Final 316(b) Rule for Existing Facilities (79 Fed. Reg. 48300-01, August 15, 2014) establishes standards for minimizing adverse impacts from cooling water intake structures. For existing facilities, the Final Rule applies to point sources (1) with a design intake flow (equal to the cumulative rated pump capacity) greater than 2 MGD *and* (2) that use 25% or more of the water withdrawn on an actual flow basis exclusively for cooling (40 C.F.R. § 125.91(a)). Actual flow is the average annual volume of water withdrawn over the past three years (40 C.F.R. § 125.92(a)). The design intake flow at the Facility is 4.3 MGD, but less than 25% of the actual intake flow at the Facility will be used exclusively for cooling (as stated above, only 21% of the 4.3 MGD will be used to cool the spent fuel storage pool). Therefore, the Final Rule does not apply, and the Facility is subject to a case-by-case determination of Best Technology Available (BTA) (40 C.F.R. § 125.90(b)).

Under 40 C.F.R. § 125.90(b) "Cooling water intake structures not subject to requirements under Sections 125.94 through 125.99 or subparts I or N of this part must meet requirements under section 316(b) of the CWA established by the Director on a case-by-case, best professional judgment basis."

Entrainment: With the cessation of electricity generation operations, the Facility has achieved BTA by effectively reducing its river water intake by 99%. On a case-by-case, best professional judgement basis, a reduction in intake volume greater than 99% compared to the design flow during operations is even greater than the flow reduction that would have been achieved had the Facility operated entirely in closed-cycle cooling (typically 97.5% for a freshwater facility, and likely less at this Facility because they would not have reduced the SW cooling needs) (79 Fed. Reg. 48333). In addition, cooling water is only anticipated tobe needed until the spent fuel rods are ready for dry cask, which is a limited period.

Impingement: Under the Final Rule at 40 C.F.R. § 125.94(c)(3), achieving an actual intake velocity of 0.5 fps is one option to comply with BTA standards for impingement mortality. Calculated through-screen velocity of the Facility under current operating conditions is less than 0.05 fps at maximum intake, well below the 0.5 fps limit.

S/N 001 Service Water Discharge: This discharge is currently made up of SW that is used to provide cooling water to plant equipment loads (such as the spent fuel pool, diesel generators, and various pumps and heat exchangers). As stated previously, the CW system used to remove unused heat energy from the Main Condenser through 'non-contact cooling' stopped operations when the Facility ceased power generation.

Thermal Discharge: Modelling and Empirical Verification. Section 3-01(B)(1) of the Vermont Water Quality Standards (VWQS) establishes temperature criteria for all state waters: the increase in the temperature of the receiving water, due to the discharge, may not exceed 1.0°F above ambient. Section 2-04(A) also establishes the conditions for the assimilation of these thermal wastes by allowing for a mixing zone to accommodate for temperature increases, provided that the mixing zone does not exceed 200 feet in length, and the temperature criteria are achieved at the end of this zone. The Permittee has required a variance from these criteria in past permits. As the thermal discharge will now meet the requirements of 3-01(B)(1)(b), the Permittee no longer requires a variance and shall meet the criteria set forth in the VWQS.

The heat loads being cooled with the SW system are generated by spent fuel stored in the spent fuel pool, and from various pumps and air conditioning units that remain in operation. The expected change in the temperature of the SW from the intake to the outfall ($\mathbf{\Delta T_d}$) can be calculated using the following equation:

$$\Delta T_d = \frac{Q}{\dot{m} \times C_p}$$

where,

Q = total heat rejected to SWS
= 4.9×10^6 Btu/hr (December 2015)

$\dot{m}$ = mass flowrate of the SWS (one pump)
= 3,000 gpm
= 1.5015×10^6 lb_m/hr

~~C_p = specific heat of water~~
~~= 1.0 Btu/(lb_m°F)~~

~~The change in SW temperature from intake to outfall is calculated to be 3.30°F. This value represents the upper limit of $\mathbf{\Delta T_d}$ during the term of the permit because of the exponential decline of the heat load due to radioactive decay. Specifically, the spent fuel pool the major component of the total heat load – will decrease from 4.2 MBtu/hr in December 2015 to an estimated 2.0 MBtu/hr in December 2020.~~

~~Short-term temperature monitoring studies were conducted to evaluate the accuracy of this model. Temperature data collected from the intake and from the outfall showed that $\mathbf{\Delta T_d}$ consistently ranged from 2°F to 3°F, validating the calculated $\mathbf{\Delta T_d}$ of 3.3°F.~~

~~The Permittee provided further analyses to determine the effect of the discharged SW on the temperature of the river. The expected increase in river temperature above ambient at the end of the 200-foot mixing zone ($\mathbf{\Delta T_x}$) can be determined using a thermal mixing model developed by EPA:~~

$$\Delta T_X \quad \frac{\Delta T_d \times Q_d \times W}{I}$$

~~ΔT_d = change in SW temperature from intake to outfall~~
~~= 3.3°F, maximum~~

~~Q_d = discharge volume~~
~~= 3,000 gpm~~
~~= 6.68 cfs~~

~~W = width of river~~
~~≈ 1,500 ft, immediately downstream of discharge~~

~~Q_r = river flow~~
~~= 1,250 cfs, at minimum flow~~

~~D_y = lateral dispersion coefficient~~
~~$= 0.6 \times d \times u^* \pm 50\%$~~

~~d = effective mixing depth for a thermal discharge~~
~~≈ 5 ft~~

~~$u^* = (g \times d \times s)^{1/2}$~~

~~g = acceleration due to gravity~~
~~= 32.2 ft/s^2~~

~~s = slope of the river~~
~~≈ 0.0001 ft/ft~~

~~X = distance downstream from discharge~~
~~= 200 ft~~

~~μ = river flow velocity~~

~~= 0.0125 ft/ft, at minimum flow~~

~~The river temperature at the end of the 200-foot mixing zone is calculated to be 0.19°F higher than ambient river temperature, well beneath the VWQS limitation of 1°F. Recognizing that the actual lateral dispersion coefficient, **Dy**, could vary with river depth and flow, calculated **ΔT_x** varied from 0.16°F to 0.27°F.~~

~~Short-term temperature monitoring studies were conducted to evaluate the accuracy of this model. Instream temperature monitoring confirmed that the effect of this thermal discharge on the temperature of the river at the edge of the 200-foot mixing zone was minimal: during time periods when solar insolation was low or absent, the temperature of the river at the end of the 200-foot mixing zone consistently measured 0.0 to 0.2°F above ambient river temperature.~~

~~The Permittee has contended that the effect of the Facility's thermal discharge on the temperature of the river cannot be accurately measured because of the confounding effects of temporally- and spatially-variable solar input on the temperature of the surface waters of the Vernon Pool. Given the verification of the models with field measurements, the Agency has concluded that, these models can be used to sufficiently ensure compliance. Using the thermal mixing model, it can thus be determined that the effluent may not exceed a **ΔT_d** of 12.2°F. Because the Permittee indicated the use of thermistors with the accuracy of ±0.5 °F, the proposed **ΔT_d** permit limit is 11.7°F.~~

~~*Chemicals*. The SW system is treated four times per week to reduce biofouling of the Facility's piping; treatment consists of two hours with Bulab 8031 and one hour with Spectrus NX-1104. Oxidizing biocides are no longer used for treatment, and the monitoring requirement for residuals has been eliminated in the draft permit.~~

Flow. The draft permit includes a maximum day flow limitation of 57,000 gallons per day for Discharge Scenarios A and B.

pH. The pH limitation remains at 6.5-8.5 Standard Units as specified in Section 3-01(B)(9) in the Vermont Water Quality Standards. This facility has demonstrated an excellent historical performance of compliance with the pH limitations set in the current permit. ***Weekly sampling is required during the startup phase (Discharge Scenario A) and quarterly sampling is required during steady-state conditions (Discharge Scenario B).***

Turbidity. The instream water quality standard for turbidity is 10 NTU as specified in Section A-02 of the Vermont Water Quality Standards. Weekly sampling is required during the startup phase (Discharge Scenario A) and quarterly sampling is required during steady-state conditions (Discharge Scenario B).

Radiological Analysis. The draft permit includes sampling requirements for radioactive elements. Sampling is required once per discharge (or once per month for Hard to Detect Radionuclides) during the startup phase (Discharge Scenario A) and quarterly sampling is required during steady-state conditions (Discharge Scenario B).

Each effluent characteristic shall be limited to the extent required to satisfy the radiological health limit of 5 millirems pursuant to Part 5 Chapter 3 of the Vermont Radiological Health Rule. The Lower Limits of Detection (LLD) listed in the draft permit are to be used as alert levels for further investigation. Discharge Scenario A includes per 10,000-gallon batch sampling requirements for Gamma Spectroscopy-detectable

radionuclides and monthly sampling requirements for hard to detect radionuclides Fe-55, Ni-63, and Sr-90 to evaluate if the discharge should be further limited to prevent an exceedance of the discharge limitation of 5 millirems authorized in Part 5 Chapter 3 of the Vermont Radiological Health Rule. Quarterly sampling of all radionuclides is required during Discharge Scenario B.

S/N 003 Plant Heating Boiler Blowdown: The draft discharge permit conditions shall supersede the authorizations, effluent limitations, and monitoring requirements for outfall serial number S/N 003 as specified in Condition I.A.2. of discharge permit No. 3-1199 issued on January 28, 2019 as direct discharge of process wastewater has been eliminated.

S/N 004 Water Filter Carbon Filter Backwash**:** This discharge was eliminated and has been removed from the draft permit.

S/N 006 Demineralized Trailer Rinse Down Water: This discharge was eliminated and has been removed from the draft permit.

S/N 009 Strainer and Traveling Screen Backwash: The draft discharge permit conditions shall supersede the authorizations, effluent limitations, and monitoring requirements for outfall serial number S/N 009 as specified in Condition I.A.3. of discharge permit No. 3-1199 issued on January 28, 2019 as direct discharge of process wastewater has been eliminated.

Other Provisions:

Approved Chemicals. All chemicals have been reviewed by the Agency for negative environmental effects. The need for several chemicals has been eliminated with the shutdown of electricity generation activities at the Facility and have been removed from the draft permit. Bulab 8006 was replaced by Bulab 8031, a penetrant/biodispersant for use in minimizing and removing fouling within the service water systems; maximum concentration remains 20 ppm.

Environmental Monitoring Studies. When the Facility was operating as an electric generating station, the Permittee was granted a variance from the temperature criteria in the VWQS. To ensure the protection and propagation of a balanced and indigenous population of shellfish, fish, and other wildlife, including their respective habitats, under the conditions allowed by the variance, previous permits included a biological monitoring program, and additional objective specific studies. The Permittee no longer requires a variance from the VWQS, eliminating the necessity of such a monitoring program.

VI. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from August 19, 2020 through September 29, 2020 during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on September 29, 2020 will be retained by the Secretary and considered in the formulation of the final determination to issue, deny or modify the draft permit. The period of comment may be extended at the discretion of the Secretary.

The Secretary will hold a public meeting on September 22nd, 2020 at 6:30 PM. Any person may submit oral or written statements and data concerning the draft permit at the public meeting. The Secretary may establish reasonable limits on time allowed for oral statements and may require the submission of statements in writing. All statements, comments, and data presented at the public meeting will be retained by the Secretary and considered in the formulation of the final determination to issue, deny, or modify the draft permit.

Per Vermont Act 150, public comments concerning draft permits must be submitted via the Environmental Notice Bulletin (ENB) for all applications deemed administratively complete after January 1, 2018. In addition to providing a portal for submitting public comments, the ENB website presents details on the processing history, draft permit documents for review, and can be used to request public meetings. The ENB public site is http://enb.vermont.gov and the DEC ENB information page is http://dec.vermont.gov/permits/enb.

NPDES permits are considered Type 1 permits under Act 150 and are subject to a 30-day public comment period. All comments received within the period described above will be considered by the Department of Environmental Conservation in its final ruling to grant or deny authorization to discharge. Any person who has commented on the draft permit may, within 30 days of the final ruling by the Department of Environmental Conservation to grant or deny authorization to discharge, appeal the ruling to the Vermont Superior Court, Environmental Division pursuant to 10 V.S.A. Chapter 220.