

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

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

**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 December 1, 2022

This permit and the authorization to discharge shall expire on September 30, 2027

Julia S. Moore, Secretary  
Agency of Natural Resources

By:   
Amy Polaczyk, Wastewater Program Manager  
Watershed Management Division

Date: 11/14/2022

**I. SPECIAL CONDITIONS**

**A. EFFLUENT LIMITS AND MONITORING REQUIREMENTS**

**1. Discharge Point S/N 001.** 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:

a. Discharge Scenario A (See Condition I.A.2.)

**Table a.1.**

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATION		MONITORING REQUIREMENTS	
	Monthly Average	Maximum Day	Measurement Frequency	Sample Type
Flow	---	130,000 GPD	daily	calculated
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 prior to discharge to the holding basin.*

**Table a.2.**

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	Measurement Frequency	Sample Type
Cerium-144	1 × discharge	grab
Cesium-134	1 × discharge	grab
Cesium-137	1 × discharge	grab
Cobalt-57	1 × discharge	grab
Cobalt-60	1 × discharge	grab
Manganese-54	1 × discharge	grab
Zinc-65	1 × discharge	grab
Fe-55	1 × month	grab
Ni-63	1 × month	grab
Sr-90	1 × month	grab
Tritium	1 × discharge	grab

b. Discharge Scenario B (See Condition I.A.8.)

**Table b.1.**

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATION		MONITORING REQUIREMENTS	
	Monthly Average	Maximum Day	Measurement Frequency	Sample Type
Flow	---	130,000 GPD	daily	calculated
pH	6.5-8.5 S.U.		1 × week	grab
Turbidity	10 NTU		1 × week	grab

**Table b.2.**

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	Measurement Frequency	Sample Type
Cerium-144	1 × quarter	grab
Cesium-134	1 × quarter	grab
Cesium-137	1 × quarter	grab
Cobalt-57	1 × quarter	grab
Cobalt-60	1 × quarter	grab
Manganese-54	1 × quarter	grab
Zinc-65	1 × quarter	grab
Fe-55	1 × quarter	grab
Ni-63	1 × quarter	grab
Sr-90	1 × quarter	grab
Tritium	1 × quarter	grab

2. **Discharge Scenario A (Startup Phase):** Groundwater collected during the startup phase shall be collected in approximately 10,000-gallon batches and sampled in a representative manner to determine if any of the radiological constituents sampled for in Table a.2. above are present at or above the Lower Limits of Detection (LLD) for liquids listed in the applicable section of the most current Vermont Yankee Nuclear Power Station Off-Site Dose Calculation Manual as approved by the Nuclear Regulatory Commission (“VYNPS ODCM”), as specified by Vermont Radiological Health Rule § 5-305(D). 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 conducted. Batch sampling shall take place until a steady state of hydraulic charge has been established.
  
3. The Permittee shall promptly submit 10,000 gallon and monthly batch sample analytical results for radiological constituents to the Vermont Department of Health and submit results to the Secretary according to the following schedule. In the event this permit is administratively continued pursuant to 3 V.S.A. § 814, the Permittee shall maintain the sampling frequencies established in Table a.2. and reporting frequencies established in this subsection during such continuance.

<b>Due Date</b>	<b>Event Description</b>
03/31/2023	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
06/30/2023	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
09/30/2023	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
12/31/2023	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
03/31/2024	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
06/30/2024	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
09/30/2024	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
12/31/2024	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
03/31/2025	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
06/30/2025	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
09/30/2025	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
12/31/2025	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
03/31/2026	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
06/30/2026	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.

09/30/2026	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
12/31/2026	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
03/31/2027	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
06/30/2027	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.
09/30/2027	The Permittee shall submit radiological constituent sample results from the previous quarter to the Secretary.

4. If any of the constituents sampled for in Table a.2. above are detected at or above the corresponding LLD from the VYNPS ODCM, the Permittee shall include with the submission a calculation into millirems of that constituent within the subject batch, which information may be shared with the parties to and used consistent with the Memorandum of Understanding dated March 2, 2018 and incorporated into the “Order Approving Acquisition of Entergy Nuclear Vermont Yankee, Inc. by NorthStar Decommissioning Holdings, LLC and Granting Other Requests Subject to Memorandum of Understanding”, Vermont Public Utility Commission, Docket No. 8880, Dec. 12, 2018.
5. Discharge Scenario A shall be applied until the system has reached steady state as described in Condition I.A.7. Discharge Scenario A shall also be applied during any subsequent period that the system is not in steady state.
6. Steady state shall be achieved as soon as reasonably possible, but no later than 30 days after beginning dewatering operations.
7. 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  $\pm 6$  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.
8. **Discharge Scenario B (Steady-State Discharge):** Groundwater collected during the steady- state phase shall be collected quarterly in a representative manner to determine if any of the radiological constituents sampled for in Table b.2. above are present at or above the LLD for liquids listed in the applicable section of the most current Vermont Yankee Off-Site Dose Calculation Manual as approved by the Nuclear Regulatory Commission (“VYNPS ODCM”), as specified by Vermont Radiological Health Rule § 5-305(D).
9. The Permittee shall promptly submit analytical results to the Vermont Department of Health and submit results to the Secretary according to the schedule outlined in Condition I.A.3.
10. If any of the constituents sampled for in Table b.2. above are detected at or above the corresponding LLD from the VYNPS ODCM, the Permittee shall include with the submission a calculation into millirems of that constituent within the subject batch, which information may be shared with the parties to and used consistent with the Memorandum of Understanding dated March 2, 2018 and incorporated into the “Order Approving Acquisition of Entergy Nuclear Vermont Yankee, Inc. by NorthStar Decommissioning Holdings, LLC and Granting Other Requests Subject to Memorandum of Understanding”, Vermont Public Utility Commission, Docket No. 8880, Dec. 12, 2018.

11. 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.7.
12. 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 Condition II.C.3., 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.
13. 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.

#### 14. Special Conditions

- a. The discharge shall be free from substances in kind or quantity that settle to form harmful benthic deposits; float as foam, debris, scum, or other visible substances; produce odor, color, taste, or turbidity that is not naturally occurring and would render the surface water unsuitable for its designated uses; result in the dominance of nuisance species; or interfere with recreational activities; or which would cause a violation of the Vermont Water Quality Standards.
- b. Any action on the part of the Secretary in reviewing, commenting upon or approving plans and specifications for the construction of WWTFs shall not relieve the Permittee from the responsibility to achieve effluent limitations set forth in this permit and shall not constitute a waiver of, or act of estoppel against any remedy available to the Secretary, the State of Vermont or the federal government for failure to meet any requirement set forth in this permit or imposed by state or federal law.

#### 15. 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: **March 31, 2027.**

## **II. GENERAL CONDITIONS**

### **A. GENERAL REQUIREMENTS**

#### **1. 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 (Environmental Protection Rule, Chapter 13), and § 402 of the Clean Water Act, as amended.

#### **2. Operating Fees**

This discharge is subject to operating fees as required by 3 V.S.A. § 2822.

#### **3. Duty to Comply**

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.B.5.) and “Emergency Pollution Permits” (Condition II.B.7.), nothing in this permit shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance.

#### **4. Civil and Criminal Liability**

Civil and criminal penalties for non-compliance are provided for in 40 C.F.R. § 122.41(a)(2)-(3) and 10 V.S.A. Chapters 47, 201, and 211. As of the effective date of this permit, the Vermont statutory penalties, which are subject to change, are as follows:

- a.** Pursuant to 10 V.S.A. Chapter 47, a civil penalty not to exceed \$10,000.00 a day for each day of violation.
- b.** Pursuant to 10 V.S.A. Chapter 47, a fine not to exceed \$25,000.00 or imprisonment for not more than six months, or both.
- c.** Pursuant to 10 V.S.A. Chapter 47, any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained by this permit, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained by this permit, shall upon conviction, be punished by a fine of not more than \$10,000.00 or by imprisonment for not more than six months, or by both.
- d.** Pursuant to 10 V.S.A. Chapter 201, a penalty of not more than \$42,500.00 for each determination of a separate violation. In addition, if the Secretary determines that a violation is continuing, the Secretary may assess a penalty of not more than \$17,000.00 for each day the violation continues. The maximum amount of penalty assessed under this provision shall not exceed \$170,000.00.
- e.** Pursuant to 10 V.S.A. Chapter 211, a civil penalty of not more than \$85,000.00 for each violation. In addition, in the case of a continuing violation, a penalty of not more than \$42,500.00 may be imposed for each day the violation continues.

#### **5. Reopener Clause**

In accordance with 40 C.F.R. § 122.44(c), this permit may be reopened and modified during the life of the permit to incorporate any applicable standard for sewage sludge use or disposal promulgated under section

405(d) of the Clean Water Act. The Secretary may promptly modify or revoke and reissue this permit if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

## **6. Permit Modification and Revocation**

Pursuant to 40 C.F.R. § 124.5, the Secretary may modify, revoke and reissue, or terminate for cause, in whole or in part, the authorization to discharge under this permit. These actions may be taken for the reasons specified in 40 C.F.R. § 122.62 (modification or revocation and reissuance) and § 122.64 (termination), including:

- a. There are material and substantial alterations or additions to the permitted facility or activity;
- b. New information is received that was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance;
- c. To correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions;
- d. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- e. Reallocation of WLA under the LIS TMDL;
- f. Development of an integrated WWTF and stormwater runoff NPDES permit;
- g. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- h. Correction of any permit violation, including violations of Vermont Water Quality Standards.

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.

## **7. 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 § 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.A.6. of this permit, in accordance with the toxic effluent standard or prohibition and the Permittee so notified.

## **8. Other Materials**

Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:



a. They are not:

(i) Designated as toxic or hazardous under provisions of Sections 307 and 311, respectively, of the Clean Water Act, or

(ii) Known to be hazardous or toxic by the Permittee, except that such materials indicated in (i) and (ii) above may be discharged in certain limited amounts with the written approval of, and under special conditions established by, the Secretary or their designated representative, if the substances will not pose any imminent hazard to the public health or safety;

b. The discharge of such materials will not violate the Vermont Water Quality Standards; and

c. The Permittee is not notified by the Secretary to eliminate or reduce the quantity of such materials entering the water.

## **9. Removed Substances**

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.

## **10. 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.

## **11. Duty to Provide Information**

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.

## **12. 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.

## **13. 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.

## **14. Confidentiality**

Pursuant to 10 V.S.A. § 1259(b):

Any records or information obtained under this permit program that constitutes 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 10 V.S.A. Chapter 47.

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.

### **15. Navigable Waters**

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

### **16. 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.

### **17. Duty to Reapply**

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The Permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

### **18. Other 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.

## **B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS**

### **1. Proper 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 properly operate and maintain in good working order all facilities and systems of treatment and control (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.

**b.** The Permittee shall provide an adequate operating staff, consistent with the Operator Rule (Environmental Protection Rule, Chapter 4), which is duly qualified to carry out the operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit.

## **2. Need to Halt or Reduce Activity not a Defense**

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.

## **3. Duty to Mitigate**

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. The Permittee shall also take all reasonable steps to minimize or prevent any adverse impact to waters of the State, the environment, or human health resulting from non-compliance 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.

## **4. Dry Weather Flows**

Dry weather flows of untreated municipal wastewater from any sanitary or combined sewers are not authorized by this permit and are specifically prohibited by state and federal laws and regulations. If for any reason there is a discharge to waters of the State of dry weather flows of untreated municipal wastewater from any sanitary or combined sewer, the operator of the WWTF or the operator's delegate shall comply with the notice requirements outlined in this permit.

## **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.

In addition to § 1268 findings, such bypass must meet the following three conditions:

- a.** Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- b.** There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- c.** The Permittee submitted notices as required under 40 C.F.R. § 122.41(m)(3):
  - (i)** Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass.
  - (ii)** Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Condition II.D.2. (24-hour notice).

## **6. Upset**

**a.** Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Condition II.B.6.b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

**b.** Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (i) An upset occurred and that the Permittee can identify the cause(s) of the upset;
- (ii) The permitted facility was at the time being properly operated; and
- (iii) The Permittee submitted notice of the upset as required in Condition II.D.2. (24-hour notice).
- (iv) The Permittee complied with any remedial measures required under Condition II.B.3.

**c.** Burden of proof. In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

## **8. Emergency Pollution Permits**

**a.** 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.D.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:

- (i) 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;
- (ii) the denial of an emergency pollution permit would work an extreme hardship upon the applicant;
- (iii) the granting of an emergency pollution permit will result in some public benefit;
- (iv) the discharge will not be unreasonably harmful to the quality of the receiving waters; and
- (v) the cause or reason for the emergency is not due to willful or intended acts or omissions of the applicant.

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

## **C. MONITORING REQUIREMENTS**

### **1. Monitoring and Records**

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 C.F.R. § 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip 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, for a period of at least 3 years from the date of the sample, measurement, report or application. This period shall be extended during the course of unresolved litigation and may be extended by request of the Secretary at any time.

c. Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

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

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

(vii) The records of monitoring activities and results, including all instrumentation and calibration and maintenance records;

(viii) The original calculation and data bench sheets of the operator who performed analysis of the influent or effluent pursuant to requirements of this permit; and

(ix) 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.

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

d. In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently

sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is “sufficiently sensitive” when:

- 1) The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or
- 2) The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

## **2. Quality Control**

- a. 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.
- b. The Permittee shall keep records of these activities and shall provide such records upon request of the Secretary.

## **3. Right of Entry**

The Permittee shall allow the Secretary, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- 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.

## **D. REPORTING 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 advance notice to the Secretary of such changes. This notification applies to pollutants which are subject neither to effluent limitations in this permit, nor to notification requirements for toxic pollutants under 40 C.F.R. § 122.42(a)(1). Following such notice, the permit may be modified, pursuant to Condition II.A.6. of this permit, to specify and limit any pollutants not previously limited.

### **3. 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 in section III.

**(i)** Public notice. For “untreated discharges” an operator of the 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 the 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 e-mail. The notification shall include:

**(a)** 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.

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

**(c)** 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.

**(d)** Except for discharges from the 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.

**(e)** 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.

**(f)** The person reporting the untreated discharge.

**d.** For any non-compliance not covered under Condition II.D.2.c. of this permit, an operator of the 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 of becoming aware of such condition:

**(i)** Cause of non-compliance;

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

**(iii)** Anticipated time the condition of non-compliance is expected to continue or, if such condition has been corrected, the duration of the period of non-compliance;

**(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 non-compliance.

**e.** For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather.

#### **4. Planned Changes**

**a.** The Permittee shall give notice to the Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

**(i)** The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b); or

**(ii)** The alteration or addition could significantly change the nature or increase the quantity of pollutants



discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements at 40 C.F.R. § 122.42(a)(1).

(iii) The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

## 5. 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.

## 6. Monthly Reporting

- a. The Permittee is required to submit monthly reports of monitoring results 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 15<sup>th</sup> day of each month, beginning with the month following the effective date of this permit.
- b. Unless waived by the Secretary, the Permittee shall electronically submit its DMRs via Vermont's on-line 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 electronic submittals are submitted through the State of Vermont Agency of Natural Resources' Online Services Portal, or its replacement.

c. If, in any reporting period, there has been no discharge, the Permittee must submit that information by the report due date.

## **7. Signature Requirements**

a. All reports shall be signed:

(i) For a corporation. By a responsible corporate officer or a duly authorized representative of that person. For the purpose of this section, a responsible corporate officer means: (1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (2) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

(ii) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(iii) For a municipality, state, or other public agency. By either a principal executive officer or ranking elected official, or a duly authorized representative of that person.

b. For the purposes of subdivision (d) of this subsection, a person is a duly authorized representative only if:

(i) The authorization is made in writing by a person described in subdivision (d) of this subsection;

(ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, or an individual or position having overall responsibility for environmental matters for the company; and

(iii) The written authorization is submitted to the Secretary.

c. Changes to authorization. If an authorization under subdivision (b) of this subsection is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of subdivision (b) of this subsection must be submitted to the Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing a document under subdivisions (a) or (b) of this subsection shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my

knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

## 8. 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.

## III. 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 § 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.

**Method Detection Limit (MDL)** – The method detection limit (MDL) is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results. ([https://www.epa.gov/sites/default/files/2016-12/documents/mdl-procedure\\_rev2\\_12-13-2016.pdf](https://www.epa.gov/sites/default/files/2016-12/documents/mdl-procedure_rev2_12-13-2016.pdf))

**Minimum Level (ML)** – The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL). Minimum levels may be obtained in several ways: They may be published in a method; they may be sample concentrations equivalent to the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a lab, by a factor. (<https://www.govinfo.gov/content/pkg/FR-2014-08-19/pdf/2014-19265.pdf>, p. 3 footnote 5)

**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.

**Monthly Average Flow** - Monthly average flow shall be calculated by summing the daily effluent flow for each day in the given month and dividing the sum by the number of days of discharge in that month.

**NPDES** –means the National Pollutant Discharge Elimination System.

**Pollutant** – means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

**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.

**Total Nitrogen** - Total Nitrogen (TN) shall be reported as pounds TN and calculated as:  $TN \text{ (mg/L)} \times \text{Total Daily Flow (MGD)} \times 8.34$ ; where  $TN \text{ (mg/L)} = TKN \text{ (mg/L)} + NO_x \text{ (mg/L)}$ .

**Ultimate Oxygen Demand (UOD)** - UOD shall be reported in pounds and calculated with the following formula:  $UOD \text{ (lbs/day)} = [(BOD_5 \text{ (lbs/day)} \times 1.43) + (TKN \text{ (lbs/day)} \times 4.57)]$

**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.

**Upset** – means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

**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.

**Attachment A.**

<b>Discharge ID</b>	<b>Discharge Activity</b>	<b>Discharge Status</b>	<b>Receiving Water</b>	<b>Latitude</b>	<b>Longitude</b>
S/N 001	Groundwater from dewatering activities	A	Connecticut River	42.77759	-72.51195

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

**FACT SHEET FOR DRAFT PERMIT  
October 2022**

Permit Number: 3-1199  
PIN: NS75-0006  
NPDES Number: 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:**

320 Governor Hunt Road  
Vernon, VT 05354

**Facility Coordinates:** Lat: 43.77893 Long: -72.51357

**Facility Classification:** Major, Certified Operator Not Required

**Receiving Water:** Connecticut River

**I. Facility and Proposed Action**

Applicant NorthStar Nuclear Decommissioning Company, LLC filed a renewal application with the Secretary of the Vermont Agency of Natural Resources (“Secretary”) on September 1, 2021. 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 April 2021 to address 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.

The previous permit (hereinafter referred to as the "current permit") has been administratively continued, pursuant to 3 V.S.A. § 814, as the applicant filed a complete application for permit reissuance within the prescribed time period per the Vermont Water Pollution Control Permit Regulations Section 13.5(b). At this time, the Secretary has made a tentative decision to reissue the discharge permit.

## **II. Statutory and Regulatory Authority**

Congress enacted the Clean Water Act (CWA or Act), “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except as authorized by specified permitting sections of the Act, one of which is § 402. CWA §§ 301(a), 402(a). Section 402 establishes one of the CWA's principal permitting programs, the National Pollutant Discharge Elimination System (NPDES). Under this section of the Act, the U.S. Environmental Protection Agency (EPA) may “issue a permit for the discharge of any pollutant, or combination of pollutants” in accordance with certain conditions. CWA § 402(a). The State of Vermont has been approved by the EPA to administer the NPDES Program in Vermont. NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. CWA § 402(a)(1) - (2).

Section 301 of the CWA provides for two types of effluent limitations to be included in NPDES permits: “technology-based” limitations and “water quality-based” limitations. CWA §§ 301, 303, 304(b); 40 C.F.R. Parts 122, 125, 131. Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant-reducing technology available and economically achievable for the type of facility being permitted. CWA § 301(b). As a class, WWTFs must meet performance-based requirements based on available wastewater treatment technology. CWA § 301(b)(1)(B). The performance level for WWTFs is referred to as “secondary treatment.” Secondary treatment is comprised of technology-based requirements expressed in terms of BOD<sub>5</sub>, TSS, and pH; 40 C.F.R. Part 133.

Water quality-based effluent limits, on the other hand, are designed to ensure that state water quality standards are achieved, irrespective of the technological or economic considerations that inform technology-based limits. Under the CWA, states must develop water quality standards for all water bodies within the state. CWA § 303. These standards have three parts: (1) one or more “designated uses” for each water body or water body segment in the state; (2) water quality “criteria,” consisting of numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the designated uses of that water body; and (3) an antidegradation provision, focused on protecting high quality waters and protecting and maintaining water quality necessary to protect existing uses. CWA § 303(c)(2)(A); 40 C.F.R. § 131.12.

A permit must include limits for any pollutant or pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality standard, including narrative water quality criteria. See 40 C.F.R. § 122.44(d)(1). An excursion occurs if the projected or actual instream concentration exceeds the applicable criterion. A NPDES permit must contain effluent limitations and conditions in order to ensure that the discharge does not cause or contribute to water quality standard violations.

Receiving stream requirements are established according to numerical and narrative standards adopted under state law for each stream classification. When using chemical-specific numeric criteria from the State's water quality standards to develop permit limits, both the acute and chronic aquatic life criteria are used and expressed in terms of maximum allowable instream pollutant concentrations. Acute aquatic life criteria are generally implemented through maximum daily limits and chronic aquatic life criteria are generally implemented through average monthly limits.



Where a state has not established a numeric water quality criterion for a specific chemical pollutant that is present in the effluent in a concentration that causes or has a reasonable potential to cause a violation of narrative water quality standards, the permitting authority must establish effluent limits in one of three ways: based on a “calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use”; on a “case-by-case basis” using CWA § 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, in certain circumstances, based on an “indicator parameter.” 40 C.F.R. § 122.44(d)(1)(vi)(A-C).

The state rules governing Vermont’s NPDES permit program are found in the Vermont Water Pollution Control Permit Regulations (Environmental Protection Rule, Chapter 13).

Limits for pollutants of concern other than radionuclides were set equal to the Vermont Water Quality Standards (Environmental Protection Rule Chapter 29(a)) therefore a Reasonable Potential Determination was not necessary.

### **III. Permit Limitations and Conditions**

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

Effluent Limitations: Pages 2-3 of 22

Monitoring Requirements: Pages 2-6 of 22

#### **A. Anti-Backsliding**

Section 402(o) of the CWA provides that certain effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the current permit. EPA has also promulgated anti-backsliding regulations which are found at 40 C.F.R. § 122.44(l). Unless applicable anti-backsliding exemptions are met, the limits and conditions in the reissued permit must be at least as stringent as those in the current permit.

## **B. Receiving Water Classification**

All uses Class B with a waste management zone. Class B waters are suitable for swimming and other primary contact recreation; irrigation and agricultural uses; aquatic biota and aquatic habitat; good aesthetic value; boating, fishing, and other recreational uses; and suitable for public water source with filtration and disinfection or other required treatment. A waste management zone is a specific reach of Class B(1) or B(2) waters designated by a permit to accept the discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings.

## **C. Waste Management and Mixing Zones**

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

The Secretary may establish a WMZ as part of the issuance of a discharge permit as described in 10 V.S.A. § 1252. The model used to determine the WMZ is based upon three precepts of domestic wastewater treatment facility discharges: 1) the use of coliform bacteria as an indicator of pathogenic organisms; 2) despite proper operation and maintenance disinfection failures may occur; and 3) a reasonably sized waste management segment provides a "buffer zone" downstream of the wastewater discharge in which contact recreation is not recommended. If a disinfection failure should occur at the WWTF, the time of travel through this zone will provide time during which some pathogen die-off will occur and may also allow time for public notification. A WMZ is not a Mixing Zone. The facility currently does not have a WMZ and a WMZ is not authorized in the draft permit.

A Mixing Zone is a length or area within Class B waters required for the dispersion and dilution of waste discharges adequately treated to meet federal and state treatment requirements and within which it is recognized that specific water uses or water quality criteria associated with the assigned classification for such waters may not be realized. A mixing zone shall not extend more than 200 feet from the point of discharge and must meet the terms of 10 V.S.A. § 29A-204. For a mixing zone to be applicable to a discharge it must be authorized within the discharge permit. The Secretary has made the determination that conditions due to discharges of waste within any mixing zone shall:

- a.** not result in a significant increase in public health risk when evaluated using reasonable assumptions about exposure pathways;
- b.** not constitute a barrier to the passage or movement of fish or prevent the full support of aquatic biota, wildlife, and aquatic habitat uses in the receiving waters outside the mixing zone;
- c.** not kill organisms passing through;
- d.** protect and maintain the existing uses of the waters;
- e.** be free from materials in concentrations that settle to form objectionable deposits;
- f.** be free from floating debris, oil, scum, and other material in concentrations that form nuisances;
- g.** be free from substances in concentrations that produce objectionable color, odor, taste, or turbidity; and
- h.** be free from substances in concentrations that produce undesirable aquatic life or result in a dominance of nuisance species. (Vermont Water Quality Standards § 29A-204(a)).

This facility currently does not have a mixing zone and a mixing zone is not authorized in the draft permit.

#### **IV. Facility History and Background**

NorthStar Nuclear Decommissioning Company, LLC owns the Facility, 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 now 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. However, since the cessation of electricity generation activities, the discharge volume is less than 1% of historical discharge volume levels.

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 approximately 10,000-gallon

batches. Batch sampling will be conducted as outlined in Table a.1. and Table a.2. of the draft permit prior to discharge. Groundwater will flow 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 b.1. and Table b.2. of the draft permit. There will be no operational changes with the system between the two discharge scenarios. 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**

**Flow** – The draft permit maintains the maximum daily flow limitation of 130,000 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 (VWQS). 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 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 VWQS. Weekly sampling is required during the startup phase (Discharge Scenario A) and during steady-state conditions (Discharge Scenario B).

**Radiological Analysis** – The draft permit maintains the sampling requirements for radioactive elements (Table a.2. and Table b.2.). 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). Radionuclides must be analyzed to achieve the Lower Limits of Detection (LLD) for liquids listed in the applicable section of the most current Vermont Yankee Off-Site Dose Calculation Manual as approved by the Nuclear Regulatory Commission (“VYNPS ODCM”), as specified by Vermont Radiological Health Rule § 5-305(D).

Per the VYNPS ODCM, the following radionuclides do not have associated LLDs: Barium 133, Cadmium 109, Ruthenium 106, and Silver 110. The Permittee shall notify the Secretary of any detected and measurable analytical results. Analytical results that are reported below the LLD shall be reported as “not detected”.

Discharge Scenario A includes per batch sampling requirements for Gamma Spectroscopy-detectable radionuclides and monthly sampling requirements for hard to detect radionuclides Fe-55, Ni-63, and Sr-90. Quarterly sampling of all radionuclides is required during Discharge Scenario B.

The Permittee shall promptly submit analytical results to the Vermont Department of Health and submit results to the Secretary according to the schedule outlined in Condition I.A.3 of the draft permit.

For any radionuclide detected at or above the corresponding LLD from the VYNPS ODCM, the Permittee must report a calculation into millirems of that constituent, which information may be shared with the parties to and used consistent with the Memorandum of Understanding dated March 2, 2018 and incorporated into the “Order Approving Acquisition of Entergy Nuclear Vermont Yankee, Inc. by NorthStar Decommissioning Holdings, LLC and Granting Other Requests Subject to Memorandum of Understanding”, Vermont Public Utility Commission, Docket No. 8880, Dec. 12, 2018.

Based on facility decommissioning and a permit amendment to address only site dewatering, the following outfalls are no longer in use and have been removed from the draft permit:

**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.

### **V.I. Special Conditions**

- 1. 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.
- 2. 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.

- 3. Electronic Reporting** – The National Pollution Discharge Elimination System (NPDES) Electronic Reporting Rule (eRule) modernized Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The eRule requires the inclusion of electronic reporting requirements in NPDES permits that become effective after December 21, 2015. The rule requires that NPDES regulated entities that are required to submit Discharge Monitoring Reports (DMRs), including majors and nonmajors, individually permitted or covered by a general permit, must do so electronically after December 21, 2016. The Secretary has created an electronic reporting system for DMRs and has trained facilities in its use. As of December 21, 2020, these NPDES facilities must also submit additional information electronically as specified in Appendix A in 40 C.F.R. Part 127.
- 4. Noncompliance Notification** – As required by 10 V.S.A. § 1295, a Noncompliance Notification has been included in the draft permit. Section 1295 requires the Permittee to provide public notification of untreated discharges from wastewater facilities. The Permittee is required to post a public alert within one hour of discovery and submit to the Secretary specified information regarding the discharge within 12 hours of discovery.
- 5. Reopener** – The draft permit includes a reopener clause whereby the Secretary reserves the right to reopen and amend the permit to implement an integrated plan to address multiple Clean Water Act obligations.

## VII. Final Determinations

The public comment period for receiving comments on this draft permit is from **October 10, 2022 to November 11, 2022** during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on **November 10, 2022** 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.

*No comments were received during the public notice comment period for the draft permit between October 10, 2022 and November 11, 2022.*

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 Environmental Court pursuant to 10 V.S.A. Chapter 220.