



# Temporary Permit

**Permit No:** TP-0197  
**Date Issued:** December 22, 2016

This certifies that:

**Public Service of New Hampshire d/b/a Eversource Energy  
780 North Commercial Street  
Manchester NH 03101**

has been granted a Temporary Permit that:

**Establishes fuel oil sulfur limits for the utility boiler and the two auxiliary boilers**

at the following facility and location:

**Newington Station  
165 Gosling Road  
Newington, NH**

Facility ID No: **3301500054**  
Application No: **16-0183**, received November 4, 2016

which includes devices that emit air pollutants into the ambient air as set forth in the permit application referenced above which was filed with the New Hampshire Department of Environmental Services, Air Resources Division (Division) in accordance with RSA 125-C of the New Hampshire Laws. Request for permit renewal must be received by the Division at least 90 days prior to expiration of this permit and must be accompanied by the appropriate permit application forms.

This permit is valid upon issuance and expires on **June 30, 2018**.

*Craig Wright*  
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Director  
Air Resources Division

**Eversource Energy - Newington Station**

**I. Facility Description**

Public Service of New Hampshire dba Eversource Energy (Eversource) - Newington Station is a fossil fuel-fired electricity generating facility. The facility is comprised of one utility boiler (NT1), two No. 2 oil fired auxiliary boilers (NTAB1 & NTAB2), one emergency generator, two bulk oil storage tanks, and one bulk oil storage day tank. Newington Station is currently operating under the following air permits:

1. Title V Operating Permit TV-OP-054; this permit expired on March 31, 2012. Application shield applies;
2. Temporary Permit TP-0120 for a new temporary steam boiler; this permit expired on June 30, 2014. Application shield applies; and
3. Temporary Permit TP-0176 for the two auxiliary boilers; this permit expires on June 30, 2017.

**II. Project Description**

Eversource submitted a Temporary Permit Application in support of air dispersion modeling analysis conducted as part of the New Hampshire Department of Environmental Services (DES) response to United States Environmental Services (EPA) Order on Title V Petition VI-2014-04. The EPA Order was in response to Sierra Club’s Petition regarding the issuance of Title V Operating Permit TV-0053 to Eversource Energy-Schiller Station. Eversource submitted an updated modeling report on October 6, 2016. The modeling report also addressed the Data Requirements Rule (DRR)<sup>1</sup> for the 2010 1-hour Sulfur Dioxide (SO<sub>2</sub>) Primary National Ambient Air Quality Standards (NAAQS). Specifically, modeling was used to characterize 1-hour SO<sub>2</sub> concentrations in New Hampshire’s seacoast region as part of DES’s obligations under the DRR. In the modeling analysis, Eversource proposed the following fuel oil sulfur limits for Newington Station:

<b>Modeled Source</b>	<b>Maximum Fuel Limitation Modeled</b>
Utility Boiler (NT1)	Burn No. 6 fuel oil with maximum of 1.0 % sulfur content (vs. 2.0% sulfur as allowed under TV-OP-054)
Auxiliary Boilers (NTAB1 and NTAB2)	Burn No. 2 fuel oil with maximum of 0.20 % sulfur content (vs. 0.40% sulfur as allowed under TV-OP-054)

This Temporary Permit establishes fuel oil sulfur limits that were proposed in the October 2016 modeling analysis for NT1, NTAB1 and NTAB2. All conditions of previously issued permit TV-OP-054 that this permit supersedes are specifically identified in this permit. Upon issuance of this permit, the Owner or Operator shall comply with terms and conditions of the permits TV-OP-054, TP-0120, TP-0176 and this permit.

<sup>1</sup> <https://www.epa.gov/so2-pollution/final-data-requirements-rule-2010-1-hour-sulfur-dioxide-so2-primary-national-ambient>

**Eversource Energy - Newington Station****III. Emission Unit Identification**

This permit covers the devices identified in Table 1:

<b>Table 1 - Emission Unit Identification</b>			
<b>Emission Unit ID</b>	<b>Device Identification</b>	<b>Installation Date</b>	<b>Maximum Design Capacity and Permitted Fuel Type(s)<sup>2</sup></b>
NT1	Steam Generating Unit 1 Combustion Engineering Model No. 8269 Tangential Firing	1969	4,350 MMBtu/hr Crude oil, No. 6 fuel oil, No. 2 fuel oil and natural gas No.6 oil - 29,000 gal/hr Natural gas - 4.26 mmcf/hr
NTAB1	Auxiliary Steam Boiler No. 1A Manufacturer: Erie City Energy Division Model No. 15M Keystone Serial No. 98627	1969	99.4 MMBtu/hr No. 2 fuel oil - 710 gal/hr
NTAB2	Auxiliary Steam Boiler No. 1B Manufacturer: Erie City Energy Division Model No. 15M Keystone Serial No. 98628	1969	99.4 MMBtu/hr No. 2 fuel oil - 710 gal/hr

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<sup>2</sup> The fuel consumption rates presented in Table 1 are based on the following heating values:

No.6 fuel oil - 151,131 Btu/gal;

No.2 fuel oil - 140,000 Btu/gal;

Natural gas - 1,020 Btu/scf.

Maximum fuel consumption of the unit may vary based on the actual heat content of the fuel burned.

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**IV. Operating and Emission Limitations**

The Owner or Operator shall be subject to the operating and emission limitations identified in Table 2.

<b>Table 2 - Operating and Emission Limitations</b>			
<b>Item #</b>	<b>Requirement</b>	<b>Applicable Emission Unit</b>	<b>Regulatory Basis</b>
1.	<p><b>Condition VIII.B Table 6, Item 2 of TV-OP-054 is replaced with the following:</b></p> <p>The sulfur content of No. 6 fuel oil and crude oil as combusted in the utility boiler shall not exceed 1.0% by weight.</p>	NT1	Env-A 607.01(w)
2.	<p><b>Condition VIII.B Table 6, Item 3 of TV-OP-054 is replaced with the following:</b></p> <p>The sulfur content of No. 2 fuel oil shall not exceed 0.20% by weight.</p>	NT1, NTAB1 & NTAB2	Env-A 607.01(w)
3.	<p><u>Mitigation of Regional Haze - Emission Standards Applicable to Tangential-Firing, Dry-Bottom Boilers</u></p> <p>SO<sub>2</sub> emissions shall not exceed 0.50 pounds per million British thermal units (lb/MMBtu) on a 30-day rolling average basis as recorded by a continuous emissions monitoring system (CEMS).</p>	NT1	Env-A 2302.02
4.	<p><u>Sulfur Limits of Certain Liquid Fuels</u></p> <p>a.) Effective July 1, 2018, sulfur content of the residual oil<sup>3</sup> shall not exceed 0.5% by weight<sup>4</sup>.</p>	NT1	RSA 125-C:10-d
	<p>b.) Effective July 1, 2018, sulfur content of the distillate oil shall not exceed 0.0015% by weight.</p>	NTAB1 & NTAB2	

<sup>3</sup> No. 6 fuel oil and crude oil meet the definition of residual oil.

<sup>4</sup> Pursuant to NH State Law, Eversource is not allowed to purchase and/or burn No. 6 oil that has a sulfur content exceeding 0.5% by weight on or after July 1, 2018. However, Eversource is permitted to use any oil remaining in the inventory which is above that concentration by blending it with a lower sulfur concentration fuel oil to meet the 0.5% sulfur content requirement as per Table 3, Item 1.b.

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**V. Monitoring and Testing Requirements**

The Owner or Operator is subject to the monitoring and testing requirements as contained in Table 3:

<b>Table 3 - Monitoring and Testing Requirements</b>					
<b>Item #</b>	<b>Parameter</b>	<b>Method of Compliance</b>	<b>Frequency</b>	<b>Applicable Unit</b>	<b>Regulatory Basis</b>
1.	Sulfur Content of Liquid Fuels	a.) Conduct testing in accordance with appropriate ASTM test methods or retain documentation in accordance with Table 4, Item 1 (residual oil) or Item 2 (distillate oil) in order to demonstrate compliance with the sulfur content limitation provisions specified in this permit for liquid fuels.	For each delivery of fuel oil to the facility	NT1, NTAB1 & NTAB2	Env-A 806.02 & Env-A 806.05
		b.) Fuel blending is permitted for NT1 boiler. Comply with the following requirements for fuel blending: <ul style="list-style-type: none"> <li>i. Oil greater than 1.0% sulfur by weight shall be mixed with oil less than 1.0% sulfur by weight in a tank in which the “sparging system” shall be in full operation to assure complete mixing of the blended oil.</li> <li>ii. After mixing for an appropriate amount of time to assure complete blending, samples from the top, middle, and bottom of the tank shall be collected and analyzed in accordance with method ASTM D4294-10. The sample results shall be averaged to create a composite figure.</li> <li>iii. After sampling is complete and the test results indicate that the sulfur content of the blended oil is less than 1.0% by weight, the oil may then be transferred to the day tank to be used in the utility boiler.</li> </ul>	For each fuel oil blend	NT1	Env-A 806.02(b)

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**VI. Recordkeeping Requirements**

The Owner or Operator shall be subject to the recordkeeping requirements identified in Table 4:

<b>Table 4 - Recordkeeping Requirements</b>				
<b>Item #</b>	<b>Requirement</b>	<b>Duration/Frequency</b>	<b>Applicable Unit</b>	<b>Regulatory Basis</b>
1.	<p><u>Liquid Fuel Oil Recordkeeping Requirements - Residual Fuel oil</u></p> <p>a.) Records showing the maximum weight percentage sulfur and quantity of each fuel delivery received; and</p> <p>b.) Records showing either:</p> <ul style="list-style-type: none"> <li>i. The analytical method used and the specific fuel analysis results of the shipment or consignment from which the delivery came; or</li> <li>ii. Delivery records sufficient to allow for traceability of the analytical results corresponding to each delivery received by the stationary source, showing:                             <ul style="list-style-type: none"> <li>1. The date of delivery;</li> <li>2. The quantity of delivery;</li> <li>3. The type of fuel;</li> <li>4. The maximum weight percentage sulfur; and</li> <li>5. The name, address, and telephone number of the company making the delivery.</li> </ul> </li> </ul>	For each delivery of fuel oil to the facility	NT1	Env-A 806.05 & Env-A 903.03(c)(2)
	c.) Records of analysis conducted as per Table 3, Item 1.b showing the sulfur content of the blended product.	For each fuel blending		
2.	<p><u>Liquid Fuel Oil Recordkeeping Requirements - Distillate fuel oil</u></p> <p>In lieu of sulfur testing pursuant to Table 3, Item 1a, the owner or operator may maintain a written statement from the fuel supplier that the sulfur content of the fuel as delivered does not exceed state or federal standards for that fuel.</p>	Whenever there is a change in fuel supplier but at least annually	NTAB1 & NTAB2	Env-A 806.05