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February 28, 2018

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*By Electronic Delivery & Hand Delivery*

Debra A. Howland  
Executive Director  
New Hampshire Public Utilities Commission  
21 South Fruit Street  
Concord, NH 03301

**RE: Public Service Company of New Hampshire d/b/a Eversource Energy  
Mercury Boiler Removal Project Monthly Status Update**

Dear Director Howland:

Pursuant to Order No. 25,956 issued on October 21, 2016, I enclose Eversource Energy's monthly update on the cost and progress for the Schiller Station mercury boiler removal project for the month of January 2018. If you have any questions, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Chris Goulding", written over a horizontal line.

Christopher J. Goulding  
Manager  
NH Revenue Requirements

Enclosures

cc : Service List, Docket No. DE 16-817 (by electronic mail only)

**Eversource**

**Removal of Mercury Boilers  
at Schiller Station**

Monthly Status Report

January 2018

**Date:** February 28, 2018  
**Subject:** Schiller Station Units 1 & 2 Mercury Boiler Removal  
Monthly Status Report # 15 – January 2018

### **Summary**

In late January 2018, the revised cost and schedule evaluation was completed by the demolition contractor Manafort Brothers Inc. (“MBI”), as new productivity levels could be quantified at that time. As a result, the new estimated completion date is December 2018. As discussed with NHPUC Staff and its counsel, an updated cost estimate is under review by the Eversource Energy Service Company Subsidiary Board of Directors and is expected to be provided in the March 2018 project update.

As previously discussed, the mercury boiler equipment removal project was proceeding as originally planned in 2016 until June 2017 when an employee of MBI, voiced concern regarding a potential mercury exposure. At that time, all work related to cutting, burning and handling steel components was stopped to evaluate the situation. As a result, demolition work stopped to assess conditions and did not resume until September 2017. Since then, demolition work has slowly ramped up using significantly modified procedures developed by MBI.

Actual expenses for the last fifteen months of activity are within the original budget. However, a budget increase as discussed below is now required to complete the project. No environmental concerns have been raised beyond those expected and typical at this time. The potential safety issue noted above was discussed in previous reports.

Due to the 2017 work-stoppage, the expected project completion date has been revised to December 2018. The revised schedule reflects the work stoppage for safety re-evaluation, a work transition to orientate several new contractor employees as well as to institute revised procedures that allowed a safe return to work during September 2017. At that time, the schedule and final project costs went under review based on the new work procedures and altered productivity due to greater safety controls.

### **Background**

On October 21, 2016 in Order No. 25,956 the Commission approved Eversource’s removal of two mercury boilers and associated equipment located at Schiller generating station as recommended by the Commission’s auction advisor, J.P. Morgan

The Order noted:

“The immediate launching of the Schiller abatement effort offers several advantages within this framework. Eversource has intimate, operationally-developed knowledge of Schiller Station conditions that would enhance the efficiency of the remediation effort. Prompt remediation of the conditions at Schiller Station will tend to make the asset a more attractive acquisition target, and protect potential operational synergies among the Schiller, Newington, and Merrimack Station facilities.”

And the Commission concluded:

“We are also satisfied that the cost-review checks called for by the terms of the Stipulation will enable the Commission, Staff, and the other parties to monitor the effort for cost overruns and other potential issues. We will require that Eversource provide monthly updates on the cost and progress of the removal to Staff and we will require Staff to bring any substantial variances to our attention. We therefore find that undertaking the proposed removal of the two mercury boilers and related equipment from the Schiller generation station is prudent within the framework of the divestiture auction. We will monitor the manner in which Eversource conducts the removal to ensure that the removal is prudently managed.”

## **Status**

### **1.0 Cost**

While preliminary cost projections noted that the project could be as high as in the \$30-40M range, the total project cost was originally estimated in the range of \$20-30M based on information provided by Eversource’s vendors prior to commencing the work. At that time, they could only estimate quantities of material to be removed, and could not make precise decisions regarding optimal work practices with respect to levels of safety and productivity. The Company has incurred cost through January 2018 of approximately \$14.7 million. As noted above, an updated cost estimate was generated during late January 2018 due to numerous changes in the approach to the work, requests by the NH DES to reduce air emissions further below allowable values, productivity changes, etc. Please refer to page 6, page 7 and page 8 for details of the actual cost by month through January 2018. Please note that the January invoice for Manafort Brothers was not accrued in January. Therefore the detail on page 6 does not reflect the \$1.765 million payment to Manafort Brothers for the January work performed. The January invoice payment will be reflected in the February activity on page 6 consistent with payment made in February.

### **2.0 Schedule**

The schedule and corresponding status review is now completed and reflected in the summary below.

	<b>Projected Schedule</b>	<b>Schedule Status</b>
Nov 2016	Mobilization & Initial Testing (a)	On Target
Dec 2016	ACM (b)	On Target
Jan - May 2017	ACM & Demolition (c)	On Target
Jun - Sep 2017	Delay – Safety Re-Evaluation	Delay (d)
Early Sep 2017	ACM & Demolition	Under Review

Oct - Dec 2017	ACM & Demolition	Under Review
Jan 2018	ACM & Demolition	See note (e) below
	<b>Project completion date now estimated to be December 2018</b>	

Notes (for table above):

- (a) "Mobilize" includes staging of temporary office trailers, parking, decontamination area, setting up enclosures, and preparing work & safety plans. "Testing" involves *in situ* pre-demolition chemical characterization of materials to determine proper offsite disposal criteria.
- (b) "ACM" = Abatement of Asbestos Containing Material.
- (c) "Demolition" = Demolition of Units 1&2 components over a 9-month period. Components to be removed include: stack, turbines, boilers, control room, coal bunker and all associated piping, lines and conduits.
- (d) Schedule impact due to Safety Re-Evaluation, new employee orientation, revised procedures and gradual startup, among other items.
- (e) Due to residual mercury remaining in the system at concentrations greater than originally anticipated, the project schedule has been extended and the total cost is expected to increase. The new estimated completion date is December 2018.

### 3.0 Permitting and Notifications

The existing project permits as described in the November 2016 monthly status report are in good standing with no issues. Those are listed below.

- Demolition Permit with the City of Portsmouth
- Abatement Notification to NHDES
- Alternative Air Emissions Compliance Plan
- Hazardous Waste Generator ID issued by NHDES

### 4.0 Critical Path Items Completed / Underway

Asbestos Abatement – 90% complete

Dismantling/Demolition – 49% complete

Gross asbestos abatement took place over the first 6 months of the project. Dismantling & demolition including integrated asbestos abatement is continuing to take place with reducing quantities, and is estimated to be fully completed by December 2018. The dismantling and integrated asbestos abatement involves 5 elevations in varied locations of the Unit 1 and 2 boiler house area. The work initially began at the higher elevations and proceeded to the lower elevations. Boiler dismantling has recently been modified to enhance productivity by working to complete boiler, condenser, and turbine dismantling on the turbine deck (El. 36') and proceed from the turbine deck up to where the boilers are currently dismantled down to at El. 82'. Where possible, work in multiple areas on different components is being completed in parallel. The asbestos and dismantling work conducted during January included the following:

- Active mercury system removal continued with an emphasis on cold-cutting methods to limit mercury vapors within containments. Also began utilization of Pac-190 "smoke eaters" to capture mercury emissions at the source of generation during cold-cutting and hot-work activities.

- Continued maintenance of all existing containments.
- Continued removal of mercury piping systems at El. 11' below Unit 1.
- Continued asbestos bulk final cleaning of the Unit 1 and 2 El. 82' and El. 59' containment outside the footprint of the Unit 1 and 2 boilers.
- Completed removal of the north and south Mercury Storage Tanks at El. 11' via cold cutting. Visible liquid mercury within the base of the tanks was removed during dismantling.
- Completed construction of large personnel decontamination area within the Planning Office on El. 36' for Units 1 and 2 and Turbine 1 dismantling activities on El. 36' and 49'.
- Began and completed removal of steam piping within the UREA tank area.
- Began and completed installation of new roof infill over the Stack opening on El. 59' roof.
- Began and completed installation of additional air emissions plenum for three new F-240 air movers servicing the containments on El. 36. The new plenum was tied into the retired Stack 5 with the two existing exhaust plenums for the project. Also began monitoring of carbon filtration efficiency on the F-240 air movers.
- Began and completed removal of asbestos on El. 11' south of the north elevator.
- Constructed and began utilizing new staging area under the transmission lines, on Eversource property, for scaffolding and other miscellaneous project equipment.
- Began removal of piping and conduits within the El. 36' and El. 49' boiler containment.
- Mobilized Vector VecLoader for ash removal within the Unit 1 and 2 boiler containment.
- Disposal of approximately 4,247 gallons of hazardous waste water.
- Disposal of approximately 28 tons of hazardous mercury impacted metal with asbestos.
- Disposal of approximately 21 tons of hazardous mercury impacted metal.
- Disposal of approximately 20 tons of general C&D debris.
- Disposal of approximately 12.3 tons of hazardous mercury impacted metal for retort.

- Disposal of approximately 1 ton of hazardous mercury impacted metal with asbestos for retort.
- Disposal of approximately 7 gallons of hazardous liquid mercury for retort.
- Removed temporary hazardous waste storage area and all staged waste from the Mobil Yard following the completion of the Station sale to Granite Shore Power. All hazardous material is now staged within the fenced work area adjacent to Schiller Station.

## **5.0 Significant Issues**

No new significant issues were identified during January 2018.

## **6.0 Cost & Schedule Impacts**

The new completion date is now scheduled for December 2018. The new total project cost increase is now under review by the Eversource Energy Service Company Subsidiary Board of Directors and will be provided in the March 2018 project update. This increase in cost and schedule are due to modified safety procedures which have reduced productivity, increased disposal costs, and costs associated with additional controls to further reduce emissions “above & beyond” compliance, etc. The Company is actively managing the cost and schedule to ensure that all costs are prudently incurred.

## **7.0 Agency Visits, Inspections & Audits**

On 1/18/18, the Occupational Safety and Health Administration (OSHA) was on-Site and conducted observation of Absolute’s removal of asbestos from the El. 11’ containment south of the north elevator.

## **8.0 Next Report Due**

The next monthly report will be submitted to the Commission by March 30, 2018.

**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Removal of Mercury Boilers Deferred Costs**  
**Monthly Status Report for January 2018**

Line #	Description	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Total 2018
1	<b>Internal Cost:</b>													
2	-Employee Labor	\$ 22,655												\$ 22,655
3	-Employee Misc. Expense	335												335
4	-Materials & Supplies	-												-
5														
6	<b>Vendor Cost:</b>													
7	-O'Connor Corp.	\$ -												\$ -
8	-William Scotsman Inc.	2,430												2,430
9	-Mohlin & Company	-												-
10	-GZA GEO Environmental Inc.	66,463												66,463
11	-Ayer Electric Inc.	-												-
12	-Manafort Brothers	296,130												296,130
13														
14	<b>Monthly Total</b>	388,013	-	-	-	-	-	-	-	-	-	-	-	388,013
15														
16	<b>Balance</b>	\$ 12,509,069	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
17														
18	Average Balance	\$ 12,315,062	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
19	Tax Impact @ 27.241%	(3,354,746)	-	-	-	-	-	-	-	-	-	-	-	
20	Average Investment	\$ 8,960,316	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
21	Stipulated Rate of Return	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	
22	<b>Interest</b>	\$ 52,631	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 52,631
23														
24	<b>Monthly Total Including Interest</b>	440,644	-	-	-	-	-	-	-	-	-	-	-	
25														
26	<b>Cumulative Total Including Interest</b>	12,941,231	12,941,231	12,941,231	12,941,231	12,941,231	12,941,231	12,941,231	12,941,231	12,941,231	12,941,231	12,941,231	12,941,231	



**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Removal of Mercury Boilers Deferred Costs**  
**Monthly Status Report for 2017**

Line #	Description	Jan 2017	Feb 2017	Mar 2017	Apr 2017	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Total 2017
1	<b>Internal Cost:</b>													
2	-Employee Labor	\$ 34,463	\$ 31,022	\$ 32,376	\$ 32,105	\$ 35,099	\$ 34,447	\$ 43,593	\$ 36,304	\$ 27,789	\$ 33,501	\$ 31,868	\$ 41,218	\$ 413,784
3	-Employee Misc. Expense	105	225	254	142	386	248	254	229	370	175	140	260	2,788
4	-Materials & Supplies	-	-	-	-	-	-	-	-	-	-	-	-	-
5														
6	<b>Vendor Cost:</b>													
7	-O'Connor Corp.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	-William Scotsman Inc.	1,510	1,510	1,510	834	2,430	590	2,430	1,510	1,510	1,510	1,510	590	17,444
9	-Mohlin & Company	12	-	-	-	-	-	-	-	-	-	-	-	12
10	-GZA GEO Environmental Inc.	51,358	39,130	59,349	49,738	51,517	55,687	30,903	94,612	7,725	39,601	50,726	40,846	571,193
11	-Ayer Electric Inc.	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-Manafort Brothers	1,065,685	240,929	2,065,674	969,690	2,242,510	(471,604)	97,743	625,126	532,282	886,322	874,768	174,029	9,303,155
13														
14	<b>Monthly Total</b>	1,153,133	312,817	2,159,162	1,052,509	2,331,942	(380,631)	174,923	757,781	569,677	961,109	959,012	256,943	10,308,376
15														
16	<b>Balance</b>	\$ 2,965,812	\$ 3,278,629	\$ 5,437,791	\$ 6,490,300	\$ 8,822,241	\$ 8,441,610	\$ 8,616,533	\$ 9,374,314	\$ 9,943,991	\$ 10,905,100	\$ 11,864,112	\$ 12,121,056	\$ 12,121,056
17														
18	Average Balance	\$ 2,389,246	\$ 3,122,221	\$ 4,358,210	\$ 5,964,045	\$ 7,656,270	\$ 8,631,926	\$ 8,529,071	\$ 8,995,423	\$ 9,659,153	\$ 10,424,546	\$ 11,384,606	\$ 11,992,584	
19	Tax Impact @ 40.330%	(963,583)	(1,259,192)	(1,757,666)	(2,405,299)	(3,087,774)	(3,481,256)	(3,439,774)	(3,627,854)	(3,895,536)	(4,204,219)	(4,591,412)	(4,836,609)	
20	Average Investment	\$ 1,425,663	\$ 1,863,029	\$ 2,600,544	\$ 3,558,746	\$ 4,568,497	\$ 5,150,670	\$ 5,089,297	\$ 5,367,569	\$ 5,763,616	\$ 6,220,326	\$ 6,793,195	\$ 7,155,975	
21	Stipulated Rate of Return	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	
22	<b>Interest</b>	\$ 9,546	\$ 12,475	\$ 17,413	\$ 23,877	\$ 30,652	\$ 34,558	\$ 34,216	\$ 36,087	\$ 38,750	\$ 41,568	\$ 45,396	\$ 47,821	
23														
24	<b>Monthly Total Including Interest</b>	1,162,679	325,291	2,176,575	1,076,386	2,362,594	(346,073)	209,139	793,868	608,427	1,002,677	1,004,409	304,764	
25														
26	<b>Cumulative Total Including Interest</b>	2,982,530	3,307,821	5,484,395	6,560,782	8,923,375	8,577,303	8,786,441	9,580,310	10,188,737	11,191,414	12,195,823	12,500,587	

**Public Service Company of New Hampshire d/b/a Eversource Energy**  
**Removal of Mercury Boilers Deferred Costs**  
**Monthly Status Report for 2016**

Line #	Description	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016	Nov 2016	Dec 2016	Total 2016
1	<b>Internal Cost:</b>													
2	-Employee Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 34,510	\$ 34,490	\$ 69,001
3	-Employee Misc. Expense	-	-	-	-	-	-	-	-	-	-	230	243	473
4	-Materials & Supplies	-	-	-	-	-	-	-	-	-	-	9,889	183	10,072
5														
6	<b>Vendor Cost:</b>													
7	-O'Connor Corp.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,000	\$ 33,058	\$ (149)	\$ 55,909
8	-William Scotsman Inc.	-	-	-	-	-	-	-	-	-	-	4,993	1,510	6,503
9	-Mohlin & Company	-	-	-	-	-	-	-	-	-	-	10,100	1,838	11,938
10	-GZA GEO Environmental Inc.	-	-	-	-	-	-	-	-	-	-	23,000	33,809	56,809
11	-Ayer Electric Inc.	-	-	-	-	-	-	-	-	-	-	46,941	(11,238)	35,703
12	-Manafort Brothers	-	-	-	-	-	-	-	-	-	-	680,010	886,262	1,566,272
13														
14	<b>Monthly Total</b>	-	-	-	-	-	-	-	-	-	23,000	842,732	946,948	1,812,679
15														
16	<b>Balance</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,000	\$ 865,732	\$ 1,812,679	\$ 1,812,679
17														
18	Average Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,500	\$ 444,366	\$ 1,339,206	
19	Tax Impact @ 40.330%	-	-	-	-	-	-	-	-	-	(4,638)	(179,213)	(540,102)	
20	Average Investment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,862	\$ 265,153	\$ 799,104	
21	Stipulated Rate of Return	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%
22	<b>Interest</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 46	\$ 1,775	\$ 5,350	\$ 7,171
23														
24	<b>Monthly Total Including Interest</b>	-	-	-	-	-	-	-	-	-	23,046	844,507	952,298	
25														
26	<b>Cumulative Total Including Interest</b>	-	-	-	-	-	-	-	-	-	23,046	867,553	1,819,851	