

Eversource

**Removal of Mercury Boilers
at Schiller Station**

Monthly Status Report

May 2017

Date: June 30, 2017
Subject: Schiller Station Units 1 & 2 Mercury Boiler Removal
Monthly Status Report # 7 – May 2017

Summary

The mercury boiler equipment removal project through May 2017 proceeded as planned. Actual expenses for the first seven months of activity are in line with the overall estimated cost range. No environmental concerns have been raised beyond those expected and typical through this reporting period. Subsequent to this reporting period, two issues noted below (in Significant Issues section) have arisen that are being/have been appropriately managed and addressed.

The current expected project completion date remains October 15, 2017. This schedule reflects work plans and resources consistent with the actual conditions and productivity experienced during January through May 2017.

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**

The total project cost estimate is in the range of \$20 - 30 million based on information provided by Eversource's vendors. The Company has incurred cost through May 2017 of approximately \$8.9 million. No changes to the overall estimated cost range are expected at this time. Please refer to page 4 and page 5 for details of the actual cost by month.

2.0 Schedule

The anticipated schedule and corresponding status for the project are as follows:

	Projected Schedule	Schedule Status
Nov 2016	Mobilize & Testing (a)	On Target
Dec 2016	ACM (b)	On Target
Jan 2017	ACM & Demolition (c)	On Target
Feb 2017	ACM & Demolition	Schedule Revised
Mar 2017	ACM & Demolition	On Target
Apr 2017	ACM & Demolition	On Target
May 2017	ACM & Demolition	On Target
Jun 2017	Demolition	
Jul 2017	Demolition	
Aug 2017	Demolition	
Sep 2017	Demolition	
Oct 2017	Cleanup & Demobilization	
	Target completion date: 15 October 2017	

Notes:

- (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.

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

As discussed last month, to provide additional flexibility with the project schedule a request has been submitted to NHDES for approval of an alternative compliance plan for air emissions. The demonstrated compliance model used to date continues to be used as the compliance method for the project; and all air monitoring data has been well under compliance limits.

4.0 Critical Path Items Completed / Underway

Asbestos Abatement – 87% complete

Dismantling/Demolition – 30% complete

Bulk asbestos abatement is taking place over 6 months and dismantling/demolition including integrated asbestos abatement over 11 months, involving 5 elevations in varied locations of the Unit 1 and 2 boiler house area. The work began at the higher elevations and is proceeding to the lower elevations. Where possible, work is being completed in parallel. The asbestos and dismantling work during May included the following:

- Completed asbestos abatement of the exterior portion of the Unit 1 Flue Duct.
- Continued removal of asbestos refractory from the Unit 1 and Unit 2 side walls between El. 59' and El. 82'.
- Collection & disposal of approximately 52 cubic yards of asbestos.
- Completed demolition and removal of the Unit 1 and Unit 2 Superheater tubing and side walls above El. 82'.
- Completed demolition of the Precipitator.
- Began Unit 1 & 2 boiler side wall dismantling between El. 59' and El. 82'.
- Began demolition of the Deaerator tank at El. 59'.
- Continued removal of mercury and non-mercury piping at El. 59'.
- Began demolition of the Turbine 2 mercury and non-mercury piping at El. 36'.
- Completed demolition of coal bunker between column lines 2-4.
- Disposal of approximately 8 tons of visible mercury impacted piping and 20 drums (approximately 35 gallons) of liquid mercury for retort.
- Collection & disposal of approximately 172 tons of metal (non-mercury impacted and mercury impacted).

- Collection & disposal of approximately 7000 gallons of hazardous wastewater from decontamination units.
- Collected and packaged approximately 4 gallons of liquid mercury (not yet disposed off-site).

5.0 Significant Issues

On May 10, 2017 at approximately 0815 hours, a fire was observed at El. 36' in the Planning Office wooden rafters within the inactive Turbine #1 containment. Manafort immediately notified the Schiller Station Control Room to call the Portsmouth Fire Department and Schiller Station personnel and Mercury Boiler project workers were evacuated except for the personnel in the Control Room. Schiller Station's power generation was not interrupted during the incident. The Portsmouth Fire Department extinguished the fire and gave the all clear for personnel to return to work in Schiller Station at 1015 hrs. Manafort conducted a root cause analysis of the incident and determined that an employee sizing pipe pieces at El. 59' with a torch accidentally cut through the diamond plate floor causing hot metal slag to fall on the rubber roofing of the Planning Office below. The slag melted through the rubber and began to smolder in the wooden rafters causing the fire. Hot work was temporarily suspended until the root cause analysis was conducted by Manafort and new fire watch and hot work procedures were implemented. Eversource provided the go ahead to resume torch cutting activities at the close of business on May 12, 2017.

In addition to the incident described above, advance notice of an issue that occurred during mid-June is included in this report and will be expanded on during the June 2017 Report. During mid-June, all metal cutting, burning and handling was temporarily halted to assess safety practices and personal protective equipment (PPE) due to low level mercury being detected in the results of a blood test taken by a Manafort subcontractor. Potential impacts to the overall project schedule are currently being assessed. Further details will be provided in the June 2017 Report.

6.0 Cost & Schedule Impacts

The schedule expected completion date was extended by one month to mid-October 2017 as indicated in the February Report. This date remains well ahead of the asset transfer date currently in the sale schedule prepared by JP Morgan.

7.0 Agency Visits, Inspections & Audits

During May 2017, the Portsmouth Fire Department responded to a fire a discussed above in Paragraph 5. In addition, regulators from the NHDES Air Compliance Group visited the site during May 2017 at the invitation of Eversource. The NHDES visit was in support of the Project

Alternate Air Emissions Compliance Plan submitted by Eversource. No other agency visits, inspections or audits occurred during May 2017.

8.0 Next Report Due

The next monthly report will be submitted to the Commission by July 31, 2017.

Public Service Company of New Hampshire d/b/a Eversource Energy
Removal of Mercury Boilers Deferred Costs
Monthly Status Report for May 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	Internal Cost:													
2	-Employee Labor	\$ 34,463	\$ 31,022	\$ 32,376	\$ 32,105	\$ 35,099	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 165,064
3	-Employee Misc. Expense	105	225	254	142	386	-	-	-	-	-	-	-	1,111
4	-Materials & Supplies	-	-	-	-	-	-	-	-	-	-	-	-	-
5														
6	Vendor Cost:													
7	-O'Connor Corp.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	-William Scotsman Inc.	1,510	1,510	1,510	834	2,430	-	-	-	-	-	-	-	7,794
9	-Mohlin & Company	12	-	-	-	-	-	-	-	-	-	-	-	12
10	-GZA GEO Environmental Inc.	51,358	39,130	59,349	49,738	51,517	-	-	-	-	-	-	-	251,092
11	-Ayer Electric Inc.	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-Manafort Brothers	1,086,678	240,929	2,065,674	969,690	2,242,510	-	-	-	-	-	-	-	6,605,482
13														
14	Monthly Total	1,174,126	312,817	2,159,162	1,052,509	2,331,942	-	-	-	-	-	-	-	7,030,555
15														
16	Balance	\$ 2,986,806	\$ 3,299,622	\$ 5,458,784	\$ 6,511,293	\$ 8,843,235	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
17														
18	Average Balance	\$ 2,399,743	\$ 3,143,214	\$ 4,379,203	\$ 5,985,039	\$ 7,677,264	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
19	Tax Impact @ 40.330%	(967,816)	(1,267,658)	(1,766,133)	(2,413,766)	(3,096,241)	-	-	-	-	-	-	-	
20	Average Investment	\$ 1,431,926	\$ 1,875,556	\$ 2,613,071	\$ 3,571,273	\$ 4,581,023	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
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	Interest	\$ 9,588	\$ 12,558	\$ 17,497	\$ 23,961	\$ 30,736	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94,341
23														
24	Monthly Total Including Interest	1,183,714	325,375	2,176,659	1,076,470	2,362,678	-	-	-	-	-	-	-	
25														
26	Cumulative Total Including Interest	3,003,565	3,328,940	5,505,599	6,582,069	8,944,747	8,944,747	8,944,747	8,944,747	8,944,747	8,944,747	8,944,747	8,944,747	

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	Internal Cost:													
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	Vendor Cost:													
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	Monthly Total	-	-	-	-	-	-	-	-	-	23,000	842,732	946,948	1,812,679
15														
16	Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 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	Interest	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 46	\$ 1,775	\$ 5,350	\$ 7,171
23														
24	Monthly Total Including Interest	-	-	-	-	-	-	-	-	-	23,046	844,507	952,298	
25														
26	Cumulative Total Including Interest	-	-	-	-	-	-	-	-	-	23,046	867,553	1,819,851	