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Subject **Daily Monitoring Report**

Client Eversource Energy **Date** October 29, 2019

Project Independent Environmental Monitoring, Little Bay Submarine Cable Installation, Seacoast Reliability Project

Project No. E2X85301 **File** Daily Monitoring Report_SRP Little Bay IEM_Cable 2 Install Day 2 10-29-19

Prepared by Jeffrey Nield **Phone No.** 617-963-3109

Copies to Gregg Comstock, NH DES
 David Price, NH DES
 Chris Nash, NH DES
 Kurt Nelson, Eversource Energy

WEATHER OBSERVATIONS				
TIME	WIND (DIRECTION AND SPEED [KTS])	VISIBILITY (NM)	PRECIPITATION (PREV. 24H)	COMMENTS
07:30	5 SSE gusts to 10	>5 NM	1"	47°F overcast, misting. Low tide (-0.6 ft) at 08:00 +/-.
10:00	5 SSE gusts to 10	>5 NM	1"	50 °F overcast, periodic light showers. High tide (8.0 ft) at 14:00 +/-.
17:00	5 SSE	>5 NM	1"	52 °F overcast, periodic light showers

Summary of Work Activities

Activity	EDT	Work Description
Cable Installation	0720	IEM on main barge in contact with water quality team. Monitoring began at 0900 for a 1000 jet plow start.
	1000	All equipment ready for plow start. 41+858 starting location.
	1015	Plowing through the channel.

	1140 - 1400	Four anchors changed, tug boat facing up to the barge 2002. Water quality team to shore for break.
	1420	Resume burial by jet sled.
	1552	Switch forward anchors on eastern tidal flat. Station 436+88. Water quality team to shore for break.
	1700	Resume burial of remaining channel. Water quality team back on site for monitoring.
	1810	End plow operations at 442+27. Spuds down. Secure equipment.
	1830	End of Day

Summary of Observations

Item	Observations and Notes
1	<p>Jet plow operations – Cable 2 (center alignment) installation by jet plow across Little Bay channel. Begin plowing at approximately 1000. One complete anchor move (4 anchors lasting approximately 3 hours from 1140 – 1400 h) and a second anchor change (2 anchors lasting approximately 1.75 hours from 1552 – 1700 h) were completed. Anchors were preset so there was no lifting and resetting of anchors only disconnection/connection of anchors leads by tug and workboat.</p>
2	<p>Water quality monitoring – Weather monitored since 72 hours before scheduled jet plow. No weather or wind concerns for IEM and WQ Team for scheduled Cable 2 installation across channel.</p> <p>Normandeau WQ team went ashore for anchor changes to relieve the crew. During second anchor change at 1552 the Normandeau team requested that the IEM inform them 20 minutes before restart of jet plowing so that the WQ could reposition to stations. IEM provided approximately 10 minutes of notice and the WQ was slightly (less than 10 minutes) delayed in resuming WQ monitoring as jet plowing restarted in the channel after the anchor change.</p>

Turbidity Data Reports and IEM Actions/Responses

Turbidity (NTU) Reported	Time of Report	IEM Action/Response	Time of Response	Result
<p>Boundary Station Action Levels (BSAL) reported by Normandeau at 1000.</p> <p>Tidal: BSAL = 15 NTU</p> <p>Channel: BSAL = 15 NTU</p>				

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Reference Turbidity Data reported to IEM on October 28, 2019 at 1300

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Hour 1 Water Quality Report from Normandeu

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Turbidity Monitoring Spreadsheet for SRP 2019 TIDAL STATIONS JET PLOW DATA FROM 10/29/19					Turbidity Monitoring Spreadsheet for SRP 2019 CHANNEL STATIONS JET PLOW DATA FROM 10/29/19						
Station	Max Turbidity			Average Reference Turbidity (NTU)	Station	Max Turbidity			Average Reference Turbidity (NTU)		
	(NTU)	Time	Depth			(NTU)	Time	Depth			
Nearfield	11	2.70	10:55	S	2.70	Nearfield	12	3.10	11:20	B	2.77
	16	1.80	11:20	B	1.20		13	3.40	11:35	M	3.08
Boundary	23	3.30	11:25	M	2.73	Boundary	17	10.40	10:24	S	4.22
							18	1.10	10:38	B	1.00
							24	3.20	11:31	B	2.75
							25	2.70	11:37	B	2.58
							27	2.50	10:50	B	2.30
							28	2.30	10:58	B	2.20
						29	9.30	10:46	M	6.52	
						Ref	43	2.60	11:06	S	2.60
10/28/19 BSAL = 15 NTU					10/28/19 BSAL = 15 NTU						

Hour 2 Water Quality Report from Normandeau

Turbidity Monitoring Spreadsheet for SRP 2019		Turbidity Monitoring Spreadsheet for SRP 2019									
TIDAL STATIONS					CHANNEL STATIONS						
JET PLOW DATA FROM 10/29/19					JET PLOW DATA FROM 10/29/19						
Station	Max Turbidity			Average Reference Turbidity (NTU)	Station	Max Turbidity			Average Reference Turbidity (NTU)		
	(NTU)	Time	Depth			(NTU)	Time	Depth			
Nearfield	11	3.10	13:00	B	2.90	Nearfield	12	4.80	13:15	B	3.16
	16	1.80	11:20	B	1.06		13	3.40	11:35	M	3.04
Boundary	23	3.30	11:25	M	2.60	Boundary	17	10.40	10:24	S	3.39
Ref	42	2.90	13:34	B	2.67		18	1.10	10:38	B	0.97
							24	3.70	13:07	S	2.98
							25	2.80	13:13	B	2.61
							27	2.90	13:00	M	2.42
							28	5.20	13:18	S	2.64
						29	9.30	10:46	M	5.17	
						Ref	41	2.60	13:21	M	2.43
							43	3.40	13:28	B	2.88
10/29/19 BSAL = 15 NTU					10/29/19 BSAL = 15 NTU						

Hour 3 Water Quality Report from Normandeau.

Turbidity (NTU)		Time of Report		IEM Action/Response		Time of Response		Result			
Turbidity Monitoring Spreadsheet for SRP 2019 TIDAL STATIONS JET PLOW DATA FROM 10/29/19					Turbidity Monitoring Spreadsheet for SRP 2019 CHANNEL STATIONS JET PLOW DATA FROM 10/29/19						
Station	Max Turbidity			Average Reference Turbidity (NTU)	Station	Max Turbidity			Average Reference Turbidity (NTU)		
	(NTU)	Time	Depth			(NTU)	Time	Depth			
Nearfield	10	3.90	14:50	B	3.73	12	4.80	13:15	B	3.15	
	11	3.40	14:35	B	2.98	13	3.40	11:35	M	2.98	
	15	1.40	14:46	B	1.07	17	10.40	10:24	S	2.80	
Boundary	16	1.80	11:20	B	0.96	18	1.10	10:38	B	0.93	
	23	3.30	11:25	M	2.63	24	3.70	13:07	S	2.91	
Ref	42	2.90	13:34	B	2.67	25	2.80	13:13	B	2.59	
						27	2.90	13:00	M	2.29	
						28	5.20	13:18	S	2.57	
						29	9.30	10:46	M	4.61	
						Ref	41	2.60	13:21	M	2.43
							43	3.40	13:28	B	2.88
10/29/19 BSAL = 15 NTU					10/29/19 BSAL = 15 NTU						

Hour 4 Water Quality Report from Normandeu.

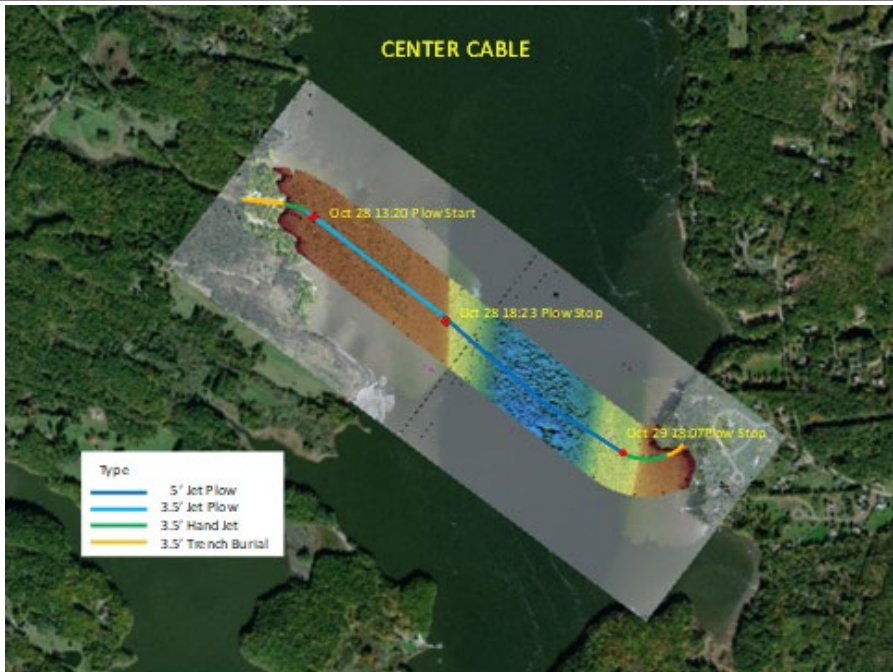
Turbidity Monitoring Spreadsheet for SRP 2019 TIDAL STATIONS JET PLOW DATA FROM 10/29/19					Turbidity Monitoring Spreadsheet for SRP 2019 CHANNEL STATIONS JET PLOW DATA FROM 10/29/19					
Station	Max Turbidity			Average Reference Turbidity (NTU)	Station	Max Turbidity			Average Reference Turbidity (NTU)	
	(NTU)	Time	Depth			(NTU)	Time	Depth		
Nearfield	10	3.90	14:50	B	3.73	12	4.80	13:15	B	3.13
	11	3.40	14:35	B	2.98	13	21.40	15:25	B	4.13
	14	3.90	15:35	B	2.80	17	10.40	10:24	S	2.29
	15	1.40	14:46	B	1.07	18	1.10	10:38	B	0.83
	16	1.80	11:20	B	0.96	22				
	19	0.60	15:40	B	0.47	24	3.70	13:07	S	2.77
Boundary	21					25	2.80	13:13	B	2.49
	23	3.30	11:25	M	2.53	27	7.00	15:11	S	2.60
	26	2.30	15:25	M	2.13	28	5.20	13:18	S	2.49
	30	2.30	15:16	B	2.20	29	9.30	10:46	M	4.12
Ref	42	2.90	13:34	B	2.67	41	2.60	13:21	M	2.43
						43	3.40	13:28	B	2.88

Hour 5 Water Quality Report from Normandeu

Turbidity (NTU) Reported	Time of Report	IEM Action/Response	Time of Response	Result
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Turbidity Monitoring Spreadsheet for SRP 2019 TIDAL STATIONS JET PLOW DATA FROM 10/29/19						Turbidity Monitoring Spreadsheet for SRP 2019 CHANNEL STATIONS JET PLOW DATA FROM 10/29/19					
	Station	Max Turbidity			Average Reference Turbidity (NTU)		Station	Max Turbidity			Average Reference Turbidity (NTU)
		(NTU)	Time	Depth				(NTU)	Time	Depth	
Nearfield	10	3.90	14:50	B	3.73	Nearfield	12	6.00	17:15	B	3.38
	11	3.40	14:35	B	2.98		13	21.40	15:25	B	3.96
	14	3.90	15:35	B	2.60		17	10.40	10:24	S	2.06
	15	1.40	14:46	B	1.07		18	1.10	10:38	B	0.77
	16	1.80	11:20	B	0.96		22				
	19	0.60	15:40	B	0.44		24	3.70	13:07	S	2.76
Boundary	21					Boundary	25	6.30	17:17	B	2.72
	23	3.30	11:25	M	2.53		27	7.00	15:11	S	2.50
	26	2.50	17:23	B	2.26		28	5.20	13:18	S	2.42
	30	10.50	17:13	S	3.75		29	9.30	10:46	M	4.12
Ref	42	2.90	13:34	B	2.67	Ref	41	2.60	13:21	M	2.43
							43	3.40	13:28	B	2.88

Hour 6 Water Quality Report from Normandieu



Cable 2 Installation – October 28 & 29, 2019 including start and end locations (Plow DBL) for channel crossing (Day 2). Map courtesy of Eversource (R. Muñoz).

Summary of Work Stops, Modification and Other Operational changes requested by the IEM during Operations

Item	
1	No corrective actions were ordered by the IEM during the channel crossing/installation of Cable #2.

Action Items

Item	
1	Completed jet plow installation of Cable #2 (center alignment). Completed cable installation across channel. Eastern landfall/cable landing scheduled for 10/30/19 and 10/31/19.
2	Normandeau, IEM and operations team to discuss Cable #3 installation and how to minimize prop wash on the tidal flat from tug and work boats.
3	Durocher requested water quality monitoring and IEM support for possible "trial hand jetting" on the eastern landing area within Little Bay for Friday, November 1, 2019. Durocher would like to test various jet tools with the divers because of dense sediments on the eastern tidal flats. IEM will be present for this trial if scheduled.

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my own inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate, and complete to the best of my knowledge and belief.

Signed: _____  _____

Jeffrey Nield
Independent Environmental Monitor
617-963-3109
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Dated: October 30, 2019