

Weekly Field Report
Week: 12-29-13 through 01-04-14
New Bedford Harbor Lower Harbor CAD Cell (LHCC)

This Weekly Field Report was prepared to serve as a summary of field activities conducted throughout the week for Phase I dredging of the New Bedford Harbor Lower Harbor CAD Cell (LHCC) in New Bedford, Massachusetts.

1. Introduction:

The weekly field report describes the activities carried out by the Contractor (Cashman/Tripp Marine), the Owner's Representative (Apex Companies, LLC), and any subcontractors completing work within the scope of the project requirements.

This Weekly Field Report represents the ninth Report associated with Phase I dredging of the LHCC in New Bedford Harbor, and the associated handling and disposal of dredged materials at CAD cells within the Harbor, and at designated open-water disposal sites approved for this Project.

This Ninth Report for the LHCC dredging activities includes:

- Daily Inspection Reports from the dredging oversight performed during the week of December 29th 2013 through January 04th 2014. Daily contractor activities are included in the form of Daily Inspection Reports noting equipment observed on site and a summary of contractor activities. (See Attachment 1);
- Water Quality Monitoring Forms completed for the week of December 29th through January 4th are attached (Attachment 2). Included with the attached forms is Figure 1 *Lower Harbor CAD Cell Phase I Water Quality Monitoring Plan*, which shows the locations of the water quality monitoring events conducted during this reporting period. Per the approved Water Quality Monitoring Plan and associated performance standards for the dredging efforts being conducted during this reporting period Apex has;
 - Conducted water quality monitoring events a minimum of two days per week.
 - Conducted water quality monitoring for disposal events into either the existing CAD Cell #2 or CAD Cell #3 of Top of LHCC sediments removed by this Project.
 - Performed visual inspections of dredged materials in the disposal scow prior to disposal to ascertain the effectiveness of dewatering. If deemed necessary by the visual inspection, Apex will monitor the water quality of the effluent discharge from the carbon filtration system.

2. Summary:

The Contractor, through its subcontractor, Tripp Marine, conducted dredging at the LHCC December 30th and 31st, and January 1st and 4th. No dredging was performed on January 2nd and 3rd due to the passing of a strong Nor'easter. Dredging operations focused on the removal of Phase I Top of CAD cell sediments and the disposal of these sediments into CAD Cell #3. During this reporting period, dredging operations were conducted using a conventional digging bucket in certain areas of the dredge footprint where dense sandy materials were known to exist, per verbal approval discussed at the November 13th project meeting and the subsequent formal letters provided on November 21st and December 23rd. Tripp Marine was observed conducting these activities during the authorized operational window of 7AM until sunset, utilizing a single dredge plant; the tug *Sand Pebble*; a 900 cubic yard dump scow – *TMC 140*; a 3000 cubic yard pocket scow *SEL-2000*, and a small utility boat. Tripp Marine was utilizing the Cashman dewatering barge as a

staging area for dewatering operations and as an aid in accurately positioning the dump scow for disposal operations into CAD Cell #3. Dredging operations were conducted without the use of silt curtains because these activities lie outside the time of year restrictions noted in the Project Specifications.

3. Operational Notes:

Dredging:

Dredging at the LHCC continued through the week of December 29th utilizing an open conventional digging bucket, per the terms outlined in the letters issued on November 21st and December 23rd. Apex conducted three days of water quality monitoring while the open conventional bucket was being used to ensure that the use of the conventional bucket did not result in an exceedance of any project-specific water quality standards. Water quality monitoring was completed December 30th, January 1st, and January 4th. Monitoring of dredging activities will continue on a schedule of a minimum of two events per week as required by the project performance standards.

Disposal:

Disposal of “Top of LHCC” sediments was conducted on the four consecutive days between December 30th and January 2nd. Based on scow logs, approximately 500 and 800 cubic yards of material (assuming 120 pounds/ft³ for dredged materials) was placed into CAD Cell #3 during each disposal event for scow TMC-140 and SEI-2000, respectively. Sediments contained in the scow were inspected prior to each disposal to assess the effectiveness of dewatering. Water quality monitoring was completed on each day of disposal activity, with the exception of December 31st.

Table 1 – Cumulative Dredging Progress

Period of Activity	Volume (cy)
Approximate Vol. Dredged this Reporting Period	2,000
Approximate Volume Dredged to Date	20,400

4. Monitoring Summary

There were no water quality exceedances observed during this reporting period related to either dredging or disposal operations. No water quality samples were collected.

Prepared by:
Apex Companies, LLC



John B. McAllister, P.E.
Senior Project Engineer



Don Boyé
Senior Project Manager

Attachment 1
Daily Inspection Reports



City of New Bedford Harbor Development Commission
New Bedford Harbor USEPA Lower Harbor CAD Cell
CFDA No.: 66.802
Inspection Report

Inspector: K. Ryan

Date: 30 December 2013

Contractor: Tripp Marine Foreman/Supt: Pyne Tripp

Weather	AM:	<u>Ptly. Cloudy</u>	Temperature	AM:	<u>21</u>
	PM:	<u>Ptly. Cloudy Winds 10-15k W</u>		PM:	<u>42</u>
Tides	High	<u>0532</u>	AM	<u>1757</u>	PM
	Low	<u>1136</u>	AM	<u>2323</u>	PM

Manpower Onsite

Equipment Onsite

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0730 to conduct oversight of dredging activities and to inspect dredged materials in scow for disposal authorization. Dredged materials held in scow TMC-140 were disposed into CAD Cell #3 at 0800, after which scow was maneuvered alongside dredge plant. Dredging begins at 0850 in Dredge Area T-5 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Dredging continued until 1406, at which point scow TMC-140 was maneuvered over to dewatering barge.

End-of-day draft marks on the scow were 9' FWD and AFT.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye

Date: 30 December 2013

Title: _____

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File: DIR_LHCC_123013



City of New Bedford Harbor Development Commission
New Bedford Harbor USEPA Lower Harbor CAD Cell
CFDA No.: 66.802
Inspection Report

Inspector: C. Stillman, M. Martinho

Date: 31 December 2013

Contractor: Tripp Marine Foreman/Supt: Pyne Tripp

Weather	AM: <u>Overcast.</u>	Temperature	AM: <u>18</u>
	PM: <u>Overcast. Winds 5-10k WNW</u>		PM: <u>27</u>
Tides	High <u>0626</u> AM <u>1850</u> PM		
	Low <u>-</u> AM <u>1228</u> PM		

Manpower Onsite

Equipment Onsite

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0745 to conduct oversight of dredging activities and to inspect dredged materials in scow for disposal authorization. Dredged materials held in scow TMC-140 were disposed into CAD Cell #3 at 0855, after which scow was maneuvered alongside dredge plant. Dredging begins at 0925 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Dredging continued until 1315, at which point scow TMC-140 was maneuvered over to dewatering barge.

End-of-day draft marks on the scow were 8.5' FWD and AFT.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye

Date: 31 December 2013

Title: _____

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File: DIR_LHCC_123113



City of New Bedford Harbor Development Commission
New Bedford Harbor USEPA Lower Harbor CAD Cell
CFDA No.: 66.802
Inspection Report

Inspector: C. Stillman

Date: 01 January 2014

Contractor: Tripp Marine Foreman/Supt: Pyne Tripp

Weather	AM:	<u>Ptly. Cloudy.</u>	Temperature	AM:	<u>17</u>
	PM:	<u>Ptly. Cloudy. Winds 5-10k W</u>		PM:	<u>28</u>
Tides	High	<u>0719</u>	AM	<u>1944</u>	PM
	Low	<u>0017</u>	AM	<u>1320</u>	PM

Manpower Onsite

Equipment Onsite

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0630 to conduct oversight of dredging activities and to inspect dredged materials in scow for disposal authorization. Dredged materials held in scow TMC-140 were disposed into CAD Cell #3 at 0933, after which scow was maneuvered alongside dredge plant and Apex boards Pyne dredge plant to confirm GPS position of dredge bucket. Dredging begins at 1032 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Dredging continued until 1437, at which point scow TMC-140 was maneuvered over to dewatering barge.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye

Date: 01 January 2014

Title: _____

Page: 1 of 1

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File: DIR_LHCC_010114



City of New Bedford Harbor Development Commission
New Bedford Harbor USEPA Lower Harbor CAD Cell
CFDA No.: 66.802
Inspection Report

Inspector: C. Stillman

Date: 02 January 2014

Contractor: Tripp Marine Foreman/Supt: Pyne Tripp

Weather	AM:	<u>Fog. Snow.</u>	Temperature	AM:	<u>21</u>
	PM:	<u>Blizzard Warning. Winds 5-10k AM 20-30k PM NNE</u>		PM:	<u>30</u>
Tides	High	<u>0810</u>	AM	<u>2036</u>	PM
	Low	<u>0112</u>	AM	<u>1410</u>	PM

Manpower Onsite

Equipment Onsite

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0805 to conduct oversight of dredging activities and to inspect dredged materials in scow for disposal authorization. Additional dewatering was required and scow was re-inspected at 0905 and cleared for disposal. Dredged materials held in scow TMC-140 were disposed into CAD Cell #3 at 0925, after which scow was maneuvered alongside dredge plant.

Given the severity of the weather forecast, Pyne elects to stand down and reposition all equipment dockside at Packer Marine- all equipment secured at 1030 and all personnel depart site for an anticipated two-day weather delay.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye

Date: 02 January 2014

Title: _____

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City of New Bedford Harbor Development Commission
New Bedford Harbor USEPA Lower Harbor CAD Cell
CFDA No.: 66.802

Inspection Report

Inspector: K. Ryan

Date: 04 January 2014

Contractor: Tripp Marine Foreman/Supt: Pyne Tripp

Weather	AM:	<u>Fog. Snow.</u>	Temperature	AM:	<u>1</u>
	PM:	<u>Overcast. Tapering Snow W15-20k+ NNW</u>		PM:	<u>24</u>

Tides	High	<u>0954</u>	AM	<u>2223</u>	PM
	Low	<u>0300</u>	AM	<u>1541</u>	PM

Manpower Onsite

Equipment Onsite

Foreman	<u>1</u>	@	<u>8</u>	Hrs	Description:	<u>Dredge Tripp 47</u>	Hrs.	<u>8</u>
Operators	<u>1</u>	@	<u>8</u>	Hrs		<u>Scow TMC 140</u>	Hrs.	<u>8</u>
Laborers	<u>1</u>	@	<u>8</u>	Hrs		<u>Push boat Sand Pebble</u>	Hrs.	<u>8</u>
Drivers		@		Hrs		<u>Support boat</u>	Hrs.	<u>8</u>
Other:		@		Hrs		<u>Scow SEI 2000</u>	Hrs.	<u>8</u>

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0945 to conduct oversight of dredging activities. Dredging begins at 1015 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Pyne is focusing on removing residual high points above the required Project elevation. Dredging continued until 1545, at which point scow TMC-140 was maneuvered over to dewatering barge. Apex departs site at 1615.

End of day draft marks on scow TMC-140 were 9.5' FWD and AFT.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye

Date: 04 January 2014

Title: _____

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File: DIR_LHCC_010414

Attachment 2
Water Quality Monitoring Forms

PROJECT:	New Bedford Harbor Lower Harbor CAD Cell		
JOB NUMBER:	6724		
SURVEY DATE:	30 December 2013		
MONITORS:	K. Ryan		
WEATHER CONDITIONS:	Ptly.Cloudy	Low: 21	High: 42
WIND CONDITIONS:	Speed: 10-15k	Direction: W	
PRIOR STORM EVENTS:	N/A		
DREDGE / SCOW Position:	Northing/Easting: 2696617 / 814829		
TYPE OF WATER QUALITY MONITORING EVENT:	TOP CAD Dredging / BTM CAD Dredging / Disposal		
TIDE INFORMATION:	High: 0532/1757	Low: 1136/2323	
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:	Dredging begins at 0850 and ends for the day at 1406		



UP-CURRENT

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
123013-00-1-1	2690720 / 815136	0910	5.7	1	5.9		Ebbing	200' N of Dredge	0
123013-00-1-2		0912		2	5.7				
123013-00-1-4		0914		4	6.4				
					AVERAGE TURBIDITY:	6.00			
123013-02-1-1	2696936 / 815119	1107	6.6	1	4.7		Ebbing	200' N of Dredge	2
123013-02-1-3		1109		3	5.7				
123013-02-1-6		1111		6	4.8				
					AVERAGE TURBIDITY:	5.07			
123013-04-1-1	2695159 / 814802	1322	32.4	1	6.8		Flooding tide	200' S of Dredge	4
123013-04-1-16		1324		16	7.2				
123013-04-1-32		1326		32	6				
					AVERAGE TURBIDITY:	6.67			
123013-06-1-1	2695648 / 814755	1509	33.9	1	6.9		Flooding tide	200' S of Dredge	6
123013-06-1-16		1511		16	5.4				
123013-06-1-32		1513		32	6				
					AVERAGE TURBIDITY:	6.10			
					AVERAGE TURBIDITY:				

Down-Current

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
123013-00-9-1	2696317 / 814857	0923	12.4	1	6.1		Ebbing	200' S of Dredge	0
123013-00-9-6		0925		6	7.8				
123013-00-9-12		0927		12	8.3				
					AVERAGE TURBIDITY:	7.40			
					TURBIDITY INCREASE:	1.40			
123013-02-9-1	2696137 / 815090	1132	9.6	1	6.9		Ebbing / Slack	200' S of Dredge	2
123013-02-9-4.5		1134		4.5	6.4				
123013-02-9-9		1136		9	9.6				
					AVERAGE TURBIDITY:	7.63			
					TURBIDITY INCREASE:	2.57			
123013-04-9-1	2696912 / 815020	1335	6.1	1	7.8		Flooding tide	200' N of Dredge	4
123013-04-9-3		1337		3	10.4				
123013-04-9-6		1339		6	11.5				
					AVERAGE TURBIDITY:	9.90			
					TURBIDITY INCREASE:	3.23			
123013-06-9-1	2696974 / 814939	1526	11	1	18.4		Flooding tide	200' N of Dredge	6
123013-06-9-5		1528		5	18.6				
123013-06-9-10		1530		10	16.5				
					AVERAGE TURBIDITY:	17.83			
					TURBIDITY INCREASE:	11.73			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: New Bedford Harbor Lower Harbor CAD Cell
 JOB NUMBER: 6724
 SURVEY DATE: 30 December 2013
 MONITORS: K. Ryan
 WEATHER CONDITIONS: Ptty. Cloudy Low: 10 High: 15
 WIND CONDITIONS: Speed: 10-15k Direction: W
 PRIOR STORM EVENTS: N/A
 DREDGE / SCOW Position: Northing/Easting: CAD Cell #3
 TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal
 TIDE INFORMATION: High: 0532/1757 Low: 1136/2323
 WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N IF YES, ATTACH COC FORMS
 GENERAL NOTES: Disposal into CAD Cell #3 occurred at 0800



UP-CURRENT

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
123013-01-1-1	2696873 / 815389	0802	14.3	1	5.2		Ebbing	200' N of Disposal	post
123013-01-1-7		0804		7	6.1				
123013-01-1-14		0806		14	6.1				
					AVERAGE TURBIDITY:	5.80			
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				

Down-Current

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
123013-01-9-1	2696372 / 815747	0807	14.8	1	5.6		Ebbing	200' S of Disposal	post
123013-01-9-7		0809		7	5.9				
123013-01-9-14		0811		14	7.1				
					AVERAGE TURBIDITY:	6.20			
					TURBIDITY INCREASE:	0.40			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: New Bedford Harbor Lower Harbor CAD Cell
JOB NUMBER: 6724
SURVEY DATE: 01 January 2014
MONITORS: C. Stillman
WEATHER CONDITIONS: Ptty.Cloudy Low: 17 High: 28
WIND CONDITIONS: Speed: 5-10k Direction: WNW
PRIOR STORM EVENTS: N/A
DREDGE / SCOW Position: Northing/Easting: 2696914 / 815314
TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal
TIDE INFORMATION: High: 0719/1944 Low: 0017/1320
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N IF YES, ATTACH COC FORMS
GENERAL NOTES: Dredging begins at 1032 and ends for the day at 1437



UP-CURRENT

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
010114-00-1-1	2697270 / 815283	1034	5	1	7.1		Ebbing	200' N of Dredge	0
010114-00-1-2.5		1036		2.5	7.8				
010114-00-1-4		1038		4	7.6				
					AVERAGE TURBIDITY:	7.50			
010114-02-1-1	2697254 / 814944	1233	5.7	1	5.2		Ebbing	200' N of Dredge	2
010114-02-1-2		1235		2	5.3				
010114-02-1-5		1237		5	5.4				
					AVERAGE TURBIDITY:	5.30			
010114-04-1-1	2696369 / 814813	1435	10.5	1	6.8		Flooding tide	200' S of Dredge	4
010114-04-1-5		1437		5	5.1				
010114-04-1-9		1439		9	5.3				
					AVERAGE TURBIDITY:	5.73			
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				

Down-Current

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
010114-00-9-1	2696589 / 815272	1050	6.8	1	10.5		Ebbing	200' S of Dredge	0
010114-00-9-3		1052		3	8				
010114-00-9-6		1054		6	8.2				
					AVERAGE TURBIDITY:	8.90			
					TURBIDITY INCREASE:	1.40			
010114-02-9-1	2696552 / 815026	1250	6	1	6.2		Ebbing	200' S of Dredge	2
010114-02-9-3		1252		3	6.9				
010114-02-9-5		1254		5	6.1				
					AVERAGE TURBIDITY:	6.40			
					TURBIDITY INCREASE:	1.10			
010114-04-9-1	2696986 / 814730	1450	20	1	7.2		Flooding tide	200' N of Dredge	4
010114-04-9-10		1452		10	7.5				
010114-04-9-19		1454		19	6.1				
					AVERAGE TURBIDITY:	6.93			
					TURBIDITY INCREASE:	1.20			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: New Bedford Harbor Lower Harbor CAD Cell
 JOB NUMBER: 6724
 SURVEY DATE: 01 January 2014
 MONITORS: C. Stillman
 WEATHER CONDITIONS: Ptty. Cloudy Low: 17 High: 28
 WIND CONDITIONS: Speed: 5-10k Direction: WNW
 PRIOR STORM EVENTS: N/A
 DREDGE / SCOW Position: Northing/Easting: CAD Cell #3
 TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal
 TIDE INFORMATION: High: 0719/1944 Low: 0017/1320
 WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N IF YES, ATTACH COC FORMS
 GENERAL NOTES: Disposal into CAD Cell #3 occurred at 0933



UP-CURRENT

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
010114-01-1-1	2697165 / 815578	0917	6.8	1	2.4		Ebbing	200' N of Disposal	post
010114-01-1-3		0919		3	4.5				
010114-01-1-6		0921		6	4.8				
					AVERAGE TURBIDITY:	3.90			
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				

Down-Current

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
010114-01-9-1	2696328 / 815914	0939	9.1	1	8.2		Ebbing	200' S of Disposal	post
010114-01-9-4		0941		4	6.2				
010114-01-9-8		0943		8	6.5				
					AVERAGE TURBIDITY:	6.97			
					TURBIDITY INCREASE:	3.07			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT: New Bedford Harbor Lower Harbor CAD Cell
 JOB NUMBER: 6724
 SURVEY DATE: 02 January 2014
 MONITORS: C. Stillman
 WEATHER CONDITIONS: Fog, Snow, PM Blizzard Warning Low: 21 High: 30
 WIND CONDITIONS: Speed: 5-10k AM 20-30k PM Direction: NNE
 PRIOR STORM EVENTS: N/A
 DREDGE / SCOW Position: Northing/Easting: CAD Cell #3
 TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal
 TIDE INFORMATION: High: 0810/2036 Low: 0112/1410
 WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N IF YES, ATTACH COC FORMS
 GENERAL NOTES: Disposal into CAD Cell #3 occurred at 0925



UP-CURRENT

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
010214-00-1-2	2697310 / 815017	0915	10.8	2	4.2		Ebbing	200' N of Disposal	0
010214-00-1-5		0917		5	4				
010214-00-1-8		0919		8	4.4				
					AVERAGE TURBIDITY:	4.20			
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				
					AVERAGE TURBIDITY:				

Down-Current

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
010214-01-9-2	2696298 / 815697	0929	16	2	4.9		Ebbing	200' S of Disposal	post
010214-01-9-8		0931		8	5				
010214-01-9-14		0933		14	10.3				
					AVERAGE TURBIDITY:	6.73			
					TURBIDITY INCREASE:	2.53			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

PROJECT:	New Bedford Harbor Lower Harbor CAD Cell		
JOB NUMBER:	6724		
SURVEY DATE:	04 January 2014		
MONITORS:	K. Ryan		
WEATHER CONDITIONS:	Fog / Snow.	Low: 1	High: 24
WIND CONDITIONS:	Speed: 15-20k gusting 25+k		Direction: NNW
PRIOR STORM EVENTS:	Nor'easter 02-03January		
DREDGE / SCOW Position:	Northing/Easting: 2696631 / 815038		
TYPE OF WATER QUALITY MONITORING EVENT:	TOP CAD Dredging / BTM CAD Dredging / Disposal		
TIDE INFORMATION:	High: 0954/2223	Low: 0300/1541	
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:	Dredging begins at 1015 and ends for the day at 1546		



UP-CURRENT

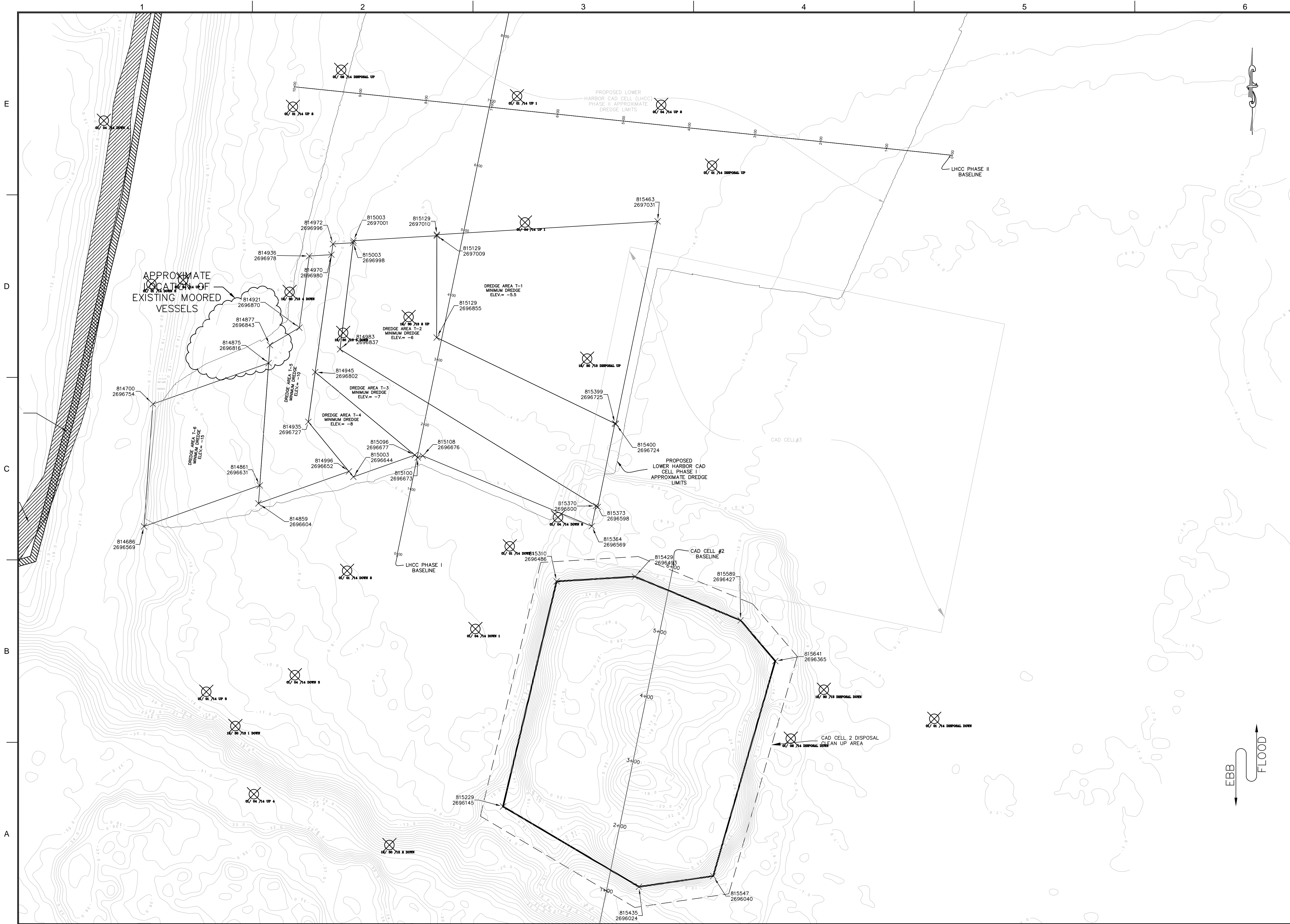
Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
010414-00-1-1	2697079 / 815295	1026	8.8	1	4.6		Ebbing	200' N of Dredge	0
010414-00-1-4		1028		4	5.3				
010414-00-1-8		1030		8	5.3				
					AVERAGE TURBIDITY:	5.07			
010414-02-1-1	2697257 / 815501	1220	6.4	1	5.3		Ebbing	200' N of Dredge	2
010414-02-1-3		1222		3	6				
010414-02-1-6		1224		6	6.1				
					AVERAGE TURBIDITY:	5.80			
010414-04-1-1	2696992 / 814778	1427	19.1	1	6.9		Ebbing	200' N of Dredge	4
010414-04-1-9.5		1429		9.5	7.6				
010414-04-1-19		1431		19	8.5				
					AVERAGE TURBIDITY:	7.67			
010414-06-1-1	2696214 / 814885	1603	15.9	1	10.4		Slack / Flooding	200' S of Dredge	6
010414-06-1-7		1605		7	10.6				
010414-06-1-14		1607		14	10.4				
					AVERAGE TURBIDITY:	10.47			
					AVERAGE TURBIDITY:				

Down-Current

Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
010414-00-9-1	2696464 / 815220	1045	10.7	1	5.3		Ebbing	200' S of Dredge	0
010414-00-9-5		1047		5	5.2				
010414-00-9-10		1049		10	5.1				
					AVERAGE TURBIDITY:	5.20			
					TURBIDITY INCREASE:	0.13			
010414-02-9-1	2696633 / 815345	1237	21.9	1	13		Ebbing	200' S of Dredge	2
010414-02-9-11		1239		11	12.4				
010414-02-9-21		1241		21	9.1				
					AVERAGE TURBIDITY:	11.50			
					TURBIDITY INCREASE:	5.70			
010414-04-9-1	2696394 / 814947	1447	9.6	1	8		Ebbing	200' S of Dredge	4
010414-04-9-4.5		1449		4.5	8.1				
010414-04-9-9		1451		9	8.4				
					AVERAGE TURBIDITY:	8.17			
					TURBIDITY INCREASE:	0.50			
010414-06-9-1	2697233 / 814658	1609	19.4	1	6.2		Flooding tide	200' N of Dredge	6
010414-06-9-9		1611		9	6.5				
010414-06-9-18		1613		18	6.8				
					AVERAGE TURBIDITY:	6.50			
					TURBIDITY INCREASE:	-3.97			
					AVERAGE TURBIDITY:				
					TURBIDITY INCREASE:				

* Turbidity Increase = Down-Current Average Turbidity - Up-Current Average Turbidity

Figure 1
Lower Harbor CAD Cell Phase I – Water Quality Monitoring



ROCKVILLE, MD
SOUTH WINDSOR, CT - BOSTON, MA -
NEW BEDFORD, MA - HOLYOKE, MA

125 BROAD STREET, 5TH FLOOR
BOSTON, MA 02210

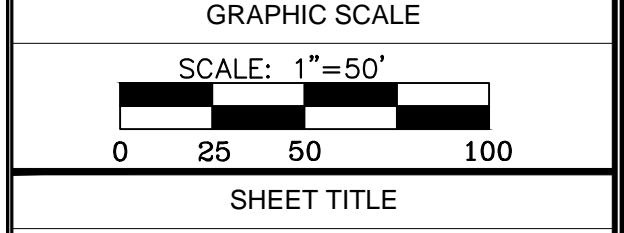
58H CONNECTICUT AVENUE
SOUTH WINDSOR, CT

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PROJECT	NEW BEDFORD HARBOR DEVELOPMENT COMMISSION LOWER HARBOR CAD CELL	
	OWNER	NEW BEDFORD HARBOR DEVELOPMENT COMMISSION 52 FISHERMAN'S WHARF, NEW BEDFORD, MA 02740

1	9/25/2012	EPA COMMENTS	GCD
2	2/21/2013	DRAFT SUITABILITY	MCK

DATE	DESCRIPTION	BY
PROJECT NO.	6724	
CADD FILE		
DESIGNED BY	###	
DRAWN BY	###	
CHECKED BY	###	
DATE	NOV 2013	
DRAWING SCALE	AS NOTED	



SHEET TITLE

LOWER HARBOR CAD CELL PHASE I WATER QUALITY MONITORING

12/29/13-01/04/14

DRAWING NO.

WQM-1

1 OF 1