

Weekly Field Report
Week: 11-24-13 through 11-30-13
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 fourth 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 Fourth Report for the LHCC dredging activities includes:

- Daily Inspection Reports from the dredging oversight performed during the week of November 24th through November 30th. 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 November 24th through November 30th 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 daily November 25th through the 30th with the exception of Wednesday, November 27th due to a passing strong weather system. Dredging operations focused on the removal of Phase I Top of CAD cell sediments and the disposal of these sediments into CAD Cell #3. Dredging operations during this reporting period 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 letter provided on November 21st. 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*, 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 November 24th utilizing an open conventional digging bucket per the terms outlined during the November 13th weekly meeting and the formal letter issued on November 21st. Apex conducted two days of water quality monitoring while the open conventional bucket was being used in 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 on the 25th and 29th of November. 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 November 26th, 28th, 29th and 30th. Based on scow logs for the *TMC 140*, approximately 500 cubic yards of material (assuming 120 pounds/ft³ for dredged materials) was placed into CAD Cell #3 during each disposal event. Sediments contained in the scow were inspected prior to each disposal to assess the effectiveness of dewatering. Water quality monitoring, required for each CAD Cell disposal event, was completed for each day of disposal activity.

Table 1 – Cumulative Dredging Progress

Period of Activity	Volume (cy)
Approximate Vol. Dredged this Reporting Period	2,000
Approximate Volume Dredged to Date	6,300

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: C. Stillman

Date: 25-Nov-13

Contractor: Tripp Marine **Foreman/Supt:** Pyne Tripp

Weather	AM: _____	Temperature	AM: <u>28</u>
	PM: <u>Winds 5-10k W</u>		PM: <u>32</u>

Tides	High	<u>0044</u>	AM	<u>1246</u>	PM
	Low	<u>0549</u>	AM	<u>1832</u>	PM

Manpower Onsite

Foreman 1 @ 8 Hrs
Operators 1 @ 8 Hrs
Laborers 1 @ 8 Hrs
Drivers _____ @ _____ Hrs
Other: _____ @ _____ Hrs

Equipment Onsite

Description:	<u>Tripp 47 Dredge</u>	Hrs. <u>8</u>
	<u>Scow TMC 140</u>	Hrs. <u>8</u>
	<u>Push Boat Sand Pebble</u>	Hrs. <u>8</u>
	<u>Support Boat</u>	Hrs. <u>8</u>
	_____	Hrs. _____

Contractor Activities: (Attach Additional Sheets as Necessary)

Scow disposal in CAD Cell #3 occurred at 0615 after receiving authorization for disposal. Apex back on-site at 0800 to conduct oversight of dredging activities. Dredging begins at 0805 using an open conventional digging bucket. Dredging continues until 1236 at which time dredging stops for the day and scow TMC 140 is maneuvered over to dewatering barge. Apex inspects dredged materials in scow. End of day draft marks on the scow were recorded as 9' FWD and 9.5' AFT. No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / n/a

Visitors:

Signature: D.Boye (Apex)
Title: _____
Copy to: file

Date: 25-Nov-13
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File: DIR_LHCC_112513



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

Inspection Report

Inspector: M. Martinho

Date: 26-Nov-13

Contractor: Tripp Marine Foreman/Supt: Pyne Tripp

Weather AM: Cloudy, light rain Temperature AM: 30
PM: Winds 10-15k SW over to E in PM PM: 46

Tides High 0131 AM 1336 PM
Low 0658 AM 1934 PM

Manpower Onsite

Foreman 1 @ 8 Hrs
Operators 1 @ 8 Hrs
Laborers 1 @ 8 Hrs
Drivers @ Hrs
Other: @ Hrs

Equipment Onsite

Description: Tripp 47 Dredge Hrs. 8
Scow TMC 140 Hrs. 8
Push Boat Sand Pebble Hrs. 8
Support Boat Hrs. 8
 Hrs.

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0535 to conduct oversight of dredging activities and inspect dredged materials in scow for disposal authorization. Scow draft marks are 8.5' FWD/AFT. Disposal in CAD Cell #3 occurs at 0805. Scow TMC 140 maneuvered into position and dredging begins at 0845 using an open conventional digging bucket. Dredging continues until 1400 at which time dredging stops for the day and scow TMC 140 is maneuvered over to dewatering barge. End of day draft marks on the scow were recorded as 8.5' FWD and 9.0' AFT. No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / n/a

Visitors:

Signature: D.Boye (Apex)
Title:
Copy to: file

Date: 26-Nov-13
Page: 1 of 1
File: DIR_LHCC_112613



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

Inspection Report

Inspector: J. Ray

Date: 28-Nov-13

Contractor: Tripp Marine **Foreman/Supt:** Pyne Tripp

Weather	AM: <u>Clear and windy</u>	Temperature	AM: <u>25</u>
	PM: <u>Winds 20-30k N</u>		PM: <u>37</u>

Tides	High	<u>0317</u>	AM	<u>0928</u>	PM
	Low	<u>1534</u>	AM	<u>2132</u>	PM

Manpower Onsite

Foreman 1 @ 8 Hrs
Operators 1 @ 8 Hrs
Laborers 1 @ 8 Hrs
Drivers _____ @ _____ Hrs
Other: _____ @ _____ Hrs

Equipment Onsite

Description:	<u>Tripp 47 Dredge</u>	Hrs. <u>8</u>
	<u>Scow TMC 140</u>	Hrs. <u>8</u>
	<u>Push Boat Sand Pebble</u>	Hrs. <u>8</u>
	<u>Support Boat</u>	Hrs. <u>8</u>
	_____	Hrs. _____

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0830 to conduct oversight of dredging activities and to inspect dredge materials in scow to provide clearance to dispose materials into CAD Cell #3. Disposal occurs at 1013 and scow maneuvered into position alongside dredge plant. Dredging begins at 1052 using an open conventional digging bucket. Dredging continues until approximately 1245 at which time dredging stops. Dredge is located in Dredge Area T3 where there Area bends to the north. Dredge repositioned to the south end of Dredge Area T2 and resumes dredging at 1340. Dredging continues until 1530 and scow TMC 140 is maneuvered over to dewatering barge. Apex inspects dredged materials in scow. End of day draft marks on the scow were recorded as 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 (Apex)
Title: _____
Copy to: file

Date: 28-Nov-13
Page: 1 of 1
File: DIR_LHCC_112813



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

Inspection Report

Inspector: M. Martinho

Date: 29-Nov-13

Contractor: Tripp Marine Foreman/Supt: Pyne Tripp

Weather AM: Clear Temperature AM: 21
PM: Winds 5-10k N PM: 36

Tides High 0412 AM 1632 PM
Low 1019 AM 2216 PM

Manpower Onsite

Foreman 1 @ 8 Hrs
Operators 1 @ 8 Hrs
Laborers 1 @ 8 Hrs
Drivers @ Hrs
Other: @ Hrs

Equipment Onsite

Description: Tripp 47 Dredge Hrs. 8
Scow TMC 140 Hrs. 8
Push Boat Sand Pebble Hrs. 8
Support Boat Hrs. 8
 Hrs.

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0950 to conduct oversight of dredging activities and to inspect dredge materials in scow to provide clearance to dispose materials into CAD Cell #3. Disposal occurs at 1011 and scow maneuvered into position alongside dredge plant. Dredging begins at approximately 1115 using an open conventional digging bucket. Dredging continues until 1625 at which time scow TMC 140 is maneuvered over to dewatering barge. Apex inspects dredged materials in scow. End of day draft marks on the scow were recorded as 9' FWD and 8.5' AFT. No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / n/a

Visitors:

Signature: D.Boye (Apex)

Title:

Copy to: file

Date: 29-Nov-13

Page: 1 of 1

File: DIR_LHCC_112913



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

Inspection Report

Inspector: M. Martinho

Date: 30-Nov-13

Contractor: Tripp Marine **Foreman/Supt:** Pyne Tripp

Weather	AM:	<u>Suny and clear</u>	Temperature	AM:	<u>18</u>
	PM:	<u>Winds 5-10k N shifting to S in PM</u>		PM:	<u>43</u>

Tides	High	<u>0505</u>	AM	<u>1726</u>	PM
	Low	<u>1107</u>	AM	<u>2301</u>	PM

Manpower Onsite

Foreman 1 @ 8 Hrs
Operators 1 @ 8 Hrs
Laborers 1 @ 8 Hrs
Drivers @ Hrs
Other: @ Hrs

Equipment Onsite

Description:	<u>Tripp 47 Dredge</u>	Hrs. <u>8</u>
	<u>Scow TMC 140</u>	Hrs. <u>8</u>
	<u>Push Boat Sand Pebble</u>	Hrs. <u>8</u>
	<u>Support Boat</u>	Hrs. <u>8</u>
	<u> </u>	Hrs. <u> </u>

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0630 and informed by Contractor that disposal was scheduled for 1000. Apex inspects dredge materials in scow at 0930 and provides clearance to dispose materials into CAD Cell #3. Disposal occurs at 1007 and scow maneuvered into position alongside dredge plant. Dredging begins at 1027 using an open conventional digging bucket. Dredging continues until approximately 1245 at which time dredging stops as scow TMC 140 appears to be running aground. On the rising tide, scow TMC 140 is afloat again at 1515. After a brief resumption in dredging, works stops for the day at 1535 and scow TMC 140 is maneuvered over to dewatering barge. Apex inspects dredged materials in scow. No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / n/a

Visitors:

Signature: D.Boye (Apex)
Title:
Copy to: file

Date: 30-Nov-13
Page: 1 of 1
File: DIR_LHCC_113013

Attachment 2
Water Quality Monitoring Forms

PROJECT:	New Bedford Harbor Lower Harbor CAD Cell		
JOB NUMBER:	6724		
SURVEY DATE:	25 November 2013		
MONITORS:	C. Stillman		
WEATHER CONDITIONS:	Low: 28	High: 32	
WIND CONDITIONS:	Speed: 5-10k	Direction: W	
PRIOR STORM EVENTS:	N/A		
DREDGE / SCOW Position:	Northing/Easting: 2696699 / 814977		
TYPE OF WATER QUALITY MONITORING EVENT:	TOP CAD Dredging / BTM CAD Dredging / Disposal		
TIDE INFORMATION:	High: 0044/1246	Low: 0549/1832	
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:			



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
112513-00-1-1	2696260 / 815287	0823	9.5	1	3.03		Flooding Tide	200' S of Dredge	0
112513-00-1-4		0825		4	7.93				
112513-00-1-9		0827		9	6.18				
AVERAGE TURBIDITY:					5.71				
112513-02-1-1	2696415 / 815134	1000	8.2	1	3.44		Flooding Tide	200' S of Dredge	2
112513-02-1-4		1002		4	4.83				
112513-02-1-8		1004		8	6.3				
AVERAGE TURBIDITY:					4.86				
112513-04-1-1	2696455 / 815202	1203	6.9	1	4.18		Flooding Tide	200' S of Dredge	4
112513-04-1-3		1205		3	5.05				
112513-04-1-6		1207		6	3.23				
AVERAGE TURBIDITY:					4.15				
112513-06-1-1	2696950 / 815332	1408	7.3	1	6.22		Ebbing	200' N of Dredge	6
112513-06-1-3.5		1410		3.5	5.07				
112513-06-1-7		1412		7	4.95				
AVERAGE TURBIDITY:					5.41				
			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
112513-00-9-1	2696885 / 815227	0841	5.7	1	8		Flooding tide	200' N of Dredge	0
112513-00-9-3		0843		3	16.4				
112513-00-9-5		0845		5	13.6				
AVERAGE TURBIDITY:		12.67							
TURBIDITY INCREASE:		6.95							
112513-02-9-1	2696877 / 815226	1016	4.5	1	10.6		Flooding tide	200' N of Dredge	2
112513-02-9-2		1018		2	6.19				
112513-02-9-4		1020		4	9.55				
AVERAGE TURBIDITY:		8.78							
TURBIDITY INCREASE:		3.92							
112513-04-9-1	2696869 / 815336	1208	8	1	5.04		Flooding tide	200' N of Dredge	4
112513-04-9-4		1210		4	5.6				
112513-04-9-8		1212		8	11.7				
AVERAGE TURBIDITY:		7.45							
TURBIDITY INCREASE:		3.29							
112513-06-9-1	2696590 / 815240	1413	7.8	1	5.85		Ebbing	200' S of Dredge	6
112513-06-9-3		1415		3	7.91				
112513-06-9-6		1417		6	5.76				
AVERAGE TURBIDITY:		6.51							
TURBIDITY INCREASE:		1.09							

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

PROJECT:	New Bedford Harbor Lower Harbor CAD Cell		
JOB NUMBER:	6724		
SURVEY DATE:	26 November 2013		
MONITORS:	C. Stillman, K. Ryan		
WEATHER CONDITIONS:	Cloudy light rain	Low: 25	High: 37
WIND CONDITIONS:	Speed: 10-15k Direction: SW shifting to E PM		
PRIOR STORM EVENTS:	N/A		
DREDGE / SCOW Position:	Northing/Easting: CAD #3		
TYPE OF WATER QUALITY MONITORING EVENT: TOP CAD Dredging / BTM CAD Dredging / Disposal			
TIDE INFORMATION:	High: 0131/1336 Low: 0658/1934		
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:			



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
112613-01-1-1	2695835 / 815342	0757	31	1	2.03		Flooding tide	200' S of Disposal	post
112613-01-1-15		0759		15	2.67				
112613-01-1-30		0801		30	2.5				
AVERAGE TURBIDITY:					2.40				
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
112613-01-9-1	2697210 / 815565	0802	4.4	1	3.52		Flooding tide	200' N of Disposal	post
112613-01-9-2		0804		2	2.02				
112613-01-9-3		0806		3	2.92				
			AVERAGE TURBIDITY:		2.82				
			TURBIDITY INCREASE:		0.42				
			AVERAGE TURBIDITY:						
			TURBIDITY INCREASE:						
			AVERAGE TURBIDITY:						
			TURBIDITY INCREASE:						
			AVERAGE TURBIDITY:						
			TURBIDITY INCREASE:						
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			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:	28 November 2013		
MONITORS:	J. Ray, A. Hart		
WEATHER CONDITIONS:	Clear Windy	Low: 25	High: 37
WIND CONDITIONS:	Speed: 20-30k Direction: W		
PRIOR STORM EVENTS:	Gale force winds 27 November 45+k winds SE		
DREDGE / SCOW Position:	Northing/Easting: CAD #3		
TYPE OF WATER QUALITY MONITORING EVENT:	TOP CAD Dredging / BTM CAD Dredging / Disposal		
TIDE INFORMATION:	High: 0317/1534 Low: 0928/2132		
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:			



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
112813-01-1-1	2696762 / 815559	1026	8	1	4.66		Flooding tide	200' S of Disposal	post
112813-01-1-4		1028		4	3.39				
112813-01-1-7		1030		7	3.1				
AVERAGE TURBIDITY:		3.72							
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
112813-01-9-1	2696254 / 815661	1014	9	1	11.9		Flooding tide	200' N of Disposal	post
112813-01-9-4		1016		4	6.26				
112813-01-9-8		1018		8	3.64				
AVERAGE TURBIDITY:		7.27							
		TURBIDITY INCREASE:		3.55					
		AVERAGE TURBIDITY:							
		TURBIDITY INCREASE:							
		AVERAGE TURBIDITY:							
		TURBIDITY INCREASE:							
		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:	29 November 2013		
MONITORS:	A. Hart, M. Martinho		
WEATHER CONDITIONS:	Clear. Temperature 21F in AM rising to 36F in PM		
WIND CONDITIONS:	Speed: 5-10k	Direction: WNW	
PRIOR STORM EVENTS:	n/a		
DREDGE / SCOW Position:	Easting/Northing: 2696745 / 815209		
TYPE OF WATER QUALITY MONITORING EVENT:	TOP CAD Dredging / BTM CAD Dredging / Disposal		
TIDE INFORMATION:	High: 0412/1632	Low: 1019/2216	
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:			



UP-CURRENT									
Monitoring ID #	EASTING/ NORTHING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
112913-02-1-1	2696356 / 815059	1230	7.3	1	5.39		Flooding tide	200' S of Dredge	2
112913-02-1-3		1232		3	5.05				
112913-02-1-6		1234		6	4.74				
AVERAGE TURBIDITY:					5.06				
112913-04-1-1	2696557 / 815011	1420	8.8	1	2.39		Flooding tide	200' S of Disposal	4
112913-04-1-4		1422		4	2.87				
112913-04-1-8		1424		8	3.12				
AVERAGE TURBIDITY:					2.79				
112913-06-1-1	2696535 / 814906	1600	11	1	1.98		Flooding tide	200' S of Dredge	6
112913-06-1-5		1602		5	2.41				
112913-06-1-10		1604		10	2.17				
AVERAGE TURBIDITY:					2.19				
AVERAGE TURBIDITY:									
AVERAGE TURBIDITY:									
Down-Current									
Monitoring ID #	EASTING/ NORTHING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
112913-02-9-1	2697025 / 815221	1236	6	1	5.16		Flooding tide	200' N of Dredge	2
112913-02-9-2.5		1238		2.5	9.59				
112913-02-9-5		1240		5	11.7				
AVERAGE TURBIDITY:					8.82				
TURBIDITY INCREASE:					3.76				
112913-04-9-1	2696952 / 815242	1425	5.5	1	6.57		Flooding tide	200' N of Dredge	4
112913-04-9-3		1427		3	5.58				
112913-04-9-5		1429		5	6.91				
AVERAGE TURBIDITY:					6.35				
TURBIDITY INCREASE:					3.56				
112913-06-9-1	2697062 / 815100	1608	6	1	6.77		Flooding tide	200' N of Dredge	6
112913-06-9-3		1610		3	6.69				
112913-06-9-5		1612		5	5.43				
AVERAGE TURBIDITY:					6.30				
TURBIDITY INCREASE:					4.11				
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									
AVERAGE TURBIDITY:									
TURBIDITY INCREASE:									

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

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

PROJECT:	New Bedford Harbor Lower Harbor CAD Cell		
JOB NUMBER:	6724		
SURVEY DATE:	29 November 2013		
MONITORS:	A. Hart, M. Martinho		
WEATHER CONDITIONS:	Clear. Temperature 21F in AM rising to 36F in PM		
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: 0412/1632	Low: 1019/2216	
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:			



UP-CURRENT

Monitoring ID #	EASTING/ NORTHING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
112913-00-1-1	2696982 / 815556	1005	6.9	1	3.11		Ebbing / Slack	200' N of Disposal	0
112913-00-1-3		1006		3	3.35				
112913-00-1-6		1007		6	2.82				
			AVERAGE TURBIDITY:		3.09				
112913-01-1-1	2696951 / 815304	1011	6	1	2.65		Ebbing / Slack	200' N of Disposal	post
112913-01-1-3		1013		3	2.96				
112913-01-1-5		1015		5	2.59				
			AVERAGE TURBIDITY:		2.73				
			AVERAGE TURBIDITY:						
			AVERAGE TURBIDITY:						
			AVERAGE TURBIDITY:						
			AVERAGE TURBIDITY:						

Down-Current

Monitoring ID #	EASTING/ NORTHING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	DISTANCE FROM LOCATION	NUMBER OF HOURS DREDGING
112913-00-9-1	2696414 / 815361	1008	15.1	1	2.47		Ebbing / Slack	200' S of Disposal	0
112913-00-9-6		1009		6	3.16				
112913-00-9-14		1010		14	3.24				
			AVERAGE TURBIDITY:		2.96				
			TURBIDITY INCREASE:		-0.14				
112913-01-9-1	2696236 / 815279	1017	12	1	8.65		Ebbing / Slack	200' S of Disposal	post
112913-01-9-6		1019		6	7.18				
112913-01-9-10		1020		10	5.53				
			AVERAGE TURBIDITY:		7.12				
			TURBIDITY INCREASE:		4.39				
			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:	30 November 2013		
MONITORS:	M. Martinho		
WEATHER CONDITIONS:	Sunny	Low: 18	High: 43
WIND CONDITIONS:	Speed: 5-10k Direction: N shifting to S in PM		
PRIOR STORM EVENTS:	N/A		
DREDGE / SCOW Position:	Northing/Easting: CAD #3		
TYPE OF WATER QUALITY MONITORING EVENT:	TOP CAD Dredging / BTM CAD Dredging / Disposal		
TIDE INFORMATION:	High: 0505/1726 Low: 1107/2301		
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS		
GENERAL NOTES:			



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
113013-01-1-1	2696911 / 815453	0957	18.5	1	3.03		Ebbing	200' N of Disposal	post
113013-01-1-8		0959		8	5.11				
113013-01-1-15		1001		15	7.02				
			AVERAGE TURBIDITY:		5.05				
			AVERAGE TURBIDITY:						
			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
113013-01-9-1	2696228 / 815542	1007	18.5	1	4.61		Ebbing	200' S of Disposal	post
113013-01-9-8		1009		8	3.8				
113013-01-9-17		1011		17	4.9				
			AVERAGE TURBIDITY:		4.44				
			TURBIDITY INCREASE:		-0.62				
			AVERAGE TURBIDITY:						
			TURBIDITY INCREASE:						
			AVERAGE TURBIDITY:						
			TURBIDITY INCREASE:						
			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

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

