Weekly Field Report
Week: 11-10-13 through 11-16-13
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 second 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 second Report for the LHCC dredging activities includes:

- Daily Inspection Reports from the dredging oversight performed during the week of November 10th through November 16th. 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 10th through November 16th are attached (Attachment 2). Include 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 for this reporting period. Per the approved Water Quality Monitoring Plan and associated performance standards for this dredging effort Apex will;
    - Conduct three consecutive water quality monitoring events in the first week of dredging, and thereafter two days per week until Phase I dredging of the LHCC has been completed.
    - Conduct 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.
    - Perform a visual inspection 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 on November 14th, 15th, and 16th with 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 the change request authorized at the weekly Project meeting on November 13th. 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 aide 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 resumed on Thursday, November 14th, after the change request submitted by the Contractor, seeking approval to utilize an open conventional bucket was reviewed and tentatively authorized in certain areas at the weekly Project meeting on Wednesday, November 13th. Since the use of the open conventional bucket was considered as a new activity, Apex initiated three consecutive days of water quality monitoring while the open conventional bucket was being used in ensure that the change did not result in an exceedance of any project-specific water quality standards. Hence, water quality monitoring was completed on the 14th, 15th, and 16th of November. Since the requirement for three consecutive days of water quality monitoring has been completed, monitoring of dredging activities will continue on a schedule of two events per week.

Disposal:

Disposal of "Top of LHCC" sediments was conducted on November 13th, 15th, and 16th. Based on scow logs for the *TMC 140*, approximately 500 cubic yards of material (assuming 120 pounds/ft^3 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.

4. Monitoring Summary

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

November 27, 2013

John B. McAllister, P.E.

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: J. Ray (APEX) **Date:** 11-Nov-13

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

Weather	AM:	Clear, WNW 15-20k	**Temperature**	AM:	39
	PM:			PM:	53

Tides	High	0158	AM	1429	PM
	Low	0840	AM	2103	PM

Manpower Onsite

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

Equipment Onsite

Description:	Scow TMC 140	Hrs. _____
	_____	Hrs. _____
	_____	Hrs. _____
	_____	Hrs. _____
	_____	Hrs. _____

Contractor Activities: (Attach Additional Sheets as Necessary)

No dredging conducted today. Apex conducted an inspection of the dredged materials in scow TMC140 located at the dewatering barge and approved the scow for disposal. Scow draft marks at the time of inspection were 6-feet FWD and AFT. No disposal occured today. Apex was on-site to collect push probes and ponar samples within the LHCC Phase I footprint to evaluate sediment conditions around the location of the dredge plant. This effort was conducted to collect information to properly evaluate Contractor's request to change the dredge bucket from an environmental bucket to an open conventional digging bucket in certain areas of the LHCC Phase I Top of CAD footprint.

Problems/Issues or Action Items:

None / n/a.

Visitors: _____

Signature: D. Boye (Apex) Date: 11-Nov-13

Title: _____ Page: __1___of___1__

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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: _____ **Date:** 13-Nov-13

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

Weather	AM:	Clear, NW 5-10k	**Temperature**	AM:	25
	PM:	Clear, NW 5-10k, gusting		PM:	37

Tides	High	0401	AM	1629	PM
	Low	1041	AM	2222	PM

Manpower Onsite

Foreman	___1____	@ ___1___	Hrs
Operators	___1____	@ ___1___	Hrs
Laborers	___1____	@ ___1___	Hrs
Drivers	_____	@ _____	Hrs
Other: _____	_____	@ _____	Hrs

Equipment Onsite

Description:	Scow TMC 140	Hrs. _____
	_____	Hrs. _____
	_____	Hrs. _____
	_____	Hrs. _____
	_____	Hrs. _____

Contractor Activities: (Attach Additional Sheets as Necessary)

No dredging conducted today. Apex on site at 0750 to monitor water quality during the disposal of scow TMC 140 containing LHCC Phase I Top of CAD sediments into CAD Cell #3. No water quality issues were observed.

Problems/Issues or Action Items:

None / n/a.

Visitors: _____

Signature: D. Boye (Apex) Date: 13-Nov-13

Title: _____ Page: __1___of___1__

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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: J. Ray, M. Tumulo **Date:** 14-Nov-13

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

Weather	AM:	Sunny, clear	**Temperature**	AM:	26
	PM:	Winds10k WSW		PM:	52

Tides	High	0457	AM	1722	PM
	Low	1123	AM	2254	PM

Manpower Onsite

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

Equipment Onsite

Description:	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support Boat	Hrs. 8
	Dredge Plant	Hrs. 8
		Hrs.

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on site at 0800 to collect background water quality data. Tripp Marine informed Apex that dredging would begin late morning on the rising tide. Apex collected a second background at 1012. Tripp Marine departs dock at 1035 and manuevers dredge plant into position at 1100. Dredging begins at 1125 in the SE area of the LHCC Phase I Top of CAD footprint using an open conventional digging bucket, as authorized. Empty scow draft marks were 2.5-feet FWD and AFT. Apex inpected sediments in scow at 1400. Dredging stopped at 1610 and Tripp Marine manuevers scow over to the dewatering barge. End of day scow draft marks were 6.5-feet FWD and AFT. Apex departs site at 1625. No water quality issues were observed during the day's monitoring efforts.

Problems/Issues or Action Items:

None / n/a.

Visitors:

Signature: D. Boye (Apex) Date: 14-Nov-13

Title: Page: 1 of 1

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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: D. Boye, M.Tumulo, M. Martinho **Date:** 15-Nov-13

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

Weather	AM:	Sunny, clear	**Temperature**	AM:	45
	PM:	Winds 5-10k, gusting in PM SW		PM:	59

Tides	High	0547	AM	1811	PM
	Low		AM	1201/2328	PM

Manpower Onsite

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

Equipment Onsite

Description:	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support Boat	Hrs. 8
	Dredge Plant	Hrs. 8
		Hrs.

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on site at 0700 to monitor activities at CAD Cell #3 and to inspect the materials in scow and approves scow for disposal. Tripp Marine departed dock at 1050 and manuevers dredge plant in position at 1135 - later start required to capture rising tide. Scow TMC 140 discharges LHCC Phase I Top of CAD sediments into CAD Cell #3 at 1205. Scow TMC 140 is manuevered into position alongside dredge plant and dredging begins at 1225 along the boundary of the adjacent CAD Cell using a conventional bucket, as authorized. Empty scow draft marks were 2.5-feet FWD and AFT. Apex inspects sediments in scow at 1400. Dredging stopped at 1630. End of day scow draft marks were 7-feet FWD and 7.5-feet AFT . Apex departs at 1635. No water quality issues were observed.

Problems/Issues or Action Items:

None / n/a.

Visitors:

Signature: D. Boye (Apex) Date: 15-Nov-13

Title: Page: 1 of 1

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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: M.Tumulo, M. Martinho **Date:** 16-Nov-13

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

Weather	AM:	Sunny, clear	**Temperature**	AM:	34
	PM:	Winds 5-10k, WSW		PM:	60

Tides	High	0633	AM	1855	PM
	Low		AM	1234	PM

Manpower Onsite

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

Equipment Onsite

Description:	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support Boat	Hrs. 8
	Dredge Plant	Hrs. 8
		Hrs.

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on site at 0700 to monitor activities at CAD #3. Apex inspected materials in scow TMC 140. Scow was approved for disposal. TMC 140 disposes LHCC Phase I Top of CAD materials into CAD Cell #3 at 1115. Scow TMC 140 manuevered into position at dredge plant and dredging begins at 1204 using an open conventional bucket, as authorized. Empty scow draft marks were 2.5-feet FWD and AFT. Apex inspected sediments in scow at 1400 and observed sediments similar to those disposed into CAD Cell #3 earlier in day. Dredging continued until 1625, at which time the loaded scow was manuevered to the dewatering barge. End of day draft marks for scow TMC 140 were 7-feet FWD and 8.5-feet AFT. Apex departed site at 1650. No water quality issues were observed.

Problems/Issues or Action Items:

None / n/a.

Visitors:

Signature: D. Boye (Apex) Date: 16-Nov-13

Title: Page: 1 of 1

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Attachment 2
Water Quality Monitoring Forms

PROJECT:	**New Bedford Harbor Lower Harbor CAD Cell**
JOB NUMBER:	**6724**
SURVEY DATE:	**13 November 2013**
MONITORS:	**J. Ray, C.Stillman**
WEATHER CONDITIONS:	**AM temperature 25F PM 37F**
WIND CONDITIONS:	**Speed: 5-10k gusting 20k Direction: NW**
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: 1429 840**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Disposal event of LHCC Phase I Top of CAD sediments into CAD Cell #3**

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
111313-00-1-1		0810		1	4.01				
111313-00-1-3		0812	11	3	4.01		Ebbing	200' N of Dredge	0
111313-00-1-5		0814		5	4				
			AVERAGE TURBIDITY:		4.01				
			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
111313-00-9-1		0817		1	11.4				
111313-00-9-8	815612 / 2696284	0819	17	8	11.5		Ebbing	200' S of Disposal	0
111313-00-9-16		0821		16	6.7				
			AVERAGE TURBIDITY:		9.87				
			TURBIDITY INCREASE:		5.86				
			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:	14 November 2013
MONITORS:	J. Ray, M. Tumulo
WEATHER CONDITIONS:	Sunny Clear Temperatures ranging from 26F AM to 52F in the afternoon
WIND CONDITIONS:	Speed: 10k Direction: WSW
PRIOR STORM EVENTS:	n/a
DREDGE / SCOW Position:	Easting / Northing: 2696598 / 815337
TYPE OF WATER QUALITY MONITORING EVENT:	TOP CAD Dredging / BTM CAD Dredging / Disposal
TIDE INFORMATION:	High: 1722 Low: 1123
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	N IF YES, ATTACH COC FORMS
GENERAL NOTES:	Dredging being conducted with open style digging bucket, as authorized.

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
111413-00-1-1	815854/ 2697349	1012	3.5	1	2		Ebbing	200' N of Dredge	0
111413-00-1-1.5		1014		1.5	2.27				
111413-00-1-3		1016		3	2.04				
			AVERAGE TURBIDITY:		2.10				
111413-01-1-1	815263/ 2696168	1210	17.7	1	4.69		Flooding tide	200' S of Dredge	0.5
111413-01-1-9		1212		9	6.72				
111413-01-1-17		1214		17	8.87				
			AVERAGE TURBIDITY:		6.76				
111413-02-1-1	815167/ 2696200	1414	9	1	3.03		Flooding tide	200' S of Dredge	2
111413-02-1-5		1416		5	4.82				
111413-02-1-8		1418		8	2.52				
			AVERAGE TURBIDITY:		3.46				
111413-04-1-1	815247/ 2696187	1600	17.9	1	1.82		Flooding tide	200' S of Dredge	4
111413-04-1-9		1602		9	2.61				
111413-04-1-16		1604		16	2.22				
			AVERAGE TURBIDITY:		2.22				
			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
111413-00-9-1	815276/ 2696370	1025	11	1	6.14		Ebbing	200' S of Dredge	0
111413-00-9-5.5		1027		5.5	4.74				
111413-00-9-10		1029		10	4.69				
			AVERAGE TURBIDITY:		5.19				
			TURBIDITY INCREASE:		3.09				
111413-01-9-1	815429/ 2697045	1223	5	1	4.47		Flooding tide	200' N of Dredge	1
111413-01-9-2		1225		2	5.85				
111413-01-9-3		1227		3	7.76				
			AVERAGE TURBIDITY:		6.03				
			TURBIDITY INCREASE:		-0.73				
111413-02-9-1	815300/ 2697081	1423	5.5	1	3.92		Flooding tide	200' N of Dredge	2
111413-02-9-2		1425		2	3.6				
111413-02-9-4.5		1427		4.5	5.24				
			AVERAGE TURBIDITY:		4.25				
			TURBIDITY INCREASE:		0.80				
111413-04-9-1	815385/ 2697102	1610	6.5	1	5.03		Flooding tide	200' N of Dredge	4
111413-04-9-3		1612		3	4.83				
111413-04-9-5		1614		5	9.24				
			AVERAGE TURBIDITY:		6.37				
			TURBIDITY INCREASE:		4.15				
			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:	**15 November 2013**
MONITORS:	**D.Boye, M.Tumulo, M.Martinho**
WEATHER CONDITIONS:	**Clear Sunny. Temperatures ranging from 45F AM to 59F in the afternoon**
WIND CONDITIONS:	**Speed: 10 to 20K Direction: SW**
PRIOR STORM EVENTS:	**n/a**
DREDGE / SCOW Position:	**Easting/Northing: 2696705 / 815279**
TYPE OF WATER QUALITY MONITORING EVENT:	**TOP CAD Dredging / BTM CAD Dredging / Disposal**
TIDE INFORMATION:	**High: 1811 Low: 1201**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Dredging being conducted with the open conventional style digging bucket, as authorized.**

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
111513-00-1-1	815222/ 2696973	1234	3.7	1	3.55		Flooding tide	200' S of Dredge	0
111513-00-1-2		1236		2	3.32				
111513-00-1-3		1238		3	5.51				
			AVERAGE TURBIDITY:		4.13				
111513-02-1-1	815232/ 2696357	1420	10	1	7.78		Floding tide	200' S of Dredge	2
111513-02-1-6		1422		6	6.63				
111513-02-1-8		1424		8	6.5				
			AVERAGE TURBIDITY:		6.97				
111513-04-1-1	815213/ 2696574	1620	7	1	6.74		Flooding tide	200' S of Dredge	4
111513-04-1-3		1622		3	6.93				
111513-04-1-6		1624		6	4.27				
			AVERAGE TURBIDITY:		5.98				
			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
111513-00-9-1	815265/ 2696411	1242	12.8	1	9.67		Flooding tide	200' N of Dredge	0
111513-00-9-6		1244		6	6.68				
111513-00-9-12		1246		12	8.33				
			AVERAGE TURBIDITY:		8.23				
			TURBIDITY INCREASE:		4.10				
111513-02-9-1	815399/ 2697023	1430	9	1	5.22		Flooding tide	200' N of Dredge	2
111513-02-9-4		1432		4	6.07				
111513-02-9-8		1434		8	4.68				
			AVERAGE TURBIDITY:		5.32				
			TURBIDITY INCREASE:		-1.65				
111513-04-9-1	815354/ 2696980	1630	5.2	1	4.54		Flooding tide	200' N of Dredge	4
111513-04-9-2		1632		2	4.24				
111513-04-9-4		1634		4	6.7				
			AVERAGE TURBIDITY:		5.16				
			TURBIDITY INCREASE:		-0.82				
			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:	**15 November 2013**
MONITORS:	**D.Boye, M.Tumulo, M.Martinho**
WEATHER CONDITIONS:	**Clear sunny. Tempertures 45F in the morning.**
WIND CONDITIONS:	**Speed: 10 to 20k Direction: SW**
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: 1811 Low: 1201**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Disposal event of LHCC Phase I Top of CAD sediments into CAD Cell #3.**

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
111513-00-1-1	815844/ 2697251	1204	4.5	1	1.85		Slack tide	200' N of Disposal	0
111513-00-1-2		1206		2	2				
111513-00-1-4		1208		4	2.21				
			AVERAGE TURBIDITY:		2.02				
			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
111513-00-9-1	815896/ 2696534	1214	24.2	1	7.07		Slack	200' S of Disposal	0
111513-00-9-12		1216		12	4.75				
111513-00-9-22		1218		22	6.68				
			AVERAGE TURBIDITY:		6.17				
			TURBIDITY INCREASE:		4.15				
			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:	**16 November 2013**
MONITORS:	**M.Tumulo, M. Martinho**
WEATHER CONDITIONS:	**Sunny and mild. Temperatures ranging from 34F AM to 60F in the afternoon.**
WIND CONDITIONS:	**Speed: 5-10k Direction: WSW**
PRIOR STORM EVENTS:	**n/a**
DREDGE / SCOW Position:	**Easting/Northing: 2696776 / 815300**
TYPE OF WATER QUALITY MONITORING EVENT:	**TOP CAD Dredging / BTM CAD Dredging / Disposal**
TIDE INFORMATION:	**High: 0633/1855 Low: 1234**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Dredging being conducted with an open conventional digging bucket, as authorized.**

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
111613-00-1-1	815300/ 2696948	1206	3	1	2.09		Ebbing	200' N of Dredge	0
111613-00-1-2.5		1208		2.5	2.73				
					0				
			AVERAGE TURBIDITY:		1.61				
111613-02-1-1	815286/ 2696605	1405	5	1	2.2		Flooding tide	200' S of Dredge	2
111613-02-1-2		1407		2	2.29				
111613-02-1-4.5		1409		4.5	3.2				
			AVERAGE TURBIDITY:		2.56				
111613-04-1-1	815173/ 2696575	1600	7	1	2.29		Flooding tide	200' S of Dredge	4
111613-04-1-3		1602		3	2.29				
111613-04-1-5.5		1604		5.5	8.04				
			AVERAGE TURBIDITY:		4.21				
				point					
			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
111613-00-9-1	815215/ 2696503	1213	4	1	1.79		Ebbing	200' S of Dredge	0
111613-00-9-2		1215		2	2.55				
111613-00-9-3		1217		3	1.94				
			AVERAGE TURBIDITY:		2.09				
			TURBIDITY INCREASE:		0.49				
111613-02-9-1	815328/ 2696986	1411	3.5	1	6.18		Flooding tide	200' N of Dredge	2
111613-02-9-2.5		1413		2.5	1.66				
					0				
			AVERAGE TURBIDITY:		2.61				
			TURBIDITY INCREASE:		0.05				
111613-04-9-1	815349/ 2697122	1605	5.5	1	3.35		Flooding tide	200' N of Dredge	4
111613-04-9-2.5		1607		2.5	5.34				
111613-04-9-5		1609		5	5.37				
			AVERAGE TURBIDITY:		4.69				
			TURBIDITY INCREASE:		0.48				
			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:	**16 November 2013**
MONITORS:	**M.Tumulo, M.Martinho**
WEATHER CONDITIONS:	**Sunny and mild. Temperatures ranging from 34F AM to 60F in the afternoon.**
WIND CONDITIONS:	**Speed: 5-10k Direction: WSW**
PRIOR STORM EVENTS:	
DREDGE / SCOW Position:	**Northing/Easting: CAD Cell #3**
TYPE OF WATER QUALITY MONITORING EVENT:	**TOP CAD Dredging / BTM CAD Dredging / Disposal**
TIDE INFORMATION:	**High: 0633/1855 Low: 1234**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Disposal of LHCC Phase I Top of CAD sediments into CAD Cell #3.**

APEX

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
111613-00-1-1	815897/ 2696993	1115	5.5	1	1.63		Ebbing	200' N of Disposal	0
111613-00-1-2.5		1117		2.5	2.54				
111613-00-1-5		1119		5	2.32				
			AVERAGE TURBIDITY:		2.16				
			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
111613-00-9-1	815696/ 2696404	1120	14.5	1	2.43		Ebbing	200' S of Disposal	0
111613-00-9-7		1122		7	2.55				
111613-00-9-13		1124		13	2.43				
			AVERAGE TURBIDITY:		2.47				
			TURBIDITY INCREASE:		0.31				
			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

PROPOSED LOWER HARBOR CAD CELL (LHCC) PHASE II APPROXIMATE DREDGE LIMITS

LHCC PHASE II BASELINE

APPROXIMATE LOCATION OF EXISTING MOORED VESSELS

814921 2696870
814877 2696843
814875 2696818
814700 2696754
814686 2696569
814861 2696631
814859 2696604
814935 2696727
814945 2696802
814983 2696837
814936 2696975
814972 2696996
814970 2696980
815003 2697001
815003 2696998
815129 2697010
815129 2697009
815129 2696855
815463 2697031
815389 2696725
815400 2696724
815108 2696678
815096 2696677
815003 2696644
814996 2696652
815100 2696673
815370 2696600
815373 2696598
815364 2696569
815310 2696483
815429 2696493
815589 2696427
815641 2696365

DREDGE AREA T-1 MINIMUM DREDGE ELEV.= -5.5
DREDGE AREA T-2 MINIMUM DREDGE ELEV.= -6
DREDGE AREA T-3 MINIMUM DREDGE ELEV.= -7
DREDGE AREA T-4 MINIMUM DREDGE ELEV.= -8
DREDGE AREA T-5 MINIMUM DREDGE ELEV.= -10
DREDGE AREA T-6 MINIMUM DREDGE ELEV.= -10

PROPOSED CAD CELL#3 TO BE CONSTRUCTED BY OTHERS

PROPOSED LOWER HARBOR CAD CELL PHASE I APPROXIMATE DREDGE LIMITS

CAD CELL #2 BASELINE

CAD CELL 2 DISPOSAL CLEAN UP AREA

EBB
FLOOD

LEGEND:
11/14/13 -1UP
LOCATION OF MONITORING POINT
DATE OF MONITORING POINT
SEQUENCE OF MONITORING EVENT IN THE DAY
TYPE OF EVENT: UP=CURRENT, DOWN=CURRENT, OR DISPOSAL

APEX
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

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	CHM
DRAWN BY	GCD
CHECKED BY	GCD
DATE	NOV 2013
DRAWING SCALE	AS NOTED

GRAPHIC SCALE
SCALE: 1"=50'
0 25 50 100

SHEET TITLE
LOWER HARBOR CAD CELL PHASE I WATER QUALITY MONITORING

DRAWING NO.
WQM-1

1 OF 1