Weekly Field Report

Week: 11-17-13 through 11-23-13

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 third 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 Third Report for the LHCC dredging activities includes:

- Daily Inspection Reports from the dredging oversight performed during the week of November 17th through November 23rd. 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 17th through November 23rd 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 this dredging effort Apex will;
    - Conduct three consecutive water quality monitoring events in the first week of new dredging activities, and thereafter two days per week until Phase I dredging of the LHCC has been completed.
    - Conduct water quality monitoring of each disposal event 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 daily November 18th through the 23rd 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 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 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 continued through the week of November 17th 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 three 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 18th, 20th, and 22nd 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 18th, 20th, and 22nd. 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.

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: Kaios Ryan **Date:** 18-Nov-13

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

Weather AM: **Temperature** AM: 48

PM: Winds 10-15k SW PM: 64

Tides High 0758 AM 2020 PM

Low 0038 AM 1338 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 0900 to conduct background water quality monitoring and to inspect sediment materials in scow TMC 140. Scow draft marks were recorded as 6' FWD and 7.5' AFT. Scow was approved for disposal into CAD Cell #3, and disposal occurs at 1028. Scow TMC 140 maneuvered into position alongside dredge and dredging begins at 1119 using an open conventional digging bucket. Apex inspects material in scow at 1246. Dredging continues until 1603 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' 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) Date: 18-Nov-13

Title: Page: 1 of 1

Copy to: file File: DIR_LHCC_111813

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:** 19-Nov-13

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

Weather	AM:		**Temperature**	AM:	36
	PM:	Rain. Winds 5-15k NW		PM:	51

Tides	High	0850	AM	2115	PM
	Low	0145	AM	1436	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 1100 to conduct oversight of dredging activities. Dredging begins at 1115 using an open conventional digging bucket. Apex inspects material in scow at 1145. Dredging continues until 1555 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' 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) Date: 19-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: Kaios Ryan **Date:** 20-Nov-13

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

Weather	AM:		**Temperature**	AM:	26
	PM:	Winds 5-10k N		PM:	41

Tides	High	0917	AM	2144	PM
	Low	0200	AM	1450	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 0920 to conduct background water quality monitoring and to inspect sediment materials in scow TMC 140. Scow draft marks were recorded as 6' FWD and 7.5' AFT. Scow was approved for disposal into CAD Cell #3, and disposal occurs at 1036. Scow TMC 140 maneuvered into position alongside dredge and dredging begins at 1105 using an open conventional digging bucket. Dredging continues until 1435 at which time dredging stops for the day. End of day draft marks on the scow were recorded as 3.5' FWD and 5.5' AFT. No water quality issues were observed during the day

Problems/Issues or Action Items:

None / n/a

Visitors:

Signature: D.Boye (Apex) Date: 20-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 **Date:** 21-Nov-13

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

Weather	AM:	Clear.	**Temperature**	AM:	21
	PM:	Winds variable 5k or less WSW		PM:	46

Tides	High	0955	AM	2025	PM
	Low	0247	AM	1533	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 0700 to conduct oversight of dredging activities. Dredging begins at 0700 using an open conventional digging bucket. Scow was partially filled with dredged material from previous day; limited dredging due to unfavorable tides according to Dredge Captain. Apex inspects material in scow at 0945 . Dredging continues until 0955 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 AFT. No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / n/a

Visitors:

Signature: D.Boye (Apex) Date: 21-Nov-13

Title: Page: 1 of 1

Copy to: file File: DIR_LHCC_112113

Attachment 2
Water Quality Monitoring Forms

PROJECT:	**New Bedford Harbor Lower Harbor CAD Cell**
JOB NUMBER:	**6724**
SURVEY DATE:	**18 November 2013**
MONITORS:	**Kaios Ryan, Chris Stillman**
WEATHER CONDITIONS:	**Low: 48 High: 64**
WIND CONDITIONS:	**Speed: 10-15k Direction: SW**
PRIOR STORM EVENTS:	**n/a**
DREDGE / SCOW Position:	**Northing/Easting: 2696775 / 815273**
TYPE OF WATER QUALITY MONITORING EVENT:	**TOP CAD Dredging / BTM CAD Dredging / Disposal**
TIDE INFORMATION:	**High: 0758/2020 Low: 0038/1338**
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
111813-00-1-1	2697199 / 815443	1116	4.9	1	4.91		Ebbing	200' N of Dredge	0
111813-00-1-2		1118		2	4.56				
111813-00-1-4		1120		4	6.41				
			AVERAGE TURBIDITY:		5.29				
111813-02-1-1	2697187 / 815423	1318	4.2	1	2.88		Ebbing / Slack	200' N of Dredge	2
111813-02-1-2		1320		2	3.93				
111813-02-1-4		1322		4	3.53				
			AVERAGE TURBIDITY:		3.45				
111813-04-1-1	2696440 / 815287	1515	18.6	1	2.28		Flooding tide	200' S of Dredge	4
111813-04-1-9		1517		9	3.22				
111813-04-1-18		1519		18	4.62				
			AVERAGE TURBIDITY:		3.37				
111813-06-1-1	2696624 / 815280	1707	9.2	1	5.64		Flooding tide	200' S of Dredge	6
111813-06-1-5		1709		5	5.71				
111813-06-1-9		1711		9	5.7				
			AVERAGE TURBIDITY:		5.68				
			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
111813-00-9-1	2696517 / 815324	1123	16.6	1	4.37		Ebbing	200' S of Dredge	0
111813-00-9-8		1125		8	4.96				
111813-00-9-16		1127		16	4.61				
			AVERAGE TURBIDITY:		4.65				
			TURBIDITY INCREASE:		-0.65				
111813-02-9-1	2696580 / 815330	1326	5.8	1	3.89		Ebbing / Slack	200' S of Dredge	2
111813-02-9-3		1328		3	4.41				
111813-02-9-5		1330		5	4.37				
			AVERAGE TURBIDITY:		4.22				
			TURBIDITY INCREASE:		0.78				
111813-04-9-1	2697275 / 815519	1525	4.4	1	7.23		Flooding tide	200' N of Dredge	4
111813-04-9-2		1527		2	21.8				
111813-04-9-4		1529		4	12.5				
			AVERAGE TURBIDITY:		13.84				
			TURBIDITY INCREASE:		10.47				
111813-06-9-1	2697151 / 815352	1718	5.2	1	14		Flooding tide	200' N of Dredge	6
111813-06-9-2		1720		2	18.4				
111813-06-9-4		1722		4	14.5				
			AVERAGE TURBIDITY:		15.63	* Vessel manuevering scow to dewatering barge			
			TURBIDITY INCREASE:		9.95				
			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:	**18 November 2013**
MONITORS:	**Kaios Ryan, Chris Stillman**
WEATHER CONDITIONS:	**Low: 48 High: 64**
WIND CONDITIONS:	**Speed: 10-15k 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: 0758/2020 Low: 0038/1338**
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
111813-00-1-1	2697385 / 815433	0921	8.5	1	2.37		Ebbing	200' N of Disposal	0
111813-00-1-4		0922		4	4.56				
111813-00-1-8		0924		8	1.93				
			AVERAGE TURBIDITY:		2.95				
111813-01-1-1	2697070 / 815883	1028	8.7	1	2.26		Ebbing	200' N of Disposal	post
111813-01-1-4		1030		4	3.61				
111813-01-1-8		1032		8	2.43				
			AVERAGE TURBIDITY:		2.77				
			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
111813-00-9-1	2696603 / 814975	0932	13.4	1	2.22		Ebbing	200' S of Disposal	0
111813-00-9-7		0934		7	3.48				
111813-00-9-13		0936		13	2.26				
				AVERAGE TURBIDITY:	2.65				
				TURBIDITY INCREASE:	-0.30				
111813-01-9-1	2696452 / 815732	1036	11.8	1	3.9		Ebbing	200' S of Disposal	post
111813-01-9-6		1038		6	2.68				
111813-01-9-11		1040		11	2.66				
				AVERAGE TURBIDITY:	3.08				
				TURBIDITY INCREASE:	0.31				
				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:	**20 November 2013**
MONITORS:	**Kaios Ryan, Dennis Claffey**
WEATHER CONDITIONS:	**Low: 26 High: 41**
WIND CONDITIONS:	**Speed: 5-10k Direction: N**
PRIOR STORM EVENTS:	**N/A**
DREDGE / SCOW Position:	**Northing/Easting: 2697088 / 815411**
TYPE OF WATER QUALITY MONITORING EVENT:	**TOP CAD Dredging / BTM CAD Dredging / Disposal**
TIDE INFORMATION:	**High: 0917/2144 Low: 1450**
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
112013-00-1-1	2697207 / 815401	1115	5.8	1	3.6		Ebbing	200' N of Dredge	0
112013-00-1-3		1117		3	6.34				
112013-00-1-5		1119		5	7.43				
			AVERAGE TURBIDITY:		5.79				
112013-02-1-1	2697142 / 815361	1320	4.5	1	2.76		Ebbing	200' N of Dredge	2
112013-02-1-2		1322		2	4.08				
112013-02-1-4		1324		4	2.55				
			AVERAGE TURBIDITY:		3.13				
112013-04-1-1	2696611 / 815249	1512	5.7	1	2.45		Flooding tide	200' S of Dredge	4
112013-04-1-3		1514		3	5.61				
112013-04-1-5		1516		5	3.59				
			AVERAGE TURBIDITY:		3.88				
			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
112013-00-9-1	2696669 / 815241	1121	6.5	1	3.04		Ebbing	200' S of Dredge	0
112013-00-9-3		1123		3	4.11				
112013-00-9-6		1125		6	9.71				
			AVERAGE TURBIDITY:		5.62				
			TURBIDITY INCREASE:		-0.17				
112013-02-9-1	2696523 / 815153	1326	6.5	1	6.9		Ebbing	200' S of Dredge	2
112013-02-9-3		1328		3	6.48				
112013-02-9-6		1330		6	3.32				
			AVERAGE TURBIDITY:		5.57				
			TURBIDITY INCREASE:		2.44				
112013-04-9-1	2697181 / 815372	1518	4.5	1	1.49		Flooding tide	200' N of Dredge	4
112013-04-9-2		1520		2	3.2				
112013-04-9-4		1522		4	5.4				
			AVERAGE TURBIDITY:		3.36				
			TURBIDITY INCREASE:		-0.52				
			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:	**20 November 2013**
MONITORS:	**Kaios Ryan, Dennis Claffey**
WEATHER CONDITIONS:	**Low: 26 High: 41**
WIND CONDITIONS:	**Speed: 5-10k Direction: N**
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: 0917/2144 Low: 1450**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	

APEX

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
112013-00-1-1	2696395 / 815257	0720	8.4	1	3.67		Flooding tide	200' S of Disposal	0
112013-00-1-4		0722		4	5.78				
112013-00-1-8		0724		8	3.11				
			AVERAGE TURBIDITY:		4.19				
112013-00-1-1	2697090 / 815489	0920	7.6	1	2.52		Ebbing / Slack	200' N of Disposal	0
112013-00-1-3		0922		3.5	4.33				
112013-00-1-7		0924		7	5.19				
			AVERAGE TURBIDITY:		4.01				
112013-01-1-1	2696967 / 815977	1038	18.5	1	1.85		Ebbing	200' N of Disposal	post-disposal
112013-01-1-13		1040		13	3.32				
112013-01-1-18		1042		18	4.03				
			AVERAGE TURBIDITY:		3.07				
			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
112013-00-9-1	2697253 / 815554	0729	6.4	1	2.48		Flooding tide	200' N of Disposal	0
112013-00-9-3		0731		3	3.18				
112013-00-9-6		0733		6	2.81				
			AVERAGE TURBIDITY:		2.82				
			TURBIDITY INCREASE:		-1.36				
112013-00-9-1	2696342 / 815255	0929	9.1	1	1.97		Ebbing Slack	200' S of Disposal	0
112013-00-9-4.5		0931		4.5	2.42				
112013-00-9-9		0933		9	2.23				
			AVERAGE TURBIDITY:		2.21				
			TURBIDITY INCREASE:		-1.81				
112013-01-9-1	2696366 / 815378	1041	18.5	1	3.42		Ebbing	200' S of Disposal	post
112013-01-9-9		1043		9	11.5				
112013-01-9-18		1045		18	7.23				
			AVERAGE TURBIDITY:		7.38				
			TURBIDITY INCREASE:		4.32				
			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:	**22 November 2013**
MONITORS:	**D. Boye, M. Martinho, C.Stillman**
WEATHER CONDITIONS:	**Lt./Moderate Rain Low: 45 High: 53**
WIND CONDITIONS:	**Speed: Calm Direction:**
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: 1035 Low: 0329/1613**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Disposal begins at 0705**

APEX

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
112213-00-1-1	2696391 / 815725	0705	19	1			Flooding tide	200' S of Dredge	0
112213-00-1-8		0707		8					
112213-00-1-18		0709		18					
			AVERAGE TURBIDITY:		2.09	*Single composite sample collected from three sample depths for turbidity measurement			
						Due to an equipment failure, the disposal water quality reading was used for the pre-dredge water quality background reading.			
112213-02-1-1	2696316 /815150	0930	9.3	1	0.95		Flooding tide	200' S of Dredge	2
112213-02-1-4.5		0932		4.5	1.06				
112213-02-1-8		0934		8	1.34				
			AVERAGE TURBIDITY:		1.12				
112213-04-1-1	2696885 / 815339	1120	14	1	1.29		Ebbing	200' N of Dredge	4
112213-04-1-6		1122		6	1.07				
112213-04-1-12		1124		12	4.96				
			AVERAGE TURBIDITY:		2.44				
			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
	2697100 / 815594		5.5				Flooding tide	200' N of Dredge	0
112213-01-9-1		0720		3	2.19				
			AVERAGE TURBIDITY:		2.19	*Single sample collected from a depth of 3-feet for turbidity measurement			
			TURBIDITY INCREASE:		0.10	Due to an equipment failure, the disposal water quality reading was used for the pre-dredge water quality background reading.			
112213-02-9-1	2696935 / 815275	0937	6.3	1	1.08		Flooding tide	200' N of Dredge	2
112213-02-9-3		0939		3	2.46				
112213-02-9-5		0941		5	3.74				
			AVERAGE TURBIDITY:		2.42				
			TURBIDITY INCREASE:		1.30				
112213-04-9-1	2696497 / 815218	1135	7.5	1	1		Ebbing	200' S of Dredge	4
112213-04-9-3.5		1137		3.5	3.53				
112213-04-9-6		1139		6	1.26				
			AVERAGE TURBIDITY:		1.93				
			TURBIDITY INCREASE:		-0.51				
			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:	**22 November 2013**
MONITORS:	**D. Boye, M. Martinho, C.Stillman**
WEATHER CONDITIONS:	**Lt./Moderate Rain Low: 45 High: 53**
WIND CONDITIONS:	**Speed: Calm Direction:**
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: 1035 Low: 0329/1613**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Disposal begins at 0705**

UP-CURRENT

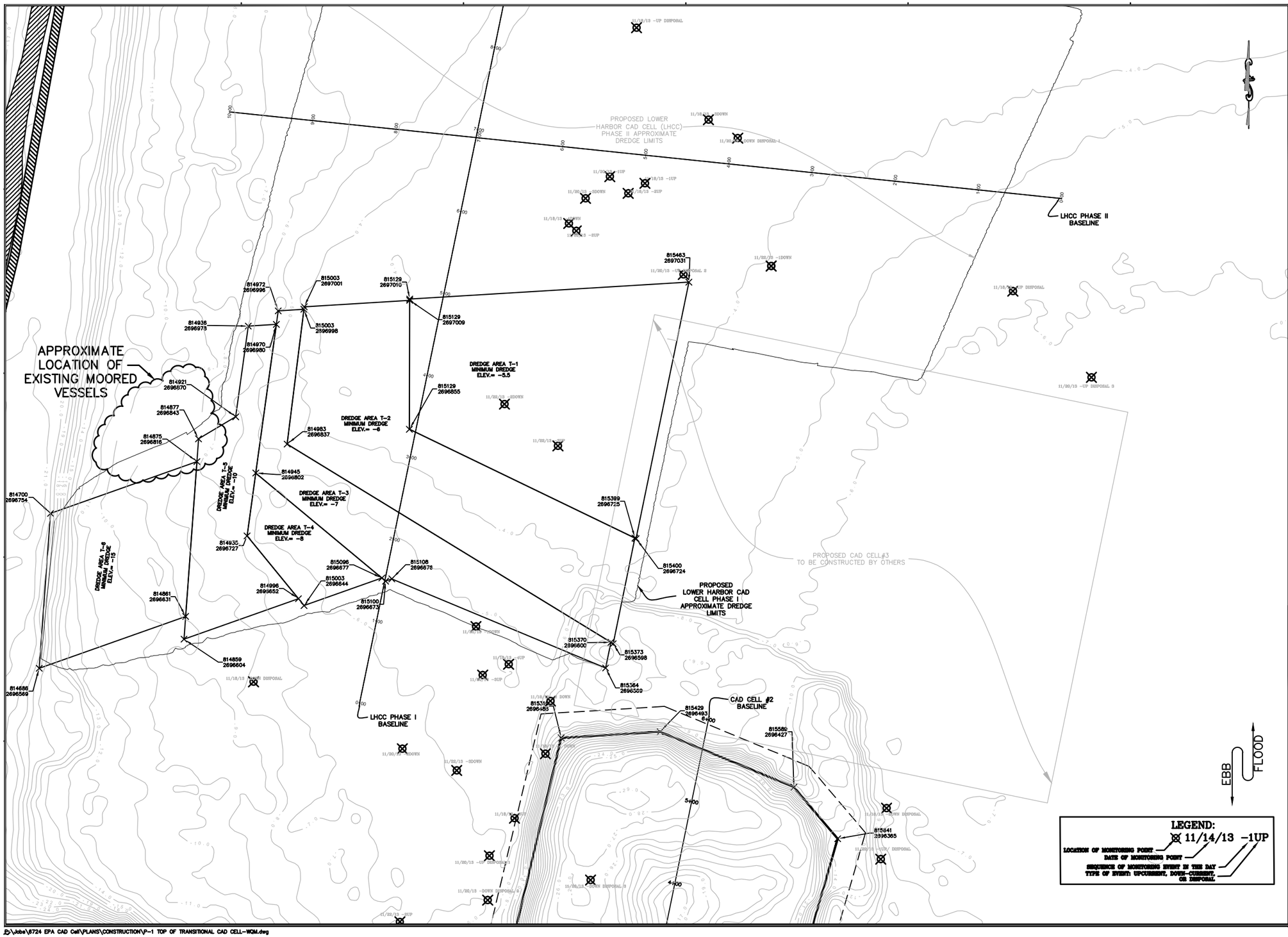
Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
112213-00-1-1	2696391 / 815725	0705	19	1			Flooding tide	200' S of Disposal	0
112213-00-1-8		0707		8					
112213-00-1-18		0709		18					
			AVERAGE TURBIDITY:		2.09	*Single composite sample collected from three sample depths for turbidity measurement			
			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
112213-01-9-1	2697100 / 815594	0720	5.5	3	2.19		Flooding tide	200' N of Disposal	0
			AVERAGE TURBIDITY:		2.19	*Single sample collected from a depth of 3-feet for turbidity measurement			
			TURBIDITY INCREASE:		0.10				
			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



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

P:\Jobs\6724 EPA CAD Cell\PLANS\CONSTRUCTION\P-1 TOP OF TRANSITIONAL CAD CELL-WQM.dwg

PLOT SCALE 1/16"=1'-0"