Weekly Field Report
Week: 12-15-13 through 12-21-13
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 seventh 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 Seventh Report for the LHCC dredging activities includes:

- Daily Inspection Reports from the dredging oversight performed during the week of December 15th through December 21st. 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 15th through December 21st 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 December 15th through the 21st. 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 10th . On December 19th and 20th, dredging was conducted using the closed environmental bucket to remove maintenance materials in the southern area of Dredge Areas T-4, T-5, and T-6. 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 SEI-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 15th utilizing both an open conventional digging bucket (per the terms outlined in the letters issued on November 21st and December 10th), and a closed environmental bucket in accordance with Project specifications. Apex conducted two 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 on the 16th and 18th of December. 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 daily December 16th through the 19th, and also on December 21st. Based on scow logs, approximately 500 and 800 cubic yards of material (assuming 120 pounds/ft^3 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 for each day of disposal activity, with the exception of December 17th due to weather.

Table 1 – Cumulative Dredging Progress

Period of Activity	Volume (cy)
Approximate Vol. Dredged this Reporting Period	2,500
Approximate Volume Dredged to Date	15,400

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:** 16 December 2013

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

Weather	AM:	Clear	**Temperature**	AM:	17
	PM:	Pt.cloudy. Winds 10-15k NW		PM:	30

Tides	High	0657	AM	1916	PM
	Low		AM	1251	PM

Manpower Onsite

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

Equipment Onsite

Description:	Dredge Tripp 47	Hrs. 8
	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support boat	Hrs. 8
	Scow SEI 2000	Hrs. 8

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0735 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 0805, after which scow was maneuvered alongside dredge plant. Dredging begins at 0857 using the open conventional digging bucket in Dredge Area T-2, with dredged materials being placed into scow TMC-140. Dredging continued until 1517, at which point scow TMC-140 is maneuvered over to the dewatering barge. End-of-day draft marks on the scow were 9.5' FWD / AFT.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye Date: 16 December 2013

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. Martinho **Date:** 17 December 2013

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

Weather	AM:	Overcast.	**Temperature**	AM:	10
	PM:	Rain / Hvy. Snow. Winds 5-10k E		PM:	30

Tides	High	0736	AM	1956	PM
	Low	0020	AM	1324	PM

Manpower Onsite

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

Equipment Onsite

Description:	Dredge Tripp 47	Hrs. 8
	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support boat	Hrs. 8
	Scow SEI 2000	Hrs. 8

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0645 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 0735, after which scow was maneuvered alongside dredge plant. Dredging begins at 0830 using the open conventional digging bucket in the northern area of Dredge Area T-2, with dredged materials being placed into scow TMC-140. Dredging continues until 1500, at which point scow TMC-140 is maneuvered over to the dewatering barge. End-of-day draft marks on the scow were 8.5' FWD and 9' AFT.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye Date: 17 December 2013

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. Tumolo **Date:** 18 December 2013

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

Weather	AM:	Clear	**Temperature**	AM:	19
	PM:	Pt.cloudy. Winds 5-10k gusts 18k WNW		PM:	35

Tides	High	0813	AM	2035	PM
	Low	0103	AM	1400	PM

Manpower Onsite

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

Equipment Onsite

Description:	Dredge Tripp 47	Hrs. 8
	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support boat	Hrs. 8
	Scow SEI 2000	Hrs. 8

Contractor Activities: (Attach Additional Sheets as Necessary)

0800 Apex inspects dredged materials in scow to provide clearance for the disposal of materials into CAD Cell #3. Disposal of dredged materials held in scow TMC-140 occurs at approximately 0815, after which it is maneuvered alongside the dredge. Dredging begins at 0900 using the open conventional digging bucket, with dredged materials being placed into scow TMC-140. Dredging continued until 1433, at which point scow TMC-140 is 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: 18 December 2013

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: C. Stillman **Date:** 19 December 2013

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

Weather	AM:	Pt.cloudy.	**Temperature**	AM:	28
	PM:	Pt.cloudy. Winds 10-15k gusts 20k W		PM:	45

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:	Dredge Tripp 47	Hrs. 8
	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support boat	Hrs. 8
	Scow SEI 2000	Hrs. 8

Contractor Activities: (Attach Additional Sheets as Necessary)

0800 Apex inspects dredged materials in scow to provide clearance for the disposal of materials into CAD Cell #3. Disposal of dredged materials held in scow TMC-140 occurs at approximately 0820, after which it is maneuvered alongside the dredge. Dredging begins at 0848 using the closed environmental bucket in Dredge Area T-6 to remove additional maintenance materials. Dredged materials placed into scow TMC-140. Dredging continued until 1230, at which point scow TMC-140 is maneuvered over to dewatering barge. End-of-day draft marks on the scow were 7.5' FWD and 8' AFT.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye Date: 19 December 2013

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: C. Stillman **Date:** 20 December 2013

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

Weather	AM:	Pt.cloudy.	**Temperature**	AM:	28
	PM:	Pt.cloudy. Winds 5-10k SSW		PM:	45

Tides	High	0925	AM	2155	PM
	Low	0228	AM	1511	PM

Manpower Onsite

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

Equipment Onsite

Description:	Dredge Tripp 47	Hrs. 8
	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support boat	Hrs. 8
	Scow SEI 2000	Hrs. 8

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0730 to conduct oversight of dredging activities. Dredging begins at 0858 using the closed environmental bucket. Plan of the day is to work in Dredge Areas T-4 and T-5 to remove additional maintenance materials. Dredged materials placed into scow TMC-140. Dredging continued until 1100, at which point scow TMC-140 is maneuvered over to dewatering barge. End-of-day draft marks on the scow were 6' FWD and 7' AFT.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye Date: 20 December 2013

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. Poirier **Date:** 21 December 2013

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

Weather	AM:	Pt.cloudy.	**Temperature**	AM:	48
	PM:	Overcast. Winds 10-15k SSW		PM:	57

Tides	High	1002	AM	2036	PM
	Low	0309	AM	1547	PM

Manpower Onsite

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

Equipment Onsite

Description:	Dredge Tripp 47	Hrs. 8
	Scow TMC 140	Hrs. 8
	Push boat Sand Pebble	Hrs. 8
	Support boat	Hrs. 8
	Scow SEI 2000	Hrs. 8

Contractor Activities: (Attach Additional Sheets as Necessary)

Apex on-site at 0700 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 0824, after which scow was maneuvered alongside dredge plant. Dredging begins at 0850 using the open conventional digging bucket in Dredge Area T-1, with dredged materials being placed into scow TMC-140. Dredging continued until 1427, at which point scow TMC-140 is maneuvered over to the dewatering barge. End-of-day draft marks on the scow were 9.5' FWD and 10' AFT.

No water quality issues were observed during the day.

Problems/Issues or Action Items:

None / N/A

Visitors:

Signature: D. Boye Date: 21 December 2013

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:	**16 December 2013**
MONITORS:	**K. Ryan**
WEATHER CONDITIONS:	**Clear to ptly. Cloudy Low: 17 High: 30**
WIND CONDITIONS:	**Speed: 10-15k Direction: NW**
PRIOR STORM EVENTS:	**N/A**
DREDGE / SCOW Position:	**Northing/Easting: 2696657 / 815187**
TYPE OF WATER QUALITY MONITORING EVENT:	**TOP CAD Dredging / BTM CAD Dredging / Disposal**
TIDE INFORMATION:	**High: 0657/1916 Low: 1251**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	**N IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Dredging begins at 0857 and ends for the day at 1517. Capping activities from another project also occurring in the Harbor, south of Lower Harbor CAD Cell work.**

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
121613-00-1-1	2697172 / 815244	0857	6.3	1	3.4		Ebbing	200' N of Dredge	0
121613-00-1-3		0859		3	3.1				
121613-00-1-6		0901		6	3.2				
			AVERAGE TURBIDITY:		3.23				
121613-02-1-1	2697112 / 815238	1100	3.8	1	3.3		Ebbing	200' N of Dredge	2
121613-02-1-2		1102		2	3.1				
121613-02-1-3		1104		3	3.2				
			AVERAGE TURBIDITY:		3.20				
121613-04-1-1	2696318 / 814973	1300	8	1	4.6		Flooding tide	200' S of Dredge	4
121613-04-1-3.5		1302		3.5	5.5				
121613-04-1-7		1304		7	4.4				
			AVERAGE TURBIDITY:		4.83				
121613-06-1-1	2694890 / 814950	1456	36.1	1	4.5		Flooding tide	200' S of Dredge	6
121613-06-1-17		1458		17	4.3				
121613-06-1-34		1500		34	4				
			AVERAGE TURBIDITY:		4.27				
			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
121613-00-9-1	2696513 / 815240	0904	7.2	1	4.2		Ebbing	200' S of Dredge	0
121613-00-9-3.5		0906		3.5	10.3				
121613-00-9-7		0908		7	5.2				
			AVERAGE TURBIDITY:		6.57				
			TURBIDITY INCREASE:		3.33				
121613-02-9-1	2696411 / 815309	1108	17.3	1	5.1		Ebbing	200' S of Dredge	2
121613-02-9-8.5		1110		8.5	9.7				
121613-02-9-17		1112		17	4.2				
			AVERAGE TURBIDITY:		6.33				
			TURBIDITY INCREASE:		3.13				
121613-04-9-1	2697023 / 815070	1309	3	1	8.8		Flooding tide	200' N of Dredge	4
121613-04-9-2		1311		2	5.8				
121613-04-9-3		1313		3	-				
			AVERAGE TURBIDITY:		7.30				
			TURBIDITY INCREASE:		2.47				
121613-06-9-1	2696823 / 814940	1507	7.8	1	6.2		Flooding tide	200' N of Dredge	6
121613-06-9-3		1509		3	25				
121613-06-9-6		1511		6	29.6				
			AVERAGE TURBIDITY:		20.27				
			TURBIDITY INCREASE:		16.00				
			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 December 2013**
MONITORS:	**K. Ryan**
WEATHER CONDITIONS:	**Clear to ptly. Cloudy Low: 17 High: 30**
WIND CONDITIONS:	**Speed: 10-15k 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: 0657/1916 Low: 1251**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Disposal into CAD Cell #3 occurred at 0805**

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
121613-00-1-1	2696977 / 815374	0748	10	1	3.7		Ebbing	200' N of Disposal	0
121613-00-1-4.5		0749		4.5	3.7				
121613-00-1-9		0751		9	3.2				
			AVERAGE TURBIDITY:		3.53				
121613-01-1-1	2696454 / 815644	0809	36.4	1	3.1		Ebbing	200' N of Disposal	post
121613-01-1-18		0811		18	3.6				
121613-01-1-36		0813		36	4.1				
			AVERAGE TURBIDITY:		3.60				
			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
121613-00-9-1	2696446 / 815146	0753	9.2	1	3.5		Ebbing	200' S of Disposal	0
121613-00-9-4.5		0755		4.5	3.7				
121613-00-9-9		0757		9	3.8				
			AVERAGE TURBIDITY:		3.67				
			TURBIDITY INCREASE:		0.13				
121613-01-9-1	2696213 / 816005	0818	10	1	3.7		Ebbing	200' S of Disposal	post
121613-01-9-4.5		0820		4.5	3.9				
121613-01-9-9		0822		9	-				
			AVERAGE TURBIDITY:		3.80				
			TURBIDITY INCREASE:		0.20				
			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:	**18 December 2013**
MONITORS:	**M. Tumolo**
WEATHER CONDITIONS:	**Clear skies. Temperature was 19F in the morning increasing to 35F PM.**
WIND CONDITIONS:	**Speed: 5-10k gusting 18k 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: 0813/2035 Low: 0103/1400**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO): N	**IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Disposal into CAD Cell #3 occurred at approimately 0815**

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
121813-01-1-1	2697013 / 815730	0826	10	1	7.3		Ebbing / Slack	200' N of Disposal	post
121813-01-1-5		0828		5	6.7				
121813-01-1-9		0830		9	7.4				
			AVERAGE TURBIDITY:		7.13				
			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
121813-01-9-1	2696188 / 815530	0819	22.8	1	7.4		Ebbing / Slack	200' S of Disposal	post
121813-01-9-12		0821		12	7.7				
121813-01-9-22		0823		22	7.6				
			AVERAGE TURBIDITY:		7.57				
			TURBIDITY INCREASE:		0.43				
			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:	**18 December 2013**
MONITORS:	**M. Tumolo**
WEATHER CONDITIONS:	**Clear skies. Temperature was 19F in the morning increasing to 35F PM.**
WIND CONDITIONS:	**Speed: 5-10k gusting 18k Direction: WNW**
PRIOR STORM EVENTS:	**N/A**
DREDGE / SCOW Position:	**Northing/Easting: 2696942 / 814062**
TYPE OF WATER QUALITY MONITORING EVENT:	**TOP CAD Dredging / BTM CAD Dredging / Disposal**
TIDE INFORMATION:	**High: 0813/2035 Low: 0103/1400**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	**N IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Dredging begins at 0900 and ends for the day at 1433. Capping activities from another project also occurring in the Harbor, south of Lower Harbor CAD Cell work.**

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
121813-00-1-1	2697095 / 815138	0900	7.2	1	5.2		Ebbing	200' N of Dredge	0
121813-00-1-3.5		0902		3.5	5.3				
121813-00-1-6		0904		6	6.1				
			AVERAGE TURBIDITY:		5.53				
121813-02-1-1	2697121 / 815136	1100	5.8	1	5.6		Ebbing	200' N of Dredge	2
121813-02-1-2.5		1102		2.5	5.3				
121813-02-1-5		1104		5	5.2				
			AVERAGE TURBIDITY:		5.37				
121813-04-1-1	2697154 / 814710	1310	22	1	4.4		Ebbing	200' N of Dredge	4
121813-04-1-11		1312		11	5				
121813-04-1-21		1314		21	7.4				
			AVERAGE TURBIDITY:		5.60				
121813-06-1-1	2697160 / 814829	1510	10.5	1	6.3		Flooding tide	200' S of Dredge	6
121813-06-1-5		1512		5	14.8				
121813-06-1-9		1514		9	14				
			AVERAGE TURBIDITY:		11.7				
			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
121813-00-9-1	2696446 / 815220	0910	7.7	1	9.3		Ebbing	200' S of Dredge	0
121813-00-9-3		0912		3	9				
121813-00-9-6		0914		6	8				
			AVERAGE TURBIDITY:		8.77				
			TURBIDITY INCREASE:		3.23				
121813-02-9-1	2696431 / 815165	1107	6.5	1	5.4		Ebbing	200' S of Dredge	2
121813-02-9-4		1109		4	6.1				
121813-02-9-6		1111		6	8.2				
			AVERAGE TURBIDITY:		6.57				
			TURBIDITY INCREASE:		1.20				
121813-04-9-1	2696378 / 814987	1316	7	1	5.4		Ebbing	200' S of Dredge	4
121813-04-9-4		1318		4	6.1				
121813-04-9-6		1320		6	8.2				
			AVERAGE TURBIDITY:		6.57				
			TURBIDITY INCREASE:		0.97				
121813-06-9-1	2697160 / 814686	1516	22	1	4.3		Flooding tide	200' N of Dredge	6
121813-06-9-11		1518		11	4.3				
121813-06-9-22		1520		21	17.2				
			AVERAGE TURBIDITY:		8.60				
			TURBIDITY INCREASE:		-3.10				
			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:	**19 December 2013**
MONITORS:	**C. Stillman**
WEATHER CONDITIONS:	**Ptly. Cloudy. Temperatures in the morning 28F rising to 45F PM**
WIND CONDITIONS:	**Speed: 10-15k gusting 20k 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: 0850/2115 Low: 0145/1436**
WAS WATER QUALITY SAMPLING PERFORMED? (YES/NO):	**N IF YES, ATTACH COC FORMS**
GENERAL NOTES:	**Disposal into CAD Cell #3 occurred at approximately 0820**

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
			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
121913-01-9-1	2696850 / 815538	0822	33.8	1	6.7		Flooding tide	100' N of Disposal	post
121913-01-9-10		0823		10	6.7				
121913-01-9-33		0824		33	7.1				
			AVERAGE TURBIDITY:		6.83	* proxy up-current reference measurement taken at 100-feet downcurrent.			
			TURBIDITY INCREASE:			* QC check on plume tracking characterizations.			
121913-01-9-1	2697016 / 815454	0826	15.2	1	6.8		Flooding tide	200' N of Disposal	post
121913-01-9-7		0827		7	6.8				
121913-01-9-14		0828		14	6.8				
			AVERAGE TURBIDITY:		6.80				
			TURBIDITY INCREASE:						
121913-01-9-1	2696977 / 815454	0829	22.2	1	7		Flooding tide	200' N of Disposal	post
121913-01-9-11		0830		11	6.9				
121913-01-9-21		0831		21	7.1				
			AVERAGE TURBIDITY:		7.00				
			TURBIDITY INCREASE:						
121913-01-9-1	2696808 / 815409	0835	29.8	1	7.5		Flooding tide	100' N of Disposal	post
121913-01-9-15		0836		15	7.8				
121913-01-9-29		0837		29	8.1				
			AVERAGE TURBIDITY:		7.80				
			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:	**21 December 2013**
MONITORS:	**J. Poirier**
WEATHER CONDITIONS:	**Ptly. Cloudy / Overcast. Temperatures 48F early, increasing to 57F PM**
WIND CONDITIONS:	**Speed: 10-15k Direction: SSW**
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: 1002/2036 Low: 0309/1547**
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

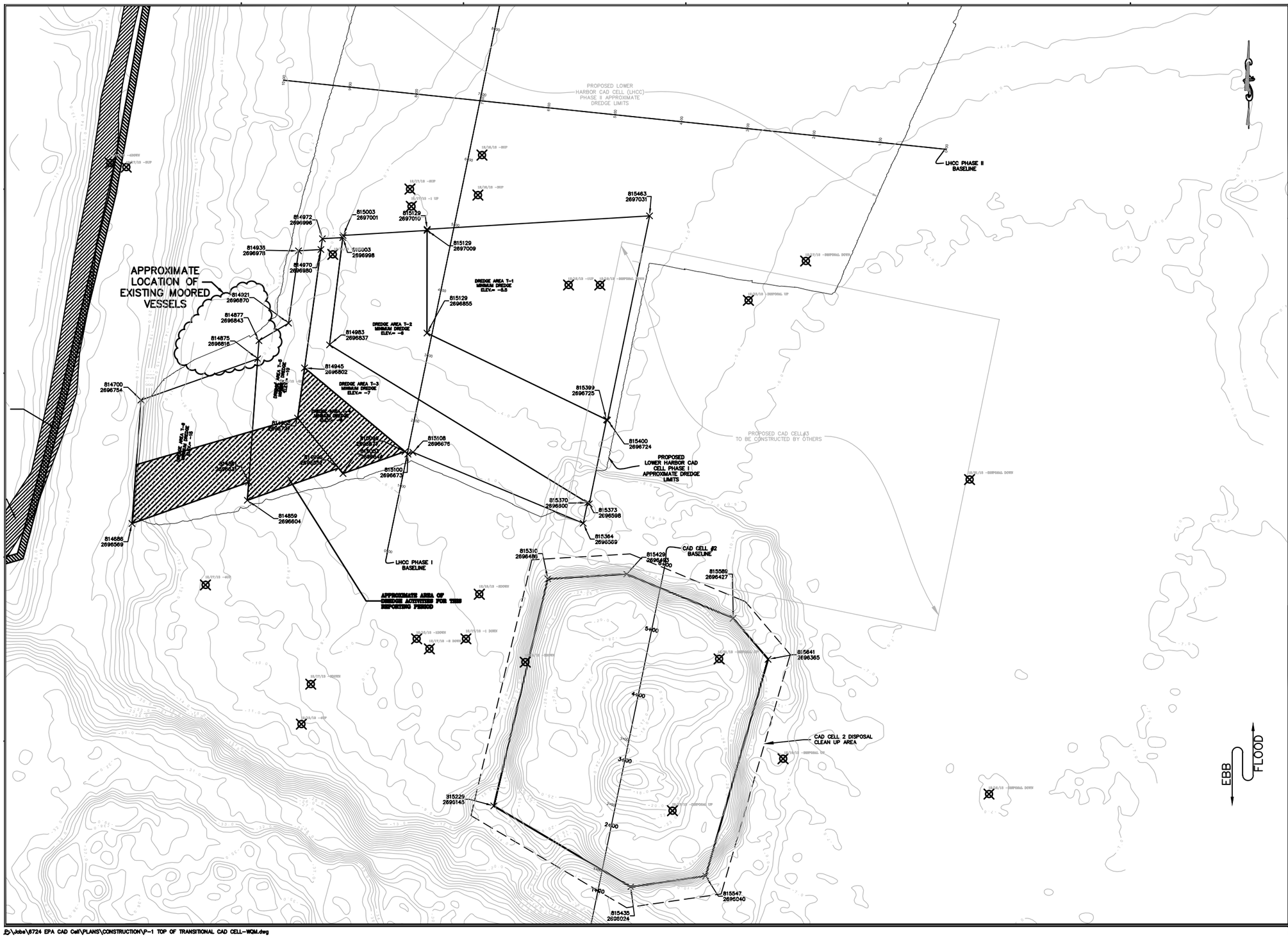
Monitoring ID #	NORTHING / EASTING	TIME	TOTAL WATER DEPTH (ft)	SAMPLE DEPTH (ft)	TURBIDITY (NTUs)	GPS FILE NAME	TIDAL STAGE	RELATIVE POSITION OF MEASUREMENT	NUMBER OF HOURS DREDGING
122113-01-1-1	2696416 / 815600	0824	21.5	1	3.1		Flooding tide	200' S of Disposal	post
122113-01-1-11		0826		11	4.5				
122113-01-1-21		0828		21	5.9				
			AVERAGE TURBIDITY:		4.50				
			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
122113-01-9-1	2696685 / 815976	0830	11.6	1	3.7		Flooding tide	200' N of Disposal	post
122113-01-9-5.5		0832		5.5	4.6				
122113-01-9-11		0834		11	5.3				
			AVERAGE TURBIDITY:		4.53				
			TURBIDITY INCREASE:		0.03				
			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"