



**WATER QUALITY MONITORING REPORT**  
**Dredge and Cap Placement Operations**  
**New Bedford Harbor Dredge Project - Phase II**  
**(Completion of Initial Construction of CAD Cell and OU #3 Cap Placement)**  
**7/6/05 – 7/22/05**

**To:** Paul Craffey (MADEP)  
David Dickerson (EPA)

**From:** Stephen Tobin  
Apex Environmental, Inc.

**Re: New Bedford Harbor Dredge – Phase II**  
**Water Quality Monitoring Report**

**Date: July 26, 2005**

Attached is the water quality monitoring results from the dredging operations for the New Bedford Harbor Dredge – Phase II from July 6, 2005 through July 22, 2005. Also included are the monitoring results from EPA Operable Unit #3 (OU #3) cap placement from July 6, 2005 through July 22, 2005. Water quality monitoring was performed in accordance with the Water Quality Monitoring Plan dated 01/05/05 and Figure 6 (Water Quality Monitoring Decision Sequence) and Figure 7 (Analytical Protocol Decision Sequence) dated March 2004 provided to Apex by the Environmental Protection Agency (EPA). Included in this report are spreadsheets tabulating the turbidity results from each day and a map of the sampling locations.

Following the guidelines of the WQMP and EPA documents, monitoring locations for water turbidity recorded an average turbidity over various water depths, up and down-current from the dredge or material placement operations, depending on tide. The values recorded as the Reference Site Turbidity were taken from up-current monitoring locations, or from monitoring events which occurred before dredge or material placement operations began. The Reference Turbidity Value was then compared to down-current turbidity values measured at regular time intervals after operations had begun.

**Water Quality Monitoring Results Summary (Dredging):**

For dredge operations, an exceedance of the project turbidity standard occurs when the average turbidity down-current exceeds the Reference Turbidity Value plus the permissible turbidity increase, as outlined in Section 3.3 of the WQMP. For a reference value less than 10 NTUs, the down-current permissible turbidity increase is plus 20 NTUs. The permissible turbidity increases for operations with or without silt curtains are the same, only the distance from the dredge to monitoring locations changes.

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Dredging events were monitored on six days; 7/6/05, 7/7/05, 7/11/05, 7/12/05, 7/15/05 and 7/22/05 during dredging operations. Water quality monitors selected various sample locations around the dredging area to collect data. There were no turbidity exceedances to report during the dredging events.

**Water Quality Monitoring Results Summary (Cap Placement):**

Water quality monitoring during cap placement in the OU #3 area followed the guidelines set forth in the documents provided by the EPA. Material placement events were monitored on six days; 7/6/05, 7/7/05, 7/8/05, 7/12/05, 7/14/05 and 7/22/05. Water quality monitors selected various sample locations around the placement area to the down-current flow of water from the cap placement operations. There were no turbidity exceedances to report during the material placement events.

The preliminary results from the second phase of water quality monitoring show that dredging and cap placement operations have stayed within the permissible turbidity levels set forth in the Water Quality Monitoring Plan and the EPA documents provided on the dates which monitoring occurred.

If you have any questions or comments regarding these results, feel free to contact me at 508-353-5202.

Stephen Tobin  
Apex Environmental, Inc.

Attachments

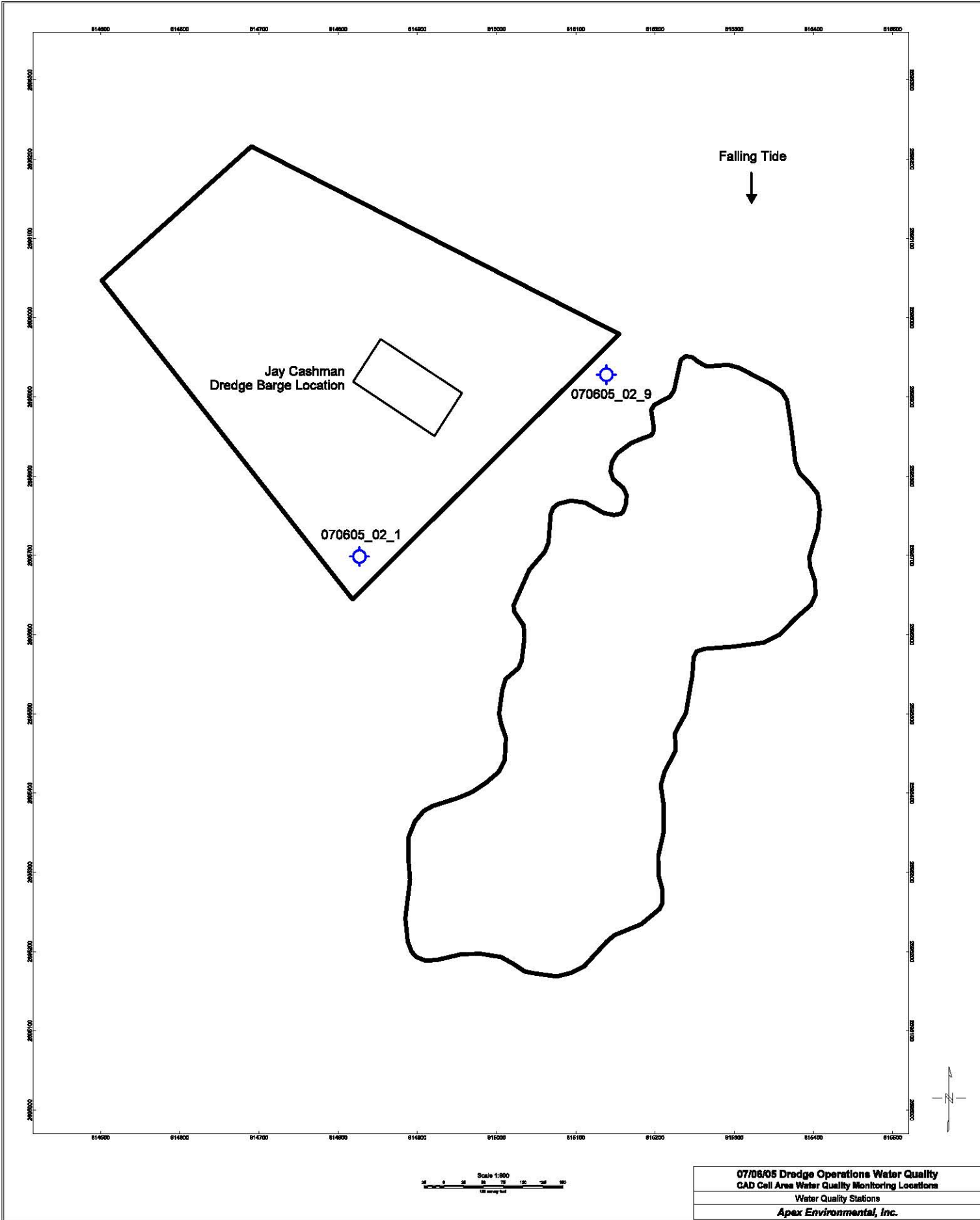
7/6/2005

New Bedford Harbor Dredge Project - Phase II  
Water Quality Monitoring - CAD Cell Excavation Area

| Tide Time    | Time  | ID           | Coordinates | Up/Down | Depth (ft.)    | Ave. Turbidity | Permissible Turbidity | Weather Conditions  | Vessel  |
|--------------|-------|--------------|-------------|---------|----------------|----------------|-----------------------|---------------------|---------|
| High 8:40    |       |              |             | Current |                | (NTUs)         | Increase (NTUs)       |                     | Traffic |
| Falling Tide | 12:00 | 070605_02_1  | 814826.81   | Up      | 5              | 2.8            |                       | Cloudy, ~80 Degrees | None    |
|              |       | (Background) | 2695698.48  |         | 10             | 2.5            |                       | S Wind 1-5 knots    |         |
|              |       |              |             |         | 15             | 4.7            |                       |                     |         |
|              |       |              |             |         | 20             | 6.0            |                       |                     |         |
|              |       |              |             |         | 25             | 6.0            |                       |                     |         |
|              |       |              |             |         | 30             | 3.5            |                       |                     |         |
|              |       |              |             |         | <b>AVERAGE</b> | <b>4.3</b>     | <b>24.3</b>           |                     |         |
|              | 11:50 | 070605_02_9  | 815138.52   | Down    | 5              | 9.5            |                       | Cloudy, ~80 Degrees | None    |
|              |       |              | 2695928.02  |         | 10             | 10.0           |                       | S Wind 1-5 knots    |         |
|              |       |              |             |         | 15             | 14.5           |                       |                     |         |
|              |       |              |             | 20      | 21.5           |                |                       |                     |         |
|              |       |              |             | 25      | 10.5           |                |                       |                     |         |
|              |       |              |             | 30      | 9.0            |                |                       |                     |         |
| Low 13:40    |       |              |             |         | <b>AVERAGE</b> | <b>12.5</b>    | <b>11.8 NTUs</b>      |                     |         |

Below Permissible  
Turbidity Increase Limit

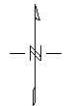
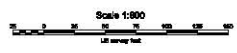
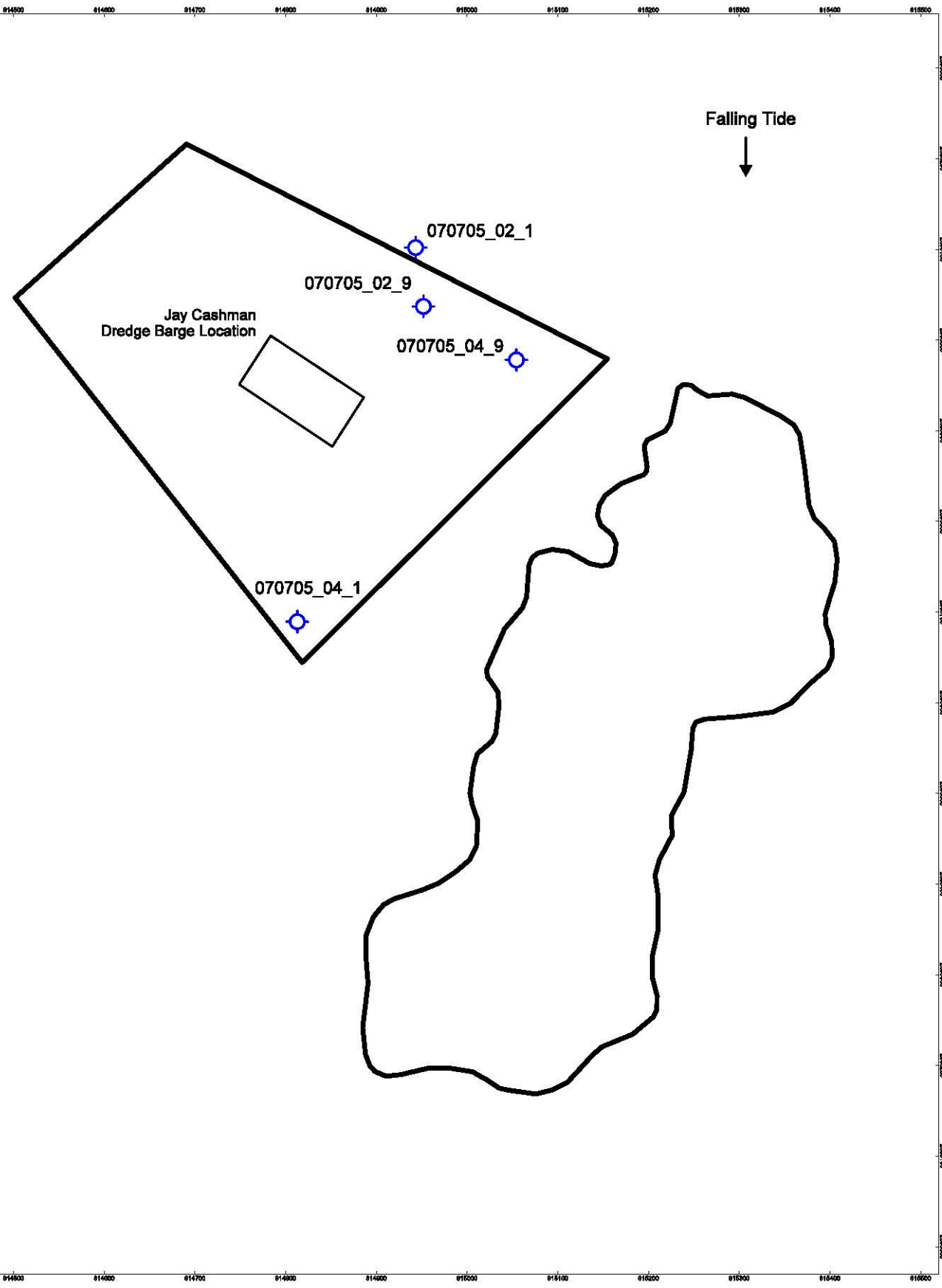
Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.



7/7/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - CAD Cell Excavation Area**

| Tide Time    | Time        | ID                          | Coordinates             | Up/Down        | Depth (ft.)    | Ave. Turbidity            | Permissible Turbidity                         | Weather Conditions                       | Vessel  |
|--------------|-------------|-----------------------------|-------------------------|----------------|----------------|---------------------------|---|--|---------|
| High 9:21    |             |                             |                         | Current        |                | (NTUs)                    | Increase (NTUs)                               |  | Traffic |
| Falling Tide | 11:56       | 070705_02_1<br>(Background) | 814943.23<br>2696102.07 | Up             | 5              | 5.5                       |   | Cloudy, ~70 Degrees<br>N Wind 5-15 knots | None    |
|              |             |                             |                         |                | 10             | 6.0                       |   |  |         |
|              |             |                             |                         |                | 15             | 6.3                       |   |  |         |
|              |             |                             |                         |                | 20             | 11.0                      |   |  |         |
|              |             |                             |                         |                | 25             | 17.0                      |   |  |         |
|              |             |                             |                         |                | 30             | 22.5                      |   |  |         |
|              |             |                             |                         |                | <b>AVERAGE</b> | <b>11.4</b>               | <b>31.4</b>                                   |  |         |
|              | 12:05       | 070705_02_9                 | 815780.97<br>2695561.53 | Down           | 5              | 6.5                       |   | Cloudy, ~70 Degrees<br>N Wind 5-15 knots | None    |
|              |             |                             |                         |                | 10             | 8.0                       |   |  |         |
|              |             |                             |                         |                | 15             | 7.5                       |   |  |         |
|              |             |                             |                         |                | 20             | 9.5                       |   |  |         |
|              |             |                             |                         |                | 25             | 13.5                      |   |  |         |
|              |             |                             |                         |                | 30             | 7.5                       |   |  |         |
|              |             |                             |                         |                | <b>AVERAGE</b> | <b>8.8</b>                | <b>22.6 NTUs</b>                              |  |         |
|              | 13:17       | 070705_04_1<br>(Background) | 814951.76<br>2696037.2  | Up             | 5              | 6.5                       | Below Permissible<br>Turbidity Increase Limit | Cloudy, ~70 Degrees<br>N Wind 5-15 knots | None    |
|              |             |                             |                         | 10             | 6.5            |                           |   |  |         |
|              |             |                             |                         | 15             | 22.0           |                           |   |  |         |
|              |             |                             |                         | 20             | 11.7           |                           |   |  |         |
|              |             |                             |                         | 25             | 16.0           |                           |   |  |         |
|              |             |                             |                         | 30             | 16.0           |                           |   |  |         |
|              |             |                             |                         | <b>AVERAGE</b> | <b>13.1</b>    | <b>33.1</b>               |   |  |         |
| 13:23        | 070705_04_9 | 814812.74<br>2695689.43     | Down                    | 5              | 2.2            |                           | Cloudy, ~70 Degrees<br>N Wind 5-15 knots      | None                                     |         |
|              |             |                             |                         | 10             | 2.6            |                           |   |  |         |
|              |             |                             |                         | 15             | 2.3            |                           |   |  |         |
|              |             |                             |                         | 20             | 3.6            |                           |   |  |         |
|              |             |                             |                         | 25             | 4.8            |                           |   |  |         |
|              |             |                             |                         | 30             | 10             |                           |   |  |         |
| Low 14:47    |             |                             |                         | <b>AVERAGE</b> | <b>4.3</b>     | <b>(28.8 Below Limit)</b> |   |  |         |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.

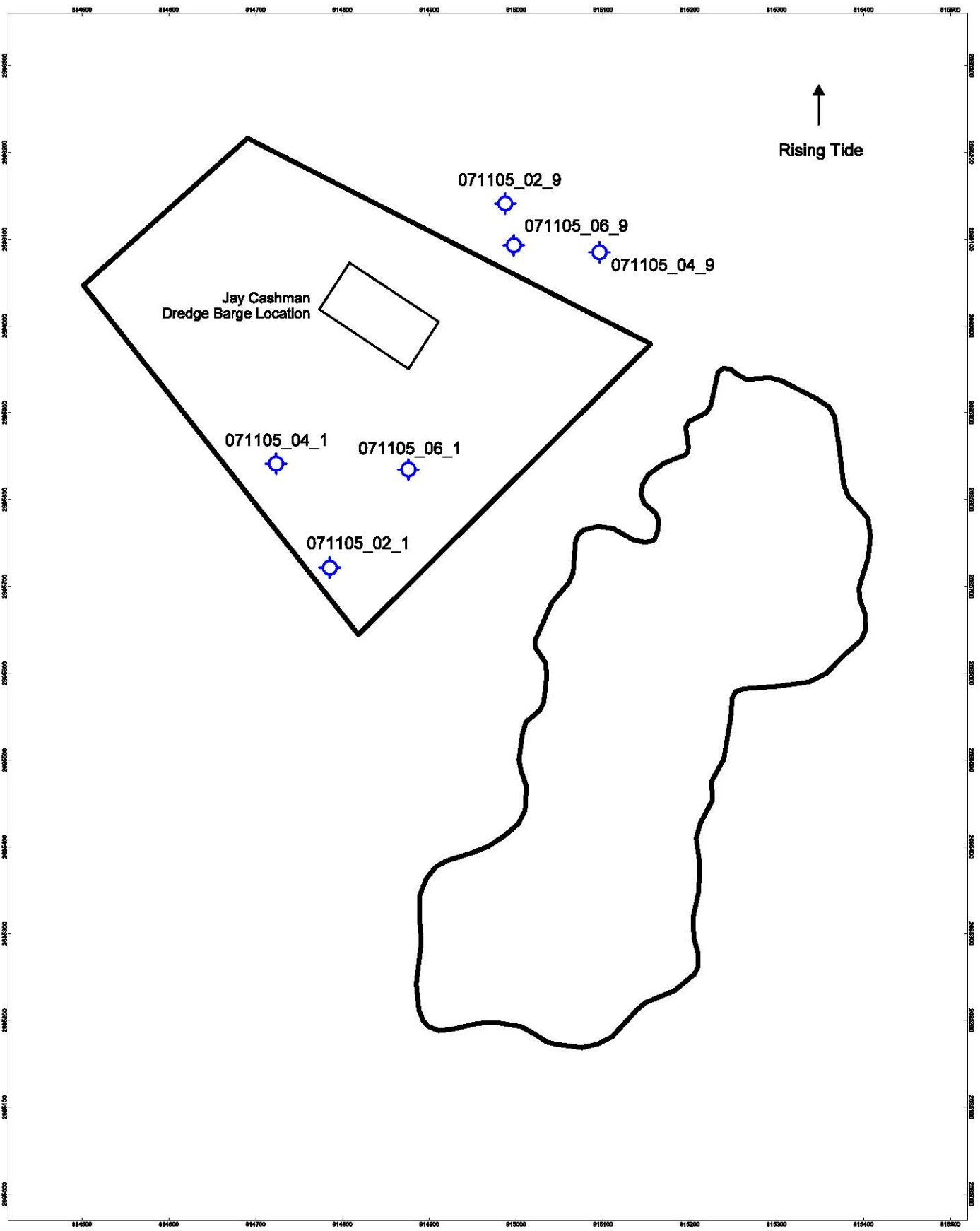


**07/07/05 Dredge Operations Water Quality  
CAD Cell Area Water Quality Monitoring Locations**  
Water Quality Stations  
**Apex Environmental, Inc.**

7/11/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - CAD Cell Excavation Area**

| Tide Time   | Time       | ID                          | Coordinates             | Up/Down | Depth (ft.)                     | Ave. Turbidity                              | Permissible Turbidity                         | Weather Conditions                       | Vessel  |
|-------------|------------|-----------------------------|-------------------------|---------|---------------------------------|---|---|--|---------|
| Low 5:14    |            |                             |                         | Current |                                 | (NTUs)                                      | Increase (NTUs)                               |  | Traffic |
| Rising Tide | 8:43       | 071105_02_1<br>(Background) | 814739.92<br>2695456.99 | Up      | 5<br>10<br>15<br>20<br>25<br>30 | 4.8<br>4.8<br>5.0<br>4.2<br>4.4<br>5.5      |   | Sunny, ~80 Degrees<br>NE Wind 5-10 knots | None    |
|             |            |                             |                         |         | <b>AVERAGE</b>                  | <b>4.8</b>                                  | <b>24.8</b>                                   |  |         |
|             | 8:53       | 071105_02_9                 | 814987.43<br>2696141.02 | Down    | 5<br>10<br>15<br>20<br>25<br>30 | 10.5<br>15.0<br>7.1<br>35.0<br>11.0<br>22.0 |   | Sunny, ~80 Degrees<br>NE Wind 5-10 knots | None    |
|             |            |                             |                         |         | <b>AVERAGE</b>                  | <b>16.8</b>                                 | <b>8.0 NTUs</b>                               |  |         |
|             | 10:04      | 071105_04_1<br>(Background) | 814982.98<br>2695576.6  | Up      | 5<br>10<br>15<br>20<br>25<br>30 | 2.6<br>3.0<br>3.0<br>2.4<br>1.6<br>1.8      | Below Permissible<br>Turbidity Increase Limit | Sunny, ~80 Degrees<br>NE Wind 5-10 knots | None    |
|             |            |                             |                         |         | <b>AVERAGE</b>                  | <b>2.4</b>                                  | <b>22.4</b>                                   |  |         |
|             | 10:15      | 071105_04_9                 | 815095.87<br>2696084.83 | Down    | 5<br>10<br>15<br>20<br>25       | 5.7<br>5.5<br>4.8<br>5<br>8.5               |   | Sunny, ~80 Degrees<br>NE Wind 5-10 knots | None    |
|             |            |                             |                         |         | <b>AVERAGE</b>                  | <b>5.9</b>                                  | <b>(16.5 Below Limit)</b>                     |  |         |
|             | 10:46      | 071105_06_1<br>(Background) | 815116.14<br>2695747.5  | Up      | 5<br>10<br>15<br>20<br>25<br>30 | 2.3<br>3.0<br>6.0<br>6.5<br>6.5<br>3.5      |   | Sunny, ~80 Degrees<br>NE Wind 5-10 knots | None    |
|             |            |                             |                         |         | <b>AVERAGE</b>                  | <b>4.6</b>                                  | <b>24.6</b>                                   |  |         |
|             | 10:54      | 071105_06_9                 | 814997.22<br>2696092.99 | Down    | 5<br>10<br>15<br>20             | 2.8<br>4.3<br>5<br>10                       |   | Sunny, ~80 Degrees<br>NE Wind 5-10 knots | None    |
|             | High 12:04 |                             |                         |         | <b>AVERAGE</b>                  | <b>5.5</b>                                  | <b>(19.1 Below Limit)</b>                     |  |         |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.



Jay Cashman  
Dredge Barge Location

071105\_02\_9

071105\_06\_9

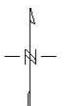
071105\_04\_9

071105\_04\_1

071105\_06\_1

071105\_02\_1

↑  
Rising Tide



**07/11/05 Dredge Operations Water Quality  
CAD Cell Area Water Quality Monitoring Locations**  
Water Quality Stations  
*Apex Environmental, Inc.*

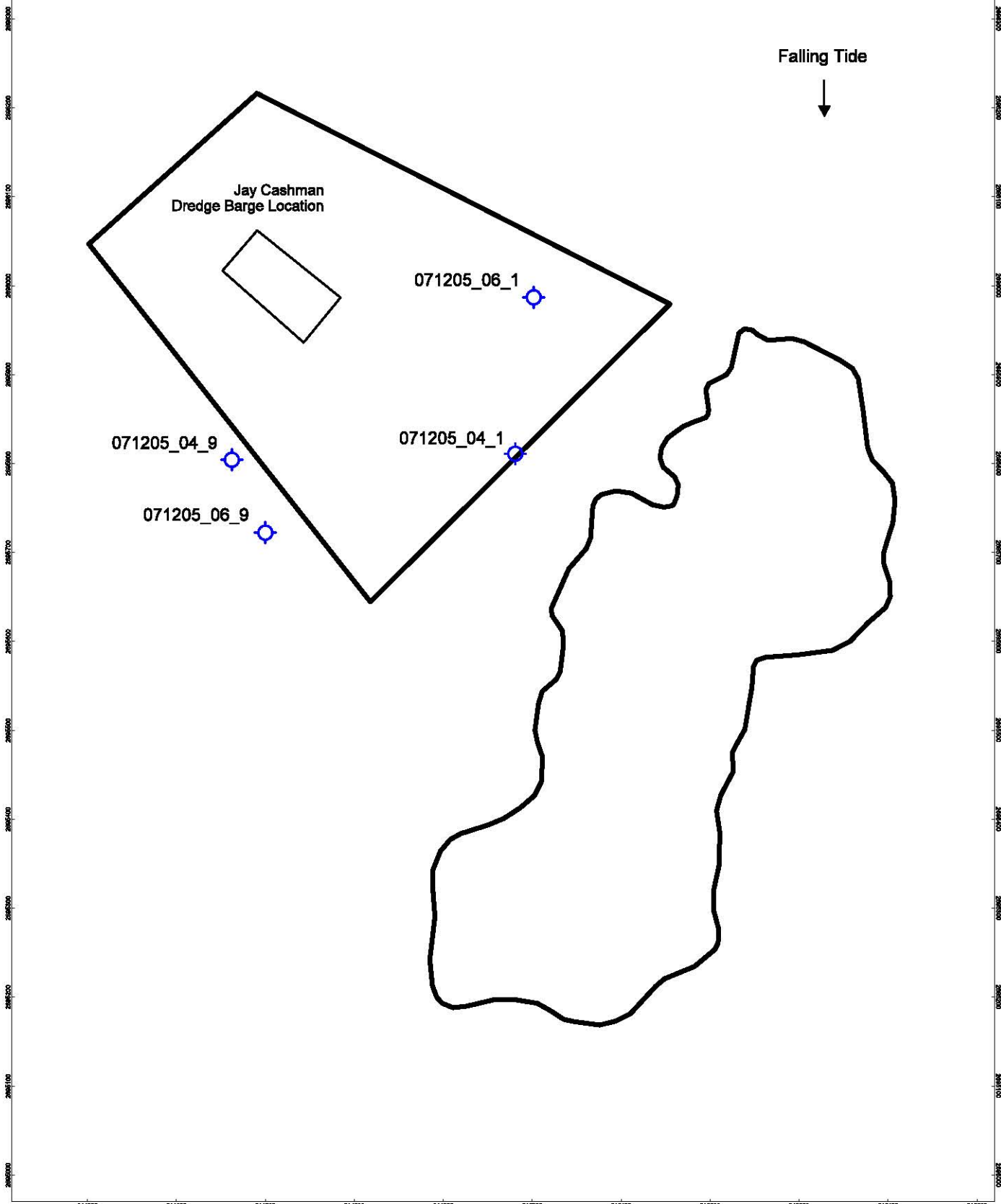


7/12/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - CAD Cell Excavation Area**

| Tide Time    | Time        | ID           | Coordinates | Up/Down        | Depth (ft.)    | Ave. Turbidity     | Permissible Turbidity    | Weather Conditions | Vessel  |
|--------------|-------------|--------------|-------------|----------------|----------------|--------------------|--------------------------|--------------------|---------|
| High 12:44   |             |              |             | Current        |                | (NTUs)             | Increase (NTUs)          |                    | Traffic |
| Falling Tide | 15:22       | 071205_04_1  | 814980.58   | Up             | 5              | 1.8                |                          | Sunny, ~80 Degrees | None    |
|              |             | (Background) | 2695810.92  |                | 10             | 1.9                |                          | NE Wind 5-10 knots |         |
|              |             |              |             |                | 15             | 3.0                |                          |                    |         |
|              |             |              |             |                | 20             | 4.1                |                          |                    |         |
|              |             |              |             |                | 25             | 5.5                |                          |                    |         |
|              |             |              |             |                | 30             | 12.0               |                          |                    |         |
|              |             |              |             |                | <b>AVERAGE</b> | <b>4.7</b>         | <b>24.7</b>              |                    |         |
|              | 15:30       | 071205_04_9  | 814662.38   | Down           | 5              | 1.9                |                          | Sunny, ~80 Degrees | None    |
|              |             |              | 2695804.14  |                | 10             | 2.6                |                          | NE Wind 5-10 knots |         |
|              |             |              |             |                | 15             | 4.9                |                          |                    |         |
|              |             |              |             |                | 20             | 4.8                |                          |                    |         |
|              |             |              |             |                | 25             | 5.4                |                          |                    |         |
|              |             |              |             |                | 30             | 3.5                |                          |                    |         |
|              |             |              |             |                | <b>AVERAGE</b> | <b>3.9</b>         | 20.8 NTUs                |                    |         |
|              | 15:52       | 071205_06_1  | 815001.71   | Up             | 5              | 2.0                | Below Permissible        | Sunny, ~80 Degrees | None    |
|              |             | (Background) | 2695986.79  |                | 10             | 2.8                | Turbidity Increase Limit | NE Wind 5-10 knots |         |
|              |             |              |             |                | 15             | 2.1                |                          |                    |         |
|              |             |              |             |                | 20             | 3.0                |                          |                    |         |
|              |             |              |             |                | 25             | 11.0               |                          |                    |         |
|              |             |              |             |                | 30             | 13.5               |                          |                    |         |
|              |             |              |             | <b>AVERAGE</b> | <b>5.7</b>     | <b>25.7</b>        |                          |                    |         |
| 15:58        | 071205_06_9 | 814699.98    | Down        | 5              | 2              |                    | Sunny, ~80 Degrees       | None               |         |
|              |             | 2695722.2    |             | 10             | 3.3            |                    | NE Wind 5-10 knots       |                    |         |
|              |             |              |             | 15             | 5.5            |                    |                          |                    |         |
|              |             |              |             | 20             | 2.6            |                    |                          |                    |         |
|              |             |              |             | 25             | 6.2            |                    |                          |                    |         |
|              |             |              |             | 30             | 6              |                    |                          |                    |         |
| Low 17:47    |             |              |             | <b>AVERAGE</b> | <b>4.3</b>     | (21.4 Below Limit) |                          |                    |         |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.

814500 814800 814700 814900 814900 815000 815100 815200 815300 815400 815500

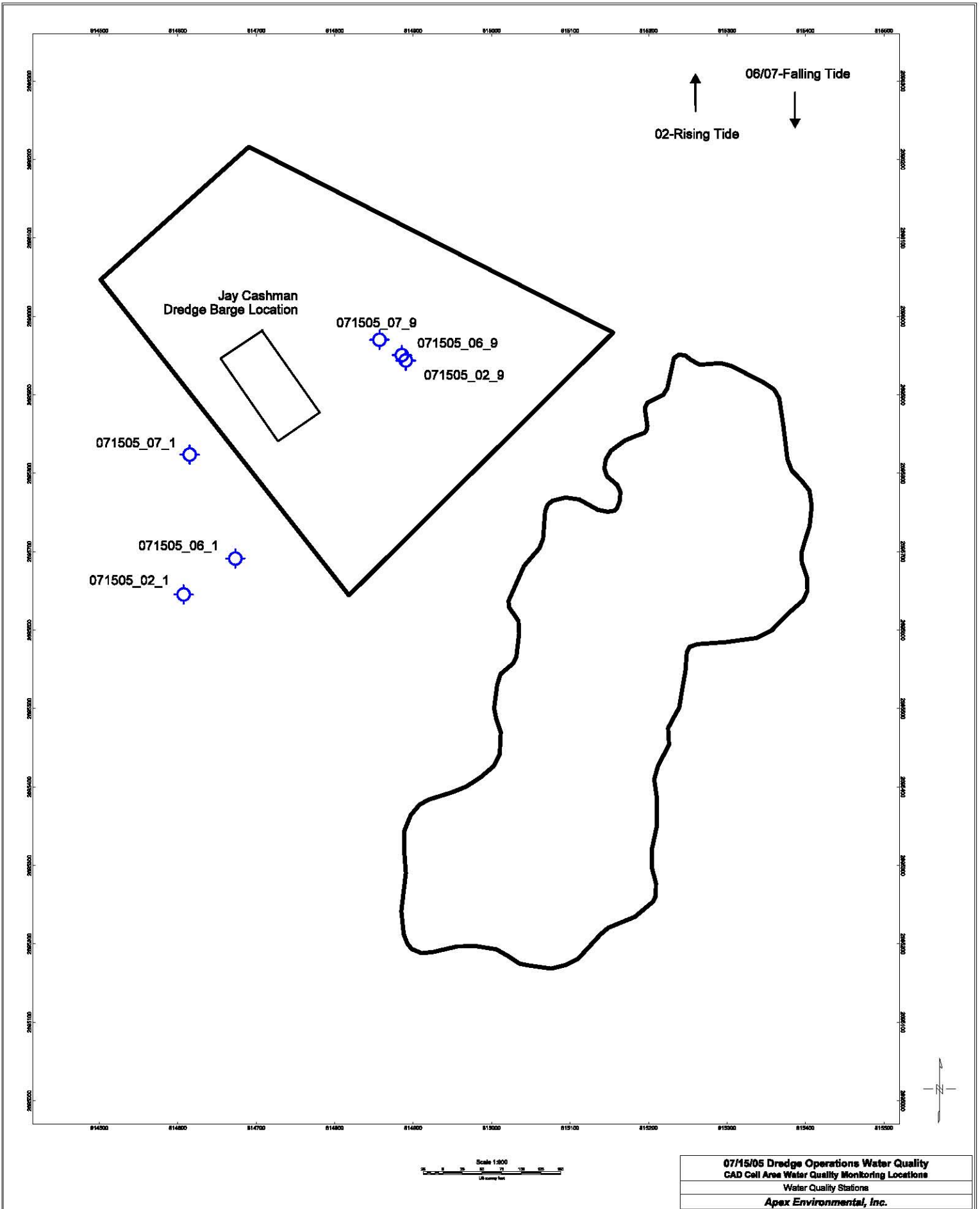


**07/12/05 Dredge Operations Water Quality**  
**CAD Cell Area Water Quality Monitoring Locations**  
 Water Quality Stations  
**Apex Environmental, Inc.**

7/15/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - CAD Cell Excavation Area**

| Tide Time    | Time                        | ID                          | Coordinates             | Up/Down<br>Current | Depth (ft.)    | Ave. Turbidity<br>(NTUs) | Permissible Turbidity<br>Increase (NTUs) | Weather Conditions  | Vessel<br>Traffic |
|--------------|-----------------------------|-----------------------------|-------------------------|--------------------|----------------|--------------------------|--|---------------------|-------------------|
| Low 8:01     |                             |                             |                         |                    |                |                          |  |                     |                   |
| Rising Tide  | 12:03                       | 071505_02_1<br>(Background) | 814607.4<br>2695645.46  | Up                 | 5              | 2.5                      |  | Cloudy, ~80 Degrees | None              |
|              |                             |                             |                         |                    | 10             | 3.2                      |  | NE Wind 0-5 knots   |                   |
|              |                             |                             |                         |                    | 15             | 3.2                      |  |                     |                   |
|              |                             |                             |                         |                    | 20             | 3.0                      |  |                     |                   |
|              |                             |                             |                         |                    | 25             | 2.0                      |  |                     |                   |
|              |                             |                             |                         |                    | 30             | 3.5                      |  |                     |                   |
|              |                             |                             |                         |                    | <b>AVERAGE</b> | <b>2.9</b>               | <b>22.9</b>                              |                     |                   |
|              | 12:09                       | 071505_02_9                 | 814890.48<br>2695943.76 | Down               | 5              | 3.0                      |  | Cloudy, ~80 Degrees | None              |
|              |                             |                             |                         |                    | 10             | 2.3                      |  | NE Wind 0-5 knots   |                   |
|              |                             |                             |                         |                    | 15             | 1.9                      |  |                     |                   |
|              |                             |                             |                         | 20                 | 2.0            |                          |  |                     |                   |
|              |                             |                             |                         | 25                 | 2.1            |                          |  |                     |                   |
|              |                             |                             |                         | 30                 | 3.2            |                          |  |                     |                   |
| High 15:08   |                             |                             |                         |                    | <b>AVERAGE</b> | <b>2.4</b>               | 20.5 NTUs                                |                     |                   |
| Falling Tide | 17:18                       | 071505_06_1<br>(Background) | 814673.28<br>2695691.25 | Up                 | 5              | 2.8                      | Below Permissible                        | Sunny, ~85 Degrees  | None              |
|              |                             |                             |                         |                    | 10             | 3.6                      | Turbidity Increase Limit                 | NE Wind 0-5 knots   |                   |
|              |                             |                             |                         |                    | 15             | 3.1                      |  |                     |                   |
|              |                             |                             |                         |                    | 20             | 3.4                      |  |                     |                   |
|              |                             |                             |                         |                    | 25             | 2.6                      |  |                     |                   |
|              |                             |                             |                         |                    | 30             | 2.5                      |  |                     |                   |
|              |                             |                             |                         |                    | <b>AVERAGE</b> | <b>3.0</b>               | <b>23.0</b>                              |                     |                   |
|              | 17:23                       | 071505_06_9                 | 814885.59<br>2695950.67 | Down               | 5              | 3.8                      |  | Sunny, ~85 Degrees  | None              |
|              |                             |                             |                         |                    | 10             | 6.3                      |  | NE Wind 0-5 knots   |                   |
|              |                             |                             |                         |                    | 15             | 9.0                      |  |                     |                   |
|              |                             |                             |                         | 20                 | 7.8            |                          |  |                     |                   |
|              |                             |                             |                         | 25                 | 1.3            |                          |  |                     |                   |
|              |                             |                             |                         | 30                 | 1.7            |                          |  |                     |                   |
|              |                             |                             |                         | <b>AVERAGE</b>     | <b>5.0</b>     | (18.0 Below Limit)       |  |                     |                   |
| 17:33        | 071505_07_1<br>(Background) | 814615.08<br>2695823.84     | Up                      | 5                  | 2.9            |                          | Sunny, ~85 Degrees                       | None                |                   |
|              |                             |                             |                         | 10                 | 4.0            |                          | NE Wind 0-5 knots                        |                     |                   |
|              |                             |                             |                         | 15                 | 4.2            |                          |  |                     |                   |
|              |                             |                             |                         | 20                 | 4.6            |                          |  |                     |                   |
|              |                             |                             |                         | 25                 | 5.0            |                          |  |                     |                   |
|              |                             |                             |                         | 30                 | 3.8            |                          |  |                     |                   |
|              |                             |                             |                         | <b>AVERAGE</b>     | <b>4.1</b>     | <b>24.1</b>              |  |                     |                   |
| 17:38        | 071505_07_9                 | 814856.96<br>2695970.18     | Down                    | 5                  | 4.8            |                          | Sunny, ~85 Degrees                       | None                |                   |
|              |                             |                             |                         | 10                 | 5.8            |                          | NE Wind 0-5 knots                        |                     |                   |
|              |                             |                             |                         | 15                 | 6.4            |                          |  |                     |                   |
|              |                             |                             |                         | 20                 | 11.0           |                          |  |                     |                   |
|              |                             |                             |                         | 25                 | 10.0           |                          |  |                     |                   |
|              |                             |                             |                         | 30                 | 14.0           |                          |  |                     |                   |
| Low 21:18    |                             |                             |                         |                    | <b>AVERAGE</b> | <b>8.7</b>               | (15.4 Below Limit)                       |                     |                   |

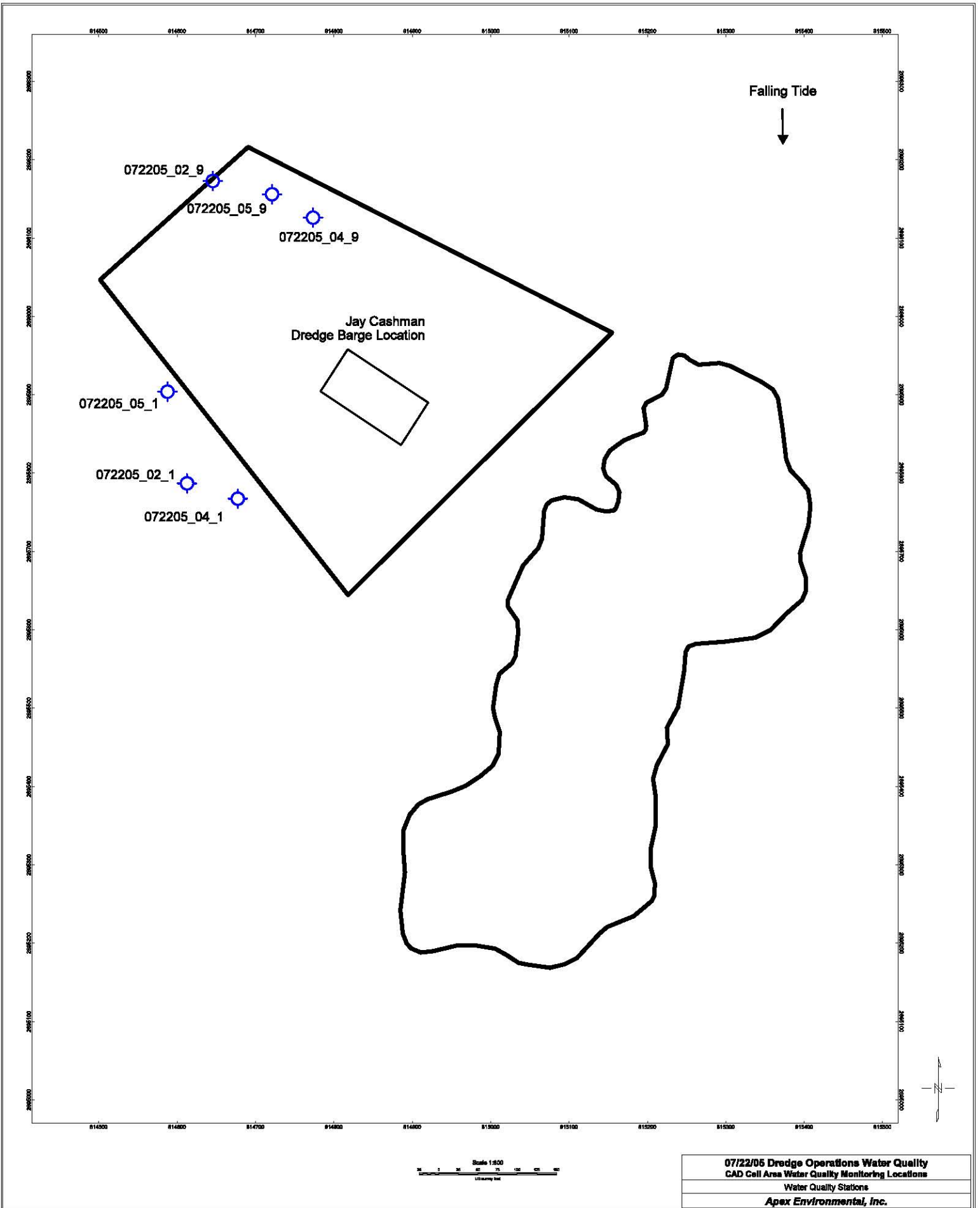
Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.



**7/22/2005**  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - CAD Cell Excavation Area**

| Tide Time    | Time      | ID                          | Coordinates             | Up/Down | Depth (ft.)                     | Ave. Turbidity (NTUs)                      | Permissible Turbidity Increase (NTUs)         | Weather Conditions                       | Vessel Traffic |
|--------------|-----------|-----------------------------|-------------------------|---------|---------------------------------|--|---|--|----------------|
| High 9:13    |           |                             |                         | Current |                                 |  |   |  |                |
| Falling Tide | 10:10     | 072205_02_1<br>(Background) | 814612.57<br>2695786.89 | Up      | 5<br>10<br>15<br>20<br>25<br>30 | 0.2<br>2.4<br>2.6<br>2.6<br>2.7<br>2.6     |   | Sunny, ~80 Degrees<br>SE Wind 5-10 knots | None           |
|              |           |                             |                         |         | <b>AVERAGE</b>                  | <b>2.2</b>                                 | <b>22.2</b>                                   |  |                |
|              | 10:17     | 072205_02_9                 | 814645.5<br>2696172.85  | Down    | 5<br>10<br>15<br>20<br>25<br>30 | 1.1<br>1.4<br>2.0<br>2.6<br>2.2<br>8.0     |   | Sunny, ~80 Degrees<br>SE Wind 5-10 knots | None           |
|              |           |                             |                         |         | <b>AVERAGE</b>                  | <b>2.9</b>                                 | <b>19.3 NTUs</b>                              |  |                |
|              | 12:43     | 072205_04_1<br>(Background) | 814677.39<br>2695767.28 | Up      | 5<br>10<br>15<br>20<br>25<br>30 | 2.6<br>2.7<br>2.6<br>2.8<br>3.4<br>5.0     | Below Permissible<br>Turbidity Increase Limit | Sunny, ~80 Degrees<br>SE Wind 5-10 knots | None           |
|              |           |                             |                         |         | <b>AVERAGE</b>                  | <b>3.2</b>                                 | <b>23.2</b>                                   |  |                |
|              | 12:48     | 072205_04_9                 | 814644.69<br>2696093.75 | Down    | 5<br>10<br>15<br>20<br>25<br>30 | 5.2<br>9.5<br>11.0<br>12.0<br>19.0<br>17.0 |   | Sunny, ~80 Degrees<br>SE Wind 5-10 knots | None           |
|              |           |                             |                         |         | <b>AVERAGE</b>                  | <b>12.3</b>                                | <b>(10.9 Below Limit)</b>                     |  |                |
|              | 12:54     | 072205_05_1<br>(Background) | 814773.41<br>2696126.03 | Up      | 5<br>10<br>15<br>20<br>25<br>30 | 2.8<br>2.9<br>2.6<br>2.7<br>2.6<br>2.8     |   | Sunny, ~80 Degrees<br>SE Wind 5-10 knots | None           |
|              |           |                             |                         |         | <b>AVERAGE</b>                  | <b>2.7</b>                                 | <b>22.7</b>                                   |  |                |
|              | 12:57     | 072205_05_9                 | 814808<br>2605789.33    | Down    | 5<br>10<br>15<br>20<br>25<br>30 | 3.4<br>4.7<br>10.5<br>7.4<br>16.0<br>19.0  |   | Sunny, ~80 Degrees<br>SE Wind 5-10 knots | None           |
|              | Low 14:47 |                             |                         |         | <b>AVERAGE</b>                  | <b>10.2</b>                                | <b>(12.6 Below Limit)</b>                     |  |                |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.

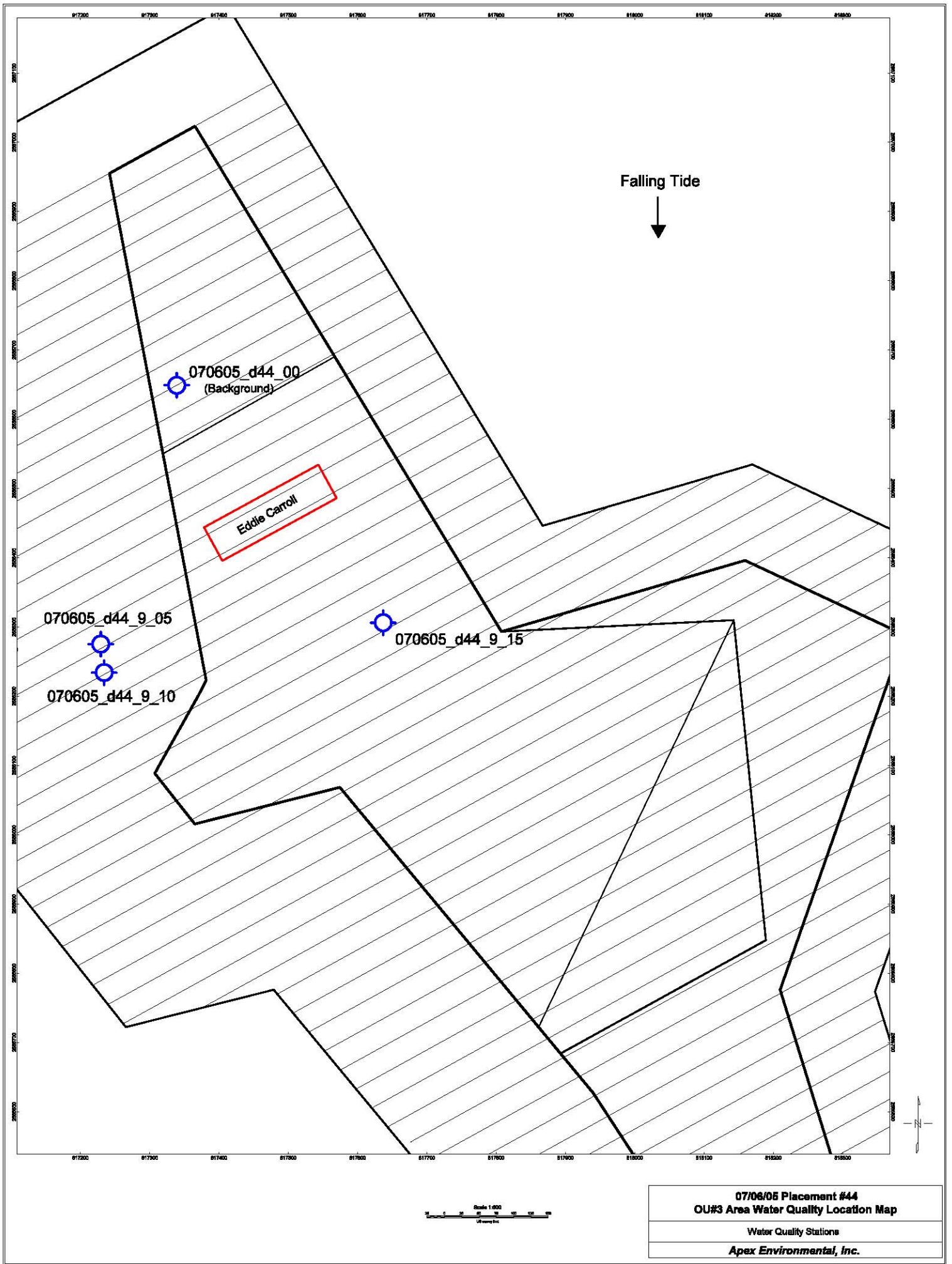


**07/22/06 Dredge Operations Water Quality**  
**CAD Cell Area Water Quality Monitoring Locations**  
 Water Quality Stations  
**Apex Environmental, Inc.**

7/6/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - Placement Operations - OU#3 Cap Area**

| Tide Time    | Time            | ID                  | Coordinates    | Up/Down        | Depth (ft.)    | Ave. Turbidity            | Permissible Turbidity | Weather Conditions  | Vessel  |
|--------------|-----------------|---------------------|----------------|----------------|----------------|---------------------------|-----------------------|---------------------|---------|
| High 8:40    |                 |                     |                | Current        |                | (NTUs)                    | Increase (NTUs)       |                     | Traffic |
| Falling Tide | 12:33           | 070605_d44_00       | 817338.98      | Up             | 2              | 7.8                       |                       | Cloudy, -80 Degrees | None    |
|              |                 | (Background)        | 2686649.09     |                | 4              | 9.5                       |                       | S Wind 1-5 Knots    |         |
|              |                 |                     |                |                | 6              | 11.5                      |                       |                     |         |
|              |                 |                     |                |                | 7              | 9.5                       |                       |                     |         |
|              |                 |                     |                |                | <b>AVERAGE</b> | <b>9.6</b>                | <b>49.6</b>           |                     |         |
|              | 12:55           | <b>PLACEMENT 44</b> | <b>STARTED</b> |                |                |                           |                       |                     |         |
|              | 13:00           | 070605_d44_9_05     | 817229.27      | Down           | 2              | 2.9                       |                       | Cloudy, -80 Degrees | None    |
|              |                 |                     | 2686275.37     |                | 4              | 3.5                       |                       | S Wind 1-5 Knots    |         |
|              |                 |                     |                |                | 6              | 3.1                       |                       |                     |         |
|              |                 |                     |                |                | 8              | 2.8                       |                       |                     |         |
|              |                 |                     |                | <b>AVERAGE</b> | <b>3.1</b>     | <b>46.5 NTUs</b>          |                       |                     |         |
| 13:06        | 070605_d44_9_10 | 817234.23           | Down           | 2              | 13.0           | Below Permissible         | Cloudy, -80 Degrees   | None                |         |
|              |                 | 2686234.23          |                | 4              | 12.5           | Turbidity Increase Limit  | S Wind 1-5 Knots      |                     |         |
|              |                 |                     |                | 6              | 10.5           |                           |                       |                     |         |
|              |                 |                     |                | 8              | 16.3           |                           |                       |                     |         |
|              |                 |                     |                | <b>AVERAGE</b> | <b>13.1</b>    | <b>(36.5 Below Limit)</b> |                       |                     |         |
| 13:12        | 070605_d44_9_15 | 817636.99           | Down           | 2              | 8.5            |                           | Cloudy, -80 Degrees   | None                |         |
|              |                 | 2686306.24          |                | 4              | 6.8            |                           | S Wind 1-5 Knots      |                     |         |
|              |                 |                     |                | 6              | 7.5            |                           |                       |                     |         |
|              |                 |                     |                | 8              | 10.0           |                           |                       |                     |         |
| Low 13:40    |                 |                     |                | <b>AVERAGE</b> | <b>8.2</b>     | <b>(41.4 Below Limit)</b> |                       |                     |         |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.



Falling Tide  
↓

070605\_d44\_00  
(Background)

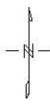
Eddie Carroll

070605\_d44\_9\_05

070605\_d44\_9\_15

070605\_d44\_9\_10

07/06/05 Placement #44  
OU#3 Area Water Quality Location Map  
Water Quality Stations  
Apex Environmental, Inc.

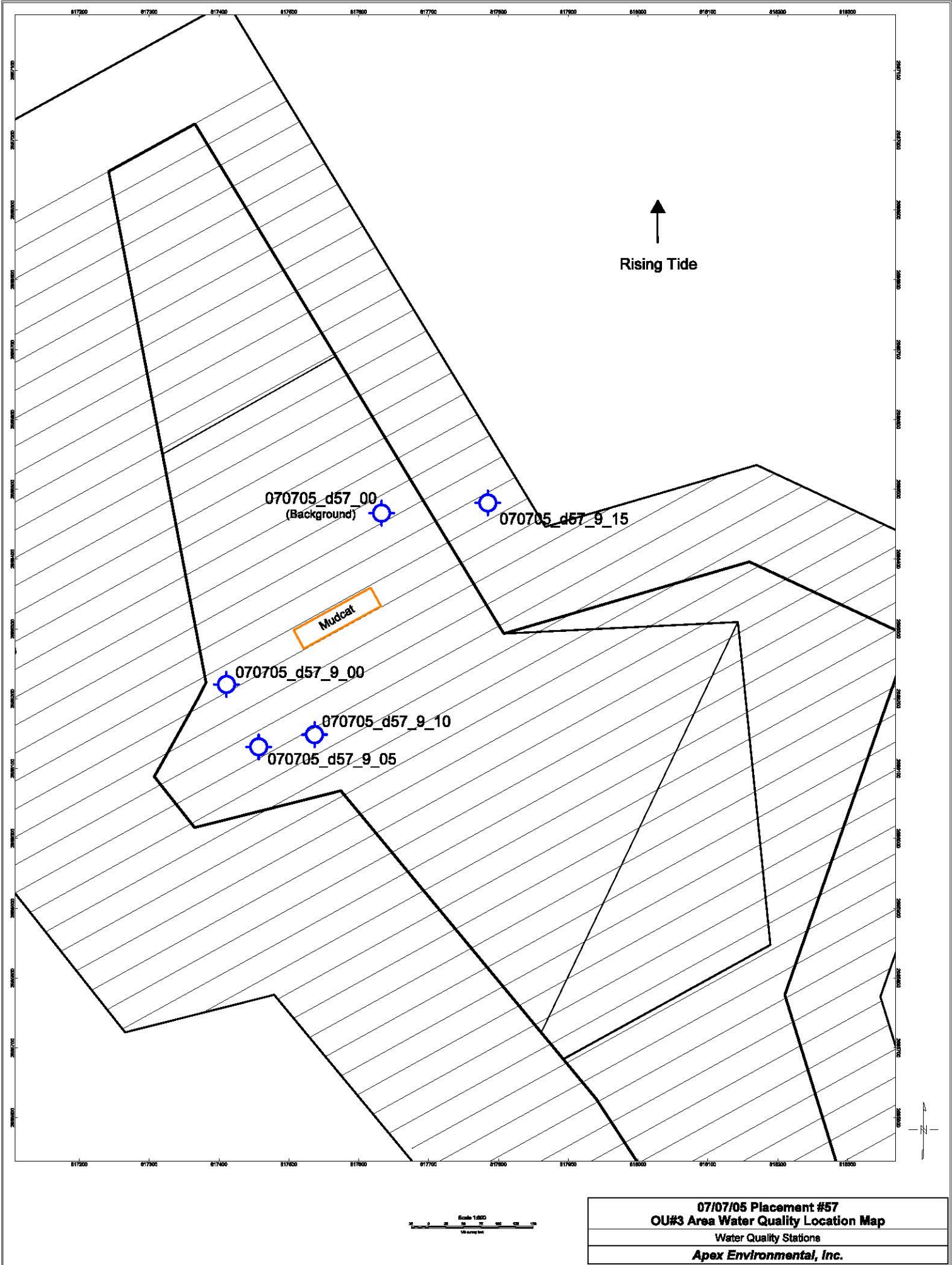




7/7/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - Placement Operations - OU#3 Cap Area**

| Tide Time   | Time  | ID                            | Coordinates             | Up/Down        | Depth (ft.)      | Ave. Turbidity (NTUs)        | Permissible Turbidity Increase (NTUs)         | Weather Conditions                       | Vessel Traffic |
|-------------|-------|-------------------------------|-------------------------|----------------|------------------|------------------------------|---|--|----------------|
| Low 14:59   |       |                               |                         | Current        |                  |                              |   |  |                |
| Rising Tide | 15:54 | 070705_d57_00<br>(Background) | 817632.68<br>2686465.82 | Down           | 2<br>4<br>6<br>8 | 6.0<br>7.0<br>9.0<br>10.0    |   | Cloudy, ~70 Degrees<br>N Wind 5-15 Knots | None           |
|             |       |                               |                         |                | <b>AVERAGE</b>   | <b>8.0</b>                   | <b>48.0</b>                                   |  |                |
|             | 15:59 | <b>PLACEMENT 57</b>           | <b>STARTED</b>          |                |                  |                              |   |  |                |
|             | 16:00 | 070705_d57_9_00               | 817410.56<br>2686220.56 | Down           | 2<br>4<br>6<br>8 | 7.0<br>9.0<br>13.0<br>16.5   |   | Cloudy, ~70 Degrees<br>N Wind 5-15 Knots | None           |
|             |       |                               |                         |                | <b>AVERAGE</b>   | <b>11.4</b>                  | <b>36.6 NTUs</b>                              |  |                |
|             | 16:05 | 070705_d57_9_05               | 817456.77<br>2686131.07 | Up             | 2<br>4<br>6<br>8 | 11.0<br>12.0<br>12.0<br>18.0 | Below Permissible<br>Turbidity Increase Limit | Cloudy, ~70 Degrees<br>N Wind 5-15 Knots | None           |
|             |       |                               |                         |                | <b>AVERAGE</b>   | <b>13.3</b>                  | <b>(34.7 Below Limit)</b>                     |  |                |
|             | 16:08 | 070705_d57_9_10               | 817536.68<br>2686148.56 | Up             | 2<br>4<br>6<br>8 | 12.0<br>14.0<br>16.0<br>17.0 |   | Cloudy, ~70 Degrees<br>N Wind 5-15 Knots | None           |
|             |       |                               |                         |                | <b>AVERAGE</b>   | <b>14.8</b>                  | <b>(33.2 Below Limit)</b>                     |  |                |
|             | 16:15 | 070705_d57_9_15               | 817784.8<br>2686480.46  | Up             | 2<br>4<br>6<br>8 | 2.0<br>2.1<br>2.2<br>2.8     |   | Cloudy, ~70 Degrees<br>N Wind 5-15 Knots | None           |
| High 21:36  |       |                               |                         | <b>AVERAGE</b> | <b>2.3</b>       | <b>(45.7 Below Limit)</b>    |   |  |                |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.



070705\_d57\_00  
(Background)

070705\_d57\_9\_15

Mudcat

070705\_d57\_9\_00

070705\_d57\_9\_10  
070705\_d57\_9\_05

↑  
Rising Tide

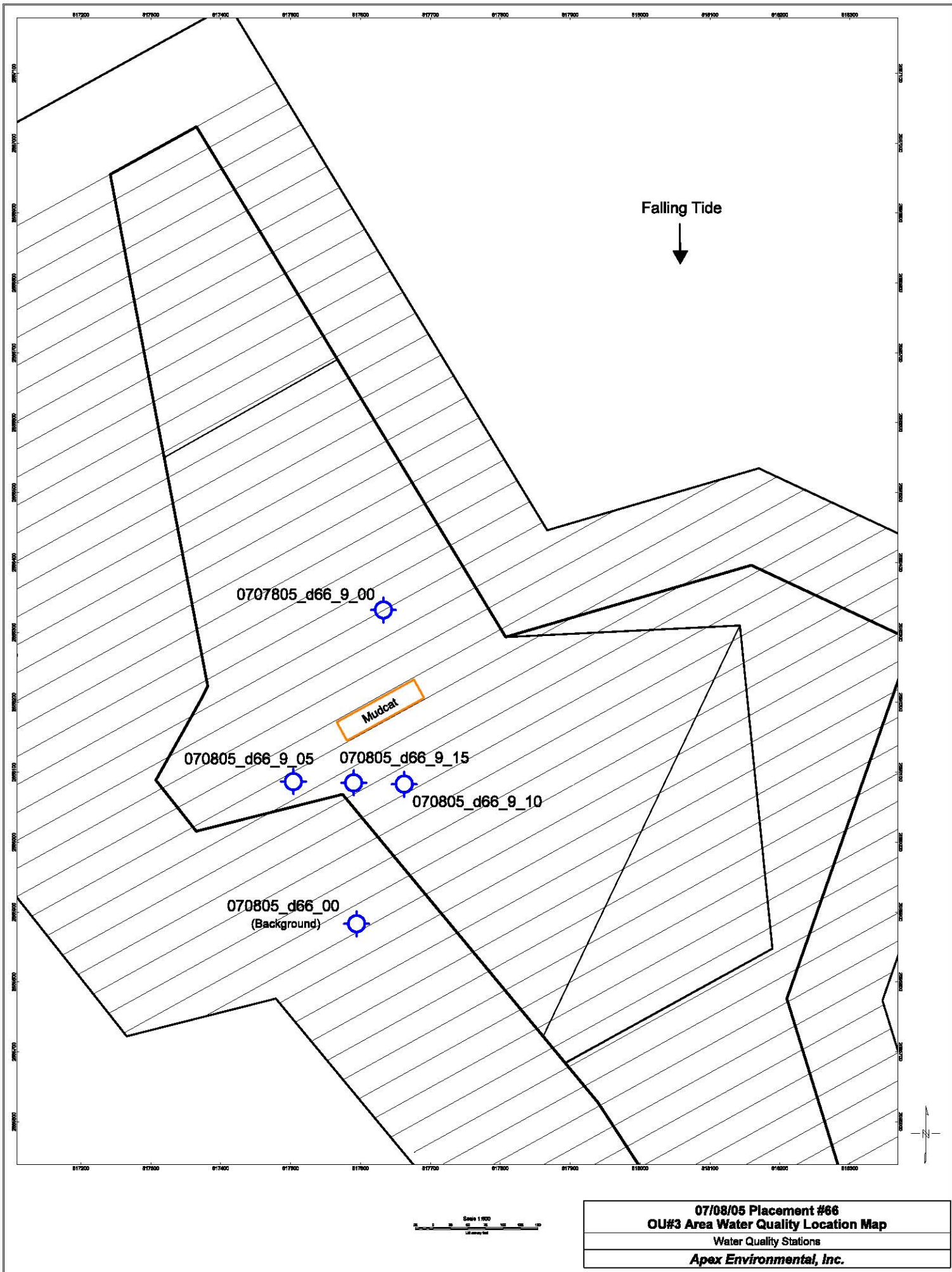


**07/07/05 Placement #57**  
**OU#3 Area Water Quality Location Map**  
Water Quality Stations  
**Apex Environmental, Inc.**

7/8/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - Placement Operations - OU#3 Cap Area**

| Tide Time    | Time            | ID                  | Coordinates    | Up/Down        | Depth (ft.)    | Ave. Turbidity (NTUs)     | Permissible Turbidity Increase (NTUs) | Weather Conditions   | Vessel Traffic |
|--------------|-----------------|---------------------|----------------|----------------|----------------|---------------------------|---------------------------------------|----------------------|----------------|
| High 10:02   |                 |                     |                | Current        |                |                           |                                       |                      |                |
| Falling Tide | 9:33            | 070805_d66_00       | 817594.42      | Down           | 2              | 4.0                       |                                       | Cloudy, ~65 Degrees  | None           |
|              |                 | (Background)        | 2685883.24     |                | 4              | 4.2                       |                                       | E,SE Wind 5-10 Knots |                |
|              |                 |                     |                |                | 6              | 4.5                       |                                       |                      |                |
|              |                 |                     |                |                | 8              | 4.5                       |                                       |                      |                |
|              |                 |                     |                |                | 10             | 4.4                       |                                       |                      |                |
|              |                 |                     |                |                | <b>AVERAGE</b> | <b>4.3</b>                | <b>44.3</b>                           |                      |                |
|              | 9:38            | <b>PLACEMENT 66</b> | <b>STARTED</b> |                |                |                           |                                       | Cloudy, ~65 Degrees  |                |
|              | 9:39            | 0707805_d66_9_00    | 817632.84      | Up             | 2              | 2.3                       |                                       | E,SE Wind 5-10 Knots | None           |
|              |                 |                     | 2686332.16     |                | 4              | 2.6                       |                                       |                      |                |
|              |                 |                     |                |                | 6              | 2.6                       |                                       |                      |                |
|              |                 |                     |                |                | 8              | 2.7                       |                                       |                      |                |
|              |                 |                     |                |                | 10             | 2.5                       |                                       |                      |                |
|              |                 |                     |                |                | <b>AVERAGE</b> | <b>2.5</b>                | <b>41.8 NTUs</b>                      |                      |                |
|              | 9:44            | 070805_d66_9_05     | 817503.9       | Down           | 2              | 5.0                       | Below Permissible                     | Cloudy, ~65 Degrees  | None           |
|              |                 |                     | 2686086.51     |                | 4              | 4.4                       | Turbidity Increase Limit              | E,SE Wind 5-10 Knots |                |
|              |                 |                     |                | 6              | 5.0            |                           |                                       |                      |                |
|              |                 |                     |                | 8              | 4.5            |                           |                                       |                      |                |
|              |                 |                     |                | <b>AVERAGE</b> | <b>4.7</b>     | <b>(37.1 Below Limit)</b> |                                       |                      |                |
| 9:49         | 070805_d66_9_10 | 817662.58           | Down           | 2              | 2.6            |                           | Cloudy, ~65 Degrees                   | None                 |                |
|              |                 | 2686082.98          |                | 4              | 2.4            |                           | E,SE Wind 5-10 Knots                  |                      |                |
|              |                 |                     |                | 6              | 2.9            |                           |                                       |                      |                |
|              |                 |                     |                | 8              | 2.7            |                           |                                       |                      |                |
|              |                 |                     |                | 10             | 2.7            |                           |                                       |                      |                |
|              |                 |                     |                | <b>AVERAGE</b> | <b>2.7</b>     | <b>(34.4 Below Limit)</b> |                                       |                      |                |
| 9:53         | 070805_d66_9_15 | 817590.14           | Down           | 2              | 4.2            |                           | Cloudy, ~65 Degrees                   | None                 |                |
|              |                 | 2686084.76          |                | 4              | 4.4            |                           | E,SE Wind 5-10 Knots                  |                      |                |
|              |                 |                     |                | 6              | 4.5            |                           |                                       |                      |                |
|              |                 |                     |                | 8              | 4.7            |                           |                                       |                      |                |
|              |                 |                     |                | 10             | 4.6            |                           |                                       |                      |                |
| Low 15:13    |                 |                     |                |                | <b>AVERAGE</b> | <b>4.5</b>                | <b>(29.9 Below Limit)</b>             |                      |                |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.



Falling Tide



0707805\_d66\_9\_00



Mudcat

070805\_d66\_9\_05



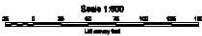
070805\_d66\_9\_15



070805\_d66\_9\_10



070805\_d66\_00  
(Background)

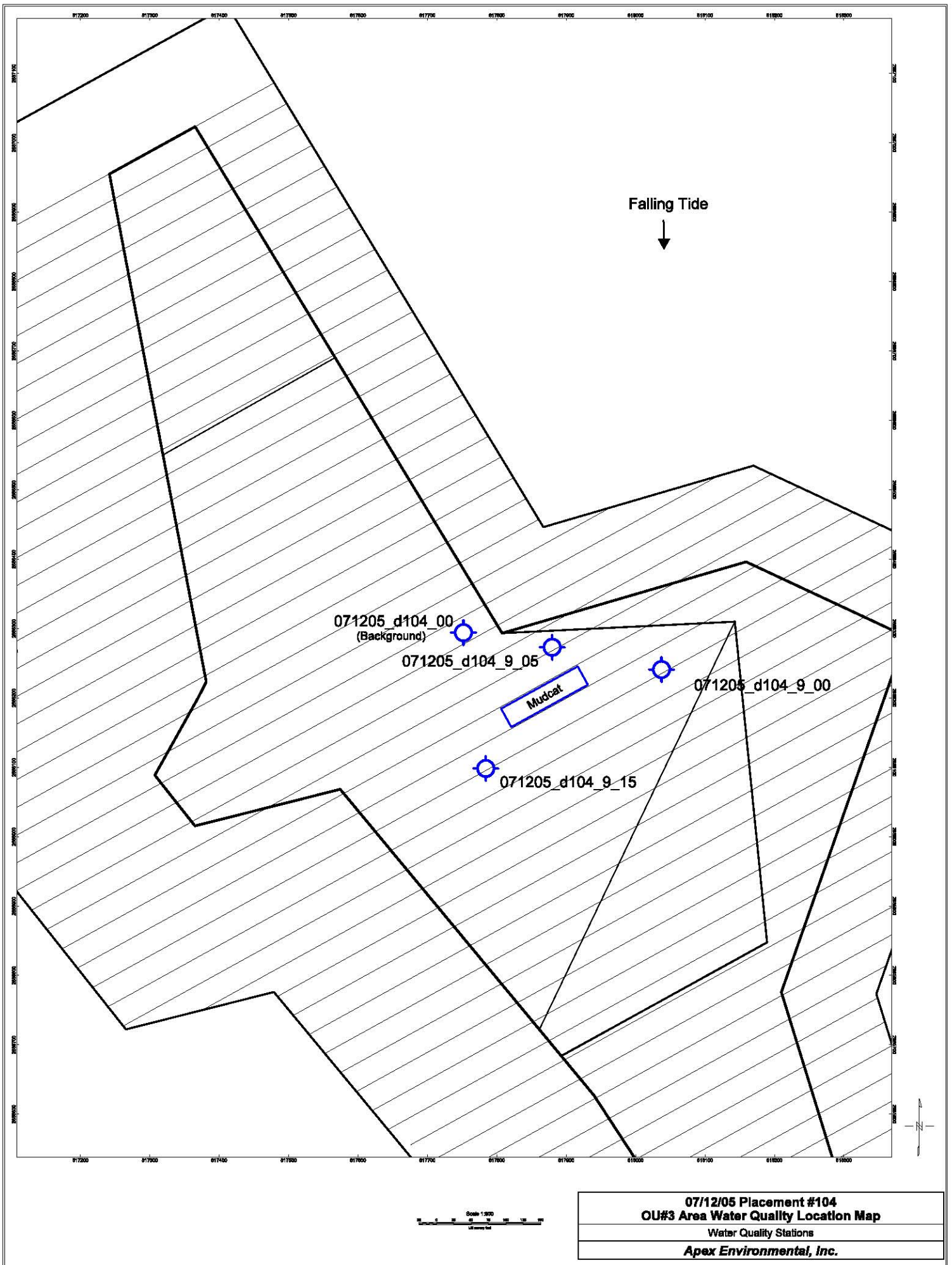


**07/08/05 Placement #66**  
**OU#3 Area Water Quality Location Map**  
Water Quality Stations  
**Apex Environmental, Inc.**

7/12/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - Placement Operations - OU#3 Cap Area**

| Tide Time        | Time             | ID                   | Coordinates    | Up/Down        | Depth (ft.)    | Ave. Turbidity            | Permissible Turbidity | Weather Conditions   | Vessel  |
|------------------|------------------|----------------------|----------------|----------------|----------------|---------------------------|-----------------------|----------------------|---------|
| High 12:44       |                  |                      |                | Current        |                | (NTUs)                    | Increase (NTUs)       |                      | Traffic |
| Falling Tide     | 16:10            | 071205_d104_00       | 818012.77      | Up             | 2              | 5.0                       |                       | Cloudy, ~65 Degrees  | None    |
|                  |                  | (Background)         | 2696359.72     |                | 4              | 4.0                       |                       | E,SE Wind 5-10 Knots |         |
|                  |                  |                      |                |                | 6              | 4.4                       |                       |                      |         |
|                  |                  |                      |                |                | 8              | 6.0                       |                       |                      |         |
|                  |                  |                      |                |                | <b>AVERAGE</b> | <b>4.9</b>                | <b>44.9</b>           |                      |         |
|                  | <b>16:15</b>     | <b>PLACEMENT 104</b> | <b>STARTED</b> |                |                |                           |                       | Cloudy, ~65 Degrees  |         |
|                  | 16:20            | 071205_d104_9_05     | 817879.82      | Up             | 2              | 37.0                      |                       | E,SE Wind 5-10 Knots | None    |
|                  |                  |                      | 2686272.97     |                | 4              | 36.0                      |                       |                      |         |
|                  |                  |                      |                |                | 6              | 34.0                      |                       |                      |         |
|                  |                  |                      |                |                | 8              | 40.0                      |                       |                      |         |
|                  |                  |                      |                | <b>AVERAGE</b> | <b>36.8</b>    | <b>8.1 NTUs</b>           |                       |                      |         |
| 16:25            | 071205_d104_9_10 | 817751.93            | Down           | 2              | 12.0           | Below Permissible         | Cloudy, ~65 Degrees   | None                 |         |
|                  |                  | 2686294.06           |                | 4              | 11.8           | Turbidity Increase Limit  | E,SE Wind 5-10 Knots  |                      |         |
|                  |                  |                      |                | 6              | 18.0           |                           |                       |                      |         |
|                  |                  |                      |                | 8              | 4.0            |                           |                       |                      |         |
|                  |                  |                      |                | <b>AVERAGE</b> | <b>11.5</b>    | <b>(33.4 Below Limit)</b> |                       |                      |         |
| 16:28            | 071205_d104_9_15 | 827729.61            | Down           | 2              | 12.0           |                           | Cloudy, ~65 Degrees   | None                 |         |
|                  |                  | 2686205.92           |                | 4              | 14.0           |                           | E,SE Wind 5-10 Knots  |                      |         |
|                  |                  |                      |                | 6              | 20.0           |                           |                       |                      |         |
|                  |                  |                      |                | 8              | 19.5           |                           |                       |                      |         |
| <b>Low 17:22</b> |                  |                      |                | <b>AVERAGE</b> | <b>16.4</b>    | <b>(28.5 Below Limit)</b> |                       |                      |         |

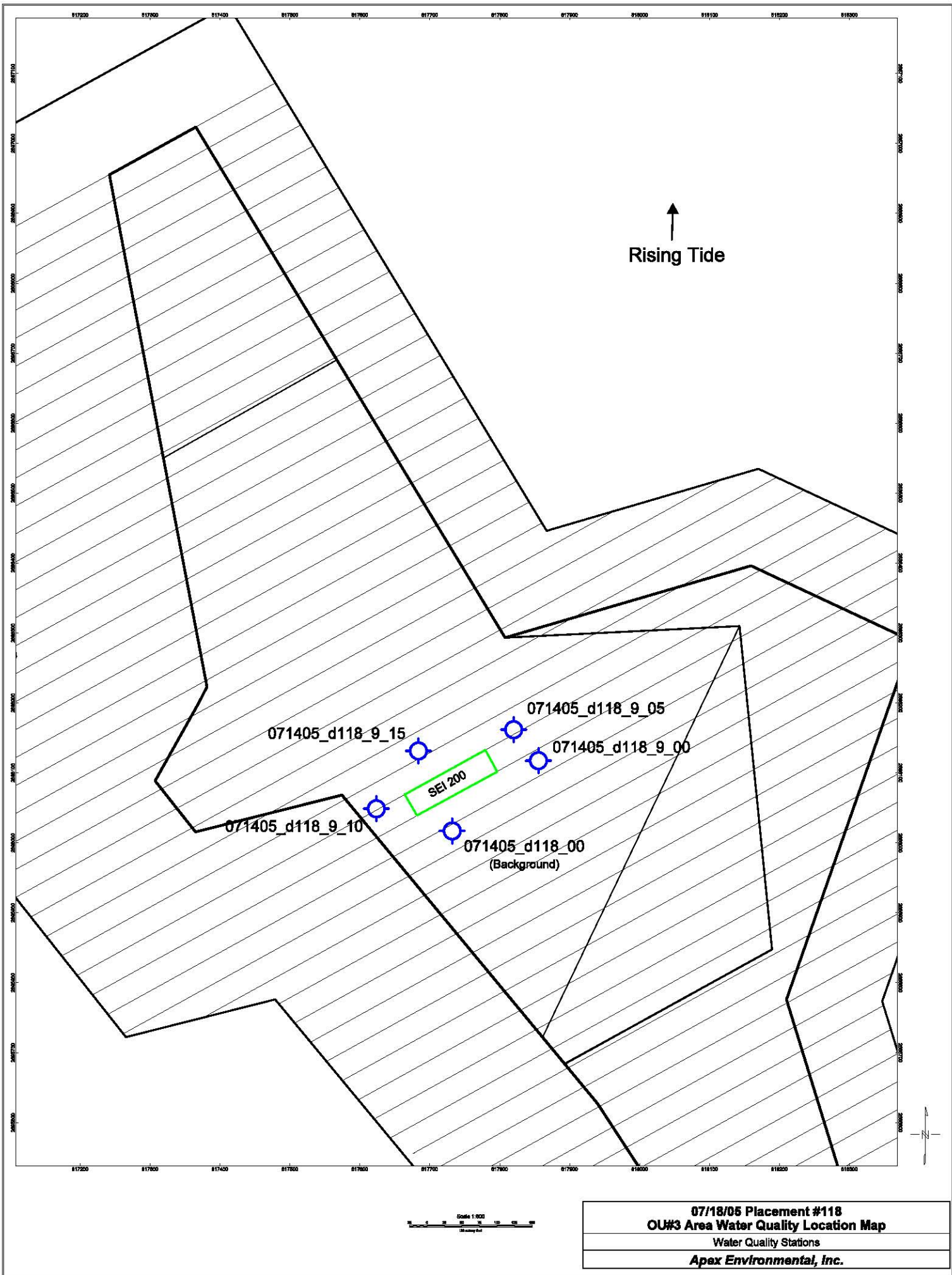
Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.



7/14/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - Placement Operations - OU#3 Cap Area**

| Tide Time   | Time             | ID                   | Coordinates    | Up/Down        | Depth (ft.)    | Ave. Turbidity            | Permissible Turbidity    | Weather Conditions  | Vessel  |
|-------------|------------------|----------------------|----------------|----------------|----------------|---------------------------|--------------------------|---------------------|---------|
| Low 7:08    |                  |                      |                | Current        |                | (NTUs)                    | Increase (NTUs)          |                     | Traffic |
| Rising Tide | 9:20             | 071405_d118_00       | 817819.92      | Up             | 2              | 1.3                       |                          | Cloudy, ~75 Degrees | None    |
|             |                  | (Background)         | 2686161.75     |                | 4              | 1.5                       |                          | SW Wind 5-10 Knots  |         |
|             |                  |                      |                |                | 6              | 1.6                       |                          |                     |         |
|             |                  |                      |                |                | 8              | 1.8                       |                          |                     |         |
|             |                  |                      |                |                | <b>AVERAGE</b> | <b>1.6</b>                | <b>41.6</b>              |                     |         |
|             | 9:42             | <b>PLACEMENT 118</b> | <b>STARTED</b> |                |                |                           |                          | Cloudy, ~75 Degrees |         |
|             | 9:42             | 071405_d118_9_00     | 817855.33      | Down           | 2              | 1.2                       |                          | SW Wind 5-10 Knots  | None    |
|             |                  |                      | 2686117.46     |                | 4              | 2.5                       |                          |                     |         |
|             |                  |                      |                |                | 6              | 4.2                       |                          |                     |         |
|             |                  |                      |                |                | 8              | 5.0                       |                          |                     |         |
|             |                  |                      |                |                | <b>AVERAGE</b> | <b>3.2</b>                | <b>38.3 NTUs</b>         |                     |         |
|             | 9:46             | 071405_d118_9_05     | 817732.02      | Down           | 2              | 1.4                       | Below Permissible        | Cloudy, ~75 Degrees | None    |
|             |                  |                      | 2686016.99     |                | 4              | 2.5                       | Turbidity Increase Limit | SW Wind 5-10 Knots  |         |
|             |                  |                      |                |                | 6              | 2.2                       |                          |                     |         |
|             |                  |                      |                |                | 8              | 2.1                       |                          |                     |         |
|             |                  |                      |                | <b>AVERAGE</b> | <b>2.1</b>     | <b>(39.5 Below Limit)</b> |                          |                     |         |
| 9:51        | 071405_d118_9_10 | 817692.5             | Down           | 2              | 1.8            |                           | Cloudy, ~75 Degrees      | None                |         |
|             |                  | 2685808.39           |                | 4              | 2.5            |                           | SW Wind 5-10 Knots       |                     |         |
|             |                  |                      |                | 6              | 2.2            |                           |                          |                     |         |
|             |                  |                      |                | 8              | 10.0           |                           |                          |                     |         |
|             |                  |                      |                | <b>AVERAGE</b> | <b>4.1</b>     | <b>(37.4 Below Limit)</b> |                          |                     |         |
| 9:56        | 071405_d118_9_15 | 818008.59            | Down           | 2              | 12.0           |                           | Cloudy, ~75 Degrees      | Yes                 |         |
|             |                  | 2685744.23           |                | 4              | 14.0           |                           | SW Wind 5-10 Knots       |                     |         |
|             |                  |                      |                | 6              | 10.0           |                           |                          |                     |         |
|             |                  |                      |                | 8              | 11.0           |                           |                          |                     |         |
| High 14:11  |                  |                      |                | <b>AVERAGE</b> | <b>11.8</b>    | <b>(29.8 Below Limit)</b> |                          |                     |         |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.



↑  
Rising Tide

071405\_d118\_9\_15

071405\_d118\_9\_05

071405\_d118\_9\_00

071405\_d118\_9\_10

SEI 200

071405\_d118\_00  
(Background)

Scale 1:500  
0 50 100 150  
Feet

**07/18/05 Placement #118**  
**OU#3 Area Water Quality Location Map**  
Water Quality Stations  
**Apex Environmental, Inc.**



7/22/2005  
**New Bedford Harbor Dredge Project - Phase II**  
**Water Quality Monitoring - Placement Operations - OU#3 Cap Area**

| Tide Time    | Time             | ID                   | Coordinates    | Up/Down        | Depth (ft.)    | Ave. Turbidity            | Permissible Turbidity | Weather Conditions | Vessel  |
|--------------|------------------|----------------------|----------------|----------------|----------------|---------------------------|-----------------------|--------------------|---------|
| High 9:13    |                  |                      |                | Current        |                | (NTUs)                    | Increase (NTUs)       |                    | Traffic |
| Falling Tide | 11:23            | 071405_d154_00       | 818247.33      | Down           | 2              | 1.2                       |                       | Sunny, ~80 Degrees | None    |
|              |                  | (Background)         | 2685861.26     |                | 4              | 1.0                       |                       | SE Wind 5-10 Knots |         |
|              |                  |                      |                |                | 6              | 1.1                       |                       |                    |         |
|              |                  |                      |                |                | 8              | 1.0                       |                       |                    |         |
|              |                  |                      |                |                | 10             | 1.0                       |                       |                    |         |
|              |                  |                      |                |                | <b>AVERAGE</b> | <b>1.1</b>                | <b>41.1</b>           |                    |         |
|              | <b>12:00</b>     | <b>PLACEMENT 154</b> | <b>STARTED</b> |                |                |                           |                       | Sunny, ~80 Degrees |         |
|              | 12:03            | 071405_d154_9_05     | 818111.32      | Up             | 2              | 14.0                      |                       | SE Wind 5-10 Knots | Yes     |
|              |                  |                      | 2686176.54     |                | 4              | 22.0                      |                       |                    |         |
|              |                  |                      |                |                | 6              | 24.0                      |                       |                    |         |
|              |                  |                      |                | 8              | 20.0           |                           |                       |                    |         |
|              |                  |                      |                | 10             | 12.0           |                           |                       |                    |         |
|              |                  |                      |                | <b>AVERAGE</b> | <b>18.4</b>    | <b>22.7 NTUs</b>          |                       |                    |         |
| 12:08        | 071405_d154_9_10 | 818263.87            | Up             | 2              | 1.0            | Below Permissible         | Sunny, ~80 Degrees    | None               |         |
|              |                  | 2686220.39           |                | 4              | 1.5            | Turbidity Increase Limit  | SE Wind 5-10 Knots    |                    |         |
|              |                  |                      |                | 6              | 1.2            |                           |                       |                    |         |
|              |                  |                      |                | 8              | 3.9            |                           |                       |                    |         |
|              |                  |                      |                | 10             | 5.0            |                           |                       |                    |         |
|              |                  |                      |                | 12             | 13.0           |                           |                       |                    |         |
|              |                  |                      |                | <b>AVERAGE</b> | <b>4.3</b>     | <b>(36.8 Below Limit)</b> |                       |                    |         |
| 12:15        | 071405_d154_9_15 | 818080.84            | Up             | 2              | 1.3            |                           | Sunny, ~80 Degrees    | None               |         |
|              |                  | 2686040.82           |                | 4              | 15.0           |                           | SE Wind 5-10 Knots    |                    |         |
|              |                  |                      |                | 6              | 10.0           |                           |                       |                    |         |
|              |                  |                      |                | 8              | 31.0           |                           |                       |                    |         |
|              |                  |                      |                | 10             | 18.0           |                           |                       |                    |         |
|              |                  |                      |                | 12             | 20.0           |                           |                       |                    |         |
| Low 14:47    |                  |                      |                | <b>AVERAGE</b> | <b>15.9</b>    | <b>(25.2 Below Limit)</b> |                       |                    |         |

Notes: An X in the vessel traffic column indicates that either a vessel had passed or there was a movement of spuds that may have had an effect on turbidity.

