

**New Bedford Regional Airport  
Runway Safety Improvements Project – Phase 4  
Reconstruct, Mark, and Groove Runway 5-23  
MassDEP File No. SE049-0635**

**ENVIRONMENTAL MONITOR INSPECTION FORM**

Environmental Monitor: **Amanda Atwell/ Mike Howard**

Date/ Time of Inspections: **5/22/14 (10am to 4pm), 5/29/14 (10am-4pm)**

Weather Conditions: **5/22/14 overcast 60s then rainy, 5/29/14 sunny high 60s (weatherunderground.com).**

Observed Construction Activities Underway (attach additional pages if necessary):

On 5/22/14 the contractor is starting to construct the subbase for both Runway ends. The unclassified excavation and fill for Taxiway A that required dewatering at Runway 5 end extension has been completed. There were no releases within this area. The contractor is removing existing stormwater infrastructure in advance of new stormwater upgrades and working to locate and move the required airport infrastructure (pipes and electrical). One existing outfall was removed adjacent to wetlands and hay was spread at this location. At the Runway 23 the contractor continues to strip loam within the extension area. The contractor created a berm between the open work zone and the infiltration trench on the south side of this work zone in order to protect wetlands downslope of the trench. The contractor is constructing infiltration trenches. The contractor is continuing to stockpile sediment at the Runway 5 end outside the limits of the staked 100-ft buffer zone and erosion control maintenance and installation work is ongoing.

On 5/29/14 the contractor is continuing to construct the subbase for both Runway ends. The contractor is continuing excavation to grade on both Runway ends and stockpiling the runway material. The contractor is staging the stormwater system and constructing the subdrains for Runway 5 and 23 ends. There is still stockpiled soil within the Runway 5 end RSA outside the 100 foot buffer zone. RAMCO is onsite Thursday and Friday to install the compost filter tubes along the ILS road, install the additional approximately 75 feet of silt fence at the northern corner (end) of Runway 5 and along a portion of Runway 5 RSA that was identified as an open action item in last week's WS report.

**Status of Existing BMPs and Other Inspection Items**

| Control Measure         | Cleaning or Repair Needed  | Comments/Recommendations from the EM   |
|-------------------------|--|--|
| Erosion Control Devices | <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> n/a | Erosion controls have been installed within all active work zones along the Work Area 1 (Runway from Taxiway B to 5 end) and 2 (Runway 23 end) and are complete. Erosion control appears properly tailed in and hay bales are appropriately staked. Areas where previous failures were observed are continuing to be monitored and no additional issues have been observed. The contractor has an emergency supply of silt fence present on the site. The contractor received authorization to install compost filter tubes along the ILS road from MassDEP and the NHESP on Wednesday May 28, 2014. As requested by MassDEP a detail of the compost filter tube has been provided and is attached to this EM report. Additional erosion controls have been installed and are discussed in detail below. Epsilon informed the RE that in one select location the erosion controls should be shifted down gradient of a headwall that is scheduled to be removed to accommodate the upgraded drainage system in order to better protect the adjacent wetlands. Epsilon installed a stake in the |

| Control Measure   | Cleaning or Repair Needed  | Comments/Recommendations from the EM  |
|---|--|---|
|   |  | centerline of where the controls should be shifted. See attached photo for clarification.   |
| Box Turtle Barriers, Gates and Protection Measures          | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> n/a | The contractor has closed the gaps in turtle fencing and extended a line of fencing in the Colonial hangar area as per Oxbow's week of 5/15 request. Turtle barrier is in good condition. The moveable gate installed at the West Ditch arch culvert was functioning properly at the time of inspection on 5-29-14.   |
| Stabilized Construction Entrances, Haul Roads, Dust Control | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> n/a | The stone tracking pad was in good shape with no significant silt or sediment on the roadway. An individual from ET&L is stationed at both entrances for site access control and sediment control. The EM has witnessed the contractor watering the exposed sediment in the construction zone, along the Airport access road and haul roads, and the pavement along Shawmut Avenue and Old Plainville Road. |
| Stockpiling Materials                                       | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> n/a | The 100-ft buffer zone is staked proximate to the stockpile area. One large stockpile is located within the central portion of the Runway 5 RSA and consists of sediment from stripping the Runway 5 end. The EM and WS discussed sowing the stockpile with annual rye if required under the NPDES CGP; Epsilon understands the WS is looking into this further in consultation with the site contractor.   |
| Dewatering  | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> n/a | The excavation of unsuitable materials and filling of subbase within the footprint of Taxiway A is complete. No impacts to the edge of the work zone (hay bale/silt fence area) were identified.  |
| Construction Equipment Storage and Refueling                | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> n/a | Equipment storage is located within the designated lay down area. Refueling occurred outside of resource areas and buffer zones.  |
| Site Clean-up and Stabilization                             | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> n/a | Small area of earth disturbance along the West Ditch (near the middle portion of Runway 5 north end) as a result of removal of existing stormwater infrastructure. This area was stabilized with straw. No further action is required at this time.   |
| Timber Swamp Matting  | <input type="checkbox"/> yes <input type="checkbox"/> no <input checked="" type="checkbox"/> n/a |   |
| Work Area 1A – Tree clearing and grubbing in Dartmouth      | <input type="checkbox"/> yes <input type="checkbox"/> no <input checked="" type="checkbox"/> n/a |   |
| Work Area V – Wetland Replication Area                      | <input type="checkbox"/> yes <input type="checkbox"/> no <input checked="" type="checkbox"/> n/a |   |
| Overall Adherence to Environmental Permits                  |  | The WS submitted the West Ditch Restoration plan to MassDEP on May 12, 2014; it was conditionally approved by MassDEP via email on May 21, 2014. Restoration work was completed on May 16, 2014. The EM shall continue to monitor this area and will coordinate with the WS regarding the quarterly inspection reports required by MassDEP.   |

**Other General Comments:**

On 5/22/14 Epsilon reviewed the Runway 5 end RSA area with the IO, and the WS and addressed the northwest corner of the West Ditch and along the central portion of the West Ditch. See separate letter from ASG to MassDEP dated May 30, 2014 for additional detail on this topic. Epsilon reviewed the earthen berm installed at the southern edge of the Runway 23 end extension. The berm is in good condition and actively protecting the infiltration trench from the open cut. Erosion control stockpiles are on site for repairs. Epsilon recommended that the silt fence be relocated to the top of the slope by the wetland resource area and observed an area by the RSA 23 end where the silt fence failed and needed to be mended. This was also listed as an action item on last week's WS report. Epsilon understands that these items will be wrapped up by the close of business on May 30<sup>th</sup>. We will confirm same next week.

On 5/29/14 Epsilon reviewed the Runway 5 and 23 ends, within the limits of the active work zone. Epsilon observed that silt fence is in good condition and the areas of previous sediment accumulation are fixed and in good shape. On Thursday RAMCO started installing the compost filter tubes along the ILS road and silt fence/ hay bales in the MALSR pad areas. The contractor trenched the tubes, properly staked, and overlapped the ends to eliminate gaps. The EM observed an interim condition and was assured by the WS on Friday May 30<sup>th</sup> that the contractor pulled the soil back so that 2-4 inches of soil contacted the filter tubes on both sides. Excess sediment was moved to the road side of the filter tubes to ensure that sediment did not reach the wetlands. The EM requested that the contractor stockpile filter tubes as per MassDEP's conditional approval of this plan change. RAMCO is also installing the additional U-shaped silt fence extension in the Runway 5 end RSA (northern corner) as discussed in Epsilon's May 30 letter to MassDEP and recommended by the IO, WS and EM on May 22<sup>nd</sup>. Sarah Porter of the New Bedford Conservation Commission conducted a site inspection with the WS in the afternoon.

Although not part of Phase 4, Epsilon inspected Wetland Mitigation Sites 5, 6, and 10, and the turtle areas as part of ongoing monitoring efforts. In March the Airport installed additional silt fence at the interface of Turtle Area 3 and Site 6, Epsilon then seeded the area with a "wet-mix" in early April. Since then some additional sediment (approximately 12 ft by 6 ft area) has migrated from Turtle Area 3 into Wetland Site 6. The two rows of silt fence and straw wattles have not adequately contained the sand during heavy rain events. Epsilon is working with the Airport to identify a long term solution to prevent erosion from a purposefully unstable sandy environment into the adjoining wetland mitigation area. One option that we will explore further involves the installation of a compost filter berm along the interface of these two areas. With this approach the compost tube(s) would eventually go to seed and create a natural berm. Epsilon intends to discuss with the IO at their convenience and get their input on possible solutions. We will provide MassDEP and the NHESP with a recommendation in the near future.

Are additional erosion control measures needed?

no yes If yes, describe: Erosion controls on the ILS road area actively being installed as of the writing of this report. Two areas of silt fence should be installed by close of business May 30<sup>th</sup>.

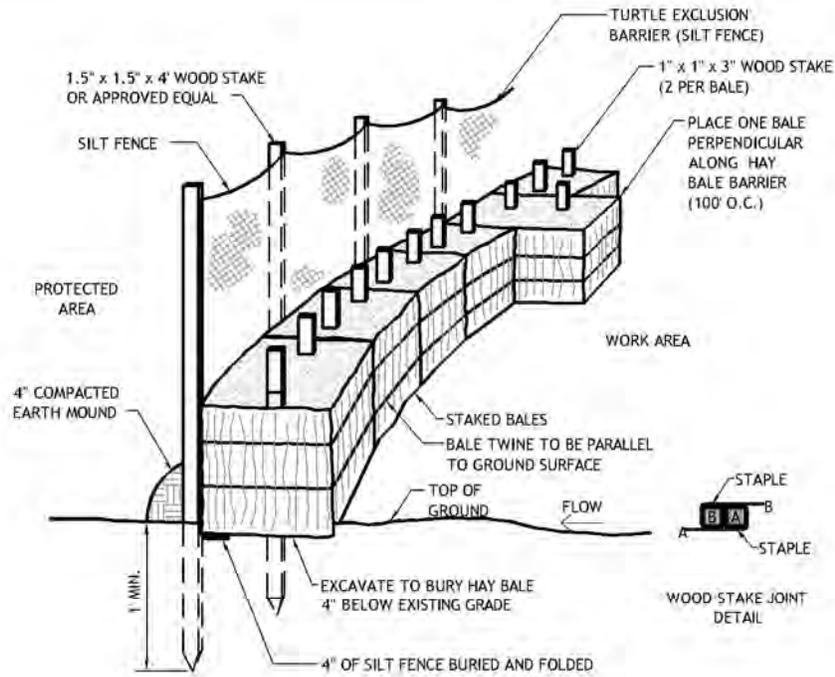
Are sediment/pollution discharges from the site present?

no yes If yes, describe:

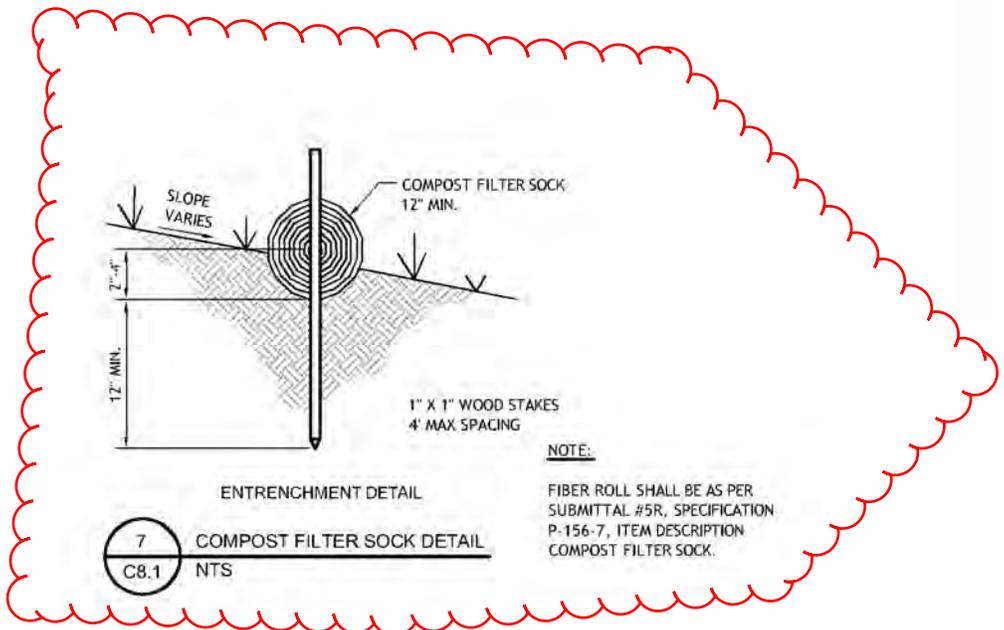
Describe any corrective action required at this time: None at this time.

Attach additional sheets with notes, comments, illustrations and issues as needed. Use site plan to identify locations of work areas or issues noted above: Photos are attached. See also attached compost filter tube detail, as requested by MassDEP.

AA/MH



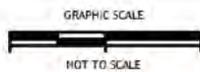
1 SILT FENCE AND HAY BALE DETAIL  
C8.1 NTS



7 COMPOST FILTER SOCK DETAIL  
C8.1 NTS

NOTE:  
FIBER ROLL SHALL BE AS PER  
SUBMITTAL #5R, SPECIFICATION  
P-156-7, ITEM DESCRIPTION  
COMPOST FILTER SOCK.

|               |             |
|---------------|-------------|
| PROJECT NO.   | 103-026     |
| CADD FILE     | CB          |
| DATE          | MAY 9, 2014 |
| DRAWING SCALE | N.T.S.      |
| DESIGNED BY   | MKD         |
| DRAWN BY      | MKD         |



SHEET TITLE

EROSION CONTROL DETAILS

FIGURE NO.

FIG. 1

PROJECT

RECONSTRUCT, MARK AND GROOVE RUNWAY 5-23  
AIP NO. 03-25-0034-48-2013  
CITY OF NEW BEDFORD BID NO. 13482304

1 OF 1



View of restored west ditch bank area, erosion control seed mix was applied on May 16<sup>th</sup>.



View of sediment stockpile in Runway 5 RSA. This material is outside the 100 foot buffer zone as staked in the field.



View of earthen berm protecting the infiltration trench at Runway 23 end. Photo taken from gravel road.



View of turtle barrier extension near Colonial Air hangars, modified as per Oxbow's direction.



Radio tagged Eastern Box Turtle found utilizing Wetland Mitigation Site 6. Epsilon reported siting to Oxbow.



View of sand migrating from Turtle Area 3 into Wetland Mitigation Site 6. This is a very small area (~12'x 6'). This area presents an ongoing challenge due to the purposefully unstable turtle nesting area located upgradient of the constructed wetland. The sediment is generated from a very small watershed (top of turtle nesting area), however it continues to hold enough energy to erode into this mitigation area. Epsilon is exploring long term solutions. See discussion of compost filter tubes.



View of active construction, looking at Runway 5 end.



View of silt fence being installed at one of the MALSR light stations at Runway 5 end. RAMCO was actively installing this feature; haybales to follow.



View of shallow trench for the placement of compost filter tubes along the ILS road. Old silt fence to be removed.



View of new stormwater catch basin and active construction.



View of stabilized area post removal of existing stormwater infrastructure.



View of constructed infiltration trench, surface stormwater control.



Note white spray paint depicting the approximate location of the “u-shaped” secondary silt fence recommended by the EM, IO, and WS and to be installed May 30<sup>th</sup>. See ASG letter to MassDEP dated May 30<sup>th</sup> for additional detail.



View of partially installed compost filter tubes. As per conversation with Joe Rogers (WS), the contractor will backfill sediment to ensure 2-4 inches of contact along the entire length of this erosion control. Excess material was moved to the ILS road side of the control to ensure that sediment does not impact the adjacent wetlands. Epsilon will conduct a follow up inspection next week.



View of erosion controls installed on upland side of existing (and now offline) headwall that is scheduled to be removed to accommodate the new storm water BMPs/infrastructure. Epsilon directed the RE to relocate ~10 – 15 feet of the controls to the downstream side of the headwall during the removal and installation process