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May 11, 2010

Mr. Scott Alfonse, Director
City of New Bedford
Department of Environmental Stewardship
133 William Street
New Bedford, Massachusetts 02740

**Subject: Spring 2010 Cap Inspection
Keith Middle School
New Bedford, Massachusetts**

Dear Mr. Alfonse:

At the request of the City of New Bedford (City), TRC performed the sixth inspection of the protective cap installed at the Keith Middle School Site located at 225 Hathaway Boulevard in New Bedford, Massachusetts. A TRC engineer conducted the inspection on April 14, 2010 in accordance with the Long-term Monitoring and Maintenance Implementation Plan (LMMIP) dated October 20, 2006 prepared by the BETA Group, Incorporated (BETA). The LMMIP requires three inspections per year in April, August and November to confirm that the cap is being properly maintained to prevent exposure to the impacted fill beneath.

The inspection consisted of a walking traverse of the entire Site with visual observations of the entire cap including the first floor concrete slab of the building, the courtyard within the building footprint, and concrete, asphalt and landscaped surfaces outside the building. Access to locked rooms within the building was provided by the facility engineer, Gary Gomes and/or a school custodian. The inspection was documented in a log book. Copies of the log book pages are presented as Attachment 1. The findings of the inspection are documented in a site-specific Cap Inspection Form (Attachment 2) provided in the LMMIP. Annotated photographs taken during the inspection are presented as Attachment 3.

Based on TRC's inspection, the concrete floor within the footprint of the building is currently acting to prevent exposure to the impacted fill beneath. The courtyard within the building and pavement and concrete surfaces outside the building were also acceptable.

The landscaped areas outside the building were acceptable with the exception of the following:

- A shallow slope failure located on the steep slope between the wetland to the west and the southern parking lot to the east has been repaired. A photograph of the slope failure prior to the temporary repair is presented in Attachment 4. A permanent repair has been implemented and should not require additional work. Vegetation appears established and the hay bales and silt fence should be removed at this time.
- Sloughing riprap stabilization stone that is undermining the concrete fence support at the top of the slope and filling the outlet of the storm water drainage culvert on the west side of the Site. Design and planning of a permanent solution is currently underway.
- There is a gopher hole at the northwestern corner of the Site. The hole should be filled in and the area reseeded in the spring to minimize erosion.
- The southern slope, adjacent to the Bethel A.M.E., has erosion rills and grassed areas are sparse. The slope is currently inaccessible for full inspection and repair due perimeter fencing.
- Woody vegetation is established at the culvert outlets and should be removed to allow unobstructed flow from each discharge.

At this time the black separation fabric that demarcates the underlying contaminated fill from the clean imported fill is not visible. However, these areas should be repaired in order to prevent further erosion or cap damage that could eventually expose the separation fabric. Please refer to the attached Cap Inspection Form for additional details concerning observed conditions.

If you have any questions, please contact me at 978-656-3560.

Sincerely,



David M. Sullivan, LSP, CHMM
Senior Project Manager

Attachments

Attachment 1

Log Book

KMS CAP INSPECTION WEDNESDAY, 4/14/10
0630 A. HAMILTON ARRIVES INSIDE
AT LEITH MIDDLE SCHOOL (KMS) TO
CONDUCT APRIL (SPRING) CAP
INSPECTION.

0700 TRC PROVIDED ACCESS TO ALL AREAS
OF THE FIRST FLOOR TO CONDUCT
THE INSPECTION. SCHOOL IS IN SESSION
THE PAV OF THE INSPECTIONS. NO
AREAS OF CRACKING IN CONCRETE GREATER
THAN 1/4 - 1/2 INCH IN WIDTH WERE
PRESENT IN ANY AREA WHERE CONCRETE
IS VISIBLE. OTHER AREAS WHERE THE
FLOOR IS COVERED WITH TILE ARE WELL
MAINTAINED AND THERE IS NO EVIDENCE
OF SIGNIFICANT WEAR OR SETTLEMENT.
PIPE PENETRATIONS WERE INSPECTED
NO CHANGE IN CONDITIONS.
0830 TRC CONDUCTED INSPECTION OF
EXTERIOR SCHOOL GROUNDS. ALL PAVED
AREAS ARE IN GOOD CONDITION. NO
EVIDENCE OF CRACKING; ALL CONCRETE
WALKWAYS/PATIO'S ARE IN EXCELLENT
CONDITION. NO CRACKING. ALL COURTYARDS
ARE WELL MAINTAINED.

A. V. Vent *[Signature]* 4/14/10

KMS CAP INSPECTION 4/14/10
CAP PERIMETER INSPECTED. Gopher
HOLE LOCATED AT THE NORTHWESTERN
CORNER OF CAP. WOOLY VEG. STILL
PRESENT IN FRONT OF CULVERT
DISCHARGE OUTLETS. EROSION OCCURRING
ON SOUTHERN SORE ADJACENT
TO BETHEL AVE PROPERTY. AREA IS
FULLY ENCLOSED BY FENCING AND
UNACCESSIBLE FOR FULL INSPECTION.

~~4/14/10~~

~~*[Signature]*~~

Attachment 2
Cap Inspection Form

CAP INSPECTION FORM KEITH MIDDLE SCHOOL

Use this inspection form to document cap inspections. If unacceptable conditions are observed, complete an additional form immediately after repairs are completed.

Inspection Date: April 14, 2010 Inspection by: Amy Hamilton

A. ASPHALT AND CONCRET PAVING – observe asphalt and concrete paving for cracking, holes, asphalt removed during construction, other damage.

All Asphalt and concrete paving acceptable? YES NO

If no, attach photograph

If no, describe unacceptable condition:

Location

Condition

Describe any repairs to asphalt and/or concrete paving conducted since previous inspection

All repairs adequate YES NO Photograph of repair attached

B. INTERIOR CONCRETE FLOORS – observe concrete for cracking, holes, concrete removed during construction, other damage.

All interior concrete floors acceptable? YES NO

The two cracks in the boiler room floor are still less than ¼-inch wide. The majority of interior concrete floors are covered with tiles or other type of flooring material. Based on visual inspection and conversations with current employees, there are no breaches or other significant damage or deterioration of the interior surficial flooring materials or, where visible, concrete floors. No construction was occurring within the building at the time of the inspection.

If no, attach photograph

If no, describe unacceptable condition:

Location

Condition

Describe any repairs to interior concrete floors conducted since previous inspection

All repairs adequate YES NO Photograph of repair attached

C. LANDSCAPING – observe landscaping for erosion animal holes, excavation, erosion control vegetation health.

All landscaped areas acceptable? YES NO

If no, attach photograph

If no, describe unacceptable condition:

Location: The southeastern and northeastern ends of the school property and the steep slope just above the wetland and to the west of the southern parking lot and school.

Condition:

1. The repair to the slope failure between the wetland to the west and the southern parking lot to the east is currently functioning as intended. The hay bales and silt fence are still in place. Photograph #9 shows stakes from the silt fence that is still visible. The vegetation surrounding the repair is established and the hale bales and silt fence at the base of the repair should be removed.
2. Riprap stabilization rock placed around the outlet of one of the storm water drainage culverts is falling down the slope and filling the end of the culvert. The outlet in question is the fourth outlet south of the above ground oil storage tank. The falling riprap undermined the concrete fence support at the top of the slope. See Photographs #10 and #14. Photograph #10 shows a crack in the concrete support of the fence along the top of slope. The structural integrity of the fence may be compromised if the sloughing of the riprap continues. The cap soils beneath the riprap may also become exposed and susceptible to erosion. The area appears stable at the moment. The extent of erosion seems similar to the conditions observed during the previous inspection. See inspection report letter dated December 11, 2009, Attachment 3, Photograph #10.
3. There is a gopher hole located at the northwestern corner of the cap, Photograph #12. Measures should be taken to remove the burrowing animal from the area. The hole should be filled in with suitable soil material and reseeded to minimize the chance of erosion.
4. Woody vegetation is becoming more established, Photographs #8 and #13. Woody vegetation should be removed from the culvert outlets so unobstructed flow occurs at each discharge.
5. Erosion is occurring on the southern end of the cap adjacent to the Bethel A.M.E. property. Access to this area is currently blocked by fencing. The rills in this area should be filled in and efforts should be taken to establish vegetation along this slope.

Describe any repairs to landscaping since previous inspection: This is the sixth cap inspection to be completed as required by the December 2006 Long-term Monitoring Plan.

All repairs adequate YES NO Photograph of repair attached

D. Areas Not Inspected:

Southern end of cap.

Reason:

Perimeter fence installed

A perimeter security fence installed around the Bethel A.M.E. property (immediately south of the KMS property) limits access to the southern end of the KMS cap.

Additional Notes: None

Attachment 3
Site Inspection Photographs

SITE PHOTOGRAPHS
April 2010 Cap Inspection
Keith Middle School
New Bedford, Massachusetts



1) Pipe penetrations in boiler room.

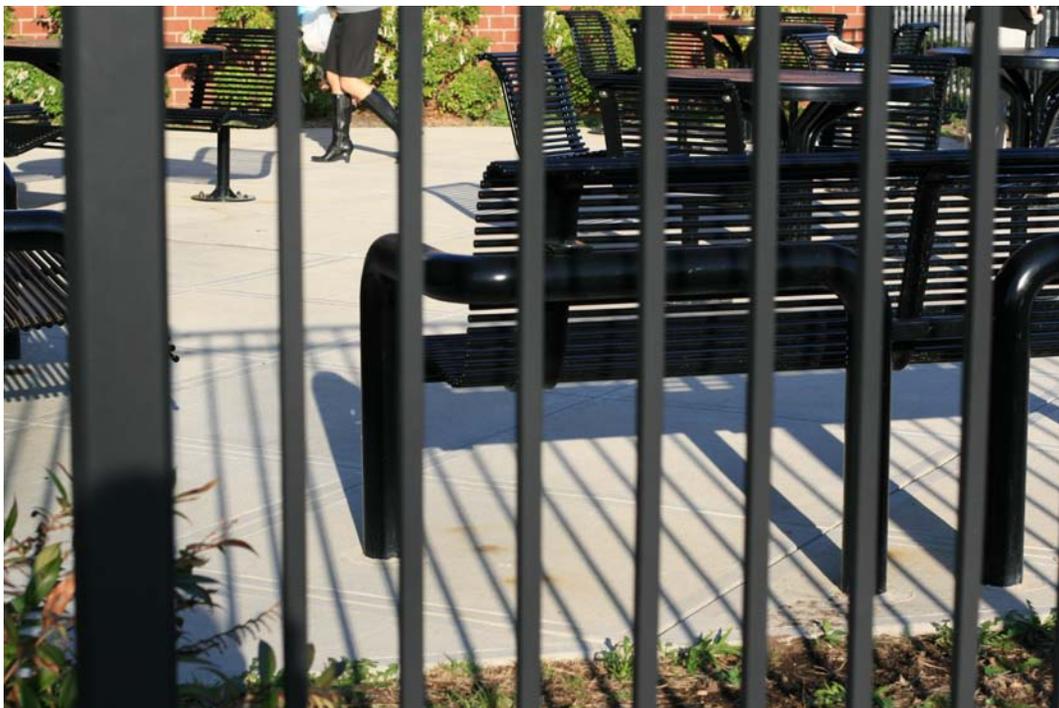


2) Kitchen.

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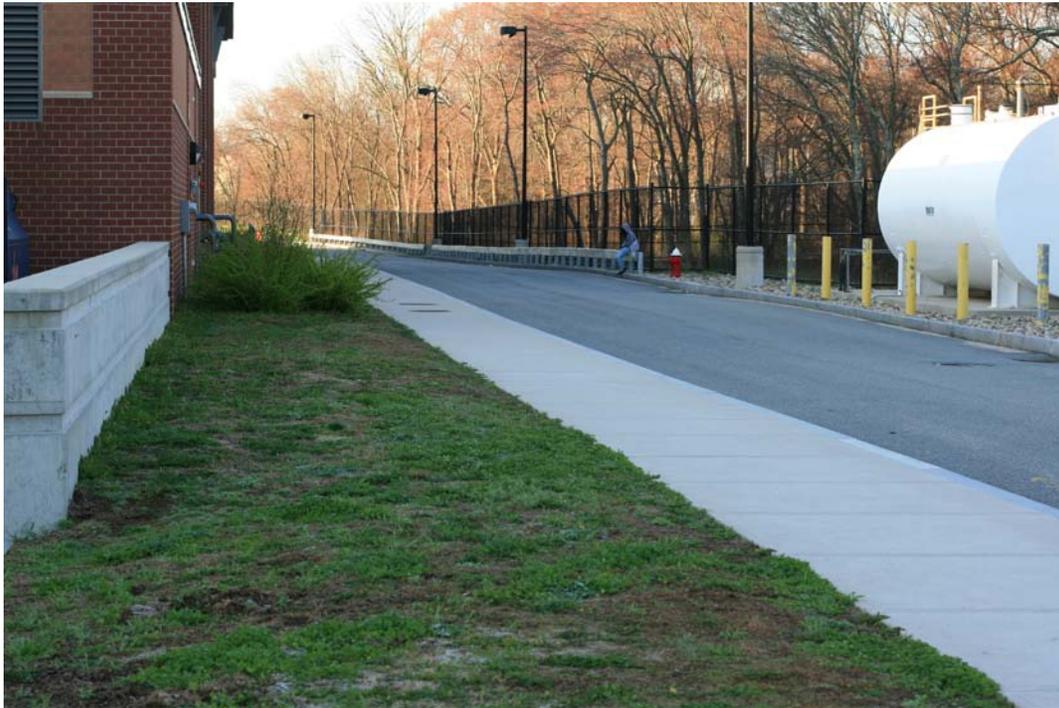


3) Courtyard looking North.



4) Community room courtyard.

SITE PHOTOGRAPHS
April 2010 Cap Inspection
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5) West side of school looking South.



6) North parking lot facing North.

SITE PHOTOGRAPHS
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New Bedford, Massachusetts

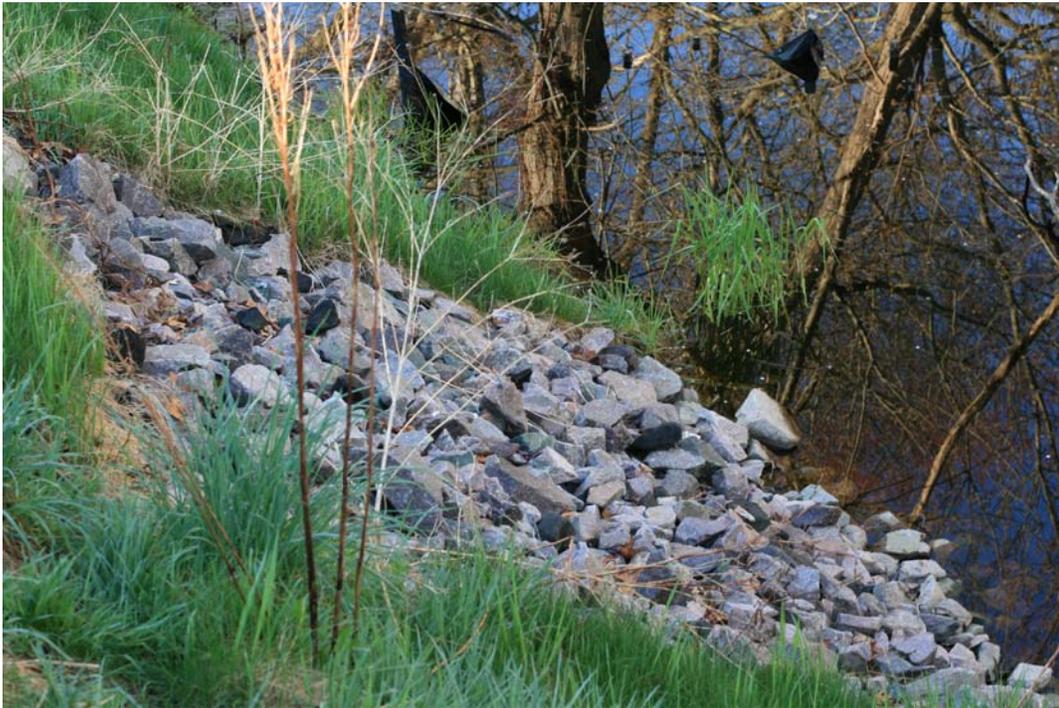


7) East side of school facing North.



8) Woody Vegetation in front of culvert outlet.

SITE PHOTOGRAPHS
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9) Temporary slope failure repair.



10) Undermining of fence support south of above ground storage tank.

SITE PHOTOGRAPHS
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11) Erosion visible through the fence that blocks access to the southern slope.



12) Same gopher hole Northwest corner.

SITE PHOTOGRAPHS
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13) Eastern slope facing South.



14) Culvert filled in with riprap.

Attachment 4
Slope Failure Photograph

