



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1  
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5090.3a

March 21, 2005

Mark Evans, Remedial Project Manager  
U.S. Department of the Navy  
Naval Facilities Engineering Command  
Northern Division  
10 Industrial Highway  
Code 1823, Mail Stop 82  
Lester, PA 19113-2090

Re: Box Culvert Video Inspection Dated August 6, 2004 for the Goss Cove Landfill (OU5)

Dear Mr. Evans:

EPA reviewed the video inspection DVD entitled "Box Culvert Video Inspection" dated August 6, 2004 for the Goss Cove Landfill, Naval Submarine Base - New London Groton, Connecticut. The DVD was submitted to EPA for review in March 2005. This video presents a visual record of the 4-foot by 10-foot storm drain culvert installed at the Goss Cove Landfill to replace the original three 42-inch drain pipes. The video inspection is a component of the annual landfill inspection for the Goss Cove Landfill; however, video inspections have not previously been provided to EPA and were not included in the 2003 annual inspection report. The review of this video inspection focused on the adequacy of the inspection as it relates to evaluating the condition of the box culvert. Items of particular interest for the video inspection include the condition of the culvert joints, the condition of the drainage inlets to the box culvert, evidence of infiltration, and evidence of sediment accumulation in the box culvert. Detailed comments are provided in Attachment A.

I look forward to working with you and the Connecticut Department of Environmental Protection to protect the environs of the Naval Submarine Base. Please do not hesitate to contact me at (617) 918-1385 should you have any questions.

Sincerely,

Kimberlee Keckler, Remedial Project Manager  
Federal Facilities Superfund Section

Attachment

cc: Mark Lewis, CTDEP, Hartford, CT  
Melissa Cokas, NSBNL, Groton, CT  
Jennifer Stump, Gannett Fleming, Harrisburg, PA

## ATTACHMENT A

1. The video inspection conducted on August 6, 2004 is too superficial to satisfy the purposes for which the inspection was conducted. A much more thorough inspection is expected and should be conducted for all future inspections. The video inspection should photo-document the condition of all inlets to the box culvert and the condition of several of the culvert joints including inspection of any anomalous looking joints. Then the condition of these features can then be tracked over time using the photographic record of the features to observe any changes in the condition of these features.
2. The August 2004 video inspection failed to acknowledge and inspect the 18-inch inlet on the north side of the culvert at Station 0+43 and failed to stop to inspect three other inlets, although it did recognize their presence and provided a superficial view of them. Only the 12-inch inlet on the south side of the culvert at Station 0+43 was inspected closely and this could have been done more thoroughly with a camera that could be better controlled.
3. Two culvert joints were inspected up close. EPA recommends that several more joints be inspected during each inspection, spending less time at each joint than was spent on the second joint inspected during the August 2004 inspection. There are approximately 30 to 35 joints in the culvert; a minimum of 6 to 8 joints should be targeted for inspection each year including any anomalous looking joints. Both sides of each joint should be inspected closely.
4. The operator had difficulty controlling the motion of the camera. The camera drive used had only a one-sided drive that forced the camera to the right hand side of the culvert. The camera also had difficulty maneuvering through the bends in the culvert and got hung up in a small sediment deposit that caused a 25 minute delay in the inspection. These camera control problems also prevented the thorough inspection of both sides of the culvert. A more robust, controllable camera drive should be used in the future to prevent these problems.
5. There were significant difficulties with glare caused by the camera light. Proper inspection of features was prevented on several occasions because of the glare that completely obliterated the camera's view. A camera better suited to inspection of the box culvert should be used.
6. Consideration should be given to the benefits of inspecting one side of the culvert on the way in and the opposite side on the way out.