



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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January 17, 2006

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: Annual Landfill Inspection Reports for the Area A, DRMO, and Goss Cove Landfills

Dear Mr. Evans:

EPA reviewed the three annual landfill inspection reports for the Area A, Defense Reutilization and Marketing Office (DRMO), and Goss Cove Landfills at the Naval Submarine Base - New London, in Groton, CT in light of their consistency of the inspections with the O&M Manual requirements, and the completeness and technical accuracy of the information presented. All three reports were dated October 2005. These reports document the inspections conducted for each landfill as required by the Operation and Maintenance (O&M) Manuals for each landfill. The inspection of the Goss Cove and DRMO landfills occurred on October 11, 2005 and inspection of the Area A Landfill was conducted on October 12, 2005. Detailed comments are provided in Attachment A.

While I believe that the most recent inspection of the Area A Landfill was comprehensive and conscientiously conducted, the inspection report does not adequately describe some of the deficiencies observed during the inspection or the urgency that is required for some of the repairs. For example, the presence of uncapped groundwater monitoring wells has been known for more than two years *yet this deficiency has not been corrected*. Immediately capping or properly abandoning these wells should be a top priority. There are also significant deficiencies in the asphalt cap in the deployed parking area (large cracks with *trees* growing in them) and significant deficiencies in portions of the drainage channels.

A camera inspection of the Box Culvert at the Goss Cove Landfill had been scheduled for the day of the annual inspection but was postponed because of the threat of rain. There is no mention of the camera inspection in the annual inspection report. This inspection is required to complete the 2005 annual inspection for the Goss Cove Landfill.

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,

A handwritten signature in black ink, appearing to read 'Kimberlee Keckler', written over a horizontal line.

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

Page            Comment

### *Area A Landfill Inspection Report*

p. 3            The last sentence of the second paragraph under inspection activities refers to October 11, 2005 as the date the inspection checklist was completed and the photographs taken. Actually, the Area A Landfill was inspected on October 12, 2005, the day after the Goss Cove and DRMO Landfills were inspected. The checklist itself is correctly dated October 12, 2005.

Under the Institutional Controls section, please edit the text to acknowledge that institutional controls also include site activity restrictions. At the Area A Landfill site activity restrictions are also a primary institutional control because of the frequent use of the site by Navy contractors. Specifically, SOPA (ADMIN) New London Instruction 5090.18 is a policy document that restricts the use of the CERCLA landfill sites at the Naval Submarine Base New London and should be cited in this section. This instruction is a primary means of protecting the integrity of the landfill cap and needs to be recognized as such. *However, it is apparent that the Navy is not adequately enforcing this SOPA at the Area A Landfill.* A recommendation should be made in this inspection report to enforce the existing SOPA Instruction 5090.18 by requiring training with sign off for all users of the Area A Landfill and registration of any vehicles stored at the Area A Landfill. This would provide the control necessary to enforce the SOPA.

p. 4            Please confirm if the security fencing actually restricts access to the Area A Landfill around the entire perimeter; although, it may not directly abut the landfill along the northern perimeter it may abut the Area A wetland which abuts the landfill on the north. Therefore, if all access to the Area A Landfill is restricted by fencing, the text should be edited to accurately clarify this point.

In the Signage section, the text should mention that signage indicating restricted access to the Area A Landfill is posted at each access gate.

The discussion in the first sentence of the second paragraph within the Landscaping Features section seems to imply that a portion of the cap is comprised of a grass cap. That is not apparently correct. Grass vegetation covers the steep slope immediately south of the landfill cap but does not apparently cover the capped waste. Please review and correct as appropriate.

- p. 6 The text should be edited to clarify that the reference to cracks surrounding the concrete pad actually refer to the joint between the concrete pad and the asphalt pavement that has separated providing access for runoff and also is fostering vegetative growth that will further damage the asphalt cap. The joint needs to be cleaned and properly sealed.
- p. 7 It is not correct to state that no deficiencies were observed regarding the integrity of the drainage channels. As noted in the subsequent discussion in this section, *the integrity of portions of the channels has been compromised by the growth of phragmites through the asphalt.* Furthermore, the function of portions of the channels has been compromised by the growth of the *phragmites*, the build up of sediment, and the accumulation of debris in the channels. The text needs to be edited to eliminate statements that are contradicted by subsequent discussions in the document. Also, while the Navy has devoted some resources to the maintenance of these channels, clearly the effort has not been adequate to properly maintain the structural and functional integrity of these channels. The recommendation for quarterly maintenance of these channels is endorsed by EPA at least until the integrity of the channels has been restored.
- p. 8 EPA understands that while access to the landfill is restricted, the site is frequented by a number of Navy contractors who store equipment at the site. The security of the monitoring wells may be best preserved by locking the wells.
- p. 9 The discussion of the channel deficiencies in the first bullet of the Housekeeping and Maintenance section does not adequately describe the poor condition of portions of the channels. For example, Channel C has so much sediment accumulation that significant amounts of water become trapped at the head of the channel. *This channel is not functioning as it was designed to do and solutions need to be proposed including replacement of this rip rap channel with an asphalt channel having a rip rap discharge apron.*

The last sentence in the Housekeeping and Maintenance section states that access to the site is relatively unrestricted to all users of the base. This statement contradicts the statement in the Groundwater Monitoring Wells section that access is restricted and therefore well locks are not necessary. *The unsupervised use of the site indicates the potential need for well locks for security.*

Figure 1-1 The date of the inspection for the Area A Landfill was October 12, 2005, not October 11, 2005.

*Area A Landfill October 12, 2005 Inspection Checklist*

p. 1 Cap Areas, item 2j should indicate damage from use exists as there are indentations and gouges in the pavement from equipment stored on the pavement.

p. 2 Side Slope Rip Rap Cap Area, item 3a should indicate that the northern catch basin was overgrown with vegetation that needs to be removed. Item 3b should indicate that continual maintenance is required to cut/remove vegetation that grows through the rip rap.

Drainage Channel A, item 5b should indicate that *areas of the asphalt lining have been compromised by phragmites growth that has penetrated the lining. If this condition is not addressed in a timely manner, the lining will become significantly damaged.* Item 5d does not adequately describe the vegetative growth in the channel. In some areas of the channel the growth is rampant and needs ongoing attention to control the problem.

p. 3 Drainage Channel C, item 7f is not related to Channel C as the culvert beneath the parking entrance is the ADS culvert between Channels B and D. If this item refers to Culvert 2, it has been addressed under Drainage Channel A as item 5j. This item should apparently be removed from the Channel C checklist.

p. 7 EPA's notes indicate that well 2LMW8S could not be found. This should be checked as 2LMW8S and 2LMW8D may have been inadvertently transposed by either EPA or the inspector.

p. 8 EPA's notes indicate that well *2LMW8D is significantly damaged and should be abandoned.* This should be checked as 2LMW8D and 2LMW8S may have been inadvertently transposed by either EPA or the inspector.

Item 48a should note that the well 2LMW18S appears to have settled as it is at an angle to the ground surface in addition to being covered by sediment.

p. 9 Under 2LMW18D, item 49c should note that no PVC riser could be detected in the steel casing. Should this well be abandoned?

p. 15 **Under Adequacy of O&M at site, EPA does not agree that the maintenance has been satisfactory or that current practices are adequate.** While it is recognized that the Navy has allocated some resources to site maintenance, even the increased effort in the past two years has not been sufficient to address the ongoing maintenance requirements at the site. There are problems that have developed over a period of years that have been only partially addressed so that they continue to be recurring problems. The maintenance effort needs to be increased to more completely address the problems after which the maintenance intensity may be reduced. There are significant repairs required, especially related

to monitoring wells, that are long overdue and need to be addressed at the next available opportunity. The report needs to be edited to reflect these concerns.

Under Deficiencies/Item Requiring Corrections, please clarify that the *phragmites* growth and sediment accumulation in the drainage channels has become significant, that *phragmites* are growing through the pavement and damaging it, and that immediate attention and comprehensive removal is required. Also add that the damaged monitoring well road boxes at several wells including 2LMW8, 2LMW17D, 2LMW18D, and 2LMW20D need immediate attention and several other wells are in need of repairs. *Note also that the severity of the asphalt cracking problem at the deployed parking area requires attention to address the cracks and the trees growing in the cracks.* Repairs there will involve cutting and removal of some existing asphalt to remove the trees and their roots to prevent damage to the geomembrane. It will not be sufficient to cut the trees off at the ground surface.

#### *DRMO Landfill Inspection Report*

p. 4 In the Security, Fencing and Gates section, the statement regarding the adequacy of the vegetation control along the fence line needs to be edited to clarify the situation. There has been a recurring problem area at the northern end of the fence line near the catch basin. Heavy vegetation growth there has infiltrated the fence and in the past has partially blocked the swale at the catch basin. Maintenance during 2005 has partially addressed this problem but a greater removal effort is required to control this vegetation to protect the fence and prevent further infiltration into the swale area. At a minimum it is expected annual vegetation removal and spraying will be required if this vegetation is not removed or severely cut back.

p. 5 The text in the Asphalt Pavement section should be edited to clarify that a significant amount of standing water, approximately 80 feet long and 10 feet wide and up to two inches deep, had accumulated along the jersey barriers on the western side of the site.

The text should also note that a small depression and some standing water were observed in and around the area of wells 6MW11D and 6MW11S. Repairs were made to these wells in 2005; however, the pavement around the wells remains somewhat depressed allowing some water accumulation around and over the wells.

p. 6 In the Groundwater Monitoring Wells section, paragraph 1, the first sentence should be corrected to indicate that it was the 11 October 2005 annual inspection

that identified well 6MW7S as in need of repair. The inspector had difficulty finding this well for the reasons cited in the second sentence of this paragraph.

*DRMO October 11, 2005 Inspection Checklist*

- p. 1 For clarity, item 1d under Security Fencing should further note that the *signs do not satisfy the letter of the IROD requirement for signage. The IROD states that the posted signs shall warn potential trespassers that a health hazard is present.*
- Item 2b should note many minor depressions throughout the pavement with significant ponding of water along the jersey barriers caused by sediment accumulation and possible depressions in the pavement.
- p. 2 Under Thames River Riprap, clarify that the westerly end of the geotextile, a component of the cap, was observed beneath the rip rap at some locations along the shoreline; however, as long as it remains secured in place beneath the rip rap no maintenance for this item will be required.
- p. 3 The pdf file has been truncated and item 17d for 6MW7S is missing.
- p. 5 The text in the Adequacy of O&M at the site should be edited to recognize that there are problems that have developed over a period of years that have been only partially addressed so that they continue to be recurring problems. The problem of sediment accumulation and ponding of water along the jersey barriers is ongoing and needs to be resolved. Also, there are repairs required, especially related to minor settlement areas that are impacting monitoring wells. These maintenance and repair items are adequately identified in the subsequent deficiencies discussion but the assessment of the adequacy of the O&M to date is not consistent with the problems existing at the site and should be edited accordingly.

*Goss Cove Landfill Inspection Report*

- p. 2 EPA's representative was Greg Kemp, not Doug Kemp.
- p. 4 It should be noted that some minor concrete curb damage was observed near the picnic area during this and earlier inspections but the condition of the curb has no impact on the effectiveness of the landfill cap.
- p. 8 It should be noted in the text that a camera inspection of the box culvert had been scheduled for the same day as the annual inspection; however, owing to the rainy conditions, the camera inspection company postponed the inspection. It was to be

rescheduled by Environmental Chemical Corporation as it is a necessary component of the annual inspection. The earlier camera inspection had detected significant levels of sediment accumulation in the upper reaches of the box culvert. This camera inspection needs to be conducted to complete the 2005 annual inspection. If it has already been completed, please include the results of the camera inspection in this 2005 annual report. If it has not been conducted, please schedule it and provide a copy of the camera inspection and supplement the 2005 annual report with the findings of the camera inspection.

- p. 9           The condition of the mortared joints between the catch basin and the piping cannot be adequately inspected from the ground surface, nor can the condition of the piping, especially the piping between the catch basins and the box culvert. These are the most vulnerable areas of the cap because of the potential impacts from differential settlement. At these locations runoff has a potential opportunity to infiltrate into the landfill materials and cause contaminant migration. Future inspections need to include a more comprehensive inspection of the drainage piping especially the piping between the catch basins and the box culvert where differential settlement will have the greatest impact. Inspection of the piping will need to be conducted with the video camera and should be scheduled with the next camera inspection for the box culvert.
- p. 10          The summary should also note the poor condition of the sprinkler system that was installed to ensure the grass cap components remain viable. The sprinkler system needs to be repaired.

Also, EPA observed that the fenced storage area at the northern end of the site contains several hazardous material storage cabinets that are not locked. These cabinets contain hazardous materials, therefore, while they are kept within the fenced area which is normally locked, it would be prudent to lock the cabinets.

*Goss Cove Landfill October 11, 2005 Inspection Checklist*

- p. 6           Under Box Culvert Road to River, items 36a and 36b (that should actually refer to the lower junction box) were not inspected because the location to access the lower junction box was not located. The junction box has never been inspected so the Navy needs to locate the access point for its subcontractor and ensure that the lower junction box is inspected during the next annual inspection. Also item 36c was not inspected because the box culvert is a confined space and the camera inspection scheduled for the day of the annual inspection was postponed. If the camera inspection has not been completed, it needs to be to complete the 2005 annual inspection.

- p. 8            Preceding Item 52, the Title of the section should be Gas Vents not Storm Water Features. Please correct.
- p. 9            Preceding Item 55, the title of this section is missing - it should be Monitoring Wells. Please correct.
- p. 11           Under Deficiencies/Item Requiring Corrections, it should be noted that the camera inspection that was scheduled for the day of the annual inspection was postponed and, if correct, has not yet been completed. The camera inspection is required to complete the 2005 annual inspection.