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Project Number N4251

Commander, Southern Division
Naval Facilities Engineering Command
ATTN: Mr. Dana Gaskins (Code ES31)
Remedial Project Manager
2155 Eagle Drive
North Charleston, South Carolina 29406

Reference: Clean Contract Number N62467-94-D-0888
Contract Task Order Number 0251

Subject: Inspection Summary and Recommendations,
Second Semi-Annual Inspection (2002), Operable Unit (OU) 1 Landfill
Naval Air Station (NAS) Jacksonville
Jacksonville, Florida

Dear Mr. Gaskins:

Tetra Tech NUS, Inc. (TtNUS) is pleased to provide the Inspection Summary and Recommendations for the Second Semi-Annual Inspection of the OU 1 Landfill at NAS Jacksonville, Jacksonville, Florida for the Year 2002. This report serves as a brief synopsis of the results of the landfill inspection that was conducted on October 14, 2002. TtNUS inspected the landfill for the United States Navy Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) under Contract Task Order (CTO) 0251, for the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D-0888.

Site History

OU 1 is comprised of Potential Source of Contamination (PSC) 26 and PSC 27. The *Record of Decision (ROD) for PSC 26 and PSC 27* [ABB Environmental Services (ABB-ES), 1997] required the installation of a cover/cap (cap) system over the landfill soil and debris as the selected remedial action. A subsequent requirement at this site is the monitoring and maintenance of the landfill cap to ensure that cap integrity is not compromised. Semi-annual inspections of the landfill are required as part of the landfill cap post-remedial action.

The installer of the landfill cap, Bechtel Environmental, Inc. (BEI), provided The *Maintenance and Monitoring Plan for Operable Unit 1, July 1999* (BEI, 1999) to guide maintenance and monitoring of the landfill cap. The maintenance plan requires that the following specific site-management measures be reviewed during landfill inspection to ensure the integrity of the landfill cap:

- 1) Verify vigorous cover vegetation.
- 2) Check for surface erosion problems.
- 3) Inspect for surface settlement.



- 4) Verify operation and condition of the surface drainage system.
- 5) Monitor for damage by vandals and pests.

The intent of the inspection is to provide information on a regular basis regarding the condition of the landfill and cap.

Results of the Last Landfill Inspection

In the Spring 2002 Landfill Inspection report, small trees and shrubs were reported to be growing in the drainage channels and culvert near the landfill. The small trees and shrubs have since been removed based on the recommendations from the last landfill inspection.

Monitoring and Maintenance Inspection

The Second Semi-Annual Maintenance Inspection of the OU 1 Landfill for Year 2002 was conducted on October 14, 2002 by TtNUS using the inspection checklist provided in the *Maintenance and Monitoring Plan for Operable Unit 1* (BEI, 1999). A copy of the October 14, 2002 inspection checklist is attached.

The following observations were reported on the inspection checklist:

- General site conditions were checked to ensure they were in accordance with the Maintenance and Monitoring Plan. The gate was locked, intact, and operational. The fence and the road were both in good condition.
- Two landfill-specific signs on the fence along Child Street were observed. In addition, the sign at the front gate was visible and in good condition.
- The grass cover on the landfill has grown since the last landfill inspection. The vegetation averaged a height of approximately 2 feet. Three small bare spots (about 10 foot by 10 foot areas) on the northern portion of the landfill were observed. One additional bare spot (about 5 feet wide by 100 feet long) was observed on the exterior side of the drainage channel just south of the gated entrance to the landfill. Overall, it is estimated that 99 percent of the landfill is covered with vegetation, and the density of the cover has increased since the last inspection.
- No erosion channels were observed during the inspection, and the areas repaired in January 2002 exhibit no signs of deterioration. A few small areas with limited vegetation were observed in the drainage channel along Child Street north of the areas repaired in January 2002. However erosion channels have not yet formed.
- No settlement problems were observed.
- No evidence of ponding water was visible on top of the landfill, although some standing water was present in the culvert located under the road entering the landfill and in the drainage channels surrounding the landfill. The standing water may be a result of weed growth located in the culvert.
- TtNUS saw no visible evidence of burrowing animals.
- Numerous small trees and shrubs located in the east and west side drainage channels were removed based on the recommendations in the spring 2002 landfill inspection report. Small trees and shrubs were not observed on the landfill during the inspection.
- The groundwater monitoring wells were observed to be in good condition and the well caps were locked.



Recommendations for Corrective Actions

As a result of the October 14, 2002 inspection, the following corrective actions are recommended:

- Mow the landfill to reduce the height of the vegetation and prevent the growth of trees and shrubs.
- Use a weed-eater and mower to remove the weeds in the drainage channel and culvert to promote drainage and prevent standing water.
- Apply a mixture of winter rye and bahia seed by hand at bare spot areas, and the areas that have the potential for future erosion.

If you have any questions or comments please feel free to contact me at (904) 636-6125.

Sincerely,

Mark Peterson, P.G.
Task Order Manager

MP/jf

Enclosure

- c: Mr. J. Caspary, FDEP
Ms. J. Beason, NASJAX
Mr. T. Woolheater, USEPA
Ms. D. Wroblewski, TtNUS (cover letter only)
Mr. M. Perry, TtNUS (unbound)
Project File CTO 0251

The professional opinions rendered in this document identified as Inspection Summary and Recommendations Second Semi Annual Inspection (2002), Operable Unit 1 Landfill, Naval Air Station Jacksonville, Florida were developed in accordance with commonly accepted procedures consistent with applicable standards of practice. This document was prepared under the supervision of the signing engineer. If conditions are determined to exist differently than those described in this document, then the undersigned professional engineer should be notified to evaluate the effects of any additional information on the project described in this document.

Gregory S. Roof, P.E.
Professional Engineering Number 50842
Tetra Tech NUS Inc. Engineering No. 7988

OU 1 LANDFILL INSPECTION CHECKLIST

Date: 10/14/02
 Time: 0950
 Inspector: Joe Ferranti / Dave Sietken

Weather Conditions: cloudy, 78°
 Ground Conditions: damp

ITEM

CONDITION/REMARKS

General Site

- 1. Entrance/Access/Perimeter Road (gate locked & intact, fence & perimeter rd. in good condition)
- 2. Signs/Warnings (adequately displayed & in good condition)

Gate locked & intact, fence & perimeter road in good condition
Signs adequately displayed and in good condition.

Cover

- 3. Grass cover (bare spots, adequate nutrients, mowing req'd.)
- 4. Erosion (inspect for eroded areas, recommended repairs)
- 5. Settlement (visually identify settlement problems, recommended repairs)
- 6. Ponding (standing water present)
- 7. Wildlife activity (evidence of burrowing animals)
- 8. Drainage Channels (clear of debris, erosion areas, overgrown)

99% of landfill covered with grass, mowing is recommended
Little erosion. Just a few small areas on east side near Child Street (mouth of areas repaired last year)
no settlement problems observed
Some standing water observed in drainage channels. weeds need to be removed to promote drainage
no evidence of burrowing animals
drainage channels need to be cleared.

Perimeter Features

- 9. Culverts (clear of debris & in good condition)
- 10. Groundwater monitoring wells (identify damaged wells, well caps locked)

Culverts is in good condition, but needs weed growth cleared.
Monitoring wells in good condition.

Additional Comments: none

Required Action: Mowing of landfill, clearing of weed growth in drainage channels & culvert, possible sealing of a few small areas or drainage channel near Child Street.
 By Whom? Texas

Inspector's Signature: Joe P. Ferranti