

**TETRA TECH NUS, INC.**

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July 16, 2001

Project Number 2823

Commander, Southern Division
Naval Facilities Engineering Command
ATTN: Mr. Dana Gaskins (Code 1857)
Remedial Project Manager
2155 Eagle Drive
North Charleston, South Carolina 29406

Reference: Clean Contract No. N62467-94-D-0888
Contract Task Order No. 0179

Subject: Inspection Summary and Recommendations, First Semi-Annual
Inspection (2001), 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 first Semi-Annual Inspection of the OU 1 Landfill at NAS Jacksonville, Jacksonville, Florida for the Year 2001. This report serves as a brief synopsis of the results of the landfill inspection that was conducted on July 3, 2001. TtNUS inspected the landfill for the U. S. Navy Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) under Contract Task Order (CTO) 0179, 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) 1997a] 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 provided 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, and

- 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 cover.

Monitoring and Maintenance Inspection

The Year 2001, First Semi-Annual Maintenance Inspection of the OU 1 Landfill was conducted on July 3, 2001 by TtNUS using the inspection checklist provided in *The Maintenance and Monitoring Plan for Operable Unit 1 (BEI, 1999)*. A copy of the July 3, 2001 inspection checklist is attached.

The following observations were reported on the inspection checklist:

- General site conditions were in accordance with the Maintenance and Monitoring Plan. The gate was locked, intact, and operational. The fence and the perimeter 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 adequately displayed and in good condition.
- The density of the vegetative cover has increased on the landfill cover since the last semi-annual inspection. A few small bare spots on the top of the cover remain. Overall, it is estimated that ninety-nine percent of the landfill is covered with vegetation.
- Erosion problems evident in the Fall 2000 inspection, along the northeast side of the landfill cover (along Child Street) and in the southwest corner, were repaired in December 2000. The repairs have corrected the erosion problems in these areas. It appears that there may be the potential for new erosion channels to form along the northeast side of the landfill adjacent to the areas corrected in December 2000. Currently, there is some limited erosion. This may be a result of new preferred pathways for groundwater flow, as a result of the filling and sodding of former erosion channels. However, there are no significant erosion issues at this time.
- No settlement problems were observed.
- No evidence of ponding water was visible on top of the landfill.
- TtNUS saw no visible evidence of burrowing animals, however a raccoon was observed on the landfill.
- Additional small shrubs and pine trees have grown on the landfill cover since December 2000, when some small trees and shrubs were removed. These plants can be removed by hand or mowed down.
- Vegetation on the southern end of the landfill cover has grown to approximately a foot in height, and to approximately 4 to 8 inches in height in other areas. Mowing at this time would only be necessary for aesthetic reasons, and therefore TtNUS recommends waiting to mow, to allow for the natural reseeding of the landfill cover to continue.

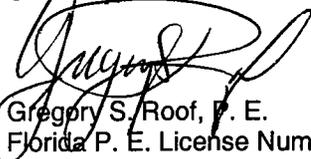
Recommendations for Corrective Actions

As a result of the July 3, 2001 inspection the following corrective actions are recommended:

- The shrubs and small pine trees that have taken root in the cover should be removed. All can be removed by hand.
- Do not mow at this time and allow the vegetation on the landfill to continue to grow. The landfill will be inspected again in late summer or early fall to determine if mowing is required.
- Hand seed the few small bare spots that are present on the cover. At this time we do not recommend the seeding of the entire landfill cover. The need for seeding the entire landfill cover will be reviewed again during the next landfill inspection.
- The liming of the landfill cover was conducted on April 30, 2001. The University of Florida Soil Extension Testing laboratory recommended that fertilizing and seeding occur at a minimum of sixty days after liming. Since sixty days has now elapsed, the fertilizer can now be applied to the landfill. However, TtNUS recommends that the fertilizer be applied in late fall when weather conditions are more favorable for fertilization.

If you have any questions or comments please feel free to contact me at (904) 281-0400.

Sincerely,



Gregory S. Roof, P. E.
Florida P. E. License Number 50842

GR/jf

Enclosure

c: Mr. Jorge Caspary, FDEP
Mr. Tim Curtin, NASJAX
Mr. Tim Woolheater, USEPA
Ms. D. Wroblewski, TtNUS (cover letter only)
Mr. M. Perry, TtNUS (unbound)
Project File CTO 0179

OU 1 LANDFILL INSPECTION CHECKLIST

Date: 7/3/01
Time: 0730
Inspector: Joe Feranti, Greg Roof

Weather Conditions: Sunny, 75°
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)

Good Condition
2 landfill-specific signs on Child st.
1 on gate. 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)

Vegetative cover increased since inspections conducted last year. still a few bare spots
No significant erosion areas since repair work performed in Dec. 2000.
No settlement problems
No evidence of ponding
No evidence of burrowing animals.
Drainage channels predominantly clear, some small shrubs & trees need to be removed.

Perimeter Features

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

Culvert clear of debris and in good condition
Monitoring wells in good condition, some locks need to be replaced due to rust.

Additional Comments: _____

Required Action: Small shrubs and pine trees need to be uprooted.
Mowing may be required in near future.

By Whom? Tetra Tech Nus, Inc.

Inspector's Signature: Joe P. Feranti