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July 24, 2002

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,
First 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 First 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 July 10, 2002. TtNUS inspected the landfill for the United States Navy Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOC) 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 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.
- 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.

Actions Performed Since the Last Landfill Inspection

Since the Fall 2001 Landfill Inspection, several corrective actions have occurred. In early January 2002, small erosion channels on the east and west side drainage ditches were repaired by filling in the erosion channels with topsoil, and covering the filled areas with bahia sod and winter rye seed. In late January and February 2002, the landfill was mowed, and the small trees and shrubs growing on the landfill cover were removed. In April 2002 the landfill cover was straight-disced, seeded and fertilized.

Monitoring and Maintenance Inspection

The First Semi-Annual Maintenance Inspection of the OU 1 Landfill for Year 2002 was conducted on July, 10, 2002 by TtNUS using the inspection checklist provided in the *Maintenance and Monitoring Plan for Operable Unit 1* (BEI, 1999). A copy of the July 10, 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 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 changed since fall 2001 inspection. Due to the seeding, fertilizing, and adequate rainfall, the vegetative cover on the landfill has increased significantly since the last landfill inspection. The vegetation averaged a height of approximately 1 foot. Four small bare spots (about 10 foot by 10 foot areas) on the northern portion of the landfill were observed. However, the size of the bare spots appears to be decreasing as the vegetative growth is beginning to cover the landfill. Overall, it is estimated that 99 percent of the landfill is covered with vegetation, and the density of the cover has increased significantly since the last inspection.
- No erosion channels were observed during the inspection, and the areas repaired in January 2001 remain in place and appear to have corrected the previous erosion problems.
- 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. The standing water in the culvert may be a result of vegetative growth located in the culvert.
- TtNUS saw no visible evidence of burrowing animals.
- No shrubs, small trees, and large weeds have grown on the landfill since removal actions in January 2002. However, as observed and reported by NAS Jacksonville, TtNUS confirmed that numerous small trees and shrubs are located in the east and west side drainage channels.

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SOUTHNAVFACENGCOM
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- 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 July 10, 2002 inspection, the following corrective actions are recommended:

- Mow at the end of August or early September to reduce the height of the vegetation.
- Remove small trees and shrubs growing in the drainage channels and culvert. The vegetation can easily be removed with a chain saw and weed-eater.

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

Sincerely,



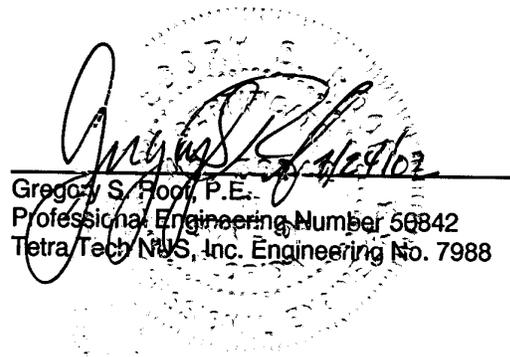
Mark Peterson, P.G.
Task Order Manager

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 0251

The professional opinions rendered in this document identified as Inspection Summary and Recommendations First 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. Hood, P.E.
Professional Engineering Number 56842
Tetra Tech NUS, Inc. Engineering No. 7988

OU 1 LANDFILL INSPECTION CHECKLIST

Date: 7/10/02
 Time: 1505
 Inspector: JOE Ferranti & Alan Pate

Weather Conditions: Sunny 90°
 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 and perimeter road are in good condition.
Signs in place 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)

Grass cover has increased dramatically, very few bare spots, may require mowing
no eroded areas observed, repairs conducted in Jan 02, remain in-place
no settlement problems observed
No standing water present on top of land-fill. Some standing water in culvert.
no evidence of burrowing animals
Small shrubs and trees in drainage channels in eastern and western channel

Perimeter Features

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

Culvert in good condition, although growth of cat-tails may be causing standing water
monitoring wells in good condition
Note: caution tape tied around well MW-12.

Additional Comments: _____

Required Action: Cut down shrubs & pine trees in drainage ditches.
cut down growth in culvert. Possibly mow.

By Whom? Tetra Tech or US

Inspector's Signature: _____

Joe Ferranti