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NAS CECIL FIELD, FL
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REMEDIAL ACTION PLAN ADDENDUM LETTER REPORT FOR JET ENGINE TEST CELL AND OIL-WATER SEPARATOR 334-OW NAS CECIL FIELD FL

1/20/2003

TETRA TECH NUS INC

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TtNUS/TPA-03-002/4248-6.4

January 20, 2003

Project Number N4248

Mr. David Grabka
Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 0248

Subject: Remedial Action Plan Addendum
Jet Engine Test Cell and Oil-Water Separator 334-OW
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Remedial Action Plan (RAP) Addendum for the subject site. This report has been prepared for the U.S. Navy Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) under Contract Task Order (CTO) 0248, for the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D-0888.

A Remedial Action Plan (RAP) was submitted for the subject site on September 27, 2002. A technical review letter was issued by the FDEP on November 8, 2002. The FDEP review letter provided comments and requested clarification of some of the information provided in the RAP. Each of the comments is addressed below.

Comment

No soil vapor extraction (SVE) is specified in the design. Department policy requires SVE with AS. AS alone, however, has been approved on a limited case-by-case basis where SVE is not feasible because of physical constraints such as shallow groundwater or land use factors. Prior to Department approval of these limited projects, however, conservative air emissions screening is required to demonstrate that the 13.7 pound per day Hazardous Air Pollutant threshold is not expected to be exceeded and local receptors will not be exposed to hazardous vapor emissions including migration to confined spaces. These projects also require ambient air monitoring during operations to confirm the air emissions screening results.

It is not obvious from the RAP that shallow groundwater or land-use constraints make SVE infeasible. Additionally, the subject design document provides no proposed air emissions monitoring. The subject document therefore can not be approved at this time without additional clarifying information. I suggest the Navy review air emissions monitoring that had been proposed for OU 9, Site 36 and Site 37 as an example.

Response

A detailed characterization of potential air sparging vapors was conducted using operational data from nearby Site 3 and Site 16 at NAS Cecil Field. The Site 3 and Site 16 data were used to model the predicted range of remedial emissions to assess if extraction and treatment of the vapors was necessary. The results of the evaluation are presented in the table below. Additional details are provided in Appendix B of the original RAP.

NAS Cecil Field Jet Engine Test Cell and Oil-Water Separator 334-OW Contaminant Reduction Goals	Single Contaminant Emission in lb./day[1, 2]
Reduction of benzene from a maximum concentration of 14 µg/L to remedial cleanup goal of 1.0 µg/L	0.0007
Reduction of ethylbenzene from a maximum concentration of 76 µg/L to remedial cleanup goal of 30.0 µg/L	0.0038
Reduction of toluene from a maximum concentration of 86 µg/L to remedial cleanup goal of 40.0 µg/L	0.002
Reduction of total xylenes from a maximum concentration of 296 µg/L to remedial cleanup goal of 20.0 µg/L	0.0069
Reduction of naphthalene from a maximum concentration of 378 µg/L to remedial cleanup goal of 20.0 µg/L	0.011
Reduction of 1-methylnaphthalene from a maximum concentration of 172 µg/L to remedial cleanup goal of 20.0 µg/L	0.0068
Reduction of 2-methylnaphthalene from a maximum concentration of 181 µg/L to remedial cleanup goal of 20.0 µg/L	0.0066
Reduction of total petroleum hydrocarbons from a maximum concentration of 24,100 µg/L to remedial cleanup goal of 5,000 µg/L	1.4
TOTAL EMISSIONS AT STARTUP IN LB./DAY[1, 2]	**1.44**

1 Emission Rates are approximate due to the nature of the model and site conditions
2 Maximum Emission was developed using Site 16 operational data (AS/VE)

Based on the calculated emission rates for the proposed system, total emissions will not exceed FDEP requirements (emission of a single contaminant is not greater than 5.5 lbs per day and total emissions are not greater than 13.7 lbs per day). Therefore, no vapor extraction component is proposed for the remediation system at this site. However, in accordance with Rule 62-770.700(5), air emissions sampling will be conducted during system start up to verify that air emissions do not exceed the allowable discharge rate of 13.7 lbs. per day.

Air emissions concentrations will be monitored by collecting air samples from select well vaults and utility vaults located within the plume area. To collect each sample, the vault lid will be cracked to allow the insertion of a sampling tube. The sample will then be pumped into a Tedlar bag using a low flow air sampling pump. The samples will be shipped via overnight delivery to a certified laboratory for analysis by EPA Method 18. The concentrations reported by the laboratory will be used to calculate the total air emissions.

If you have any questions regarding the information presented in this document, please contact me by phone at (813) 806-0202, or via e-mail at calliganp@ttnus.com.

Sincerely,

Paul E. Calligan, P.G.
Task Order Manager

/pc

Attachments

c: Wayne Hansel, SOUTHDIV
Debbie Wroblewski (Cover Letter Only)
Mark Perry/File (Unbound)

The professional opinions rendered in this decision document identified as Remedial Action Plan Addendum for Jet Engine Test Cell Site, Naval Air Station Cecil Field, Jacksonville, Florida were developed in accordance with commonly accepted procedures consistent with applicable standards of practice. Decision documents were prepared under the supervision of the signing engineer and are based on information obtained from others. 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.

Steven Brashers
01-16-2002

Steven L. Brashers, P.E.
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