

N60200.AR.003532
NAS CECIL FIELD, FL
5090.3a

"REMEDIAL ACTION PLAN ADDENDUM LETTER REPORT FOR BUILDING 271 TANKS 271
UL, R, SUL AND D NAS CECIL FIELD FL"

1/20/2003

TETRA TECH NUS INC



TETRA TECH NUS, INC.

1401 Oven Park Drive, Suite 201 • Tallahassee, FL 32308
Tel 850.385.9899 • Fax 850.385.9860 • www.tetrattech.com

TtNUS/TPA-03-001/4248-6.4

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
Building 271, Tanks 271 UL/R/SUL/D
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 12, 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 Building 271 Tanks UL/R/SUL/D Contaminant Reduction Goals	Single Contaminant Emission in lb./day^(1, 2)
Reduction of benzene from a maximum concentration of 89 µg/L to remedial cleanup goal of 1.0 µg/L	0.0075
Reduction of ethylbenzene from a maximum concentration of 1,600 µg/L to remedial cleanup goal of 30.0 µg/L	0.21
Reduction of toluene from a maximum concentration of 2,900 µg/L to remedial cleanup goal of 40.0 µg/L	0.25
Reduction of total xylenes from a maximum concentration of 3,300 µg/L to remedial cleanup goal of 20.0 µg/L	0.014
Reduction of naphthalene from a maximum concentration of 230 µg/L to remedial cleanup goal of 20.0 µg/L	0.0027
Reduction of 1-methylnaphthalene from a maximum concentration of 35 µg/L to remedial cleanup goal of 20.0 µg/L	0.0038
Reduction of 2-methylnaphthalene from a maximum concentration of 55 µg/L to remedial cleanup goal of 20.0 µg/L	0.0063
TOTAL EMISSIONS AT STARTUP IN LB./DAY^(1, 2)	0.72

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.

Comment

Groundwater flow direction is reported towards the southeast, and there is no monitoring well up-gradient of former Tank 271-UL bounding the contaminated groundwater plume. The design engineers should therefore consider extending the area of treatment northwest of AS-01.

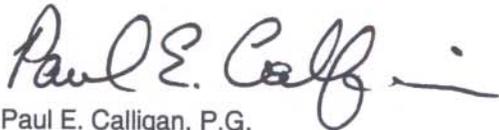
Mr. David Grabka
Florida Department of Environmental Protection
January 20, 2003 - Page 3 of 3

Response

The layout of the Air Sparging system has been revised to extend the area of treatment northwest of AS-01. The revised layout is provided on the attached figure.

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,

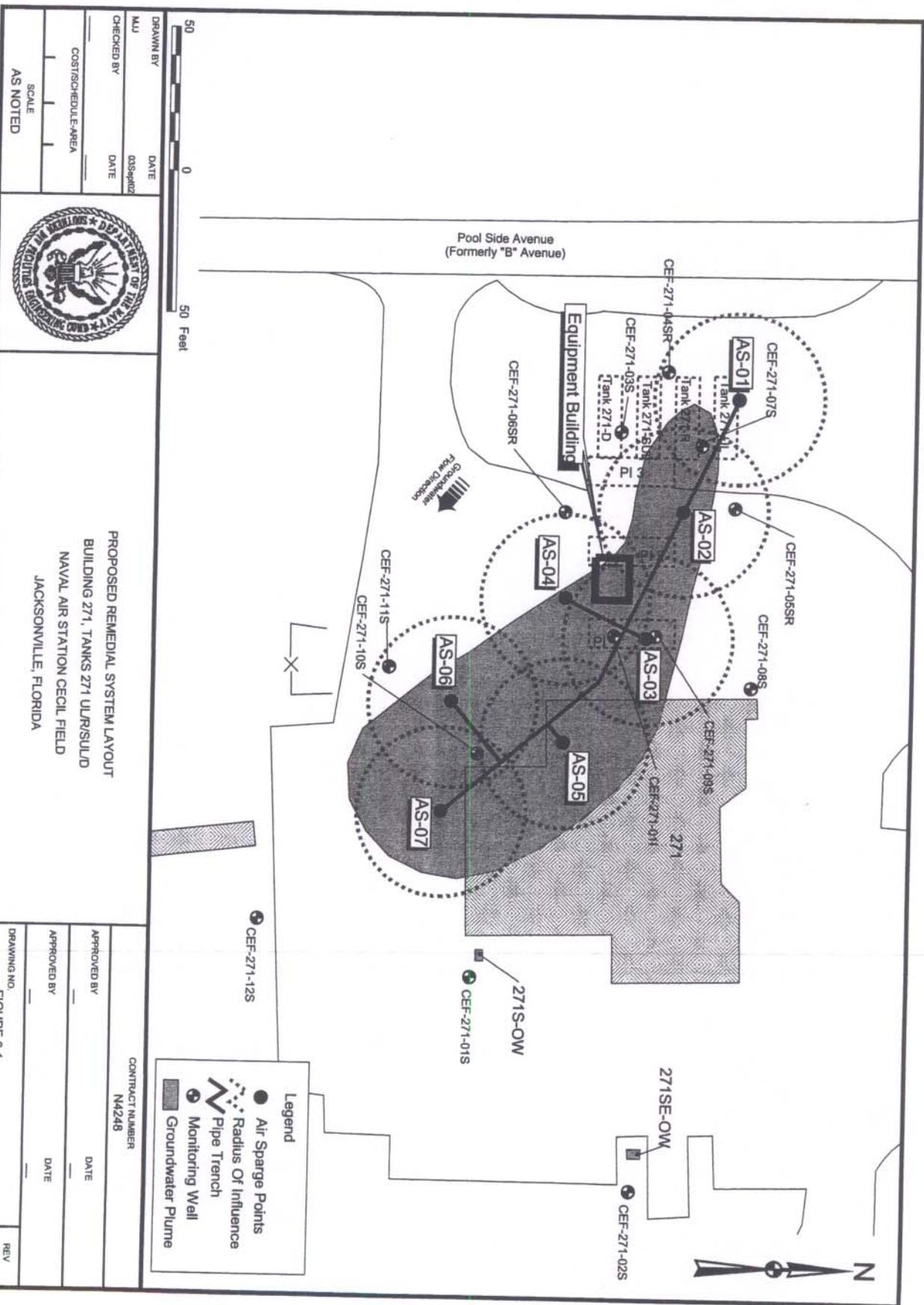
A handwritten signature in black ink that reads "Paul E. Calligan" followed by a horizontal flourish.

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

/pc

Attachments

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



Pool Side Avenue
(Formerly "B" Avenue)

Equipment Building

Tank 271-A
Tank 271-B
Tank 271-C
Tank 271-D

271SE-OW

271S-OW

DRAWN BY	DATE
MLJ	03Sept02
CHECKED BY	DATE
COST/SCHEDULE AREA	
SCALE	
AS NOTED	



PROPOSED REMEDIAL SYSTEM LAYOUT
BUILDING 271, TANKS 271 ULR/SULD
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Legend	
●	Air Sparge Points
○	Radius Of Influence
—	Pipe Trench
+	Monitoring Well
■	Groundwater Plume

CONTRACT NUMBER	
NA248	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	REV
FIGURE 6-1	0



The professional opinions rendered in this decision document identified as Remedial Action Plan Addendum for Building 271, Tanks 271 UL/R/SUL/D, 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
01-16-2003

Steven L. Brashers, P.E.
Professional Engineering Number FL 47151
Tetra Tech NUS, Inc. Engineering Number 7988