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NAS PENSACOLA
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RESPONSE TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION COMMENTS ON THE DRAFT SITE ASSESSMENT REPORT ADDENDUM FOR UNDERGROUND STORAGE TANK SITE 2 WITH TRANSMITTAL LETTER NAS PENSACOLA FL

09/20/2010

TETRA TECH INC

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TETRA TECH

Document No. TtNUS/TAL-11-072-1522

September 20, 2010

Project Number 112G01522

Florida Dept of Environmental Protection
Division of Waste Management
Attn: David Grabka, P.G.
Remedial Project Manager
Bob Martinez Center, MS 4535
2600 Blairstone Road
Tallahassee, FL 32399-2400

Reference: CLEAN Contract No. N62467-04-D-0055
Contract Task Order No. 0119

Subject: Response to Florida Department of Environmental Regulation Comments on the Draft Site Assessment Report Addendum for Underground Storage Tank Site 2 at the Naval Air Station Pensacola, Pensacola, Florida

Dear Mr. Grabka:

On behalf of Naval Facilities Engineering Command Southeast (NAVFAC SE), Tetra Tech NUS, Inc. is pleased to submit for your review the Response to Florida Department of Environmental Protection (FDEP) Comments on the Draft Site Assessment Report Addendum for Underground Storage Tank (UST) Site 2 at the Naval Air Station (NAS) Pensacola, Pensacola, Florida.

Please contact me and Patty Marajh-Whittemore if you have any questions concerning these responses. Once the response to comments is approved, the Navy will implement the additional fieldwork indicated and initiate the changes to the document indicated.

If you have any questions, please call me at (850) 385-9866 ext 1362.

Sincerely yours,

Gerald Walker

Gerald Walker, P.G.
Project Manager

Attachment (1 paper)

GAW/gaw
c: Patty Marajh-Whittemore, NAVFAC SE
Greg Campbell, NASP PWC
Debra Humbert, Tetra Tech
CTO 0119 Project File

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NAVAL AIR STATION PENSACOLA

PENSACOLA, FLORIDA

SITE ASSESSMENT REPORT ADDENDUM FOR

UNDERGROUND STORAGE TANK SITE 02 - BUILDING 2662

RESPONSE TO FDEP COMMENTS DATED JUNE 27, 2011

Comment 1: Appendix A contains a greatly appended version of the April 1994 Contamination Assessment Report (CAR). In Table 5-3, OVA readings are presented for 95 soil borings. Table 5-4 through 5-6 present soil laboratory analytical data for three soil boring samples, one duplicate sample, and a sample from a trench. Between this data and data collected by Bechtel during soil excavation, thermal treatment of the soil, and post-treatment soil analysis, the Department hopes that a figure or figures showing the area that was excavated and where samples were collected and OVA and analytical data tables can be compiled that conclusively show that soil contamination at the site has been adequately remediated and meets the current regulatory requirements for RMO I for soils. If sufficient data has not been collected to show this, or if there is an indication that contaminated soil still exists on the site, the Department expects the Navy to address it in accordance with the current Petroleum Cleanup Rule, Chapter 62-770, Florida Administrative Code.

Response: Comment acknowledged; Appendix A will be updated to include full versions of historical reports that support current statements made in the text of the 2010 Draft Site Assessment Report Addendum (SARA). In addition, figures illustrating historical activities including area of excavation, soil sample locations, field screening and laboratory analytical results will be compiled. Tables presenting this historical data will also be included. This data will demonstrate conclusively whether the site meets the current regulatory requirements for Risk Management Option (RMO) I for soils.

Comment 2: Between the April 1994 CAR and the December 1996 Second CAR Addendum, contaminants detected in groundwater above their current groundwater cleanup target levels included benzene, naphthalene, 1-methylnaphthalene, 2-methylnaphthaene, TRPH and lead. TRPH concentrations reported in the December 1996 Second CAR Addendum would indicate that the detections above GCTLs in the April 1994 CAR were no longer of concern. The lead concentrations reported in the December 2010 SAR Addendum would indicate that lead is no longer of concern. Analysis of the other contaminants has not been done lately because the last time they were analyzed, they were detected at concentrations less than the cleanup numbers in effect at the time they were reported. Because the site was not closed earlier when the aforementioned cleanup number were in effect, the current cleanup numbers are required to be met. Please identify a list of monitoring wells to be sampled for analysis for volatiles and semi-volatiles per Chapter 62-770, F.A.C.

Response: Comment acknowledged; TRPH and lead in groundwater are no longer a concern at the site. However, based on the 1994 data, laboratory analysis needs to be conducted for benzene, naphthalene, 1-methylnaphthalene, 2-methylnaphthaene to determine if they meet the current cleanup criteria required per Chapter 62-770, F.A.C. In addition to monitoring wells MW-4 and MW-41, it should be noted that groundwater samples from five other monitoring wells

sampled during 1994 including MW-19, MW-22, MW-29, MW-34, and MW-35 contained naphthalene and/or 1-methylnaphthalene or 2- methylnaphthalene at concentrations that exceed current criteria (Please refer to the Attachments, Table A-2). However, monitoring wells MW-19, MW-22, MW-29, MW-34, and MW-35 were transferred and investigated under Site 36, Building 3380, Bilge Wastewater Line. Also, it should also be noted that monitoring wells MW-4, MW-19, MW-22, MW-29, MW-34, MW-35 and MW-41 have been abandoned. Therefore, existing monitoring well MW-14/2662MW07 near MW-4 and MW-41 will be sampled (Please refer to the Attachments, Figures 2-1 and 2-2). The results of this additional investigation will be included in the Draft Final SARA. Table 1 provides the proposed monitoring wells to be sampled and the analytes required to address Comment 2.

Table 1
Monitoring Wells to be Sampled

Site 2 Building 2662
NAS Pensacola
Pensacola, Florida

Analyte	1994/1996 Criteria	Current Criteria	Last Detected Concentration	Monitoring Well	Monitoring Well To Be Sampled
Benzene	50 ppb	1 µg/L	4 ppb (1996)	MW-15(2662MW06)	MW-15/2662MW06
Naphthalene	100 ppb (total naphthalenes)	14 µg/L	19 ppb (1994)	MW-4	MW-14/2662MW07
			19 ppb (1994)	MW-41	
1-Methylnaphthalene	100 ppb (total naphthalenes)	28 µg/L	30 ppb (1994)	MW-4	MW-14/2662MW07
2- Methylnaphthalene	100 ppb (total naphthalenes)	28 µg/L	36 ppb (1994)	MW-4	MW-14/2662MW07

ppb = part per billion
µg/L = microgram per liter or part per billion

Comment 3: The very high pH values depicted in Table 2-2 need to be explained or otherwise addressed through remediation. Currently, the best hypothesis is that grout was introduced into several wells at the time of installation and/or development. Please investigate to determine whether the surficial aquifer has been impacted so that it is highly alkaline.

Response: Comment acknowledged; the Draft Final SARA will include additional field investigation activities to evaluate and address the high pH levels previously measured in groundwater samples to determine the most likely cause, which is hypothesized to be invasion of grout into the screen zone of the monitoring wells. Eight of the 15 monitoring wells sampled were reported to have higher than expected pH values including: monitoring wells 2662MW01 through 2662MW07 and monitoring well 2662MW09. The Navy proposes the hand installation of a temporary well point adjacent to each of the monitoring wells reported with the elevated pH.

The monitoring well and adjacent well point would be purged and sampled concurrently and measured for pH using field test kits. The results for the adjacent samples points would be compared and evaluated in the Draft Final SARA.

Comment 4: I have the following editorial changes to be made to the Draft SARA:

a) On page 1-5, second bullet, first sentence, please change fluorine to fluorene.
b) On page 1-5, second paragraph after the bullets, please change Bechetel to Bechtel.
c) On page 3-1, Section 3.1, first paragraph, the Florida MCL for lead is defined as a treatability standard under Chapter 62-550, F.A.C. Please correct this to state the Florida MCL for lead is a human health standard.
d) On page 4-1, Section 4.1, last paragraph, same comment as c) above.

Response:

a) Comment acknowledged; fluorine changed to fluorene.
b) Comment acknowledged; Bechetel changed to Bechtel
c) Comment acknowledged; the Florida MCL for lead has been corrected to state it is a human health standard.
d) Comment acknowledged; the Florida MCL for lead has been corrected to state it is a human health standard.

Comment 5: Please note that the well numbers do not correlate between the December 2010 SARA (figure 2-1) and the December 1996 CARA (figure 3-5).

SARA	CARA
2662MW01	MW-2
2662MW02	MW-3
2662MW03	MW-4
2662MW04	MW-5
2662MW05	MW-6
2662MW06	MW-15
2662MW07	MW-14
2662MW08	MW-13
2662MW09	MW-11
2662MW10	MW-10
2662MW11	MW-8
2662MW12	MW-7
2662MW13	MW-12
2662MW14	MW-9
2662MW15	MW-16

Response: Comment acknowledged; monitoring well identifiers on figures and tables in the Draft Final SARA will reflect the nomenclature used in 1996.

ATTACHMENT

Table A-2
Summary of Groundwater Sample Analytical Results, Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number									
		MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10
Naphthalene	4/92	<10	<10	<10	<11	<10	<10	<11	<10	<10	<10
	8/92	<10	<10	<11	26	<10	<10	<10	<10	14	<10
	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
	2/94	NS	<5	<5	19	<5	<5	5.9	<5	7.6	<5
1-Methylnaphthalene	4/92	<10	<10	25	7J	<10	<10	<11	<10	<10	<10
	8/92	<10	<10	11	29	<10	<10	<10	<10	10	<10
	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
	2/94	NS	<5	5.5	30	<5	<5	<5	15	23	<5
2-Methylnaphthalene	4/92	<10	<10	9J	<11	<10	<10	<11	<10	<10	<10
	8/92	<10	<10	9	26	<10	<10	<10	<10	7J	<10
	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
	2/94	NS	<5	5.3	36	<5	<5	<5	16	24	<5
Total naphthalenes[1]	4/92	<30	<30	34JN	7JN	<30	<30	<30	<30	<30	<30
State Target	8/92	<30	<30	20N	81	<30	<30	<30	<30	31	<30
Level[2]:	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<30
100 ppb	2/94	NS	<15	10.8N	85	<15	<15	5.9N	31N	54.6	<15
Acenaphthene	4/92	<10	<10	<10	<11	<10	<10	<11	<11	<10	<10
Guidance	8/92	<10	<10	<11	<10	<10	<10	<10	<10	<10	<10
Concentration[2]:	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
20 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5
Fluorene	4/92	<10	<10	<10	<11	<10	<10	<11	<11	<10	<10
Guidance	8/92	<10	<10	<11	<10	<10	<10	<10	<10	<10	<10
Concentration:	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
10 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5
Phenanthrene	4/92	<10	<10	<10	<11	<10	<10	<11	<11	<10	<10
Guidance	8/92	<10	<10	<11	<10	<10	<10	<10	<10	<10	<10
Concentration:	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
10 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results, Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number									
		MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10
Bis(2-ethylhexyl) phthalate	4/92	<10	19	<10	<11	<10	<10	<11	<11	<10	<10
Guidance	8/92	<10	<10	<11	82	<10	<10	<10	<10	<10	<10
Concentration:	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
14 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5
Diethyl phthalate	4/92	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Guidance	8/92	<10	<10	<11	<10	<10	<10	<10	<10	<10	10
Concentration:	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
5600 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5
TRPH	4/92	<1	<1	12	1	<1	<1	1	3	7	<1
State Target	8/92	<1	<1	3	97	<1	<1	<1	3	5	<1
Level:	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<1
5 ppm	2/94	NS	<1	1.9	40.8	<1	<1	<1	1.2	1.5	<1
Lead	4/92	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
State Target	8/92	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Level:	1/93	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5
50 ppb	2/94	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results, Semivolatile Compounds, Total Recoverable Petroleum Compounds, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number								
		MW-11	MW-12	MW-13	MW-14D	MW-15	MW-17	MW-18	MW-19	MW-20
Naphthalene	4/92	<10	<10	<10	<10	<10	<10	<10	11	<10
	8/92	<10	9J	<10	<10	<10	<10	<10	27	<10
	1/93	NS	NS	<10	NS	NS	NS	NS	15	NS
	2/94	<5	<5	<5	<5	<5	NS	<5	21	6
1-Methylnaphthalene	4/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
	1/93	NS	NS	<10	NS	NS	NS	NS	<10	NS
	2/94	<5	<5	<5	<5	<5	NS	<5	<5	<5
2-Methylnaphthalene	4/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
	1/93	NS	NS	<10	NS	NS	NS	NS	<10	NS
	2/94	<5	<5	<5	<5	<5	NS	<5	<5	<5
Total naphthalenes[1]	4/92	<30	<30	<30	<30	<30	<30	<30	11N	<30
State Target	8/92	<30	9N	<30	<30	<30	<30	<30	27N	<30
Level[2]:	1/93	NS	NS	<30	NS	NS	NS	NS	15N	NS
100 ppb	2/94	<15	<15	<15	<15	<15	NS	<15	21N	6N
Acenaphthene	4/92	<10	<10	<10	<10	<10	<10	<10	<10	11
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Concentration[3]:	1/93	NS	NS	<10	NS	NS	NS	NS	<10	NS
20 ppb	2/94	<5	<5	<5	<5	<5	NS	<5	<5	5.8
Fluorene	4/92	<10	<10	<10	<10	<10	<10	<10	<10	15
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Concentration:	1/93	NS	NS	<10	NS	NS	NS	NS	<10	NS
10 ppb	2/94	<5	<5	<5	<5	<5	NS	<5	<5	5.6
Phenanthrene	4/92	<10	<10	<10	<10	<10	<10	<10	<10	8J
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Concentration:	1/93	NS	NS	<10	NS	NS	NS	NS	<10	NS
10 ppb	2/94	<5	<5	<5	<5	<5	NS	<5	<5	<5

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results,
Semivolatile Compounds, Total Recoverable Petroleum Compounds, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number								
		MW-11	MW-12	MW-13	MW-14D	MW-15	MW-17	MW-18	MW-19	MW-20
Bis(2-ethylhexyl) phthalate	4/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	11
Concentration:	1/93	NS	NS	<10	NS	NS	NS	NS	<10	NS
14 ppb	2/94	<5	<5	<5	<5	<5	NS	<5	<5	<5
Diethyl phthalate	4/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Concentration:	1/93	NS	NS	<10	NS	NS	NS	NS	<10	NS
5600 ppb	2/94	<5	<5	<5	<5	<5	NS	<5	<5	<5
TRPH	4/92	2	<1	<1	<1	<1	<1	<1	<1	2
State Target	8/92	2	3	<1	<1	<1	<1	<1	<1	2
Level:	1/93	NS	NS	<1	NS	NS	NS	NS	<1	NS
5 ppm	2/94	<1	<1	<1	<1	<1	NS	<1	<1	<1
Lead	4/92	10	21	<5	<5	<5	<5	<5	<5	<5
State Target	8/92	<5	<5	<5	<5	<5	<5	<5	<5	<5
Level:	1/93	NS	NS	<5	NS	NS	NS	NS	<5	NS
50 ppb	2/94	NA	NA	NA	NA	NA	NS	NA	NA	NA

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results, Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number								
		MW-21	MW-22	MW-23	MW-24	MW-25D	MW-26	MW-27	MW-28	MW-29
Naphthalene	4/92	<10	<10	<10	NI	NI	NI	NI	NI	NI
	8/92	<10	<10	<10	<10	<10	<10	<10	<10	140
	1/93	<5	87	<5	NS	NS	<5	<5	8	NS
	2/94	NS	21	<5	<5	<5	<5	<5	<5	110
1-Methylnaphthalene	4/92	<10	<10	<10	NI	NI	NI	NI	NI	NI
	8/92	<10	<10	<10	<10	<10	<10	<10	<10	6J
	1/93	<5	8	<5	NS	NS	<5	<5	<5	NS
	2/94	NS	5.5	<5	<5	<5	<5	<5	<5	5.4
2-Methylnaphthalene	4/92	<10	<10	<10	NI	NI	NI	NI	NI	NI
	8/92	<10	<10	<10	<10	<10	<10	<10	<10	6J
	1/93	<5	7	<5	NS	NS	<5	<5	<5	NS
	2/94	NS	5.9	<5	<5	<5	<5	<5	<5	6.6
Total naphthalenes[1]	4/92	<30	<30	<30	NI	NI	NI	NI	NI	NI
State Target	8/92	<30	<30	<30	<30	<30	<30	<30	<30	152J
Level[2]:	1/93	<30	102	<30	NS	NS	<30	<30	8N	NS
100 ppb	2/94	NS	32.4	<15	<15	<15	<15	<15	<15	131
Acenaphthene	4/92	<10	<10	<10	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Concentration[2]:	1/93	<10	<10	<10	NS	NS	<10	<10	<10	NS
20 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5
Fluorene	4/92	<10	<10	<10	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Concentration:	1/93	<10	<10	<10	NS	NS	<10	<10	<10	NS
10 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5
Phenanthrene	4/92	<10	<10	<10	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Concentration:	1/93	<10	<10	<10	NS	NS	<10	<10	<10	NS
10 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results,
Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number								
		MW-21	MW-22	MW-23	MW-24	MW-25D	MW-26	MW-27	MW-28	MW-29
Bis(2-ethylhexyl) phthalate	4/92	<10	<10	<10	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	23
Concentration:	1/93	<10	<10	<10	NS	NS	<10	<10	<10	NS
14 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5
Diethyl phthalate	4/92	<10	<10	<10	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	<10	<10	<10	<10	<10	<10	<10
Concentration:	1/93	<10	<10	<10	NS	NS	<10	<10	<10	NS
5600 ppb	2/94	NS	<5	<5	<5	<5	<5	<5	<5	<5
TRPH	4/92	<1	8	<1	NI	NI	NI	NI	NI	NI
State Target	8/92	<1	<1	<1	<1	<1	<1	<1	<1	2
Level:	1/93	<1	<1	<1	<1	<1	<1	<1	<1	NS
5 ppm	2/94	NS	<1	<1	<1	<1	<1	<1	<1	2.5
Lead	4/92	<5	110	71	NI	NI	NI	NI	NI	NI
State Target	8/92	<5	<5	<5	<5	<5	<5	<5	<5	9
Level:	1/93	<5	<5	<5	<5	<5	<5	<5	<5	NS
50 ppb	2/94	NS	NA	NA	NA	NA	NA	NA	NA	NA

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results, Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number								
		MW-30	MW-31	MW-32	MW-33	MW-33A	MW-34	MW-35	MW-36	MW-37
Naphthalene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	8/92	<10	<10	NI	NI	NI	NI	NI	NI	NI
	1/93	NS	NS	NS	NS	NS	81	NS	NS	<5
	2/94	<5	12	<5	<5	<5	19	130	<5	<5
1-Methylnaphthalene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	8/92	<10	<10	NI	NI	NI	NI	NI	NI	NI
	1/93	NS	NS	NS	NS	NS	23	NS	NS	<5
	2/94	<5	<5	<5	<5	<5	<5	22	<5	<5
2-Methylnaphthalene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	8/92	<10	<10	NI	NI	NI	NI	NI	NI	NI
	1/93	NS	NS	NS	NS	NS	19	NS	NS	<5
	2/94	<5	<5	<5	<5	<5	<5	33	<5	<5
Total naphthalenes[1]	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
State Target	8/92	<30	<30	NI	NI	NI	NI	NI	NI	NI
Level[2]:	1/93	NS	NS	NS	NS	NS	123	NS	NS	<15
100 ppb	2/94	<15	12N	<15	<15	<15	19N	185	<15	<15
Acenaphthene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	NI	NI	NI	NI	NI	NI	NI
Concentration[3]:	1/93	NS	NS	NS	NS	NS	<5	NS	NS	<5
20 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5
Fluorene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	NI	NI	NI	NI	NI	NI	NI
Concentration:	1/93	NS	NS	NS	NS	NS	<5	NS	NS	<5
10 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5
Phenanthrene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	NI	NI	NI	NI	NI	NI	NI
Concentration:	1/93	NS	NS	NS	NS	NS	<5	NS	NS	<5
10 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results,
Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number								
		MW-30	MW-31	MW-32	MW-33	MW-33A	MW-34	MW-35	MW-36	MW-37
Bis(2-ethylhexyl) phthalate	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	NI	NI	NI	NI	NI	NI	NI
Concentration:	1/93	NS	NS	NS	NS	NS	<5	NS	NS	<5
14 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5
Diethyl phthalate	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	<10	<10	NI	NI	NI	NI	NI	NI	NI
Concentration:	1/93	NS	NS	NS	NS	NS	<5	NS	NS	<5
5600 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5
TRPH	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
State Target	8/92	<1	<1	NI	NI	NI	NI	NI	NI	NI
Level:	1/93	NS	NS	NS	NS	NS	2	NS	NS	<1
5 ppm	2/94	<1	<1	<1	<1	1.6	2.5	1.6	<1	<1
Lead	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
State Target	8/92	<5	8	NI	NI	NI	NI	NI	NI	NI
Level:	1/93	NS	NS	NS	NS	NS	<5	NS	NS	<5
50 ppb	2/94	NA	NA	NA	NA	NA	NA	NA	NA	NA

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results,
Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number								
		MW-38	MW-39	MW-40	MW-41	MW-42	MW-43	MW-44	MW-45	MW-46
Naphthalene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	1/93	NS	23	<5	NS	NS	NS	NS	NS	NS
	2/94	<5	<5	<5	19	<5	<5	9.3	<5	<5
1-Methylnaphthalene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	1/93	NS	28	<5	NS	NS	NS	NS	NS	NS
	2/94	<5	<5	<5	8.1	<5	<5	8.5	<5	<5
2-Methylnaphthalene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
	1/93	NS	22	<5	NS	NS	NS	NS	NS	NS
	2/94	<5	<5	<5	7.6	<5	<5	6.7	<5	<5
Total naphthalenes[1]	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
State Target	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Level[2]:	1/93	NS	73	<15	NS	NS	NS	NS	NS	NS
100 ppb	2/94	<15	<15	<15	24.7	<15	<15	24.5	<15	<15
Acenaphthene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Concentration[3]:	1/93	NS	<5	<5	NS	NS	NS	NS	NS	NS
20 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5
Fluorene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Concentration:	1/93	NS	<5	<5	NS	NS	NS	NS	NS	NS
10 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5
Phenanthrene	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Concentration:	1/93	NS	<5	<5	NS	NS	NS	NS	NS	NS
10 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results,
Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number								
		MW-38	MW-39	MW-40	MW-41	MW-42	MW-43	MW-44	MW-45	MW-46
Bis(2-ethylhexyl) phthalate	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Concentration:	1/93	NS	<5	<5	NS	NS	NS	NS	NS	NS
14 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5
Diethyl phthalate	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Concentration:	1/93	NS	<5	<5	NS	NS	NS	NS	NS	NS
5600 ppb	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5
TRPH	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
State Target	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Level:	1/93	NS	1	<1	NS	NS	NS	NS	NS	NS
5 ppm	2/94	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead	4/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
State Target	8/92	NI	NI	NI	NI	NI	NI	NI	NI	NI
Level:	1/93	NS	<5	<5	NS	NS	NS	NS	NS	NS
50 ppb	2/94									

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results,
Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number					
		MW-47	MW-48	MW-49	MW-50	MW-51	MW-52D
Naphthalene	4/92	NI	NI	NI	NI	NI	NI
	8/92	NI	NI	NI	NI	NI	NI
	1/93	<5	<5	<5	<5	<5	NI
	2/94	<5	<5	<5	<5	<5	<5
1-methylnaphthalene	4/92	NI	NI	NI	NI	NI	NI
	8/92	NI	NI	NI	NI	NI	NI
	1/93	<5	<5	<5	<5	<5	NI
	2/94	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	4/92	NI	NI	NI	NI	NI	NI
	8/92	NI	NI	NI	NI	NI	NI
	1/93	<5	<5	<5	<5	<5	NI
	2/94	<5	<5	<5	<5	<5	<5
Total naphthalenes[1]	4/92	NI	NI	NI	NI	NI	NI
State Target	8/92	NI	NI	NI	NI	NI	NI
Level[2]:	1/93	<15	<15	<15	<15	<15	NI
100 ppb	2/94	<15	<15	<15	<15	<15	<15
Acenaphthene	4/92	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI
Concentration[2]:	1/93	<5	<5	<5	<5	<5	NI
20 ppb	2/94	<5	<5	<5	<5	<5	<5
Fluorene	4/92	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI
Concentration:	1/93	<5	<5	<5	<5	<5	NI
10 ppb	2/94	<5	<5	<5	<5	<5	<5
Phenanthrene	4/92	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI
Concentration:	1/93	<5	<5	<5	<5	<5	NI
10 ppb	2/94	<5	<5	<5	<5	<5	<5

See notes at end of table.

Table A-2 (Continued)
Summary of Groundwater Sample Analytical Results,
Semivolatile Compounds, Total Recoverable Petroleum Hydrocarbons, and Lead

Contamination Assessment Report
Site 2662W, Naval Aviation Depot
Pensacola, Florida

Contaminant	Date	Monitoring Well Number					
		MW-47	MW-48	MW-49	MW-50	MW-51	MW-52D
Bis(2-ethylhexyl)phthalate	4/92	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI
Concentration:	1/93	<5	<5	<5	<5	<5	NI
14 ppb	2/94	<5	<5	<5	<5	<5	<5
Diethyl phthalate	4/92	NI	NI	NI	NI	NI	NI
Guidance	8/92	NI	NI	NI	NI	NI	NI
Concentration:	1/93	<5	<5	<5	<5	<5	NI
5600 ppb	2/94	<5	<5	<5	<5	<5	<5
TRPH	4/92	NI	NI	NI	NI	NI	NI
State Target	8/92	NI	NI	NI	NI	NI	NI
Level:	1/93	<1	<1	<1	2	<1	NI
5 ppm	2/94	<1	<1	<1	<1	<1	<1
Lead	4/92	NI	NI	NI	NI	NI	NI
State Target	8/92	NI	NI	NI	NI	NI	NI
Level:	1/93	<5	<5	<5	5	<5	NI
50 ppb	2/94	NA	NA	NA	NA	NA	<5

See notes at end of table.

ance Concentration, or king Water Standard	Date	Monitoring Well Number										
		TW-1	TW-2	TW-3	TW-4	TW-5	TW-6	TW-7	TW-8	TW-9	TW-10	TW-11
	2/94	<5	24	<5	<5	8.5	83	<5	<5	<5	<5	<5
	2/94	<5	<5	<5	<5	<5	5.1	<5	<5	<5	<5	<5
	2/94	<5	<5	<5	<5	<5	5	<5	<5	<5	<5	<5
[2]100	2/94	<15	24N	<15	<15	8.5N	93.1	<15	<15	<15	<15	<15
[3]20	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
[3]10	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
[3]10	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
[3]14	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
[2]5600	2/94	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
[2]5	2/94	3	<1	<1	<1	12.5	<1	<1	2.2	<1	8.8 (2.3)	1.3

of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene concentrations.
artment of Environmental Protection (FDEP), Chapter 17-770, FLorida Administrative Code (FAC).
P, February 1989.
rd: FDEP, Chapter 17-550, FAC.

parts per billion (ppb), except TRPH concentrations, which are in parts per million (ppm).
s from temporary wells TW-12 through TW-15 were not analyzed for U.S. Environmental Protection Agency (USEPA) Method 610 parameters.
PH in temporary wells TW-12 through TW-15 were below the detection limit of 1 ppm.
rch 1994

ed below quantitation limit, estimated value.
be greater than the reported value.

ed in method blank associated with this sample.

ble petroleum hydrocarbons.

highlighted text shows monitoring wells with analytes at concentrations that would current regulatory standards. Monitoring wells MW-22, MW-29, MW-34, MW-35, V-19 were all transferred and investigated under Site 36, Building 3380, Bilge vater Line

Well
Well
Well
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MONITORING WELL LOCATIONS RELATIVE TO PREVIOUS SITE FEATURES
UST SITE 2
BUILDING 2662
SITE ASSESSMENT REPORT ADDENDUM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NUMBER	
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. FIGURE 2-2	REV 0

shows monitoring wells with detections that would exceed today's criteria. Monitoring wells
29, MW-34 and MW-35 were transferred and investigated under Site 36, Building 3380, Bilge
ow highlighted monitoring well identifiers indicates an existing well, and the ones with white text
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MONITORING WELL SITE MAP
UST SITE 2
BUILDING 2662
SITE ASSESSMENT REPORT ADDENDUM
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NUMBER	—
APPROVED BY —	DATE —
APPROVED BY —	DATE —
FIGURE NO. FIGURE 2-1	REV 0

Yellow highlighted monitoring wells identifiers indicates an existing well, and the ones with white text have been abandoned.