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NAS WHITING FIELD
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FINAL RECORD OF DECISION FOR SITE 5A NAS WHITING FIELD FL
9/16/2005
TETRA TECH NUS

Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-94-D-0888



Rev. 1
09/16/05

Record of Decision for Surface and Subsurface Soils at OU 5, Site 5A, Battery Acid Seepage Pit

**Naval Air Station Whiting Field
Milton, Florida**

USEPA ID No. FL2170023244

Contract Task Order 0079

September 2005



Southern Division

Naval Facilities Engineering Command

2155 Eagle Drive

North Charleston, South Carolina 29406

**RECORD OF DECISION
FOR
SURFACE AND SUBSURFACE SOILS AT
OU 5, SITE 5A, BATTERY ACID SEEPAGE PIT**

**NAVAL AIR STATION WHITING FIELD
MILTON, FLORIDA
USEPA ID No. FL2170023244**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

Submitted to:

**Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406**

Submitted by:

**Tetra Tech NUS, Inc.
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**CONTRACT NO. N62467-94-D-0888
CONTRACT TASK ORDER 0028**

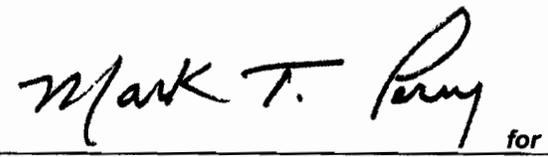
SEPTEMBER 2005

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CERTIFICATION OF TECHNICAL DATA CONFORMITY

The Contractor, Tetra Tech NUS, Inc., hereby certifies, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-94-D-0888 are complete, accurate, and comply with all requirements of this contract. The work and professional opinions rendered in this report were conducted or developed in accordance with commonly accepted procedures consistent with applicable standards of practice.

DATE: 30 September 2005

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ACRONYMS

bls	below land surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	constituent of concern
COPC	constituents of potential concern
ERA	ecological risk assessment
EE	Envirodyne Engineers, Inc.
EP-TOX	Extraction Procedure Toxicity
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDER	Florida Department of Environmental Regulation
FS	Feasibility Study
ft	foot/feet
G&M	Geraghty & Miller, Inc.
HHRA	human health risk assessment
HI	Hazard Index
IAS	Initial Assessment Study
ILCR	Incremental Lifetime Cancer Risk
IR	installation restoration
NAS	Naval Air Station
Navy	United States Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
PCB	polychlorinated biphenyl
PDWS	Primary Drinking Water Standard
RA	remedial action
RI	Remedial Investigation
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SCTL	Soil Cleanup Target Levels
SDWS	Secondary Drinking Water Standards
SERA	screening ecological risk assessment
TCE	Trichloroethene
TtNUS	Tetra Tech, NUS, Inc.
USEPA	United States Environmental Protection Agency

1.0 DECLARATION OF THE RECORD OF DECISION

1.1 SITE NAME AND LOCATION

Naval Air Station (NAS) Whiting Field is located approximately 5.5 miles north of the town of Milton, Florida in Santa Rosa County, about 25 miles northeast of Pensacola (Figure 1-1). OU 5, Site 5A, Battery Acid Seepage Pit, consists of Building 1478 and the surrounding land and is located north of the Midfield Maintenance Hangar, Building 1454, at NAS Whiting Field, Milton, Florida.

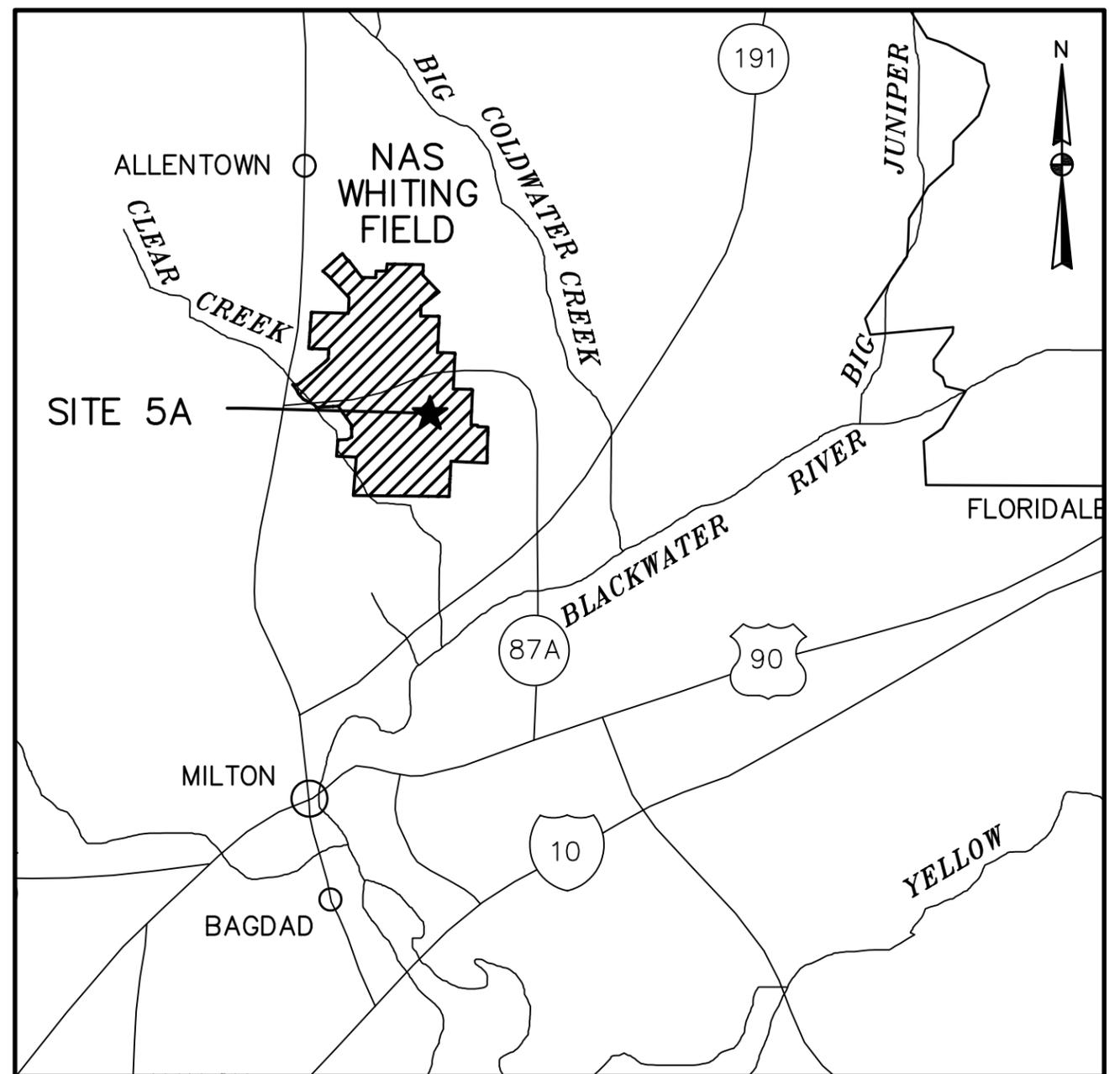
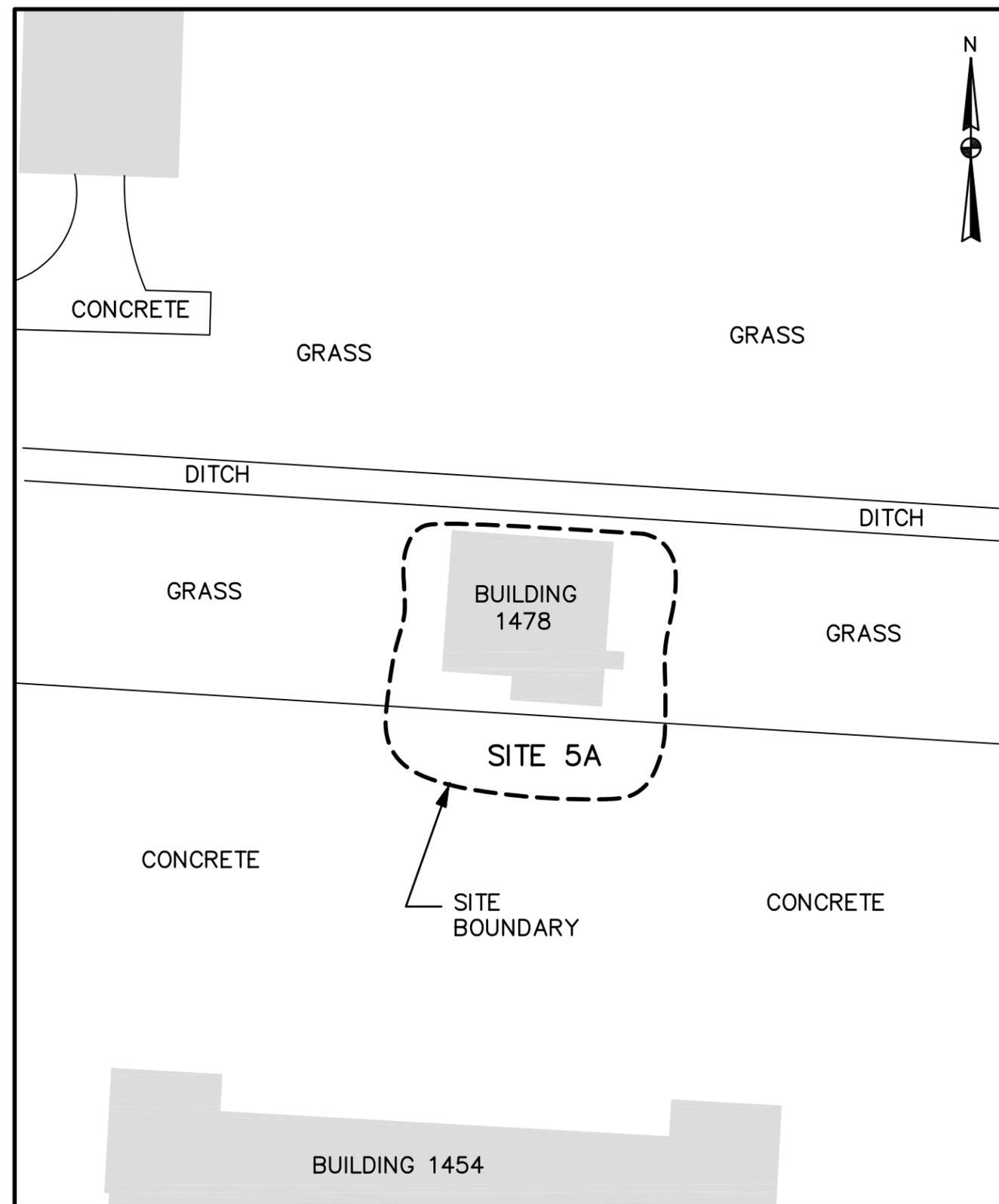
1.2 STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedy for Site 5A as No Action for surface and subsurface soils. As a result of the selected remedy, no action is required under a nonresidential / recreational land use scenario and unlimited exposure and unrestricted use of surface and subsurface soils will be allowed at Site 5A. Groundwater at NAS Whiting Field has been identified as a separate site (Site 40, Basewide Groundwater) and will be addressed in a future decision document. The selected action was chosen by the United States Navy (Navy) and the United States Environmental Protection Agency (USEPA) in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Information supporting the selection of this action is contained in the Administrative Record for this site. The NAS Whiting Field Information Repository, including the Administrative Record, is located at the West Florida Regional Library, Milton Branch, 805 Alabama Street, Milton, Florida 32570, (850) 623-5565.

The Florida Department of Environmental Protection (FDEP) concurs with the selected remedy.

1.3 ASSESSMENT OF THE SITE

The Remedial Investigation (RI) for Sites 05, 7, 29, 35, and 38 [Tetra Tech, NUS, Inc. (TtNUS), 2005a] identified three pesticides, one polychlorinated biphenyl (PCB), and 19 inorganic analytes in the surface soil at Site 5A on the northeast side of Building 1478. Three constituents of potential concern (COPCs) were identified in the RI, however, no constituents of concern (COCs) or human health risks were identified in the risk assessment for exposure to surface and subsurface soils at Site 5A. A summary of site risks is provided in Section 2.6 of this Record of Decision (ROD).



**FIGURE 1-1
SITE 5A LOCATION AND AREA MAP
RECORD OF DECISION
NAS WHITING FIELD, MILTON, FLORIDA**



The results of the ecological risk assessment (ERA) presented in the RI indicate potential ecological risks at the site are acceptable, and further ecological study is unwarranted because the site is heavily industrialized and severely limited in the quantity and quality of habitat. Site 5A is characterized by Building 1478, the grassy areas around it and the building parking lot on the south side of the building.

As a result of the moderate human activity and vehicle noise, terrestrial wildlife is deterred from using the site. Most importantly, the limited size and habitat of the site serves to restrict the amount of food available to upper trophic level organisms. A discussion of the potential ecological risk is presented in Section 2.6.2.

1.4 DESCRIPTION OF THE SELECTED REMEDY

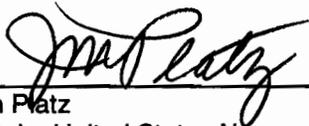
This ROD presents the final action for surface and subsurface soils at Site 5A and is based on results of the RI (TtNUS, 2005a), and the Feasibility Study (FS) (TtNUS, 2005b). The selected remedy for Site 5A is No Action for surface and subsurface soils and ensures protection of human health and the environment.

This ROD only addresses surface and subsurface soil at Site 5A. Consequently, this ROD does not address actual or potential groundwater contamination at the site. Groundwater at NAS Whiting Field has been identified as a separate site (Site 40, Basewide Groundwater) and will be addressed in a future decision document. Sediment and surface water are not present at Site 5A. Current soil conditions at Site 5A are protective of human health and the environment under an unrestricted land use scenario; therefore, no further CERCLA action for surface and subsurface soils is necessary.

1.5 STATUTORY DETERMINATIONS

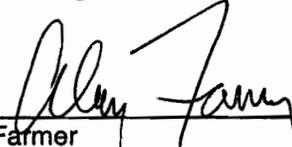
The No Action remedy selected for surface and subsurface soils at Site 5A is protective of human health and the environment, complies with federal and state requirements legally applicable or relevant and appropriate, and is cost effective. Consequently, no active treatment or monitoring will be conducted at Site 5A.

1.6 AUTHORIZING SIGNATURES



Joan Platz
Captain, United States Navy
Commanding Officer, NAS Whiting Field

22 Sep 2005
Date



Alan Farmer
Acting Director, Waste Management Division
USEPA, Region IV

9/27/05
Date

2.0 DECISION SUMMARY

2.1 SITE NAME, LOCATION, AND DESCRIPTION

OU 5, Site 5A, Battery Acid Seepage Pit, consists of Building 1478 and the surrounding land and is located north of the Midfield Maintenance Hangar, Building 1454, at NAS Whiting Field, Milton, Florida (Figure 2-1).

2.2 SITE HISTORY AND ENFORCEMENT ACTIVITIES

2.2.1 NAS Whiting Field History

NAS Whiting Field was placed on the National Priorities List (NPL) by the USEPA in June 1994. Following the listing of NAS Whiting Field on the NPL, remedial response activities have been conducted pursuant to CERCLA authority.

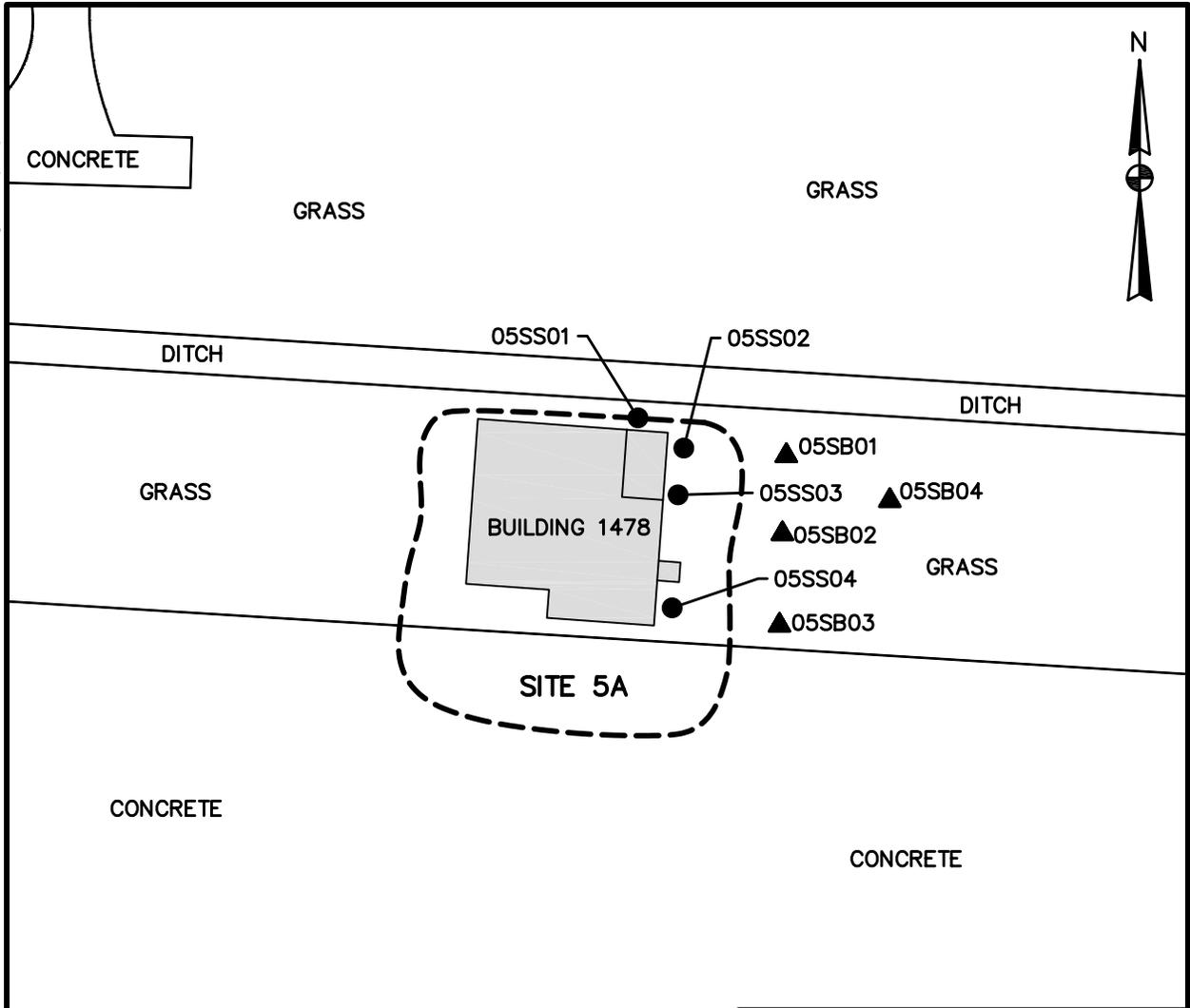
The first environmental studies for the investigations of waste handling and/or disposal sites at NAS Whiting Field were conducted during the Initial Assessment Study (IAS) (Envirodyne Engineers, Inc. (EE), 1985). The record search indicated throughout its years of operation, NAS Whiting Field generated a variety of wastes related to pilot training, operation and maintenance of aircraft and ground support equipment, and facility maintenance programs.

2.2.2 Site 5A History

The Battery Shop, Building 1478, was the site of battery waste acid and electrolyte solution disposal from 1967 until 1984. Waste solutions with sodium bicarbonate and tap water were poured down the drain of a sink in the building and discharged to a dry well west of the building. The dry well consisted of a section of 60-inch-diameter concrete culvert set vertically in the ground and filled with gravel. The sink drain was disconnected from the dry well in 1984 and connected to the sanitary sewer. An estimated 180 gallons of battery waste electrolyte solution was discharged to the dry well annually during the period of operation (EE, 1985).

As described in the RI Report for Sites 05, 7, 29, 35, and 38 (TtNUS, 2005a), on February 9, 1984, Florida Department of Environmental Regulation (FDER) (currently FDEP) conducted a hazardous waste compliance inspection at NAS Whiting Field. Shortly thereafter FDER issued a warning notice to the Navy stating the "battery electrolyte and/or wastes constituents and the disposal of hazardous waste constituted violations of Florida Administrative Code (F.A.C.) Chapters 17-4 and 17-30 and Chapter 403,

ACAD: 0052CM47.dwg 09/14/05 DM PIT



BUILDING 1454

LEGEND:

- ▲ 05SB01 SUBSURFACE SOIL BORING LOCATION
- 05SS01 SURFACE SOIL BORING LOCATION
- SITE 5A BOUNDARY

GRAPHIC SCALE IN FEET

DRAWN BY MF	DATE 2/22/05		SITE 5A SURFACE AND SUBSURFACE SOIL BORING LOCATION MAP RECORD OF DECISION NAS WHITING FIELD, MILTON, FLORIDA		CONTRACT NO. 0050
CHECKED BY	DATE				OWNER NO. 0000
REVISED BY	DATE				APPROVED BY DATE
SCALE AS NOTED					DRAWING NO. FIGURE 2-1

Florida Statutes.” [Geraghty & Miller, Inc. (G&M), 1986]. Based on a meeting attended by the Navy, FDER and G&M, G&M prepared a document for the Navy entitled “Proposed Monitoring Program for the Battery Shop”. The final version of the document was completed June 1985. Site 5, the Battery Acid Seepage Pit, was included in the IAS (EE, 1985).

In June 1985, G&M began the field investigative work at the Battery Shop. Four soil borings were advanced and subsurface soil samples were collected at 5 feet (ft) intervals. One soil boring was advanced to a depth of 85 ft below land surface (bls), the remaining soil boring were advanced to 20 ft bls. Subsurface soil samples were analyzed for pH, arsenic, mercury, selenium, cadmium, lead and Extraction Procedure Toxicity (EP Tox) tests for the previously mentioned metals (G&M, 1986).

Four monitoring wells were installed at the soil boring locations and completed with maximum depths ranging from 142 ft to 147 ft bls. On August 10, 1985, groundwater samples were collected from the monitoring wells and analyzed for Primary Drinking Water Standard (PDWS) contaminants, Secondary Drinking Water Standard (SDWS) contaminants, USEPA priority pollutants, and aluminum. The monitoring wells were resampled on November 1, 1985 and analyzed for USEPA priority pollutants. The analytical results for the groundwater samples indicated benzene was the only compound detected at concentrations exceeding the PDWS (G&M, 1986).

The conclusions of the detection and monitoring program were: the groundwater and soils in the vicinity of the battery shop had not been adversely impacted by metals or other contaminants associated with past discharges to the dry well. However, organic compounds, particularly benzene, detected at concentrations slightly above the PDWS in groundwater samples from two monitoring wells was of concern. The source of benzene in the groundwater was unknown. Trichloroethene (TCE) was detected at a concentration exceeding the PDWS in a groundwater sample from the facility supply well W-S2. Periodic groundwater sampling for a period of one year was recommended (G&M, 1986). The sampling operation would be coordinated with the Navy’s Installation Restoration (IR) Program.

In 1987, the initial investigation of Site 5 was completed and subsequently, FDER recommended, in a letter (dated April 15, 1987) to the Navy, that Site 5 be closed.

During an April 1999 meeting between the Navy, USEPA, and FDEP, a document review was requested to determine if the previous investigation at Site 5 had included sampling for PCBs. This request was based on the previous use of Building 1478 as the Old Transformer Repair Building. The document review revealed analysis for PCBs had not been conducted on the on-site soils; therefore, the site was reopened as Site 5A and was further investigated for potential pesticide/PCB contamination.

Three pesticides, one PCB, and 19 inorganic analytes were detected in the surface soil on the northeast side of Building 1478 as presented in Section 2.5. The individual inorganic constituents, aluminum, iron, and vanadium, detected at the site have no direct evidence of site-related use at Site 5A and the process and procedures at this site did not likely contribute to the presence of these inorganics in surface soil. Additionally, the site-specific values for these inorganics are within the range of levels found at NAS Whiting Field and of naturally occurring levels throughout the southeastern United States. Considering the information presented above, aluminum, iron, and vanadium were dropped from consideration as COPCs for Site 5A surface soils. Table 2-1 summarizes the Site 5A investigative history.

NAS Whiting Field presently consists of two airfields (North and South Fields) and serves as a naval aviation training facility providing support facilities for flight and academic training. The current land use at Site 5A is industrial and no change is anticipated in the future land use.

2.3 HIGHLIGHTS OF COMMUNITY PARTICIPATION

The RI Report (TtNUS, 2005a), FS (TtNUS, 2005b), and Proposed Plan (TtNUS, 2005c) for Site 5A were made available to the public for review in August 2005. These documents, and other IR program information, are contained within the Administrative Record in the Information Repository at the West Florida Regional Library, Milton, Florida.

The notice of availability of all site-related documents was published in the Santa Rosa Press Gazette and Pensacola News Journal on 30 July and 31 July 2005, respectively, and targeted the communities closest to NAS Whiting Field. The availability notice presented information on the RI, and FS at Site 5A and invited community members to submit written comments on the Proposed Plan.

A public comment period was held from 01 August through 29 August 2005, to solicit comments on the Proposed Plan. The comment period included an opportunity for the public to request a public meeting; however, a public meeting was not held because one was not requested. The site-related documents were placed in the Information Repository and made available for the public to review. Comments received during the public comment period are presented in the Responsiveness Summary in Appendix A.

TABLE 2-1
INVESTIGATIVE HISTORY
RECORD OF DECISION
SITE 5A, BATTERY ACID SEEPAGE PIT
NAVAL AIR STATION WHITING FIELD
MILTON, FLORIDA

Date	Investigation Title	Activities	Findings
1985	<i>Initial Assessment Study, NAS Whiting Field, Milton, Florida (Envirodyne Engineers, Inc., 1985)</i>	<ul style="list-style-type: none"> • Review of historical records and aerial photographs • Field inspections and personal interviews 	<ul style="list-style-type: none"> • From the 1967 until 1984, waste solutions with sodium bicarbonate and tap water were poured down the sink drain and discharged to a dry well west of the building. • Preparation of "Proposed Monitoring program for the Battery Shop".
1986	<i>Verification Study, Assessment of Potential Groundwater Pollution at NAS Whiting Field, Florida (Geraghty & Miller, Inc., 1986)</i>	<ul style="list-style-type: none"> • Collection and analysis of 4 subsurface soil samples • Installation of 4 monitoring wells and groundwater sampling 	<ul style="list-style-type: none"> • No soil exceedances • Groundwater detections of benzene above standards
1999 - 2000	<i>Remedial Investigation Report for Surface and Subsurface Soil, Sites 05, 07, 29, 35, and 38, NAS Whiting Field, Milton, Florida (TtNUS, 2005a)</i>	<ul style="list-style-type: none"> • Installation of four soil borings • Collection and analysis of surface soil samples • HHRA • ERA 	<ul style="list-style-type: none"> • The HHRA determined the carcinogenic risk from exposure to surface soil was below USEPA's target risk range FDEP's benchmark for current and future receptors at Site 05. • The non-cancer HI associated with ingestion and direct contact of soil under current and hypothetical future land-uses are below USEPA's and FDEP's target of 1.0. • The ERA does not predict unacceptable risks to plants or animals from chemicals present in surface soil at Site 05.
2005	<i>Feasibility Study for Surface and Subsurface Soil at Site 05 NAS Whiting Field, Milton, Florida (TtNUS, 2005b).</i>	<ul style="list-style-type: none"> • Evaluated remedial alternatives for site cleanup of COCs. 	<ul style="list-style-type: none"> • No surface soil or subsurface COCs identified.
2005	<i>Proposed Plan, Site 05, Battery Acid Seepage Pit, NAS Whiting Field, Milton, Florida, (TtNUS, 2005c)</i>	<ul style="list-style-type: none"> • Established public comment period from August 01 through August 29, 2005. 	<ul style="list-style-type: none"> • Proposed remedy: No Action for Site 05 surface and subsurface soils. • No comments received.

Notes:

- bls = below land surface
- HHRA = human health risk assessment
- ERA = ecological risk Assessment
- HI = hazard index
- COC = constituent of concern
- FDEP = Florida Department of Environmental Protection
- TtNUS = Tetra Tech, NUS, Inc.
- USEPA = United States Environmental Protection Agency

2.4 SCOPE AND ROLE OF REMEDIAL ACTION SELECTED FOR SITE 5A

This ROD addresses surface and subsurface soil contamination and presents the final response action as No Action for Site 5A. The groundwater at NAS Whiting Field has been designated as a separate site (Site 40, Basewide Groundwater) and is not addressed in this ROD.

2.5 SITE CHARACTERISTICS

Site 5A, Battery Acid Seepage Pit, consists of Building 1478 and the surrounding land and is located north of the Midfield Maintenance Hangar, Building 1454, at NAS Whiting Field, Milton, Florida

2.5.1 Nature and Extent of Contamination

As part of the RI conducted for Site 5A, data were collected to determine the nature and extent of releases of site-derived contaminants in surface and subsurface soil, to identify potential pathways of migration in surface and subsurface soil, and to evaluate risks to human and ecological receptors.

The Proposed Plan recommended No Action for surface and subsurface soils at Site 5A. This ROD documents the selected remedial action (RA) for Site 5A as No Action for surface and subsurface soils. The groundwater at NAS Whiting Field has been designated as a separate site (Site 40, Basewide Groundwater) and is not addressed in this ROD.

2.5.1.1 Surface Soil

Surface soil sampling was conducted at Site 5A to determine the nature and extent of contamination at the site and to assess whether or not surface soil could potentially serve as an exposure pathway to human or ecological receptors. Constituents detected in surface soil at Site 5A on the northeast side of Building 1478 included three pesticides, one PCB, and 19 inorganic analytes. Three COPCs (Aroclor-1260, Dieldrin, and Chromium) were identified in the RI and no human health risks were identified for exposure to surface and subsurface soils at Site 5A.

A complete list of all constituents sampled and their detected concentrations in surface soil is available in the RI report (TtNUS, 2005a).

2.5.1.2 Subsurface Soil

The subsurface soil below the 0-1 ft bls at Site 5A was not analyzed by a laboratory. Subsurface soil borings were advanced and soil samples were collected from 1-2 ft bls and visually inspected for discoloration (indicating possible pesticide/PCB contamination). No discoloration was observed. And because the surface soil did not indicate the presence of pesticides/PCBs above FDEP SCTLs, it is not likely pesticides/PCBs exist in the subsurface soil at Site 5A above FDEP Soil Cleanup Target Levels (SCTLs) (FDEP, 2005).

2.5.2 Ecological Habitat

Site 5A is severely limited in the quantity and quality of habitat for ecological receptors because it is heavily industrialized, characterized by concrete surfaces, mowed turfgrass, and moderate human activity. Most importantly, the limited size and habitat of the site serves to restrict the amount of food available to upper trophic level organisms.

2.5.3 Migration Pathways

No COCs were identified for exposure to surface and subsurface soils at Site 5A; therefore, the leaching of constituents from the soil to groundwater, is not a concern.

2.5.4 Current and Potential Future Site Land Use

The current land use at Site 5A is industrial and this is not expected to change in the near future. Potential future residential land use will be allowed under the selected remedy.

2.6 SUMMARY OF SITE RISKS

A risk assessment was completed for Site 5A to predict whether the site would pose current or future threats to human health or the environment. Both a human health risk assessment (HHRA) and an ERA were performed for Site 5A. These risk assessments evaluated the constituents detected in site soil during the RI and the COPCs.

The HHRA and the ERA provide the basis for selecting the remedial alternative for Site 5A. This section of the ROD summarizes the results of the HHRA and the ERA.

2.6.1 HHRA

An HHRA was conducted at Site 5A to characterize the risks associated with potential exposures to site-related contaminants for human receptors. The HHRA is provided in Chapter 2.0 of the *Remedial*

Investigation Report for Surface and Subsurface Soil, Sites 05, 07, 29, 35, and 38, Naval Air Station Whiting Field, Milton, Florida (TtNUS, 2005a). Three COPCs (Aroclor-1260, Dieldrin, and Chromium) were evaluated and no human health risks (carcinogenic or non-carcinogenic) were identified for surface or subsurface soils at Site 5A. Table 2-2 provides a qualitative risk evaluation of the COPCs.

2.6.1.1 Risk Characterization

For the risk characterization at Site 5A, three potential risk receptors were evaluated. These receptors are:

- A site occupational worker. The site occupational worker was assumed to be on site in a commercial/industrial scenario.
- A trespasser or visitor. These individuals may occasionally enter the site with or without proper authorization. Both an adult and an older child were considered.
- An on-site resident. The on-site resident is considered highly unlikely; however, this pathway was considered for purposes of completeness and conservatism.

Potential risks were calculated using the methodology presented in Section 1.4.3. of the *Remedial Investigation Report for Surface and Subsurface Soil, Sites 05, 07, 29, 35, and 38, Naval Air Station Whiting Field, Milton, Florida (TtNUS, 2005a)*.

Surface Soil – Carcinogenic Risks

The Incremental Lifetime Cancer Risk (ILCR) calculated for the hypothetical future resident and the typical occupational worker (based on Florida SCTLs) are 5.2E-07 and 1.5E-07, respectively. These risk estimates are below the USEPA target risk range and the State of Florida benchmark of 1E-06. The ILCRs for aroclor-1260, dieldrin, and chromium do not exceed 1E-06 for either receptor. Given the ILCR is at the lower end of the target risk range and considering the FDEP benchmark of 1E-06 is not exceeded.

Surface Soil – Noncarcinogenic Risks

The total Hazard Index (HI) does not exceed unity (HI = 0.10) when the typical future worker or hypothetical future resident is evaluated. HI calculated on a target organ specific basis for both receptors does not exceed 1 either.

Also, as discussed in the RI Report (TtNUS, 2005a), although concentrations of aluminum, arsenic, iron, and vanadium in surface soil exceed respective screening criteria, these inorganics are not known to be associated with past practices or processes at any NAS Whiting Field sites. Surface soils associated with NAS Whiting Field landfills are composed of natural soil covers and do not reflect subsurface landfill

**TABLE 2-2
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF CONCERN
SITE 5A - SURFACE SOIL
NAVAL AIR STATION WHITING FIELD, MILTON, FLORIDA**

CAS Number	COPC	Maximum Concentration	Detection Frequency	Concentration Used For Screening ⁽¹⁾	Background Value ⁽²⁾	Region IX PRG ⁽³⁾	Residential HQ Value	Is Constituent a COC?	Rationale/Comments ⁽⁴⁾
Pesticides (mg/kg)									
11096-82-5	Aroclor-1260	0.0799	2/4	0.0799	NA	0.037 - C	NA	No	BCR
60-57-1	Dieldrin	0.0179	2/4	0.0179	NA	0.005 - C	0.01	No	BCR
Metals (mg/kg)									
7429-90-5	Aluminum	31600	4/4	31600	15848	7600 - N	NA	No	AS
7440-38-2	Arsenic	4.2	2/4	4.2	3.2	0.065 - C	NA	No	AS
7440-47-3	Chromium	21.5	2/4	21.5	11	5 - C	0.09	No	BCR
7439-89-6	Iron	17400	4/4	17400	8832	2300 - N	NA	No	AS
7440-62-2	Vanadium	44.9	4/4	44.9	21.8	55 - N	NA	No	AS

⁽¹⁾ Maximum concentration used as screening value

⁽²⁾ The background screening value is twice the average of background concentrations for inorganic analytes.

⁽³⁾ Based on Superfund Preliminary Remediation Goals, USEPA Region IX, Residential land use (Cancer benchmark value = 1E-06, Hazard Quotient = 0.1) (May 2000)

⁽⁴⁾ Rationale Codes

BCR: Below cancer risk regulatory level (i.e. the total HI is < 1.0)

AS: Aluminum, arsenic, iron, and vanadium are not known to be associated with past practices or processes at Site 5A and the concentrations in soil are considered to be naturally occurring

Definitions:
 NA = Not Applicable
 COPC = Constituent of Potential Concern
 COC = Constituent of Concern
 N = noncarcinogen
 C = carcinogen

contents. Therefore, these inorganics were not retained as COPCs for direct contact exposures to surface soil at the Site 5A.

As discussed in Section 2.5.1.2, no subsurface soil samples were collected at Site 5; therefore, risk estimates were only calculated for exposures to surface soil.

2.6.1.2 Uncertainty Analysis

General uncertainties associated with the risk estimation process and site-specific uncertainties are discussed or referenced in the RI.

2.6.2 ERA

A screening ecological risk assessment (SERA) was performed for Site 5A. Several organic and inorganic compounds were detected in surface soil at concentrations exceeding conservative screening levels and, therefore, were selected as COPCs. These COPCs were assessed in a less conservative Step 3A evaluation.

The results of the Step 3A analysis indicate the chemicals detected in the surface soil at Site 5A do not pose unacceptable risks to ecological receptors and were not evaluated further.

2.6.3 Risk Summary

No unacceptable human health risks have been identified for Site 5A surface and subsurface soils, based on a residential land use scenario and risks to ecological receptors are acceptable.

2.7 DOCUMENTATION OF SIGNIFICANT CHANGES

No significant changes have occurred at Site 5A since the public comment period for the Proposed Plan.

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APPENDIX A

**COMMUNITY RELATIONS
RESPONSIVENESS SUMMARY**

**Responsiveness Summary
Site 5A, Battery Acid Seepage Pit
Naval Air Station Whiting Field
Milton, Florida**

A public comment period on the Site 5A Proposed Plan was held from 01 August 2005 through 29 August 2005. No public comments were received, and because a public meeting was not requested one was not held.