N60508.AR.002528
NAS WHITING FIELD
5090.3a

TRANSMITTAL LETTER AND SAMPLING DATA FOR THE ANALYSIS OF SOIL FOR ARSENIC AT OUTLYING LANDING FIELDS NAS WHITING FIELD FL
4/9/2001
NAS WHITING FIELD

DEPARTMENT OF THE NAVY
COMMANDING OFFICER
NAS WHITING FIELD
7550 USS ESSEX STREET SUITE 200
MILTON, FLORIDA 32570-6155

IN REPLY REFER TO
5090
Ser 18/0185
03 Apr 01

Mr. Jim Cason
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399

Subject: ANALYSIS OF SOIL FOR ARSENIC AT OUTLYING LANDING FIELDS

Dear Mr. Cason:

The enclosed sampling data is forwarded to aid in the evaluation of arsenic soil concentrations at Naval Air Station Whiting Field.

This information represents sampling reports from eight sites located on Navy owned property scattered throughout Santa Rosa County, Florida. These samples were analyzed for arsenic in soil using method 6010 and were analyzed by Serven/Trent Laboratory (STL), Pensacola, Florida. STL Pensacola has a Florida COMPQAP Number 980156-1.

When considered with the absence of historical evidence of an arsenic release and the report prepared by Dr. Richard L. DeGrandchamp [Geochemical Analysis of Background Conditions Naval Air Station Whiting Field (March 11, 2001)]; this evidence suggests the arsenic concentrations observed in the soils aboard Naval Air Station Whiting Field did not result from site-related activities by the Navy.

Thank you for your continuing cooperation in resolving this issue. My point of contact is Mr. James Holland at (850) 623-7268.

Sincerely,

P. J. ODENTHAL
Lieutenant Commander
Civil Engineer Corps, U. S. Navy
Public Works Officer
By direction of the Commanding Officer

ARSENIC 2.doc
4-10-01

Enclosure: Analysis of Soil for Arsenic at Navy Outlying Landing Fields

CERTIFICATION
FOR NAS WHITING FIELD
ANALYSIS OF SOIL FOR ARSENIC AT OUTLYING LANDING FIELDS (OLFS)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

4/2/01

PAUL J. ØDENTHAL
LCDR, CEC,USN
Public Works Officer

Date

NAVAL AIR STATION WHITING FIELD

ANALYSIS OF SOIL FOR ARSENIC AT NAVY OUTLYING LANDING FIELDS (NOLFs)

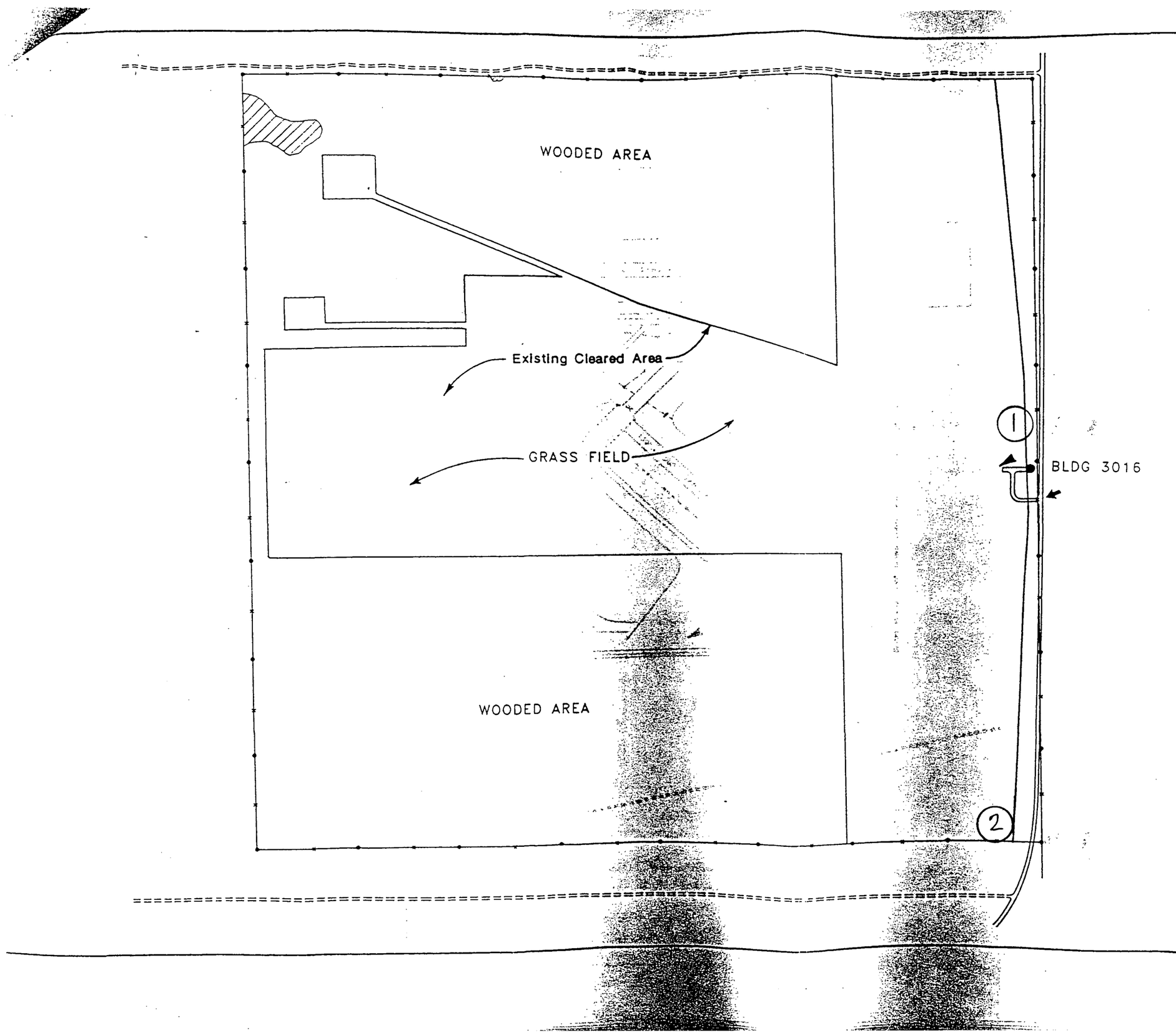
Soil samples were taken at four NOLFs in Santa Rosa County, Florida. The fields chosen for sampling were:

Pace Field - located 10 miles west (from NASWF)
Spencer Field - located 9 miles southwest
Santa Rosa Field - located 8 miles southeast
Harold Field - located 8 miles east

All four NOLFs are used for helicopter operations. No industrial activities have been conducted that would be expected to result in the release of arsenic. Pesticide use during farming operations at Pace Field may have occurred. Two sampling sites were selected at each field and two soil samples were collected at each site. The first sample was taken six inches bls. The second sample was taken at a depth of six feet bls. The sampling sites at each NOLF are shown on attachment "A" and a map of the sample location is given in attachment "B". The soil samples were collected by Ms. Elaine Sessions, Environmental Manager for Tumpane Services Corporation. Analysis of the samples was performed by Severn/Trent Laboratory, 3355 McLemore Drive, Pensacola, Florida. Analysis of the soil samples found arsenic present in all 16 samples ranging from 0.802 mg/kg to 12 mg/kg. Results of the analysis are provided in attachment "C".

SOIL SAMPLING SITES

ATTACHMENT "A"



OLF HAROLD
EXISTING CONDITIONS

LEGEND

- PAVED ROAD & AIRFIELD PAVEMENT
- IMPROVED OR UNIMPROVED ROAD
- BUILDING
- AIRFIELD PROPERTY BOUNDARY
- FENCE
- CRASH FIRE RESCUE STRUCTURE
- WINDSOCK
- WETLAND AREAS

FIELD EL. 150' MSL

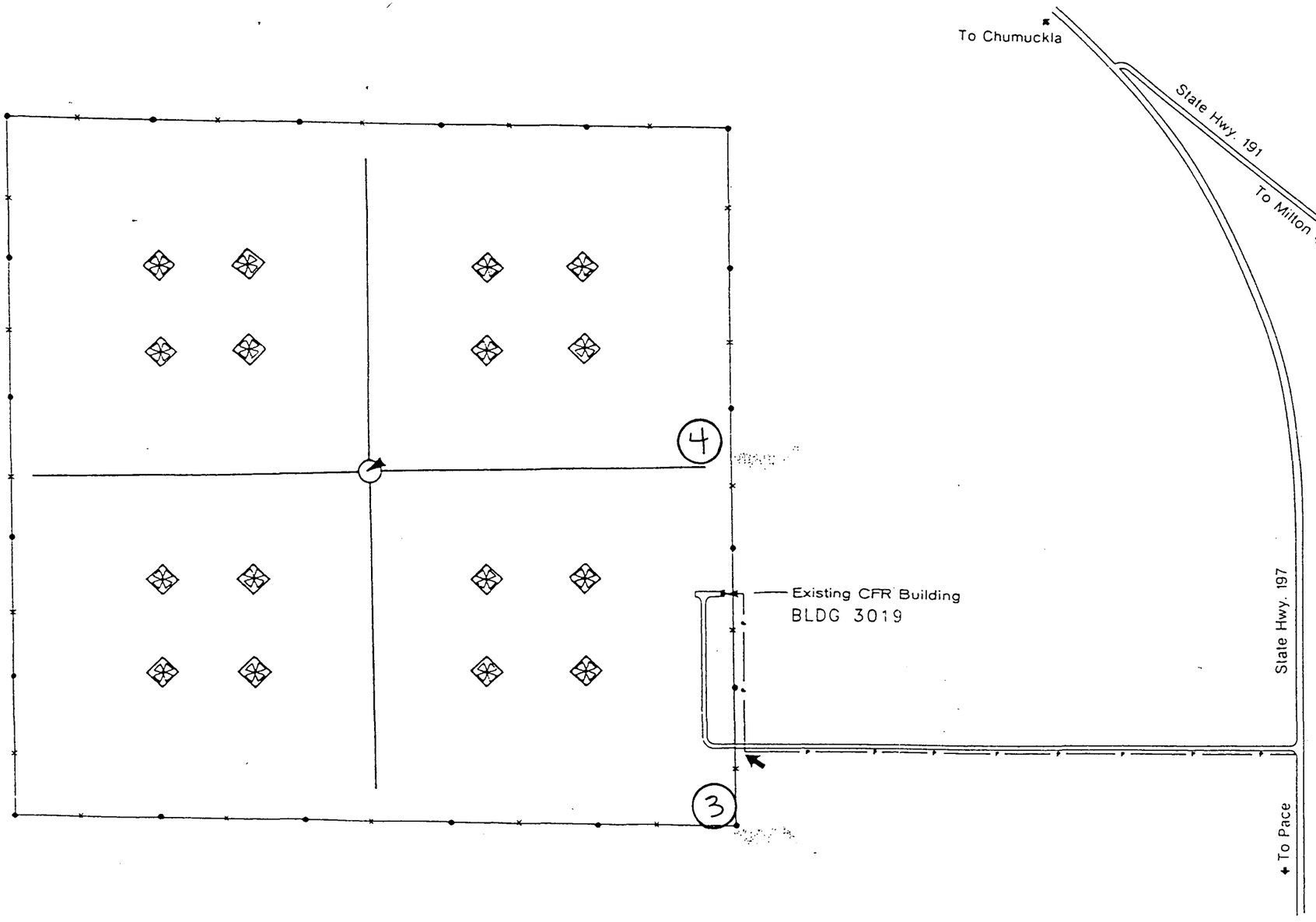
SOURCE: SOUTHNAVFACENGCOM

0 500 1000 FEET
0 100 200 300 400 METERS

FIGURE IV-5 REVISED 1/28/94

NAS WHITING FIELD
MILTON, FLORIDA

MASTER PLAN



OLF PACE
EXISTING CONDITIONS

LEGEND

- PAVED ROAD & AIRFIELD PAVEMENT
- IMPROVED OR UNIMPROVED ROAD
- BUILDING
- AIRFIELD PROPERTY BOUNDARY
- FENCE
- P — POWER TRANSMISSION LINE
- T — TELEPHONE LINE
- HELICOPTER LANDING AREA
- WINDSOCK
- CFR CRASH FIRE RESCUE

FIELD EL. 180'MSL

SOURCE: SOUTHNAVFACENGCOM

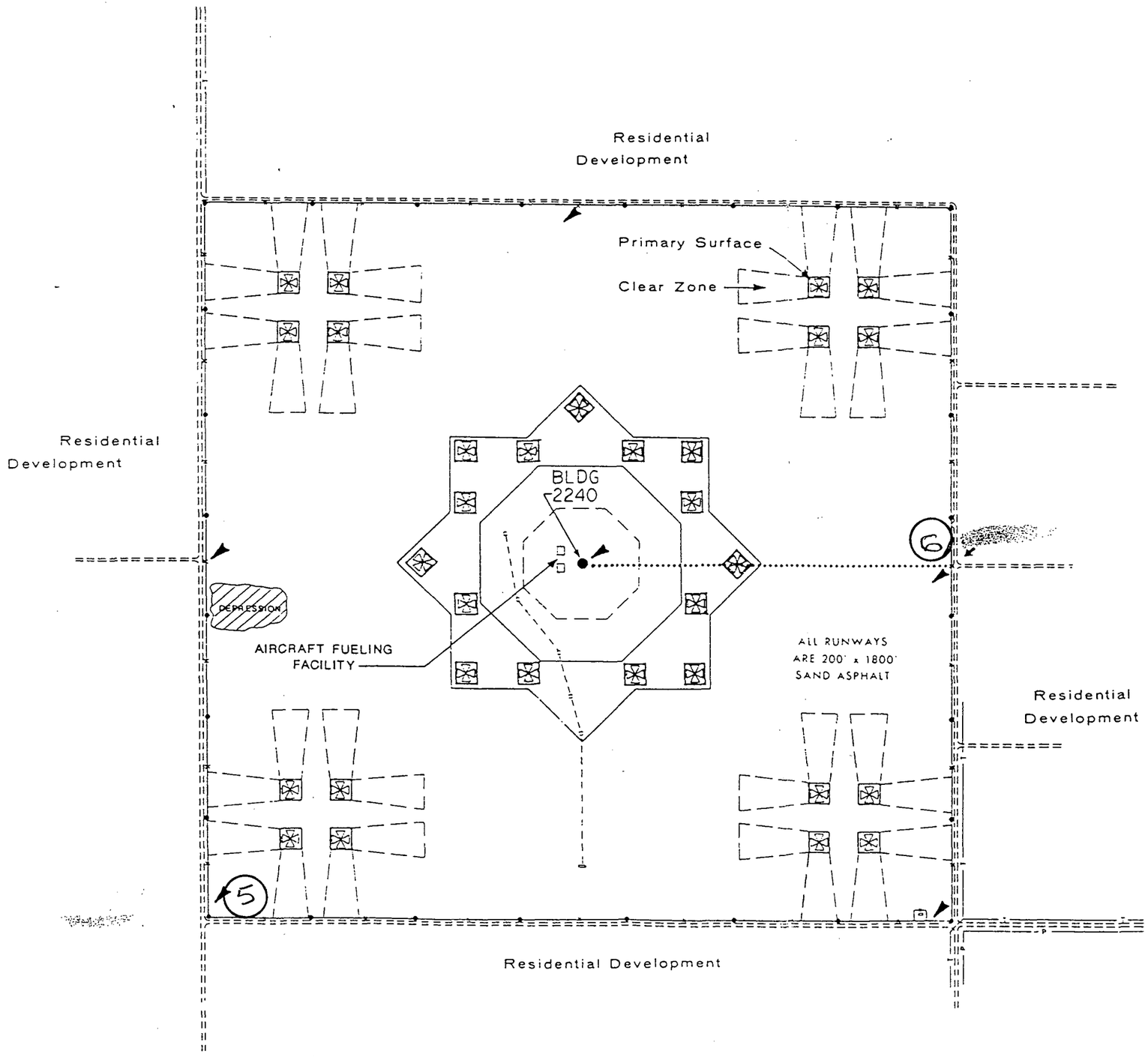
0 500 1000 1500 FEET
0 100 200 300 400 500 METERS

FIGURE IV-7 REVISED 1/28/94

NAS WHITING FIELD
MILTON, FLORIDA

MASTER PLAN

OLF SPENCER
EXISTING CONDITIONS



LEGEND

- PAVED ROAD & AIRFIELD PAVEMENT
- IMPROVED OR UNIMPROVED ROAD
- AIRFIELD PROPERTY BOUNDARY
- FENCE
- POWER TRANSMISSION LINE
- TELEPHONE LINE
- PRIMARY SURFACE/CLEAR ZONE
- UNDERGROUND DRAINAGE
- CRASH FIRE RESCUE STRUCTURE
- ACCESS
- WINDSOCK
- HELICOPTER LANDING SPOT
- WETLAND AREAS

FIELD EL. 142'MSL

SOURCE: SOUTHNAVFACENGCOM

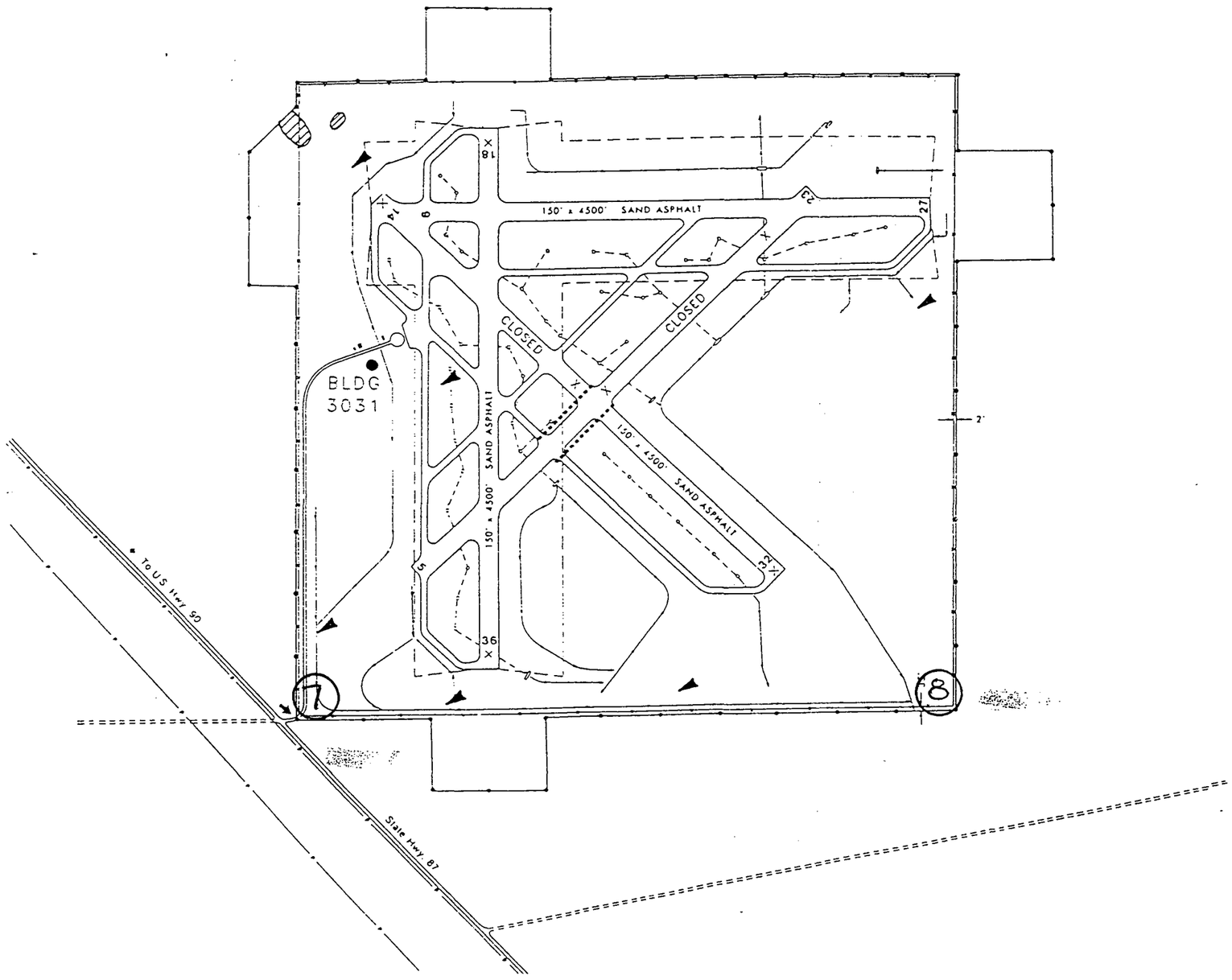
0 500 1000 1500 FEET
0 100 200 300 400 500 METERS

FIGURE IV-13 REVISED 1/28/94

NAS WHITING FIELD

MILTON, FLORIDA

MASTER PLAN



OLF SANTA ROSA
EXISTING CONDITIONS

LEGEND

- PAVED ROAD & AIRFIELD PAVEMENT
- IMPROVED OR UNIMPROVED ROAD
- BUILDING
- AIRFIELD PROPERTY BOUNDARY
- FENCE
- POWER TRANSMISSION LINE
- PRIMARY SURFACE
- UNDERGROUND DRAINAGE
- DRAINAGE DITCHES
- CRASH FIRE RESCUE STRUCTURE
- WINDSOCK
- RUNWAY LIGHTS
- WETLAND AREAS

FIELD EL. 150'MSL

SOURCE: SOUTHNAVFACENGCOM

0 500 1000 1500 2000 FEET
0 200 400 600 METERS

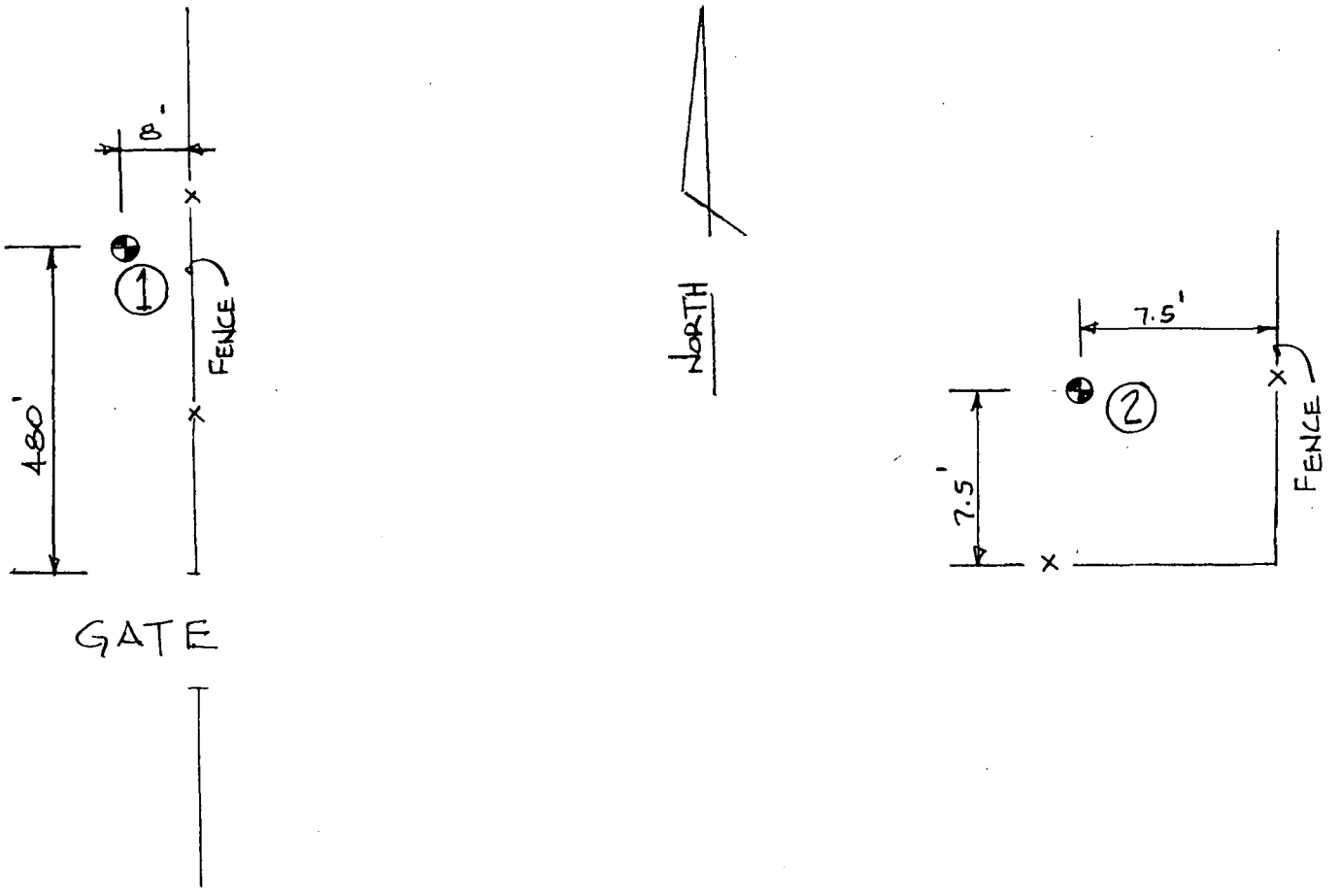
FIGURE IV-8 REVISED 1/28/94

NAS WHITING FIELD
MILTON, FLORIDA

MASTER PLAN

SAMPLE LOCATION

ATTACHMENT "B"



● SAMPLE LOCATION

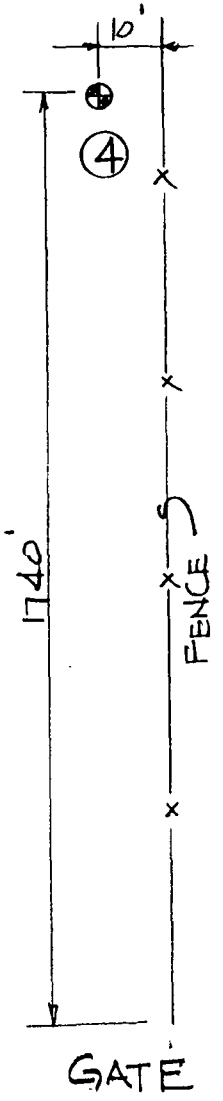
◯ SAMPLE SITE NUMBER

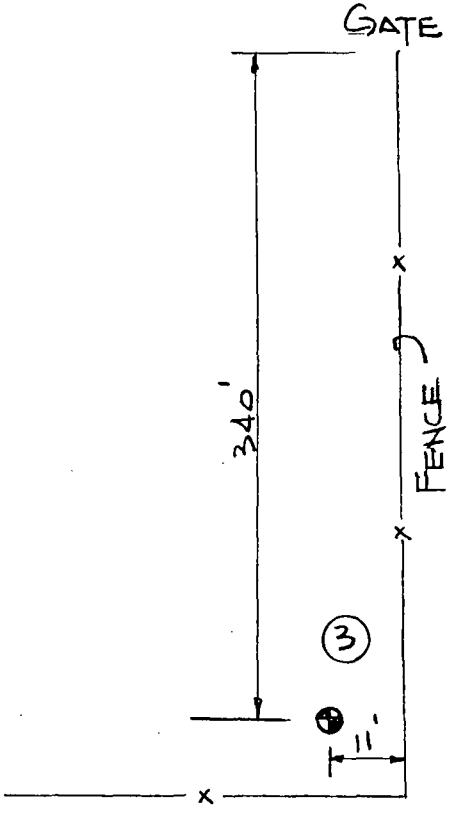
DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

NAS WHITING FIELD — MILTON, FLORIDA

NOLF HAROLD
SOIL SAMPLE LOCATION

SIZE	CODE IDENT. NO.	DRAWING NO.
	80091	
SCALE:		CONSTR. CONTR NO.
	SPEC	SHEET OF





● SAMPLE LOCATION

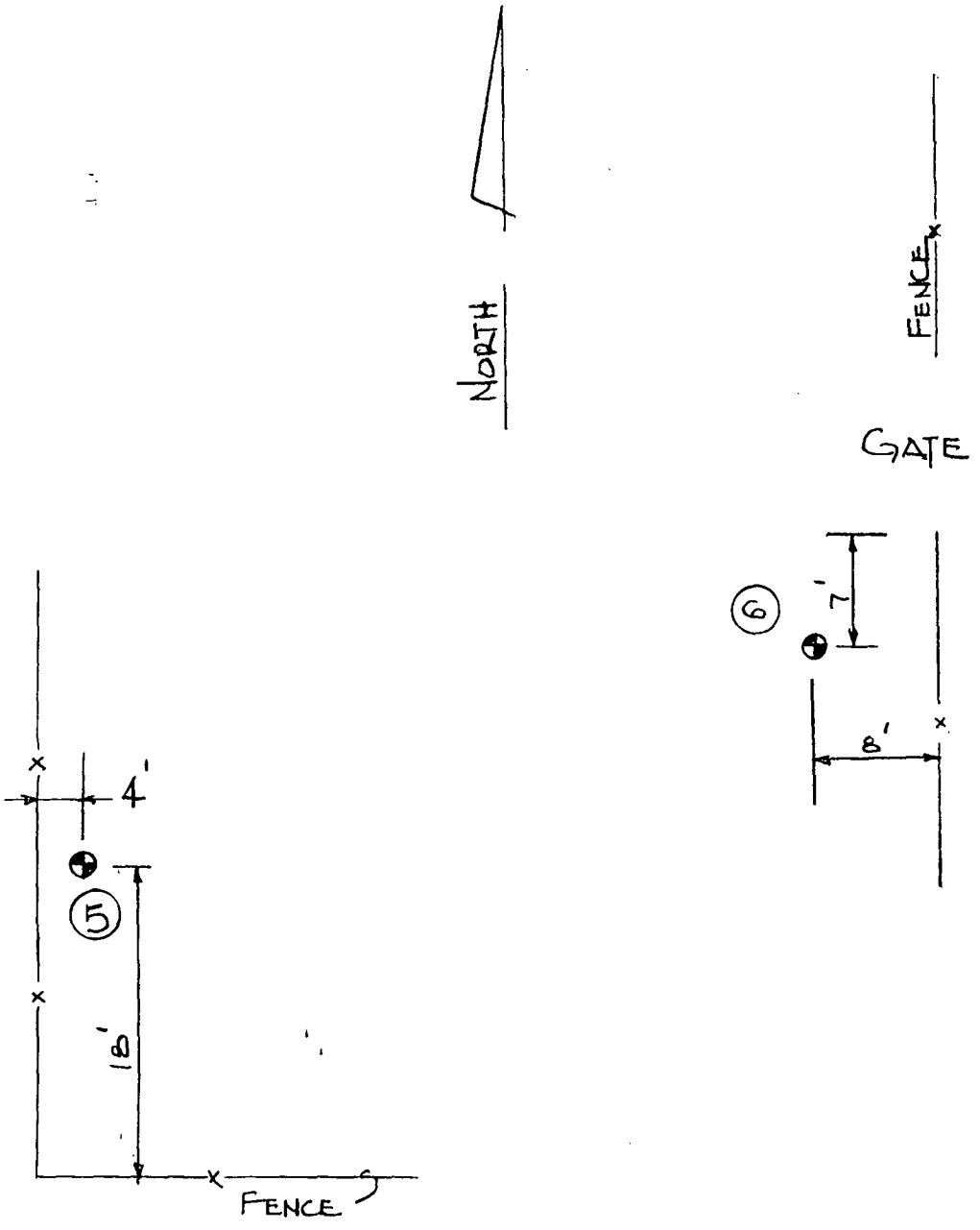
○ SAMPLE SITE NUMBER

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

NAS WHITING FIELD — MILTON, FLORIDA

NOLF PACE
SOIL SAMPLE LOCATION

SIZE	CODE IDENT NO.	DRAWING NO.
	80091	
SCALE:		CONSTR CONTR NO.
	SPEC	SHEET OF



● SAMPLE LOCATION

◯ SAMPLE SITE NUMBER

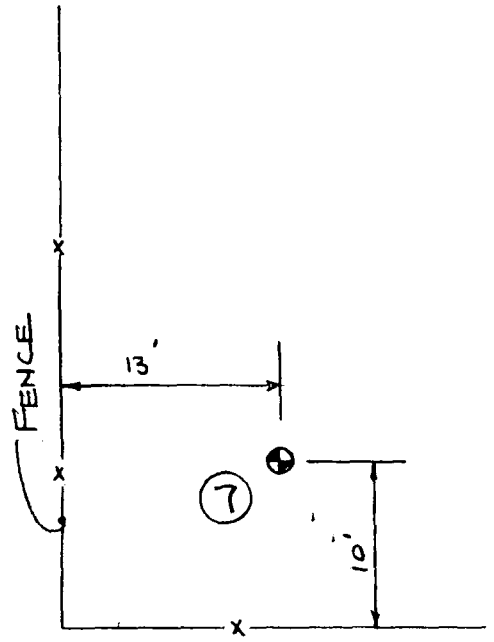
DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

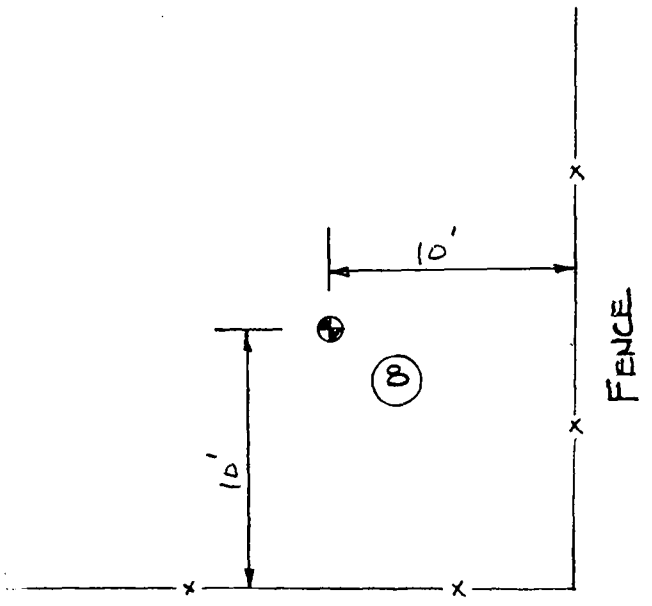
NAS WHITING FIELD — MILTON, FLORIDA

NOLF SPENCER
SOIL SAMPLE LOCATION

SIZE	CODE IDENT. NO.	DRAWING NO.
	80091	

CONSTR. CONTR NO





● SAMPLE LOCATION

◯ SAMPLE SITE NUMBER

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

NAS WHITING FIELD — MILTON, FLORIDA

NOLF SANTA ROSA
SOIL SAMPLE LOCATION

SIZE	CODE IDENT NO.	DRAWING NO.
	80091	

CONSTR CONTR NO

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C0-11010
Received: 01 NOV 00
Reported: 13 NOV 00

Ms. Elaine Sessions
Tumpane Services Corporation
Building 1429 Whiting Field
Milton, FL 32570-0000

Client PO. No.: 14910

Project: NASWF,ARSENIC SAMPLES
Sampled By: Client
Code: 143601113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
11010-19	Method Blank	
11010-20	Lab Control Standard % Recovery	
11010-21	Matrix Spike % Recovery	
11010-22	Matrix Spike Duplicate % Recovery	

PARAMETER	11010-19	11010-20	11010-21	11010-22
Arsenic (6010), mg/kg	<0.500	111 %	96 %	98 %
Dilution Factor	1	1	1	1
Prep Date	11.08.00	11.08.00	11.08.00	11.08.00
Analysis Date	11.09.00	11.09.00	11.09.00	11.09.00
Batch ID	PS219	PS219	PS219	PS219
Prep Method	3050A	3050A	3050A	3050A
Analyst	CH	CH	CH	CH

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

Rick Hayes, Project Manager

Final Page Of Report

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C0-11010
Received: 01 NOV 00
Reported: 13 NOV 00

Ms. Elaine Sessions
Tumpane Services Corporation
Building 1429 Whiting Field
Milton, FL 32570-0000

Client PO. No.: 14910

Project: NASWF,ARSENIC SAMPLES
Sampled By: Client
Code: 143601113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11010-16	8B-SANTA ROSA	10-30-00/13:59
11010-17	9A-AB. R/W	10-24-00
11010-18	9B-AB. R/W	10-24-00

PARAMETER	11010-16	11010-17	11010-18
Arsenic (6010), mg/kg	0.802	* 4.5	* 4.4
Dilution Factor	1	1	1
Prep Date	11.08.00	11.08.00	11.08.00
Analysis Date	11.09.00	11.09.00	11.09.00
Batch ID	PS219	PS219	PS219
Prep Method	3050A	3050A	3050A
Analyst	CH	CH	CH

* From beneath runway pavement @ NatL Field

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C0-11010
Received: 01 NOV 00
Reported: 13 NOV 00

Ms. Elaine Sessions
Tumpane Services Corporation
Building 1429 Whiting Field
Milton, FL 32570-0000

Client PO. No.: 14910

Project: NASWF,ARSENIC SAMPLES
Sampled By: Client
Code: 143601113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11010-11	6A-SPENCER	10-31-00/13:15
11010-12	6B-SPENCER	10-31-00/12:45
11010-13	7A-SANTA ROSA	10-30-00/14:05
11010-14	7B-SANTA ROSA	10-30-00/14:30
11010-15	8A-SANTA ROSA	10-30-00/13:35

PARAMETER	11010-11	11010-12	11010-13	11010-14	11010-15
Arsenic (6010), mg/kg	1.4	1.4	3.8	12	0.822
Dilution Factor	1	1	1	1	1
Prep Date	11.08.00	11.08.00	11.08.00	11.08.00	11.08.00
Analysis Date	11.09.00	11.09.00	11.09.00	11.09.00	11.09.00
Batch ID	PS219	PS219	PS219	PS219	PS219
Prep Method	3050A	3050A	3050A	3050A	3050A
Analyst	CH	CH	CH	CH	CH

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C0-11010
Received: 01 NOV 00
Reported: 13 NOV 00

Ms. Elaine Sessions
Tumpane Services Corporation
Building 1429 Whiting Field
Milton, FL 32570-0000

Client PO. No.: 14910

Project: NASWF,ARSENIC SAMPLES
Sampled By: Client
Code: 143601113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11010-6	3-B-PACE	10-31-00/09:30
11010-7	4-A-PACE	10-31-00/09:30
11010-8	4-B-PACE	10-31-00/10:00
11010-9	5-A-SPENCER FLD	10-31-00/13:30
11010-10	5-B-SPENCER FLD	10-31-00/13:45

PARAMETER	11010-6	11010-7	11010-8	11010-9	11010-10
Arsenic (6010), mg/kg	4.3	1.8	1.4	2.3	2.0
Dilution Factor	1	1	1	1	1
Prep Date	11.08.00	11.08.00	11.08.00	11.08.00	11.08.00
Analysis Date	11.09.00	11.09.00	11.09.00	11.09.00	11.09.00
Batch ID	PS219	PS219	PS219	PS219	PS219
Prep Method	3050A	3050A	3050A	3050A	3050A
Analyst	CH	CH	CH	CH	CH

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C0-11010
Received: 01 NOV 00
Reported: 13 NOV 00

Ms. Elaine Sessions
Tumpane Services Corporation
Building 1429 Whiting Field
Milton, FL 32570-0000

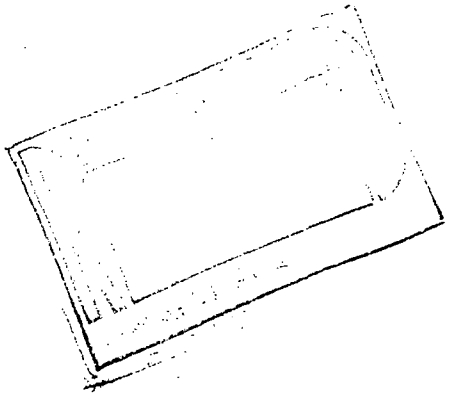
Client PO. No.: 14910

Project: NASWF,ARSENIC SAMPLES
Sampled By: Client
Code: 143601113

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
11010-1	1-A-HAROLD	10-30-00/11:15
11010-2	1-B-HAROLD	10-30-00/11:15
11010-3	2-A-HAROLD	10-30-00/10:45
11010-4	2-B-HAROLD	10-30-00/10:45
11010-5	3-A-PACE	10-31-00/09:00

PARAMETER	11010-1	11010-2	11010-3	11010-4	11010-5
Arsenic (6010), mg/kg	0.924	0.924	1.0	0.908	6.1
Dilution Factor	1	1	1	1	1
Prep Date	11.08.00	11.08.00	11.08.00	11.08.00	11.08.00
Analysis Date	11.09.00	11.09.00	11.09.00	11.09.00	11.09.00
Batch ID	PS219	PS219	PS219	PS219	PS219
Prep Method	3050A	3050A	3050A	3050A	3050A
Analyst	CH	CH	CH	CH	CH



ANALYTICAL RESULTS

ATTACHMENT "C"

RLH C0102603

CHAIN OF CUSTODY

Severn Trent Laboratories
3355 McLemore Drive • Pensacola, FL 32514
Tel: (850) 474-1001- • Fax (850) 474-4789

Committed To *Your* Success

LAB ACCESSION # C011010

PART 1 - Bottle Shipment Information

CLIENT: Tumpane Svcs Corp | **CLIENT PROJECT NUMBER:**

QUANTITY OF SAMPLE CONTAINERS SHIPPED	PRESERVATIVE							PLASTIC CONTAINERS							GLASS CONTAINERS									NOTES
	H_2SO_4	HNO3	HCL	Zn Acetate	$Na_2S_2O_3$	Unpreserved	NaOH	8 oz.	16 oz.	32 oz.	½ gallon	1 gallon	Whirl-pak	100-ML Cup	120 ml (A)	1 liter (A)	1 liter (C)	40 ml Vial	4 oz. wm	8 oz. wm	16 oz. wm	32 oz. wm	D.I. Trip Blank	
10																			X					

Relinquished By: Danielle Howard — **Time** 1450 — **Date** 10-27-00 — **Received By:** Ken Lewis — **Time** 1450 — **Date** 10/27/00

PART 2 - Sample/Project Information

SAMPLE MATRIX CODES

DW DRINKING WATER — AI AIR — SW SURFACE WATER
WW WASTEWATER — SO SOIL — SL SLUDGE
GW GROUNDWATER — OI OIL — ST STORMWATER

SAMPLE I.D.	SAMPLE DATE	SAMPLE TIME	MATRIX	ARSENIC	TOTAL # OF BOTTLES
1-A -HAROLD	10.30.00	11:15A	SO		1
1-B -HAROLD	10.30.00	11:15A	SO		1
2-A -HAROLD	10.30.00	10:45A	SO		1
2-B -HAROLD	10.30.00	10:45A	SO		1
3-A -PACE	10.31.00	9:00A	SO		1
3-B -PACE	10.31.00	9:30A	SO		1
4-A -PACE	10.31.00	9:30A	SO		1
4-B -PACE	10.31.00	10:00	SO		1
5-A -Spencer FLD	10.31.00	1:30	SO		1
5-B -Spencer FLD	10.31.00	1:45	SO		1

Total Number of Bottles/Containers: 10

Relinquished By	Date	Time	Received By	Date	Time
Elaine Sessions	11/1/00	6:30A	Ken Lewis	11/1/00	6:30
Ken Lewis	11/1/00	1130	Robert Espy	11/01/00	1130

Client	Tumpane Svcs Corp	Purchase Order Number	14910
Address	BLDG 1429 NASWF	Project Number	01416.02
City	Milton	State FL Zip 32570	Project Name	Sample for Arsenic
Phone Number	(850) 626-0131	Fax Number (850) 983-9105	Project Location	Various locations
Project Manager	Elaine Sessions		Sampled By	Esessions

TURNAROUND TIMES	check below	SPECIAL INSTRUCTIONS
Standard - 14-21 days	X	
RUSH (must be approved in advance)		
<- 48 hours - 2x standard price		
3-7 days - 1.5x standard price		
TCLP - 1 week rush 1.5x standard price		
QC Level none I II III IV (circle one)		Copies of report needed _____

FORM # 12694

WHITE — LAB CANARY — REPORT PINK — CLIENT

RLH C0102603

CHAIN OF CUSTODY

Severn Trent Laboratories
3355 McLemore Drive • Pensacola, FL 32514
Tel: (850) 474-1001- • Fax (850) 474-4789

Committed To *Your* Success

LAB ACCESSION # C011010

PART 1 - Bottle Shipment Information

CLIENT: Tumpane Svcs Corp | **CLIENT PROJECT NUMBER:**

QUANTITY OF SAMPLE CONTAINERS SHIPPED	PRESERVATIVE							PLASTIC CONTAINERS							GLASS CONTAINERS									NOTES
	H_2SO_4	HNO3	HCL	Zn Acetate	$Na_2S_2O_3$	Unpreserved	NaOH	8 oz.	16 oz.	32 oz.	½ gallon	1 gallon	Whirl-pak	100-ML Cup	120 ml (A)	1 liter (A)	1 liter (C)	40 ml Vial	4 oz. wm	8 oz. wm	16 oz. wm	32 oz. wm	D.I. Trip Blank	
8																			X					

Relinquished By:	Time	Date	Received By:	Time	Date

PART 2 - Sample/Project Information

SAMPLE MATRIX CODES

DW DRINKING WATER — AI AIR — SW SURFACE WATER
WW WASTEWATER — SO SOIL — SL SLUDGE
GW GROUNDWATER — OI OIL — ST STORMWATER

PARAMETERS AND PRESERVATIVES REQUESTED

SAMPLE I.D.	SAMPLE DATE	SAMPLE TIME	MATRIX	Arsenic													TOTAL # OF BOTTLES
6A - Spencer	10.31.00	1:15	SO	✓												11	1
6B - Spencer	10.31.00	12:45	SO	✓												12	1
7A - SANTA ROSA	10.30.00	2:05	SO	✓												13	1
7B - SANTA ROSA	10.30.00	2:30	SO	✓												14	1
8A - SANTA ROSA	10.30.00	1.35	SO	✓												15	1
8B - SANTA ROSA	10.30.00	1.59	SO	✓												16	1
9A - AB. R/W	10/24/00		SO	✓												17	1
9B - AB R/W	10/24/00		SO	✓												18	1

Total Number of Bottles/Containers: 8

Relinquished By	Date	Time	Received By	Date	Time
Elaine Sessions	11/1/00	6:30A	Ken Lewis	11/1/00	6:30
Ken Lewis	11/1/00	1130	Todd Ezzell	11/1/00	1130

Client	Tumpane Svcs Corp			Purchase Order Number	14910
Address	BLDG 1429 NASWF			Project Number	014682
City	Milton	State	FL	Zip	32570
Phone Number	(850) 626-0131	Fax Number	(850) 983-9105	Project Name	Sample for arsenic
Project Manager	Elaine Sessions			Project Location	various locations
				Sampled By	esessions

TURNAROUND TIMES	check below	SPECIAL INSTRUCTIONS
Standard - 14-21 days	X	
RUSH (must be approved in advance)		
<- 48 hours - 2x standard price		
3-7 days - 1.5x standard price		
TCLP - 1 week rush 1.5x standard price		
QC Level none I II III IV (circle one)		Copies of report needed _____

Severn Trent Laboratories of Florida
PROJECT SAMPLE INSPECTION FORM

Lab Order #: C011010 Date Received: 11/1/00

1.	Was there a Chain of Custody?	(Yes)	No♣	
2.	Was Chain of Custody properly filled out and relinquished?	(Yes)	No♣	
3.	Were samples received cold? (Criteria: 2° - 6°C: STL-SOP 1055)	(Yes)	No♣	N/A
4.	Were all samples properly labeled and identified?	(Yes)	No♣	
5.	Did samples require splitting or compositing♦? Req By: PM Client Other♦	Yes♣	(No)	
6.	Were samples received in proper containers for analysis requested?	(Yes)	No♣	
7.	Were all sample containers received intact?	(Yes)	No♣	
8.	Were samples checked for preservative? *(Check pH of all H_2O requiring preservative (STL-PN SOP 917) except VOA vials that require zero headspace)*+*	Yes	No♣	(N/A)
9.	Is there sufficient volume for analysis requested?	(Yes)	No♣	N/A *(Can)*
10.	Were samples received within Holding Time? (REFER TO STL-SOP 1040)	(Yes)	No♣	
11.	Is Headspace visible > ¼" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control section.	Yes♣	No	(N/A)
12.	If sent, were matrix spike bottles returned?	Yes	No♣	(N/A)
13.	Was Project Manager notified of problems? (initials:_____)	Yes	No♣	(N/A)

Airbill Number(s): Walkin

Cooler Number(s): Client

Cooler Weight(s): N/A

Shipped By: Walkin

Shipping Charges: N/A

Cooler Temp(s) (°C): 2°C CC#3

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS) ☞

Inspected By: MHS **Date:** 11/1/00 **Logged By:** JE **Date:** 11-1-00

♣ *Note all Out-of-Control and/or questionable events on Comment Section of this form.*

♦ *If Other, note who requested the splitting or compositing of samples on the Comment Section of this form. All volatile samples requested to be split or composited must be done in the Volatile Lab. Document: "Volatile sample values may be compromised due to sample splitting (compositing)"*

\+ *All preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (STL-SOP 938, section 2.2.9).*

* *According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, STL makes it policy to record any headspace as out-of-control (STL-SOP 938, section 2.2.12).*

Severn Trent Laboratories, Inc.
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Committed to *Your* Success

Data Qualifiers for Final Report

STL-Pensacola Inorganic/Organic

B1	The analyte was detected in the associated method blank (sample itself is flagged even though sample is ND).
B2	The analyte was detected in the sample(s) and in the associated method blank analyzed on the day samples were extruded; however, this analyte was not detected in the blank analyzed with the samples.
B3	The analyte was found in the associated blank as well as in the associated sample(s) (qualifier is applied to the sample, not to the blank).
B4	Sample results were corrected due to contaminants in Fractionation Blank
D	Diluted out (surrogate or spike due to sample dilution)
E	Compound concentration exceeds the upper calibration range of the instrument.
F	The reported value is < STL-Pensacola RL and > the STL-Pensacola MDL; therefore, the quantitation is estimation (The STL-PN RL is at or above lowest calibration standard in the initial calibration curve).
G	Sample and/or duplicate result is at or below 5 X (times) the STL Reporting Limit and the absolute difference between the sample and duplicate result is at or below the STL reporting limit; therefore, the results are "in control".
H1	Sample and/or duplicate is below 5 X (times) the STL Reporting Limit and the absolute difference between the results exceeds the STL Reporting Limit; therefore, the results are "out of control"
H2	Sample and duplicate (or MS and MSD) RPD is above control limit.
J (description)	The analyte was positively identified, the quantitation may be an estimation
J4	(For positive results)Temperature limits exceeded (≤2°C or ≥ 6°C), non-reportable for NDPES compliance monitoring.
J6	(For positive results) LCS or Surrogate %R is > upper control limit (UCL), results may be biased high
J7	The reported value is > the laboratory MDL and < lowest calibration standard; therefore, the quantitation is an estimation (this qualifier should only be used when the STL-PN RL is below the lowest calibration standard in the initial calibration).
J8	Matrix spike and post spike recoveries are outside control limits. See out of Control Events/Corrective Action Form.
J9	(For positive results) LCS or Surrogate %R is < lower control limit (LCL), results may be biased low
M1	A matrix effect was present ([1]sample, MS or MSD was analyzed twice to confirm surrogate/spike failure, [2]sample and/or MS/MSD chromatogram(s) had interfering peaks, [3]sample result was > 4 X spike added, [4]metals serial dilution was performed, or [5]metals post spike is < 40% R)
M2	The MS and/or MSD %R or RPD was outside upper or lower control limits; not necessarily due to matrix effect.
N/C	Not Calculable; Sample spiked is > 4X spike concentration (may also use this flag in place of negative numbers)
NH	Sample and duplicate results are "out of control". The sample is nonhomogeneous.
NoMS	Not enough sample provided to prepare and/or analyze a method-required matrix spike (MS) and/or duplicate (MSD)
Q	The analytical (post digestion) spike is reported due to the percent recovery being outside limits on the matrix (pre-digestion) spike.
R (description)	The data may be unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
R1	(For nondetects) Temperature limits exceeded (≤2°C or ≥ 6°C); non-reportable for NDPES compliance monitoring
R2	Improper preservation, no preservative present or insufficient amounts of preservative in sample upon receipt, non-reportable for NDPES compliance monitoring
R3	Improper preservation, incorrect preservative present in sample upon receipt, non-reportable for NPDES compliance
R4	Holding time exceeded, non-reportable for NDPES compliance monitoring.
R5	Collection requirements not met, improper container used for sample
R6	LCS or surrogate %R is < LCL and analyte is not detected or surrogate %R is < 10% for detects/nondetects.
R7	Internal standard area outside –50% to +100% of calibration verification standard.
R8	Initial calibration or any calibration verification exceeds acceptance criteria.
R9	Not filtered and preserved at time of collection.
R10	Headspace >1/4" in diameter in volatile vials, non-reportable for NPDES compliance monitoring
R11	Samples were filtered and preserved within 4 hours of collection.
R12	Analysis performed outside the 12-hour tune or not within tune criteria.
S1	The Method of Standard Additions (MSA) has been performed on this sample.
S2	Incorrect sample amount was submitted to the laboratory for analysis
S3 (Flashpoint)	This method is not designed for solids and the results may not be accepted by any regulator for such purposes.
T	Second-column or detector confirmation exceeded the SW-846 criteria of 40% RPD for this compound.
TIC	The compound is not within the initial calibration curve. It is searched for qualitatively or as a Tentatively Identified Compound.
U	The reported value is ≤ Laboratory MDL (value for result will be the MDL, never below the MDL)
W	Post-digestion spike for Furnace AA is out of control limits (85-115%), while sample absorbance is less than 50% spike absorbance.
@	Adjusted reporting limit due to sample composition, not due to overcal (dilution prior to digestion and/or analysis).
#	Elevated reporting limit due to insufficient sample size
1 pt	The compound has been quantitated against a one point calibration.
* (Metals & Wet Chem)	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)

SEVERN TRENT LABORATORIES, INC. - PENSACOLA, FLORIDA
STATE CERTIFICATIONS

Alabama Department of Environmental Management, Laboratory ID No. 40150 (Drinking Water by Reciprocity with FL)

Arizona Department of Health Services, Lab ID No. AZ0589 (Hazardous Waste & Wastewater)

Arkansas Department of Pollution Control and Ecology, (No Laboratory ID No. assigned by state) (Environmental)

State of California, Department of Health Services, Laboratory ID No. 2338 (Hazardous Waste and Wastewater)

State of Connecticut, Department of Health Services, Connecticut Lab Approval No. PH-0697 (Drinking Water, Hazardous Waste and Wastewater)

Delaware Health & Social Services, Division of Public Health, Laboratory ID No. FL094 (Drinking Water by Reciprocity with FL)

Florida DOH Laboratory ID No. E81010 (Drinking Water, Hazardous Waste and Wastewater)

Florida, Radioactive Materials License No. G0733-1

Foreign Soil Permit, Permit No. S-37599

Kansas Department of Health & Environment, Laboratory ID No. E10253 (Wastewater and Hazardous Waste)

Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet, Laboratory ID No. 90043 (Drinking Water)

State of Louisiana, DHH, Office of Public Health Division of Laboratories, Laboratory ID No. LA000017 (Drinking Water)

Louisiana Department of Environmental Quality, Environmental Laboratory Accreditation Program, Agency Interest ID 30748 (Environmental - Accreditation Pending)

State of Maryland, DH&MH Laboratory ID No. 233 (Drinking Water by Reciprocity with Florida)

Commonwealth of Massachusetts, DEP, Laboratory ID No. M-FL094 (Hazardous Waste and Wastewater)

State of Michigan, Bureau of E&OccH, Laboratory ID No.9912 (Drinking Water by Reciprocity with Florida)

New Hampshire DES ELAP, Laboratory ID No. 250599A (Wastewater)

State of New Jersey, Department of Environmental Protection & Energy, Laboratory ID No. 49006 (Wastewate and Hazardous Waster)

New York State, Department of Health, Laboratory ID No. 11503 (Wastewater and Solids/Hazardous Waste)

North Carolina Department of Environment & Natural Resources, Laboratory ID No. 314 (Hazardous Waste and Wastewater)

North Dakota DH&Consol Labs, Laboratory ID No. R-108 (Drinking Water, Wastewater and Hazardous Waste by Reciprocity with Florida)

State of Oklahoma, Oklahoma Department of Environmental Quality, Laboratory ID No. 9810 (Hazardous Waste and Wastewater)

Commonwealth of Pennsylvania, Department of Environmental Resources, Laboratory ID No. 68-467 (Drinking Water)

South Carolina DH&EC, Laboratory ID No. 96026 (Wastewater by Reciprocity with FL and Solids/Hazardous Waste by Reciprocity with CA)

Tennessee Department of Health & Environment, Laboratory ID No. 02907 (Drinking Water)

Virginia Department of General Services, Laboratory ID No. 00008 (Drinking Water by Reciprocity with FL)

State of Washington, Department of Ecology, Laboratory ID No. C282 (Hazardous Waste and Wastewater)

West Virginia Division of Environmental Protection, Office of Water Resources, Laboratory ID No. 136 (Hazardous Waste and Wastewater by Reciprocity with FL)

American Industrial Hygiene Association (AIHA) Accredited Laboratory, Laboratory ID No. 100704