

N00164.AR.000934
NSWC CRANE
5090.3a



DEPARTMENT OF THE NAVY
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
300 HIGHWAY 361
CRANE INDIANA 47522-5001

IN REPLY REFER TO
5090/S4.7
Ser RP3/5099

18 MAR 1995

Indiana Department of Environmental Management
Corrective Action Section
Office Of Land Quality
Hazardous Waste Permits
100 N Senate Ave
PO Box 6015
Indianapolis, In 46206-6015

Dear Mr. Griffin:

Crane Division, Naval Surface Warfare Center submits the field report for soil sampling at the Building 2930 Process Control Area (B2930 PCA) as enclosure (1). Based on available information, the samples were collected in the vicinity where testing reportedly occurred. Also recall that the site was disturbed during past construction activities. Since the results show no significant contamination, NSWC Crane recommends a No Further Action status for B2930 PCA without need for environmental notice. The permit required Certification Statement is provided as enclosure (2).

If you require any further information, my point of contact is Mr. Thomas J. Brent, Code RP3-TB, at 812-854-6160, email thomas.brent@navy.mil.

Sincerely,

James M. Hunsicker
AMES M. HUNSICKER

Manager, Environmental Protection
By direction of the commanding Officer

Enclosures: 1. Soil Sampling Field Report for B2930 PCA
2. Certification Statement

Copy to:
ADMINISTRATIVE RECORD
SOUTHNAVFACENGCOM (Code ES31) (w/o encl)
USEPA (Pete Ramanauskas)
TTNUS (Ralph Basinski) (w/o encl)

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 assure that qualified personnel properly gather and evaluate 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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



SIGNATURE

Manager, Environmental Protection

TITLE

3/17/05

DATE

FIELD REPORT

SOIL MONITORING PROGRAM
FOR
BUILDING 2930

NAVALSURFACEWARFARECENTER
CRANE DIVISION
CRANE, INDIANA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY CONTRACT

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406

Submitted by:
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220

CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0331

MARCH 2005

1.0 INTRODUCTION

This Field Report was prepared for the Naval Surface Warfare Center (NSWC) facility located in Crane, Indiana, through the U.S. Navy Southern Division Naval Facilities Engineering Command (NAVFAC) under Contract Task Order (CTO) 0331, for the Comprehensive Long-Term Environmental Act Navy (CLEAN 3), Contract Number N62467-94-D-0888. The Field Report addresses sampling results associated with the proposed construction of a new building within the footprint of Building 2930.

1.1 BACKGROUND

Explosive handling operations occurred in Building 2930. The Navy conducted a study to determine the potential for explosives contamination release associated with the explosive handling operations in Building 2930. The Indiana Department of Environmental Management (IDEM) reviewed information which was provided by the Navy and agreed that No Further Action (NFA) is necessary for Building 2930. However, IDEM has required that an Environmental Notice be placed on the property associated with Building 2930. The intent of the Environmental Notice is to make future property users aware that additional investigations may be necessary to determine whether explosives are present at the site.

The Navy has plans to construct a new building whose foundation would include the footprint of Building 2930. This Field Report provides results of a soil sampling program which was conducted to determine whether explosives are present within the Building 2930 footprint which could result in potential risks to construction workers.

2.0 FIELD WORK DESCRIPITON

Figure 1-1 presents the locations where three composite surface soil grab samples (B2930SSCP0010002, B2930SSCP0020002, and B2930SSCP0030002) were taken utilizing direct push technology (DPT) techniques for depth range of 0 to 2 feet below surface grade (bgs). The following summarizes the locations and grab sampling procedures:

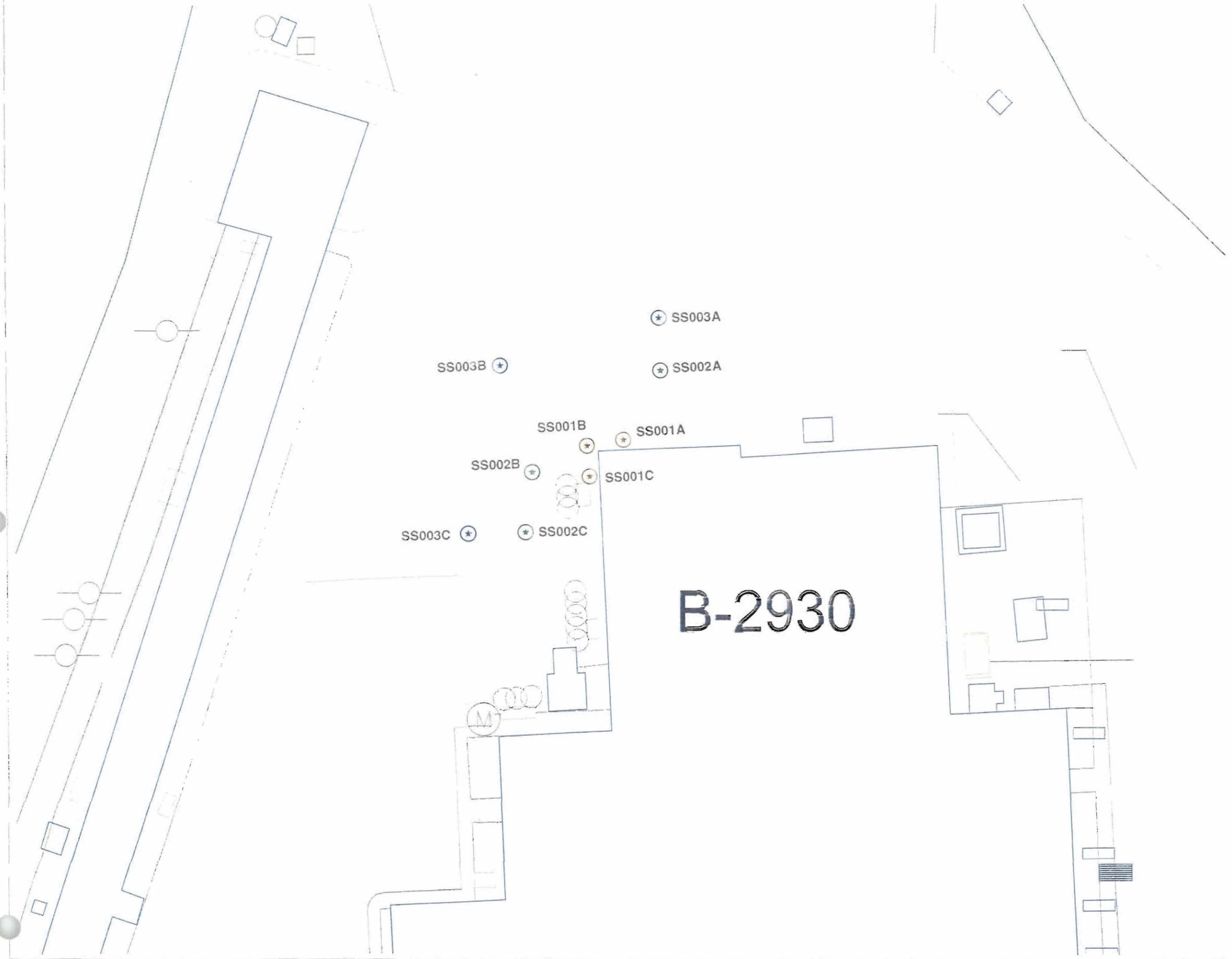
- B2930SSCP0010002 was a composite of three grab samples (SS001A, SS001B, and SS001C) located approximately 5 feet from the Building 2930 wall.
- B2930SSCP0020002 was a composite of three grab samples (SS002A, SS002B, and SS002C) located approximately 30 feet from Building 2930 wall.

- **B2930SSCP0030002** was a composite of three grab samples (**SS003A**, **SS003B**, and **SS003C**) located approximately 50 feet from Building 2930 wall.

Each of the three composite samples was analyzed for explosives using United States Environmental Protection Agency (U.S. EPA) method 8330. The laboratory and field procedures, including fieldwork documentation (See Appendix A) and quality assurance procedures were utilized as described in the IDEM-approved Quality Assurance Project Plan (QAPP) for RCRA Facility Investigation at Building 106 Pond (SWMU 8) and Roads and Grounds Area (SWMU 15) and Environmental Indicator Investigation for SWMU 18 (Load and Fill Area Buildings), SWMU 19 (Pyrotechnic Test Area), SWMU 20 (Crane Army Ammunition Activity Quality Assurance/Quality Control Test Area), and the Old Gun Tub Storage Lot dated September 2004.

3.0 RESULTS

The results of the sampling are presented in Table 3-1. The only explosive detected was octahydro-1,3,5,7-tetranitro-1,2,5,7-tetrazocine (HMX), which was detected in one composite sample, at a concentration of 0.22 milligrams per kilogram (mg/kg). The U.S. EPA Region 9 Preliminary Remediation Goal (PRG) is 3,100 mg/kg for residential land use and 31,000 mg/kg for industrial land use. The concentration of 0.22 mg/kg is well below both PRGs. Therefore, the positive detection of HMX is not considered to be significant.



- ⊛ Borings - 5' from wall - composite
- ⊛ Borings - 30' from wall - composite
Includes area identified on Fig 5.3-1
- ⊛ Borings - 50' from wall - composite

**FIGURE 1-1
GRAB SAMPLE LOCATIONS
BUILDING 2930
NSWC CRANE
CRANE, INDIANA**



**TABLE 3-1
BUILDING 2930 COMPOSITE GRAB SAMPLE SUMMARY OF RESULTS
NSWC CRANE
CRANE, INDIANA**

SITE LOCATION NSAMPLE SAMPLE	BUILDING 2930 B2930SSCP001 B2930SSCP0010002 B2930SSCP0010002	BUILDING 2930 B2930SSCP001 B2930SSCP0010002-D B2930FD02040501	BUILDING 2930 B2930SSCP002 B2930SSCP0020002 B2930SSCP0020002	BUILDING 2930 B2930SSCP003 B2930SSCP0030002 B2930SSCP0030002
Explosives (mg/kg)				
1,3,5-TRINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U
1,3-DINITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-TRINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U
2,4-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U
2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U
2-AMINO-4,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U
2-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U
3-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U
4-AMINO-2,6-DINITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U
4-NITROTOLUENE	0.25 U	0.25 U	0.25 U	0.25 U
HMX	0.22 J	0.20 J	0.25 U	0.25 U
NITROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U
RDX	0.25 U	0.25 U	0.25 U	0.25 U
TETRYL	0.25 U	0.25 U	0.25 U	0.25 U

HMX - octahydro 1,3,5,7 tetranitro 1,2,5,7-tetrazocine.

RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine.

APPENDIX A

FIELDWORK DOCUMENTATION



B2930SSCP0010002

Project Site Name: NSWCRANE
Project No.: N1245, CTO 0331

Sample ID No.: 2095
Sample Location: 2098 001A, B&C
Sampled By: CD / TR
C.O.C. No.:

- Surface Soil
- Subsurface Soil
- Sediment
- Other:
- QA Sample Type:

- Type of Sample:
- Low Concentration
 - High Concentration

GRAB SAMPLE DATA:

Date: 2/4/05	Depth: 0' to 2'	Color: yellow to orange brown	Description (Sand, Silt, Clay, Moisture, etc.): silty clay, moist, trace fine sand
Time: 0900			
Method: DPT			
Monitor Reading (ppm): -			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method: NA	001A	0' to 2'	yellow brown	Silty clay, moist
Monitor Readings (Range in ppm): NA	001B	0' to 2'	orange yellow orange yellow, orange brown	Silty clay, moist, some fine sand
	001C	0' to 2'	orange brown	Silty clay, moist, trace fine sand

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Energetics - Nitroaromatics, Nitramines & Perchlorates	(1) 4oz Jar	Yes	
TAL Metals plus Sn	(1) 4oz Jar	Yes NO	

OBSERVATIONS / NOTES:

001A ≈ 1 gravel on surface
 001B ≈ 1.3ft gravel on surface
 ≈ 1.5ft gravel on surface

MAP:

See Figures 3-8

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):



Project Site Name: NSWC CRANE, ~~SWAMP~~
Project No.: N1245, CTO 0331

B2930SSCP0020002
Sample ID No.: ~~20SS-74~~
Sample Location: ~~20SB-002A, BEC~~
Sampled By: T.R. / CD
C.O.C. No.:

- Surface Soil
- Subsurface Soil
- Sediment
- Other:
- Q A Sample Type:

- Type of Sample:
- Low Concentration
 - High Concentration

GRAB SAMPLE DATA:

Date: 2/4/05	Depth: 0' to 2'	Color: brown to orange brown	Description (Sand, Silt, Clay, Moisture, etc.): clayey sand and silt, moist, trace medium to coarse sand and rock fragments
Time: 0925			
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
NA	NA	NA	NA	NA
Method: NA	002A	0' to 2'	brown	clayey silt, moist, trace sand
Monitor Readings (Range in ppm): NA	002B	0' to 2'	yellow orange, orange brown	silt to fine sand, moist, some medium sand and weathered rock frags
	002C	0' to 2'	dark brown, orange brown	clay and fine sand, moist, trace medium sand

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Energetics - Nitroaromatics, Nitramines & Perchlorates	(1) 4oz Jar	Yes	
TAL Metals plus Sn	(1) 4oz Jar	Yes also	

OBSERVATIONS / NOTES:

MAP:

002A ≈ 0.9' gravel on surface
 refusal at 3' on surface
 002B ≈ 1.0' gravel on surface
 002C ≈ 1.2' gravel on surface
 fine sand layer at 2.7' below surface

See Figures 3-8

Cide if Applicable:

Signature(s):

MS/MSD

Duplicate ID No.:

Chris Jacob



Project Site Name: NSWC CRANE.
Project No.: N1245, CTO 0331

B29305SCP0030002
Sample ID No.: 2066
Sample Location: 20SB 003A B,C
Sampled By:
C.O.C. No.:

- Surface Soil
- Subsurface Soil
- Sediment
- Other:
- QA Sample Type:

Type of Sample:
 Low Concentration
 High Concentration

GRAB SAMPLE DATA:

Date: 2/4/05	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0955	0' to 1.5'	brown to orange brown	Silty fine sand, moist, some medium sand and rock frags. trace clay
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date: NA	Time: NA	Depth: NA	Color: NA	Description (Sand, Silt, Clay, Moisture, etc.): NA TC
Method: NA	003A	0' to 2'	brown	clayey silt, moist, trace fine sand
Monitor Readings (Range in ppm): NA	003B	0' to 1'	brown, orange brown	Silty fine sand, moist, some clay, trace med. sand
	003C	0' to 1.5'	brown to yellow orange	fine to medium sand, moist, some silt, abundant rock frags.

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
Energetics - Nitroaromatics, Nitramines & Perchlorates	(1) 4oz Jar	Yes	
TAL Metals plus Sn	(1) 4oz Jar	Yes No	

OBSERVATIONS / NOTES:

003 A 1' gravel on surface refusal at 3.5' below surface

003 B ≈ 0.8' gravel on surface refusal at (weathered rock) 2' below surface

003 C ≈ 1.3' gravel on surface refusal at 3' below surface

MAP:

See Figures J-8

Circle if Applicable:

MS/MSD Duplicate ID No.:

Signature(s): *John J. [unclear]*



PROJECT NO: B-2930 N1245 ST-331	FACILITY: NISWIC CRANE	PROJECT MANAGER RALPH BASINSKI	PHONE NUMBER (412) 921-8308	LABORATORY NAME AND CONTACT: LAUKIS / HUGH PRENTISS
SAMPLERS (SIGNATURE) <i>Terry Regal</i>		FIELD OPERATIONS LEADER TERRY REGAL	PHONE NUMBER (412) 921-8857	ADDRESS 940 SOUTH MARINE ST.
CARRIER/WAYBILL NUMBER FED. EX. AB # 8447 81357424			CITY, STATE SEATTLE, WA 98108	

STANDARD TAT
RUSH TAT
 24 hr. 48 hr. 72 hr. 7 day 14 day

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)		PRESERVATIVE USED	TYPE OF ANALYSIS EXPLOSIVES SW-846 B320 AC G	COMMENTS
2/04	0900	B2930SSCP001.0002	SSCP 001	0	2	SO	G	2					Do ms/msd
2/04	0925	B2930SSCP002.0002	SSCP 002	0	2	SO	G	1					
2/04	0955	B2930SSCP003.0002	SSCP 003	0	2	SO	G	1					
2/04	0000	B2930FDO2040501	QC	0	2	SO	G	1					DUP OF B2930SSCP001.0002

1. RELINQUISHED BY <i>Terry Regal</i>	DATE 2/04/05	TIME 1000	1. RECEIVED BY FEDERAL EXPRESS	DATE 2/04/04	TIME 1000
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME