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NSWC CRANE
5090.3a

DEPARTMENT OF THE NAVY
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
CRANE, INDIANA 47522-5000

IN REPLY REFER TO:

5090
Ser 095/324/H11.9

30 JUN 1993

U.S. Environmental Protection Agency, Region V
Region V Waste Management Division
Attn: Ms. Carol Witt-Smith (HRP-8J)
77 West Jackson Blvd.
Chicago, IL 60604

Dear Ms. Witt-Smith:

Crane Division, Naval Surface Warfare Center (NAVSURFWARCENDIV) submits enclosure (1) which contains revised pages for the Part 2 Phase III Soils Workplan at the Ammunition Burning Grounds. Two copies are included for insertion into the Workplans which were submitted to your office on June 11, 1993. Enclosure (2) is the required certification statement.

NAVSURFWARCENDIV Crane point of contact is Mr. Thomas J. Brent, Code 09510, telephone 812-854-1132.

Sincerely,

G. K. [illegible]
Deputy Director, Public Works Directorate
By direction of the Commander

Encl:
(1) Workplan Corrected Pages
(2) Certification Statement

Copy to: w/o encl
SOUTHNAVFACENGCOM, (CODE 185ND)
COMNAVSEASYSCOM (SEA 654E)
USAE-WES, BILL MURPHY (GG-YH)

3.1.4 ANALYTICAL METHODS SELECTION.

Procedures and methods set out in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" SW-846, Third Edition will be used. The test methods are given in Table 3.1.4. EPA/SW-846 method 8100 will be used to detect Polycyclic (Polynuclear) aromatic hydrocarbons and Method 8240 to detect trichloroethylene (TCE). SW-846 method 8330 will be used to detect explosive contaminants.

3.1.5 PHYSICAL PARAMETER SELECTION.

Soil samples will be characterized using standard US Army Corps of Engineers geotechnical methods. These methods are defined in EM 110-2-1906, Laboratory Soils Testing, 1970. The soil samples will be physically described and classified in the field by the field crew. Unified Soil Classification System classification will be done at the laboratory. The classification will consist of a visual classification, a sieve and hydrometer analysis to determine grain size distribution of the sample, determination of water content, organic content, Atterberg limits, and density. The sieve analysis determines the gradation of grain sizes ranging from the number 4 sieve to the number 200 sieve. The hydrometer analysis determines the percentage of silt and clay size particles in the sample.

3.2.0 SAMPLING PROCEDURES

3.2.1 GENERAL PRINCIPLES.

Both hand augered and machine augered borings are planned for this site. All hand augered borings will be done in one effort. The machine augered (drilling) effort will follow. The surface soil samples will be taken from the hand auger. Stratigraphic samples will be taken from machine augered, vertical soil borings. All sampling equipment and drilling equipment will be decontaminated between usage. A tube sampler will be used to take the subsurface soil samples. A hand trowel (scoop) will be used to take the surface soil samples. Surface samples will be taken from the interval between 0" and 24". The overburden will be removed with a hand augering device. From each full soil column boring, samples will be taken at the following depth levels, 0" to 24", 24" to 48", and from the last sample above the top of rock or groundwater table whichever comes first. One sample from each boring will be collected for physical parameter analysis. These sample intervals and their corresponding sample identification number are shown on Figure 3.2.1. Sample identification will

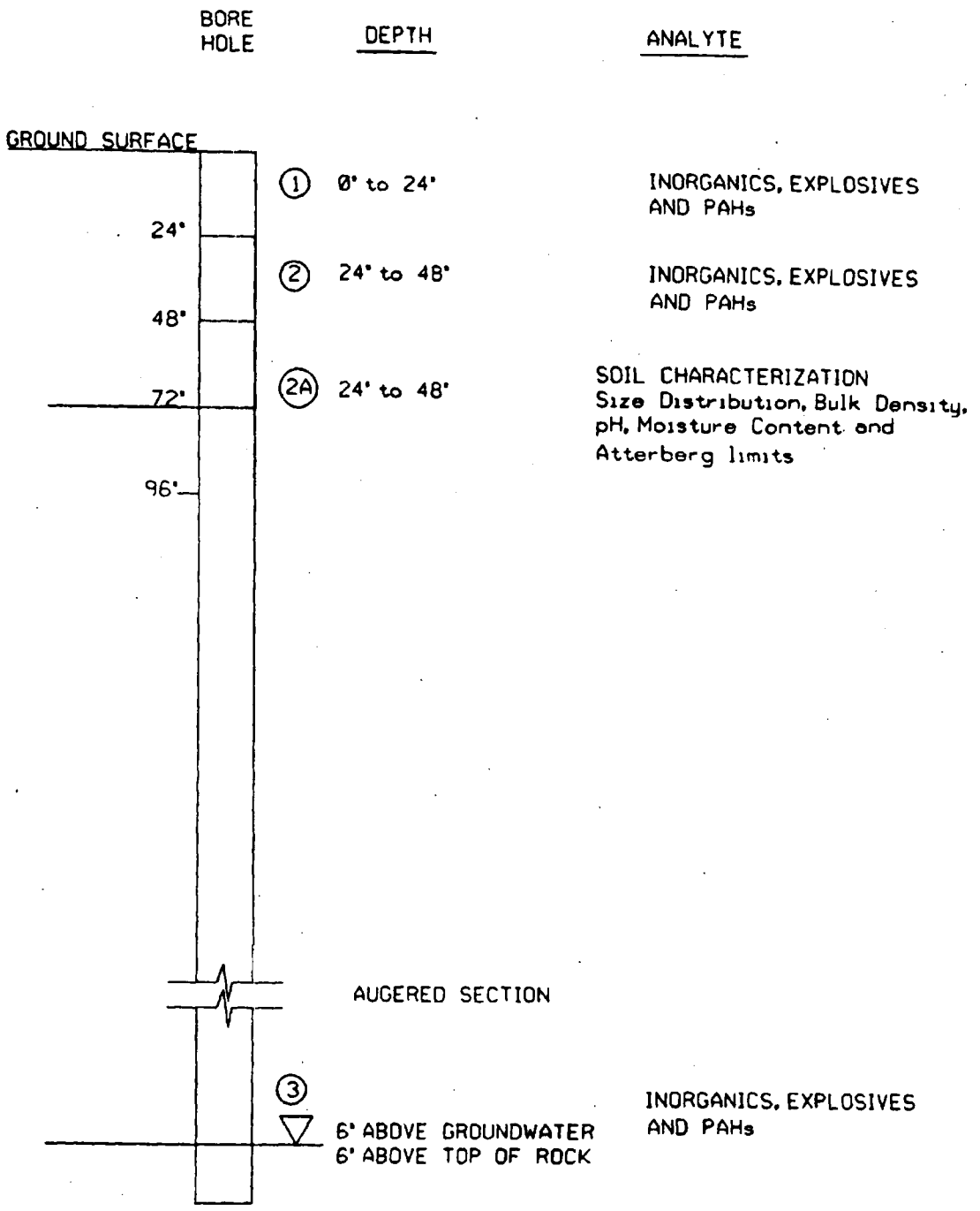

Figure 3.2.1
Diagram of Boring Log with Sample Points
ABG Phase III Part 2 Soils

TABLE 3.2.6.
Types and Numbers of Samples
AMMUNITION BURNING GROUND PART 2

	Field Samples	Quality Assurance and Quality Control: Field/Dups QC	Rinsate Equip	Field Blanks	Trip Blanks	Total
GROUNDWATER:						
Volatiles						
B/N/A					NR	
Pesticides					NR	
TRPH					NR	
Metals					NR	
Other:					NR	
SURFACE WATER:						
Volatiles						
B/N/A					NR	
Pesticides					NR	
TRPH					NR	
Metals					NR	
Other:					NR	
SURFACE SOILS:						
Volatiles 8240	33		NR	0	0	33
B/N/A 8270			NR	NR	NR	
Pesticides			NR	NR	NR	
PAHS	33	2	NR	NR	NR	35
Metals	33	2	5	NR	NR	40
Explosives	33	2	5	NR	NR	40
SUBSURFACE SOILS:						
Volatiles 8240	114	0		0	10	124
B/N/A 8270	0	0		NR	NR	
Pesticides	0	0		NR	NR	
PAHS	114	6	5	NR	NR	125
Metals	114	6	15	5	NR	140
Explosives	114	6	15	5	NR	140
Phy.Parameters	37	NR	NR	NR	NR	37

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

G. K. HILL
Assistant Public Works Officer

TITLE

6/30/93

DATE

Enclosure (2)