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Post-Removal Action Report
for
Site 5 - Swale No. 2
at
Indian Head Division
Naval Surface Warfare Center
Indian Head, Maryland

Engineering Field Activity Chesapeake
Naval Facilities Engineering Command
Northern Division Contract No. N62472-90-D-1298
Contract Task Order 0157

July 1995

Halliburton NUS
CORPORATION

02-95-24/P

POST-REMOVAL ACTION REPORT
SITE 5 - SWALE NO. 2

INDIAN HEAD DIVISION
NAVAL SURFACE WARFARE CENTER
INDIAN HEAD, MARYLAND

COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (CLEAN)

Submitted to:
Engineering Field Activity Chesapeake
Design Branch Code 04
Naval Facilities Engineering Command
Washington Navy Yard, Building 212
Washington, D.C. 20374-2121

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NORTHERN DIVISION CONTRACT NO. N62472-90-D-1298
CONTRACT TASK ORDER 0157

JULY 1995

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EXECUTIVE SUMMARY

A removal action which consisted of excavating approximately 1,750 cubic yards of soil containing elevated levels of silver was performed at Installation Restoration (IR) Site 5 - Swale No. 2, at the Indian Head Division, Naval Surface Warfare Center (IHDIV, NSWC) in Indian Head, Maryland. The objective of the removal action was to eliminate the potential for future release of silver into the downstream environment by removing the source of silver. An action level of 10 mg/kg was previously established for the project and achieved during the removal action; soil with silver concentration above the action level was removed from the site. The removal action construction activities began in November 1994 and was completed in January 1995.

IR Site 5 is located on the southwestern side of Building 731 at IHDIV, NSWC. Between 1953 and 1965, silver-laden photographic processing wastewaters were discharged from Building 731 into two drainage swales; this discharge deposited silver into the soils of the two swales. Soils with elevated levels of silver from Swale No. 1 were removed during a previous removal action. Photographic operations continue in Building 731, however, the spent fixer is now collected and the silver is recovered.

Prior to site construction activities, site investigations were performed to characterize the nature and extent of silver in Swale No. 2. Although silver is a naturally occurring metal, at high concentrations silver can have toxic effects. The soils at IR Site 5 were not found at toxic or hazardous concentrations, however, due to site drainage conditions, there were concerns that the silver could be washed downstream and accumulate to levels which could endanger the downstream aquatic environment. An Engineering Evaluation/Cost Analysis (EE/CA) was conducted to evaluate alternatives for addressing these concerns. Based on the data collected, the decision was made to excavate soils from IR Site 5 and placed them in a manner that would minimize potential release to the environment.

Construction activities were initiated in November 1994. Initial activities included the installation of erosion and sediment control measures to prevent the release of sediment from the site during construction. Excavation of silver laden soils was accomplished using common excavation techniques (e.g., bulldozers, front-end loaders). Soils were transported to the Stump Neck Annex where they were placed in The Rum Point Borrow Pit. The soils were compacted, covered with a 12-inch, low-permeability clay layer, 18 inches of clean soil (fill and top soil), and then revegetated.

Post-removal action sampling and analysis performed after soil excavation verified that remaining soils were below the 10 mg/kg silver action level. The excavated area was backfilled with clean fill material, the swale was reconstructed, and the area was revegetated.

1.0 INTRODUCTION

The Northern Division of the Naval Facilities Engineering Command issued Contract Task Order Number 0157 (CTO 157) to Halliburton NUS Corporation (Halliburton NUS), under the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract No. N62472-90-D-1298. CTO 157 is for evaluation, engineering, design, and construction phase services for a removal action at Installation Restoration (IR) Site 5, Indian Head Division, Naval Surface Warfare Center (NSWC) in Indian Head, Maryland.

CTO 157 consists of tasks to: (1) perform an Engineering Evaluation/Cost Analysis (EE/CA) regarding proposed removal action alternatives for IR Site 5, (2) prepare construction plans and specifications for the implementation of the selected removal action alternative, and, (3) provide post construction award services (PCAS) including construction monitoring, post-removal sampling and analysis, and the development of this Post-Removal Action Report. A listing of documents prepared by Halliburton NUS in support of CTO 0157 is contained in the reference section of this report.

The objective of this Post-Removal Action Report is to briefly review and summarize the construction and field-sampling activities performed during the removal action at IR Site 5. Following a brief review of the Project Background in Section 2.0, significant aspects of the Removal Action Construction Activities are summarized in Section 3.0. Section 4.0 presents Analytical Results, and a Summary and Conclusions are presented in Section 5.0.

2.0 PROJECT BACKGROUND

2.1 SITE DESCRIPTION

Indian Head Division, Naval Surface Warfare Center (NSWC) is located 25 miles south of Washington, D.C., adjacent to the town of Indian Head, in west-central Charles County, Maryland. The primary mission of Indian Head Division NSWC is the development and production of propellant and explosive ingredients and formulants used in ordnance devices.

The project site known as Installation Restoration Site 5 (IR Site 5) is located on the southwestern side of Building 731, which is located on Voegeli Road at the NSWC. The site consists of two drainage swales emanating from the southeast (Swale No. 1) and southwest (Swale No. 2) corners of Building 731. Between 1953 and 1965, silver-laden photographic processing wastewaters were discharged from Building 731, elevating the level of silver in the soils of the two swales. Photographic operations continue in Building 731; however, the spent fixer is now collected and the silver is recovered. A removal action was completed on Swale No. 1 in January 1993. The previous removal action at Swale No. 1 included the excavation and treatment of soil and sediment containing silver at concentrations exceeding the identified action level of 10 mg/kg. The results of the removal action were documented in the Removal Action Findings Report (ABB, 1993). This Post-Removal Action Report addresses the removal action at Swale No. 2.

2.2 SITE HISTORY

Previous sampling at IR Site 5 (ABB, 1991) indicated that some soils and sediments in Swale No. 2 also exceeded the 10 mg/kg action level. In February 1993, Halliburton NUS conducted additional field sampling to define the horizontal and vertical extent of silver within Swale No. 2. The findings and conclusions of this sampling activity are contained in the Field Sampling Report for Site 5 - Swale No. 2 (HNUS, 1994a). An Engineering Evaluation/Cost Analysis (EE/CA) Report (HNUS, 1994b) was also prepared to identify and evaluate removal action alternatives for Swale No. 2. Of the four removal action alternatives identified in the EE/CA, excavation of soil containing silver above the action level and subsequent placement of it at the Rum Point Borrow Pit on the Stump Neck Annex was the alternative selected for implementation. The location of the removal site and placement site is provided in Figure 2-1.

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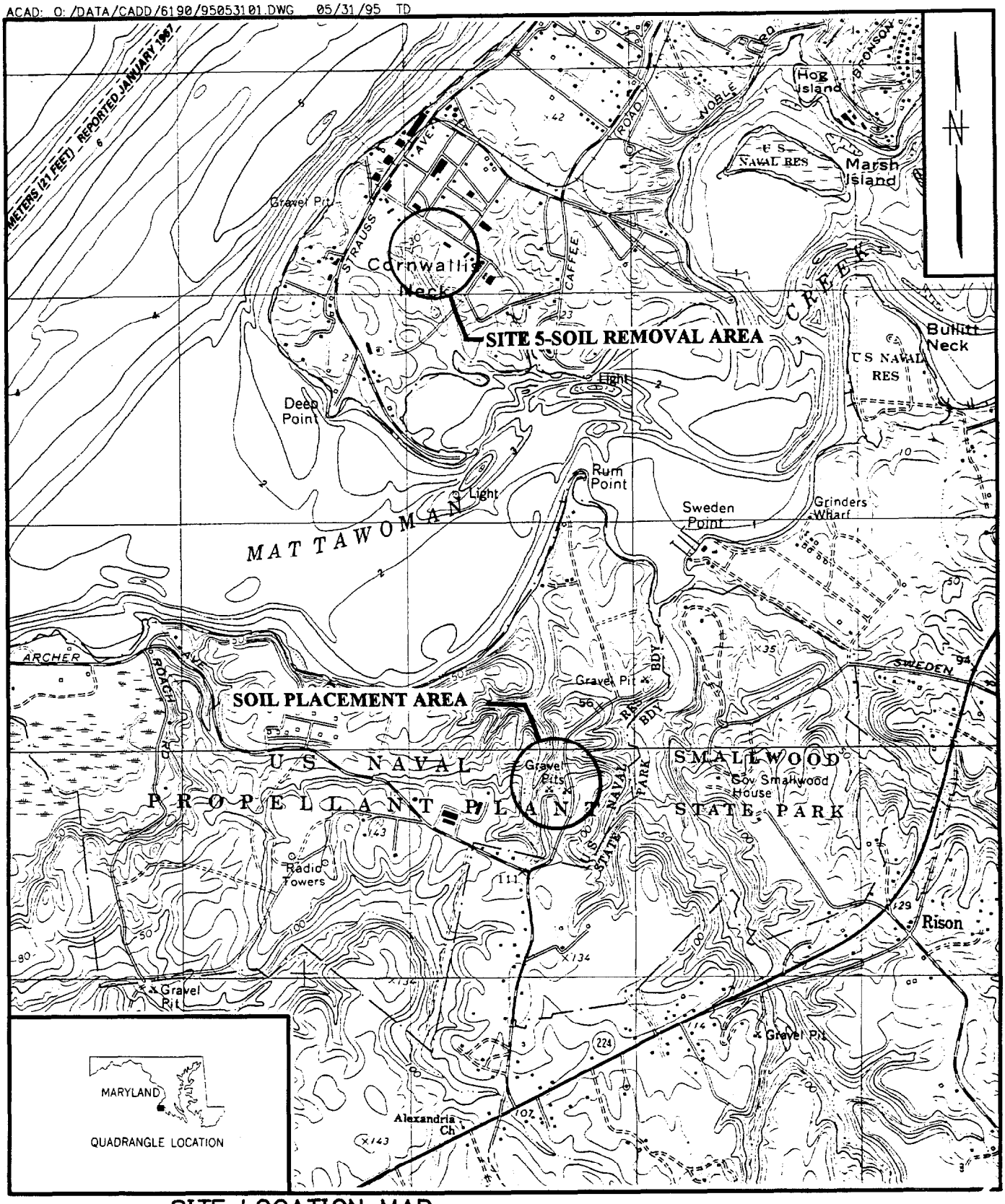

SITE LOCATION MAP
SITE 5 – SWALE No. 2
NSWC INDIAN HEAD, MARYLAND

0 2000 4000
SCALE IN FEET

FIGURE 2-1

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Halliburton NUS prepared construction drawings and specifications to implement the selected removal action alternative (HNUS, 1994c,d). Construction began at IR Site 5 - Swale No. 2 by the Atlantic Division Remedial Action Contractor (RAC), OHM Corporation (OHM), in November 1994.

3.0 REMOVAL ACTION CONSTRUCTION ACTIVITIES

An overview of IR Site 5 - Swale No. 2 is included in Figure 3-1. Design investigations (HNUS, 1994a) identified the area of concern within Swale No. 2 to be approximately 500 feet long and 75 feet wide. The area began at the southwest corner of Building 731 and extended approximately 400 feet southward to the dirt access road. The swale followed the northern edge of the dirt road for approximately 100 feet and then continued southward in the area of the 12-inch CMP and stone outfall. Soil between Buildings 731 and 1135 was also found to contain silver at concentrations exceeding 10 mg/kg.

Under this removal action plan, the following construction activities were performed:

- Site preparation.
- Excavation of all soil containing silver at concentrations greater than the established action level of 10 mg/kg from IR Site 5 - Swale No. 2.
- Transportation of the excavated soil to the Rum Point Borrow Pit for placement.
- Regrading of the soil deposited at the Rum Point Borrow Pit.
- Restoration of the disturbed portions of IR Site 5.

Activities relating to each of these items is reviewed below.

Halliburton NUS provided Post Construction Award Services (PCAS) including monitoring the construction activities of the RAC. Daily construction activities were recorded by the Halliburton NUS field representative into a bound logbook and also on Daily Construction Report forms. The following items were recorded in the Daily Construction Report forms:

- **Equipment**. Numbers and types of major pieces of RAC equipment on site and used each day.

- **Personnel**. Number and classification of RAC personnel on site and a general description of their activity.

- **Tasks Performed**. A general summary of the actual work performed.

- **General Observations**. General observations of construction activity.

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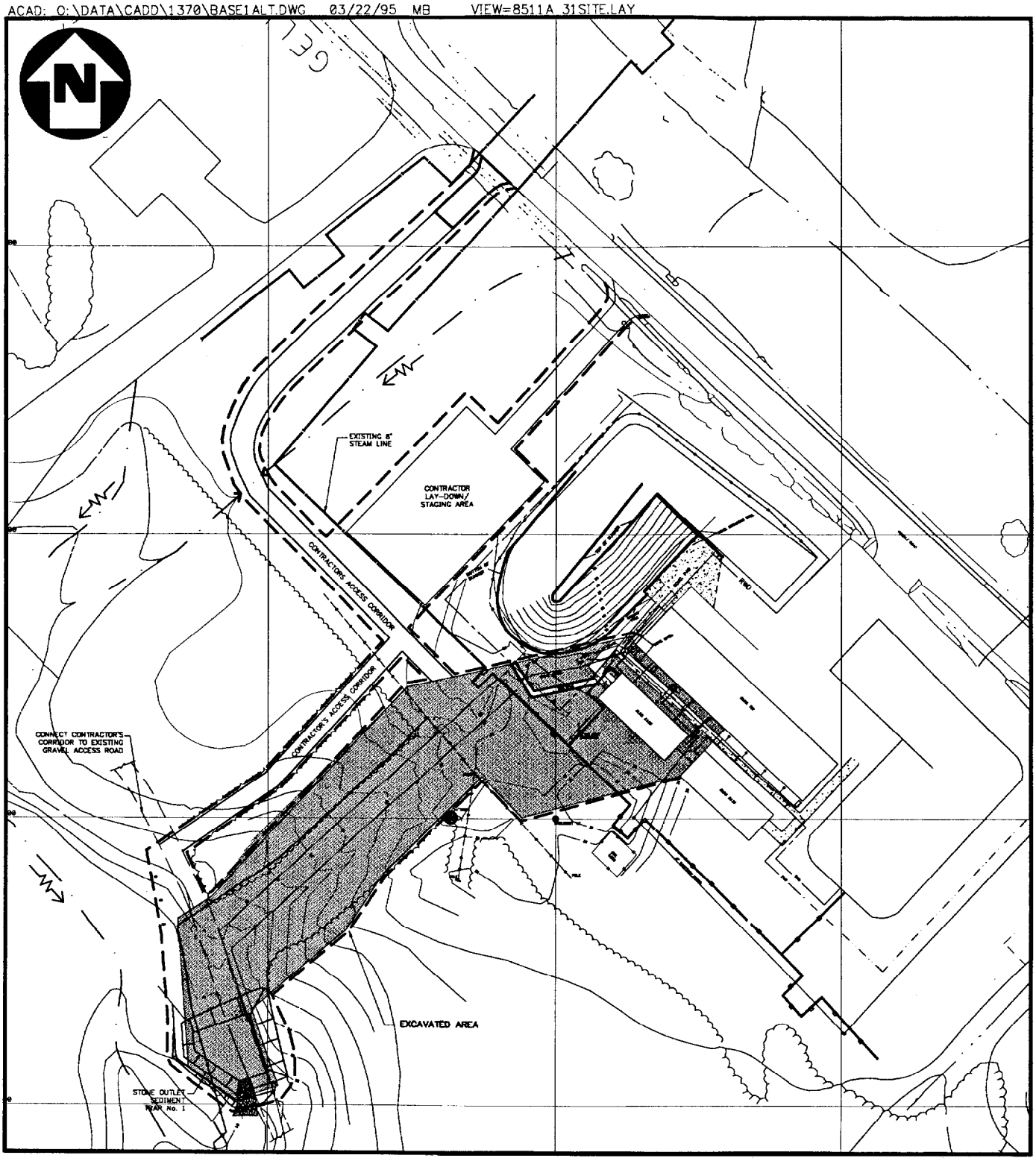

SITE PLAN
IR SITE 5 – SWALE 2
INDIAN HEAD (NSWC)
INDIAN HEAD, MARYLAND

0 100 200
SCALE IN FEET

FIGURE 3-1

Halliburton NUS CORPORATION

Copies of the Daily Construction Report Forms are included in Appendix A. The Navy provided direction and approval of RAC activities through the Indian Head Division NSWC Resident Officer-In-Charge-of-Construction (ROICC). Daily Construction Report forms were submitted to the ROICC.

3.1 SITE PREPARATION

Site preparation activities began in November 1994 and consisted of the following tasks to prepare the site for the actual removal action:

- Layout of the site.
- Clearing and grubbing of the site.
- Construction of equipment decontamination pad.
- Access road construction.
- Installation and maintenance of erosion and sediment control measures.

The general layout of the construction site was defined and the work area was identified by caution tape. Clearing and grubbing of the wooded sections within the work area was completed in a few days. The cleared and grubbed materials were shredded on-site, and the chips were distributed along the eastern and western borders of the construction area. Large stumps were decontaminated by a high-pressure spray wash and placed at the southwest boundary to the site.

Construction of the site decontamination pad was completed on the second day of site preparation.

3.1.1 Access Road Construction

The RAC constructed an access road into the site within the access corridor defined on the construction drawings. The access road extended approximately 600 feet, from Vogelli Road to the dirt road that crossed the southern portion of the construction area. As the access road primarily crossed through grassy fields, only minor grading was required to fully develop the road. On three occasions during site excavation, 10 cy to 15 cy of additional aggregate was delivered and spread along the construction access road to Site 5.

A construction access road along the southern boundary of the Rum Point Borrow Pit was completed on December 14.

3.1.2 Installation and Maintenance of Erosion and Sediment Control Measures

In accordance with the construction specifications (HNUS, 1994d), the following erosion and sediment control measures were installed at Site 5 during site preparation:

- Site sedimentation basin and dike at the southern, downgradient end of the construction area.
- Silt fencing along the southwestern, downgradient boundary of the construction area, and along the southeastern, downgradient boundary of the construction area.

Erosion and sediment control measures were maintained and operated throughout the construction period. Maintenance included: adding riprap to the downstream side of the sedimentation basin dike, replacing and reinforcing deteriorating sections of silt fence, and covering stockpiles of excavated soil in the construction area with plastic sheeting. The sedimentation basin was removed by the RAC after removal action objectives at Site 5 were met. The area was then backfilled and revegetated.

3.2 SOIL EXCAVATION

Excavation of the Site 5 swale began in early December. The excavation was performed in 3 separate sections of the site. The narrow section of the site between Buildings 731 and 1135 was excavated using picks, shovels and a small track hoe. The fenced area immediately south and west of Building 1135 was excavated using a standard, rubber-tire backhoe. The largest portion of the swale, south of the streamline and the fenceline, was excavated using a excavator and dozer. The excavated soil from all three site sections was temporarily stockpiled in the southwestern portion of the swale, adjacent to the site entry point of the construction access road. Between December 21 and December 29, 2,613 tons (approximately 1,750 cy) of soil containing silver at concentrations exceeding the 10 mg/kg action level were excavated and stockpiled in this area prior to subsequent transportation to and placement in the Rum Point Borrow Pit in the Stump Neck Annex.

On December 13 and 14, during excavation, the spent fixer tank was removed from the narrow section of Site 5, between Building 731 and Building 1135. Approximately 15 cy of noticeably darker soil was then excavated from under the base of the tank and stockpiled adjacent to the excavation on an impermeable liner. The metal was analyzed for toxic characteristic leaching procedure (TCLP) constituents. Analysis of the material indicated that the material was not hazardous based on TCLP analysis. Also, this excavation was dewatered during construction. The water was containerized and handled per section 4.2 of this report. Also, on December 29, a 2-inch iron pipe and a 4-inch PVC pipe were broken during

excavation in this narrow section between Buildings 731 and 1135. These two lines were re-excavated by hand and repaired on January 9, following the start of backfilling activities in this area.

3.3 TRANSPORTATION OF EXCAVATED SOIL

Transportation of silver-laden soil to the Rum Point Borrow Pit was begun on December 13. The dump trucks were loaded in the southwestern section of the swale and then weighed before departing for Rum Point. A fleet of five to six trucks was used through the transportation and placement phase.

3.4 PLACEMENT AND REGRADING OF SOIL AT STUMP NECK

As silver-laden soil was delivered and placed at the Rum Point Borrow Pit, it was graded and contoured. The soil was graded in horizontal lifts that varied in depth from 8 to 24 inches. Each lift was compacted by several passes of a track dozer.

Halliburton NUS did not observe regular compaction testing (moisture/density) on the placed soil. A moisture/density field test of the placed soil at the Rum Point was performed on (January 10, 1995); the test was performed on the soil cover layer. The value for this test was reportedly less than 95 percent of standard proctor.

3.5 RESTORATION ACTIVITIES

3.5.1 Swale Restoration

The excavated portions of IR Site 5 were backfilled with clean soil delivered from stockpiles located next to the reconstructed bunker at IR Site 8. Between December 29, 1994 and January 11, 1995, 72 truckloads (approximately 1,080 cy) of clean fill were placed and spread in a 1-foot layer on the Site 5 swale. The placed and spread fill was then covered by a 6-inch layer of topsoil. Fifty-eight truckloads of topsoil were delivered from off Base and spread over the reconstructed portions of IR Site 5 - Swale No. 2.

The IR Site 5 drainage swale was reconstructed and connected to the riprapped drainage outfall located at the southeastern boundary of the reconstruction area. Erosion control matting and seeding were applied to disturbed portions of IR Site 5 - Swale No. 2. On January 11 and January 12, site workers were deployed in two separate shifts in order to accommodate the X-Ray activities inside Building 731. Starting at 7:00 AM and continuing until 6:00 PM or 7:00 PM, the first crew worked on reconstructing the portion of the swale south of the security fenceline. Then starting at 2:00 PM, the second crew worked on

reconstructing the sections of IR Site 5 north of the security fenceline, and between Building 731 and Building 1135. On both days, the second shift worked late into the evening under construction lamps.

Standing water was observed during site inspection of the reconstructed sections of Swale No. 2. Wet soil conditions in the underlying soils between Building 731 and Building 1135 and the southern portion of the swale made grading difficult and created a "pumping" effect on the backfill layers.

3.5.2 Swale Restoration Near Buildings 731 and 1135

One truckload of clay and one truckload AASHTO No. 57 crushed stone were delivered from off Base and placed in the narrow section of Site 5 between Building 731 and Building 1135.

An 8-foot-long section of 12-inch, corrugated metal pipe was installed in the section of the Site 5 drainage swale located inside the security fenceline and immediately west of Building 1135. All large tree stumps remaining from the clearing and grubbing activities were decontaminated by high-pressure spray and stockpiled near the construction access road. Because of excessive water between Building 731 and Building 1135, the RAC was unable to reconstruct the sidewalk that passed through this area. Construction of this sidewalk was stopped on January 11. Arrangements were made for the RAC to return and finish the sidewalk during more favorable conditions.

3.5.3 Restoration of Rum Point Borrow Pit

Warning tape that identified the location of the silver containing soil was placed in a grid pattern on top of the compacted soil at the Rum Point Borrow Pit. A 12-inch, low-permeability clay layer was then applied on top of the warning-tape grid and compacted. On January 9 and 10, a total of 29 truckloads of clay were spread over the silver-containing soil. The compaction sample collected on January 10 achieved a maximum of 85 percent compaction. An additional 15 truckloads of clean fill were then delivered, from off Base, to the Rum Point Borrow Pit for final site contouring.

4.0 ANALYTICAL RESULTS

Figure 4-1 presents a location map of the 37 verification samples collected from IR Site 5 - Swale No. 2. Samples were collected from the surface soils after completion of excavation at Site 5 to confirm that all soil containing silver at concentrations exceeding the 10 mg/kg action level were removed. Samples were collected from throughout the entire excavation. Samples were collected at the bottom of the excavation; the excavation was approximately 3 feet deep in the existing drainage channel and 1 foot deep near the sides. The objective of the sampling and analysis was to determine the levels of silver in the remaining soil at the site and verify that soil containing silver concentrations above the action level were removed. Additional samples were collected from specific points between Building 731 and Building 1135 where high silver concentrations were suspected.

4.1 SOIL SAMPLES

As indicated in Table 4-1, most of the soil containing silver at concentrations greater than the action level was removed from the swale during initial excavation. Only four samples collected after the initial extraction contained silver concentrations above the action level. Samples 01, 14, 17 and 31; additional soil was removed from these areas.

A large tree was located within the eastern boundary of the excavation area. Because of the size and age of the tree, Base personnel requested that, if possible, the tree and its root system should not be disturbed by the site construction activities. A soil sample collected inside the western perimeter of a 10-square-foot "root protection area" (Sample 01) contained silver at a concentration of 23.7 mg/kg. Because the sample analytical results exceeded the 10 mg/kg action level for silver concentration, the tree and the root system were removed.

The original soil sample collected from the former location of the spent fixer tank (Sample 14) contained silver at a concentration of 137 mg/kg. As noted in Section 3.2, an additional 15 cy of dark soil was subsequently removed from this area.

Soil sample 17, collected near the western boundary of Swale No. 2, at the base of the 1-foot-deep excavation limit, contained 12.6 mg/kg of silver. Approximately 9.0 cy of additional soil was subsequently removed from the area of sample 17. The silver concentration of sample 17A (3.92 mg/kg), collected from

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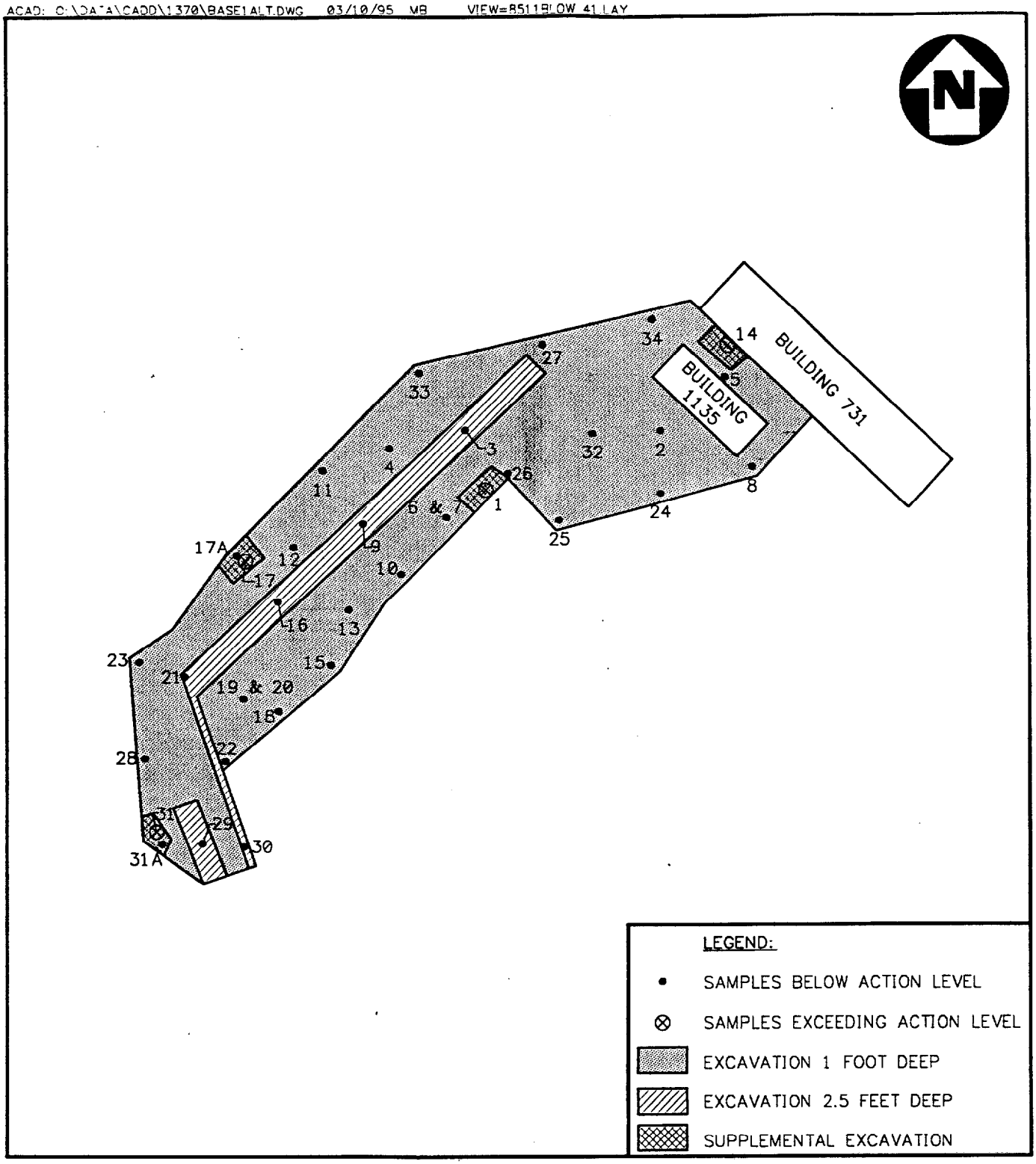

POST REMOVAL VERIFICATION
SAMPLING LOCATION SCHEMATIC
IR SITE 5 – SWALE 2
INDIAN HEAD (NSWC)
INDIAN HEAD, MARYLAND
NOT TO SCALE

FIGURE 4–1

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TABLE 4-1
POST-REMOVAL VERIFICATION SAMPLING RESULTS - IR SITE 5
INDIAN HEAD DIVISION, NSWC, INDIAN HEAD, MARYLAND

Sample ID	Approximate Distance South of Bldg. 1135 (feet)	Silver Concentration (mg/kg)	Sample Depth (Feet)	Comments
01	140	23.7	Surface	
02	20	2.07 U	1	
03	120	2.32 U	2.5	
04	160	2.08 U	1	
05	0	2.04 U	1	
06	160	2.09 U	1	
07	160	2.10 U	1	Duplicate of 06
08	0	2.12 U	1	
09	180	2.12 U	2.5	
10	180	2.11 U	1	
11	180	1.95 U	1	
12	210	2.06 U	1	
13	210	2.15 U	1	
14	0	137.0	1.5	Under fixer tank
15	240	2.11 U	1	
16	240	4.31	2.5	
17	240	12.6	1	
17A	240	3.92	2	Same location as 17
18	280	1.90 U	2	
19	290	1.98 U	1	
20	290	1.96 U	1	Duplicate of 19
21	300	2.10 U	2.5	
22	300	2.25 U	1	
23	310	2.06 U	1	
24	70	2.12 U	1	
25	100	2.19 U	1	
26	100	2.05 U	1	
27	40	2.06	1	
28	350	8.32	1	
29	360	2.14	2.5	
30	350	6.98	1	

TABLE 4-1 (Continued)
POST-REMOVAL VERIFICATION SAMPLING RESULTS - IR SITE 5
INDIAN HEAD DIVISION, NSWC, INDIAN HEAD, MARYLAND

Sample ID	Approximate Distance South of Bldg. 1135 (feet)	Silver Concentration (mg/kg)	Sample Depth (Feet)	Comments
31	400	18.2	1	
31A	400	2.12 U	2.0	Same location as 31
32	100	2.22	1	
33	110	2.00 U	1	
34	0	1.98 U	1	
35	0	2.8	1	Duplicate of 31
TRS-01	0	2,040	Stockpile	Between Bldg. 731 & 1135
TRS-02	0	2.07 U	2.5	Between Bldg. 731 & 1135
Water		**µg/L**		
		129		Decon water

U Indicates that the compound was analyzed for but not detected, number indicates the detection limit.

Shading implicates sample concentrations exceeding 10 mg/kg action level for silver.

the base of the 2-foot-deep re-excavated area verified that all soil containing silver at concentrations exceeding 10 mg/kg had been removed.

The silver concentration of soil Sample 31 (18.2 mg/kg), collected from the base of the 1-foot-deep excavation limit, along the western edge of the runoff sedimentation basin, indicated that additional soil must be removed from this area. An additional 1 cubic yard of soil was subsequently removed from this area. The silver concentration of Sample 31A (2.12 mg/kg), collected from the base of the 2-foot-deep re-excavated area verified that soil containing silver at concentrations exceeding 10 mg/kg had been removed from the area.

4.2 WATER SAMPLES

Approximately 200 gallons of water were containerized as a result of pumping ponded site water and as a result of Site 5 equipment decontamination processes. This water was being temporarily stored on site in a large tank and in two 55-gallon steel drums. A sample of the containerized water contained silver at a concentration of 129 µg/L. At the request of Base personnel, this water was placed in the Base Sewage Treatment Plant.

5.0 SUMMARY AND CONCLUSIONS

Following completion of site preparation activities, excavation of soil containing elevated concentrations of silver was initiated at Site 5 - Swale No.. 2. Excavation activities began in early December 1994, and proceeded in parallel in three distinct areas of Swale No. 2. Approximately 1,745 cy of soil containing silver at concentrations exceeding the 10 mg/kg action level were excavated and subsequently transported and placed in the Rum Point Borrow Pit at the Stump Neck Annex. Additionally, a tank formerly used to contain spent film developing fixer solutions was removed from between Building 731 and Building 1135.

After verification sampling and analysis confirmed that the removal action objectives were achieved, approximately 1,080 cy of clean fill were used to reconstruct Swale No. 2. The swale was covered with 6 inches of topsoil, stabilized, and reseeded. Because of wet soil conditions, reconstruction of the sidewalk was not possible. Arrangements were made for the RAC to return and finish the sidewalk during more favorable weather conditions.

The excavated soil was trucked to the Rum Point Borrow Pit, placed in the borrow pit in lifts, and graded and compacted by a track dozer. A uniform grid of warning tape was placed over the compacted silver-laden soil. The silver-laden soil was then capped with a 12-inch layer of compacted clay, 12 inches of clean fill, and 6 inches of topsoil. The entire site was then seeded and fertilized.

Soil samples were collected to verify that the 10 mg/kg silver action level was achieved. A total of 37 soil samples were collected and analyzed for total silver. Four soil samples collected after initial excavation exceeded the 10 mg/kg action level and additional excavation in those areas was performed. The areas were then resampled and analytical results indicated the areas were below the 10 mg/kg action level.

The removal action objective was achieved; soil containing silver concentrations above the 10 mg/kg action level was removed from the IR Site 5 - Swale No. 2. Swale No. 2 was reconstructed and vegetated. The excavated soil was placed in the Rum Point Borrow Pit, capped and revegetated. All major construction activities at Site 5 - Swale No. 2 were completed on January 20, 1995.

REFERENCES

ABB Environmental Services (ABB-ES), 1993. Removal Action Findings Report.

ABB Environmental Services (ABB-ES), 1991. Draft Site Characterization and Remediation Evaluation Report.

Halliburton NUS Environmental Corporation, 1994. Field Sampling Report for Site 5 - Swale 2.

Halliburton NUS Environmental Corporation, 1994. Engineering Evaluation/Cost Analysis (EE/CA) Report, Installation Restoration Site 5 - Swale 2.

Halliburton NUS Environmental Corporation, 1994. Erosion and Sediment Control Plan Report for Removal of Silver Contaminated Soil at Installation Restoration Site 5.

Halliburton NUS Environmental Corporation, 1994. Construction Documents and Construction Specifications for Removal of Silver Contaminated Soil at Installation Restoration Site 5.

APPENDIX A

DAILY CONSTRUCTION REPORT FORMS

DAILY CONSTRUCTION REPORT

DATE 12-8-94

DAY | S | M | T | W | X | F | S |

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT U.S. Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Cloudy X	Overcast	Rain	Snow
TEMP.	To 32	32-50 X	50-70	70-85	85 up
WIND	Still X	Moderate	High	Reports No	
HUMIDITY	Dry X	Moderate	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 Laborers 3 Operators 1 Account person	Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
0850 1340	Tom Symalla	Navy	

EQUIPMENT AT THE SITE

225 CAT Excavator	1155E Case Track loader	Wood Chipper
1455B Case Track Loader	580 Case Backhoe	Chain Saw
D5H CAT Dozer	Generator/Light Standard	

CONSTRUCTION ACTIVITIES

Tasks Accomplished:
1. Equipment Decon Pad Constructed
2. Sedimentation Basin Completed at site 5
3. Tree removal and vegitation grubbing in Excavation area completed.
4. Construction Access roads to site 5 Final grading Finished

Activities Conducted:
- Hand Excavation of soils between buildings 731 and 1135
- Excavator removing soil in North-Northwestern portion of removal area.
- Dozer Stock piling excavated soil within removal area (South western section)
- Backhoe removes soil from area adjacent to and south of Building 1135
- Wood Chipper mulching vegitation along eastern and western borders of removal area.

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 12-8-94

CONSTRUCTION ACTIVITIES (Continued)

- Removal area delineated with caution tape along east and west boundaries.
- Silt Fence placed along new construction access road.

OHM crew begins shutdown at 1700 hours.

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DAILY CONSTRUCTION REPORT

DATE 12-9-94

DAY | S | M | T | W | TH | F | S | (F: X)

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT U.S. Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Clear	Overcast	Rain	Snow
TEMP.	To 32	32-50	50-70	70-85	85 up
WIND	Still	Light	High	Report No	
HUMIDITY	Dry	Moderate	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 Labarers 3 operators 1 accountant	Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
0820	Jim Behrend Tom Symalla Shawn Phillips Lt. Croom D. Bower	Navy	Attend progress meeting in OHM Field Trailer

EQUIPMENT AT THE SITE

225 CAT Excavator	1155 E Case Track Loader	Wood Chipper
1455 B Case Track Loader	580 Case Backhoe	Chain Saw
D5H CAT Dozer	Generator/Light Standard	

CONSTRUCTION ACTIVITIES

Tasks Accomplished:
1. Truck access road to excavated soil stockpile completed.
2. Equipment decontamination pad completed.
3. Silt fence/Erosion control installed along equipment access roadway to site

Activities Conducted:
- 225 CAT Excavator removing soil from Northeastern portion of site to depth of 1 ft.
- D5H dozer pushing excavated soil to stockpile at southwestern corner of excavation area.
- 580 Case Backhoe removing soil from area south of building 1135
- Wood chipper mulching grubbed vegitation at western border of site.

OHM crew begin shutdown at 1330, depart site at 1530

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO - 157 DATE 12-9-94

CONSTRUCTION ACTIVITIES (Continued)

- Halliburton NUS personnel collect initial post excavation confirmation samples. Total of 4 samples collected on this date.

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CN-157 PF

DAILY CONSTRUCTION REPORT

DATE Dec. 10, 1994

DAY S M T W TH F S X

PROJECT Indian Head - Site 5
JOB NO. CTO - 157
CLIENT NAVY
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Clear	Overcast X	Rain X	Snow
TEMP.	To 32	32-50 X	50-70	70-85	85 up
WIND	Still	Moderate X	High	Report No	
HUMIDITY	Dry	Moderate	Humid X		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	Jim George	Samuel Minor Bill Letz Mike Phillips Scott Sockeen	

VISITORS

Time	Representing	Representing	Remarks

EQUIPMENT AT THE SITE

HAND DIGGING ONLY - Shovels, pick-axe, wheel barrows

CONSTRUCTION ACTIVITIES

Tasks accomplished →
① Hand excavation between the two buildings.
Downslope side excavated
Upslope side started
② Materials Stored and fence closed and secured
Activities conducted: hand excavation between two buildings
laborers store equipment & materials
laborers close fence and secured.

OPTIONAL FORM 99 (7-90)

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To Tony Klimek	From Vince Shickota
Dept./Agency HAUS	Phone #
Fax # (412) 921-4040	Fax #

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BY Robin Summerhill TITLE Env. Scientist

Wiley-Fisk Form 8-1

DAILY CONSTRUCTION REPORT

DATE 12-12-94

DAY: S | M (X) | T | W | TH | F | S

PROJECT Indian Head - Site 5
JOB NO. CTO - 157
CLIENT U.S. Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Brite Sun	Clear (X)	Overcast	Rain	Snow
TEMP.	To 32	32 50 (X)	50-70	70 85	85 up
WIND	Still	Moder (X)	High	Report No	
HUMIDITY	Dry	Moder (X)	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 Laborers 4 Operators 1 accountant	Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
0920	D. Bower	Navy	

EQUIPMENT AT THE SITE

225 CAT Excavator	1155 E Case Track Loader	Wood Chipper
1455B Case Track Loader	580 Case Backhoe	Chain Saw
D5H CAT Dozer	Generator/Light Standard	

CONSTRUCTION ACTIVITIES

Tasks Accomplished: ① 225 CAT excavator digs trench to allow ponded water from completed excavation area to flow to sedimentation pond.
② Access Road to soil stockpile lined with crushed stone and graded to level

Activities Conducted: - Hand Excavation of soil between building 731 and 1135
- 225 CAT Excavator removing soil in North - Northeastern portion of removal area
- Backhoe excavating soils from area south of building 1135.
- General maintenance and refueling of all site equipment.

Halliburton NUS personnel collect additional post-excavation confirmation samples. A total of 2 samples were collected including one QC sample

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DAILY CONSTRUCTION REPORT

DATE 12-13-94

DAY | S | M | T (X) | W | TH | F | S

PROJECT Indian Head
JOB NO. CTO-157
CLIENT US Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Brite Sun	Clear	Overcast (X)	Rain	Snow
TEMP.	To 32	32-50 (X)	50-70	70-85	85 up
WIND	Still	Moderate (X)	High	Report No	
HUMIDITY	Dry	Moderate (X)	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 3 Laborers 1 accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
0910	Tom Symalla	Navy	
	Tony Klimek	HNUS	
	Kevin Donnelly	HNUS	

EQUIPMENT AT THE SITE

225 CAT Excavator	4-Mack Dumptrucks	1-Ford Dump truck
1455B Case Loader	850 John Deere Dozer	580 Case Backhoe
D5H Dozer	1155E Case loader	Wood Chipper
		Light Standard / Generator

CONSTRUCTION ACTIVITIES

Tasks Accomplished: ① Two additional loads of crushed stone delivered to site

Activities Conducted:
- Hand excavation of soils between building 731 and 1135
- 580 Case continues excavation south of Building 1135
- 225 CAT excavator loading trucks from soil stockpile
- 5 dump trucks hauling soil to Stump Neck Annex Fill area
- 850 John Deere leveling soil at Stump Neck Annex Fill area
- Spent Fixer tank removal activities conducted by hand between building 1135 and 731
- 1155E Loader spreads crushed stone and maintains truck access road to soil stockpile.

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DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head REPORT NO.

JOB NO. CTO-157 DATE 12-13-94

CONSTRUCTION ACTIVITIES (Continued)

- D5H Dozer stockpiling soil at northwest corner of excavation area
- OHM Laborer weighs all trucks prior to departure from site to Stump Neck Annex

OHM personnel begin shutdown at 1800 hours

Project Estimates: - 60% completion on soil excavation at Site 5
- 30% completion of soil removal from Site 5 to Stump Neck annex

Halliburton NUS personnel collect 8 post excavation confirmation samples. Total of 14 total samples collected (including QA/QC) as of this date.

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DAILY CONSTRUCTION REPORT

DATE 12-14-94

DAY | S | M | T | W | TH | F | S |

PROJECT Indian Head
JOB NO. CTO-157
CLIENT U.S. Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Brite Sun	Clear	Overcast / Rain	Snow
TEMP.	To 32	33-50	50-70	70-85	85 up
WIND	Still	Jasper	High	Report No
HUMIDITY	Dry	Moger	Humid	

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 4 Laborers 1 accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
0820	Tom Symalla	US Navy	

EQUIPMENT AT THE SITE

225 CAT Excavator	1155E Case loader	4-Mack Dumptrucks	Light Generator
1455B Case loader	580 Case Backhoe	1 Ford Dumptruck	Wood Chipper
D5H CAT Dozer	850 John Deere Dozer	Bomag 172 Compactor	Chain Saw

CONSTRUCTION ACTIVITIES

Tasks Accomplished: ① Spent-Fixer tank removed from between buildings 731 and 1135
② Truck Access road to upper end (south end) of Stump Neck Annex Fill area completed

Activities Conducted:
- Hand Excavation of soils between Building 731 and Building 1135
- 580 Case backhoe excavating soil from within fenced area adjacent to building 1135
- D5H Dozer stockpiling soil at Northwest corner of excavation area
- 1155 Case loader spreads stone and maintains Truck access road to soil stock pile
- 225 Excavator loading trucks from soil stockpile at Southwestern corner of site.
- 4-mack dump trucks and 1 Ford dump truck hauling soil from site 5 to stump Neck Annex Fill Area (30 Total loads this date)

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DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head REPORT NO.

JOB NO. CTO-157 DATE 12-14-94

CONSTRUCTION ACTIVITIES (Continued)

- Laborer weighing dump trucks prior to departure for Stump Neck Annex
- 850 Dozer spreading Fill material at Stump Neck Annex.

OHM personnel begin shutdown at 1730 hours

Project Estimates: - 70% completion on soil excavation at Site 5
- 55% completion of soil removal from Site 5 to Stump Neck Annex

Note: - Fill material being placed into Stump Neck Fill area is greater than 8-inch lifts.
- Compaction of Fill material being conducted with 850 John Deere Dozer rather than Compactor
- Density / Compaction testing of Fill material not being conducted.

Halliburton NUS Personnel collect sample from location under spent-Fixer tank which was removed from between buildings. Total of 15 samples collected to date (including QA/QC)

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DAILY CONSTRUCTION REPORT

DATE 12-15-94

DAY | S | M | T | W | TH X | F | S |

PROJECT Indian Head
JOB NO. CTO-157
CLIENT U.S. Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Brite Sun	Clear X	Overcast X	Rain	Snow
TEMP.	To 32	32-50 X	50-70	70-85	85 up
WIND	Still X	Moder	High	Report No	
HUMIDITY	Dry	Moder X	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 3 Laborers 1 accountant.	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
1445	Tom Symalla	US Navy	

EQUIPMENT AT THE SITE

225 CAT Excavator	1155 E Case loader	6-Mack Dump trucks	Light Generator
1455B Case loader	580 Case Backhoe	1-Ford Dump truck	Wood Chipper
D5H CAT Dozer	850 John Deere Dozer	Bomag 172 Compactor	Chain Saw

CONSTRUCTION ACTIVITIES

Tasks Accomplished: ① Central and Southwestern portion of excavation completed at Site 5
② Fuel tanks delivered to site. - one each for Site 5 and Stump Neck Annex Fill Area
③ Silt fencing placed along upper and lower truck access roads to Stump Neck Annex Fill Area.

Activities Conducted: - D5H Dozer stock piling soil at Northwestern corner of excavation area
- 1155 Case loader places large stumps from removal area into on site equipment decon pad.
- 225 Excavator loading trucks from Southwestern and Northwestern Stock piles
- 6 Mack Dump trucks and 1 Ford Dump truck hauling soil from site 5 to Stump Neck Annex Fill Area (Total of 42 Truckloads this date)

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DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head REPORT NO.

JOB NO. CTO-157 DATE 12-15-94

CONSTRUCTION ACTIVITIES (Continued)

- Laborer weighing dump trucks prior to departure to Stump Neck Annex
- Laborer sweeping mud/dirt which has fallen from Dump trucks onto roadways surrounding the site.
- 850 Dozer spreading/compacting soil from site 5 at Stump Neck Annex Fill Area
- Mechanic repairs rear-swing mechanism on 580 Case Backhoe

OHM personnel begin site shut down at 1700 hours

Project Estimates: -75% completion on Soil excavation at site 5
-70% completion of soil removal from Site 5 to Stump Neck Annex Fill Area

Note! -Soil compaction at Stump Neck Annex Fill area being conducted by 850 John Deere Dozer rather then Compactor
- Compaction Testing not being conducted at Stump Neck Annex
- Upper truck Access road to Stump Neck Annex No longer in use by OHM - All trucks accessing Fill area from lower access road.

Hallibuirton NUS personnel collect 9 additional post-excavation confirmation samples Total of 23 samples collected as of this date (including QA/QC samples)

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DAILY CONSTRUCTION REPORT

DATE 12-16-94

DAY | S | M | T | W | TH | F (X) | S |

PROJECT Indian Head
JOB NO. CTO-157
CLIENT US Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Brite Sun	Clear (X)	Overcast	Rain	Snow
TEMP.	To 32	33-50 (X)	50-70	70-85	85 up
WIND	Still (X)	Moder	High	Report No	
HUMIDITY	Dry	Moder (X)	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 3 Laborers 1 Accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
	None		

EQUIPMENT AT THE SITE

225 CAT Excavator	1155E Case loader	4-Mack Dump Trucks	Bobcat (Sweeper)
1455B Case Loader	580 Case Backhoe	1-Ford Dump Truck	Wood Chipper
DSH CAT Dozer	850 John Deere Dozer	Bomag 172 Compactor	Light Generators

CONSTRUCTION ACTIVITIES

Tasks Accomplished: (1) DSH Dozer transferred from Site 5 to Stump Neck Annex Fill Area
(2) Bobcat with Sweeper attachment delivered to Site 5
(3) Secondary Containment berms constructed around fuel tanks at site 5 and Stump Neck Annex.

Activities Conducted:
- 225 CAT Excavator loading trucks from the Northwestern stockpile
- 4-Mack Dump trucks and 1-Ford Dump truck hauling soil from Site 5 to Stump Neck Annex Fill Area (Total of 25 Truckloads this date)
- Laborer weighing trucks prior to departure for Stump Neck Annex
- Bobcat machine with sweeper attachment cleaning roadways surrounding site 5.
- 850 Dozer spreading/compacting soil from site 5 at Stump Neck Annex Fill Area.

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT Indian Head REPORT NO.

JOB NO. CTO-157 DATE 12-16-94

CONSTRUCTION ACTIVITIES (Continued)

OHM personnel begin site shutdown at 1415 hours

Project Estimates: - 90% completion on soil excavation at Site 5
- 90% completion on soil removal from site 5 to Stump Neck Annex Fill Area

Note: - Soil compaction at Stump Neck Annex Fill Area being conducted by 850 John Deere Dozer rather than Bomag Compactor. Also, compaction testing of soil placed at Stump Neck Fill Area is not being conducted

- All sample results from within the site 5 excavation area have shown samples to be below detection limits with the exception of sample RA-14 which was collected at depth of 12 inches from under the location of spent-fixer tank which was removed from between building 731 and building 1135. Also, sample location RA-01 which was collected adjacent to large tree to be left within excavation area contained elevated levels. However, the soil from RA-01 location was removed after sample results were obtained. Results for all samples analyzed to date are listed below:

RA-01 → 23.7 mg/Kg	RA-09 → <2.12 mg/kg
RA-02 → <2.07 mg/Kg	RA-10 → <2.11 mg/Kg
RA-03 → <2.32 mg/Kg	RA-11 → <1.95 mg/Kg
RA-04 → <2.08 mg/Kg	RA-12 → <2.06 mg/Kg
RA-05 → <2.04 mg/Kg	RA-13 → <2.15 mg/kg
RA-06 → <2.09 mg/Kg	RA-14 → 137 mg/Kg
RA-07 → <2.10 mg/Kg	RB-01 → <8.5 ug/L
RA-08 → <2.12 mg/kg	

- A copy of sample location map has been attached to this report.

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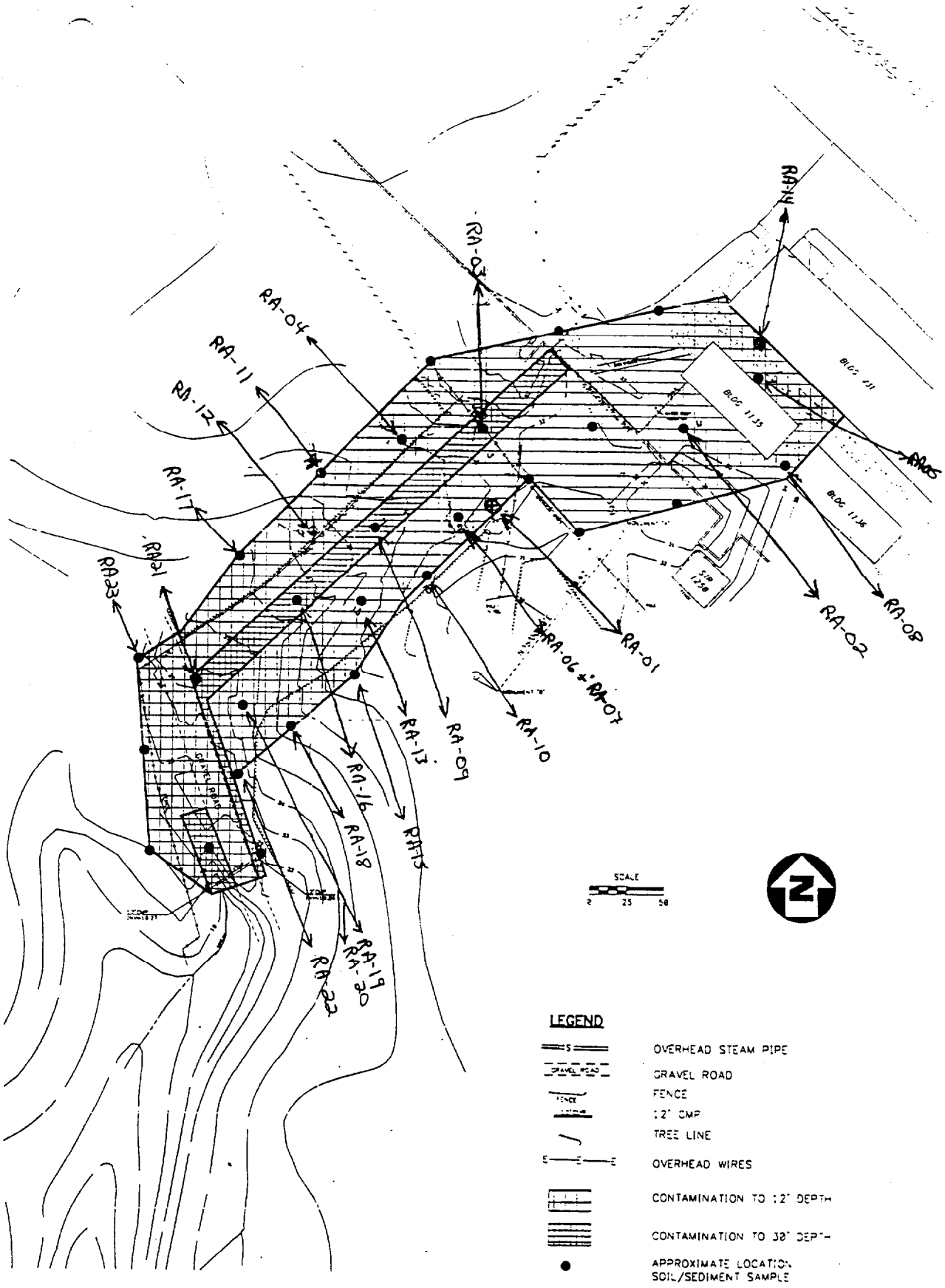

POST REMOVAL VARIFICATION SAMPLING LOCATION PLAN
IR SITE 5
INDIAN HEAD DIVISION, NSWC
INDIAN HEAD, MARYLAND

FIGURE 2-1

HALLIBURTON NUS CORPORATION

Page 3 of 3

Halliburton NUS

DAILY CONSTRUCTION REPORT

DATE 12-19-94

DAY: S | M (X) | T | W | TH | F | S

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Cloudy (X)	Overcast	Rain	Snow
TEMP.	To 32	32-50 (X)	50-70	70-85	85 up
WIND	Still	Moderate (X)	High	Report No	
HUMIDITY	Dry (X)	Moderate	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 4 laborers 1 accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
0900	Tom Symalla	US Navy	

EQUIPMENT AT THE SITE

225 CAT Excavator	450 Case Dozer	3-Mack Dump trucks	2 Light Generators
1155E Case Loader	580 Case Backhoe	1-Ford Dump truck	Wood Chipper
D5H CAT Dozer	Bomag 172 Compactor	Bobcat with Sweeper	

CONSTRUCTION ACTIVITIES

Tasks Accomplished:
1. 1455B Case track Loader and 850 John Deere Dozer removed from site.
2. Stumps from excavation area decorned / power washed and placed onto pile outside excavation area

Activities Conducted:
- 225 CAT Excavator loads trucks from the Northwestern Stockpile
- 3-Mack dump trucks and 1-Ford dump truck hauling soil from site 5 to Stump Neck Annex Fill Area (total of 11 trucks this date)
- Laborer weighing trucks prior to departure for Stump Neck Annex
- Bobcat / Sweeper cleaning roads surrounding Site 5
- D5H Dozer Compacting / Spreading Fill from site 5 at Stump Neck Annex
- 450 Case Dozer and OHM Laborers continue excavation of soil inside secure / fenced area near building 1135.

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Halliburton NUS

DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 12-19-94

CONSTRUCTION ACTIVITIES (Continued)

Project Estimates: 95% completion on soil Excavation at Site 5
- 95% completion on soil removal From Site 5 to Stump Neck Annex

Note: - Compaction testing of soil being placed at Stump Neck Annex is not being conducted.

- the following sample results were obtained on this date:

RA-15 → < 2.11 mg/kg	RA-20 → < 1.96 mg/Kg
RA-16 → 4.31 mg/Kg	RA-21 → < 2.10 mg/Kg
RA-17 → 12.6 mg/Kg	RA-22 → < 2.25 mg/Kg
RA-18 → < 1.90 mg/Kg	RA-23 → < 2.06 mg/Kg
RA-19 → < 1.98 mg/Kg	

- Sample results of location RA-17 exceeded the site action limit of 10 mg/Kg. OHM personnel re-excavated an approximate 10 Ft radius around this location to a depth 8 to 10 inches deeper than previous sample.
- HNUS personnel collect 6 additional samples on this date including resample of location RA-17. A total of 29 samples have been collected to date (including QC and resample)

SHEET 2 OF 3

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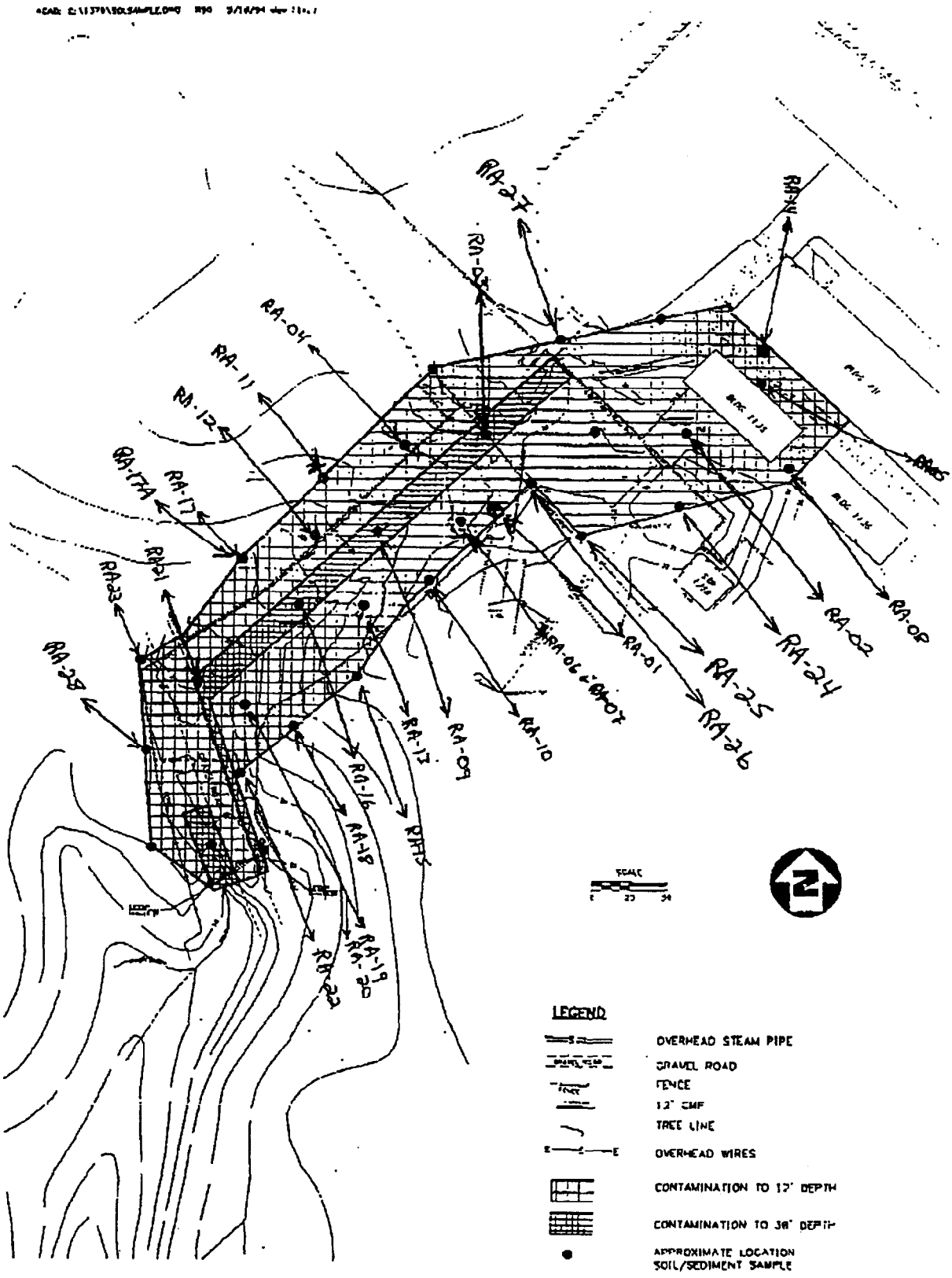

POST REMOVAL VARIFICATION SAMPLING LOCATION PLAN
IR SITE 5
INDIAN HEAD DIVISION, NSWC
INDIAN HEAD, MARYLAND

FIGURE 2-1

HALLIBURTON NUS CORPORATION

Halliburton NUS

DAILY CONSTRUCTION REPORT

DATE 12-20-94

DAY: S | M | T (X) | W | TH | F | S

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Bright	Overcast	Rain	Snow
TEMP.	To 32	32-50	50-70	70-85	85 up
WIND	Still	Light	High	Report No	
HUMIDITY	Dry	Moder	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 4 Laborers 1 accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
1030	Tom Symalla Jim Croom	US Navy	

EQUIPMENT AT THE SITE

225 CAT Excavator	450 Case Dozer	3-Mack Dump Trucks	
1155 Case Loader	580 Case Backhoe	1-Ford Dump Truck	
D5H Dozer	Bomag 172 Compactor	Bobcat Sweeper	2 generators

CONSTRUCTION ACTIVITIES

Tasks Accomplished: ① Wood Chipper machine removed from the site.
② Light Standard/generator bulbs repaired by rental company mechanic

Activities Conducted: - 1155 Case loader loads out soil from Northwest stockpile to Ford Dump truck
- Laborer weighs Ford Dump truck prior to departure to Stump Neck Annex
- D5H Dozer spreading/compacting soil at Stump Neck Annex Fill Area
- 450 Case Dozer and OHM Laborers cutting Timber removed from excavation area into manageable size pieces and stockpiling at the Northwest corner of site

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Halliburton NUS

DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 12-20-94

CONSTRUCTION ACTIVITIES (Continued)

Project Estimates: - 95% completion on Soil Excavation From Site 5
- 95% completion on removal of soil from Site 5 to Stump Neck Annex Fill Area

Note: 3-Mack Trucks sent back to garage at 1000 hours. Due to Excavator breakdown these trucks were not utilized on this date these trucks will return to the site on 12-21-94 and replacement Excavator expected to be on site also.

OHM personnel begin site shut down at 1430 hours.

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Halliburton NUS

DAILY CONSTRUCTION REPORT

DATE 12-21-94

DAY | S | M | T | W | TH | F | S |

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US NAVY
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Cloudy	Overcast	Rain	Snow
TEMP.	To 32	32-50	50-70	70-85	85 up
WIND	Still	Breeze	High	Report No
HUMIDITY	Dry	Moist	Humid	

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 4 laborers 1 accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
1500	Tom Symalla Shawn Phillips Jim Croom	US Navy	

EQUIPMENT AT THE SITE

690 John Deere Excavator	450 Case Dozer	2 Mack Dump trucks
1155E Case Loader	Bomag 172 Compactor	1 Ford Dump truck
DSH CAT Dozer	580 Case Backhoe	Bobcat Sweeper
		2 Light Generators

CONSTRUCTION ACTIVITIES

Tasks Accomplished: ① 690 John Deere Excavator delivered to site 5

Activities Conducted: - 690 John Deere Excavator loading Mack trucks and Ford truck from Northwest Stockpile
- Laborer weighs trucks prior to departure to Stump Neck Annex Fill Area
- DSH Dozer spreading / compacting soil at Stump Neck Annex
- 450 Case Dozer removing on site equipment decon pad (pushed onto Northwest Stockpile)
- Bobcat Sweeper cleaning roadways around Site 5

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Halliburton NUS

DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 12-21-94

CONSTRUCTION ACTIVITIES (Continued)

Project Estimates: -97% completion on soil excavation from site 5
-97% completion on soil removal from Site 5 to Stump Neck Annex Fill area

Note: -the following Sample results were obtained on this date:

RA-24 → <2.12 mg/Kg
RA-25 → <2.19 mg/Kg
RA-26 → <2.05 mg/Kg
RA-27 → 2.06 mg/Kg
RA-28 → 8.32 mg/Kg
RA-17A → 3.92 mg/Kg

OHM personnel begin site shut down at 1415 hours
- 1 operator and 3 laborers left site at 1230 hours

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SHEET 2 OF 2

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DAILY CONSTRUCTION REPORT

DATE 12-28-94

DAY: S | M | T | W (X) | TH | F | S

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US NAVY
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Clear (X)	Overcast	Rain	Snow
TEMP.	To 32	32-50 (X)	50-70	70-85	85 up
WIND	Still (X)	Moderate	High	Report #10	
HUMIDITY	Dry	Moderate (X)	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 4 Laborers 1 Accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
—	None	—	—

EQUIPMENT AT THE SITE

690 John Deere Excavator	450 CASE Dozer	3 Mack Dump Trucks	Bobcat Sweeper
1155 E Case Loader	Bomag 172 Compactor	1 Ford Dump Truck	Jackhammer
D5H CAT Dozer	580 CASE Backhoe	TB15 Takeuchi mini-excavator	

CONSTRUCTION ACTIVITIES

Tasks Accomplished:
1. Equipment decon pad removed with 450 Case Dozer
2. 690 Excavator completes removal of Northwest Soil stockpile

Activities Conducted:
- 690 John Deere Excavator loads out Dump Trucks from Northwest Stockpile
- Laborer weighs trucks prior to departure for Stump Neck Annex. Total of 18 Trucks Loaded out on this date.
- 450 Case Dozer removes equipment decon pad to Northwest Stockpile.
- TB15 mini-excavator removing soil from Tank removal area between building 1135 and building 731 (assisted by Laborers)
- 690 John Deere Excavator begins removing accumulated sediment from sedimentation basin at Site 5

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DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 12-28-94

CONSTRUCTION ACTIVITIES (Continued)

- DSH CAT Dozer compacting / Spreading soil From Site 5 at Stump Neck Annex Fill Area

Project Estimates: - 98% completion on soil excavation From Site 5
- 98% completion on soil removal From site 5 to Stump Neck Annex

Note: No compaction testing of soil being conducted at Stump Neck Annex Fill Area.

HNUS personnel collect sample of Black soil From Tank removal area between buildings 1135 and 731. Sample to be analyzed for TCL Volatiles, TAL metals, TCLP metals, reactivity, ignitability, pH / acidity. A total of 31 samples have been collected From Site 5 todate. (including QC samples)

OHM personnel begin site shut down at 1645 hours

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Wiley-Fisk Form 6-2

Halliburton NUS

DAILY CONSTRUCTION REPORT

DATE 12-29-94

DAY: S | M | T | W | TH [X] | F | S

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Clear [X]	Overcast	Rain	Snow
TEMP.	To 32	32-50 [X]	50-70	70-85	85 up
WIND	Still	Breezy [X]	High	Report No	
HUMIDITY	Dry	Moder [X]	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 4 Laborers 1 accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
0910	Jim Groom	US Navy	

EQUIPMENT AT THE SITE

690 John Deere Excavator	450 CASE Dozer	2 Mack Dumptrucks	Bobcat Sweeper
1155 E Case Loader	Bomag 172 Compactor	1 Ford Dumptruck	Jackhammer
DSH CAT Dozer	580 CASE backhoe	TB15 Takeuchi Excavator	

CONSTRUCTION ACTIVITIES

Tasks Accomplished: ① Excavation of Soil at Site 5 completed
② Excavation of soil from under tank removed from between building 731 and building 1135 completed

Activities Conducted:
- 690 John Deere loads out soil and scattered debris from Southwest corner of site
- Dump trucks haul soil and debris to Stump Neck Annex (Total of 9 trucks this date)
- Laborer weighs trucks prior to departure for Stump Neck fill area
- TB15 excavator and Laborers continue excavation under tank removed from between building 731 and building 1135
- DSH Dozer compacting / spreading soil from site 5 at Stump Neck Annex
- Dumptrucks deliver 10 loads of cover / fill material to site 5.
- 690 excavator begins backfill at site 5 using cover / fill material.

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DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 12-29-94

CONSTRUCTION ACTIVITIES (Continued)

- 450 Case Dozer and 1155 Case loader assisting with back fill activities at site 5

Project Estimates: - 100% completion on soil Excavation at Site 5
- 100% completion on soil removal from Site 5 to Stump Neck annex.
- 2% completion on back Fill / regrade at site 5

Note: - No compaction testing of soil conducted at Stump Neck annex Fill area as of this date.
- 2" iron pipe and 4" PVC pipe broken by TBIS excavator in area between building 1135 and building 731. OHM personnel did not repair these pipes as of end this date.
- fair amount of black-stained soil still visible in completed excavation of Tank removal area between buildings 1135 and 731. Approximately 15 yds³ of this stained soil has been removed and Temporarily stockpiled between buildings 1136 and 731
- ponded water from Tank removal area has been pumped into tank removed from site as well as 2-55 gallons drums which are located North of building 1135.

HNUS personnel collect 7 post removal verification samples from within Site 5 excavation. Also collect one sample (composite) of base of excavation from tank removal area. The 7 post removal samples were sent to lab for analysis. the one sample from Tank removal area will be archived, pending analytical results of previous sample of this area. A total of 39 samples have been collected to date (including QC samples) (see attached map for sample locations)

OHM personnel begin site Shut down at 1640 hours

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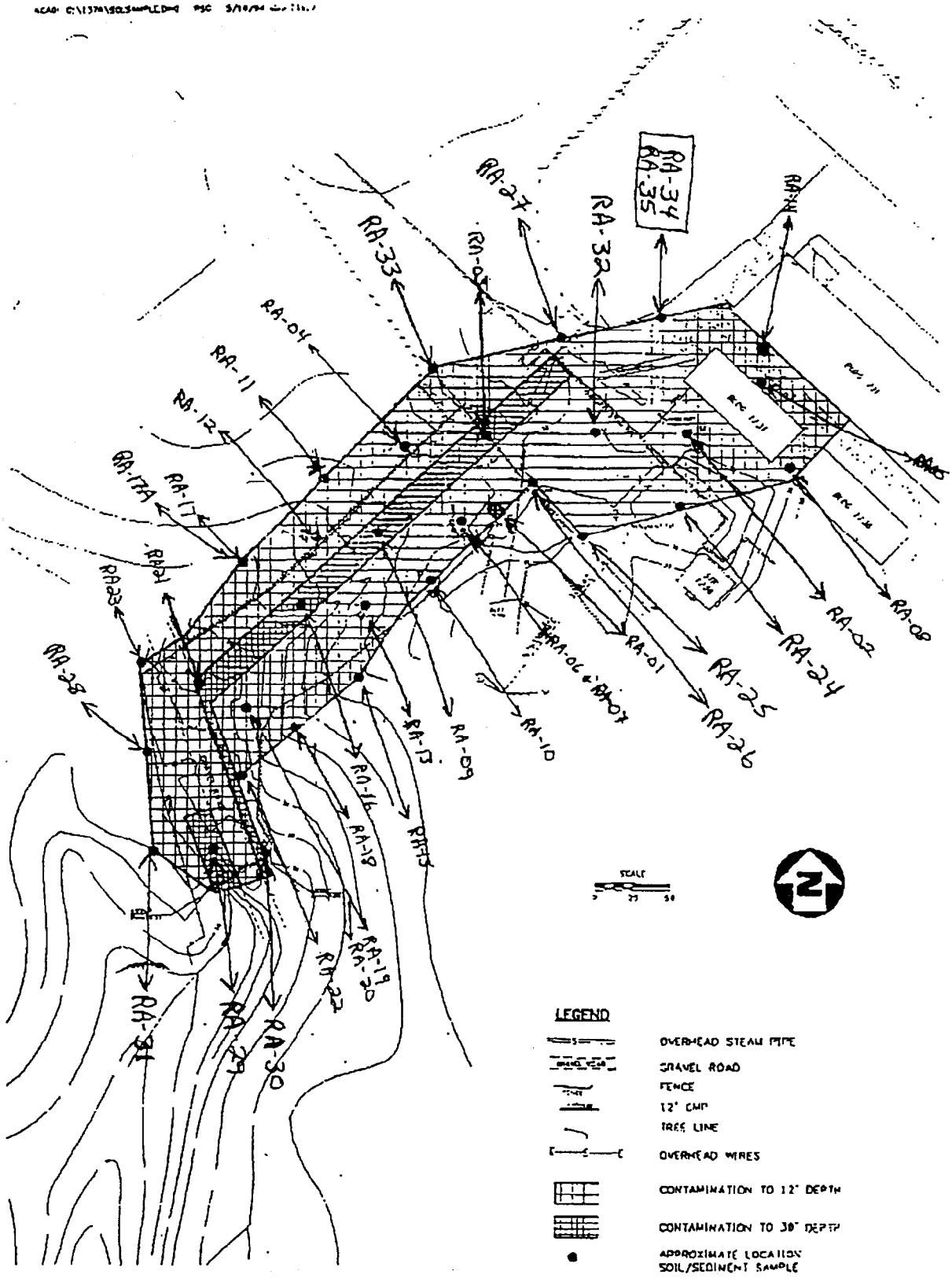

POST REMOVAL VARIFICATION SAMPLING LOCATION PLAN
IR SITE 5
INDIAN HEAD DIVISION, NSWC
INDIAN HEAD, MARYLAND

FIGURE 2-1

HALLIBURTON NUS CORPORATION

Page 3 of 3

Halliburton NUS

DAILY CONSTRUCTION REPORT

DATE 12-30-94

DAY | S | M | T | W | TH | F | S | (F marked)

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Clear	Overcast	Rain	Snow
TEMP.	To 32	32-50	50-70	70-85	85 up
WIND	Still	Moderate	High	Report No	
HUMIDITY	Dry	Moderate	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	3 operators 3 Laborers 1 accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
—	None	—	—

EQUIPMENT AT THE SITE

690 John Deere Excavator	450 CASE Dozer	2 Mack Dump Trucks	Bobcat Sweeper
1155E Case Loader	Bomag 172 Compactor	1 Ford Dump Truck	Jackhammer
DSH CAT Dozer	580 Case Backhoe	TB15 Takeuchi Excavator	2 Light Generators

CONSTRUCTION ACTIVITIES

Tasks Completed: (1) Excavation of Black stained soil between building 1135 and building 731 completed.
(2) 55-gallon drums and removed Tank, which contain water pumped from Tank removal excavation area, covered with PVC sheeting

Activities Conducted:
- 690 Excavator and 450 Dozer spreading backfill material at Site 5
- Dump trucks delivering backfill material to Site 5
- TB15 Excavator and Laborers completing removal of Black Stained soil from Tank removal area between buildings 731 and 1135.
- 2nd 690 Excavator loading out clean fill material pile from Bunker Area of Site 8 to Stump Neck Annex.
- Dump trucks hauling fill material from Site 8 to Stump Neck Annex Fill Area.
- DSH Dozer spreading/compacting fill material at Stump Neck Annex Fill Area

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Halliburton NUS

DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 12-30-94

CONSTRUCTION ACTIVITIES (Continued)

Project Estimates: - 5% completion on Backfill / Regrading at Site 5.
- AT completion of soil excavation at Site 5 2613 tons of soil (estimated) have been removed from Site 5 to Stump Neck Annex.

Note: - Warning tape has not been placed directly on top of Silver contaminated soil (as per specifications). Fill material from Site 8 hauled to Stump Neck Fill Area and spread over top of Silver contaminated soil.
- Compaction testing not being conducted at Stump Neck Annex Fill Area.

The Following Sample results were obtained on this date:

RA-29 → 2.14 mg/Kg
RA-30 → 6.98 mg/Kg
RA-31 → 18.2 mg/Kg
RA-32 → 2.22 mg/Kg
RA-33 → <2.0 mg/Kg
RA-34 → <1.98 mg/Kg
RA-35 → 2.80 mg/Kg

Other personnel begin site shut down activities at 1215 hours

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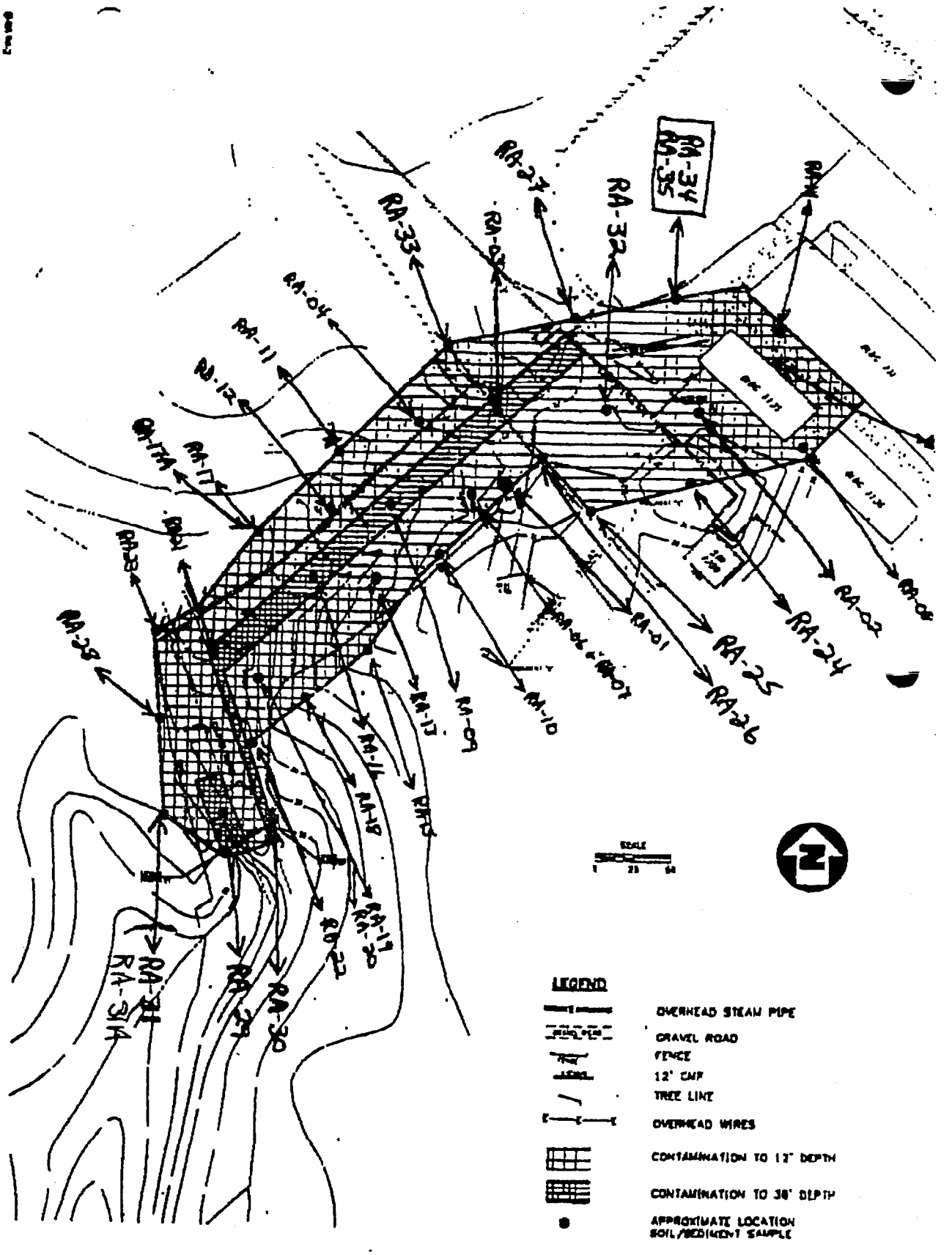

POST REMOVAL VARIFICATION SAMPLING LOCATION PLAN
IR SITE 5
INDIAN HEAD DIVISION, NSWC
INDIAN HEAD, MARYLAND

FIGURE 2-1

HALLIBURTON NUS CORPORATION

Page 3 of 3

Halliburton NUS

DAILY CONSTRUCTION REPORT

DATE 1-4-95

DAY: S | M | T | W (X) | TH | F | S

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Brite Sun	Hazy (X)	Overcast	Rain	Snow
TEMP.	Below 32 (X)	32-50	50-70	70-85	85 up
WIND	Still	Moder (X)	High	Report No	
HUMIDITY	Dry	Moder (X)	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	Dave Dorris	4 operators 5 Laborers 1 Accountant	Temporary Site Supervisor

VISITORS

Time	Representing	Representing	Remarks
0900	D. Brower	US Navy	—

EQUIPMENT AT THE SITE

690 John Deere Excavator	450 CASE Dozer	Ford Dump Truck	2 light Generators
1155E Case Loader	Bomag 172 Compactor	3 Mack Dump trucks	690 JD Excavator
D5H CAT Dozer	Bomag 1720 Compactor	Bobcat Sweeper	

CONSTRUCTION ACTIVITIES

Tasks Accomplished: (1) Removal of clean Fill soil pile From bunker area of Site 8 to Stump Neck Annex Fill Area completed.
(2) Additional excavation in and around sample location RA-31 completed.

Activities Conducted:
- 690 Excavator 1155 Loader and 450 Dozer spreading fill material at site 5
- Soil/Fill material being hauled into site 5 for backFill operations. Total of 30 truck loads hauled in this date.
- 2nd 690 Excavator loading out clean fill soil pile From bunker area of site 8 to Stump Neck Annex. 22 truck loads hauled out this date and total of 28 loads were removed from this area
- Dump trucks hauling material from site 8 to Stump Neck Annex.

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DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 1-4-95

CONSTRUCTION ACTIVITIES (Continued)

- D5H Dozer spreading / compacting fill from site 8 at Stump Neck Annex.
- Laborers conduct hand excavation around broken PVC pipe between building 1135 and 731 to repair pipe. Also dig out hole to replace fence post removed between buildings
- Water which was temporarily stored in tank removed from between building 1135 and 731, pumped into 55-gallon drums by OHM Laborer.
- 690 excavator re-excavates around sample location RA-31 which showed elevated silver levels. Soil from this area loaded into Dump truck and hauled to Stump Neck.

Project Estimates: 15% completion on Backfill / Regrading at Site 5

Note: - damaged / Broken grounding wires within excavation areas around building 731 and 1135 have not been repaired and OHM personnel have begun backfill around buildings
- Compaction testing not being conducted at Stump Neck Annex.
- Damaged PVC pipe between building 731 and 1135 not yet repaired

The following sample results were obtained on this date:

TRS-02 → < 2.00 mg/Kg

OHM personnel begin site shut down activities at 1700 hours

HNUS personnel collect one additional sample. Total of 40 samples collected to date (including QC samples)

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Halliburton NUS

DAILY CONSTRUCTION REPORT

DATE 1-5-95

DAY S M T W T F S

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US Navy
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Bright Sun	Cloudy	Overcast	Rain	Snow
TEMP.		32-50	60-70	70-85	85 up
WIND	Still	Moderate	High	Report No
HUMIDITY	Dry	Moderate	Humid	

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	1 Surveyor 4 operators 5 Laborers 1 Accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
—	None	—	—

EQUIPMENT AT THE SITE

2-690 John Deere Excavators, 450 Case Dozer, Ford Dump Truck, 2 Light Generators
1155E Case Loader, Bomag 172 Compactor, 3 Mack Dump Trucks
DSH CAT dozer, Bomag 172-D Compactor, Bobcat Sweeper

CONSTRUCTION ACTIVITIES

Tasks Accomplished: ① Survey of the final elevations of silver contaminated soil at Stump Neck Fill Area completed by OHM Surveyor

Activities Conducted: - 690 Excavator and 450 dozer spreading backfill material at site 5
- Soil/Backfill material being hauled to site 5 for backfill operations. Total of 2 truckloads hauled into site on this date.
- Laborers conduct hand excavation to begin repair of broken PVC pipe between buildings 1135 and 731.

Note: Above mentioned operations were stoped at 0850 hours due to casting operations being conducted in building 731 for remainder this date.

- 2nd 690 excavator loading excess clean soil pile from stream-bed portion of site 8 to Stump Neck Annex Fill Area. This soil is being stockpiled at Stump Neck for use as capping material.

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO-157 DATE 1-5-95

CONSTRUCTION ACTIVITIES (Continued)

- Laborers begin placing warning tape on top of silver contaminated soil at Stump Neck Annex Fill area.
- 3 Mack dump trucks hauling clean soil pile from site 8 to Stump Neck.
- Surveyor completing survey of Stump Neck Fill Area. Unable to calibrate compaction /density test instrument and this unit must be returned to manufacturer.
- D5H Dozer completing final grading on silver contaminated soil at Stump Neck.

Project Estimates: 20% completion of Backfill /Regrading at site 5

The following sample results were obtained on this date:
RA-31A → < 2.12 mg/Kg

Note: Post removal verification sampling at site 5 is now complete. Total of 40 samples collected and analyzed (including QC samples)

OHM personnel begin site shut down at 1700 hours

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Halliburton NUS

DAILY CONSTRUCTION REPORT

DATE 1-6-95

DAY | S | M | T | W | TH | F | S |

PROJECT Indian Head - Site 5
JOB NO. CTO-157
CLIENT US Navy.
CONTRACTOR OHM
PROJECT MANAGER

WEATHER	Sun	Clear	Overcast	Rain	Snow
TEMP.	Below 32	32-50	50-70	70-85	85 up
WIND	Still	Moderate	High	Report No
HUMIDITY	Dry	Moderate	Humid	

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	M. Geary J. George	4 operators 5 Laborers 1 Accountant	Site Supervisor Field Supervisor

VISITORS

Time	Representing	Representing	Remarks
0950	D. Brower	US Navy	—

EQUIPMENT AT THE SITE

2-690 John Deere Excavators, 450 CASE Dozer, Ford Dump Truck, 2 Light Generators
1155 E CASE Loader, Bomag 172 Compactor, 3-Mack Dump Trucks
D5H CAT Dozer, Bomag 172D Compactor, Bobcat Sweeper

CONSTRUCTION ACTIVITIES

Tasks Accomplished: None

Activities Conducted:
- 690 Excavator, 1155 Loader and 450 Dozer spreading backfill material at Site 5
- Soil / Backfill material being hauled into Site 5
- Laborers continue hand excavation in tank removal area to repair broken PVC pipe
- Bobcat loader and laborers begin loadout of Black-stained soil stockpile between buildings 113b and 731
- Black-stained soil hauled to Stump Neck Fill Area for disposal by Ford dump truck
- 2nd 690 Excavator loading out excess soil stockpile from stress test portion of site 8
- Laborers continue placement of warning tape at Stump Neck Fill Area
- 3 Mack Dump trucks hauling soil pile from Site 8 to Stump Neck

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT Indian Head - Site 5 REPORT NO.

JOB NO. CTO - 157 DATE 1-6-95

CONSTRUCTION ACTIVITIES (Continued)

- clay cap material being hauled into Stump Neck Annex Fill Area.
- D5H Dozer begins spreading clay cap cover material at Stump Neck. Clay Cap being placed in thickness of roughly 12".

Project Estimates: - 40% completion of BackFill / Regrading at Site 5
- 20% completion of clay cap cover at Stump Neck Annex Fill Area.

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DAILY CONSTRUCTION REPORT

DATE JANUARY 9, 1995

DAY | S | X | T | W | TH | F | S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER	Bright Sun	Cloudy	Overcast	Rain	Snow
TEMP.	To 32	33-49	50-70	70-85	85 up
WIND	Still	X Moderate	High	Report No	
HUMIDITY	Dry	X Moderate	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	2 MEN	9 MEN	

VISITORS

Time	Representing	Representing	Remarks
1400	TOM SYMALLA	NAVY	OBSERVED AREA BETWEEN BUILDINGS

EQUIPMENT AT THE SITE
EXCAVATOR - JOHN DEERE 690ELC, BULLDOZER - CASE 450 C, TRACK MOUNTED FRONT END LOADER - CASE 1155E, BACKHOE - CASE 580 K, ROLLER/COMPACTOR - BW 172D.

CONSTRUCTION ACTIVITIES

TASKS ACCOMPLISHED/COMPLETED: ~~NONE~~ ① REPAIRED SEWER LINE BETWEEN BUILDING 731 AND 1135.

ACTIVITIES CONDUCTED: ① REPAIRED SEWER PIPE
② 25 TRUCKLOADS OF BACKFILL SOIL BROUGHT TO SITE 5 AND GRADED OUT WITH BULLDOZER.
③ HOLE THAT WAS EXCAVATED BETWEEN TWO BUILDINGS WAS BACKFILLED
④ BACKFILL WAS BROUGHT TO PLACEMENT AREA AND GRADED

OBSERVATIONS: ① COMPACTION TESTS ~~HAVE~~ NOT BEEN PERFORMED PER SPECS, BUT STARTED TODAY. NOT OBSERVED
② BACKFILLING IN REMAINING AREA AND BETWEEN BLDGS DOES NOT MEET COMPACTION REQUIREMENTS.
③ BLDG 731 IS STILL SHUT DOWN BECAUSE THE "INTERLOCKED" FENCE IS STILL DISMANTLED.
④ BACKFILL AT PLACEMENT AREA CONTAINS DEBRIS, STONE, ROOTS.

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BY MICHAEL K. MALLOY TITLE ENGINEER

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DAILY CONSTRUCTION REPORT

DATE JANUARY 10, 1995

DAY | S | M | X | W | TH | F | S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER
TEMP.
WIND
HUMIDITY

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	(CONT) Remarks
OHM	2 MEN M. GEARY D. SPENCER	11 MEN J. GEORGE C. BUTTON B. JENKS M. KERRICK	S. JACKSON, D. RIVERA, M. PELLERCO, B. ELLS, M. MARKS, D. PORRICK, R. WOODORN.

VISITORS

Time	Representing	Representing	Remarks

EQUIPMENT AT THE SITE
EXCAVATOR - JOHN DEERE 690 ELC, 2 BULL DOZERS - CAT D5 & CASE 450 C, TRACK F.E. LOADER - CASE 1155 E, BACKHOE - CASE 580K, ROLLER/SMOOTH DRUM BW 172 D, 2 COLEMAN GENERATORS w/ LIGHTING POLES, GEHL 4625SX BOBCAT w/ SWEEPSTER, BOMAG PLATE TAMPER, SHEEPSFOOT ROLLER & ROLLER AT STUMP NECK, GAS TANKS AT 2 SITES, SITE PUMP TRUCK

CONSTRUCTION ACTIVITIES

TASKS ACCOMPLISHED/COMPLETED:

(1) INSTALLED UPPER PIPE THAT WILL BE UNDER SIDEWALK NEAR BLDG 731.

(2) BACKFILLED BETWEEN BUILDINGS.

ACTIVITIES CONDUCTED:

(1) BROUGHT 2 TRUCKLOADS OF TOPSOIL, 5 LOADS OF SELECT FILL TO SITE 5; 1 LOAD OF CLAY FOR BETWEEN BLDGS; 9 LOADS OF CLAY TO STUMP NECK AREA

(2) CONTINUED GRADING BACKFILL; ENGINEER SHOT SOME GRADES TO ASSURE DRAINAGE.

(3) FENCE WAS REPLACED SO THAT IT CAN BE RE-INTERLOCKED TOMORROW

OBSERVATIONS:

(1) MEETING HELD WITH LT. JAMES CROOM, TOM SYMALLA, AND MATT GEARY. OHM WILL REINSTALL FENCE COB TODAY, THEN WILL REPLACE THE SIDEWALK BETWEEN #731 AND 1135. THAT WORK WILL BE PERFORMED AFTER 1500hr EACH DAY. CLAY AT STUMP NECK AREA DOES NOT HAVE 95% COMPACTION DENSITY.

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BY MICHAEL MALLOY TITLE ENGINEER

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DAILY CONSTRUCTION REPORT

DATE JANUARY 11, 1995

DAY: S M T [W] TH F S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT U.S. NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER: Sunny / Cloudy / Rain / Snow
TEMP.: 10-32 / 33-50 / 50-70 / 70-85 / 85-up
WIND: Still / Moderate / High / Reduced vis
HUMIDITY: Dry / Moderate / Humid

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	3 MEN	9 MEN	2 NON-MANUAL, 3 MANUAL ≈0700-1800 + 2 STUMP NECK; 1 NON-MANUAL, 3 MANUAL ≈1500-2100

VISITORS

Time	~~Representing~~	Representing	Remarks
1130-1715	KEN KUKKONEN	OHM PROJECT MANAGER	SITE VISIT.

EQUIPMENT AT THE SITE
JOHN DEERE 690ELC, CAT D5 & CASE 450 C-BULLDOZERS, TRACK FRONTEND LOADER-CASE 1155E, BACKHOE-CASE 580K, SMOOTH DRUM ROLLER-DW MTD, 2 COLEMAN GENERATORS W/LIGHTS, "BOBCAT"-GEHL 4625SX W/SWEEPER, PLATE TAMPER-BOMAG, DUMP TRUCK, SHEEPS FOOT ROLLER AND DOZER AT STUMP NECK, 2 GAS TANKS, 90 lb JACK HAMMER (ELEC.)

CONSTRUCTION ACTIVITIES

TASKS ACCOMPLISHED/COMPLETED:

1. INSTALLED 12" CMP NEAR WEST OUTER GATE (8' LONG).
2. GRADED BETWEEN OUTER FENCE AND BUILDING 1135.
3. COMPLETED BACKFILL OF SELECT FILL BETWEEN BUILDINGS

ACTIVITIES CONDUCTED:

1. BROUGHT IN 15 TRUCKLOADS OF TOPSOIL, AND 1 LOAD OF AASHTO #57 STONE. SPREAD TOPSOIL SOUTH OF 1135 AND WEST OF SWALE (OUTSIDE FENCES).

2. REMOVED PART OF BROKEN/SUNKEN SIDEWALK BETWEEN BUILDINGS. STARTED SPREADING TOPSOIL BETWEEN BUILDINGS.

3. BUILT FORMS THAT WILL BE USED TO CONTAIN STONE AS IT IS PLACED AND COMPACTED FOR SIDEWALKS (USED 2"x6"s)

(CONT.)

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BY MICHAEL MALLOY TITLE ENGINEER

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT INDIAN HEAD SITE 5 REPORT NO.

JOB NO. CTO 099 DATE 1/11/95

CONSTRUCTION ACTIVITIES (Continued)

OBSERVATIONS:

(1) CREW WAS SPLIT TO ALLOW WORK BETWEEN BUILDINGS AFTER 1500 hr. 2 MANUAL AND 3 OPERATORS WERE ON SITE 0700 - 1800. AT 1800, THOSE 5 LEFT. 1 OPERATOR AND 3 LABORERS CAME TO THE SITE 5 AT 1500 AND WORKED UNTIL LATE AT NIGHT UNDER LIGHTS.
AT STUMP NECK, 2 OTHER OHM OPERATORS WERE GRADING AND COMPACTING CLAY. THEY RECIEVED 20 TRUCKLOADS OF CLAY, WHICH WAS ENOUGH TO COMPLETE THE CLAY CAP. AT STUMP NECK, THEY HAVE RECIEVED ALL FILL MATERIAL WHICH WILL CAME FROM SITE 8. FROM NOW ON, SELECT FILL AND TOPSOIL WILL COME FROM VENDORS.

(2) OHM PROJECT MANAGER, KEN KUKKONEN, WAS ON SITE TODAY.

(3) MIKE MALLOY, HNUS, COLLECTED WATER SAMPLE (COMPOSITE) FROM DRUMS AND TRASH CANS WEST OF BLDG 731. THE FLUID IS FROM EXCAVATION BETWEEN BLDGS 731 & 1135. IT WILL BE ANALYZED FOR TOTAL SILVER TO DETERMINE HOW TO DISPOSE OF FLUIDS.

(4) OHM WILL HAVE A SUBCONTRACTOR INSTALL CONCRETE SIDEWALK. IF BLDG 731 CANNOT BE SHUT DOWN DURING THE WEEK, A PREMIUM WILL BE CHARGED TO PERFORM THE WORK ON A WEEKEND OR AT NIGHT.

(5) OHM PLANS ON WORKING LATE AGAIN TONIGHT.

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DAILY CONSTRUCTION REPORT

DATE JANUARY 12, 1995

DAY S M T W T F S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT U.S. NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER
TEMP.
WIND
HUMIDITY

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	2	3-SITE 5 2-STUMP NECK	0700 - 1900
	1	3-SITE 5	1400 - 1/13/95 @ 2AM

VISITORS

Time	Representing	Representing	Remarks

EQUIPMENT AT THE SITE
EXCAVATOR - J.D. 690 ELC, BULLDOZERS - CAT D5 & CASE 450 C, TRACK FRONT END LOADER - CASE 1155 E, BACKHOE - CASE 580K, SMOOTHDRUM ROLLER - BW 172D, 2 COLEMAN GENERATORS W/ LIGHTS, BOBCAT - ~~CONSTRUCTION ACTIVITIES~~ GEHL 4625 SX W/ SWEEPSTER, PLATE TAMPER - BOMAG, DUMP TRUCK, SHEEPSFOOT ROLLER AND DOZER AT STUMP NECK, 2 GAS TANKS (≈ 500 GA 90lb ELEC. JACKHAMMER, 2" TRASH PUMP
→ BOMAG BW 172 PD & CAT D6.

CONSTRUCTION ACTIVITIES:

TASKS ACCOMPLISHED/COMPLETED: (1) FINISHED TOPSOILING BETWEEN BLDG 1135 AND STEAM LINE.
(2) COMPLETED JACKHAMMERING OF SIDEWALK BETWEEN BUILDINGS.
ACTIVITIES CONDUCTED: (1) BROUGHT IN AND GRADED TOPSOIL SOUTH OF STEAM LINE.
(2) BROUGHT SURPLUS SEDIMENT CONTROL MATERIALS FROM SITE 8 TO SITE 5.
(3) TOPSOILED AND SEEDED BETWEEN BUILDINGS, INSTALLED SOME PERMANENT EROSION CONTROL AND TEMPORARY EROSION CONTROL MATTING. 41 TRUCKLOADS OF TOPSOIL WERE BROUGHT TO SITE 5, 15 TRUCKLOADS OF SELECT FILL WERE BROUGHT TO STUMP NECK.

(CONT.)

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT INDIANHEAD SITE 5 REPORT NO.

JOB NO. CTO 099 DATE 1/12/95

CONSTRUCTION ACTIVITIES (Continued)

OBSERVATIONS :

(1) CREW AGAIN WAS SPLIT. NIGHT CREW ARRIVED AT 1400 EXPECTING TO WORK INSIDE FENCE AT 1500. X RAY MACHINE WAS BEING WORKED ON UNTIL 2030. CREW WORKED ON TOPSOIL, SEEDING, GRADING, EROSION MATTING OUTSIDE FENCE, THEN INSIDE FENCE. AREA BETWEEN BLDGS FILLS IN W/ WATER EACH DAY AND MUST BE PUMPED OUT BEFORE STARTING TO JACK-HAMMER.

(2) NAVY IS CLOSED 1/16/95 FOR HOLIDAY, BUT WE WILL BE ABLE TO WORK INSIDE FENCE ALL DAY.

(3) WARM WEATHER AND BREEZES HELPED DRY UP THE SURFACE, BUT BECAUSE SUBSURFACE OF ENTIRE SITE IS WET / HAS SPRINGS OR PERCHED GROUND WATER, BACKFILL HAS A TENDENCY TO "PUMP".

(4) AT STUMP NECK PLACEMENT AREA, ALL CLAY HAS BEEN INSTALLED AND APPEARS TO BE WELL-COMPACTED AND IMPERMEABLE. BACKFILL OF 1" SELECT FILL AT STUMP NECK IS ~~PROCEEDING~~ COMPLETED. TOPSOIL, SEEDING, EROSION CONTROL REMAINS.

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DAILY CONSTRUCTION REPORT

DATE JANUARY 13, 1995

DAY | S | M | T | W | TH | F | S |

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT U.S. NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER
TEMP.
WIND
HUMIDITY

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	2 MEN	3 MEN	NIGHT CREW WORKED LATE LAST NIGHT AND DID NOT COME IN TODAY.

VISITORS

Time	Representing	Representing	Remarks
0900	KEN KUKKONEN	OHM PROJECT MANAGER	

EQUIPMENT AT THE SITE
EXCAVATOR - JD 690 ELC, BULLDOZERS - CAT D5; CASE 450C, TRACK FRONT-END LOADER - CASE 1155 E, BACKHOE - CASE 580K, SMOOTH DRUM ROLLER - BW 172D, 2 COLEMAN GENERATORS W/ LIGHTS, "BOBCAT" - GEHL 4625 SX W/ SWEEPSTER, PLATE TAMPER - BOMAG, DUMPTRUCK, SHEEPSFOOT ROLLER - BOMAG BW 172 PD AND DOZER - CAT D6 AT STUMPNECK, 2 - 500 GAL FUEL TANKS, 2" TRASH PUMP.

CONSTRUCTION ACTIVITIES:

TASKS ACCOMPLISHED/COMPLETED:

(1) GRADED SWALE SUCH THAT IT WILL DRAIN IF IT RAINS THIS WEEKEND

ACTIVITIES CONDUCTED:

(1) BROUGHT TOPSOIL TO STUMP NECK AND GRADED IT OVER SELECT FILL.

(2) GRADED TOPSOIL AT SITE 5 SOUTH OF STEAM LINE. SHAPED THE SWALE SO THAT IT WILL DRAIN, INCLUDING EXCAVATING TRENCH FROM FENCE TO OPEN SWALE.

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT INDIAN HEAD SITE 5 REPORT NO.

JOB NO. CTO 099 DATE 1/13/95

CONSTRUCTION ACTIVITIES (Continued)

(CONT)

(3) SEEDED AND INSTALLED TEMPORARY EROSION CONTROL MATTING BETWEEN BLDG. 1135 AND STEAM LINE.

OBSERVATIONS:

(1) SHAPING SWALE IS DIFFICULT BECAUSE SOIL IS "PUMPING" AND TENDS TO LEVEL OUT WHEN THE EXCAVATOR IS WORKING ON IT.

(2) TOPSOIL IS SPREAD BY WIDE TRACK DOZER, HOWEVER, IT TENDS TO FILL IN TRACKS AND UNEVEN SURFACES. RESULT IS THAT TOPSOIL DEPTH MAY BE UNEVEN, AND MORE TOPSOIL WILL BE USED THAN ESTIMATED. THERE WILL NOT BE ANY PROBLEM IN REVEGETATION HOWEVER.

(3) AREA BETWEEN BLDGS 731 & 1135 CONTINUES TO FILL WITH WATER FAIRLY QUICKLY DESPITE DRY WEATHER CONDITIONS. THE REST OF THE SITE HAS DRIED UP SOME SINCE 1/9/95.

(4) PUDDLES IN SUPPORT AREA AND BETWEEN BUILDINGS EXISTED PRIOR TO WORK, BUT WERE MADE WORSE BY TRAFFIC AND SHOULD BE REPAIRED DURING FINAL PUNCH OUT.

(5) CONTRACTOR ACCESS CORRIDOR MUST BE LEFT IN PLACE FOR NAVY TO ACCESS THE AREA ALONG THE STEAM LINE.

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DAILY CONSTRUCTION REPORT

DATE JANUARY 16, 1995

DAY S [X] M T W TH F S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT U.S. NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER	Bright Sun	Clear	[X] Overcast	Rain	Snow
TEMP.	In 32	40-50	[X] 50-70	70-85	85 up
WIND	Still	Moderate	[X] High	Report No	
HUMIDITY	Dry	Moderate	[X] Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	3 MEN	4 TECHS 3 OPERATORS 2-STUMP NECK	0700 - 1800

VISITORS

Time	Representing	Representing	Remarks

EQUIPMENT AT THE SITE

EXCAVATOR - JD 690 ELC, BULLDOZER - CASE 450C, BACKHOE - CASE 580K, 2 COLEMAN GENERATORS W/LIGHTS, BOBCAT - GEHL 4625 SX W/SLEDGESTER, DUMP TRUCK, 2-500 GAL FUEL TANKS, 2" TRASH PUMP,

CONSTRUCTION ACTIVITIES

TASKS ACCOMPLISHED / COMPLETED:

1. COMPLETED SEEDING OF ALL AREAS W/IN FENCED AREA.
2. INSTALLED PERMANENT MATTING IN SWALE WITHIN FENCED AREA.
3. INSTALLED TEMPORARY MATTING WITHIN FENCED AREA.
4. COMPLETED ALL TOPSOILING WITHIN FENCED AREA.
5. COMPLETED TOPSOILING AND SEEDING AT STUMP NECK.

ACTIVITIES CONDUCTED:

1. TOPSOILING, SEEDING, GRADING, INSTALLATION OF EROSION CONTROL MATTING. (AT SITE 5 AND STUMP NECK)
2. REMOVED SEVERAL PIECES OF EQUIPMENT FROM SITE.

OBSERVATIONS:

1. AREA BETWEEN BLDGS 731 AND 1135 REMAINS VERY WET. IT GETS PUMPED OUT IN THE EVENING, AND BY MORNING SEVERAL HUNDRED GALLONS OF WATER/LIQUID HAVE FILLED

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DAILY CONSTRUCTION REPORT

(Continuation Sheet)

PROJECT INDIAN HEAD SITE 5 REPORT NO.

JOB NO. CTO 099 DATE 1/18/95

CONSTRUCTION ACTIVITIES (Continued)

IN THE AREA WHERE THE CONCRETE HAS BEEN REMOVED FOR INSTALLATION OF A NEW SIDEWALK, 13 PIPES FROM BLDG. 731 ARE CONSTANTLY LEAKING INTO THE AREA. THERE ALSO MAY BE INFLOW FROM GROUNDWATER. TO KEEP THE AREA DRY, A SUMP PUMP MIGHT HAVE TO BE INSTALLED. THERE IS VERY LITTLE FALL IN ELEVATION FROM THE "TANK AREA" TO AN OPEN SWALE. A SUBSURFACE DRAIN WOULD BE VERY DIFFICULT TO CONSTRUCT.

(2) THE AREA BETWEEN THE INNER AND OUTER FENCE IS VERY SOFT. OHM HAS PROPOSED CONSTRUCTING THE SIDEWALKS IN THE SPRING WHEN THE SITE DRIES UP.

(3) ACCORDING TO OHM, ALL WORK SHOULD BE COMPLETED THIS WEEK.

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DAILY CONSTRUCTION REPORT

DATE JANUARY 17, 1995

DAY S M T W TH F S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT U.S. NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER
TEMP.
WIND
HUMIDITY

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	2 IN TRAILER	3 OPERATORS 4 TECHS 2 - STUMP NECK	0700 - 1800

VISITORS

Time	~~Representing~~	Representing	Remarks
1415	SYE WILLIAMSON	SAFETY OFFICE ON BASE	SITE VISIT
1015	HEALTH AND SAFETY INSPECTOR	OHM CORPORATE SAFETY	SITE VISIT

EQUIPMENT AT THE SITE
EXCAVATOR - JD 690 ELC, BULLDOZER - CASE 450C, BACKHOE - CASE 580K, 2 COLEMAN GENERATORS W/ LIGHTS, BOBCAT - GEHL 4625SK W/ SWEEPER, DUMP TRUCK, 2 - 500 GAL. FUEL TANKS, 2" TRASH PUMP.

CONSTRUCTION ACTIVITIES

TASKS ACCOMPLISHED/COMPLETED:

(1) INSTALLED 2 CULVERT PIPES IN THE SWALE AT SITE 5, ABOUT 70' SOUTH OF THE OUTER FENCE. THE PIPES CAME FROM AN EXISTING CULVERT UNDER A GRAVEL ROAD AT THE LOWER END OF THE SITE. THE CULVERT WILL ALLOW ACCESS ACROSS THE SWALE.

(2) INSTALLED PERMANENT EROSION CONTROL MATTING IN THE SWALE AT SITE 5 SOUTH OF THE CULVERT, TO EDGE OF SEDIMENT TRAP.

ACTIVITIES CONDUCTED:

(1) PERFORMED SEEDING ON OPEN AREA OF SITE 5.
(2) PERFORMED "CLEAN-UP" IN AREA BETWEEN THE BUILDINGS.
(3) INSTALLED EROSION CONTROL MATTING AT STUMP NECK AND SITE 5. SHAPED SWALE AND CULVERT AT UPPER END OF SITE 5

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT INDIAN HEAD SITE 5 REPORT NO.

JOB NO. CTO 099 DATE 1/17/95

CONSTRUCTION ACTIVITIES (Continued)

(4) EXCAVATOR IS WORKING AT THE LOWER END OF SITE 5, TRYING TO SHAPE UP THE SWALE TO MEET THE STONE OUTLET IN THE SEDIMENT TRAP. BROUGHT SOME SOIL FROM THE UPPER END OF THE SITE TO HELP FILL THE LOWER AREA.

(5) REMOVED SHEEPSFOOT ROLLER FROM STUMP NECK.

OBSERVATIONS:

(1) SITE 5 CONTINUES TO BE VERY WET. EXCAVATOR WORKING AT LOWER END OF SWALE USUALLY SINKS 1.5' INTO THE MUD. MATT GEARY (OHM) INDICATED THAT THE SEDIMENT CONTROL INSPECTOR FROM MDE (MARK ECKER) WOULD ALLOW SHAPING THE SWALE (WHERE THE SITE IS STABILIZED, PRIOR TO GERMINATION) ALL THE WAY TO THE STONE OUTLET. THIS MEANS THROUGH THE SEDIMENT TRAP. BECAUSE THE SITE IS SO WET, AND THE WORK IS BEING PERFORMED NOW, THIS WORK WILL BE DIFFICULT TO PERFORM ACCORDING TO DRAWINGS.

OHM WAS INFORMED THAT THE PRIMARY OBJECTIVES AT THE LOWER END OF THE SITE WERE TO CONSTRUCT A SWALE TO CONVEY WATER TO THE STONE OUTLET APRON IN THE EXISTING RAVINE. CARE SHOULD BE TAKEN TO ASSURE THAT ALL WATER FROM THE SWALE IS DIRECTED TO THE STONE AND CANNOT CUT A CHANNEL AROUND IT.

(2) ON THE STEEP SECTION OF FILL AT STUMP NECK, PERMANENT EROSION CONTROL MATTING LEFT OVER FROM SITE 8.

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DAILY CONSTRUCTION REPORT

DATE JANUARY 18, 1995

DAY: S M T W TH F S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT U.S. NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER
TEMP.
WIND
HUMIDITY

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	2	4 TECHS 3 OPERATORS 2 - STUMP NECK	0700 - 1800

VISITORS

Time	Representing	Representing	Remarks
0900	SHAWN PHILLIPS	EFACHES	TOOK A SAMPLE OF A GABION BASKET.

EQUIPMENT AT THE SITE
EXCAVATOR - JD 690 ELC, BULLDOZER - CASE 450C, BACKHOE - CASE 580 K, COLEMAN GENERATOR W/LIGHTS, BOBCAT - GEHL 4625SE W/SWEEPER, DUMPTRUCK, 2 - 500 GAL. FUEL TANKS, 2" TRASH PUMP.

CONSTRUCTION ACTIVITIES

TASKS ACCOMPLISHED / COMPLETED:

(1) INSTALLED/ REPLACED FENCE POLE AT SW CORNER OF OUTER FENCE. IT HAD BECOME LOOSE DURING CONSTRUCTION OF THE SWALE.
(2) INSTALLED PERMANENT EROSION MATTING AT STUMP NECK.

ACTIVITIES CONDUCTED:

(1) RESHAPED SEDIMENT CONTROL TRAP AND SWALE AT LOWER END OF SITE 5. USED FILL DIRT STOCKPILED AT UPPER END OF SITE.
(2) PERFORMED SEEDING AND INSTALLATION OF EROSION CONTROL MATTING AT SITE 5. MOVED LOGS OFFSITE. STUMPS WILL BE MOVED INTO WOODS PER TOM SYMALLA.
(3) BROUGHT IN 4 LOADS OF TOPSOIL TO BE DISTRIBUTED OVERSITE WHERE IT HAS BEEN DISTURBED.

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT INDIAN HEAD SITE 5 REPORT NO.

JOB NO. CTO 099 DATE 1/18/95

CONSTRUCTION ACTIVITIES (Continued)

(4) SHAPED AND INSTALLED PERMANENT EROSION MATTING IN SWALE BETWEEN SIDEWALK CULVERT AND "ACCESS ROAD" CULVERT.

OBSERVATIONS:

(1) THE SWALE AT SITE 5 HAS BEEN RESHAPED, DIRECTED TOWARD THE STONE OUTLET.

(2) SHAWN PHILLIPS STOPPED BY SITE TO LOOK AT GABION MATERIALS LEFT OVER FROM SITE 8.

(3) WORK IS EXPECTED TO FINISH ON 1/20/95.

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DAILY CONSTRUCTION REPORT

DATE JANUARY 19, 1995

DAY S M T W [X] F S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT U.S. NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER
TEMP.
WIND
HUMIDITY

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	3	4 TECHS 3 OPERATORS 2-STUMP NECK	SUPERINTENDENT, PROJECT ACCOUNTANT, FOREMAN SITE 5 0760-1800

VISITORS

Time	~~Representing~~	Representing	Remarks
1430	TOM SYMALLA	NAVY	WALKED SITE 5 AND STUMP NECK.

EQUIPMENT AT THE SITE
EXCAVATOR - JD 690 ELC, BULLDOZER - CASE 450 C, BACKHOE - CASE 580K, "BOBCAT" GEHL 4625 SX w/ SWEEPSTER, DUMP TRUCK

CONSTRUCTION ACTIVITIES

TASKS ACCOMPLISHED/ COMPLETED:

(1) ALL REPLACEMENT OF FENCE, AND WORK INSIDE THE FENCE (BETWEEN BLDGS. 731 & 1135) HAS BEEN COMPLETED.

ACTIVITIES CONDUCTED:

(1) REPLACED FENCE AND BARBED WIRE. ALONG STEAMLINE SOUTH OF BLDG. 1135.
(2) INSTALLED TEMPORARY EROSION MATTING ALONG SWALE AND EAST SIDE OF SWALE. FINISHED SHAPING LOWER END OF SWALE.
(3) GRADED PERIPHERAL AREAS NEAR ACCESS ROADS, WHERE MATERIALS WERE TEMPORARILY STOCKPILED.
(4) REMOVED FUEL TANK AT SITE 5. SECONDARY CONTAINMENT STRUCTURE WAS GRADED OUT. NO FUEL HAD BEEN SPILLED ~~IN~~ WITHIN THE BERM.

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT Indian Head Site 5 REPORT NO.

JOB NO. CTO 099 DATE 1/19/95

CONSTRUCTION ACTIVITIES (Continued)

(5) GRADED TOPSOIL TO FILL WET AREA NEAR TRAILERS.
(6) INSTALLED EROSION MATTING AT STUMP NECK.

OBSERVATIONS:

(1) TOM SYMALLA INDICATED THAT THE WATER IN THE DRUMS WEST OF BUILDING 731 COULD BE DISPOSED OF IN THE ON BASE SEWER SYSTEM. THE TOTAL SILVER CONCENTRATION IS 129 PPB. OHM AND HNUS ARE CONSIDERING SEVERAL METHODS OF DOING THIS, BUT OHM DOES NOT WANT TO INCUR EXCESSIVE COSTS OR SCHEDULE IMPACTS.

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DAILY CONSTRUCTION REPORT

DATE JANUARY 20, 1995

DAY S M T W TH F S

PROJECT INDIAN HEAD - SITE 5
JOB NO. CTO 099
CLIENT U.S. NAVY
CONTRACTOR OHM
PROJECT MANAGER TONY KLIMEK

WEATHER
TEMP.
WIND
HUMIDITY

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
OHM	3 OFFICE	3 OPERATORS 3 TECHS	0700 - 1200

VISITORS

Time	Representing	Representing	Remarks

EQUIPMENT AT THE SITE

EXCAVATOR - JD 690 ELC, BULLDOZER - CASE 450C, BACKHOE - CASE 580 K, BOBCAT - GEHL 4625 SX w/ SWEEPSTER, DUMP TRUCK

CONSTRUCTION ACTIVITIES

ACTIVITIES CONDUCTED:

(1) INSTALLED TEMPORARY EROSION MATTING ON WEST SIDE OF SWALE FROM STEAM LINES TO LOWER PART OF SITE.
(2) CONTINUED FINAL GRADING ON WEST SIDE OF SWALE AND ACCESS ROADS.

OBSERVATIONS:

(1) ABOUT 1" OF RAIN FELL LAST NIGHT. THE SWALE AND GRADED AREAS ARE SATURATED, BUT EXHIBIT NO SIGNS OF EROSION. THE ACCESS ROAD AT THE LOWER END OF THE SITE WAS ERODED BECAUSE OF A CLOGGED CULVERT UPSTREAM, OFF SITE 5, WHICH OVERFLOWED. THIS WATER WAS DIVERTED TO ITS ORIGINAL CHANNEL.

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DAILY CONSTRUCTION REPORT
(Continuation Sheet)

PROJECT: INDIAN HEAD - SITE 5 REPORT NO.
JOB NO.: CTO 099 DATE: 1/20/95

CONSTRUCTION ACTIVITIES (Continued)

(2) REMAINING ITEMS:

A) CONTINUE INSTALLATION OF MATTING AT SITE 5 AND STUMP NECK.

B) MINOR GRADING AS WE WORK OUR WAY OUT OF THE SITE.

C) DEMOBILIZATION, CLEAN UP AT SITE 5 AND STUMP NECK.

D) RE-ESTABLISH STABILIZED CONSTRUCTION ENTRANCE AT STUMP NECK.

E) THE FOLLOWING MUST BE DONE IN THE SPRING:
- INSTALL SIDEWALKS
- RE ESTABLISH PERMANENT VEGETATION
- TOUCH UP GRADING AND STABILIZATION.
- w/ MOE APPROVAL, REMOVE SILT FENCE.

F) OTHER ITEMS AS DEEMED NECESSARY BY NAVY.

(3) FINAL WORK WILL BE DONE MONDAY, JAN. 23, 1995. THE NAVY WILL HAVE A WALK THROUGH TUESDAY AT 1300 TO DEVELOP A PUNCH LIST. OHM WILL FINISH PUNCH LIST ITEMS TUESDAY AND WEDNESDAY.

(4) TOM SYMALLA IS INVESTIGATING DISPOSAL OF DRUMS/WATER ON WEST SIDE OF BLDG. 731.

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APPENDIX B

CONSTRUCTION PHOTOGRAPHS

SITE 5 PRE-CONSTRUCTION AND EROSION AND SEDIMENT CONTROL DEVICES

1. Site 5 prior to excavation. Limits of silver contamination are marked in field.

2. Area between Buildings 731 & 1135 prior to excavation.

3. Site 5 construction access corridor.

4. Erosion and sediment controls for Site 5 are installed, which includes this sediment basin.

SITE 5 EXCAVATION ACTIVITIES

5. Soil removal activities between Site 5 buildings using small excavation equipment.

6. Soil removal between Site 5 buildings being performed by hand.

7. Excavating activities along swale.

8. Stockpiled material from Site 5 to be placed at Rum Point Borrow Pit area.

SITE 5 EXCAVATION AND RESTORATION ACTIVITIES

9. Excavated soil is placed in dump trucks for transport to Rum Point.

10. Removal of soil activities completed and verification sampling performed prior to backfilling operation.

11. Backfill material is delivered to Site 5.

12. Backfilling operation along swale.

SITE 5 RESTORATION ACTIVITIES

13. Area between Site 5 buildings is backfilled and restored,

15. Temporary erosion control revegetation mat is placed in disturbed areas.

14. Permanent erosion control revegetation mat is placed in reconstructed swale.

16. Reconstructed Site 5 swale area.

RUM POINT PRE-CONSTRUCTION AND EROSION AND SEDIMENT CONTRL DEVISES

17. Rum Point Borrow Pit area prior to excavated soil placement.

19. Construction access corridors are installed at the Rum Point Borrow Pit area.

18. Erosion and sediment control measures are installed, which includes this sediment basin at Rum Point Borrow Pit area.

20. Soil excavated from Site 5 is placed in the Rum Point Borrow Pit area.

RUM POINT CAP CONSTRUCTION AND RESTORATION ACTIVITIES

21. Hazard indicator tape is placed over the soil indicating silver-contaminated soil.

22. A one foot low-permeable soil layer is installed.

23. A one foot soil layer is placed over the low-permeable Layer.

24. Permanent erosion control revegetation matting is placed on the steep slope areas of the cap and a temporary erosion control revegetation matting is installed on the other areas of the cap.

APPENDIX C

ANALYTICAL RESULTS

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: CTO-157 INDIAN HEAD

Halliburton NUS
661 Andersen Drive
Pittsburgh, PA 15220
Atten: Tony Klimek

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by: MD

SAMPLE IDENTIFICATION

GP ID	Client ID
9412073-01A	RA-01
9412073-02A	RA-02
9412073-03A	RA-03
9412073-04A	RA-04

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412073-01
Client ID: RA-01

Matrix: SOIL
Collected: 12/09/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	23.7	1.93	mg/Kg	1	12/10/94	12/12/94 MB

GP ID: 9412073-02
Client ID: RA-02

Matrix: SOIL
Collected: 12/09/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.07	mg/Kg	1	12/10/94	12/12/94 MB

GP ID: 9412073-03
Client ID: RA-03

Matrix: SOIL
Collected: 12/09/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.32	mg/Kg	1	12/10/94	12/12/94 MB

GP ID: 9412073-04
Client ID: RA-04

Matrix: SOIL
Collected: 12/09/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.08	mg/Kg	1	12/10/94	12/12/94 MB

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412073-01 Matrix: SOIL
Client ID: RA-01 Collected: 12/09/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	88.2		%			12/10/94 SCT

GP ID: 9412073-02 Matrix: SOIL
Client ID: RA-02 Collected: 12/09/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	82.2		%			12/10/94 SCT

GP ID: 9412073-03 Matrix: SOIL
Client ID: RA-03 Collected: 12/09/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	73.4		%			12/10/94 SCT

GP ID: 9412073-04 Matrix: SOIL
Client ID: RA-04 Collected: 12/09/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	81.9		%			12/10/94 SCT

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: CTO-157 INDIAN HEAD

Halliburton NUS
661 Andersen Drive
Pittsburgh, PA 15220
Atten: Tony Klimek

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by: CB

SAMPLE IDENTIFICATION

GP ID	Client ID
9412107-01A	RA-05
9412107-02A	RB-01
9412107-03A	RA-06
9412107-03B	
9412107-04A	RA-07
9412107-05A	RA-08
9412107-06A	RA-09
9412107-07A	RA-10
9412107-08A	RA-11
9412107-09A	RA-12
9412107-10A	RA-13
9412107-11A	RA-14

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412107-01 Matrix: SOIL
Client ID: RA-05 Collected: 12/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.04	mg/Kg	1	12/14/94	12/15/94 MB

GP ID: 9412107-02 Matrix: WATER
Client ID: RB-01 Collected: 12/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	8.50	ug/L	1	12/14/94	12/15/94 MB

GP ID: 9412107-03 Matrix: SOIL
Client ID: RA-06 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.09	mg/Kg	1	12/14/94	12/15/94 MB

GP ID: 9412107-04 Matrix: SOIL
Client ID: RA-07 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.10	mg/Kg	1	12/14/94	12/15/94 MB

GP ID: 9412107-05 Matrix: SOIL
Client ID: RA-08 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.12	mg/Kg	1	12/14/94	12/15/94 MB

GP ID: 9412107-06 Matrix: SOIL
Client ID: RA-09 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.12	mg/Kg	1	12/14/94	12/15/94 MB

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412107-07
Client ID: RA-10

Matrix: SOIL
Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.11	mg/Kg	1	12/14/94	12/15/94 MB

GP ID: 9412107-08
Client ID: RA-11

Matrix: SOIL
Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	1.95	mg/Kg	1	12/14/94	12/15/94 MB

GP ID: 9412107-09
Client ID: RA-12

Matrix: SOIL
Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.06	mg/Kg	1	12/14/94	12/15/94 MB

GP ID: 9412107-10
Client ID: RA-13

Matrix: SOIL
Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.15	mg/Kg	1	12/14/94	12/15/94 MB

GP ID: 9412107-11
Client ID: RA-14

Matrix: SOIL
Collected: 12/14/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	137.0	2.14	mg/Kg	1	12/14/94	12/15/94 MB

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412107-01 Matrix: SOIL
Client ID: RA-05 Collected: 12/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	83.3		%			12/15/94 SCT

GP ID: 9412107-03 Matrix: SOIL
Client ID: RA-06 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	81.4		%			12/15/94 SCT

GP ID: 9412107-04 Matrix: SOIL
Client ID: RA-07 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	81.0		%			12/15/94 SCT

GP ID: 9412107-05 Matrix: SOIL
Client ID: RA-08 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	80.3		%			12/15/94 SCT

GP ID: 9412107-06 Matrix: SOIL
Client ID: RA-09 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	80.0		%			12/15/94 SCT

GP ID: 9412107-07 Matrix: SOIL
Client ID: RA-10 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	80.5		%			12/15/94 SCT

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412107-08 Matrix: SOIL
Client ID: RA-11 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	87.1		%			12/15/94 SCT

GP ID: 9412107-09 Matrix: SOIL
Client ID: RA-12 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	82.6		%			12/15/94 SCT

GP ID: 9412107-10 Matrix: SOIL
Client ID: RA-13 Collected: 12/13/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	79.2		%			12/15/94 SCT

GP ID: 9412107-11 Matrix: SOIL
Client ID: RA-14 Collected: 12/14/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	79.4		%			12/15/94 SCT

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: CTO-157 INDIAN HEAD

Halliburton NUS
661 Andersen Drive
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Atten: Tony Klimek

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by: CB

SAMPLE IDENTIFICATION

GP ID	Client ID
9412135-01A	RA-15
9412135-02A	RA-16
9412135-03A	RA-17
9412135-04A	RA-18
9412135-05A	RA-19
9412135-05B	
9412135-06A	RA-20
9412135-07A	RA-21
9412135-08A	RA-22
9412135-09A	RA-23

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412135-01 Matrix: SOIL
Client ID: RA-15 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.11	mg/Kg	1	12/17/94	12/18/94 MB

GP ID: 9412135-02 Matrix: SOIL
Client ID: RA-16 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	4.31	1.99	mg/Kg	1	12/17/94	12/18/94 MB

GP ID: 9412135-03 Matrix: SOIL
Client ID: RA-17 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	12.6	2.23	mg/Kg	1	12/17/94	12/18/94 MB

GP ID: 9412135-04 Matrix: SOIL
Client ID: RA-18 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	1.90	mg/Kg	1	12/17/94	12/18/94 MB

GP ID: 9412135-05 Matrix: SOIL
Client ID: RA-19 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	1.98	mg/Kg	1	12/17/94	12/18/94 MB

GP ID: 9412135-06 Matrix: SOIL
Client ID: RA-20 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	1.96	mg/Kg	1	12/17/94	12/18/94 MB

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412135-07 Matrix: SOIL
Client ID: RA-21 Collected: 12/15/94

Parameter	Method	Result		Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010		BQL	2.10	mg/Kg	1	12/17/94	12/18/94 MB

GP ID: 9412135-08 Matrix: SOIL
Client ID: RA-22 Collected: 12/15/94

Parameter	Method	Result		Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010		BQL	2.25	mg/Kg	1	12/17/94	12/18/94 MB

GP ID: 9412135-09 Matrix: SOIL
Client ID: RA-23 Collected: 12/15/94

Parameter	Method	Result		Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010		BQL	2.06	mg/Kg	1	12/17/94	12/18/94 MB

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412135-01 Matrix: SOIL
Client ID: RA-15 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	80.5		%			12/19/94 SCT

GP ID: 9412135-02 Matrix: SOIL
Client ID: RA-16 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	85.3		%			12/19/94 SCT

GP ID: 9412135-03 Matrix: SOIL
Client ID: RA-17 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	76.3		%			12/19/94 SCT

GP ID: 9412135-04 Matrix: SOIL
Client ID: RA-18 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	89.2		%			12/19/94 SCT

GP ID: 9412135-05 Matrix: SOIL
Client ID: RA-19 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	86.0		%			12/19/94 SCT

GP ID: 9412135-06 Matrix: SOIL
Client ID: RA-20 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	86.6		%			12/19/94 SCT

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412135-07 Matrix: SOIL
Client ID: RA-21 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	80.8		%			12/19/94 SCT

GP ID: 9412135-08 Matrix: SOIL
Client ID: RA-22 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	75.6		%			12/19/94 SCT

GP ID: 9412135-09 Matrix: SOIL
Client ID: RA-23 Collected: 12/15/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	82.3		%			12/19/94 SCT

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: CTO-157 INDIAN HEAD

Halliburton NUS
661 Andersen Drive
Pittsburgh, PA 15220
Atten: Tony Klimek

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by: _____

SAMPLE IDENTIFICATION

GP ID	Client ID
9412158-01A	RA-24
9412158-02A	RA-25
9412158-03A	RA-26
9412158-04A	RA-27
9412158-05A	RA-17A
9412158-06A	RA-28

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412158-01 Matrix: SOIL
Client ID: RA-24 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.12	mg/Kg	1	12/20/94	12/21/94 MB

GP ID: 9412158-02 Matrix: SOIL
Client ID: RA-25 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.19	mg/Kg	1	12/20/94	12/21/94 MB

GP ID: 9412158-03 Matrix: SOIL
Client ID: RA-26 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.05	mg/Kg	1	12/20/94	12/21/94 MB

GP ID: 9412158-04 Matrix: SOIL
Client ID: RA-27 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	2.06	1.98	mg/Kg	1	12/20/94	12/21/94 MB

GP ID: 9412158-05 Matrix: SOIL
Client ID: RA-17A Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	3.92	2.12	mg/Kg	1	12/20/94	12/21/94 MB

GP ID: 9412158-06 Matrix: SOIL
Client ID: RA-28 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	8.32	2.25	mg/Kg	1	12/20/94	12/21/94 MB

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412158-01 Matrix: SOIL
Client ID: RA-24 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	80.0		%			12/21/94 SCT

GP ID: 9412158-02 Matrix: SOIL
Client ID: RA-25 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	77.6		%			12/21/94 SCT

GP ID: 9412158-03 Matrix: SOIL
Client ID: RA-26 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	82.9		%			12/21/94 SCT

GP ID: 9412158-04 Matrix: SOIL
Client ID: RA-27 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	85.8		%			12/21/94 SCT

GP ID: 9412158-05 Matrix: SOIL
Client ID: RA-17A Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	80.2		%			12/21/94 SCT

GP ID: 9412158-06 Matrix: SOIL
Client ID: RA-28 Collected: 12/19/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	75.6		%			12/21/94 SCT

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: CTO-157 INDIAN HEAD-SITE 5

Halliburton NUS
661 Andersen Drive
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Atten: Tony Klimek

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by:

SAMPLE IDENTIFICATION

GP ID	Client ID
9412206-01A	RA-29
9412206-02A	RA-30
9412206-03A	RA-31
9412206-04A	RA-32
9412206-05A	RA-33
9412206-06A	RA-34
9412206-06B	
9412206-07A	RA-35

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412206-01 Matrix: SOIL
Client ID: RA-29 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	2.14	1.95	mg/Kg	1	12/29/94	12/30/94 MB

GP ID: 9412206-02 Matrix: SOIL
Client ID: RA-30 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	6.98	2.03	mg/Kg	1	12/29/94	12/30/94 MB

GP ID: 9412206-03 Matrix: SOIL
Client ID: RA-31 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	18.2	2.10	mg/Kg	1	12/29/94	12/30/94 MB

GP ID: 9412206-04 Matrix: SOIL
Client ID: RA-32 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	2.22	1.94	mg/Kg	1	12/29/94	12/30/94 MB

GP ID: 9412206-05 Matrix: SOIL
Client ID: RA-33 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.00	mg/Kg	1	12/29/94	12/30/94 MB

GP ID: 9412206-06 Matrix: SOIL
Client ID: RA-34 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	1.98	mg/Kg	1	12/29/94	12/30/94 MB

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412206-07
Client ID: RA-35

Matrix: SOIL
Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	2.80	1.95	mg/Kg	1	12/29/94	12/30/94 MB

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412206-01 Matrix: SOIL
Client ID: RA-29 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	87.1		%			12/30/94 SCT

GP ID: 9412206-02 Matrix: SOIL
Client ID: RA-30 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	83.7		%			12/30/94 SCT

GP ID: 9412206-03 Matrix: SOIL
Client ID: RA-31 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	81.0		%			12/30/94 SCT

GP ID: 9412206-04 Matrix: SOIL
Client ID: RA-32 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	87.7		%			12/30/94 SCT

GP ID: 9412206-05 Matrix: SOIL
Client ID: RA-33 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	85.0		%			12/30/94 SCT

GP ID: 9412206-06 Matrix: SOIL
Client ID: RA-34 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	86.0		%			12/30/94 SCT

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412206-07
Client ID: RA-35

Matrix: SOIL
Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	87.2		%			12/30/94 SCT

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: CTO-157 INDIAN HEAD-SITE 5

Halliburton NUS
661 Andersen Drive
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202 Perry Parkway
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Atten: Client Services
Phone: (301) 926-6802

Certified by:

SAMPLE IDENTIFICATION

GP ID	Client ID
9501054-01A	W-1

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9501054-01
Client ID: W-1

Matrix: WATER
Collected: 01/11/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	129.0	8.50	ug/L	1	01/12/95	01/13/95 MB

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: CTO-157 INDIAN HEAD-SITE S

Halliburton NUS
661 Andersen Drive
Pittsburgh, PA 15220
Atten: Tony Klimek

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by: CB

SAMPLE IDENTIFICATION

GP ID	Client ID
9412194-01A	TRS-01
9412194-02A	HOLDING BLANK
9412194-02B	

GP ENVIRONMENTAL SERVICES
ORGANIC ANALYSIS RESULTS

GP ID: 9412196-01
Client ID: TRS-01

Matrix: SOIL
Collected: 12/28/94

Parameter	Method	Result		Det.Lim.	Units	Dil.	Prepared	Analyzed By
Flash point	1010		N	100.0	deg. C			12/28/94 JB

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412196-01
Client ID: TRS-01

Matrix: SOIL
Collected: 12/28/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed	By
TCLP Silver	SW846 6010	BQL	17.8	ug/L	1	12/28/94	12/30/94	DH
TCLP Arsenic	SW846 6010	BQL	121.0	ug/L	1	12/28/94	12/30/94	DH
TCLP Barium	SW846 6010	296.0	89.0	ug/L	1	12/28/94	12/30/94	DH
TCLP Cadmium	SW846 6010	BQL	11.8	ug/L	1	12/28/94	12/30/94	DH
TCLP Chromium	SW846 6010	BQL	13.9	ug/L	1	12/28/94	12/30/94	DH
TCLP Mercury	SW846 7470	0.108	0.100	ug/L	1	12/28/94	12/29/94	AK
TCLP Lead	SW846 6010	BQL	107.0	ug/L	1	12/28/94	12/30/94	DH
TCLP Selenium	SW846 6010	BQL	109.0	ug/L	1	12/28/94	12/30/94	DH

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412196-01 Matrix: SOIL
Client ID: TRS-01 Collected: 12/28/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Acidity	MCAWW 305.1	BQL	1470.0	mg/Kg			12/29/94 ST
Reactive Cyanide	SW 846 7.3.3	BQL	0.036	mg/Kg	1	12/29/94	12/29/94 JS
pH	SW846 9045	7.80	0.001	pH	1		12/29/94 SCT
Reactive Sulfide	SW 846 7.3.4	191.0	1.19	mg/Kg	1	12/29/94	12/29/94 SCT

GP ENVIRONMENTAL SERVICES
ORGANIC ANALYSIS RESULTS

GP ID: 9412194-01A
Client ID: TRS-01
Collected: 12/28/94
Dilution: 1

Matrix: SOIL
Method: CLP SOW 390
Units: ug/Kg

Analyst: MB
Analyzed: 12/28/94
Prepared:

VOLATILE TARGET COMPOUNDS

Parameter	Result	Det.Lim.	Qualifier
Chloromethane	BQL	12.0	
Bromomethane	BQL	12.0	
Vinyl chloride	BQL	12.0	
Chloroethane	BQL	12.0	
Methylene chloride	3.00	12.0	BJ
Acetone	BQL	12.0	
Carbon Disulfide	BQL	12.0	
1,1-Dichloroethene	BQL	12.0	
1,1-Dichloroethane	BQL	12.0	
1,2-Dichloroethene(total)	BQL	12.0	
Chloroform	BQL	12.0	
1,2-Dichloroethane	BQL	12.0	
2-Butanone	BQL	12.0	
1,1,1-Trichloroethane	BQL	12.0	
Carbon tetrachloride	BQL	12.0	
Bromodichloromethane	BQL	12.0	
1,2-Dichloropropane	BQL	12.0	
cis-1,3-Dichloropropene	BQL	12.0	
Trichloroethene	BQL	12.0	
Dibromochloromethane	BQL	12.0	
1,1,2-Trichloroethane	BQL	12.0	
Benzene	BQL	12.0	
trans-1,3-Dichloropropene	BQL	12.0	
Bromoform	BQL	12.0	
4-Methyl-2-pentanone	BQL	12.0	
2-Hexanone	BQL	12.0	
Tetrachloroethene	BQL	12.0	
1,1,2,2-Tetrachloroethane	BQL	12.0	
Toluene	BQL	12.0	
Chlorobenzene	BQL	12.0	
Ethylbenzene	BQL	12.0	
Styrene	BQL	12.0	
Xylenes (total)	BQL	12.0	

GP ENVIRONMENTAL SERVICES
ORGANIC ANALYSIS RESULTS

GP ID: 9412195-01A
Client ID: TRS-01
Collected: 12/28/94
Dilution: 1

Matrix: SOIL
Method: CLP SOW 390
Units: ug/Kg

Analyst: IM
Analyzed: 12/30/94
Prepared: 12/28/94

SEMIVOLATILE TARGET COMPOUNDS

Parameter	Result	Det.Lim.	Qualifier
Phenol	BQL	380.0	
bis(2-Chloroethyl) ether	BQL	380.0	
2-Chlorophenol	BQL	380.0	
1,3-Dichlorobenzene	BQL	380.0	
1,4-Dichlorobenzene	BQL	380.0	
1,2-Dichlorobenzene	BQL	380.0	
2-Methylphenol	BQL	380.0	
2,2'-oxybis-(1-chloropropane)	BQL	380.0	
4-Methylphenol	BQL	380.0	
N-Nitroso-di-n-propylamine	BQL	380.0	
Hexachloroethane	BQL	380.0	
Nitrobenzene	BQL	380.0	
Isophorone	BQL	380.0	
2-Nitrophenol	BQL	380.0	
2,4-Dimethylphenol	BQL	380.0	
bis(2-Chloroethoxy) methane	BQL	380.0	
2,4-Dichlorophenol	BQL	380.0	
1,2,4-Trichlorobenzene	BQL	380.0	
Naphthalene	BQL	380.0	
4-Chloroaniline	BQL	380.0	
Hexachlorobutadiene	BQL	380.0	
4-Chloro-3-methylphenol	BQL	380.0	
2-Methylnaphthalene	BQL	380.0	
Hexachlorocyclopentadiene	BQL	380.0	
2,4,6-Trichlorophenol	BQL	380.0	
2,4,5-Trichlorophenol	BQL	954.0	
2-Chloronaphthalene	BQL	380.0	
2-Nitroaniline	BQL	954.0	
Dimethyl phthalate	BQL	380.0	
Acenaphthylene	BQL	380.0	
2,6-Dinitrotoluene	BQL	380.0	
3-Nitroaniline	BQL	954.0	

GP ENVIRONMENTAL SERVICES
ORGANIC ANALYSIS RESULTS

GP ID: 9412195-01A
Client ID: TRS-01
Collected: 12/28/94
Dilution: 1

Matrix: SOIL
Method: CLP SOW 390
Units: ug/Kg

Analyst: IM
Analyzed: 12/30/94
Prepared: 12/28/94

SEMIVOLATILE TARGET COMPOUNDS

Parameter	Result	Det.Lim.	Qualifier
Acenaphthene	BQL	380.0	
2,4-Dinitrophenol	BQL	954.0	
4-Nitrophenol	BQL	954.0	
Dibenzofuran	BQL	380.0	
2,4-Dinitrotoluene	BQL	380.0	
Diethylphthalate	BQL	380.0	
4-Chlorophenyl phenyl ether	BQL	380.0	
Fluorene	BQL	380.0	
4-Nitroaniline	BQL	954.0	
4,6-Dinitro-2-methylphenol	BQL	954.0	
N-nitrosodiphenylamine	BQL	380.0	
4-Bromophenyl-phenylether	BQL	380.0	
Hexachlorobenzene	BQL	380.0	
Pentachlorophenol	BQL	954.0	
Phenanthrene	BQL	380.0	
Anthracene	BQL	380.0	
Carbazole	BQL	380.0	
di-n-Butylphthalate	190.0	380.0	J
Fluoranthene	BQL	380.0	
Pyrene	BQL	380.0	
Butyl benzyl phthalate	BQL	380.0	
3,3'-Dichlorobenzidine	BQL	380.0	
Benzo[a]anthracene	BQL	380.0	
Chrysene	BQL	380.0	
bis(2-Ethylhexyl)phthalate	BQL	380.0	
di-n-Octylphthalate	BQL	380.0	
Benzo[b]fluoranthene	BQL	380.0	
Benzo[k]fluoranthene	BQL	380.0	
Benzo[a]pyrene	BQL	380.0	
Indeno[1,2,3-cd]pyrene	BQL	380.0	
Dibenz[a,h]anthracene	BQL	380.0	
Benzo[g,h,i]perylene	BQL	380.0	

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9412194-01
Client ID: TRS-01

Matrix: SOIL
Collected: 12/28/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed	By
Antimony	MCAWW 204.2	BQL	0.578	mg/Kg	1	12/28/94	12/29/94	FU
Arsenic	MCAWW 206.2	6.42	0.347	mg/Kg	1	12/28/94	12/29/94	RA
Lead	MCAWW 239.2	32.0	1.85	mg/Kg	10	12/28/94	12/29/94	RA
Mercury	MCAWW 245.5	0.230	0.052	mg/Kg	1	12/28/94	12/28/94	AK
Potassium	MCAWW 258.1	383.0	62.9	mg/Kg	1	12/29/94	12/30/94	RA
Selenium	MCAWW 270.2	BQL	0.393	mg/Kg	1	12/28/94	12/29/94	FU
Silver	MCAWW 272.2	2040.0	57.8	mg/Kg	500	12/28/94	12/29/94	FU
Sodium	MCAWW 273.1	BQL	33.5	mg/Kg	1	12/29/94	12/30/94	RA
Thallium	MCAWW 279.2	BQL	0.624	mg/Kg	1	12/28/94	12/29/94	FU
Aluminum	MCAWW 200.7	10300.0	19.8	mg/Kg	1	12/29/94	12/30/94	MB
Barium	MCAWW 200.7	11.9	1.58	mg/Kg	1	12/29/94	12/30/94	MB
Beryllium	MCAWW 200.7	0.254	0.144	mg/Kg	1	12/29/94	12/30/94	MB
Calcium	MCAWW 200.7	261.0	16.9	mg/Kg	1	12/29/94	12/30/94	MB
Cadmium	MCAWW 200.7	1.03	0.617	mg/Kg	1	12/29/94	12/30/94	MB
Cobalt	MCAWW 200.7	BQL	2.68	mg/Kg	1	12/29/94	12/30/94	MB
Chromium	MCAWW 200.7	17.1	1.11	mg/Kg	1	12/29/94	12/30/94	MB
Copper	MCAWW 200.7	24.4	1.38	mg/Kg	1	12/29/94	12/30/94	MB
Iron	MCAWW 200.7	10200.0	13.9	mg/Kg	1	12/29/94	12/30/94	MB
Magnesium	MCAWW 200.7	478.0	13.1	mg/Kg	1	12/29/94	12/30/94	MB
Manganese	MCAWW 200.7	17.2	1.44	mg/Kg	1	12/29/94	12/30/94	MB
Nickel	MCAWW 200.7	13.8	4.07	mg/Kg	1	12/29/94	12/30/94	MB
Vanadium	MCAWW 200.7	24.8	1.74	mg/Kg	1	12/29/94	12/30/94	MB
Zinc	MCAWW 200.7	24.8	1.19	mg/Kg	1	12/29/94	12/30/94	MB

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9412194-01
Client ID: TRS-01

Matrix: SOIL
Collected: 12/28/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	86.5		%			12/29/94 SCT

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: CTO-157 INDIAN HEAD-SITE 5

Halliburton NUS
661 Andersen Drive
Pittsburgh, PA 15220
Atten: Tony Klimek

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by:

SAMPLE IDENTIFICATION

GP ID	Client ID
9501010-01A	TRS-02
9501014-01A	RA-31A

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9501010-01 Matrix: SOIL
Client ID: TRS-02 Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.07	mg/Kg	1	01/03/95	01/04/95 MB

GP ID: 9501014-01 Matrix: SOIL
Client ID: RA-31A Collected: 01/04/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Silver	SW846 6010	BQL	2.12	mg/Kg	1	01/04/95	01/05/95 MB

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9501010-01
Client ID: TRS-02

Matrix: SOIL
Collected: 12/29/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	82.2		%			01/03/95 SCT

GP ID: 9501014-01
Client ID: RA-31A

Matrix: SOIL
Collected: 01/04/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	80.1		%			01/05/95 SCT

GP ENVIRONMENTAL SERVICES
ORGANIC ANALYSIS RESULTS

GP ID: 9412194-02A
Client ID: HOLDING BLANK
Collected: 12/28/94
Dilution: 1

Matrix: WATER
Method: CLP SOW 390
Units: ug/L

Analyst: HY
Analyzed: 12/29/94
Prepared:

VOLATILE TARGET COMPOUNDS

Parameter	Result	Det.Lim.	Qualifier
Chloromethane	BQL	10.0	
Bromomethane	BQL	10.0	
Vinyl chloride	BQL	10.0	
Chloroethane	BQL	10.0	
Methylene chloride	4.00	10.0	J
Acetone	BQL	10.0	
Carbon Disulfide	BQL	10.0	
1,1-Dichloroethene	BQL	10.0	
1,1-Dichloroethane	BQL	10.0	
1,2-Dichloroethene(total)	BQL	10.0	
Chloroform	1.00	10.0	J
1,2-Dichloroethane	BQL	10.0	
2-Butanone	BQL	10.0	
1,1,1-Trichloroethane	BQL	10.0	
Carbon tetrachloride	BQL	10.0	
Bromodichloromethane	BQL	10.0	
1,2-Dichloropropane	BQL	10.0	
cis-1,3-Dichloropropene	BQL	10.0	
Trichloroethene	BQL	10.0	
Dibromochloromethane	BQL	10.0	
1,1,2-Trichloroethane	BQL	10.0	
Benzene	BQL	10.0	
trans-1,3-Dichloropropene	BQL	10.0	
Bromoform	BQL	10.0	
4-Methyl-2-pentanone	BQL	10.0	
2-Hexanone	BQL	10.0	
Tetrachloroethene	BQL	10.0	
1,1,2,2-Tetrachloroethane	BQL	10.0	
Toluene	BQL	10.0	
Chlorobenzene	BQL	10.0	
Ethylbenzene	BQL	10.0	
Styrene	BQL	10.0	
Xylenes (total)	BQL	10.0	

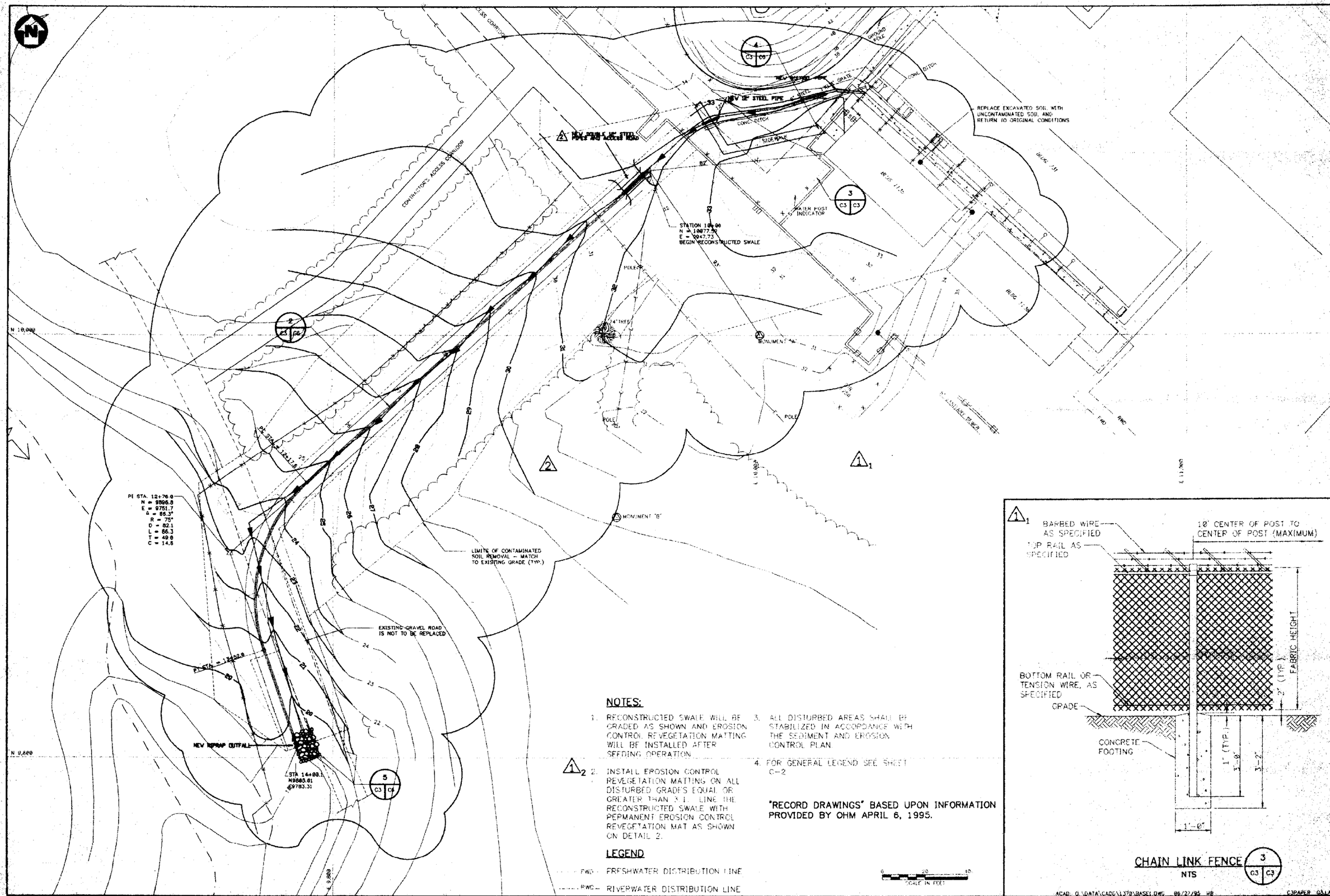
GP ENVIRONMENTAL SERVICES

Possible notes and definitions for this report:

BQL	= Below Quantitation Limit
J	= An estimated value, below method detection limit
B	= Indicates that the compound was found in the associated blank
E	= Indicates that the concentration exceeded the calibration range of the instrument
U	= Indicates that the compound was analyzed for but not detected, number indicates the detection limit
D	= Indicates that the compound was found in a analysis at a secondary dilution factor
*	= Value obtained from a 1:5 dilution
+	= Value obtained from a 1:10 dilution
#	= Value obtained from a 1:20 dilution
^	= Value obtained from a 1:50 dilution
~	= Value obtained from a 1:100 dilution
!	= Value obtained from a 1:250 dilution
@	= Value obtained from a 1:125 dilution (Medium Level)
$	= Value obtained from a 1:1000 dilution
&	= Value obtained from a 1:10000 dilution
N	= Flashpoint not observed; heated to specified limit
R	= Flammable at room temperature
TNTC	= Too numerous to count
B.P.	= Detection limit taken from boiling point
F.F.	= Sample gave off flammable fumes

APPENDIX D

RECORD DRAWINGS



NOTES:

1. RECONSTRUCTED SWALE WILL BE GRADED AS SHOWN AND EROSION CONTROL REVEGETATION MATTING WILL BE INSTALLED AFTER SEEDING OPERATION.
2. INSTALL EROSION CONTROL REVEGETATION MATTING ON ALL DISTURBED GRADES EQUAL OR GREATER THAN 3:1. LINE THE RECONSTRUCTED SWALE WITH PERMANENT EROSION CONTROL REVEGETATION MAT AS SHOWN ON DETAIL 2.
3. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE SEDIMENT AND EROSION CONTROL PLAN.
4. FOR GENERAL LEGEND SEE SHEET C-2.

"RECORD DRAWINGS" BASED UPON INFORMATION PROVIDED BY OHM APRIL 6, 1995.

LEGEND

FWD – FRESHWATER DISTRIBUTION LINE

RWD – RIVERWATER DISTRIBUTION LINE

SCALE IN FEET

CHAIN LINK FENCE (3 / C3)
NTS

HALLIBURTON NUS CORPORATION
901 ANDERSON DRIVE, PITTSBURGH, PA 15220
(412) 921-7090

DSA	403		
04	404		
EAC	405		
JAG	406		
402	016		

SYMBOL	DESCRIPTION	DATE	APPROVED
1	RECORD DRAWING INFORMATION		
2	MOVED DETAIL 2 TO C6 AND MOVED DETAIL 3 FROM C6 TO C3	8/17/95	
3	ADDED NOTE	8/17/95	

REVISIONS

NSWC INDIAN HEAD SAFETY DIVISION

NSWC INDIAN HEAD ENVIRONMENTAL DIVISION

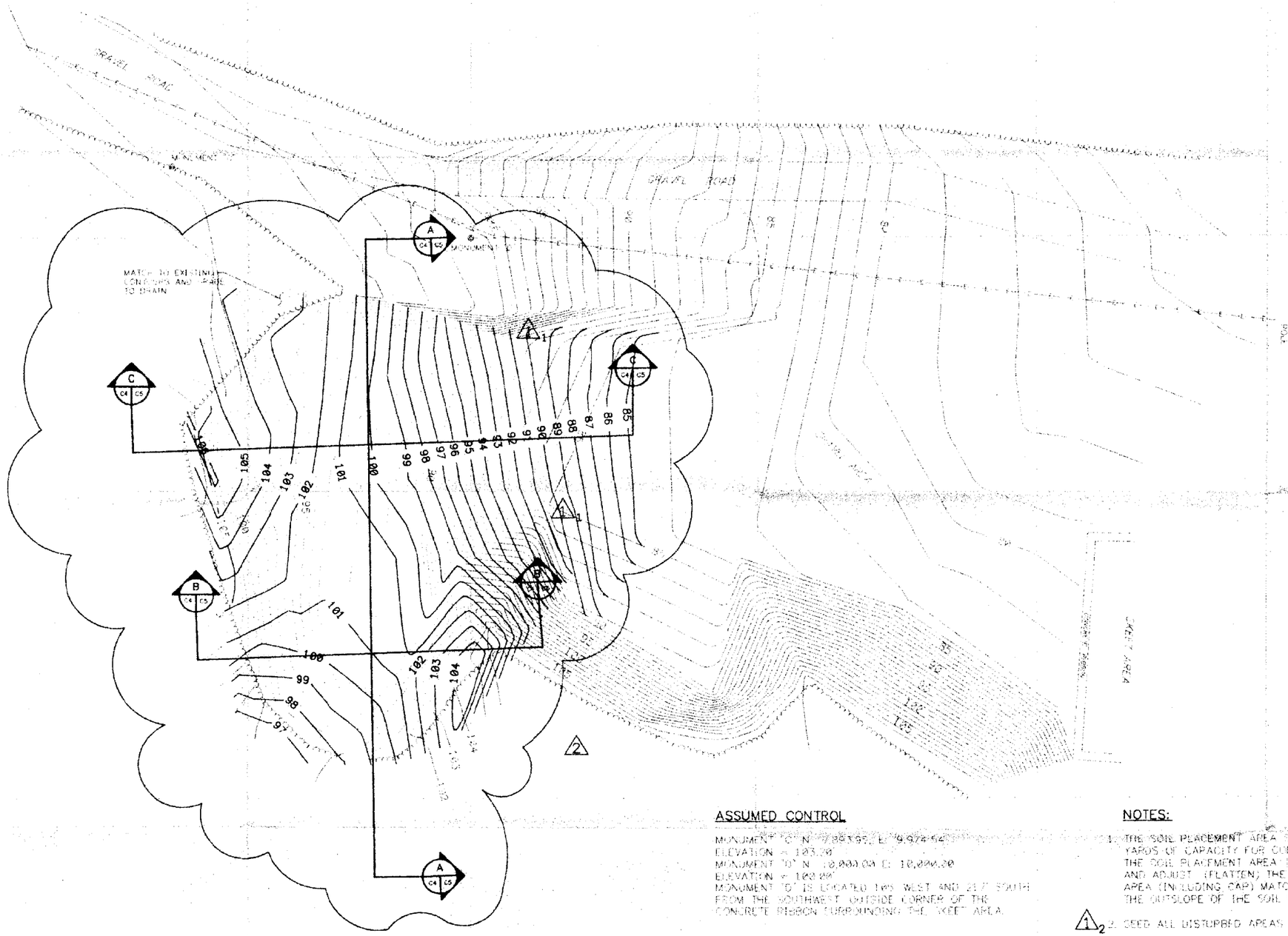
ENGINEERING FIELD ACTIVITY CHESAPEAKE
WASHINGTON, D.C.

NAVY ENGINEERING DIVISION

INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER
REMOVAL OF SILVER CONTAMINATED SOIL IR SITE 5 REGRADING PLAN

CODE I.D. NO. 80091
DRAWING SIZE: B
CONST. CONT. NO. N62477-93-C-0305
SPEC. 21-93-0305
NAVFAC DRAWING NO. 3081292
SHEET 4 OF 10
SHEET NO. C-3

ACAD: Q:\DATA\CADD\1378\BASE1.DWG 08/27/95 HB



ASSUMED CONTROL

MONUMENT "C" N [illegible] E [illegible]
ELEVATION = 103.20
MONUMENT "D" N 10,000.00 E 10,000.00
ELEVATION = 100.00
MONUMENT "D" IS LOCATED 100' WEST AND 217' SOUTH FROM THE SOUTHWEST OUTSIDE CORNER OF THE CONCRETE RIBBON SURROUNDING THE "KEEP" AREA.

NOTES:

1. THE SOIL PLACEMENT AREA SHOWN ON THIS DRAWING HAS APPROXIMATELY 2100 CUBIC YARDS OF CAPACITY FOR CONTAMINATED SOIL. THE CONTRACTOR SHALL CONSTRUCT THE SOIL PLACEMENT AREA TO BEGIN AT THE TOE SHOWN ON THIS DRAWING (ELEV. 95) AND ADJUST (FLATTEN) THE OUTSLOPE SO THAT THE TOP ELEVATION OF THE SOIL PLACEMENT AREA (INCLUDING CAP) MATCHES THE TOP ELEVATION OF THE EXISTING AREA (ELEV. 105). THE OUTSLOPE OF THE SOIL PLACEMENT AREA SHALL NOT EXCEED 3H : 1V.
2. SEED ALL DISTURBED AREAS AFTER FINAL GRADING.
3. INSTALL EROSION CONTROL REVEGETATION MATTING ON ALL DISTURBED GRADES EQUAL OR GREATER THAN 3:1.

"RECORD DRAWINGS" BASED UPON INFORMATION PROVIDED BY OHM, APRIL 6, 1995.

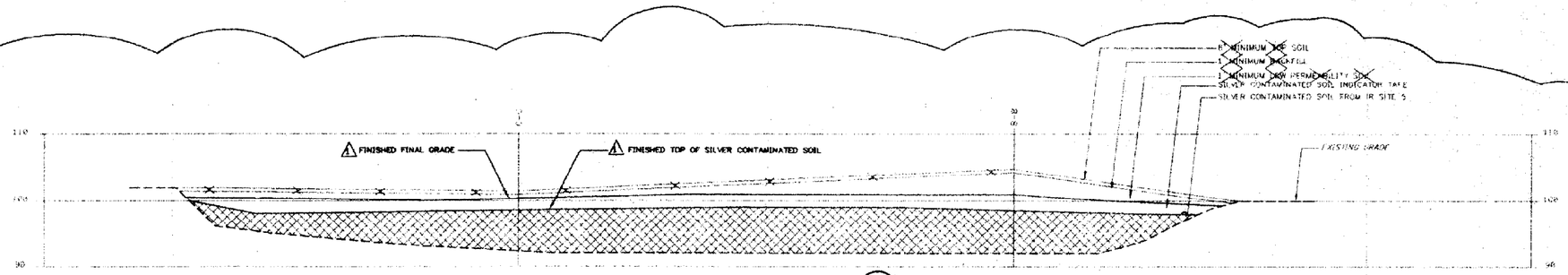
0 20 40
SCALE IN FEET

A0.40 Q:\DATA\CADD\1370\PROFILE.DWG 06/26/95 MB

HALLIBURTON NUS CORPORATION
901 WORLDS FAIR DRIVE, PITTSBURGH, PA 15220
U.S. ARMY ENGINEERS
DRAWN BY: DB
CHK. BY: TLC
PROJECT MANAGER: TLC
APPROVED: DATE:
DSA 04 TLC 401 402 403 404 415 408 DAB
REVIEWED BY PROJ. ENGR. DATE:
REVISIONS
1 REVISE DRAWING INFORMATION
2 REMOVE GRUBN CHANNEL
3 ADD NOTES 2 AND 3
DATE: 1 YRREL
DESCRIPTION
DATE: 8/17/94
DATE: 8/17/94
DATE: APPROVED

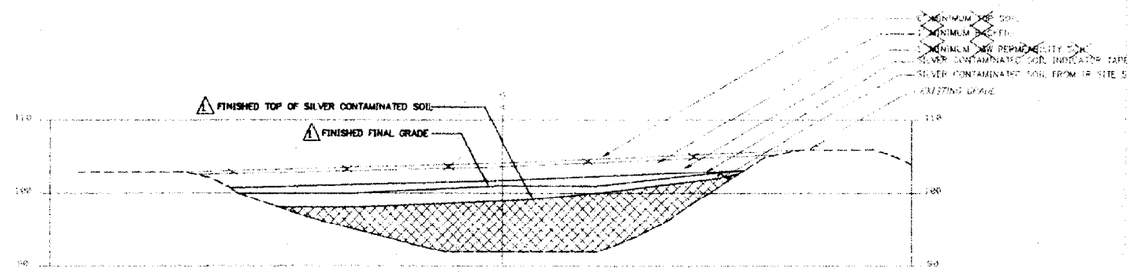
ENGINEERING FIELD ACTIVITY, CHESAPEAKE
INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER
REMOVAL OF CONTAMINATED SOIL
CONTAMINATED SOIL PLACEMENT AND REGRADING PLAN
CODE I.D. NO. 89091
DRAWING SIZE: D
CONST. CONT. NO. N62477-93-C-0305
SPEC. 21-93-0305
NAVFAC DRAWING NO. 3081293
SHEET 5 OF 10
SHEET NO. C-4

0042I08x
Box 2



CROSS-SECTION A-A (A / C4 | C5)

SCALE IN FEET



CROSS-SECTION B-B (B / C4 | C5)

SCALE IN FEET

NOTES:

1. MAXIMUM SLOPE FOR SOIL COVER IS THREE HORIZONTAL TO ONE VERTICAL.

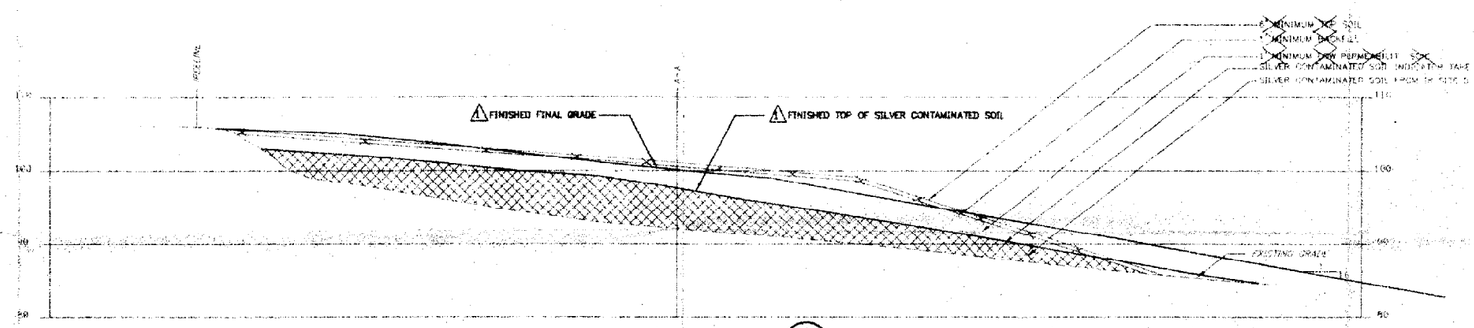
2. PLACE "SILVER CONTAMINATED SOIL" INDICATOR TAPE IN A CROSS PATTERN WITH EACH LINE OF TAPE A MAXIMUM OF 36" APART. PLACE TAPE OVER THE ENTIRE CONTAMINATED SOIL AREA DIAGONAL ON THE FACE OF THE SLOPE.

"RECORD DRAWINGS" BASED UPON INFORMATION PROVIDED BY OHM, APRIL 6, 1995.

LEGEND

LOW PERMEABILITY SOIL

SILVER CONTAMINATED SOIL



CROSS-SECTION C-C (C / C4 | C5)

SCALE IN FEET

2

ACAD: C:\DATA\CADD\172\93081201.DWG 06/28/95 MB

REVISIONS					
SYMBOL	DESCRIPTION	DATE	APPROVED		
1	RECORD DRAWING INFORMATION				

HSWC-INDIAN HEAD ENVIRONMENTAL DIVISION — HSWC-INDIAN HEAD SAFETY DIVISION

HALLIBURTON NUS CORPORATION
901 ANDERSON DRIVE, PITTSBURGH, PA 15220
(412) 921-7090

CDR	403		
04	404		
	405		
E.J.C.	406		
RBJ	408		
MBZ	DWG		

ENGINEERING FIELD ACTIVITY, CHESAPEAKE — INDIAN HEAD NAVAL ORDNANCE STATION — INDIAN HEAD, MD.

INDIAN HEAD DIVISION,
NAVAL SURFACE WARFARE CENTER
REMOVAL OF CONTAMINATED SOIL
PLACEMENT CROSS SECTIONS

CODE I.D. NO. 80091
DRAWING SIZE: D
CONST. CONT. NO. N62477-93-C-0305
SPEC. 21-93-0305
NAVFAC DRAWING NO. 3081294
SHEET 6 OF 10
SHEET No. C-5

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Box 2
Fig C-5