

Site No.: 69 (Continued)

that the top layer was five or six feet below ground level when the drums were covered. Gas masks with some type of absorption cannister and other protective clothing were worn by those people present. The heavy equipment operator reported that he itched after working at this site. The drums were light blue or bluish-green and unmarked.

In 1970, another burial incident took place during which 5-gallon cans and 55-gallon drums of DDT, trichloroethylene (TCE), and calcium hypochlorite were placed together in a common pit. When earth was being placed over the containers, an explosion and fire occurred which caused a forest fire and blew drums from the pit into the forest about 40 yards from the pit. A fire truck and base safety personnel were present. Some of those present possessed gas masks.

Note: Size estimates are based on map and photograph information. Field estimates may have been made, but no field measurements have been performed. Estimates are provided for general guidance only.

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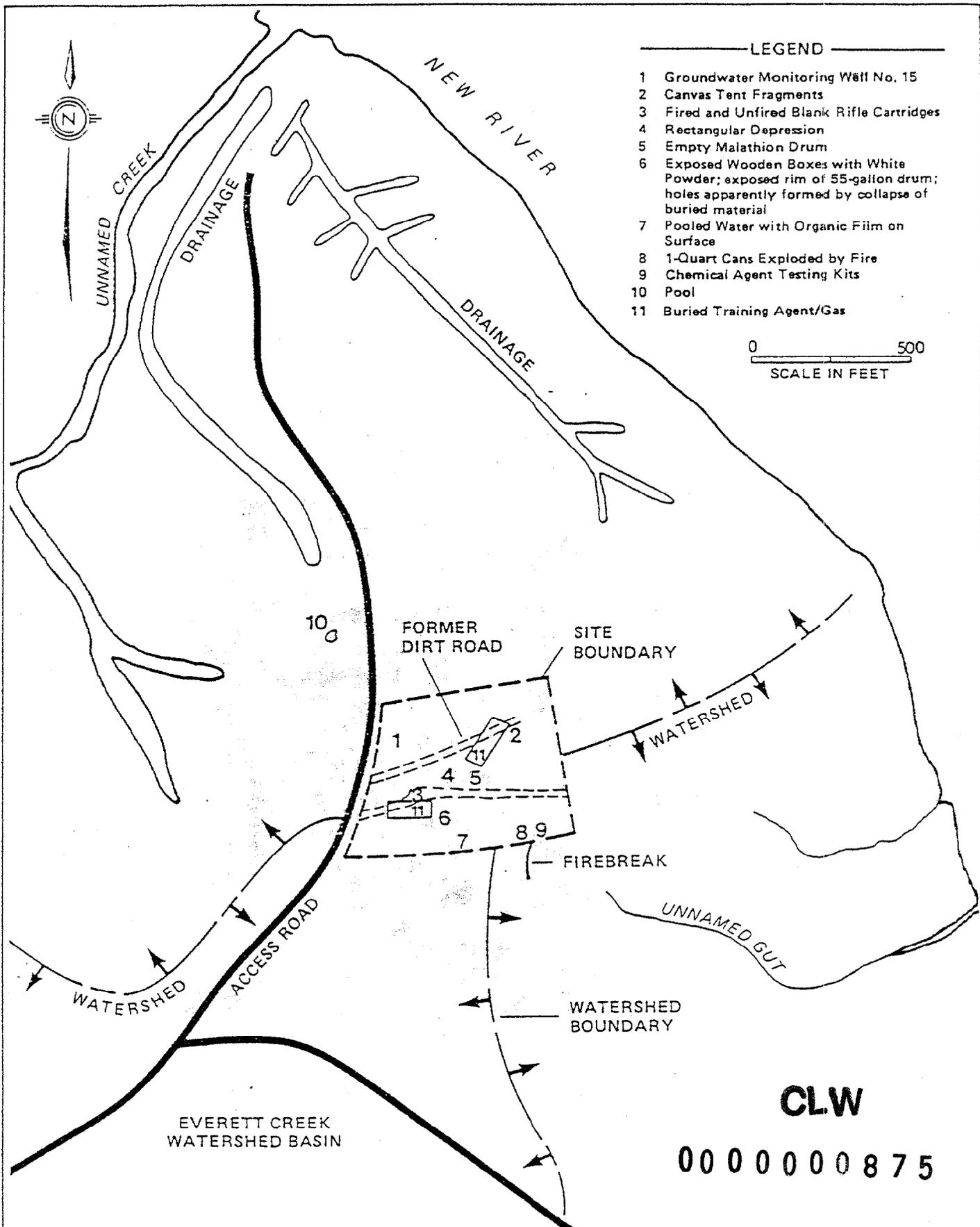


FIGURE 6-32
Physical Features and Locator Map For Site No. 69

SOURCE: USGS, 7.5 MINUTE SERIES, SNEADS FERRY, N.C., 1971.
VARIOUS AERIAL PHOTOGRAPHS, PERSONAL OBSERVATIONS, 1982.



FIGURE 6-33
Site No. 69 — Rifle Range Chemical Dump
Showing Discarded Gas Detection Kits

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Site No.: 73

Name: Courthouse Bay Liquid Disposal Area

Location: PWDM 17, 111-12; area surrounding Buildings A2, A3, A8, and A9, and surrounding the southern one-third of Courthouse Road

Figures and Photos: 2-1, 6-34, 6-35

Size: Acid and POL disposal area is about 1 acre. Disposal area for POL exclusively is about 12 acres.

Previously Reported: Yes Sanitary Engineering Survey FY77

Activity: Waste battery acid and motor oil were drained onto soil.

Materials Involved: Used vehicle battery acid containing sulfuric acid, lead, and possibly antimony; waste motor oil possibly containing phenol, barium, cadmium, chromium, copper, lead, nickel, silver, and zinc

Quantity: About 10,000 to 20,000 gallons of used battery acid were poured out at this site at an estimated rate of 60 gallons per month for a minimum of 27 years. The amount of lead dissolved in the used acid is expected to be small. (The solubility constant for lead sulfate is 2×10^{-8} ; new battery acid is about 12 normal sulfuric acid); however, lead sulfate debris may have been suspended in the acid. Antimony sulfate or dissolved antimony may be present in used acid. The acid content of fresh battery acid is about 6 molar sulfuric acid. Using fresh acid molarity, between 60,000 and 120,000 moles of sulfuric acid was dumped at this site. This amount of sulfuric acid would consume about 13 tons of calcium carbonate during neutralization. Over a 32-year period, as much as 400,000 gallons of waste motor oil has been disposed of at this site. Presently, the 208 amphibious vehicles at this site require four oil changes of 15 gallons each per year. If the constituent concentrations listed in Table 6-4 are representative of this waste oil, the following amounts of material would be present in the soil or ground water: lead, 1,300 pounds; zinc, 1,600 pounds; and phenol, 70 pounds.

When: 1946 to 1977

Comments: Acid disposal occurred periodically by manually digging small holes in the ground, pouring in battery wastes, and then replacing soil. Oil wastes were disposed of by driving vehicle into wooded area, draining oil onto ground, replacing it with new oil, and driving away. Acid was disposed of by hand-carrying the battery or acid from the maintenance area, so the disposal area for acid is smaller than for the oil.

The acid disposal area is approximately 200 feet from **CLW** Courthouse Bay. The disposal area for POL only is within just tens of feet from the shoreline.

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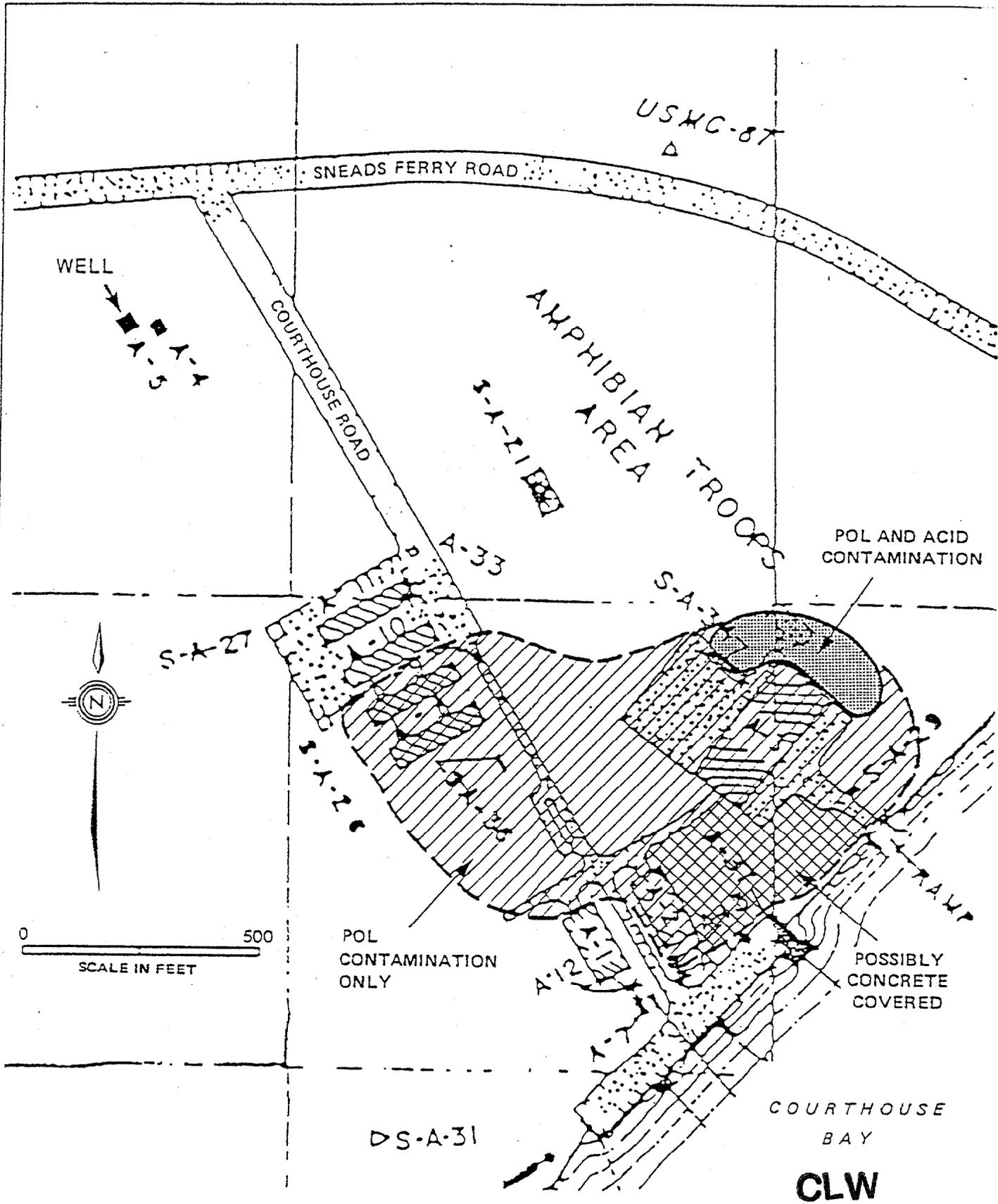


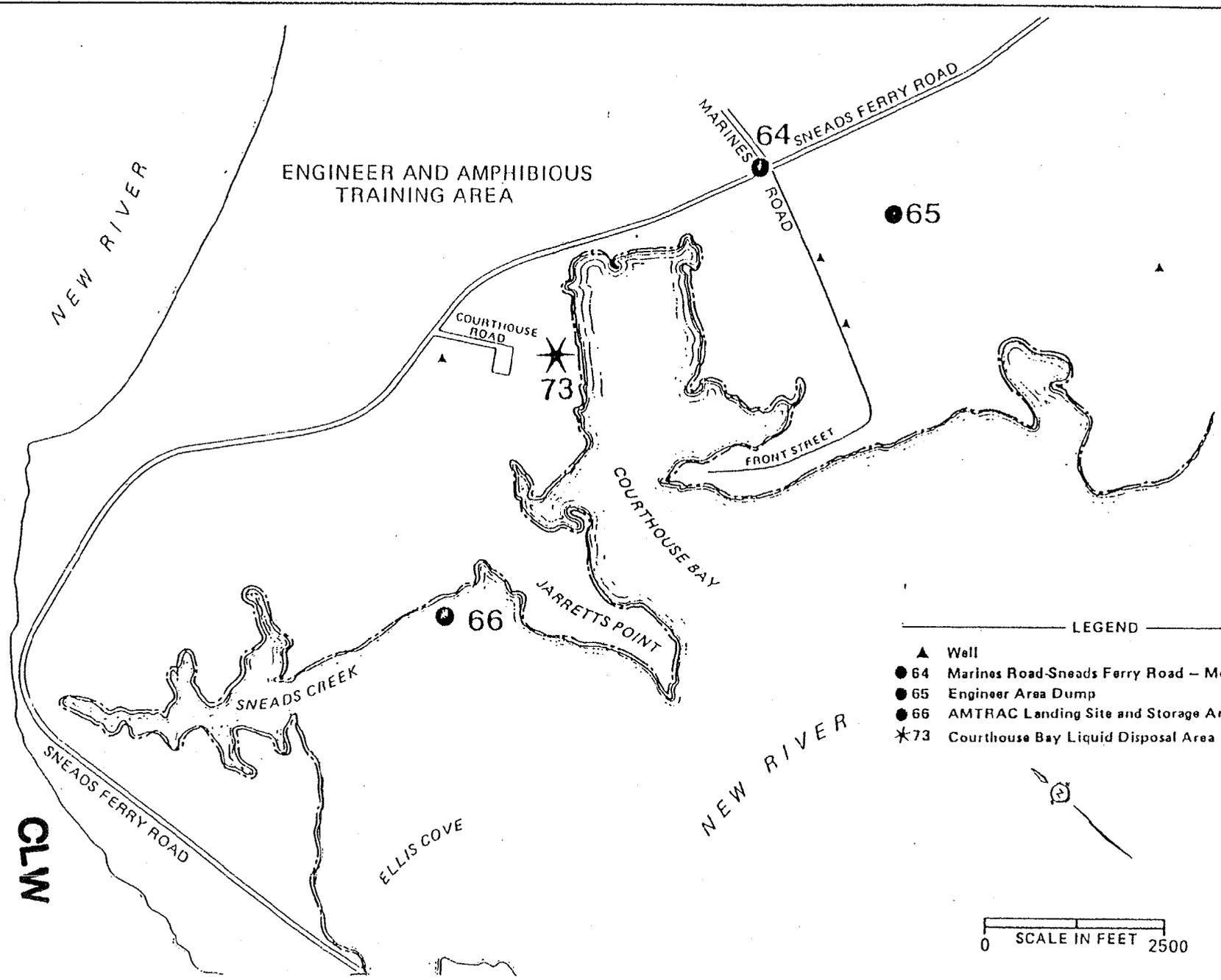
FIGURE 6-34
Detail of Site No. 73, Courthouse Bay Liquid Disposal Area

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6-39

6 7 8 0 0 0 0 0 0 0

CLW



- LEGEND
- ▲ Well
 - 64 Marines Road-Sneads Ferry Road - Mogas Spill
 - 65 Engineer Area Dump
 - 66 AMTRAC Landing Site and Storage Area
 - * 73 Courthouse Bay Liquid Disposal Area

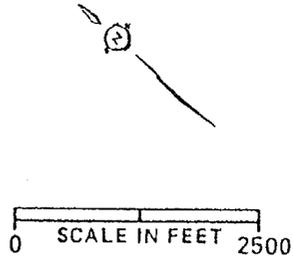


FIGURE 6-35. Site Locations at Engineer and Amphibious Training Area

Site No.: 74

Name: Mess Hall Grease Pit Area

Location: PWDM Coordinates 5, N13/014; grease pit located 0.4 miles east of railroad tracks - road intersection (at old sawmill site, Site No. 3) and north of dirt road; pest control usage area was 20-50 yards south of dirt road and about 75 yards east of Building 617.

Figures and Photos: 2-1, 6-5

Size: Grease pit 100-135 feet long by 30 feet wide by 10-12 feet deep; assume each drum burial pit was 30 feet long by 6 feet wide - total area north of dirt road approximately 2-3 acres; pest control area of about 100 feet by 100 feet is assumed.

Previously Reported: No

Activity: Three separate activities occurred in this area:

1. Grease from mess halls was deposited in a large pit;
2. Burials of 55-gallon drums, possibly containing PCB transformer oil and pesticides occurred near the grease pit; and
3. Burlap bags of sawdust were soaked in a DDT solution and then later deposited in wetland areas for mosquito control.

Materials Involved: PCBs, DDT, possibly other pesticides and drummed wastes.

Quantity: Pesticide contamination from pest control activities would have resulted from dripping sawdust bags, small spills, washout and excess disposal. It is reasonable to assume that at least several gallons per year were released. Therefore, over about 10 years, the quantity involved is estimated on the order of 50 to 500 gallons.

One or more truck loads of pesticides in 55-gallon drums were disposed of at this site. Assuming two truck loads of 20 full drums each, a quantity of 2,200 gallons of pesticides was buried here.

About 20 drums of PCB containing transformer oil, or 1,100 gallons, are buried here.

Mess hall grease at this site will not be considered a waste of concern (see Comments below).

Other wastes: See comment section below.

CLW

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(Continued)

Site No.: 74 (Continued)

When: Sawdust bag soakings: 1950-1958; Pesticide drum burial: early 1950s; PCB burial: about 1963; grease pit activities: early 1950s.

Comments: The grease pit was used in the early 1950s as a disposal site for mess hall grease and some food wastes. At least one unsuccessful attempt to burn the grease using more flammable material failed. In 1954 Hurricane Hazel passed through the area and washed/floated the grease from the pit; pit use was then discontinued.

Drum burials occurred near but not in the grease pit. Detailed information regarding drum contents is not available because most data were provided by equipment operators involved only with burial and not with transportation or custody of the drums.

Some drums may have been left over from a burial/disposal incident at the Rifle Range Chemical Landfill (Site No. 69).

Aerial photographs show extensive activity at the grease pit area in 1956 with evidence of perhaps four separate burial trenches. Some activity is evident in 1949 and this area remained partially denuded as late as 1970. It is likely that other waste disposal events took place at this site although no other evidence or reports were discovered during the course of this study.

A sand mining site was used in the Sawmill-Grease Pit area concurrently with the grease pit operations.

CLW

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Site No.: 75

Name: MCAS Basketball Court Site

Location: PWDM Coordinates 23, 08-9/P8-9; north of Curtis Road to the vicinity of the basketball court (Structure No. 1005) and between railroad tracks and housing area.

Figures and Photos: 2-1, 6-25, 6-36

Size: Pit was oval shaped, 90 feet long by 70 feet wide, at least 6 feet deep.

Previously Reported: No

Activity: Burial of drums occurred at this location.

Materials Involved: Material was called "gas" by personnel who unloaded it and is believed to be CN tear compound in solution. Solvents might include any one or more of the following: chloroform, carbon tetrachloride, benzene, and chloropicrin (PS).

Quantity: 75 to 100 55-gallon drums or 4,100 to 5,500 gallons

When: Early 1950s

Comments: Some conflicting data from former heavy equipment operators exist about this site. At least one disposal operation took place during which 75 to 100 55-gallon drums were buried. A crane was used to dig an oval hole about 70 feet by 90 feet and deep enough to cut into the groundwater table. The drum contents were called "gas" by the people delivering and unloading it but this was not intended to indicate automotive or airplane fuels. No fire department equipment or personnel were present. The drums may have contained a yellow or brown liquid. Tops of the drums may have had 8 feet of earth covering them.

There are three potable wells within 1,000 feet. No basements or shallow wells are known to exist in the vicinity. Recycled filter backwash water is pumped through a buried pipe between the water treatment plant and a storage pond north of the site. This pipe runs north-south immediately west of the site. Relatively high permeability fill surrounding the pipe may provide an opportunity for groundwater movement from the site to and into the pond.

CLW

Aerial photographs for years 1949, 1954, 1956 and 1964 **0000000882** reveal a conclusive location for this site.

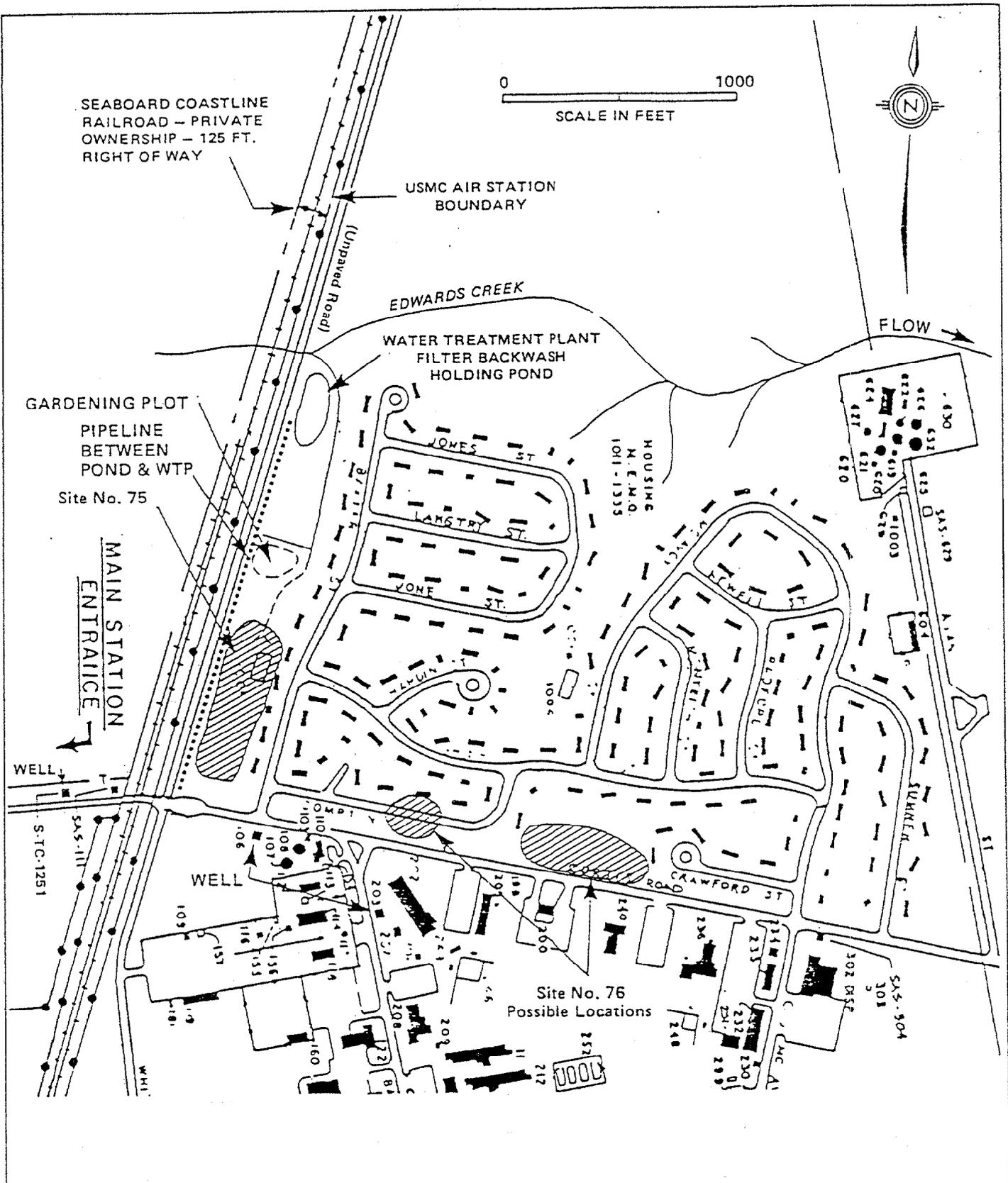


FIGURE 6-36
 Detail of Site No.s 75 and 76, MCAS Basketball Court Site
 and MCAS Curtis Road Site, Respectively 0000000883

SOURCE: BASE PUBLIC WORKS DEVELOPMENT MAP, SHEET 23 OF 24, JUNE 30, 1979.

Site No.: 76

Name: MCAS Curtis Road Site

Location: PWDM Coordinates 23, L10/M10/N10; adjacent to and north of Curtis Road and west of terminus circle of Crawford Street. Precise location cannot be ascertained (see Comments below).

Figures and Photos: 2-1, 6-25, 6-36

Size: Probably about 1/4 acre; assuming two 50 feet by 100 feet areas placed beside each other.

Previously Reported: No

Activity: Burial of drums occurred here on two separate occasions.

Materials Involved: Possibly chloroacetophenone (CN) tear compound/training agent because similar transporting and unloading procedures as those used at the MCAS Basketball Court Site (Site No. 75) were followed. Chloroform, carbon tetrachloride and benzene may be present as solvents and also chloropicrin (PS).

Quantity: At least 25 and possibly as many as 75 55-gallon drums, i.e., 1,400 to 4,100 gallons.

When: 1949

Comments: Material was delivered to the burial site on a padded truck and was unloaded by people who wore some protective clothing (perhaps only rubber gloves).

In 1949, this area was relatively undeveloped and lacked permanent landmarks. A large pecan tree cited as a landmark could not be located during the site visit. Features on a 22 October 1949 aerial photo indicate that the disposal site might be located 200 to 300 yards west of the area identified during the interview with a former heavy equipment operator. Since neither data source was considered unquestionable both areas are indicated on Figure 6-36. The exact site cannot be conclusively located at either one or the other of these two suggested locations. However, these sites are the most probable based on available data.

This site is different and distinct from the MCAS Basketball Court Site (Site No. 75).

CLW
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6.7.3 Sites Not Requiring Confirmation. The majority of identified waste disposal sites have been judged not to require further assessment. This is because the potential for adverse impact to public health and/or the environment is relatively small. These sites are described in this section.

CLW

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Site No.: 3

Name: Old Creosote Plant

Location: PWDM Coordinates 5, N11-12/O11-12

Figures and Photos: 2-1, 6-5

Size: Several acres

Activity: Lumber cutting and creosoting when railroad was being built

Materials and Quantity Involved: Trash and general debris

When: 1951 to 1952

Comments: Creosote plant operated only a few months when railroad was being built. The other operation was as a sawmill which made railroad ties and rough cut lumber. Plant later sold and removed.

Site No.: 4

Name: Sawmill Road Construction Debris Dump

Location: PWDM Coordinates 5, N14-15/O14-15

Figures and Photos: 2-1, 6-5

Size: Along roadway about 0.3 miles in length

Activity: General surface disposal area for construction debris

Materials and Quantity Involved: Asphalt, old bricks, and cement

When: Unknown

Comments: Distance to nearest well is about 100 feet (Well Building 641). No hazardous wastes involved.

CLW

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Site No.: 5

Name: Piney Green Road

Location: PWDM Coordinates 6, G4/H4

Figures and Photos: 2-1, 6-7

Size: Presumably along entire length of road which is about a mile

Activity: Waste oil from central heating plant was put on crushed clinkers and spread on road.

Materials and Quantity Involved: Waste oil for dust control

When: Unknown

Comments: Minor contamination potential

Site No.: 7

Name: Tarawa Terrace Dump

Location: PWDM Coordinates 3, F4

Figures and Photos: 2-1

Size: A few acres

Activity: Disposal site for waste material

Materials and Quantity Involved: Construction debris, STP filter sand,
and household trash

When: 1972 (this is date closed)

Comments: No hazardous waste involved.

CLW

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Site No.: 8

Name: Flammable Storage Warehouse Bldg TP-451 and TP-452

Location: PWDM Coordinates 6, K3

Figures and Photos: 2-1, 6-7

Size: About 1 acre

Activity: Storage facilities for flammable materials

Materials and Quantity Involved: Assorted flammables.

When: Current

Comments: Building TP-452 burned in 1977

Site No.: 10

Name: Original Base Dump

Location: PWDM Coordinates 6, G2/H2

Figures and Photos: 2-1, 6-7

Size: 5 to 10 acres

Activity: Waste disposal landfill

Materials and Quantity Involved: Construction debris

When: Pre-1950

Comments: First dump on base. Received mainly construction debris.
Also a burn dump.

CLW

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Site No.: 11

Name: Pest Control Shop

Location: PWDM Coordinates 10, F10

Figures and Photos: 2-1, 6-3

Size: A few acres

Activity: Formerly used as a Naval Research Laboratory where metabolic studies using Iodine 131 occurred; presently the Pest Control Shop

Materials and Quantity Involved: Pesticide storage (current), beta buttons (previously dissolved and removed), animal carcasses contaminated with low-level radioactive materials

When: 1976 to 1982

Comments: Previously reported as a site by base environmental personnel and cleaned. Residual radioactivity low due to short half-life of Iodine 131

Site No.: 12

Name: EOD (G-4)

Location: PWDM coordinates 20, G8-10/H8-10/I8-10

Figures and Photos: 2-1

Size: About 300 acres

Activity: Ordnance is disposed of by burning or exploding when found to be inert, unserviceable or defective

Materials and Quantity Involved: Ordnance, burned or exploded, colored smokes, and white phosphorus

When: Early 1960s

Comments: Any undestroyed residues are typically less than 1 ppm. 00-00000-0889

CLW

Site No.: 13

Name: Golf Course Construction Dump Site

Location: PWDM Coordinates 7, G12-13

Figures and Photos: 2-1

Size: About 10 acres

Activity: Surface disposal of materials

Materials and Quantity Involved: Clippings, branches, and some asphalt

When: 1944

Comments: No hazardous wastes involved

Site No.: 14

Name: Knox Area Rip-Rap

Location: PWDM Coordinates 2, L16-17/M16-17

Figures and Photos: 2-1, 6-10

Size: Along about 700 feet of shoreline

Activity: Shoreline stabilization

Materials and Quantity Involved: Broken concrete and asphalt

When: 1973

Comments: No hazardous wastes involved

CLW

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Site No.: 15

Name: Montford Point Dump Site (1948-1958)

Location: PWDM Coordinates 2, M9-10

Figures and Photos: 2-1, 6-10

Size: About 4 acres

Activity: Disposal area for trash and construction debris

Materials and Quantity Involved: Litter, asphalt, STP sludge, and sand

When: 1948 to 1958

Comments: No hazardous wastes involved

Site No.: 17

Name: Montford Point Area Rip-Rap

Location: PWDM Coordinates 2, N9/O9

Figures and Photos: 2-1, 6-10

Size: Along about 800 feet of shoreline

Activity: Shoreline stabilization

Materials and Quantity Involved: Concrete rubble

When: 1968 to Unknown

Comments: No hazardous wastes involved

CLW

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Site No.: 18

Name: Watkins Village (E) Site

Location: PWDM Coordinates 7, L21

Figures and Photos: 2-1

Size: 0.5 to 1 acre

Activity: Landfill burial of debris

Materials and Quantity Involved: Construction materials and debris

When: 1976 to 1978

Comments: No hazardous wastes involved

Site No.: 19

Name: Naval Research Lab Dump

Location: PWDM Coordinates 10, E10/F10

Figures and Photos: 2-1, 6-3

Size: About 2 to 3 acres

Activity: Waste disposal site for Naval Research Laboratory

Materials and Quantity Involved: Radioactive contaminated animals, empty tanks, and scrap metals

When: 1956 to 1960

Comments: Animal bodies were buried in deep pits. No residuals reported due to short half-life of Iodine 131. **CLW**

0000000892

Site No.: 20

Name: Naval Research Lab Incinerator

Location: PWDM Coordinates 10, F10

Figures and Photos: 2-1, 6-3

Size: Less than 0.5 acre

Activity: Incineration of burnable wastes

Materials and Quantity Involved: Some ash and debris

When: 1956 to 1960

Comments: Minor quantities of wastes and residuals

Site No.: 23

Name: Roads and Grounds, Building 1105

Location: PWDM Coordinates 10, J15

Figures and Photos: 2-1, 6-3

Size: 4,400 square feet

Activity: Formerly administration and storage area for Pest Control Shop

Materials and Quantity Involved: Pesticide and herbicide storage

When: 1957 to 1977

Comments: Site of former pesticide and herbicide storage and handling Storage Lot 140 (Site No. 21) at that time was used for pesticide mixing. No spills reported.

CLW

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Site No.: 25

Name: Base Incinerator

Location: PWDM Coordinates 10, G8

Figures and Photos: 2-1, 6-3

Size: Less than 0.5 acres

Activity: Waste incineration, classified material incineration

Materials and Quantity Involved: Burned trash and melted glass

When: 1940 to 1960

Comments: No hazardous wastes involved

Site No.: 26

Name: Coal Storage Area

Location: PWDM Coordinates 10, L12

Figures and Photos: 2-1, 6-3

Size: About 3 acres

Activity: Fuel storage for Central Heating Plant

Materials and Quantity Involved: Coal storage runoff

When: Present

Comments: Runoff control should be considered for this site.

CLW

0000000894

Site No.: 27

Name: Naval Hospital Area Rip-Rap

Location: PWDM Coordinates 10, H5

Figures and Photos: 2-1, 6-3

Size: About 500 feet of shoreline

Activity: Shoreline stablization

Materials and Quantity Involved: Concrete, granite rip-rap

When: 1970 to Unknown

Comments: No hazardous wastes involved

Site No.: 29

Name: Base Sanitary Landfill

Location: PWDM Coordinates 11, A12/B12-13/C12-13/D13

Figures and Photos: 2-1

Size: About 30 acres

Activity: Sanitary waste disposal

Materials and Quantity Involved: Garbage, construction debris, and
general trash

When: 1972 to present

Comments: Previously reported by base environmental personnel. However,
this site is a current site and permitted.

CLW

0000000895

Site No.: 31

Name: Engineering Stockade--G4 Range Road

Location: PWDM Coordinates 20, G7-8/H3-8/I1-7/J1-5

Figures and Photos: 2-1

Size: About 1.5 miles of roadway

Activity: Dust control

Materials and Quantity Involved: Waste oils

When: 1950 to early 1970s

Comments: Minor amounts of wastes involved

Site No.: 32

Name: Frenchs Creek

Location: PWDM Coordinates 11, F3/G3-4/H4

Figures and Photos: 2-1

Size: About 2,300 feet of shoreline

Activity: Shoreline stablization

Materials and Quantity Involved: Rip-rap dumped

When: 1973 to 1979

Comments: No hazardous wastes involved

CLW

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Site No.: 33

Name: Onslow Beach Road

Location: PWDM Coordinates 19, G11-12/H11-12/I12-13/J12-13

Figures and Photos: 2-1

Size: Approximately 1/2 mile

Activity: Dust control

Materials and Quantity Involved: Waste oil and cinders for dust control

When: Unknown

Comments: Minor quantities of wastes involved

Site No.: 34

Name: Ocean Drive

Location: PWDM Coordinates 19, L16-17/M15-16/N14-15/O13-14/P12-13
Q10-12

Figures and Photos: 2-1

Size: About 2.5 miles of roadway

Activity: Dust control

Materials and Quantity Involved: Waste oil

When: Unknown

Comments: Minor quantities of wastes involved

CLW

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Site No.: 37

Name: Camp Geiger Area Surface Dump

Location: PWDM Coordinates 12, D11-12

Figures and Photos: 2-1, 6-19

Size: About 4 acres

Activity: Surface disposal of wastes

Materials and Quantity Involved: Motor parts, garbage, wood

When: 1950 to 1951

Comments: No hazardous wastes involved

Site No.: 38

Name: Camp Geiger Construction Dump

Location: PWDM Coordinates 12, B10

Figures and Photos: 2-1, 6-19

Size: Less than 0.5 acre

Activity: Surface disposal of waste materials

Materials and Quantity Involved: Construction debris, branches

When: Present

Comments: Appeared to be a recent dumping of materials. No known hazardous wastes involved.

CLW

0000000898

Site No.: 39

Name: Camp Geiger Construction Slab Dump

Location: PWDM Coordinates 12, B9-10/C9-10

Figures and Photos: 2-1, 6-19

Size: 1 to 2 acres

Activity: Bulldozing of building foundations, etc.

Materials and Quantity Involved: Concrete slabs

When: Unknown

Comments: No hazardous wastes involved

Site No.: 40

Name: Camp Geiger Area Borrow Pit

Location: PWDM Coordinates 13, D4

Figures and Photos: 2-1, 6-22

Size: 4 to 5 acres

Activity: Waste disposal

Materials and Quantity Involved: Auto parts, metal

When: 1969 to Unknown

Comments: No hazardous wastes involved

CLW

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Site No.: 42

Name: Building 705, BOQ Dump

Location: PWDM Coordinates 23, D10

Figures and Photos: 2-1, 6-25

Size: Several acres

Activity: Surface disposal of material

Materials and Quantity Involved: Trees, tree stumps, boards

When: 1950 to 1960

Comments: No hazardous wastes involved

Site No.: 43

Name: Agan Street Dump

Location: PWDM Coordinates 23, H6-7/16-7

Figures and Photos: 2-1, 6-25

Size: About 20 acres

Activity: Surface disposal of materials

Materials and Quantity Involved: Boards, trash, WTP sludge, fiberglass

When: Unknown

Comments: Mostly inert material

CLW

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Site No.: 44

Name: Jones Street Dump

Location: PWDM Coordinates 23, L6-7/M6-7

Figures and Photos: 2-1, 6-25

Size: Several acres

Activity: Waste disposal

Materials and Quantity Involved: Debris, cloth, boards, old paint cans

When: 1950s

Comments: Minor quantities of potentially hazardous wastes

Site No.: 46

Name: MCAS Main Gate Dump

Location: PWDM Coordinates 23, Q8-9

Figures and Photos: 2-1, 6-25

Size: Less than 1 acre

Activity: Waste disposal

Materials and Quantity Involved: Construction and demolition debris

When: 1958 to 1962

Comments: No present evidence of dump site. No hazardous wastes involved.

CLW

0000000901

Site No.: 47

Name: MCAS Rip-Rap Near Stick Creek

Location: PWDM Coordinates 23, B11

Figures and Photos: 2-1, 6-25

Size: About 1,000 feet of shoreline

Activity: Shoreline stablization

Materials and Quantity Involved: Construction and demolition debris

When: Unknown

Comments: No hazardous wastes involved

Site No.: 49

Name: MCAS Suspected Minor Dump

Location: PWDM Coordinates 23, C18-19

Figures and Photos: 2-1, 6-25

Size: About 800 feet of shoreline

Activity: Possible waste disposal

Materials and Quantity Involved: Paint cans

When: Unknown

Comments: Minor quantities of potential hazardous wastes

CLW

0000000902

Site No.: 50

Name: MCAS Small-Craft Berthing Rip-Rap

Location: PWDM Coordinates 23, A19-20/B19-20

Figures and Photos: 2-1, 6-25

Size: About 1,000 feet of shoreline

Activity: Shoreline stablization

Materials and Quantity Involved: Demolition debris, asphalt, concrete

When: Unknown

Comments: No hazardous wastes involved

Site No.: 51

Name: MCAS Football Field

Location: PWDM Coordinates 23, C21-22/D21-22

Figures and Photos: 2-1, 6-25

Size: 20 to 30 acres

Activity: Empty container disposal site

Materials and Quantity Involved: Paint cans, hydraulic fluid cans

When: Approximately 1967 to 1968

Comments: Minor quantities of hazardous materials

CLW

0000000903

Site No.: 52

Name: MCAS Direct Refuel Depot

Location: PWDM Coordinates 23, L19-20/M19-20

Figures and Photos: 2-1, 6-25

Size: About 25 acres

Activity: Refueling of military aircraft for about 1 year

Materials and Quantity Involved: Aviation fuel spill, JP fuels

When: 1971

Comments: Only used 1 year. Quantities minor.

Site No.: 53

Name: MCAS Warehouse Building 3525 area. Oiled roads.

Location: PWDM Coordinates 23, H-Q23-26

Figures and Photos: 2-1, 6-25

Size: About 3 miles of roadway

Activity: Dust control

Materials and Quantity Involved: Crankcase waste oils, JP fuels, paint thinners

When: 1970 to 1975

Comments: Minor quantities of residuals expected

CLW

0000000904

Site No.: 55

Name: Air Station East Perimeter Dump

Location: PWDM Coordinates 23, C29-30

Figures and Photos: 2-1, 6-25

Size: Several acres

Activity: Site presently used as a marina and recreation area by MCAS

Materials and Quantity Involved: Barrels, tires, trash, metal planking,
and telephone poles

When: 1950s to 1960

Comments: No hazardous wastes involved

Site No.: 56

Name: MCAS Oiled Roads to Marina

Location: PWDM Coordinates 23, C28-30

Figures and Photos: 2-1, 6-25

Size: About 1,500 feet of roadway

Activity: Dust control

Materials and Quantity Involved: Crankcase and waste oils and
contaminated fuels

When: 1975 to unknown

Comments: Roads oiled with listed materials for dust control

CLW

0000000905

Site No.: 57

Name: Runway 36 Dump

Location: PWDM Coordinates 23, E-G/30-32

Figures and Photos: 2-1, 6-25

Size: About 40 to 50 acres

Activity: Possible disposal site for material removed for runway construction

Materials and Quantity Involved: Debris

When: Unknown

Comments: No hazardous wastes involved

Site No.: 58

Name: MCAS Tank Training Area

Location: PWDM Coordinates 23, D33-39/G33-39

Figures and Photos: 2-1, 6-25

Size: About 50 acres

Activity: Training exercises for tanks and other armored vehicles

Materials and Quantity Involved: Tank parts and miscellaneous trash

When: Unknown

Comments: No hazardous wastes involved

CLW

0000000906

Site No.: 59

Name: MCAS Infantry Training Area

Location: PWDM Coordinates 23, P-T/26-30

Figures and Photos: 2-1, 6-25

Size: About 70 acres

Activity: Land clearing debris disposal

Materials and Quantity Involved: Stumps

When: 1950s

Comments: No hazardous waste involved

Site No.: 60

Name: EOD K-326 Range

Location: PWDM Coordinates 15, 09

Figures and Photos: 2-1

Size: 2 to 4 acres

Activity: Burning or detonation of live ordnance for disposal purposes

Materials and Quantity Involved: Burn pits for explosives

When: 1974 to present

Comments: Site located 500 meters north of Rhodes Point Road, adjacent to New River. Minor amounts of residuals only.

CLW

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Site No.: 61

Name: Rhodes Point Road Dump

Location: PWDM Coordinates 15, I9

Figures and Photos: 2-1

Size: 8 to 10 acres

Activity: Disposal site for wastes generated during bivouac exercise

Materials and Quantity Involved: Bivouac waste

When: Unknown

Comments: Area restricted due to war games. No hazardous wastes involved.

Site No.: 62

Name: Race Course Area Dump

Location: PWDM Coordinates 14, D8

Figures and Photos: 2-1

Size: 1 to 2 acres

Activity: Disposal site for wastes generated during bivouac exercise

Materials and Quantity Involved: Bivouac waste

When: Unknown

Comments: Area restricted due to war games. No hazardous wastes involved.

CLW

0000000908

Site No.: 63

Name: Vernon Road Dump

Location: PWDM Coordinates 14, H5

Figures and Photos: 2-1

Size: 3 to 4 acres

Activity: Disposal site for wastes generated during bivouac exercises

Materials and Quantity Involved: Bivouac waste

When: Unknown

Comments: Area restricted due to war games. No hazardous wastes involved.

Site No.: 64

Name: Marines Road--Sneads Ferry Road Mogas Spill

Location: PWDM Coordinates 17, I15/J15

Figures and Photos: 2-1, 6-35

Size: 1 acre

Activity: Fuel spilled in roadside ditch after vehicle accident

Materials and Quantity Involved: Mogas (spillage removed)

When: February 28, 1975

Comments: Spill immediately remediated

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Site No.: 65

Name: Engineer Area Dump

Location: PWDM Coordinates 17, K16

Figures and Photos: 2-1, 6-35

Size: 4 to 5 acres

Activity: Burn dump

Materials and Quantity Involved: Burn area dump construction debris

When: Pre-1958 to 1972

Comments: No hazardous wastes involved

Site No.: 66

Name: AMTRAC Landing Site and Storage Area

Location: PWDM Coordinates 17, IM/611

Figures and Photos: 2-1, 6-35

Size: About 1 square mile

Activity: Vehicle maintenance during training exercises

Materials and Quantity Involved: Oil spill, POL, and battery acid

When: 1950s to present

Comments: Minor amounts of wastes

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Site No.: 67

Name: Engineers TNT Burn Site

Location: PWDM Coordinates 23, A19-20/B19-20; located approximately 200 meters southeast of Building SBB-159 and about 50 feet from the water.

Figures and Photos: 2-1

Size: Less than 1 acre

Activity: TNT burning

Materials and Quantity Involved: TNT disposal

When: 1951

Comments: 2- to 3-foot pits were dug and unwanted TNT was opened and burned. Complete consumption of all TNT was reported during these procedures.

Site No.: 70

Name: Oak Grove Field--Surface Dump

Location: PWDM Coordinates 24, H2/I2, approximately 1400 ft. northwest of the western end of Runway 9-27

Figures and Photos: 2-1, 6-37

Size: About 3 acres

Activity: General dumping of all sorts of garbage

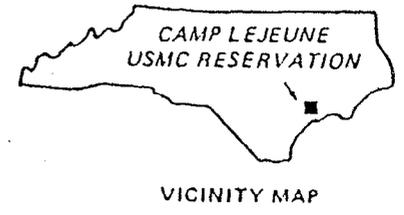
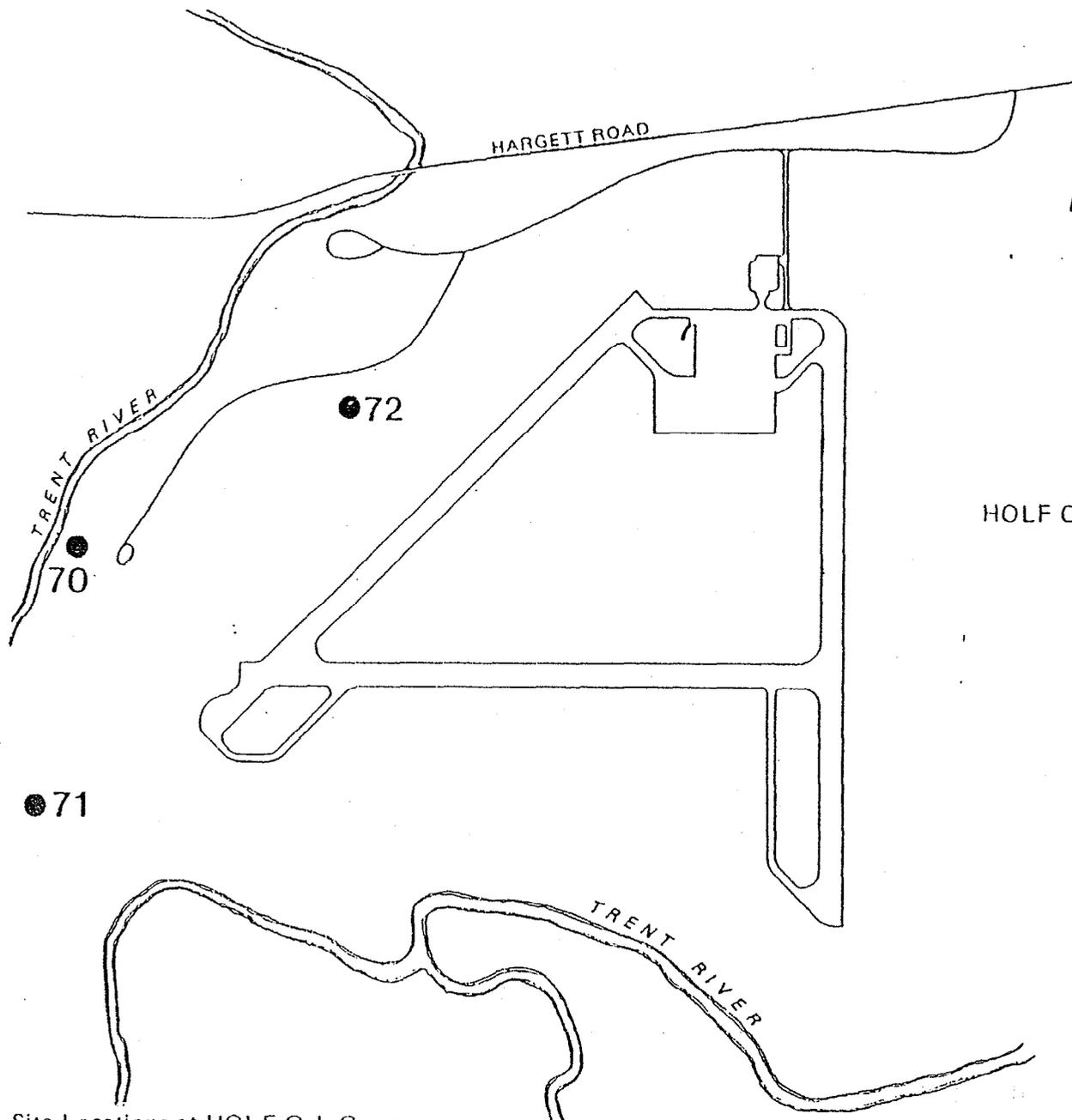
Materials and Quantity Involved: Cans, bottles, drums (i.e., paint thinner cans, brake fluid cans, cleaning compound)

When: Early to mid-1940s

Comments: No hazardous wastes involved

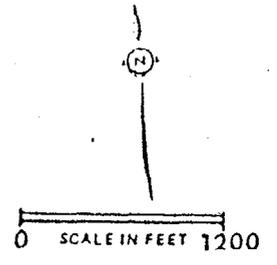
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HOLF OAK GROVE

- LEGEND —
- 70 Field Surface Dump
 - 71 Buried Dump
 - 72 Coal Pile



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FIGURE 6-37. Site Locations at HOLF Oak Grove

Site No.: 71

Name: Oak Grove Buried Dump

Location: PWDM Coordinates 24, L1; about 1600 feet west/southwest of the southwest end of Runway 5-23

Figures and Photos: 2-1, 6-37

Size: 5 to 10 acres

Activity: Disposal site for all municipal and industrial type wastes

Materials and Quantity Involved: Paint thinner, brake fluid and cleaning compound cans, bottles, and drums

When: 1940s to 1950s

Comments: Site also apparently used as a war game training area. Various cartridge casings found on-site. Minor quantities of potentially hazardous wastes involved.

Site No.: 72

Name: Oak Grove Coal Pile

Location: PWDM Coordinates 24, F6

Figures and Photos: 2-1, 6-37

Size: About 1 acre

Activity: Coal storage for heating purposes

Materials and Quantity Involved: Coal

When: 1940

Comments: Insignificant potential residuals

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APPENDIXES

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APPENDIX A
MONITORING-WELL CONSTRUCTION

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APPENDIX A--MONITORING WELL CONSTRUCTION

A-1. RECOMMENDATIONS FOR GROUNDWATER MONITORING

A-1.1 Monitoring Well Inventory. Wells that have been improperly abandoned or that have been out of service for a long period are potential conduits for contamination from the water table aquifer to those deeper. Many of the wells at Camp Lejeune have been abandoned or are no longer in service, but there is not a complete inventory of the location or abandonment procedure.

It is recommended that the status of wells at the installation be clarified by determining the location of all the wells that have ever been drilled at the base. A comparison of the complete list of wells with the wells now in use will show those that have been abandoned or that are out of service. If these wells are close to and downgradient of a confirmed hazardous waste site, a further assessment of the wells' status should be made. This assessment should include the reason for abandonment or nonuse, the date when the well was last used, how it was abandoned (if applicable), future plans for the well (if not yet abandoned), and a review of any chemical/physical data available.

A satisfactory abandonment procedure involves filling the well and gravel pack with grout so that contaminants cannot migrate between aquifers.

A-1.2 Monitoring Well Installation. Each monitoring-well should be constructed so that it has both an efficient hydraulic connection to the surrounding water table aquifer and an effective seal against the migration of surface waters into the borehole.

The following techniques and materials are recommended to accomplish these two aims (Figure A-1):

1. Drill an 8-inch borehole to 10 feet below the water table, as noted during drilling. Collect representative lithologic samples every 5 feet during drilling for preparation of the lithologic log.
2. Install a string of threaded, flush-joint, 2-inch, schedule 40 PVC well casing and well screen. Set the top of a 10-foot length of PVC well screen at the water table if the water table is within approximately 5 feet of land surface. If the water table is encountered at greater depths, some portion of the well screen should be set above the water table. The recommended well-screen slot size is 0.010 inch. The top of the casing should extend approximately 12 to 18 inches above ground level.
3. After the well casing and screen have been installed in the borehole, place a filter pack of fine- to medium-grained quartz sand in the annular space from the bottom of the hole to approximately 2 feet above the top of the screen.

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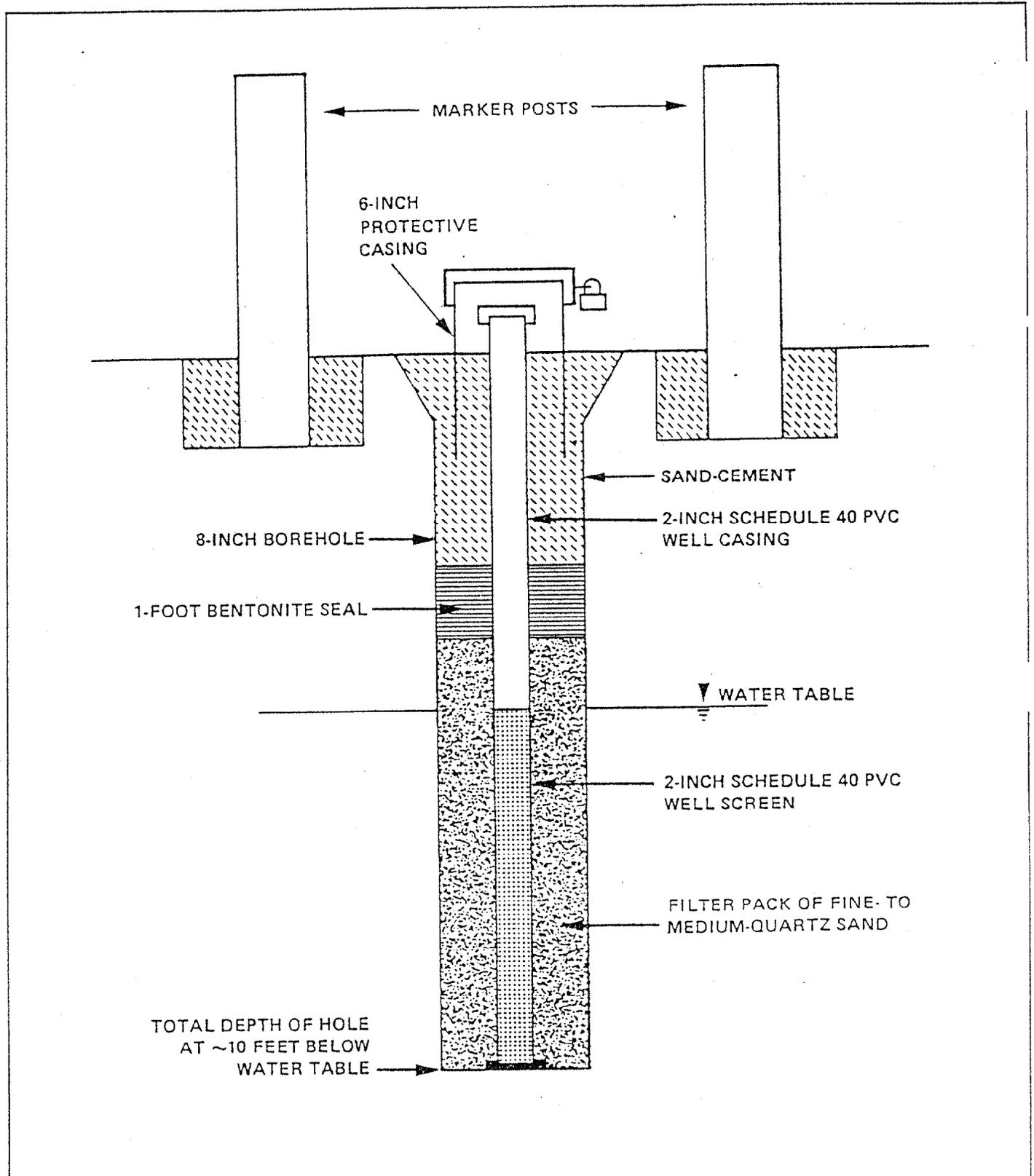


FIGURE A-1. Recommended Monitoring-Well Construction

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4. Place a 1-foot seal of bentonite pellets in the annular space on top of the filter pack.
5. Fill the remainder of annular space with a sand-cement grout composed of two parts dry weight of sand to one part of cement with not more than 6 gallons of clean water per bag of cement (94 pounds or 1 cubic foot).
6. Install a 5-foot-long, 6-inch diameter, steel protective casing 3 feet into the grout. The protective casing should have a lockable steel cap and a padlock. The above-ground portions of both the protective casing and the PVC well casing should be vented with a 1/8-inch hole to permit the water in the well to fluctuate freely.
7. Install two 8-foot-long, 4-inch diameter, black steel marker posts adjacent to each well. Bury each marker post 3 feet and set it in sand-cement. Paint the upper 2 feet of each marker post day-glo orange.
8. Establish the vertical elevation and horizontal coordinates of the top of the casing (cap removed) to second order accuracy.

It may be necessary to vary the placement of the top of the screen and the thickness of the bentonite seal and the sand-cement grout if the water table is less than 5 feet below land surface.

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APPENDIX B
ABBREVIATIONS LIST

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APPENDIX B--ABBREVIATIONS LIST

<u>Abbreviation</u>	<u>Term</u>
AID	Accident Incident Data Bank
AMTRAC(s)	Amphibious Tractor(s)
BAT	Best Available Technology
BT	Bombing Target
CIA	Controlled Industrial Area
CMC	Commandant Marine Corps
COD	Chemical Oxygen Demand
CNO	Chief of Naval Operations
CSRS	Confirmation Study Ranking System
DPDO	Defense Property Disposal Office
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
FMF	Fleet Marine Force
FSSG	Force Services Support Group
GWCI	Ground Water Contamination Indicators
HOLF(s)	Helicopter Outlying Landing Field(s)
IAS	Initial Assessment Study
IWTP	Industrial Waste Treatment Plant
LANTNAVFACENGCOM	Atlantic Division, Naval Facilities Engineering Command
MACS	Marine Air Control Squadron
MAG	Marine Aircraft Group
MCALF	Marine Corps Auxiliary Landing Field
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MC Bul	Marine Corps Bulletin
MCOLF	Marine Corps Outlying Landing Field
MEK	Methyl Ethyl Ketone
NACIP	Navy Assessment and Control of Installation Pollutants
NAVAIREWORKFAC	Naval Air Rework Facility
NAVFACENGCOM	Naval Facilities Engineering Command
NBC	Nuclear, Biological, Chemical
NCBC	Naval Construction Battalion Center
NEESA	Naval Energy and Environmental Support Activity
NCIC	National Cartographic Information Center
NREA	Natural Resources and Environmental Affairs
NSWC	Naval Surface Weapons Center
OESO	Ordnance Environmental Support Office
OLF(s)	Outlying Landing Fields
POL	Petroleum, Oil, Lubricant(s)
PWDM	Public Works Development Map
RCRA	Resource Conservation Recovery Act
SAFEORD	Safety Ordnance File
STP	Sewage Treatment Plant
TCE	Trichloroethylene
THM	Trihalomethane(s)
WAR	Water and Air Research, Inc.
WTP	Waste Treatment Plant
2d FSSG	Second Force Service Support Group

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APPENDIX C

LOGS OF WELL NOS. HP-613 and HP-616

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25 June 1993 11:30 AM

UNDERGROUND STORAGE TANK GUIDANCE
FOR FILLING OUT RMIS SITE DATA SHEETS

Tanks may come into the system via:

- annual testing
- tank inventory

If tank is leaking, either shut down and remove or repair the tank.
If tank is repaired, tank will not be entered into RMIS.

If tank is removed, it needs to go into RMIS (DERA funded, BRAC funded).

After removal, there is a summary report (Tank Removal Summary Report), which includes results of samples taken where tank was removed. If samples are dirty, a Remedial Investigation (RI) Plan or a soil sampling and ground water plan (could be same plan) needs to be completed and signed off by regulatory agency.

Then the RI Plan is implemented and a Corrective Action Plan is done based on the results of the RI.

The last step is implementation of the Corrective Action Plan which is basically the soil and groundwater cleanup.

RMIS Phase	Data Dictionary	UST People
PA 2	Initial Site Characterization or Tank Inventory	Tank Removal/ Tank Removal Summary Report
Start Date:	For Abandoned or Active Tanks-- Contract award date for removal or abandoned in place. (tank closure)	Start Date of Phase 4 could be within timeframe of Phase 2
End Date:	regulatory buyoff of report	
RI/FS 4	Investigation for Soil and Groundwater Cleanup/Corrective Action Plan	RI Plan; Implement RI Plan; Corrective Action Plan.
Start Date:	Contract award date to do plans for investigation	
End Date:	Regulatory buyoff of Corrective Action Plan	

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UNDERGROUND STORAGE TANK GUIDANCE
FOR FILLING OUT RMIS SITE DATA SHEETS

CORRECTIVE ACTION PLAN

CORRECTIVE ACTION
PLAN

RD 5 Put in Phase 5, RD if Design needed.

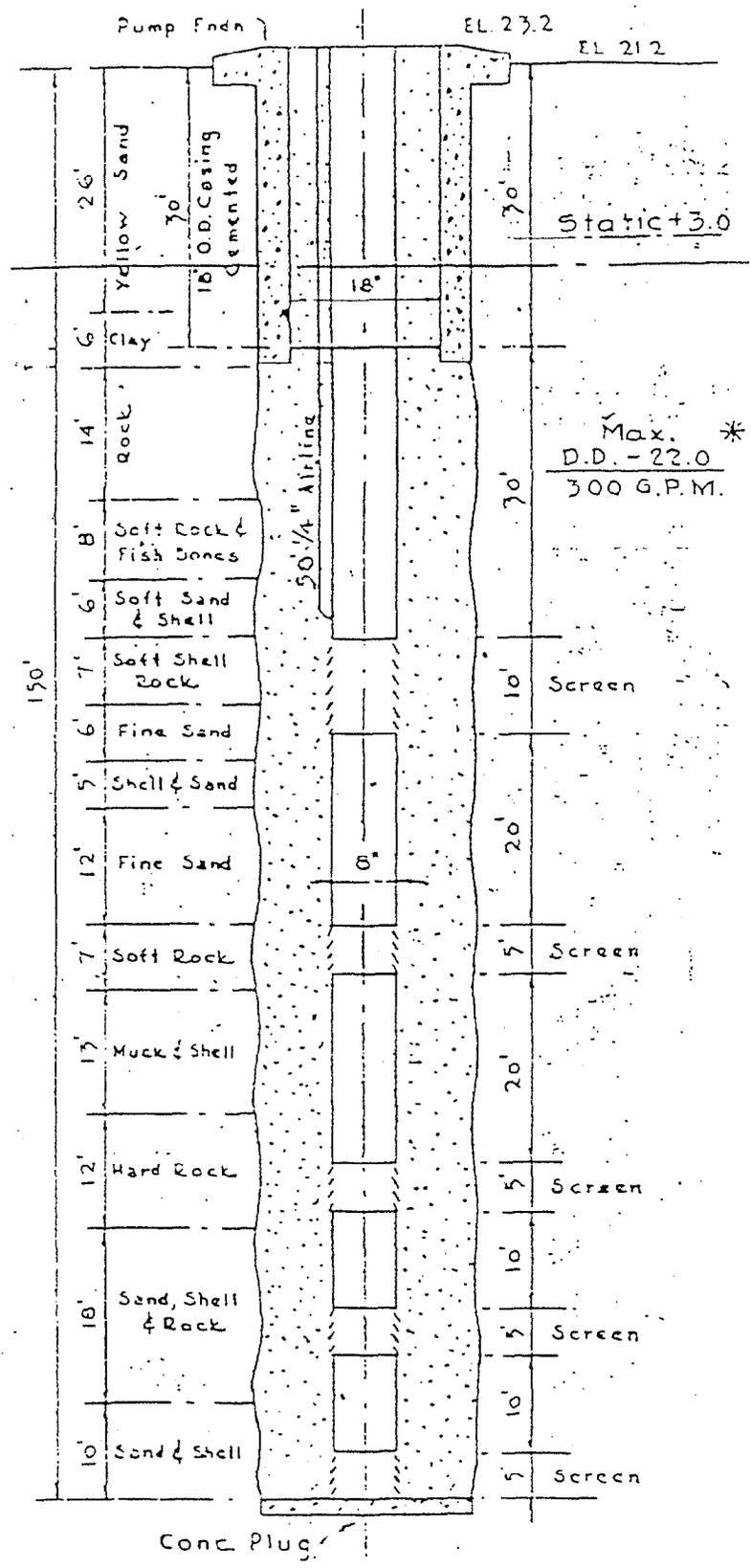
Start Date: Contract Award date
End Date: Date of Design Report
(No regulatory buyoff needed)
(At WESTDIV)

RA 6 IMPLEMENT CORRECTIVE
ACTION PLAN

IMPLEMENT CORRECTIVE
ACTION PLAN

Start Date: Contract award date to
Implement Corrective
Action Plan
End Date: Last date of Field Work

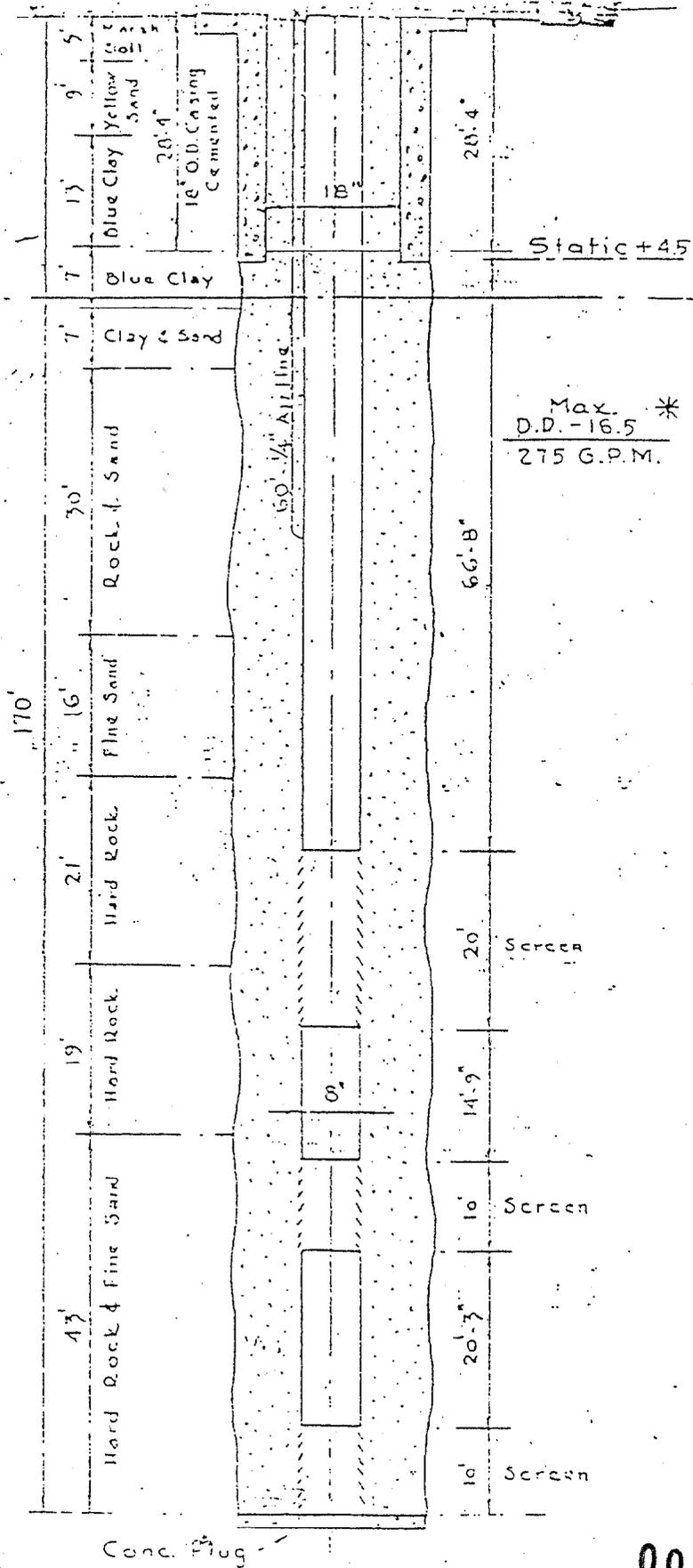
Remedy Information Section
will deal with regulatory
concurrence and Site Close-
out.



HP-613

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Armco Iron Screen Used In This Well

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