

1/1/92-01354

SITE SUMMARY

Issue:

- o Naval Amphibious Base at Little Creek, Virginia: Amphibious Base Landfill (Site 7)

Summary:

- o Groundwater, surface water, and sediment samples were collected at this site and analyzed for a range of contaminants. Some groundwater and surface water samples show nickel, thallium, and selenium levels in excess of CWA human health criteria or standards but the source of these contaminants is uncertain. Results suggest little or no migration of contaminants away from the landfill.

Background:

- o This 30-acre landfill was used from 1962 through 1979 and contains an estimated total volume of 500,000 cubic yards of waste, including 250,000 to 1,000,000 gallons of oils, solvents, plating baths and degreasers.
- o This site was the only landfill for the base during most of the years of its operation so it probably contains a representative mix of wastes produced on-base during its operating years. This includes inorganics, solvents, pesticides, heavy metals, PCBs, other organic compounds, mixed municipal waste, and unknown wastes.

Discussion:

- o Nine groundwater samples from monitoring wells, five surface water samples, and five sediment samples were collected in May/June 1986.
- o The concentrations of constituents in groundwater and surface water samples were generally at or near detection limits, but results for several metals exceeded CWA health criteria. The groundwater and surface water samples along Little Creek Cove north of the site showed selenium levels above the MCL. Some low concentrations of organics were detected in a few groundwater and surface water samples, but all near detection limits. Oil and grease values were comparatively

high in groundwater sampled near Little Creek Cove. Constituents exceeding standards or criteria were:

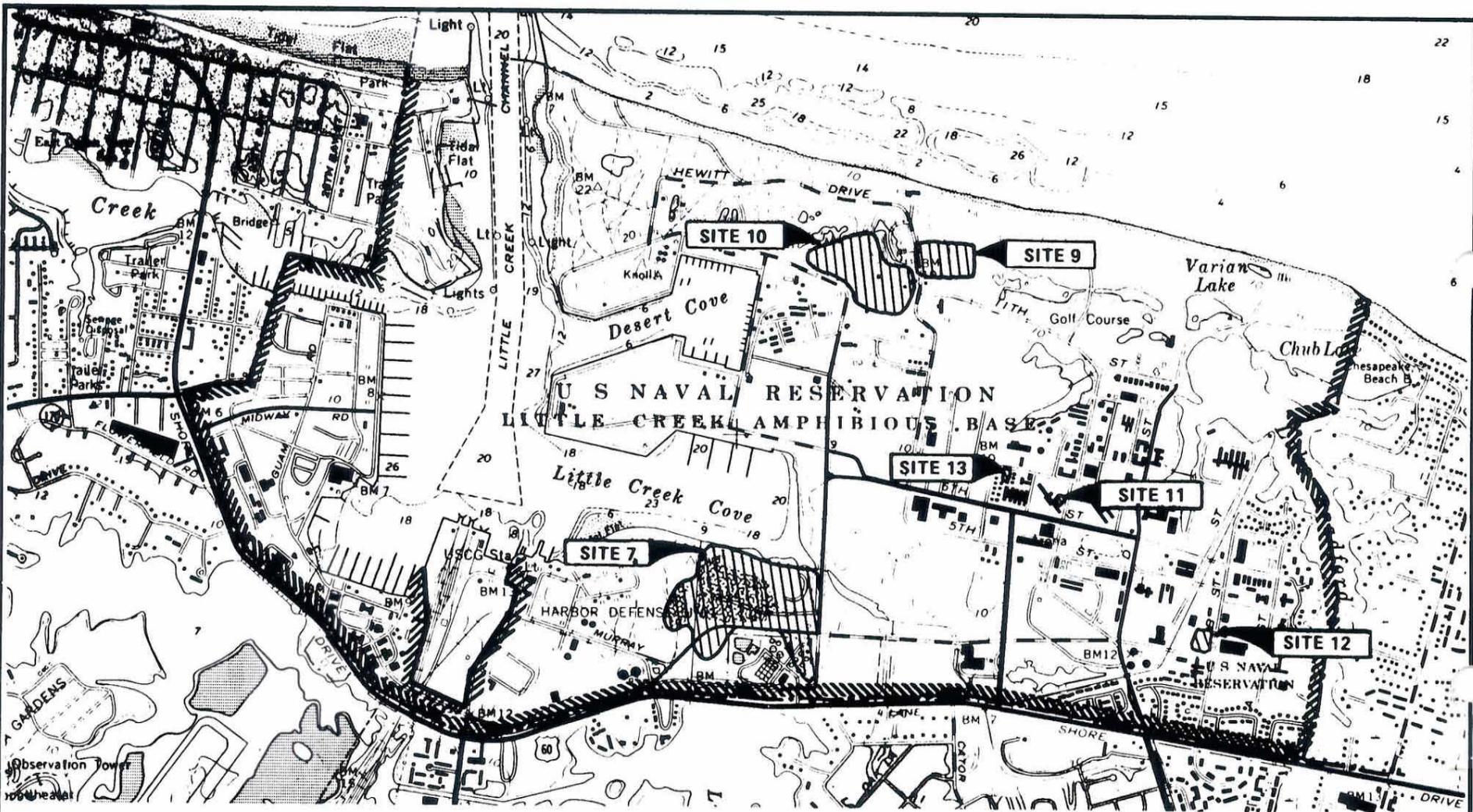
Standard	Concentration Detected		
	Selenium (ppb)	Thallium (ppb)	Nickel (ppb)
MCL	10	--	--
CWA Human Health Criteria	10	18	15
Maximum Detected in Surface Water	95	130	200
Maximum Detected in Groundwater	27	83	<90

- o Concentrations in sediment samples were generally below or near detection limits or near average natural soil levels.
- o The primary potential pathway for contaminant migration is by groundwater flow towards Little Creek Cove as indicated by groundwater level measurements. These results suggest that contaminant migration from the landfill is low.

Future Plans:

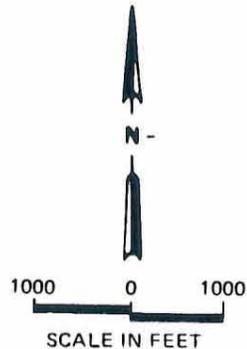
- o Future plans are to perform a second round of sampling and analysis for constituents at existing groundwater and surface water sampling locations as well as sampling and analysis of new surface water sampling locations farther from the site.

WDR06/039



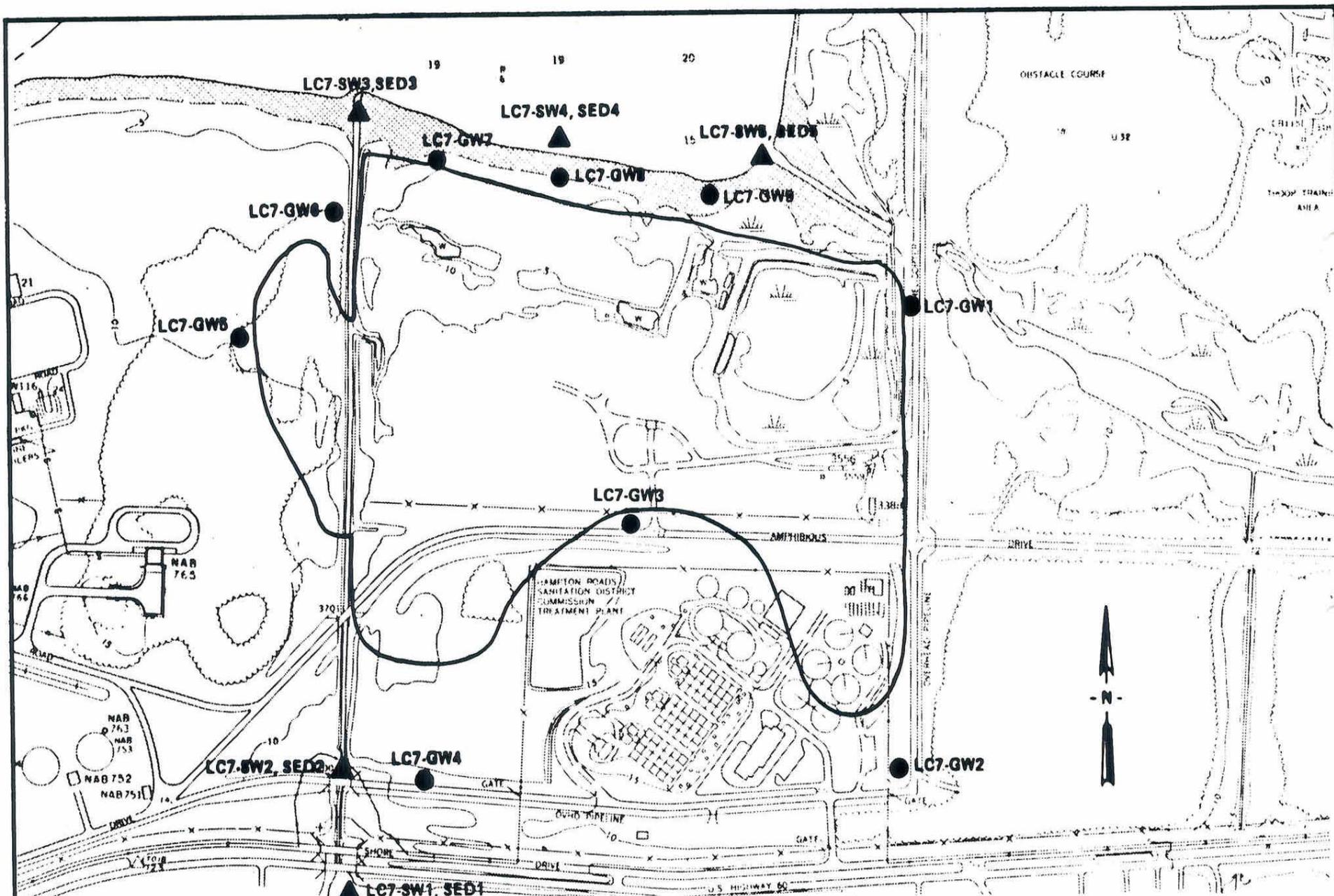
LEGEND

-  Base Boundary
-  Site Boundary
- SITE 7 – Amphibious Base Landfill
- SITE 9 – Driving Range Landfill
- SITE 10 – Sewage Treatment Plant Landfill
- SITE 11 – School of Music Plating Shop
- SITE 12 – Exchange Laundry Waste Disposal Area
- SITE 13 – Public Works Compound PCP Dip Tank/Metals Shop



Site Locations
Naval Amphibious Base, Little Creek





LEGEND

- ▲ Surface Water and Sediment Samples
- Monitoring Well
- Approximate Landfill Boundary
Contour Interval is 5 Feet



SITE 7
Amphibious Base Landfill
 Naval Amphibious Base, Little Creek



SITE SUMMARY REPORT

Site: #7--Amphibious Base Landfill

Period of Operation: 1962-1979

Area of Contamination: 30 acres

Materials Disposed: Pesticides, paints, solvents, inorganics,
heavy metals, acids, bases, PCBs, mixed
municipal wastes, unknowns (1,000,000 gal.)

Hazards: Possible surface and ground water contamination.
Proximity to Lake Smith (backup municipal water supply
reservoir for Norfolk and Virginia Beach).

Status

12/84 Initial Assessment conducted by NEESA. Site identified
for Confirmation Study.

10/86 First round of Confirmation Study (RI/FS) completed.
Site recommended for second round sampling.

5/88 HRS scoring package submitted to EPA.

1/89 TRC meeting held to review first round sampling
results.

9/90 Contract awarded for second round RI/FS sampling and
support for TRC meeting.

Schedule

10/29/90 Work Plan, Sampling Plan, Safety/Contingency Plan
submitted.

11/19/90 Approve WP, SP, SSP.

12/3/90 Initiate drilling.

2/11/91 Initiate sampling.

6/10/91 Meet with contractor and LANTDIV to discuss site-
specific recommendations.

7/22/91 Draft RI Interim Report submitted.

9/2/91 Comments due on RI interim report.

9/30/91 Submit draft final RI interim report.

11/4/91 Present RI results to TRC.