

STATE OF MAINE

Department of Environmental Protection

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ACTING COMMISSIONER

May 15, 1986

L. K. Jones, Commander
United States Navy
Public Works Officer
Naval Air Station
Brunswick, Maine 04011

RE: Pollution Abatement Confirmation Study 1A-Verification Report
Brunswick Naval Air Station

Dear Commander:

The Maine Department of Environmental Protection (DEP) has reviewed the Pollution Abatement Confirmation Study Step 1A-Verification Report prepared for Brunswick Naval Air Station by E. C. Jordan Company. The following are concerns the DEP has with the study. Comments and recommendations are included.

Sites #1, #2, and #3:

Information from previous studies indicates that Site #2 received hazardous wastes similar to those disposed of at Site #1 and #3. In this report, results of surface and ground water analyses at the three sites show similar levels for TOC, TOX, and soluble inorganics. For these reasons Site #2 and the area south of Mere Brook should be included along with Sites #1, and #3 in the Characterization Study.

Site #7:

Evidence indicates that elevated concentrations of lead are present and have migrated within the soils at this site. Lead concentrations increase with depth at each soil boring location. Given this evidence of past lead migration and the apparent uncertainty of ground water flow direction at Site #7, one or more additional wells should be installed to further characterize the ground water. The wells should be located to the northwest of the site (see Figure 1), between Site #7 and the Jordan Avenue Well Field. This will give a positive means to determine that contaminants from the site have not migrated in this direction.

Site #8:

This site is a primary concern due to its proximity to the Jordan Avenue Well Field (Figure 2). An E. C. Jordan Report done for the Brunswick and Topsham Water District (January 1986) shows the secondary recharge area for the Jordan Avenue Well Field extending outward and encompassing the immediate vicinity of Site #8 (Figure 3). The BNAS Verification Report indicates ground water flow



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toward the well field. This, coupled with the elevated levels of chromium, lead, and mercury detected in the groundwater, leaves no doubt that a more extensive Characterization Study must be undertaken at this site. The potential threat to the well field warrants more than the recommended actions. Ground water flow in the area must be further characterized. The extent of contaminant movement toward the well field must be documented.

A statement on page 33 of the Verification Report seems inappropriate, suggesting "the original surface water sampling locations be resampled to strengthen the justification for eliminating this site from continued study." Surface water should not be the primary focus of attention here. Ground water quality in the vicinity of the Jordan Well Field is the immediate concern.

Site #9:

The DEP supports the recommendation to do additional study at this site. The conflicting results of mercury analyses should be cleared up. The 30' monitoring well should be installed as proposed. It will provide ground water flow information as well as further characterization of contaminants in the ground water.

It is my understanding that DEP concerns and recommendations will be addressed when formulating future work plans. The DEP looks forward to continued cooperation with BNAS throughout the Pollution Abatement process. Should you have any comments or questions, please contact me at (207) 289-2651.

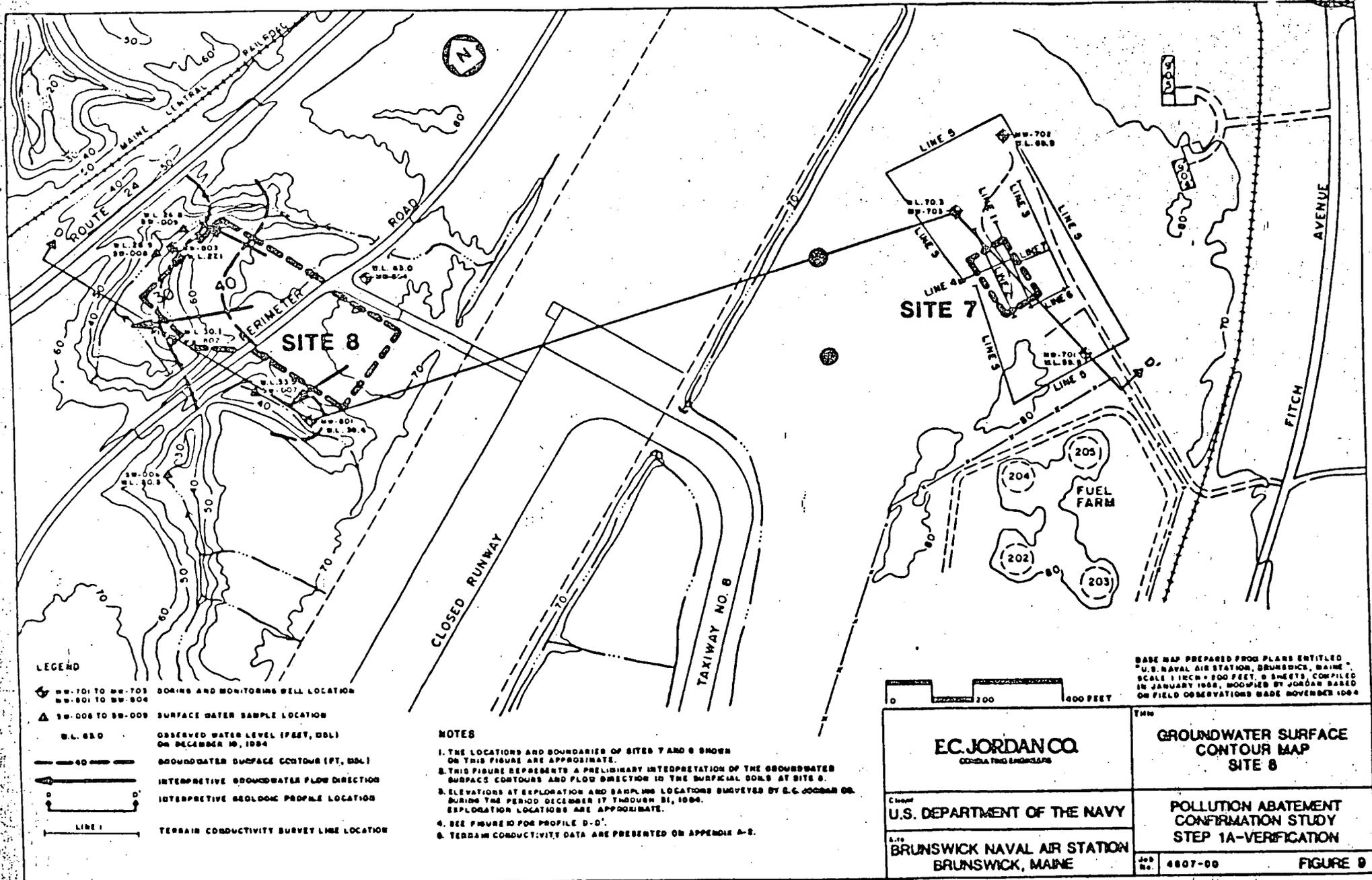
Sincerely,

Anthony D. Leavitt

ANTHONY D. LEAVITT, ESS II
Division of Licensing & Enforcement
Bureau of Oil and Hazardous Materials Control

AL:c

cc: Greg Apraham, BNAS
Robert Jackson, EPA
Stacy Ladner, DEP
Scott Whittier, DEP
David Boulter, DEP



LEGEND

- MW-701 TO MW-705 BORING AND MONITORING WELL LOCATION
● MW-801 TO MW-804
- ▲ SW-006 TO SW-009 SURFACE WATER SAMPLE LOCATION
- B.L. 820 OBSERVED WATER LEVEL (FEET, DGL) ON DECEMBER 10, 1984
- 40 --- GROUNDWATER SURFACE CONTOUR (FT, DGL)
- INTERPRETIVE GROUNDWATER FLOW DIRECTION
- 0 — D — INTERPRETIVE GEOLOGIC PROFILE LOCATION
- LINE 1 — TERRAIN CONDUCTIVITY SURVEY LINE LOCATION

NOTES

1. THE LOCATIONS AND BOUNDARIES OF SITES 7 AND 8 SHOWN ON THIS FIGURE ARE APPROXIMATE.
2. THIS FIGURE REPRESENTS A PRELIMINARY INTERPRETATION OF THE GROUNDWATER SURFACE CONTOURS AND FLOW DIRECTION IN THE SURFICIAL CONE AT SITE 8.
3. ELEVATIONS AT EXPLORATION AND SAMPLING LOCATIONS SURVEYED BY E.C. JORDAN CO. DURING THE PERIOD DECEMBER 17 THROUGH 31, 1984. EXPLORATION LOCATIONS ARE APPROXIMATE.
4. SEE FIGURE 10 FOR PROFILE D-D.
5. TERRAIN CONDUCTIVITY DATA ARE PRESENTED ON APPENDIX A-B.

BASE MAP PREPARED FROM PLANS ENTITLED "U.S. NAVAL AIR STATION, BRUNSWICK, MAINE", SCALE 1 INCH = 500 FEET, 8 SHEETS, COMPILED IN JANUARY 1968, MODIFIED BY JORDAN BASE ON FIELD OBSERVATIONS MADE NOVEMBER 1984

E.C. JORDAN CO. <small>CONSULTING ENGINEERS</small>		GROUNDWATER SURFACE CONTOUR MAP SITE 8	
<small>Client</small> U.S. DEPARTMENT OF THE NAVY		<small>Title</small> POLLUTION ABATEMENT CONFIRMATION STUDY STEP 1A-VERIFICATION	
<small>Location</small> BRUNSWICK NAVAL AIR STATION BRUNSWICK, MAINE		<small>Job No.</small> 4807-00	<small>Figure No.</small> FIGURE 9

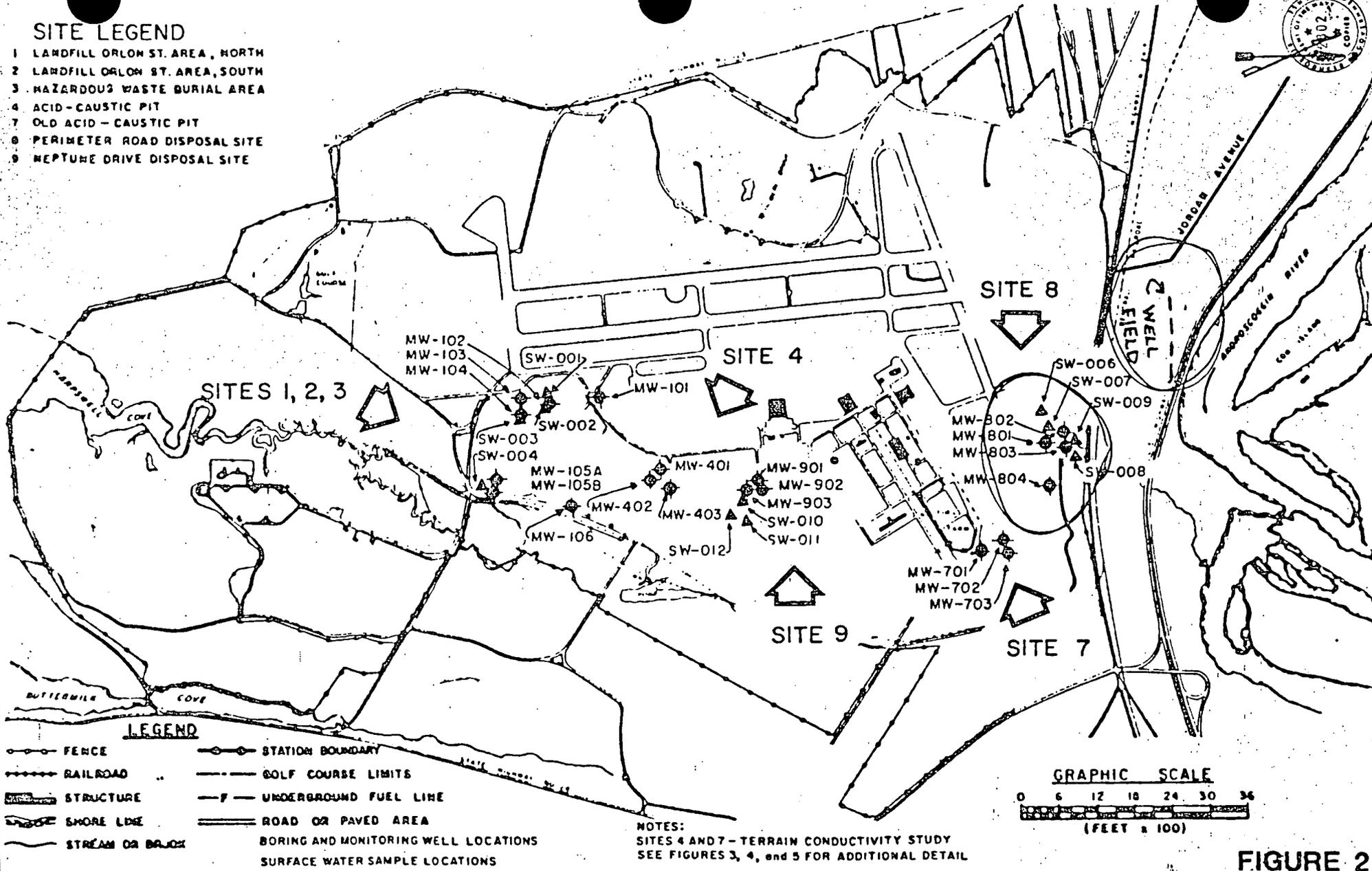
● Suggested Monitoring Well Locations

FIGURE 1



SITE LEGEND

- 1 LANDFILL ORLON ST. AREA, NORTH
- 2 LANDFILL ORLON ST. AREA, SOUTH
- 3 HAZARDOUS WASTE BURIAL AREA
- 4 ACID - CAUSTIC PIT
- 7 OLD ACID - CAUSTIC PIT
- 8 PERIMETER ROAD DISPOSAL SITE
- 9 NEPTUNE DRIVE DISPOSAL SITE



NOTES:
 SITES 4 AND 7 - TERRAIN CONDUCTIVITY STUDY
 SEE FIGURES 3, 4, and 5 FOR ADDITIONAL DETAIL

FIGURE 2

LOCATION OF EXPLORATIONS
BRUNSWICK NAVAL AIR STATION
POLLUTION ABATEMENT CONFIRMATION STUDY
STEP 1-A VERIFICATION
 EC.JORDANCO

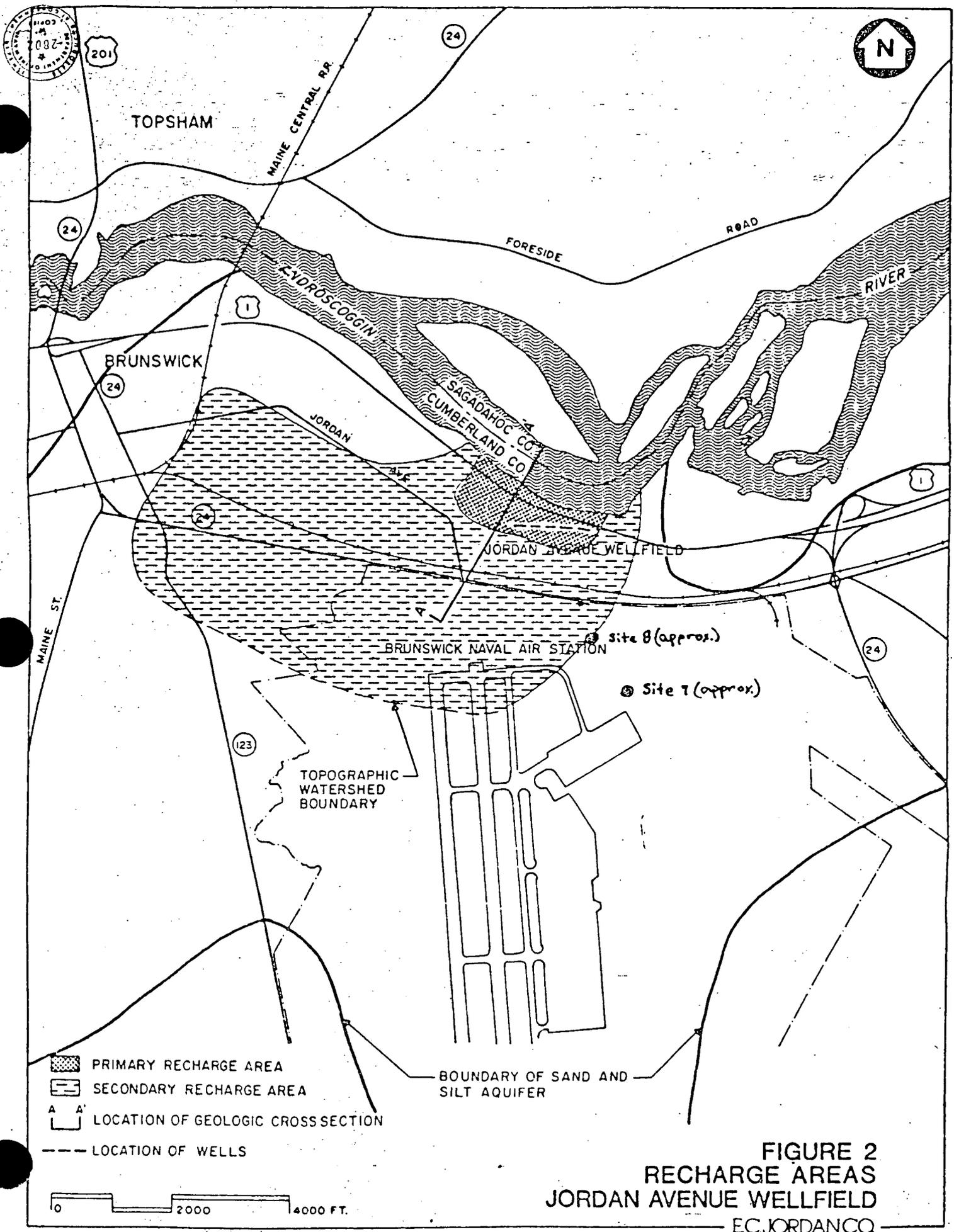


FIGURE 2
 RECHARGE AREAS
 JORDAN AVENUE WELLFIELD
 EC JORDAN CO

4885-00

From report prepared for Brunswick and Topsham Water District (January, 1986).