300212 TIM - THIS IS THE 3.10.2.
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N. PESCE.

SUBJECT: RCRA FAC. INVESTIGATION
#37 POPLAR CREEK DISPOSAL AREA [ACROSS
POPLAR CREEK ALONG R.R. TRACKS NE OF K-25]

THE SUBJECT SITE WAS INSPECTED (OCT. 1988)
BY WALKING THE RAILROAD TRACK BETWEEN A
POINT STARTING AT THE SOUTH END OF THE
POPLAR CREEK - R.R. BRIDGE CROSSING AND THE
RAILROAD TRACK CROSSING AT THE ACCESS
ROAD TO THE TVA - ROANE SUBSTATION.
THIS RAILROAD TRACK SECTION AND ITS ADJOINING
LAND AREA (EXTENDING AWAY FROM THE TRACKAGE) W
FOUND CLEAR OF SURFICIAL WASTE AREAS; WITH T
EXCEPTION OF TWO ISOLATED SPOTS:

- ONE LOCATION IS AT THE RAILROAD TRACK - SUBSTATION ACCESS ROAD INTERSECTION WHERE THERE WAS A SMALL PILE OF DAMAGED/SPLINTERED CREOSOTED RAILTIES.
- THE SECOND LOCATION WAS IN PROXIMITY, OF THE NORTH END OF THE RAILTRACK - POPLAR CREEK CROSSING; WHERE, SEVERAL RAILTIES REST ALONG THE RAILTRACK EMBANKMENT. A SINGLE CONCRETE SECTION RESTS AT THE TOP OF THE EMBANKMENT.

NO VISIBLE TRASH - SPOIL AREAS WERE SEEN ALONG
THE RAILTRACK BETWEEN THE ROANE SUBSTATION
ACCESS ROAD AND THE BLAIR ROAD CROSSIN
OR, ALONG THE RAILROAD SPUR TRACK TO THE
ROANE SUBSTATION.

1) FIGURE 4.4.4-1 ORGDP WASTE DISPOSAL SITES

#527

#37 CONT.

FOLLOWING THE DETERMINATION OF PRESENT SURFACE CONDITIONS, AN INVESTIGATION WAS STARTED TO DEFINE THE USE OF THIS SITE PRIOR TO THE ASSIGNMENT OF THE AREA TO THE CONSTRUCTION OF THE ROANE SUBSTATION. THREE AERIAL PHOTOGRAPHS 2/, ATTACHED, PROVIDE EVIDENCE OF PRIOR LAND USE.

INITIAL CONTACTS WITH FORMER K-25 PLANT EMPLOYEES HELPED TO CHARACTERIZE THE PRIOR LAND USE. 3/ DURING THE PERIOD OF THE EARLY-MID FOURTIES AND THE ADVENT OF THE ROANE SUBSTATION IN 1975-1976 THE AREA HAD BEEN USED FOR SELECT MATERIAL STORAGE OPERATIONS; FOR THE BURIAL OF SELECT NON-COMBUSTABLE BUILDING MATERIALS; AND THE INCINERATION OF COMBUSTABLE MATERIALS. FOLLOWING THE INCINERATION ACTIVITIES THE AREA WAS CLEANED AND GRADED; THEN SEEDED. THESE ACTIVITIES OCCURRED AT DIFFERENT TIMES. NO SPECIFIC TIME PERIODS WERE STATED. WITHOUT HESITATION THE K-25 EMPLOYEES STATED THAT THEY WERE NOT AWARE OF THE DISPOSAL OF ANY HAZARDOUS/CONTAMINATED MATERIALS IN THIS AREA. DURING THE EARLY SEVENTIES THE SITE SAW SHARED USAGE BY TVA AND THE ORGDP OPERATIONS.

2/ PHOTOGRAPHS MED-280 [APPROX 1945]
ORO 57-622 [1957]
ORO #596 [SEPT, 1964]

3/ FRED MOORE
W. WILLIAMS.

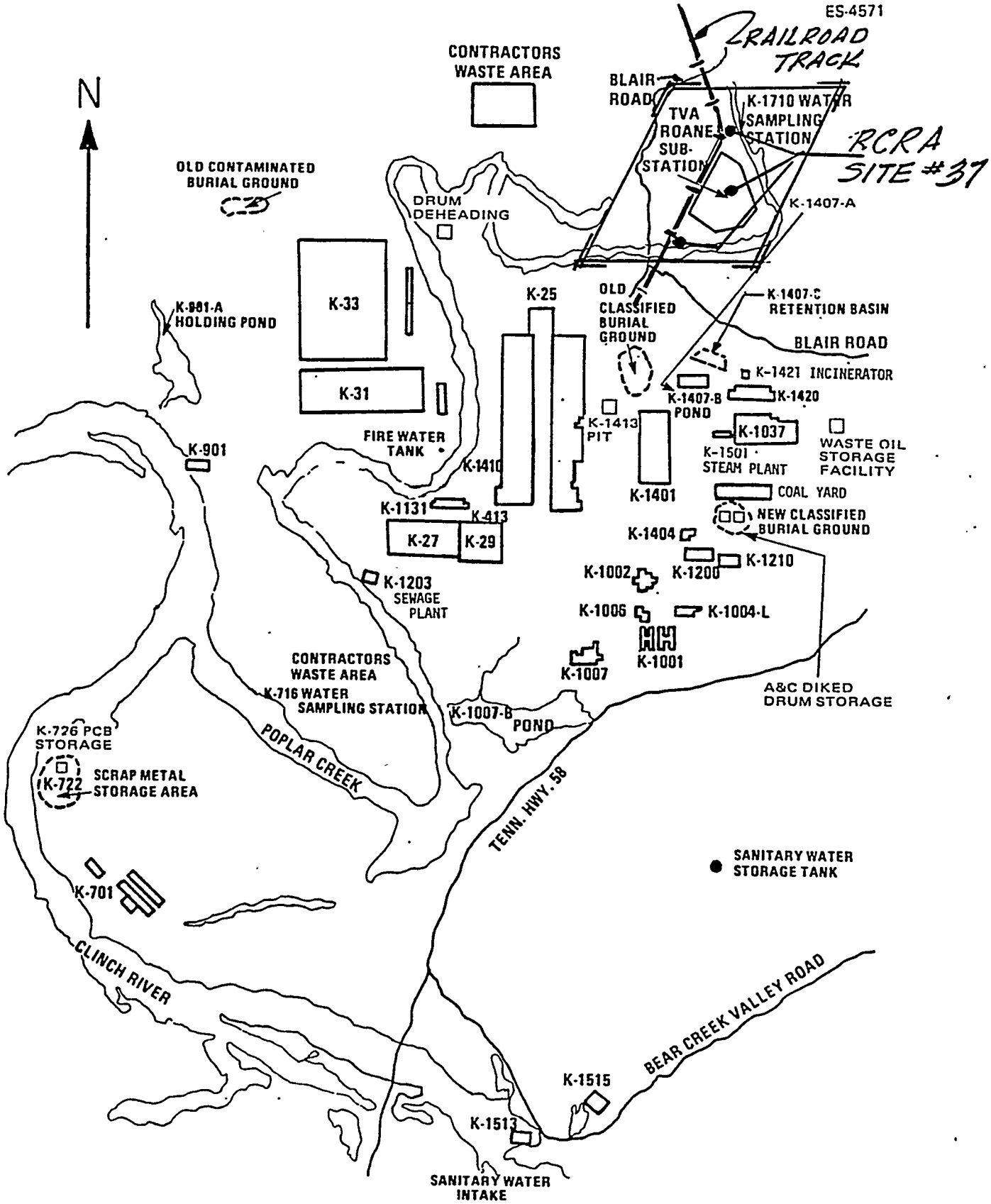
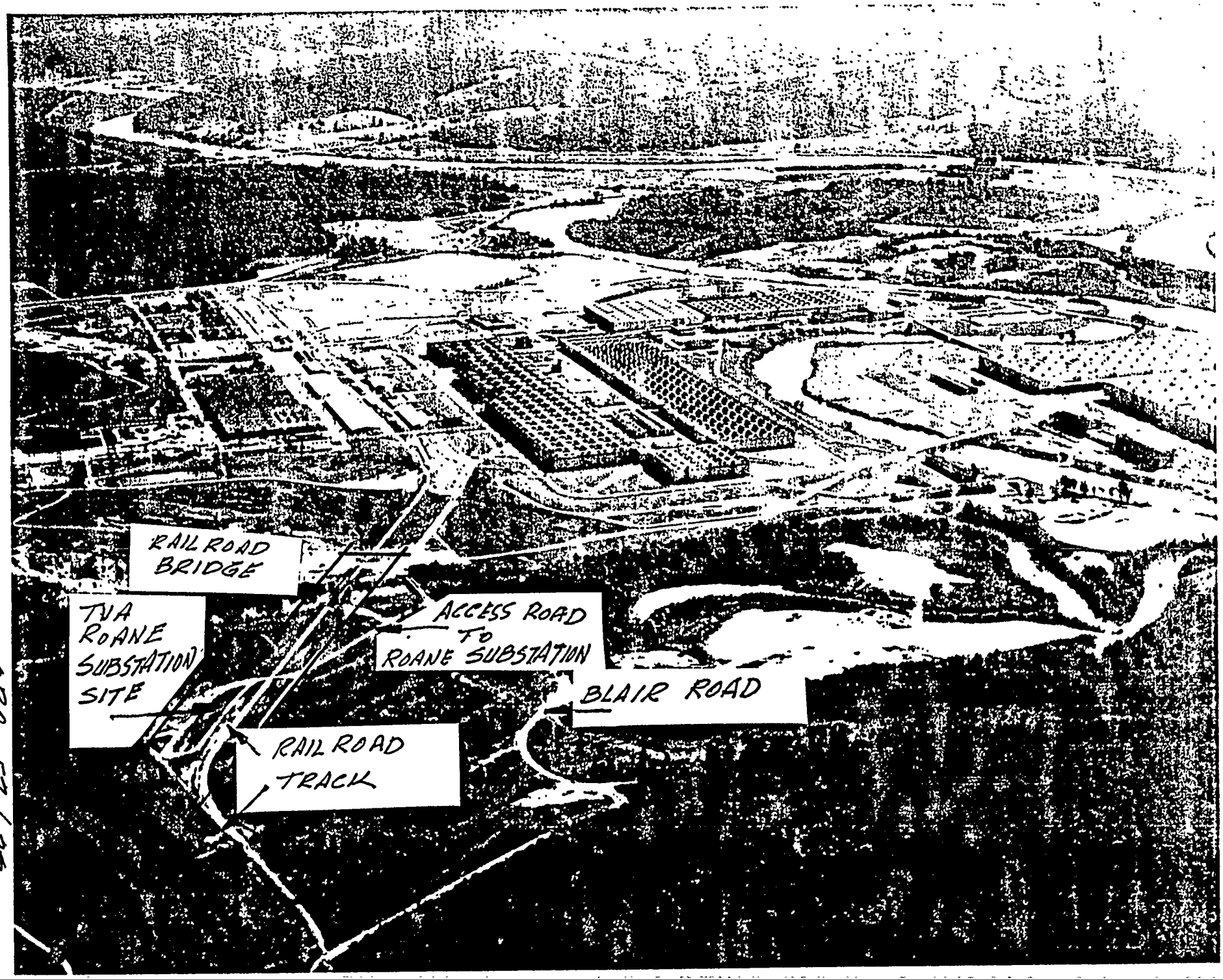
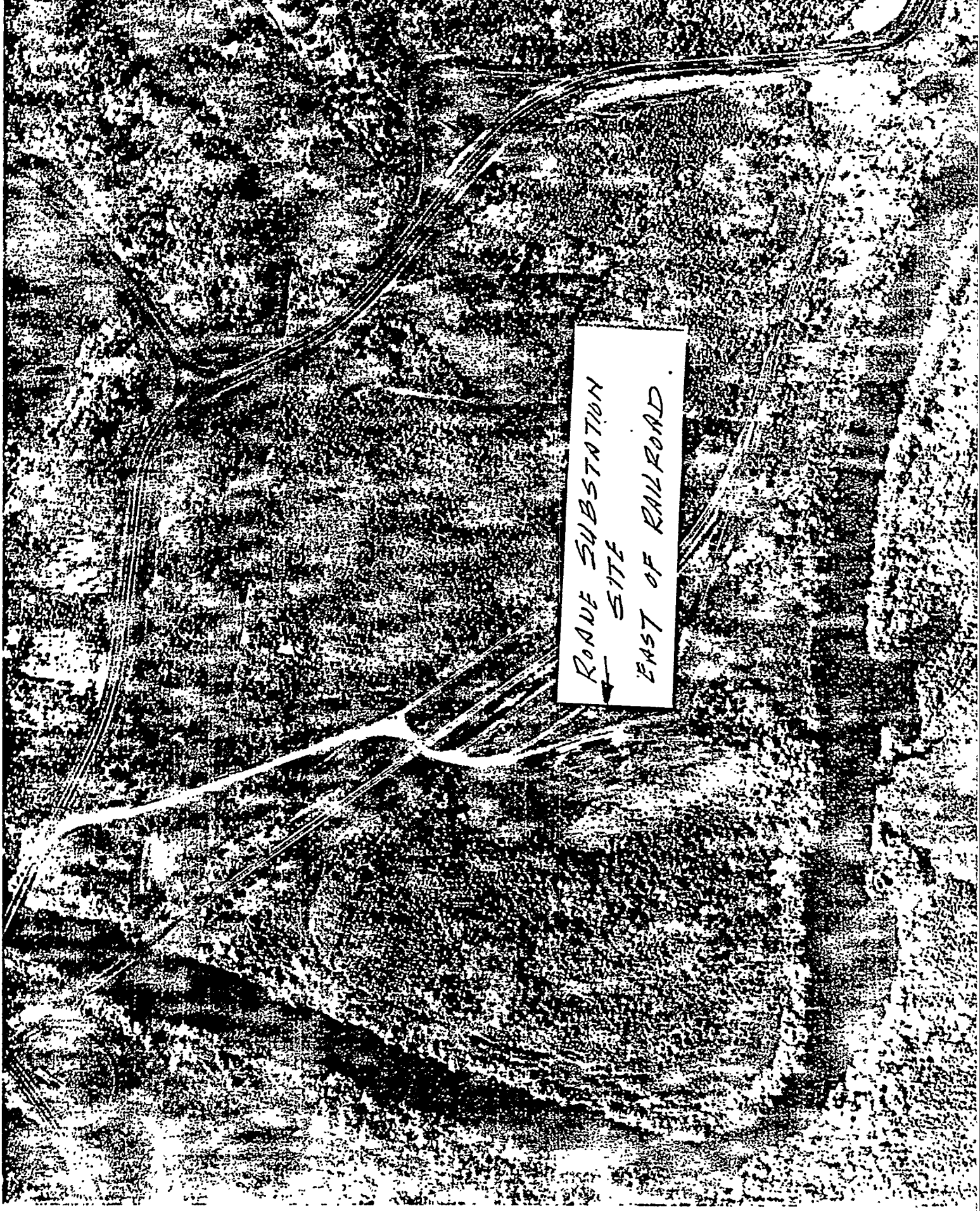


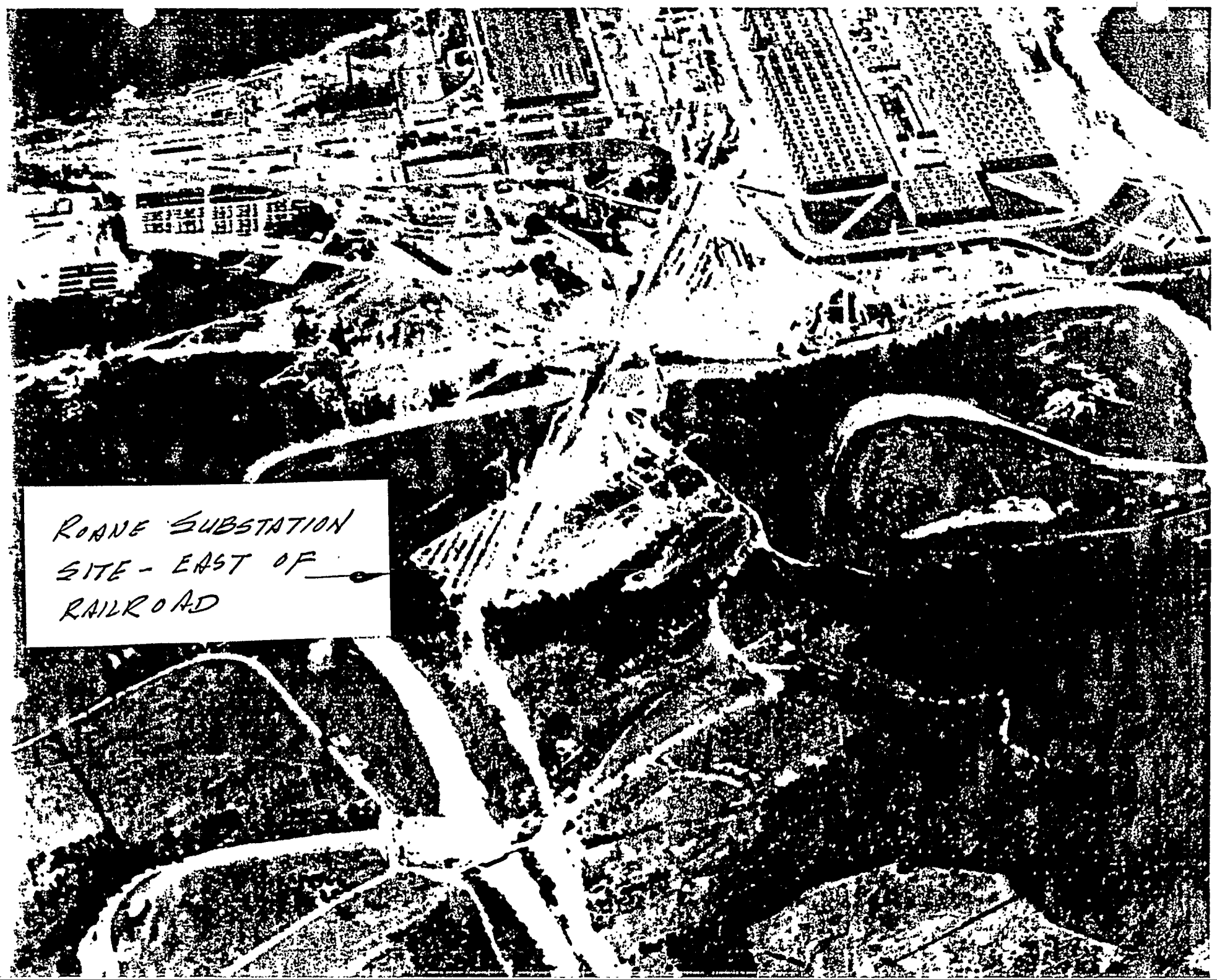
Figure 4.4.4-1
ORGDP WASTE DISPOSAL SITES


RAILROAD BRIDGE
TVA ROANE SUBSTATION SITE
ACCESS ROAD TO ROANE SUBSTATION
BLAIR ROAD
RAILROAD TRACK

ORO 51-022



ORO 586



MED 280

NEXT, CONTACT WAS INITIATED WITH THE TENNESSEE VALLEY AUTHORITY; WITH THE PURPOSE OF FINDING DATA CONCERNING SITE INVESTIGATIONS CONDUCTED BY TVA IN SUPPORT OF THE SITE SELECTION PROCESS FOR THE ROANE SUBSTATION. A TOTAL OF TVA STAFF PERSONNEL WERE CONTACTED [4] THESE CONTACTS PROVIDED VERBAL AND DOCUMENTED INFORMATION. [5] THE INFORMATION IS CONSISTENT AND TOTALLY SUPPORTS THE INFORMATION PROVIDED BY THE K-25 EMPLOYEES THAT THE ROANE SUBSTATION SITE HAD ONCE BEEN A WASTE DISPOSAL AREA. THE REFERENCED LETTERS [5] STATE THAT THERE WAS CONSIDERABLE WASTE MATERIAL LOCATED IN AREA OF MINIMUM FILL. THE SPOIL INCLUDED WASTE CONCRETE, ASPHALT AND STEEL IN A SOIL MATRIX. NONE OF THE KNOWLEDEABLE TVA CONTACTS WERE AWARE OF (OR) HAD SEEN EVIDENCE OF THE DISPOSAL OF RADIOACTIVE OR HAZARDOUS MATERIALS.

4/ KNOXVILLE TVA OFFICES

PETER SHEFFLER:
ENVIRONMENTAL COORDINATOR

ROBERT BAIRD

JAMES SULLIVAN

CHATTANOOGA TVA OFFICE

THOMAS WOJTALIK:
ENVIRONMENTAL ENGINEER

JAMES COPP
PHYSICAL PLANNING

WILLIAM FORD
PHYSICAL PLANNING

IT WAS STATED BY THE TVA PERSONNEL THAT, IN PREPARATION OF THE SITE FOR CONSTRUCTION OF THE ROANE SUBSTATION, BURIED WASTE WAS REMOVED AS DEFINED BY DESIGN REQUIREMENTS. HOWEVER NO CONCLUSIVE EVIDENCE WAS GIVEN THAT THE WASTES BURIED OUTSIDE OF THE ROANE SUBSTATION CONFIGURATION HAD BEEN REMOVED.

ONE INTERESTING NOTE WAS OFFERED BY A TVA CONTACT: THE FIRST WATER SUPPLY DEVELOPMENT EFFORTS DID NOT PROVIDE THE REQUIRED WATER QUANTITY AND MORE IMPORTANTLY DID NOT PROVIDE QUALITY WATER. THE WATER CONTAINED E-COLI BACTERIA. EVENTUALLY, QUALITY WATER WAS OBTAINED FROM A WELL LOCATED IN PROXIMITY OF THE FORMER BLAIR ROAD GUARD PORTAL.

CLOSURE:

IT IS NOTED THAT THE TVA PROPERTY LINE EXTENDS BEYOND THE ROANE SUBSTATION AREA. THE PROPERTY IS BOUNDED BY POPLAR CREEK AND BY BLAIR ROAD AS SHOWN ON TVA DWG CW-7064 SH 1 OF 4; "ROANE, TENN. SUBSTATION - PROPERTY MAP.

5/ LETTER: R.C. CRAWFORD TO A.C. PFITZER
JUNE 11, 1976
"ROANE, TENNESSEE, 500-KV SUBSTATION"
SEE ATTACHED

LETTER: G. FARMER TO R.C. CRAWFORD
MAY 12, 1976
"ROANE, TENNESSEE, SUBSTATION 500-KV SOIL INVESTIGATION"
SEE ATTACHED

#37 CON'T

THE PROPERTY WAS APPROVED FOR ACQUISITION IN 1976 WITH THE PROPERTY OFFICIALLY TRANSFERRED ON 7-8-88
THE TVA DOES NOT HAVE ANY PLANS THAT DEFINE THE BOUNDARY(IES) OF THE BURIED WASTES. THE SAME IS TRUE OF MMES.
THE TVA RETAINS RESPONSIBILITY FOR MANAGING THE PROPERTY. CONSEQUENTLY, WE WOULD EXPECT THAT CHARACTERIZATION OF ANY RESIDUAL BURIED WASTES WOULD BE A TVA FUNCTION.

TO : Richard C. Crawford, Chief, Transmission System Siting and Clearance Staff, 523 CBB-C (3)

FROM : Gene Farmer, Chief, Construction Services Branch, E6B39 C-K

DATE : May 12, 1976

SUBJECT: ROANE, TENNESSEE, SUBSTATION 500 kV - SOIL INVESTIGATION

As requested in your memorandum of January 28, 1976, our laboratory has completed the soil investigation for the Roane substation. Sampling and in-situ testing were performed between March 1 and 18, 1976, under generally favorable weather conditions. Borings were drilled with the aid of a trailer-mounted CME 55 drill and hollow stem augers without the use of drilling fluid.

Field Sampling and Testing

Laboratory drawing 604K710 shows the location of 60 standard penetration borings and 1 undisturbed boring. Areas of shaly limestone outcrop and the presence of a large wastefill dump are indicated. The spoil is made up of waste concrete, asphalt, and steel in a soil matrix. A summary of boring data are also tabulated on this drawing.

All borings except those on line 5 were carried to refusal or to a minimum depth of 10 feet. The water table was not encountered during the exploration. Drawings 604B703 through 604K709 show the soil profile established at the site. Overburden depth is quite variable, ranging from 0 to 23.3 feet. Bedrock elevations range from about el. 745 to el. 730 with the highest bedrock elevations occurring at those locations with the highest ground surface. Coring of the shaly limestone in 7 locations along line 5 revealed no major weaknesses with the exception of a 2.7-foot-thick filled cavity in boring SS-B5.

Standard penetration testing disclosed medium to stiff soil consistencies over the site. Standard penetration blow counts usually increase with depth. No particular weakness was established at the soil bedrock contact. Weak zones, N<5 were present at the following locations.

Location	Elevation	N
A3	754	3
D1	748	2
E2	759	3
G1	753	4

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A. C. Pfitzer, Acting Chief, Civil Engineering and Design Branch, 202 CEB-C

R. C. Crawford, Chief, Transmission System Siting and Clearance Staff, 323 CEB-C
June 11, 1976

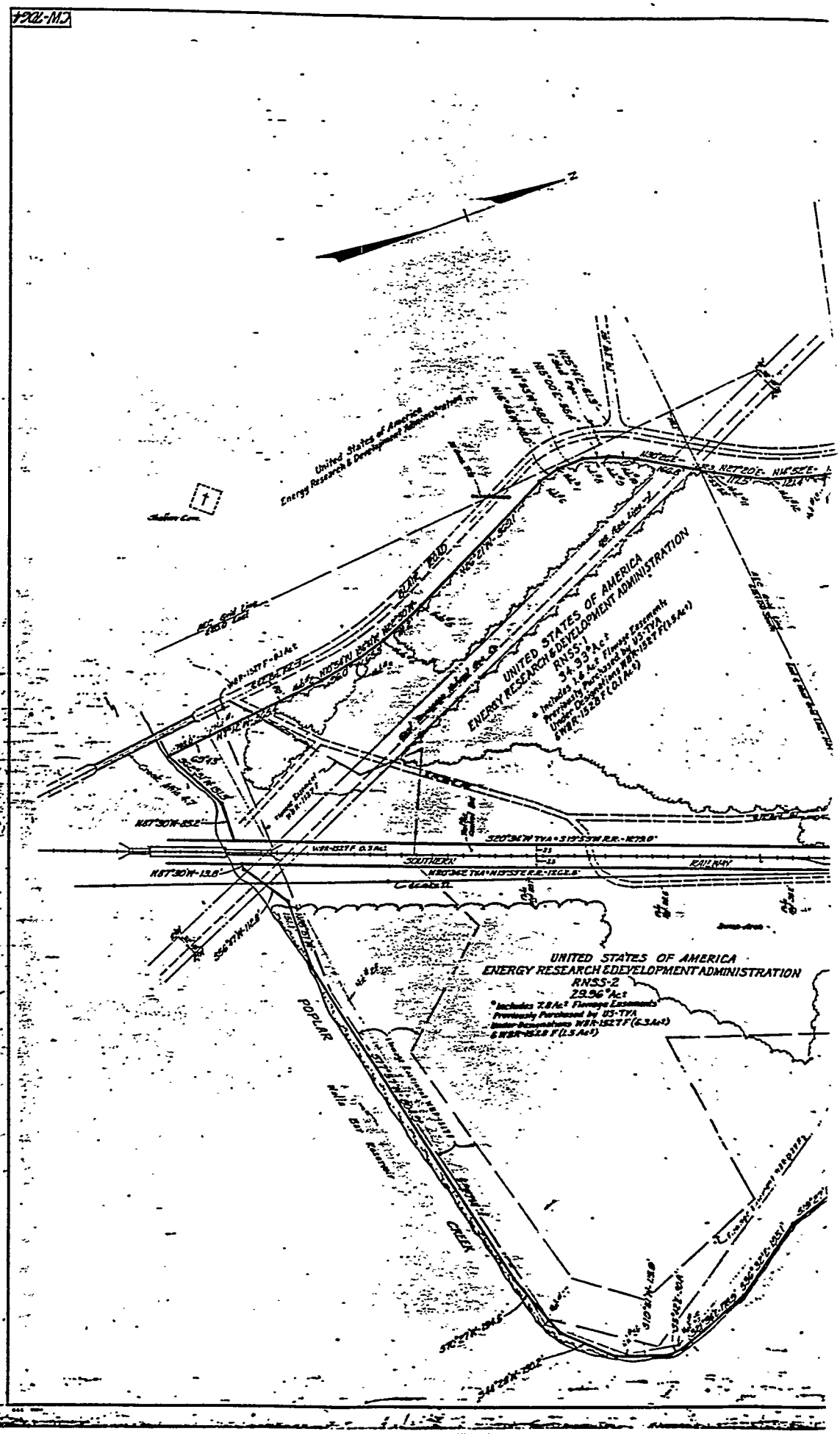
ROANE, TENNESSEE, 500-kV SUBSTATION

Examination of the soil investigation data indicates there is considerable waste material located in areas of minimum fill. This could be of interest to your foundation people since standard penetration tests reveal that there are weak zones present. An undisturbed sample of the waste fill material had an unconfined compressive strength of 0.6 tons/sq. ft.

This project has considerable borrow material at present; therefore, any amount the waste material is undercut will increase the borrow an equivalent amount. Therefore, please examine the attached cross sections and indicate if you need this area undercut giving us any comments that would assist in this matter. Our schedule calls for issuance of the grading plan and related drawings prior to June 21, 1976; therefore, a prompt answer will be appreciated.

JGC:DC
Attachments

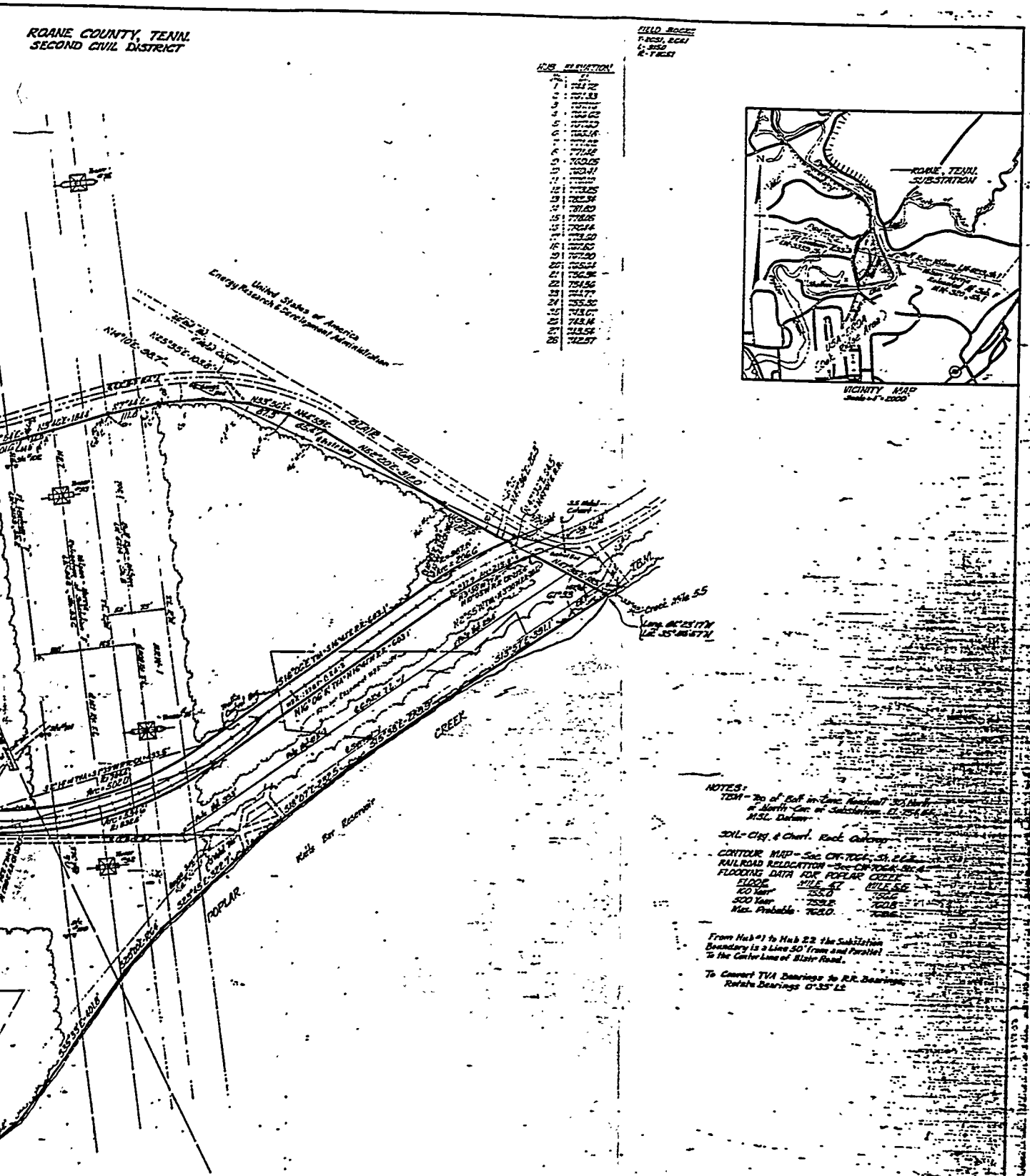
JCC


CW-7064
United States of America
Energy Research & Development Administration
UNITED STATES OF AMERICA
ENERGY RESEARCH & DEVELOPMENT ADMINISTRATION
RNSS-1
34.93 Ac±
* Includes 1.6 Ac± Flowage Easements
Previously Purchased by US-TVA
Under Designations WBR-1527 F(1.5 Ac±)
& WBR-1528 F (0.1 Ac±)
WBR-1527F-0.3 Ac±
SOUTHERN
RAILWAY
UNITED STATES OF AMERICA
ENERGY RESEARCH & DEVELOPMENT ADMINISTRATION
RNSS-2
29.96* Ac±
* Includes 7.8 Ac± Flowage Easements
Previously Purchased by US-TVA
Under Designations WBR-1527 F (0.3 Ac±)
& WBR-1528 F (1.5 Ac±)
POPLAR
CREEK

ROANE COUNTY, TENN.
SECOND CIVIL DISTRICT

FIELD BOOKS
T-8051, 8041
L-9550
R-7861

HUB	ELEVATION
1	21
2	752.32
3	757.83
4	[illegible]
5	765.05
6	767.03
7	768.14
8	769.42
9	770.15
10	770.41
11	[illegible]
12	773.25
13	775.94
14	777.10
15	778.05
16	779.14
17	779.50
18	779.80
19	779.90
20	780.21
21	780.96
22	781.56
23	782.77
24	783.50
25	783.07
26	783.14
27	783.54
28	783.97



VICINITY MAP
Scale of 1" = 2000'

NOTES:
TEM - Top of Bolt in Conc. Headwall 30' North of North Cor. of Substation. El. 754.86 ft. M.S.L. Datum.

SOIL - Clay & Chert. Rock Outcrop.

CONTOUR MAP - See CN-70GA-30, 2 & 3.
RAILROAD RELOCATION - See CN-70GA-30, 4.
FLOODING DATA FOR POPLAR CREEK

FLOOD	MILE 4.2	MILE 5.5
100 Year	755.0	756.6
500 Year	759.2	760.8
Max. Probable	762.0	763.6

From Hub #1 to Hub 22 the Substation Boundary is a Line 30' from and Parallel to the Center Line of Blair Road.

To Convert TVA Bearings to R.R. Bearings, Rotate Bearings 0°35' Lt.

Approved For Acquisition

37837	5	6-13-72	Added R.R. Bearings.	
37837	4	10-13-72	Changed Sheet No. From 30.1 of 2	
37837	3	10-8-75	Added Hard. Order	
	2	1-18-73	Updated Name & Acreage	
			Added Flowage Easement	
	1	9-9-25	Cont. Road Data	
REV.	DATE		REVISION	

TENNESSEE VALLEY AUTHORITY
DIVISION OF TRANSMISSION PLANNING AND ENGINEERING

ROANE, TENN. SUBSTATION
PROPERTY MAP

CN-70GA-30

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Title of requested document RCRA Facility Investigation #37 Poplar Creek...

Document Number 300212

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Derivative Classifier R. G. Jordan Phone 4 1645

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AS Quist 2/1/93

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Document number UNNUMBERED/300212 Pages 12

Document title RCRA FAC INVESTIGATION #37 POPLAR CREEK DISPOSAL AREA [ACROSS POPLAR CREEK ALONG RR TRACKS NE OF K-25

Author(s) (indicate other divisions or organizations, if applicable) N PESCE

Document type (See Doc. Prep. Guide, Chs. 1 and 2, for definitions of document types):

- ☐ Formal Report
- ☑ Progress Report
- ☐ Informal R&D Report
- ☐ Abstract
- ☐ Drawing
- ☐ Administrative
- ☐ Correspondence
- ☐ Internal Technical Data
- ☐ Photo
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DOCUMENT NUMBER: UNNUMBERED/300212

DOCUMENT TITLE: ROANE, TENNESSEE, SUBSTATION 500 KV - SOIL INVESTIGATION

AUTHORS: G FARMER

DOCUMENT TYPE: CORRESPONDENCE

DOCUMENT DATE: 05-12-76

PURPOSE OF RELEASE: HEALTH STUDY FEASIBILITY REPORT

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Document: # Unnumbered (13 pages); Date ND ;

Title/Subject RCRA FAC INVESTIGATION #37 POPLAR CREEK DISPOSAL AREA [ACROSS POPLAR CREEK ALONG RR TRACKS NE OF K-25]

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Irvin S Quist (B) 1/29/93

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