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WM Project 11
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JUN 04 1987

John J. Linehan
Section Leader
Repository Projects Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
Washington, DC 20555

RESPONSE TO OPEN ITEMS FROM DEPARTMENT OF ENERGY (DOE) AND NUCLEAR REGULATORY COMMISSION (NRC) MEETING OF APRIL 14 AND 15, 1987 ON THE DOE PROPOSED CHANGES TO THE NEVADA NUCLEAR WASTE STORAGE INVESTIGATIONS (NNWSI) PROJECT EXPLORATORY SHAFT FACILITY (ESF)

Reference: Summary of Meeting on Proposed Changes to the Nevada Nuclear Waste Storage Investigations Exploratory Shaft Facility, April 14-15,1987, dated April 15, 1987

The subject meeting resulted in seven "Action/Open Items" that are listed in the reference. DOE's responses to three of these items (numbers 1, 2, and 5) are the subject of this letter. Of the remaining four items, number 3 is the DOE's responsibility and the response is being prepared by the DOE; number 4 is a commitment and no response is planned by the DOE; number 6 is an NRC item; and the response to number 7 was provided to the NRC with the meeting summary. Response to open items 1, 2, and 5 were due on June 1, 1987.

In response to open item number 1, the ESF/repository interface control drawing is enclosed. This is Sandia National Laboratories (SNL) drawing R07048A. In response to open item 5, the historic drawings that depict the initial repository level at the 1,200 foot horizon are enclosed. These are SNL drawings R06948, R06948/1, and R06949. These drawings warrant further explanation:

> The depth to the repository horizon varies significantly over the repository layout. This is due to two factors: the dip of the rock strata within which the proposed repository is located; and, the elevation of the surface terrain at the point of interest. Therefore, there is no one depth number, such as 1,200 feet, which characterizes the entire repository.
>
> The surface terrain elevation above sea level at the proposed exploratory shaft is 4,144.4 feet (ESI) and 4,129.7 feet (ES2). The 1,020 foot and 1,200 foot depth test levels beneath these shafts correspond to elevations above sea level of about 3,110-3,125 feet and 2,930-2945 feet, respectively.

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Some historic drawings depicting prior repository concepts have been published in a SNL Report*. A repository layout as well as various cross sections are shown. Figures 2-8 and 2-9 each contain a notation showing a repository elevation at the bottom of a repository drift. These noted elevations are 2,930 feet (figure 2-8) and 2,910 feet (figure 2-9).

We now consider these two open items to be closed.

The response to open item number 2, the technical analysis of exploratory drift size is not included with this transmittal. The DOE Headquarters (HQ) review of the analysis has raised questions which the project is now evaluating. The analysis supporting the drift size will be transmitted to the NRC when these evaluations are completed and the HQ questions are resolved.

Please address questions on these topics to Dennis H. Irby (FTS 575-1696) or Jerry S. Szymanski (FTS 575-1503) of my staff.

Donald L. Vieth, Director
Waste Management Project Office

WMPO:JSS-1927

Enclosures:
As stated

* Jackson, J. L., 1984, Nevada Nuclear Waste Storage Investigations Preliminary Repository Concepts Report, SAND 83-1877, Sandia National Laboratories, Albuquerque, New Mexico.

cc w/encls:
J. P. Knight, HQ (RW-24) FORS
C. R. Head, HQ (RW-24) FORS
Ralph Stein, HQ (RW-23) FORS
N. K. Stablein, NRC, Washington, DC
P. T. Prestholt, NRC, Las Vegas, NV
D. M. Dawson, SAIC, Las Vegas, NV
M. A. Glora, SAIC, Las Vegas, NV
M. D. Voegele, SAIC, Las Vegas, NV
R. R. Reust, SAIC, Las Vegas, NV
Paul Steneck, SAIC, Las Vegas, NV
Gerald Fredrickson, SAIC, Las Vegas, NV
M. L. Brown, SAIC, Las Vegas, NV
D. H. Irby, WMPO, NV
L. P. Skousen, WMPO, NV
J. S. Szymanski, WMPO, NV
M. B. Blanchard, WMPO, NV
M. P. Kunich, WMPO, NV

cc w/o encls:
V. J. Cassella, HQ (RW-222), FORS
R. L. Bullock, F&S, Las Vegas, NV
Vincent Gong, REECo, Las Vegas, NV
L. R. Hayes, USGS, Denver, CO
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D. T. Oakley, LANL, Los Alamos, NM
J. P. Pedalino, H&N, Las Vegas, NV
L. D. Ramspott, LLNL, Livermore, CA
M. E. Spaeth, SAIC, Las Vegas, NV
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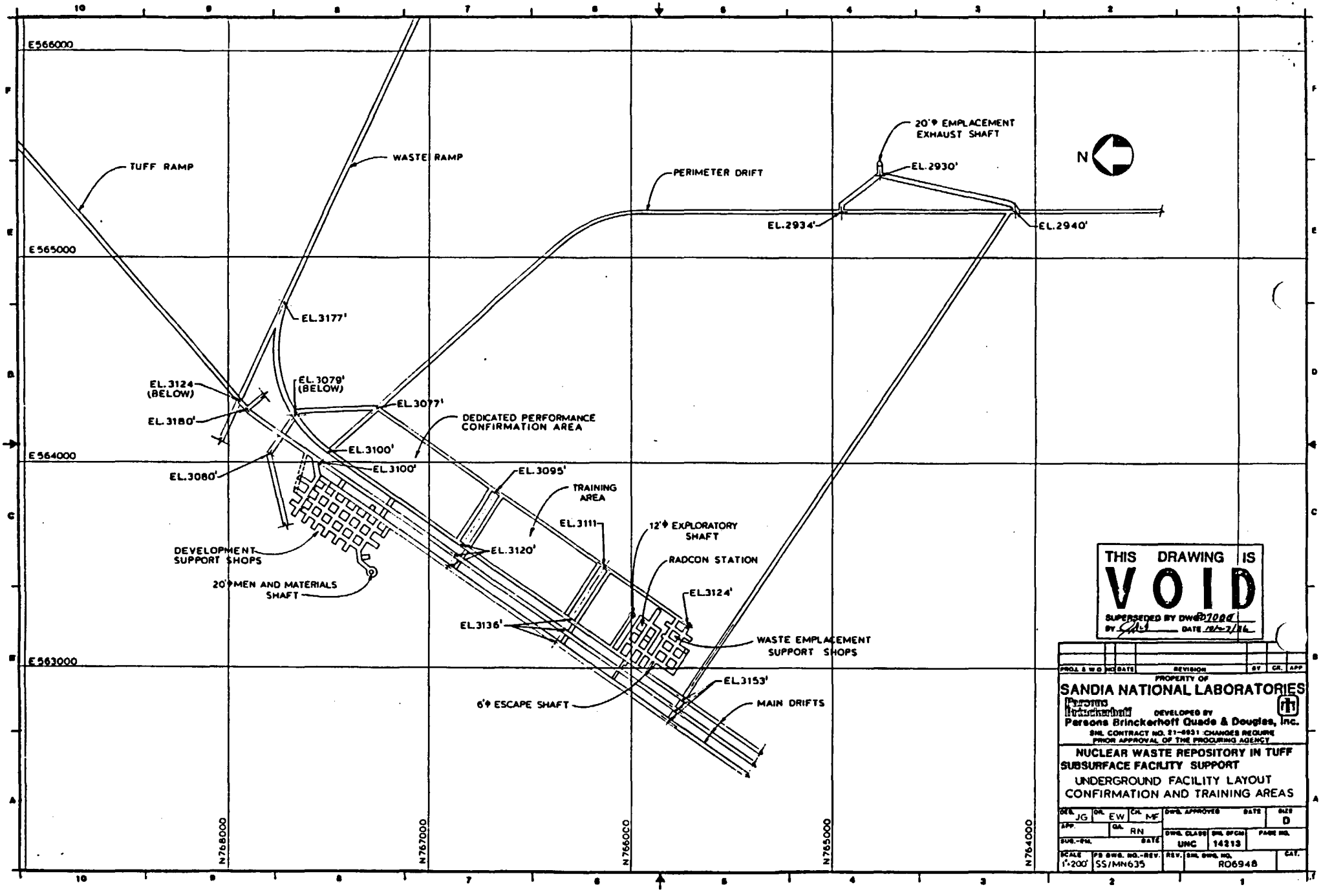

E566000
E565000
E564000
E563000
N768000
N767000
N766000
N765000
N764000
TUFF RAMP
WASTE RAMP
PERIMETER DRIFT
20'Φ EMPLACEMENT EXHAUST SHAFT
EL.2930'
EL.2934'
EL.2940'
N
EL.3177'
EL.3124 (BELOW)
EL.3079' (BELOW)
EL.3077'
EL.3180'
DEDICATED PERFORMANCE CONFIRMATION AREA
EL.3100'
EL.3100'
EL.3080'
EL.3095'
TRAINING AREA
EL.3111
12'Φ EXPLORATORY SHAFT
EL.3120'
RADCON STATION
DEVELOPMENT SUPPORT SHOPS
20'Φ MEN AND MATERIALS SHAFT
EL.3124'
EL.3136'
WASTE EMPLACEMENT SUPPORT SHOPS
EL.3153'
6'Φ ESCAPE SHAFT
MAIN DRIFTS
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NUCLEAR WASTE REPOSITORY IN TUFF
SUBSURFACE FACILITY SUPPORT
UNDERGROUND FACILITY LAYOUT
CONFIRMATION AND TRAINING AREAS
DES. JG
DR. EW
CH. MF
DWG. APPROVED
DATE
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APP.
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SNL SFCM 14213
PAGE NO.
SCALE 1"=200'
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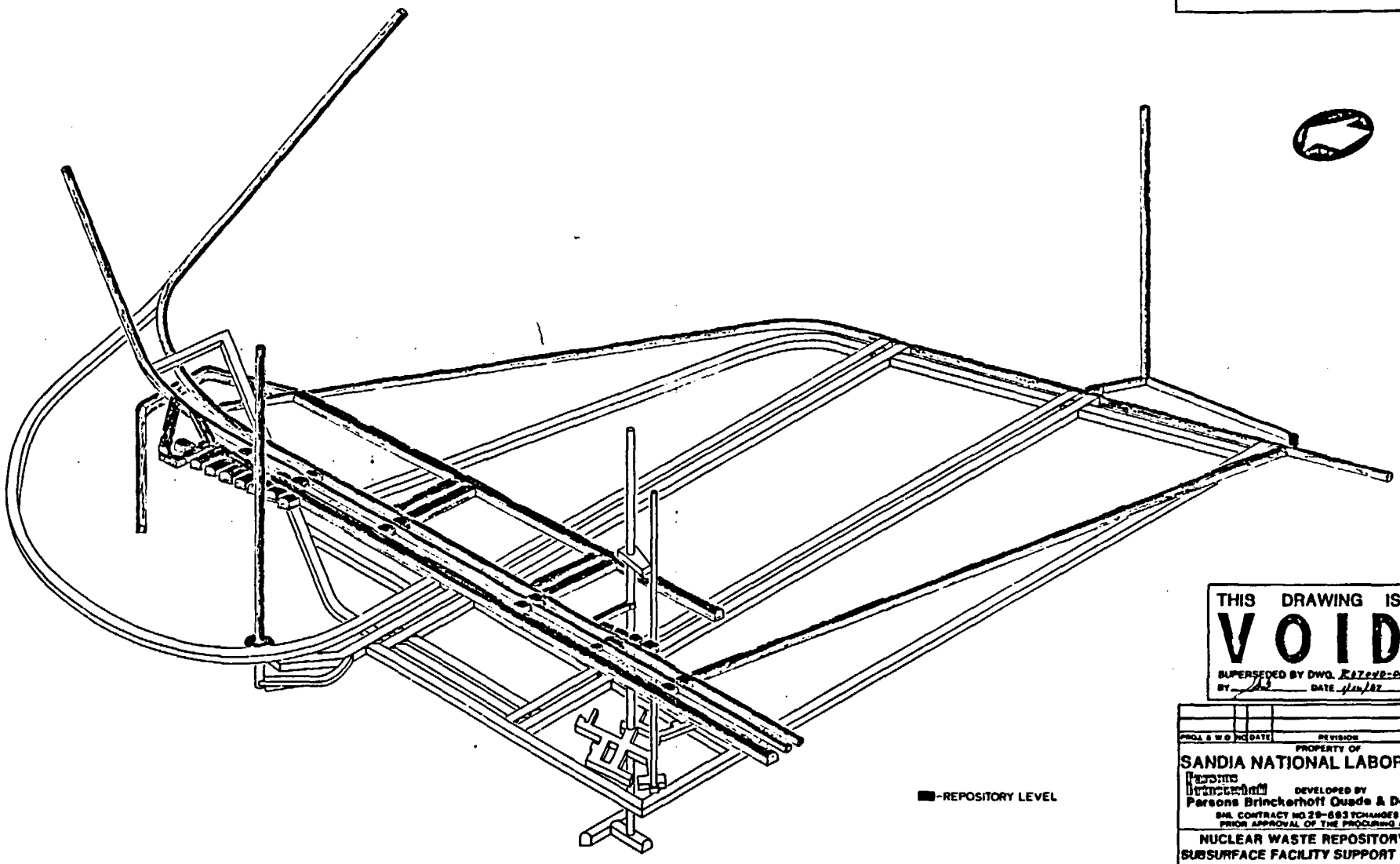
REV.
SNL DWG. NO. R06948
CAT.

FIGURE



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NUCLEAR WASTE REPOSITORY IN TUFF
SUBSURFACE FACILITY SUPPORT
UNDERGROUND FACILITY LAYOUT
ISOMETRIC

DES.	DR. K-H	CH.	DWG. APPROVED	DATE	SIZE D
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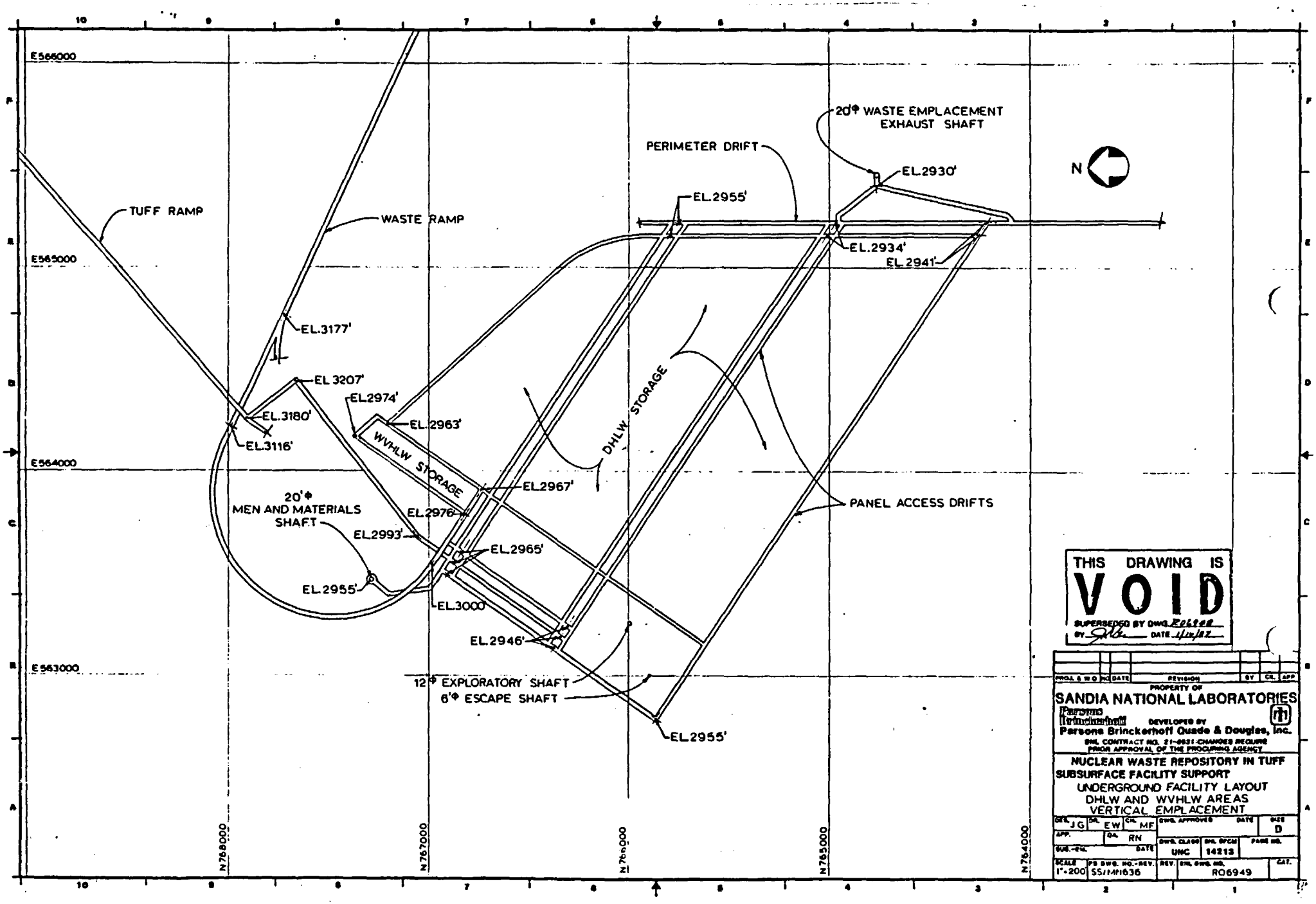

E566000
E565000
E564000
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N766000
N765000
N764000
TUFF RAMP
WASTE RAMP
EL.3177'
EL 3207'
EL.3180'
EL.3116'
EL.2974'
EL.2963'
WVHLW STORAGE
20'Φ MEN AND MATERIALS SHAFT
EL.2993'
EL.2976'
EL.2967'
EL.2965'
EL.2955'
EL.3000'
EL.2946'
12'Φ EXPLORATORY SHAFT
6'Φ ESCAPE SHAFT
EL.2955'
DHLW STORAGE
PERIMETER DRIFT
EL.2955'
20'Φ WASTE EMPLACEMENT EXHAUST SHAFT
EL.2930'
EL.2934'
EL.2941'
PANEL ACCESS DRIFTS
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NUCLEAR WASTE REPOSITORY IN TUFF
SUBSURFACE FACILITY SUPPORT
UNDERGROUND FACILITY LAYOUT
DHLW AND WVHLW AREAS
VERTICAL EMPLACEMENT
DES. JG DR. EW CK. MF
DWG. APPROVED DATE
SIZE D
APP. QA. RN
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SNL DWG. NO. R06949
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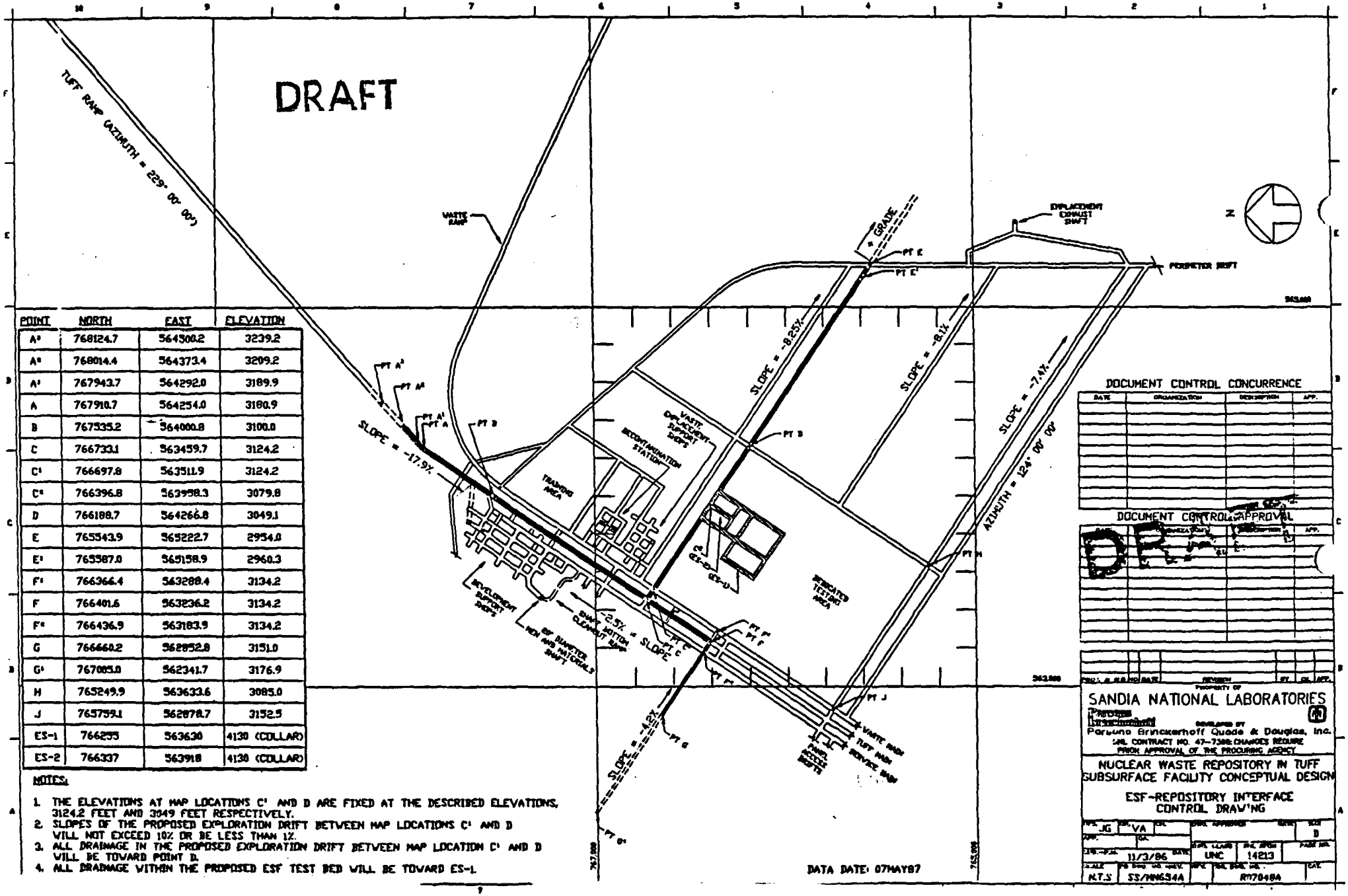
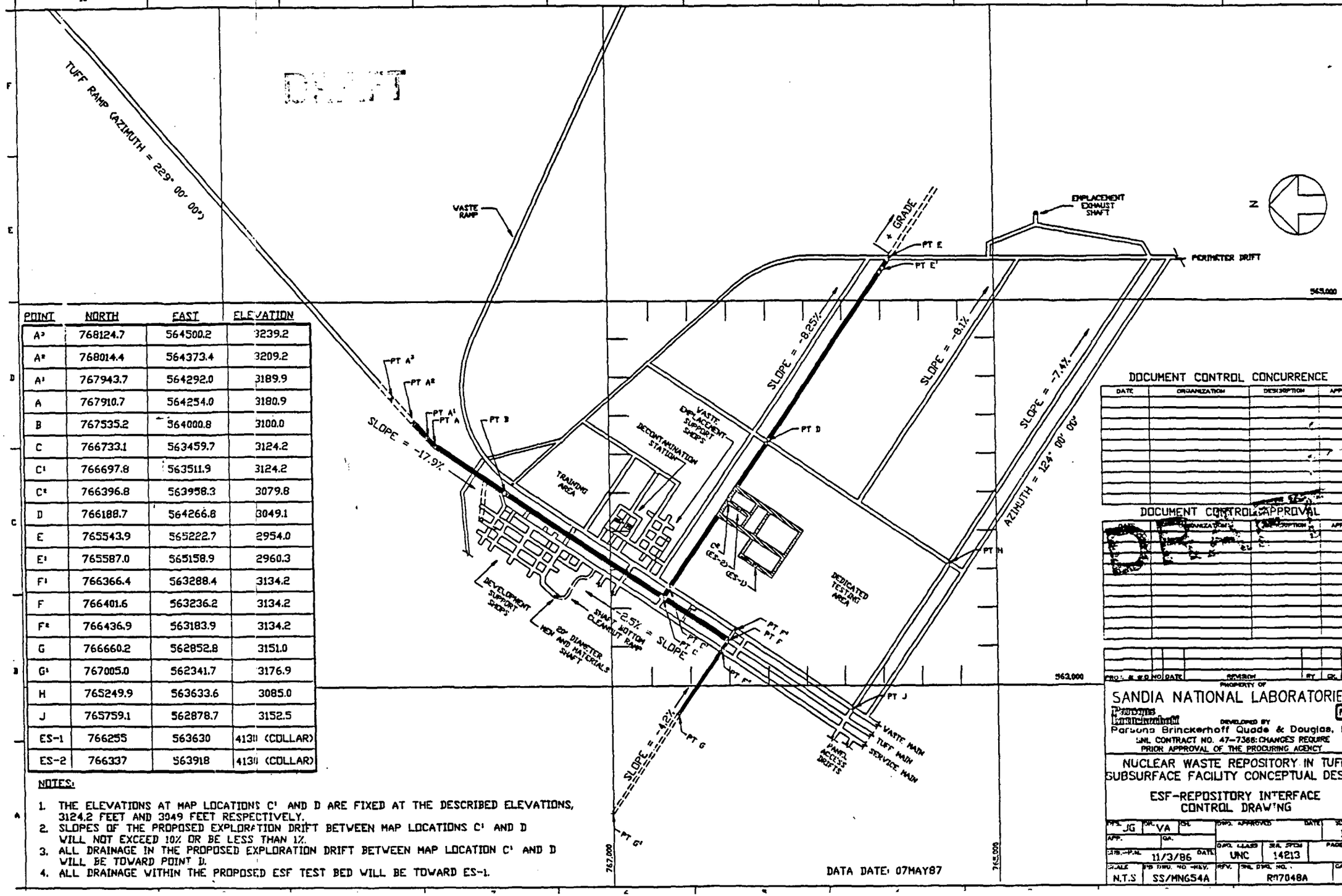


POINT	NORTH	EAST	ELEVATION
A³	768124.7	564300.2	3239.2
A⁴	768014.4	564373.4	3209.2
A¹	767943.7	564292.0	3189.9
A	767910.7	564254.0	3180.9
B	767535.2	564000.8	3100.0
C	766733.1	563459.7	3124.2
C'	766697.8	563511.9	3124.2
C²	766396.8	563958.3	3079.8
D	766188.7	564266.8	3049.1
E	765543.9	565222.7	2954.0
E'	765387.0	565158.9	2960.3
F'	766366.4	563288.4	3134.2
F	766401.6	563236.2	3134.2
F²	766436.9	563183.9	3134.2
G	766660.2	562852.8	3151.0
G'	767085.0	562341.7	3176.9
H	765249.9	563633.6	3085.0
J	765759.1	562878.7	3152.5
ES-1	766255	563630	4130 (COLLAR)
ES-2	766337	563918	4130 (COLLAR)

NOTES:

1. THE ELEVATIONS AT MAP LOCATIONS C' AND D ARE FIXED AT THE DESCRIBED ELEVATIONS, 3124.2 FEET AND 3049 FEET RESPECTIVELY.
2. SLOPES OF THE PROPOSED EXPLORATION DRIFT BETWEEN MAP LOCATIONS C' AND D WILL NOT EXCEED 10% OR BE LESS THAN 1%.
3. ALL DRAINAGE IN THE PROPOSED EXPLORATION DRIFT BETWEEN MAP LOCATION C' AND D WILL BE TOWARD POINT D.
4. ALL DRAINAGE WITHIN THE PROPOSED ESF TEST BED WILL BE TOWARD ES-1.



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C²	766396.8	563958.3	3079.8
D	766188.7	564266.8	3049.1
E	765543.9	565222.7	2954.0
E¹	765587.0	565158.9	2960.3
F¹	766366.4	563288.4	3134.2
F	766401.6	563236.2	3134.2
F²	766436.9	563183.9	3134.2
G	766660.2	562852.8	3151.0
G¹	767005.0	562341.7	3176.9
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4. ALL DRAINAGE WITHIN THE PROPOSED ESF TEST BED WILL BE TOWARD ES-1.

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SCALE N.T.S	SUB DWG. NO.-REV. SS/MNG54A	REV.	SNL DWG. NO. R07048A	CAT.	

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