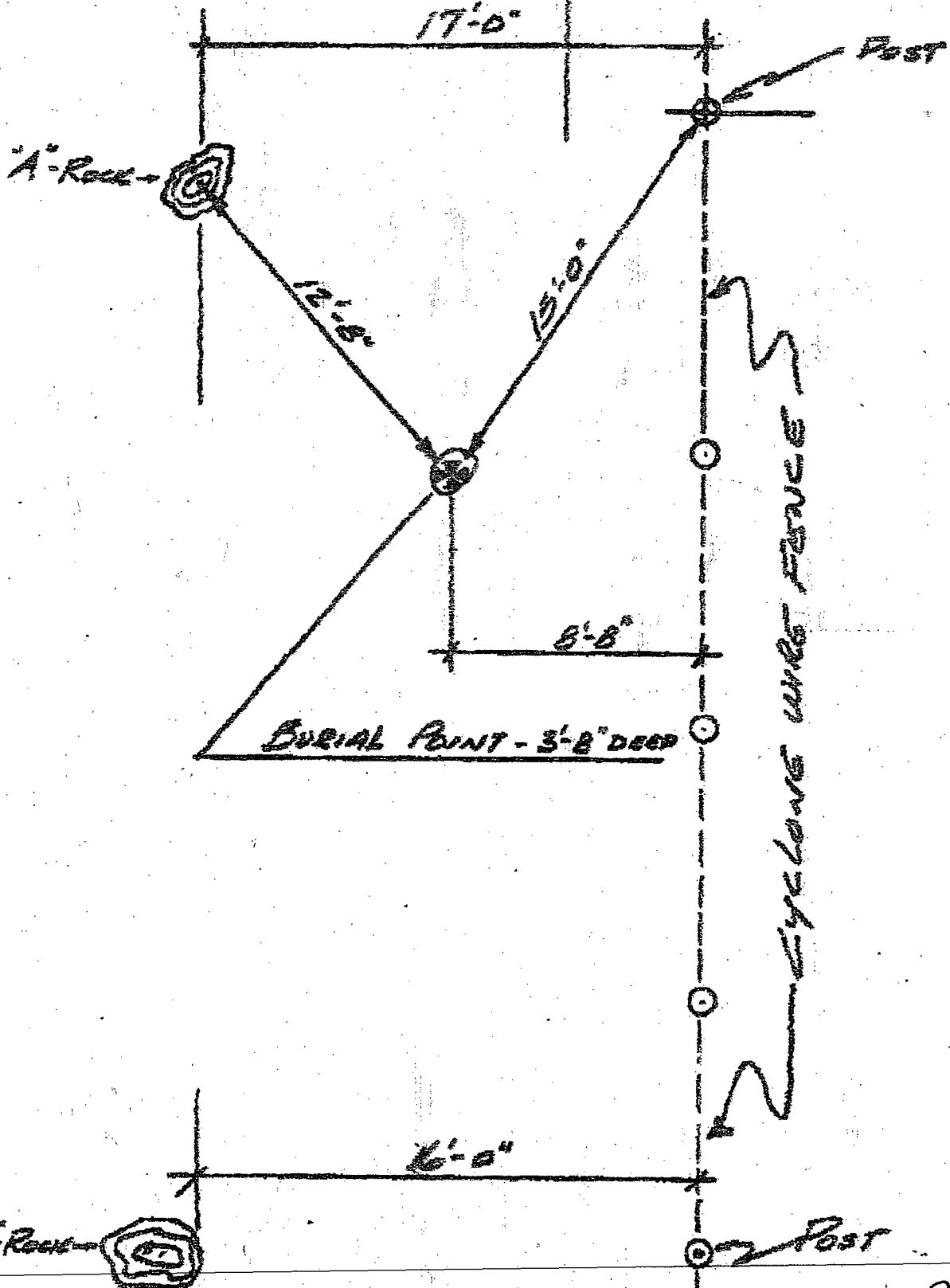


# Radiation Technology, Inc.

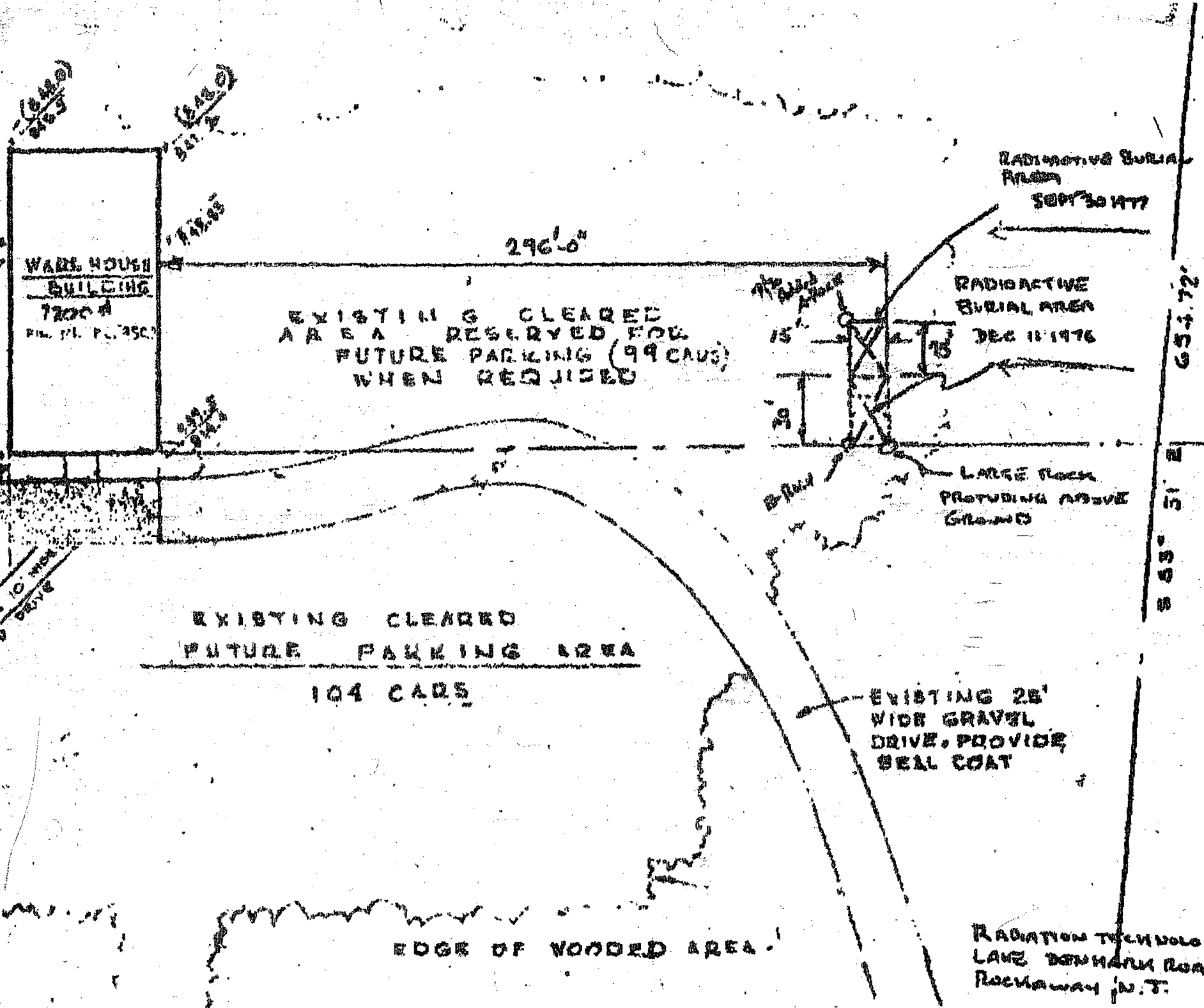
LAKE DENMARK ROAD, ROCKAWAY, N.J. 07866  
(201) 627-2900



SEE ATTACHED RADIOACTIVE BURIAL MAP - SEPT 30, 1977



BLOCK 240 LOT 107 73018



WAREHOUSE BUILDING  
7200 sq. ft.  
PL. 7501

EXISTING CLEARED  
AREA RESERVED FOR  
FUTURE PARKING (99 CARS)  
WHEN REQUIRED

EXISTING CLEARED  
FUTURE PARKING AREA  
104 CARS

RADIOACTIVE BURIAL  
AREA  
SEP 30 1977

RADIOACTIVE  
BURIAL AREA  
DEC 11 1976

LARGE ROCK  
PROTRUDING ABOVE  
GROUND

EXISTING 25'  
WIDE GRAVEL  
DRIVE. PROVIDE  
SEAL COAT

EDGE OF WOODED AREA

RADIATION TECHNOLOGY  
LAW DONNAN ROAD  
ROCKAWAY N.J.

Bldg. 62

Approximate location  
of NRC sampling site  
on 8/24/87.

Bldg. 70

fence.

•15

•14

•13 (BKgd)

•1

3:  
2:

•5a & b

4:

•6

7:

•8

|    |                   | <u>LiCl/gm</u>    |
|----|-------------------|-------------------|
| 1  | 24'               | (3.3 ± 0.2) E-6   |
| 2  | 31'9"             | (9.9 ± 0.3) E-6   |
| 3  | 31'5"             | (3.04 ± 0.09) E-5 |
| 4  | 44'5"             | (5.6 ± 0.2) E-5   |
| 5a | 34'5"             | (1.25 ± 0.08) E-6 |
| 5b | 34'5"             | (9.2 ± 0.3) E-6   |
| 6  | 44'8"             | (1.68 ± 0.09) E-6 |
| 7  | 60'8"             | (1.61 ± 0.05) E-5 |
| 8  | 78'               | (1.42 ± 0.05) E-5 |
| 9  | 149'              | (2.97 ± 0.2) E-6  |
| 10 | 105'              | (1.05 ± 0.04) E-5 |
| 12 | lake edge         | (4.4 ± 0.2) E-6   |
| 13 | 19'7"             |                   |
| 14 | fence             | (1.75 ± 0.6) E-6  |
| 15 | 8' above<br>fence | (7.4 ± 0.6) E-7   |

•10

9:

dirt road

Discharge  
Area

1 block = 5 feet

12'

Lake  
Denmark

46 0410

5 X 5 TO THE INCH • 7 X 10 INCHES  
KEUFFEL & ESSER CO. MADE IN U.S.A.



NRC REGION I NUCLEAR MATERIALS SAFETY & SAFEGUARDS BRANCH

REQUEST FOR TECHNICAL ASSISTANCE: RFTA NO. \_\_\_\_\_

INSPECTOR'S NAME John R. White

DATE OF REQUEST April 8, 1987

REGION I

BRANCH NM&SB

ASSISTANCE COMPLETION DATE April-May, 1987

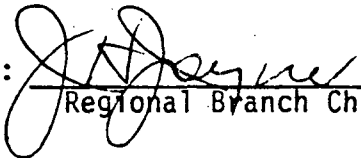
NATURE AND EXTENT OF ASSISTANCE: Perform surveys of abandoned buildings and debris (barrels, containers, boxes, etc.) located on Radiation Technology, Incorporated's property (a 250 acre tract) in Rockaway, New Jersey. (L/N 29-13613-02, D/N 30-0702) The survey should be sufficiently detailed to identify anomalous indications of radioactivity on the site as a result of material previously stored or disposed of improperly. Principal isotopes expected are Co-60 and Cs-137. A comprehensive ground survey is not required, but documentation sufficient to support that the buildings, suspected areas and debris do not contain radioactive material is directed by this request.

JUSTIFICATION: Results will be used to support inspection of licensee activities and provide independent validation of the radiological status of the property which currently maintained as an unrestricted area.

Contact at Site: Tass Varaklis (201-625-8400)

ESTIMATES OF TIME: approximately 20 person-days AND COST: approximately \$20,000

-----  
IF ASSISTANCE RESULTS ARE PROPRIETARY, STATE WHY: N/A

AUTHORIZATION:   
Regional Branch Chief

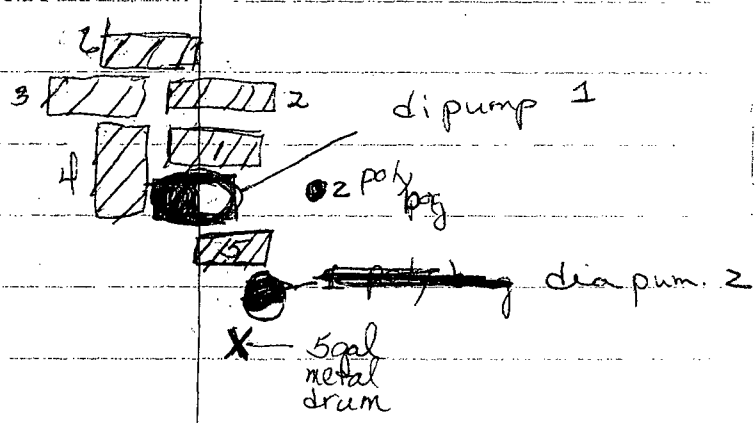
4/8/87  
DATE

-----  
APPROVED: \_\_\_\_\_

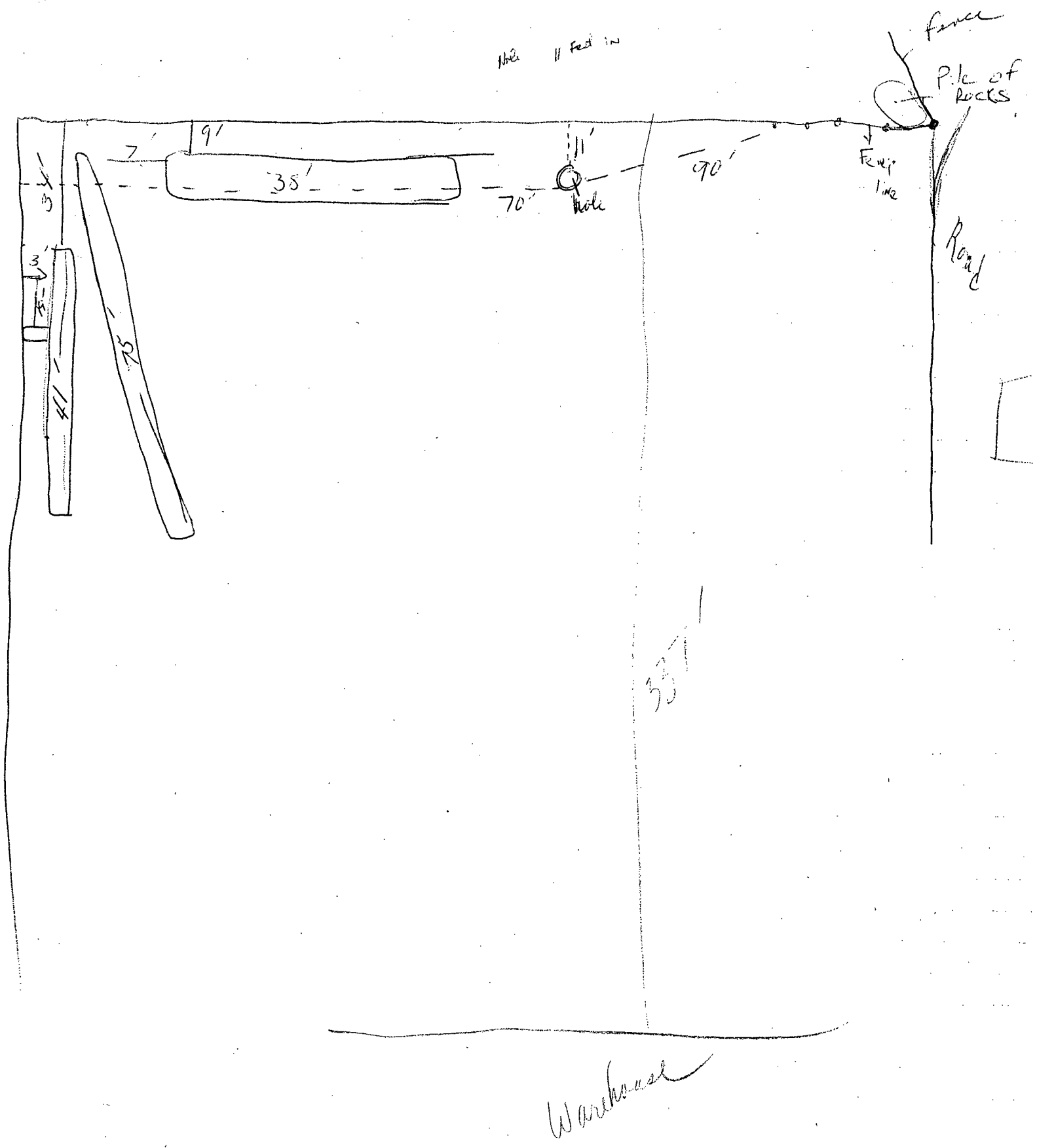
\_\_\_\_\_  
DATE

\_\_\_\_\_  
Priority Code  
IE Project Officer

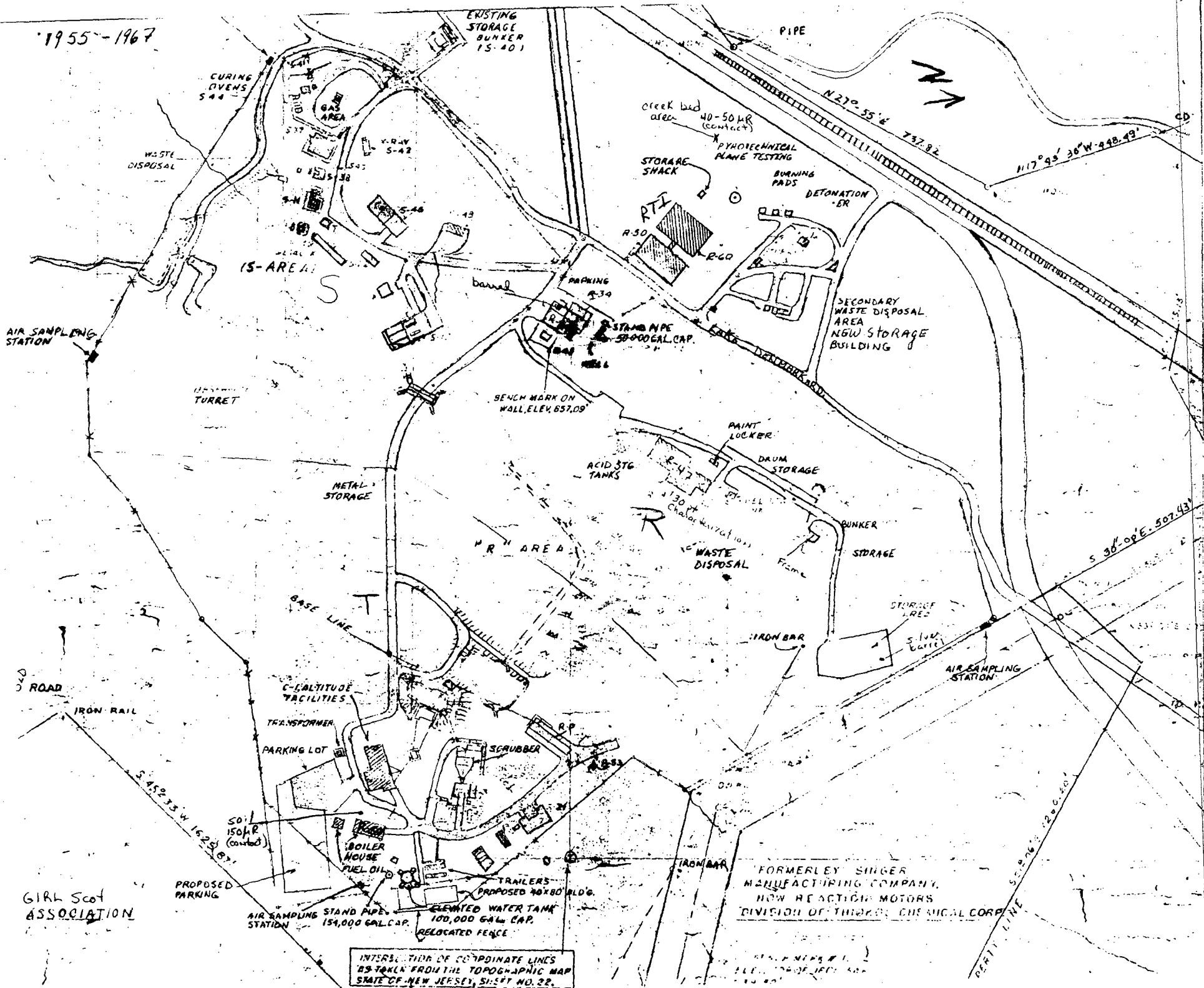
COMMENTS:



Deltuffa



1955-1967



INTERSECTION OF COORDINATE LINES  
 25-TAKEN FROM THE TOPOGRAPHIC MAP  
 STATE OF NEW JERSEY, SHEET NO. 22.

FORMERLY SINGER  
 MANUFACTURING COMPANY,  
 NOW REACTION MOTORS  
 DIVISION OF TRIGON CHEMICAL CORP.

GIRL SCOT  
 ASSOCIATION



Taylor

Attachment 1

RADIATION TECHNOLOGY, INC.  
P.O. Box 185  
108 Lake Denmark Road  
Rockaway, N.J. 07866  
(201) 625 - 8400

Form No. :  
Page: : OF  
Issued On :  
Revised On :  
Approved By:

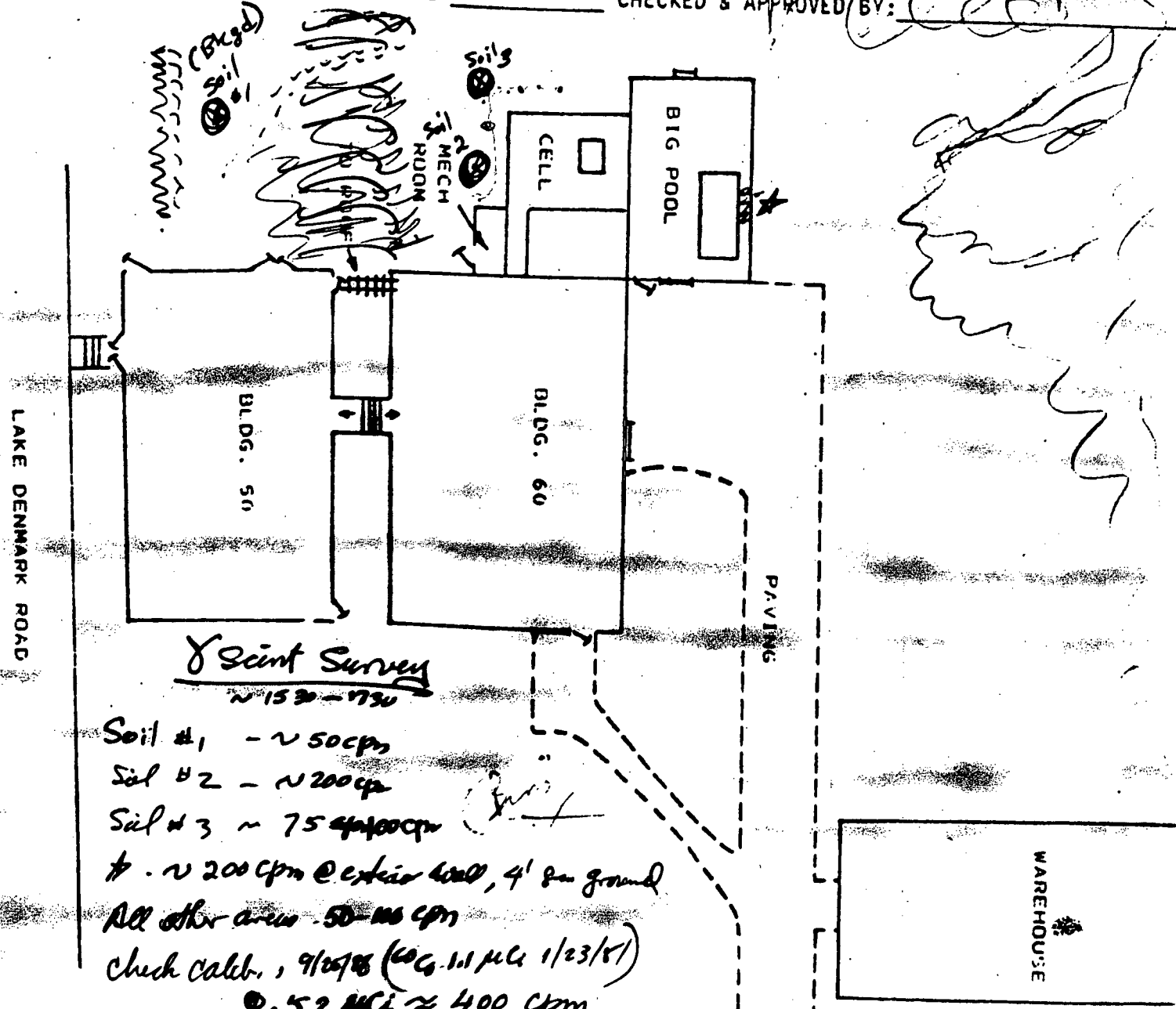
SURVEY MAP # 5

DATE: 10/3/86

SURVEY TAKEN BY: Hudson & Oberg

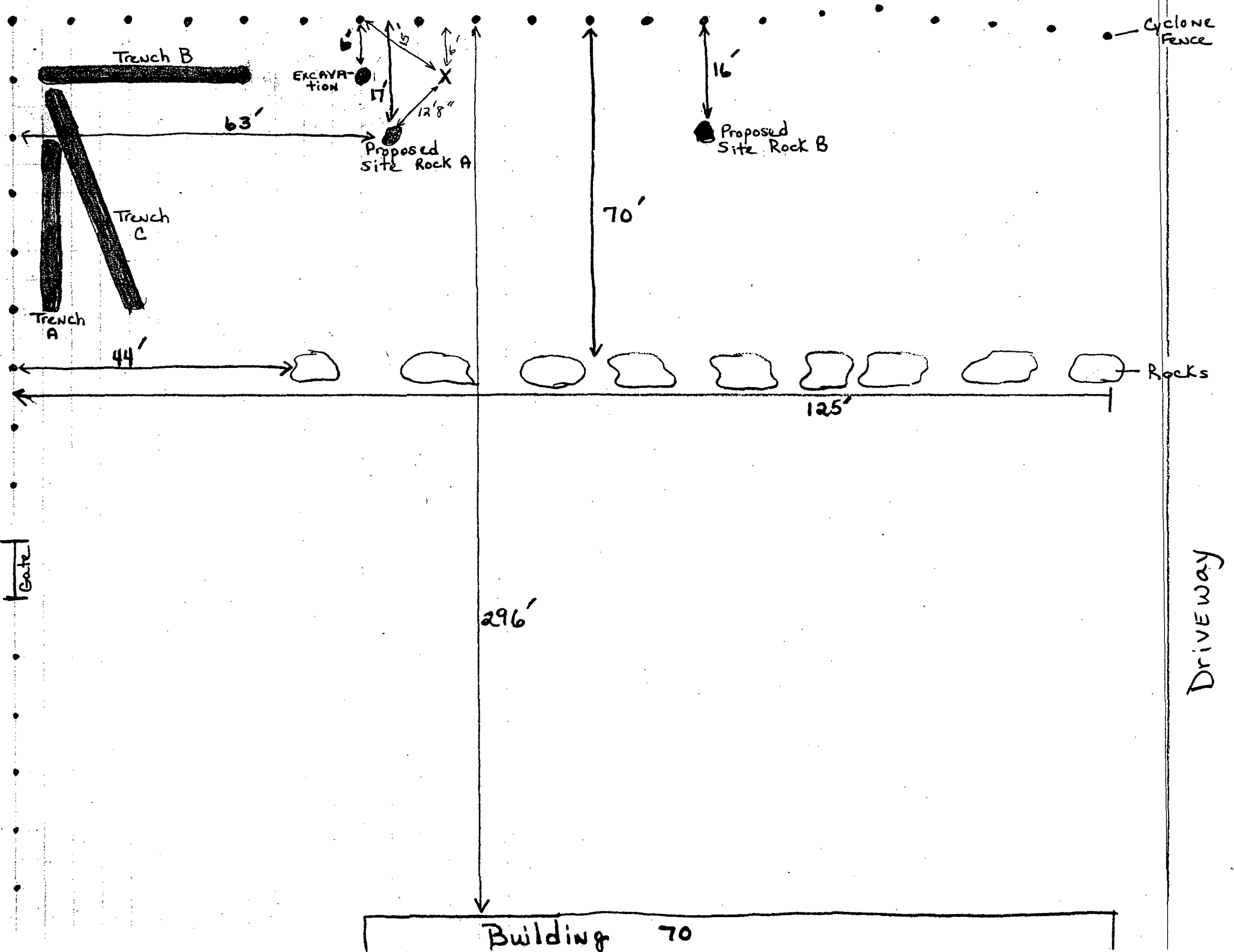
LABORATORY NOTEBOOK REFERENCE

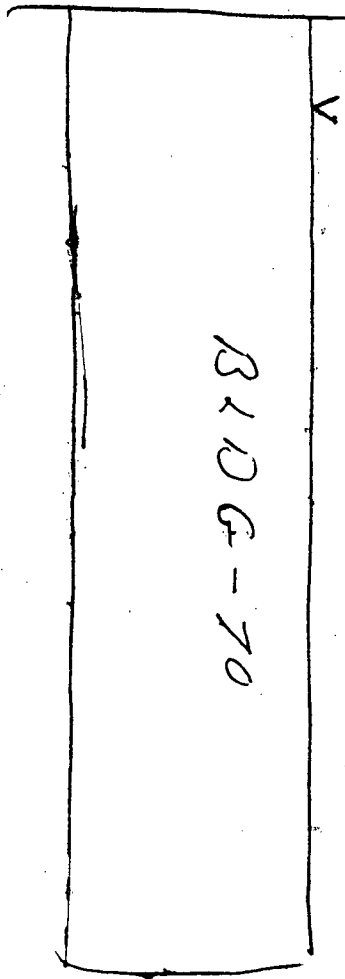
CHECKED & APPROVED BY: [Signature]



Y Scint Survey  
~ 150 - 1750

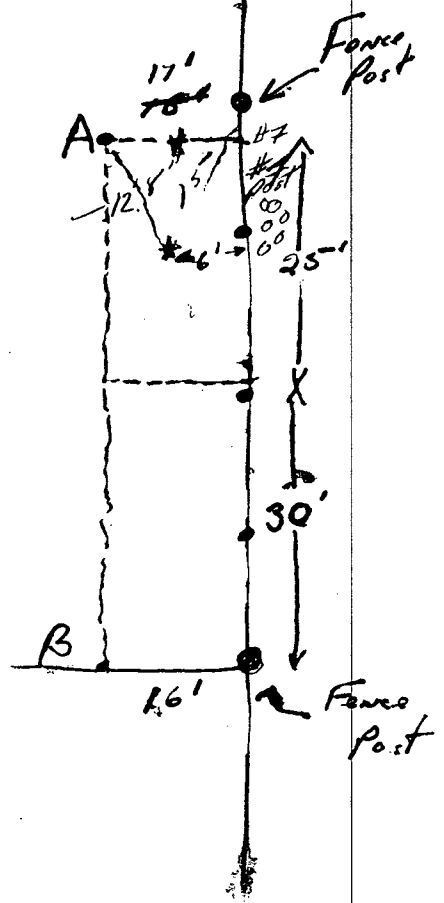
Soil #1 - ~ 50 cpm  
 Soil #2 - ~ 200 cpm  
 Soil #3 - ~ 75-100 cpm  
 \* ~ 200 cpm @ exterior wall, 4' from ground  
 All other areas - 50-100 cpm  
 Check Calib., 9/27/86 (Co. 1.1 µCi 1/23/81)  
 0.52 µCi ≈ 400 cpm

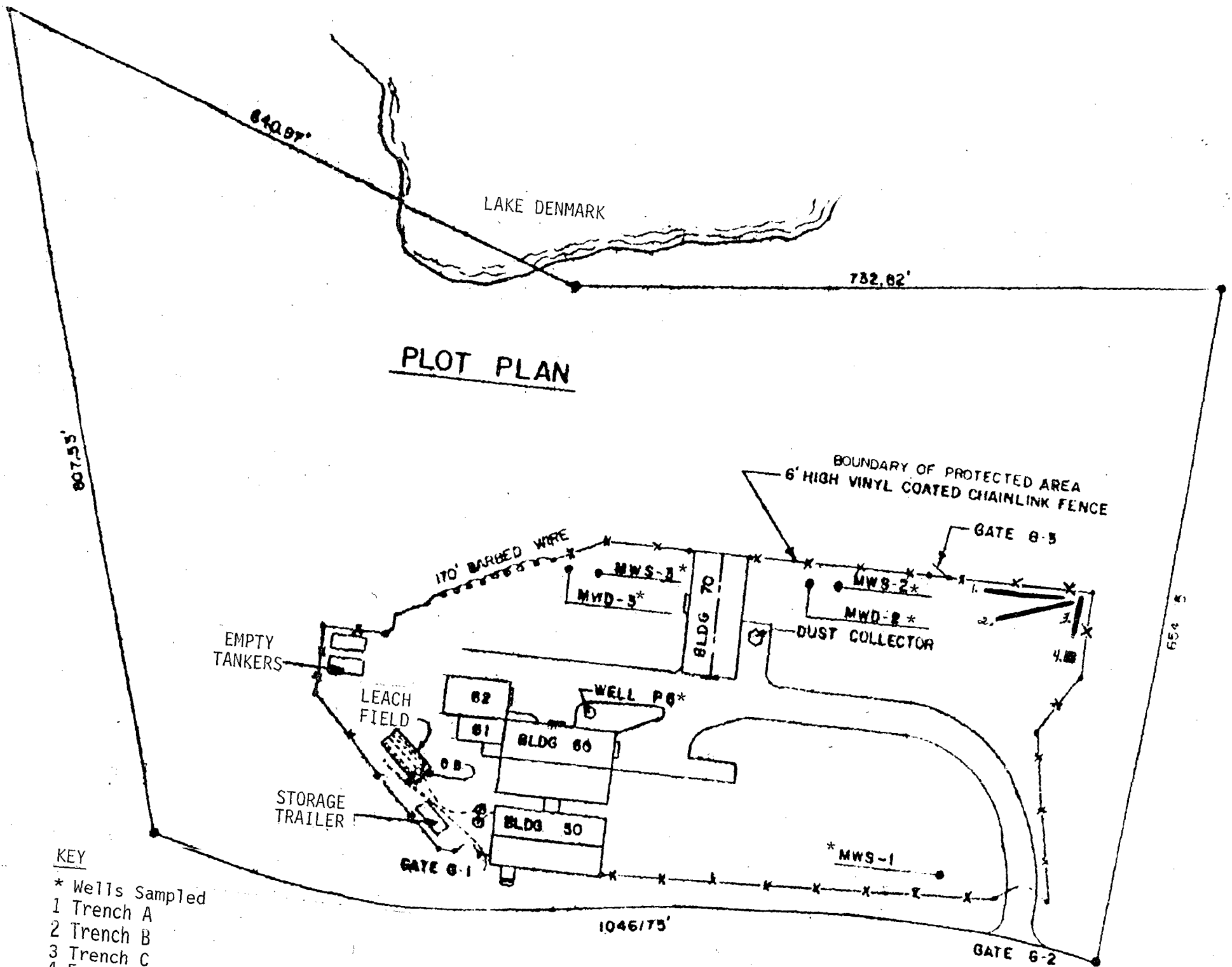




~ 296  
 verified 3/18/87  
 by White/Taylor

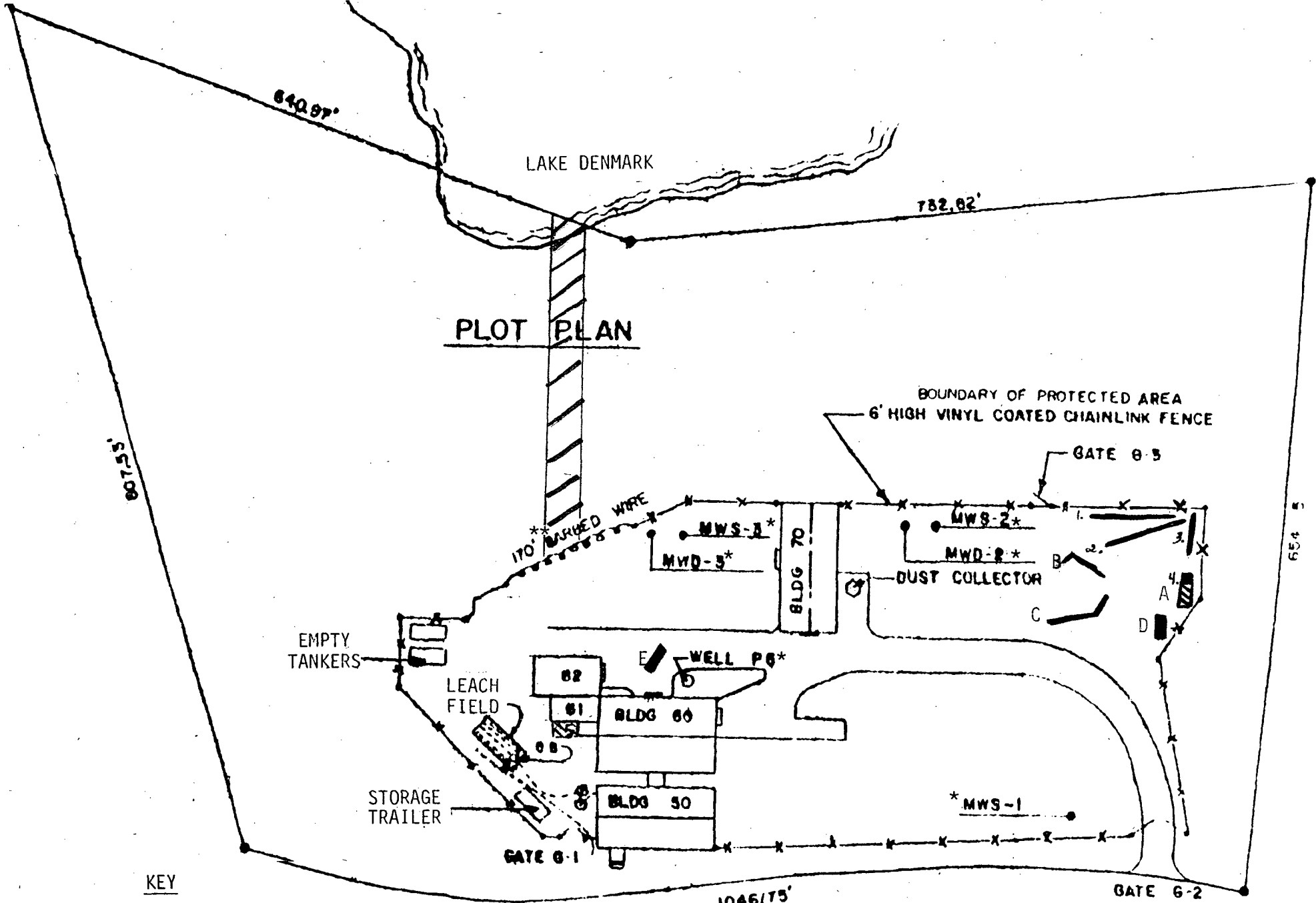
Cyclone  
 Fence





**KEY**

- \* Wells Sampled
- 1 Trench A
- 2 Trench B
- 3 Trench C
- 4 Excavated area where bucket found



**KEY**

**Licensee Excavations**

- 1 Trench
- 2 Trench
- 3 Trench
- 4 Excavated area where bucket found
- 5 Random Sampling-elevated Co-60 levels
- \* Wells Sampled

\*\* ORAU soil sample (17.1 pCi/g co-60)

NRC survey areas

A,B,C,D. NRC directed excavation sites

## Status

### ENVIRONMENTAL

#### Water

- All samples taken from both shallow and deep wells on site have results less than LLD.
- No Co-60 found in lake water samples.

#### Soil

- All trenches have been filled in. Elevated readings (@ 200/hr) still exist in trench #1.
- NRC surveys reveal elevated radiation readings in area outside fence line near Lake Denmark. Licensee has grided area and is conducting surveys and soil sampling.
- Traces of Co-60 contamination found in Lake Denmark silt sample (4' from water's edge; below NRC limits)

### NJDEP

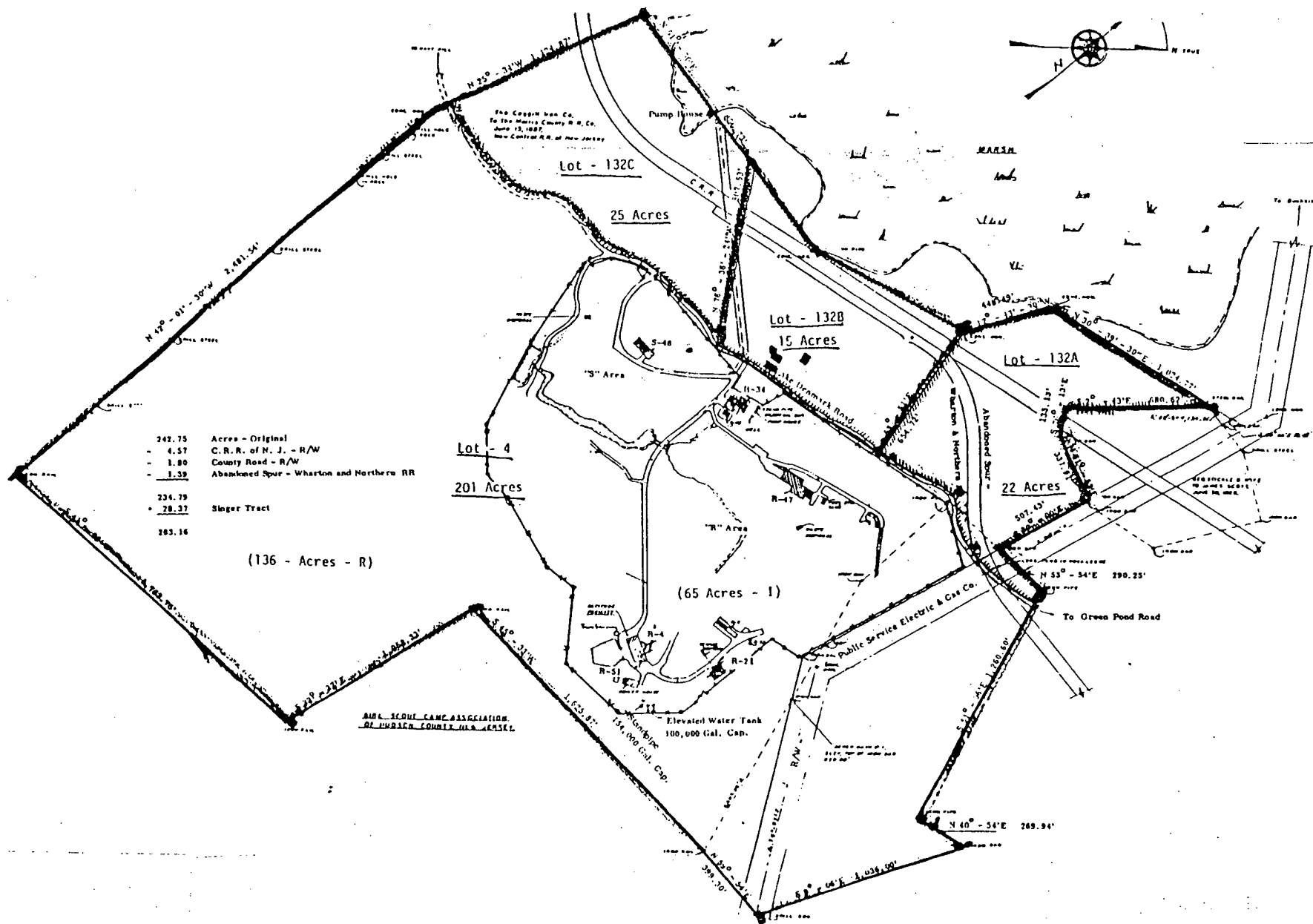
- Test wells are still being drilled.

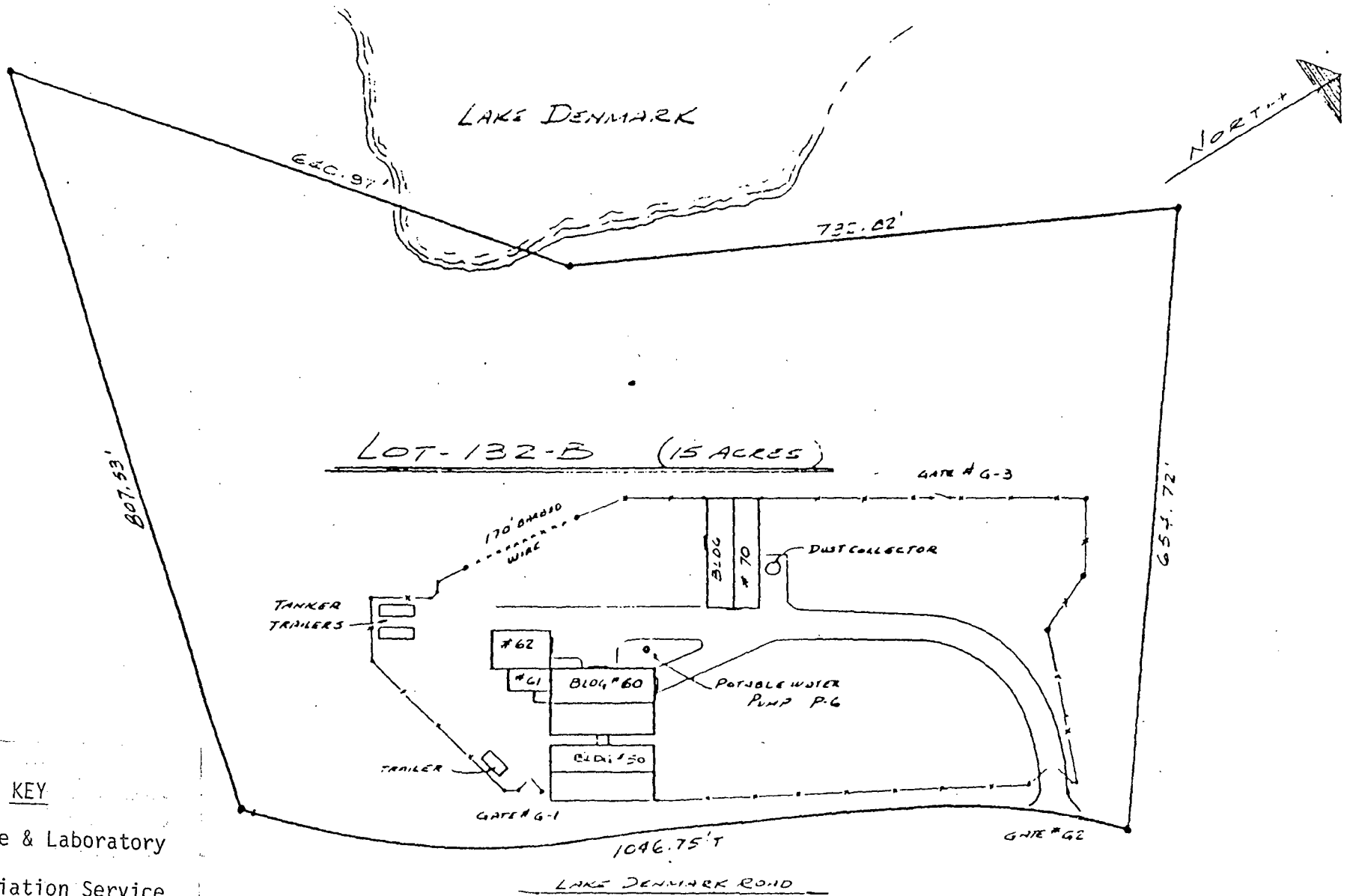
| <u>Date</u> | <u>Time</u> | <u>Description</u>  |
|-------------|-------------|---|
| 6/11/87     | ≈ 9:30am    | crushed paint can, 200 mR hr <sup>-1</sup> max, identified as Co-60 with multi-channel analyzer |
|             | ≈ 10:40am   | diatomaceous earth filter, 130 μR hr <sup>-1</sup> max  |
|             | ≈ 11:20am   | 55 gallon drum #1, 120 μR hr <sup>-1</sup> max  |
|             | ≈ 12:30pm   | (2) 30 gallon drums #2 & #3, 110 μR hr <sup>-1</sup> max  |
|             | 1:35pm      | plastic bottle in plastic bag, 50 mR hr <sup>-1</sup> max                                       |
|             | 2:10pm      | 55 gallon drum #4, 60 μR hr <sup>-1</sup> max   |
|             | 2:20pm      | 55 gallon drum #5, 50 μR hr <sup>-1</sup> max   |
|             | 2:40pm      | 55 gallon drum #6, 50 μR hr <sup>-1</sup> max   |
|             | 2:45pm      | diatomaceous earth pump, 38 μR hr <sup>-1</sup> max   |
|             | 2:50pm      | 5 gallon metal bucket #7, 100 μR hr <sup>-1</sup> max   |
|             | 3:10pm      | 55 gallon drum #8, 80 μR hr <sup>-1</sup> max   |
|             | 4:55pm      | 55 gallon drum #9, covered in plastic, 500 μR hr <sup>-1</sup> maximum reading                  |

| <u>Date</u> | <u>Time</u> | <u>Description</u>   |
|-------------|-------------|--|
| 6/12/87     | a.m.        | 55 gallon drum #10, 3 mR hr <sup>-1</sup> max  |
| 6/16/87     | 11:00am     | metallic bucket #11 containing vermiculite and resin beads, 10 mR hr <sup>-1</sup> max |
| 6/17/87     | 2:45pm      | 55 gallon drum #12, 9 mR hr <sup>-1</sup> max  |
| 6/24/87     | 11:00 am    | 55 gallon drum #13, 180 $\mu$ R hr <sup>-1</sup> max                                   |
|             | 11:45 am    | 55 gallon drum #14, 80 $\mu$ R hr <sup>-1</sup> max                                    |

During the excavation activities, many poly bags were removed from the pit. The poly bags contain filters, rags, resins, and assorted trash. Many glass jars & bottles, plastic bottles, empty source sleeves, and other debris were also removed. One plastic bottle measured 50 mR hr<sup>-1</sup> and another measured 5 mR hr<sup>-1</sup>.







KEY

- BLDG 50 Office & Laboratory
- BLDG 60 Irradiation Service
- BLDG 61 R & D Pool Irradiator
- BLDG 62 Processing
- BLDG 70 Warehouse & Finishing

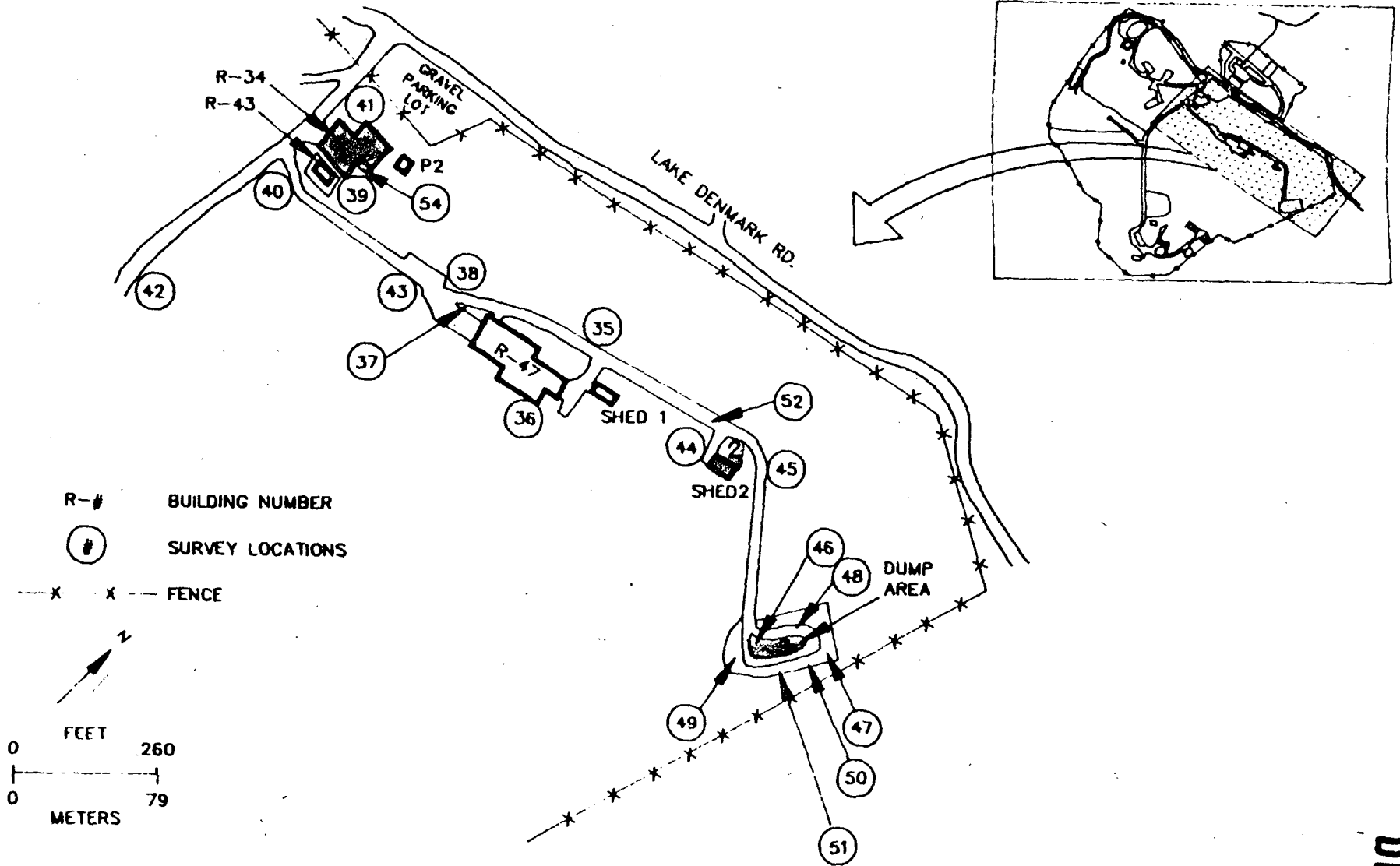
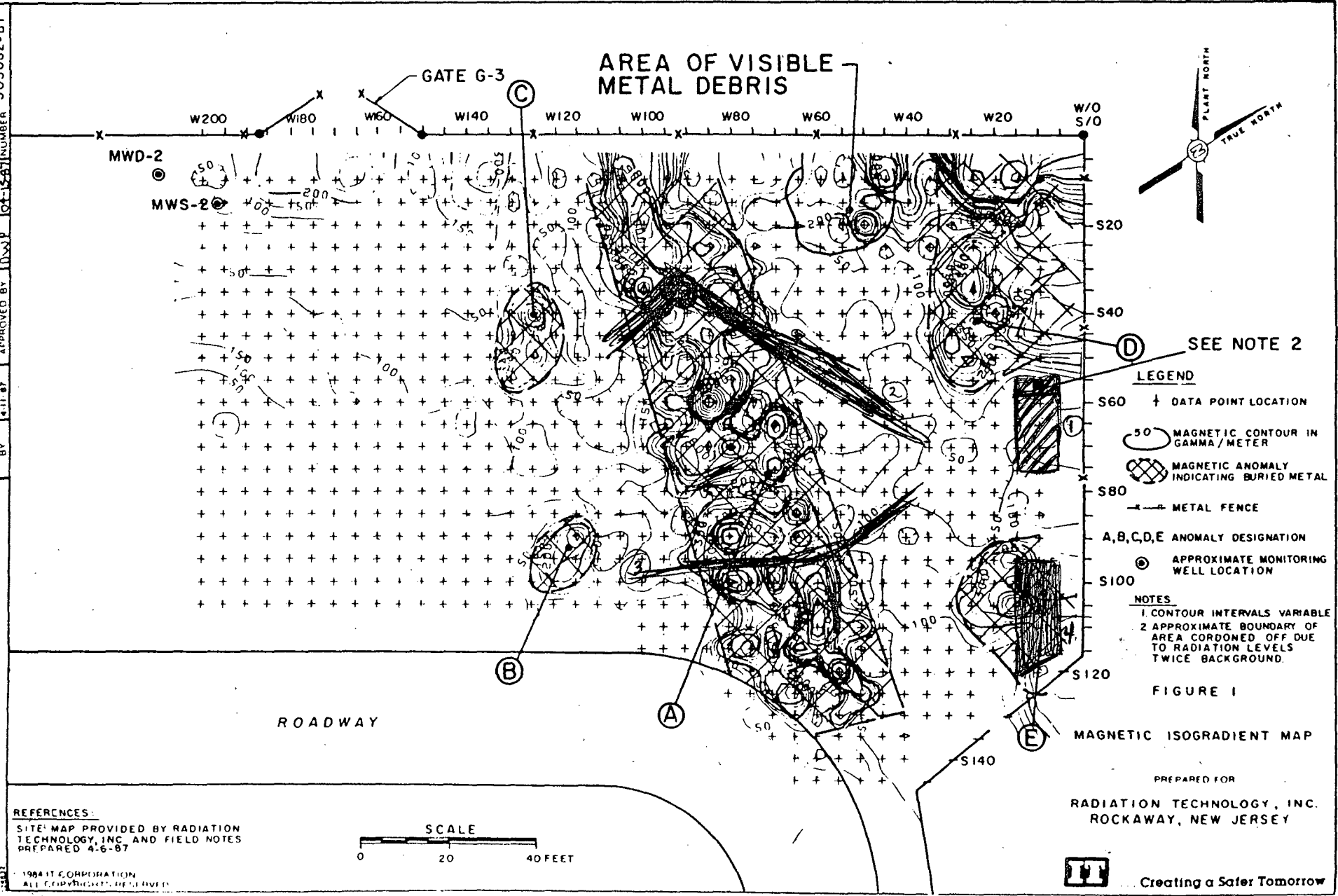


FIGURE 5: Map of Area C Indicating Survey Locations 35 through 52

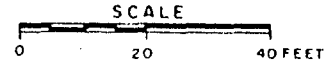
1. Metal drum Up to 20uR/h on contact
2. Metal frame Up to 600 uR/h on contact
3. Stainless Steel drum Up to 165 uR/h on contact

Trench 5 was in the parking lot across from Bldg. 60

DRAWN BY: J. LOBREGO  
 CHECKED BY: J. W. W.  
 APPROVED BY: [Signature]  
 DATE: 4-11-87  
 DRAWING NUMBER: 303082-81



**REFERENCES:**  
 SITE MAP PROVIDED BY RADIATION  
 TECHNOLOGY, INC. AND FIELD NOTES  
 PREPARED 4-6-87

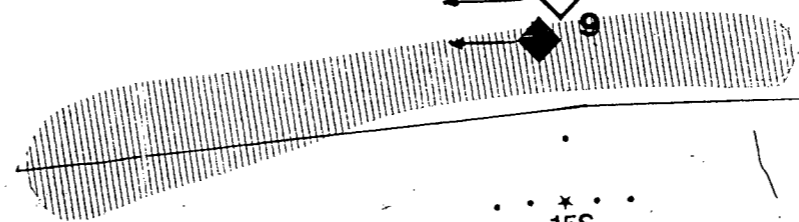
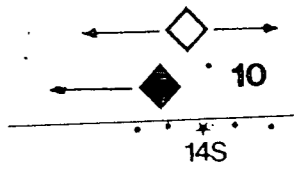


**LEGEND**  
 S60 † DATA POINT LOCATION  
 50 MAGNETIC CONTOUR IN GAMMA/METER  
 [Cross-hatched symbol] MAGNETIC ANOMALY INDICATING BURIED METAL  
 S80 ——— METAL FENCE  
 A,B,C,D,E ANOMALY DESIGNATION  
 [Circle with dot symbol] APPROXIMATE MONITORING WELL LOCATION  
 S100  
**NOTES**  
 1. CONTOUR INTERVALS VARIABLE  
 2. APPROXIMATE BOUNDARY OF AREA CORDONED OFF DUE TO RADIATION LEVELS TWICE BACKGROUND.

FIGURE 1  
 MAGNETIC ISOGRADIANT MAP

PREPARED FOR  
 RADIATION TECHNOLOGY, INC.  
 ROCKAWAY, NEW JERSEY

CENTRAL RAILR



WET AREA

WOODS

WOODS

STORAGE AREA

TANKERS

DISPOSAL FIELD

TRAILER

EXTRA SEISMIC STA.

13D

15S

14S

70

62

61

60

50

3

2

2

1

14S

16D

300'

540'

480'

420'

600'

P-6

240'

180'

ST

