

~~R-001-101.3~~

G-000-101.97

122

**STATUS UPDATE ON INVESTIGATION OF  
ELEVATED CONCENTRATIONS OF URANIUM  
IN OFFSITE SOILS**

**05-10-1989**

**WMCO/WMCO**

**WMCO:R(RIFS):89-055**

**37**

**LETTER**

~~R-001-101-3~~  
G-000-101.97

From: C. R. Conner/6017

WMCO:R(RIFS):89-055

Date: May 10, 1989

Subject: STATUS UPDATE ON INVESTIGATION OF ELEVATED CONCENTRATIONS OF URANIUM  
IN OFFSITE SOILS

To : W. A. Weinreich

The enclosure provides an update of actions taken to date regarding the characterization of offsite surface soils which contain elevated concentrations of uranium. Changes to the status are identified with an asterisk. An updated status summary will be issued each Monday, Wednesday, and Friday over the next two week period.

Should you have any questions on any aspect of characterization or corrective actions, please contact me directly.



C. R. Conner, Manager  
RI/FS

CRC:dal

Enclosure

- c: L. C. Bogar
- M. B. Boswell
- S. L. Bradley
- D. J. Brettschneider
- W. H. Britton
- D. J. Carr
- L. Elikan
- P. E. Mohr

Central Files

**Elevated Concentrations of Uranium  
in Off-Site Surface Soils  
Status Report  
May 8, 1989**

**1. DOE Notification**

- o DOE (Ray Hansen) was notified verbally by C. R. Conner on 5/2/89.
- o A letter describing the findings and a fact sheet were transmitted to DOE on 5/3/89 (WMCO:R:89-034).

**2. Public Notification**

- o The property owner was notified of findings by M. B. Boswell on 5/3/89. The property owner agreed to allow FMPC access to the property for characterization.
- o A draft news release was prepared on 5/3/89 by Public Affairs. The news release was forwarded to DOE for approval.
- o The draft news release was revised on 5/8/89 to keep it current. The revised news release was forwarded to DOE.

**3. Characterization around Manholes**

- o ASI/IT were given notice to proceed on 5/3/89 by Jim Reafsnyder.
- o Confirmation analytical results for the original eight soil samples were obtained from the WMCO laboratories on 5/3/89. The results obtained were in good agreement with the original analytical results.
- \* Isotopic analysis on the collected samples was completed by the WMCO Laboratory on 5/8/89. This data indicates that all samples were within the depleted or normal range. (See Attachment 1)
- o ASI/IT mobilized on 5/4/89. Field measurements using SPA-3 and FIDLER probes were completed on 5/7/89.
- \* Preliminary survey data and maps showing collected field radiological measurements were transmitted to WMCO on 5/9/89. (See Attachment 2)
- \* Soil sampling activities have been delayed due to wet conditions at manhole 180. Sampling is anticipated to begin on 5/11/89. Sampling at manhole 180 will require four days to complete (Longer if rain delays are encountered).

- o Sampling around manholes 176 through 179 and at manhole 181 will be initiated following completion at manhole 180. It is anticipated that six days will be required to complete this effort.
- Analytical work on the samples will be performed through WMC0 laboratories. Ten percent of the samples will be split with IT Laboratories for quality assurance purposes. WMC0 laboratories can complete ten samples in eight hours. It is therefore estimated that sufficient data will be available to begin engineering of potential cleanup activities on 5/22/89.

#### 4. Cleanup Activities

- \* An initial meeting to arrange for engineering of potential cleanup activities was conducted on 5/9/89.
- \* Procedures for soil characterization, removal, transportation and certification were requested from Bechtel National. Bechtel National is prime contractor on the Formerly Utilized Sites Remedial Action Program. These procedures are anticipated to be received at the FMPC on 5/12/89.

#### 5. Determination of Root Cause

- \* An evaluation of the root cause is being conducted by Environmental Engineering. An initial assessment points to a lack of routine maintenance for the manholes and covers. The results of this evaluation will be available by 5/16/89.

#### 6. Corrective Actions

- o Based on the activities performed in Item 5, work orders are being prepared for repair of the manholes.
- o Interim corrective actions are being identified to insure that overflow of the manholes will not recur. The actions will be identified as part of the Item 5 report.



May 8, 1989

Department of Energy  
ATTN: Mary Stone  
P. O. Box 398704  
Cincinnati, OH 45239

**Subject: Preliminary Walkover Information for the Outfall Line**

Attached is a preliminary copy of the walkover data performed this past weekend in support of Task 9.24, Outfall Line Survey, for your information. This data includes field SPA-3 and Fidler results and soil sampling locations.

Soil sampling will commence as soon as weather conditions permit, the soil can not be saturated with rain water.

As of this time, ASI has not received the task order for this effort.

If you have any questions please contact Jeff Whitesides at 615-690-3211.

Sincerely,

Robert G. Conner  
Project Manager

CC: K. Eilerman  
~~R. Conner~~  
R. Galbraith  
J. Whitesides

## MANHOLE SURVEYS

MAY 9, 1989

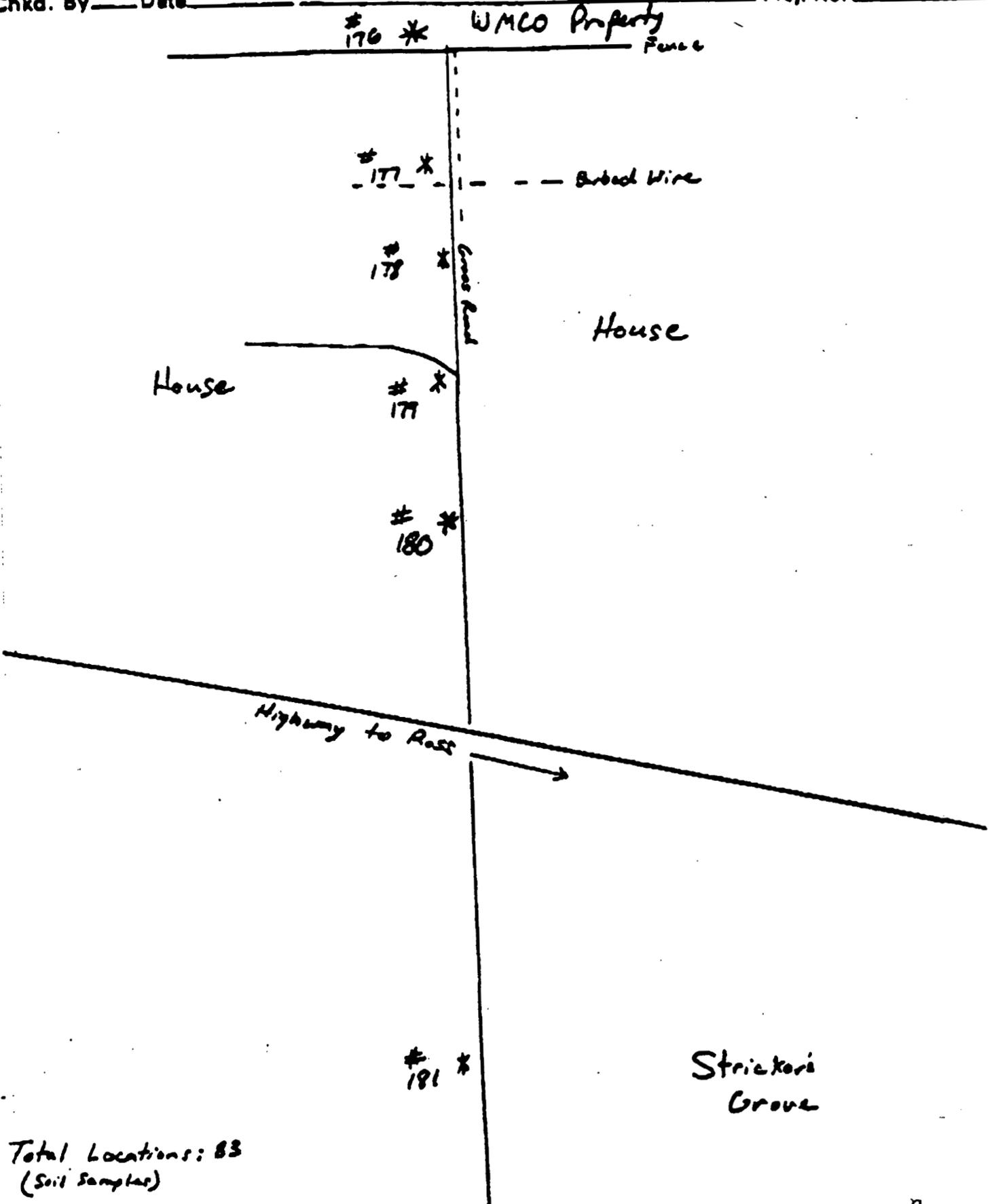
Area around manholes # 176, 177, 178, 179, 180 and 181 were surveyed. Each area was surveyed with a FIDLER and SPA-3 with the exception of manhole #178 which was surveyed with the SPA-3 only. Slightly elevated levels of radiation were detected around manholes # 177, 180, and 181. The areal extent of these elevated areas was no larger than a two foot radius around the manholes. The countrate at manholes # 178 and 177 will tend to be slightly higher because of ambient radiation from the FMPC (less natural shielding).

Wooden stakes were placed at each manhole to identify soil sample locations. Two sample locations at each manhole were designated for "background samples." These are assumed to be far enough from the manhole to not be affected by any wastewater overflow. Soil sampling at manhole #180 will be more extensive as to encompass the area of overflow. A total of 83 soil sample locations was determined.

**Contents:**

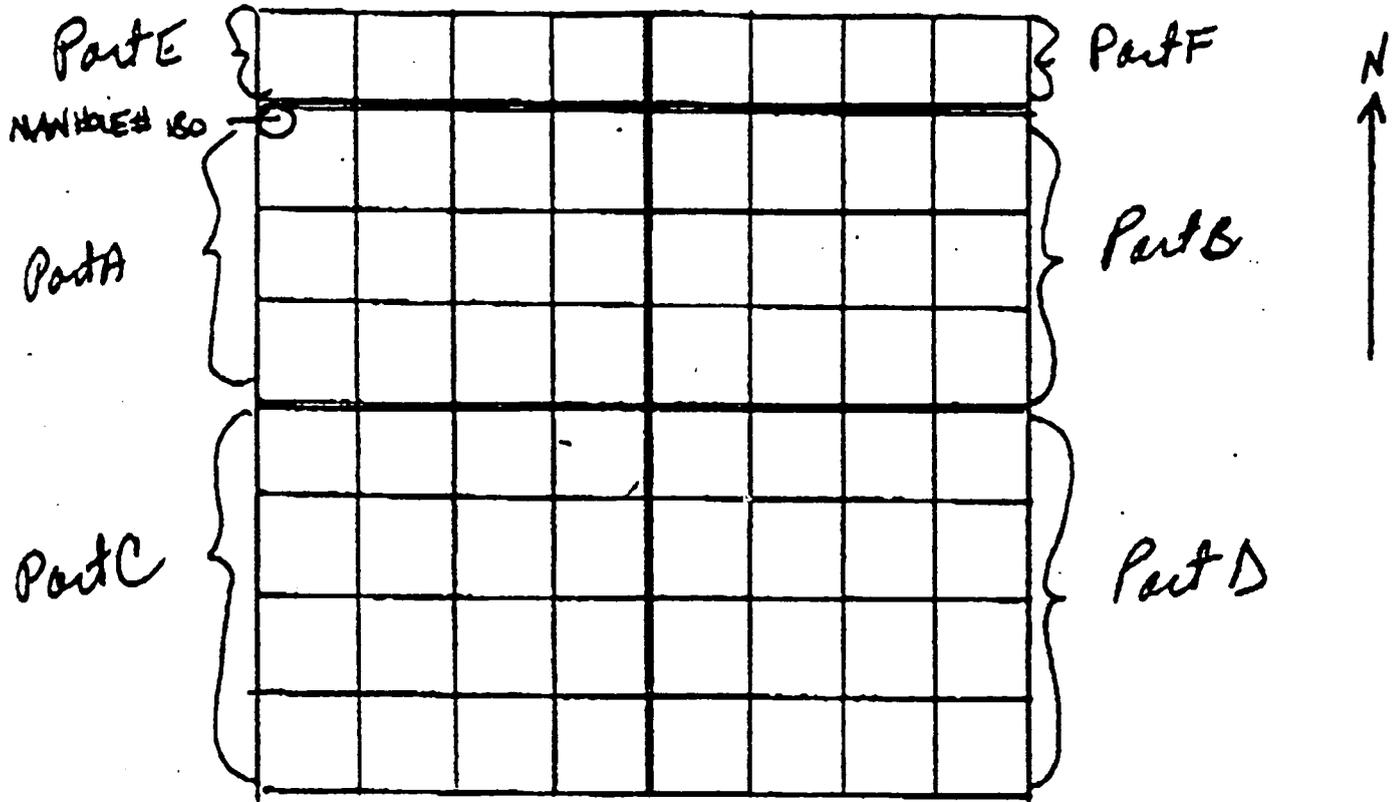
- A. Soil sample locations with respect to manholes.
- B. SPA-3 Walkover
- C. FIDLER Walkover (if applicable)

By JLW Date 5-7-89 Subject Mankula Locations Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Proj. No. \_\_\_\_\_

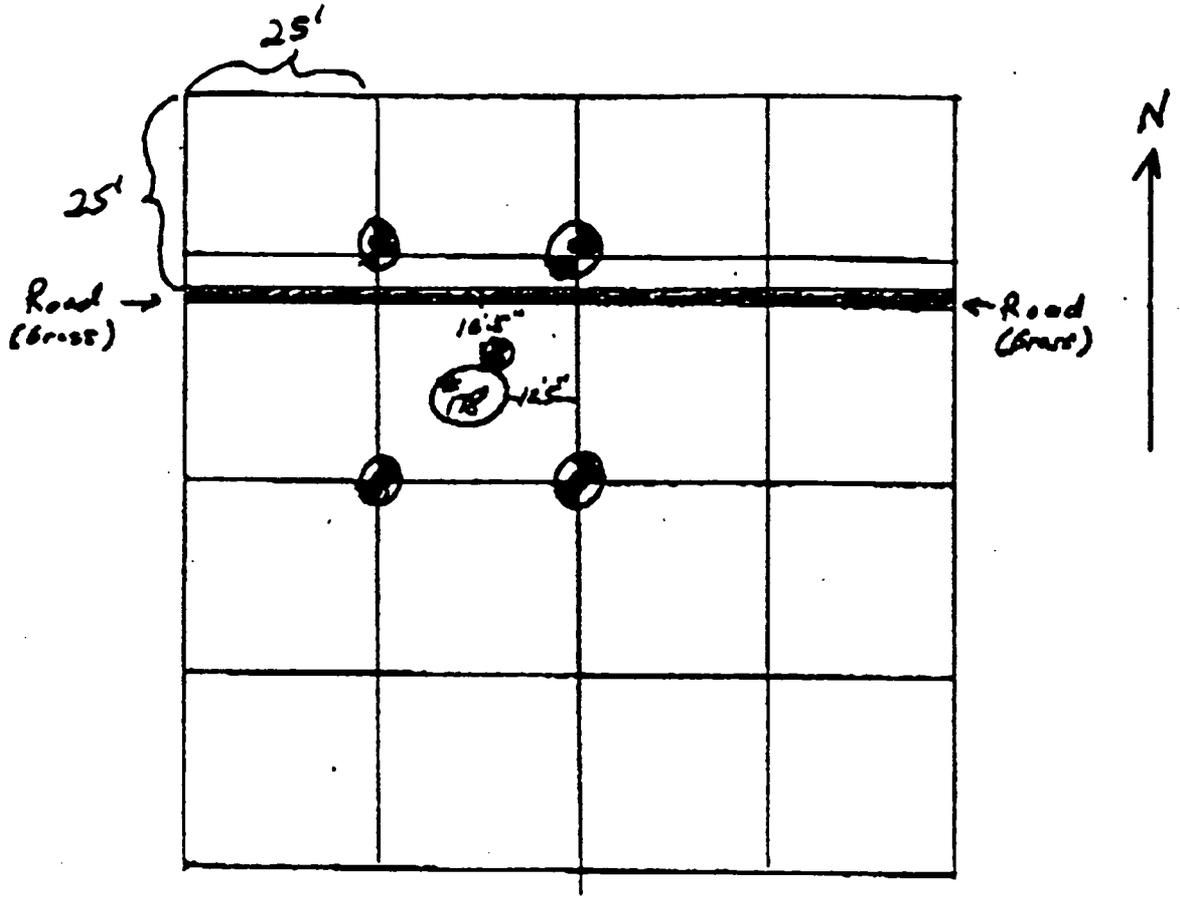


Total Locations: 83  
(Soil Samples)

By L.JJ Date 5-4-89 Subject Membala 180 Grid Location Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Description \_\_\_\_\_ Proj. No. 703317.09



By LJT Date 5-7-89 Subject Manhole #176 Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Soil Sample Locations Proj. No. 33317.09



○ - SAMPLE LOCATIONS  
5 TOTAL

FERNALD  
R/FB

Surface Measurements Field Logbook Form

DATE	0	5	0	7	8	9
TIME	1	6	2	0		
PAGE	OF					
PAGE						
CHKD. BY						

SITE: EMPG AREA: Manhole # 176

SURVEYORS: J. WHITESIDES

RECORDED BY: L. JYBOSKI

COUNT TIME: 2 MIN. BACKGROUND: 1.13 X 0.1 CPM

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_

		 1.78 X 0.1	



N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_

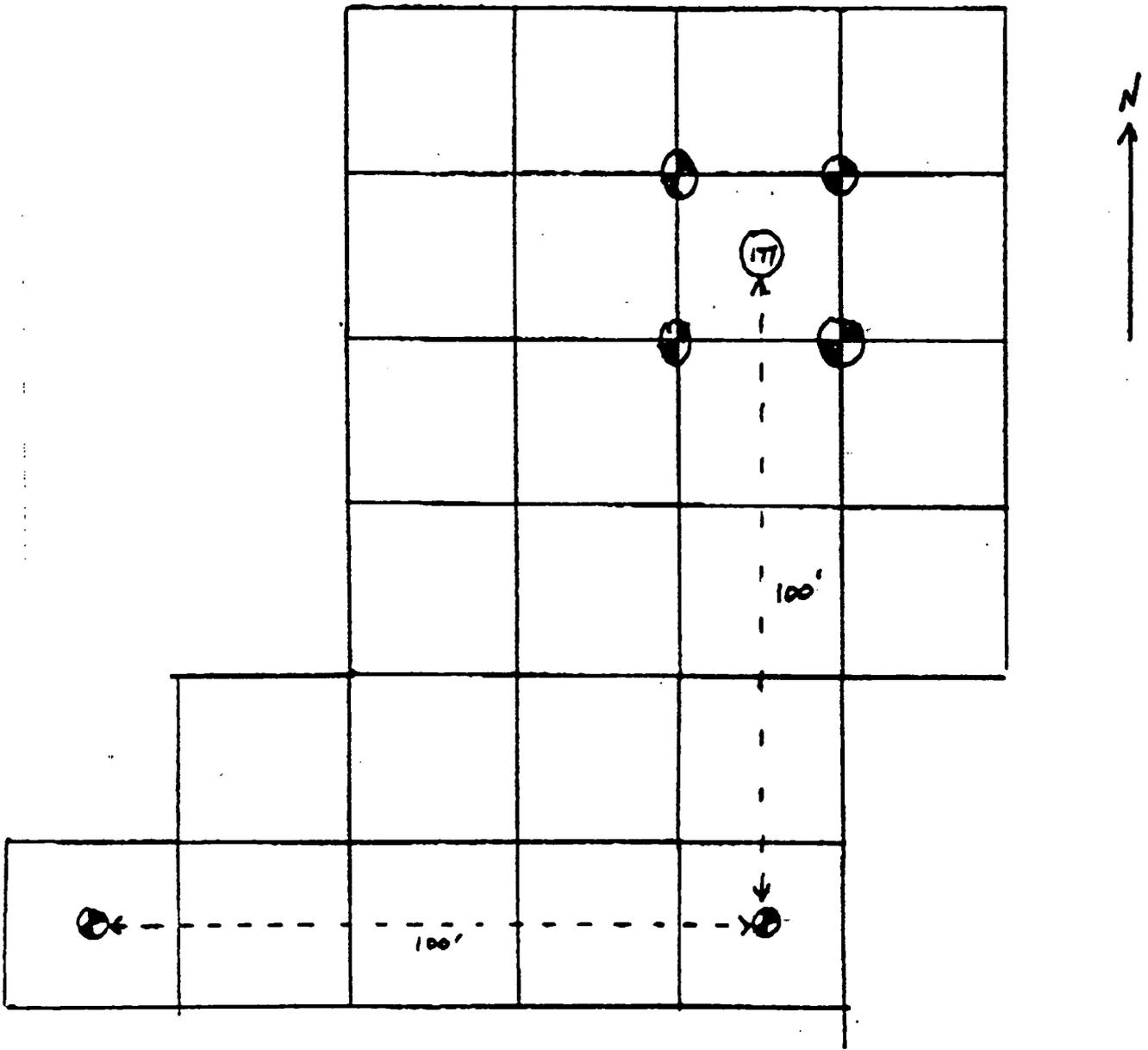
N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SPA3

SCALER MODEL ESP-1 SERIAL NO. 1794  
PROBE MODEL SPA-3 SERIAL NO. 20

By LJT Date 5-7-89 Subject Reshole # 177 Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Soil Sample Locations Proj. No. 313317.09.



⊙ - SAMPLE LOCATION  
6 TOTAL

**FERNALD  
R/F8**

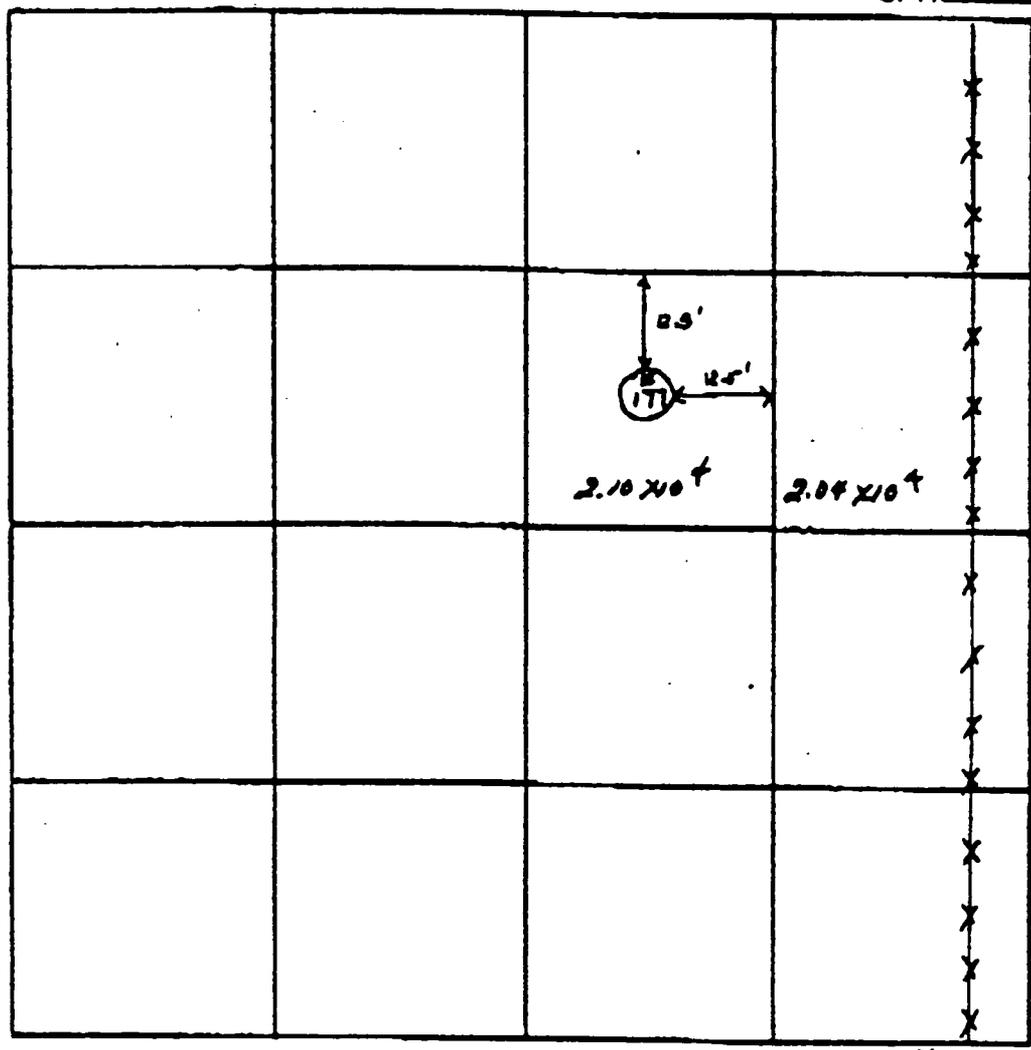
Surface Measurements Field Logbook Form

DATE	0	5	0	7	8	9
TIME	1	4	5	0		
PAGE	OF					
PAGE						
CHKD. BY						

SITE: EMPC AREA: Manhole 177  
 SURVEYORS: J. WHITESIDES  
 RECORDED BY: L. TRYBOSKI  
 COUNT TIME: (2 MIN) BACKGROUND: 1.13 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_



N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SCALER MODEL ESP-1 SERIAL NO. 1794  
 PROBE MODEL SPA-3 SERIAL NO. 20

SPA3

FERNALD  
R/FB

Surface Measurements Field Logbook Form

DATE	05	07	89
TIME	1	45	0
PAGE	OF		
PAGE			
CHKD. BY			

SITE: EMPC AREA: Manhole 177

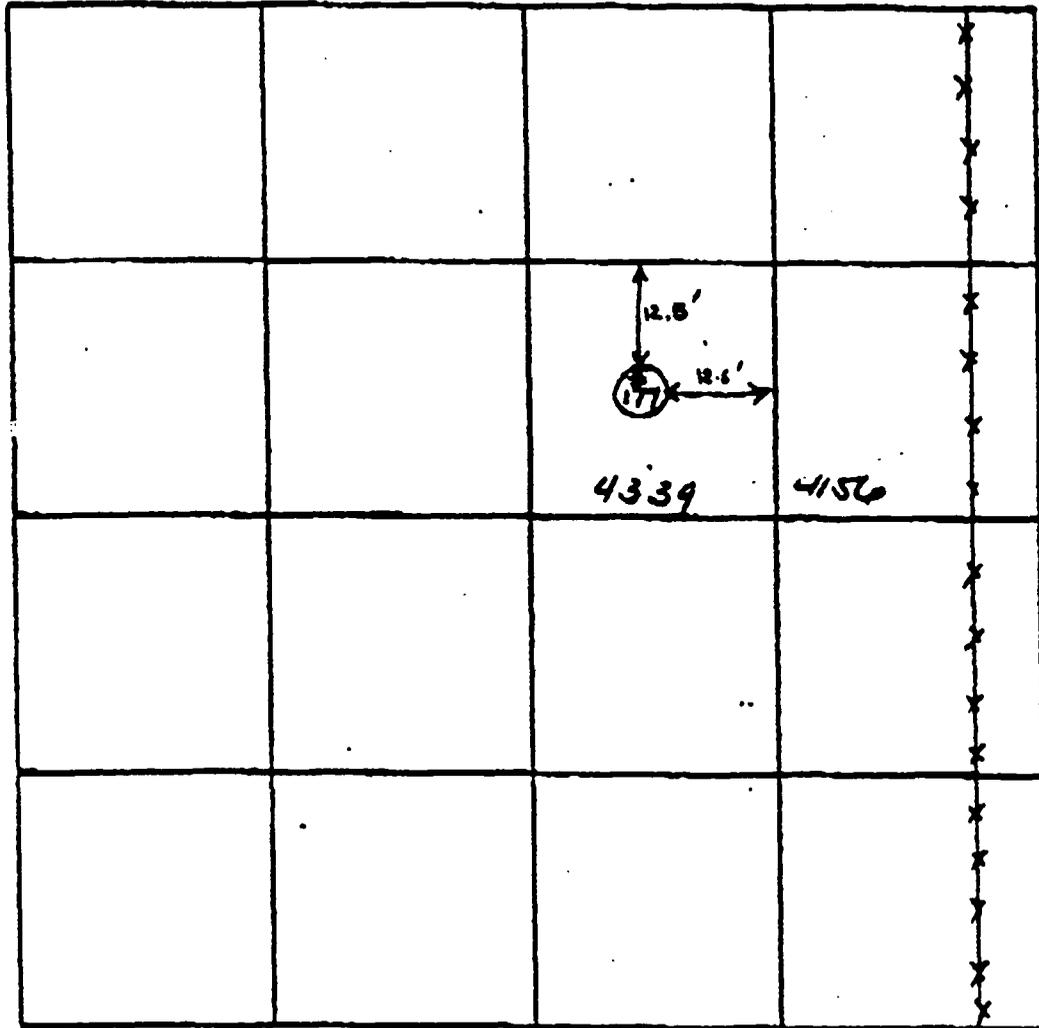
SURVEYORS: \_\_\_\_\_

RECORDED BY: \_\_\_\_\_

COUNT TIME: (3 MIN) BACKGROUND: 1033 CPM

N \_\_\_\_\_  
E \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_



N \_\_\_\_\_  
E \_\_\_\_\_

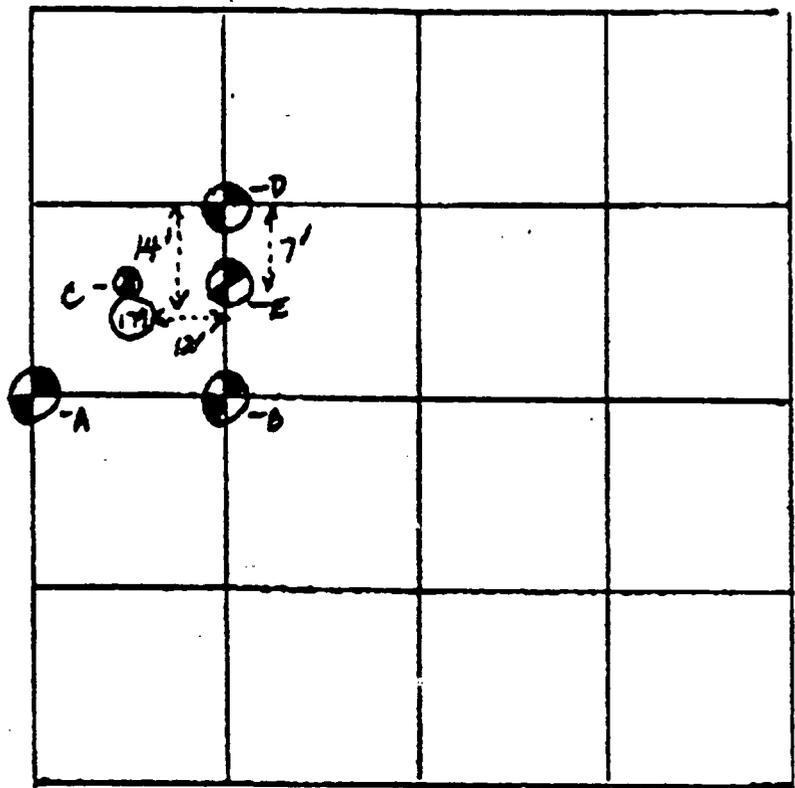
N \_\_\_\_\_  
E \_\_\_\_\_

COMMENTS: FIDLER integrated counts in a 25' x 25' grid in accordance with procedure RSL 2004.

\_\_\_\_\_

FIDLER SCALER MODEL 2220 SERIAL NO. 42138  
PROBE MODEL 65 SERIAL NO. A303K

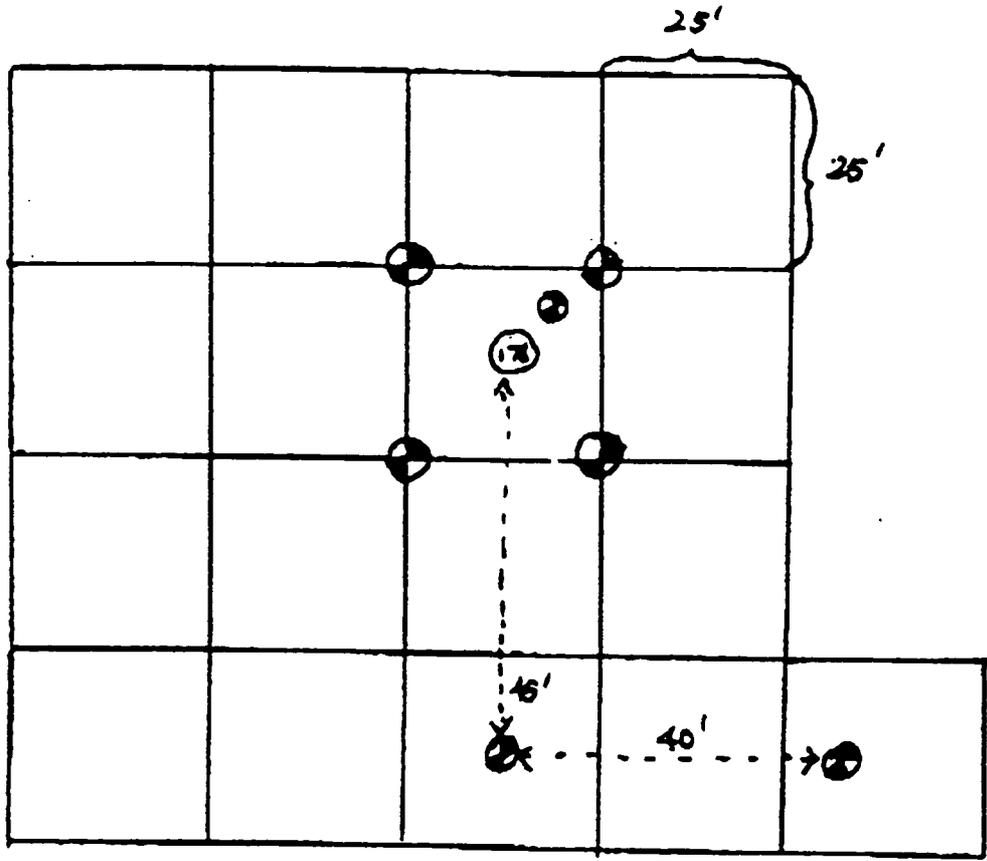
By LJT Date 5-7-89 Subject Menville #179 Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ oil sample locations Proj. No. 20337.09



⊙ - SAMPLE LOCATIONS 5 TOTAL

	<u>SURFACE RADIATION</u>	<u>MEASUREMENTS</u>
⊙-A	<u>STA-3 (1794/20)</u> 8.51 x 10 <sup>3</sup> CPM	<u>FIDLER (A3032/52131)</u> 964 CPM
⊙-B	9.55 x 10 <sup>3</sup> CPM	1040 CPM
⊙-C	8.47 x 10 <sup>3</sup> CPM	825 CPM
⊙-D	8.20 x 10 <sup>3</sup>	842 CPM
⊙-E	1.03 x 10 <sup>4</sup>	1040 CPM

By LJT Date 5-7-89 Subject Manhole 178 Sheet No.      of       
Chkd. By      Date      Soil Sample Locations Proj. No.     



⊙ - SAMPLE LOCATIONS  
7 TOTAL

FERNALD  
R/FS

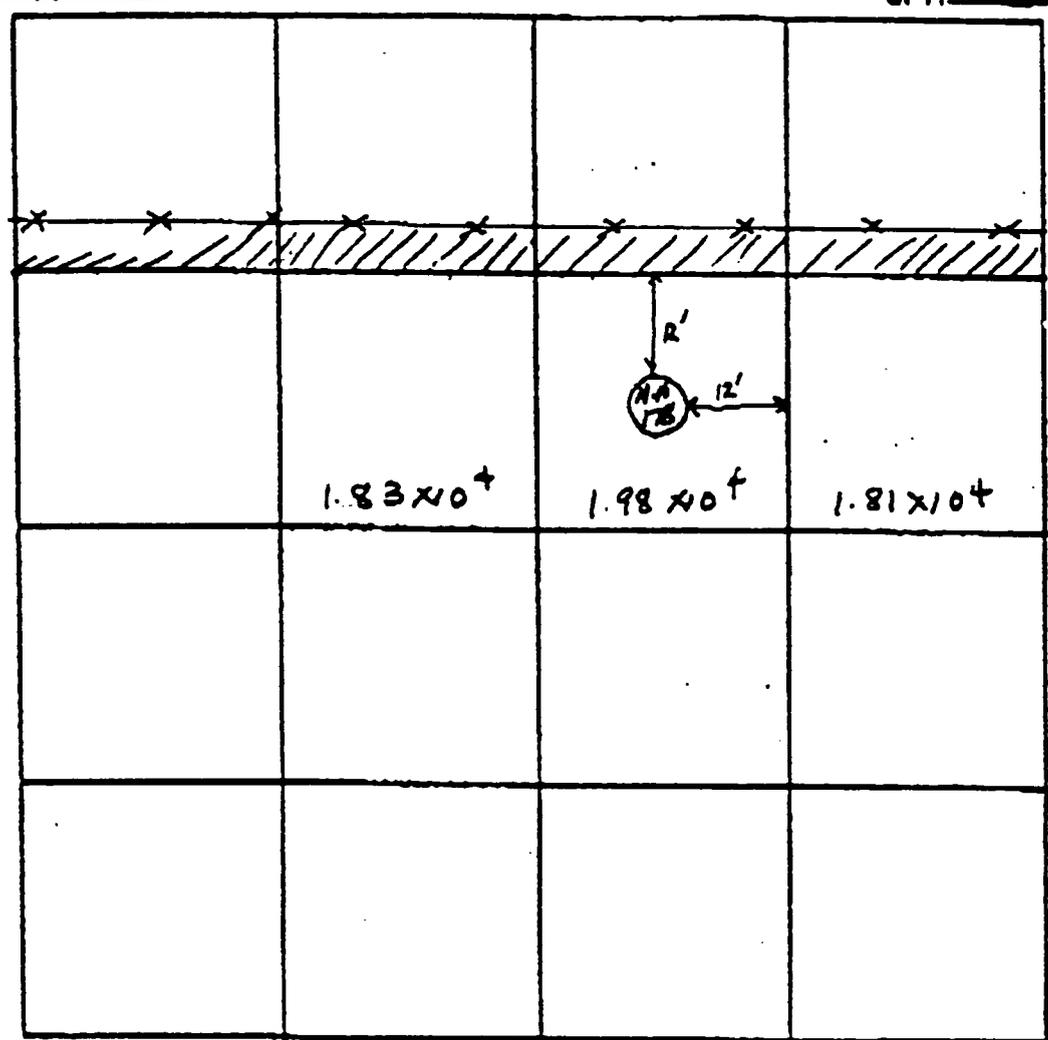
Surface Measurements Field Logbook Form

DATE	0	5	0	7	8	9
TIME	1	3	3	5		
PAGE	OF					
PAGE						
CHKD. BY						

SITE: FMPC AREA: Minkale 178  
 SURVEYORS: J. WHITESIDES  
 RECORDED BY: L. TRAY BOSKI  
 COUNT TIME: 2 MIN. BACKGROUND: 1.13 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 2.94 x 10<sup>3</sup>

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 8.34 x 10<sup>3</sup>



N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SCALER MODEL ESP-1 SERIAL NO. 1794  
 PROBE MODEL SPA-3 SERIAL NO. 20

SPAS

FERNALD  
R1/FS

Surface Measurements Field Logbook Form

DATE	0	5	0	7	8	9
TIME	1	3	2	5		
PAGE	OF					
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SITE: FMPC AREA: Manhole #178

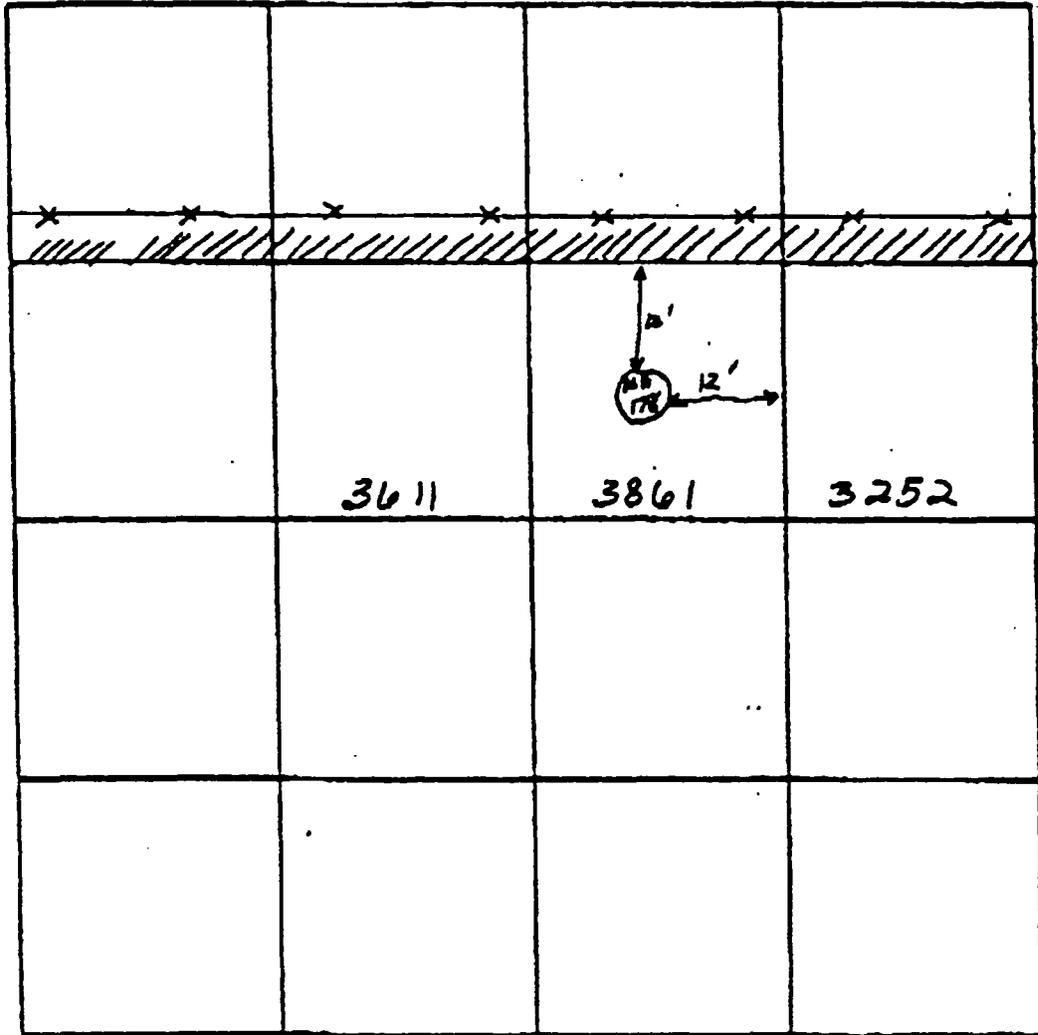
SURVEYORS: L. TRUBSKI

RECORDED BY: J. WHITESIDES

COUNT TIME: 3 MIN. BACKGROUND: 1033 CPM

N \_\_\_\_\_  
E \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_



N \_\_\_\_\_  
E \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_

COMMENTS: FIDLER integrated counts in a 25' x 25' grid in accordance with procedure RSL 2004.

FIDLER

SCALER MODEL 2220 SERIAL NO. 52838  
PROBE MODEL 65 SERIAL NO. A303K

**FERNALD  
R/FS**

Surface Measurements Field Logbook Form

DATE	0	5	0	7	8	9
TIME	0	9	3	0		
PAGE	OF					
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SITE: FMPC AREA: MANHOLE # 179

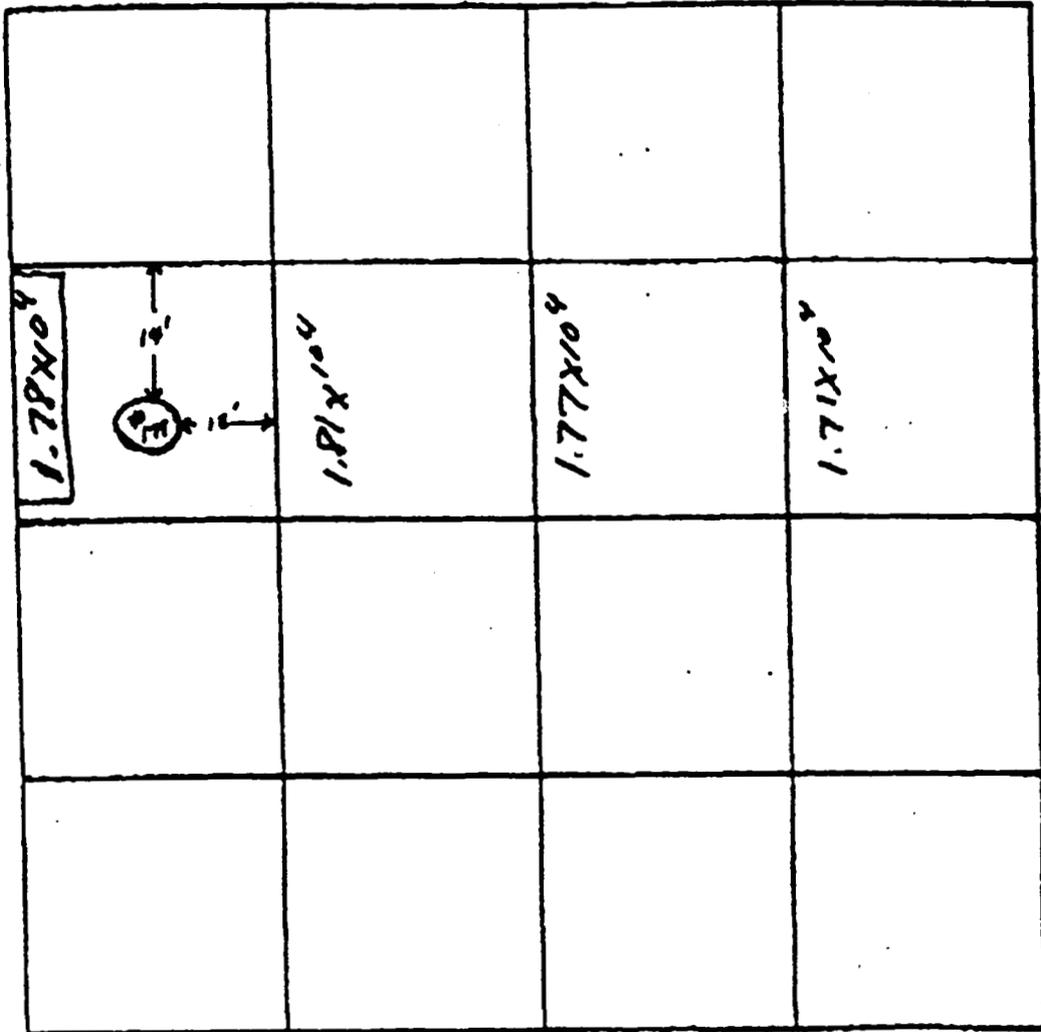
SURVEYORS: J. WHITESIDES, L. TRAYBORN

RECORDED BY: L. TRAYBORN, J. WHITESIDES

COUNT TIME: 2 MIN. BACKGROUND: 1.13 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 7.35 x 10<sup>3</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 7.37 x 10<sup>3</sup>



N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SCALER MODEL ESP-1 SERIAL NO. 1794  
PROBE MODEL SPA-3 SERIAL NO. 26

**FERNALD  
R/FS**

Surface Measurements Field Logbook Form

DATE	0
TIME	0
PAGE	
PAGE	
CHKD. BY	

SITE: FMPC AREA: Monkela # 179  
 SURVEYORS: L. Trubski, J. Whitesides  
 RECORDED BY: J. Whitesides, L. Trubski  
 COUNT TIME: (3 MIN) BACKGROUND: 1033

N \_\_\_\_\_  
 E \_\_\_\_\_

N \_\_\_\_\_  
 E \_\_\_\_\_

 3114	3255	2865	3012

N \_\_\_\_\_  
 E \_\_\_\_\_

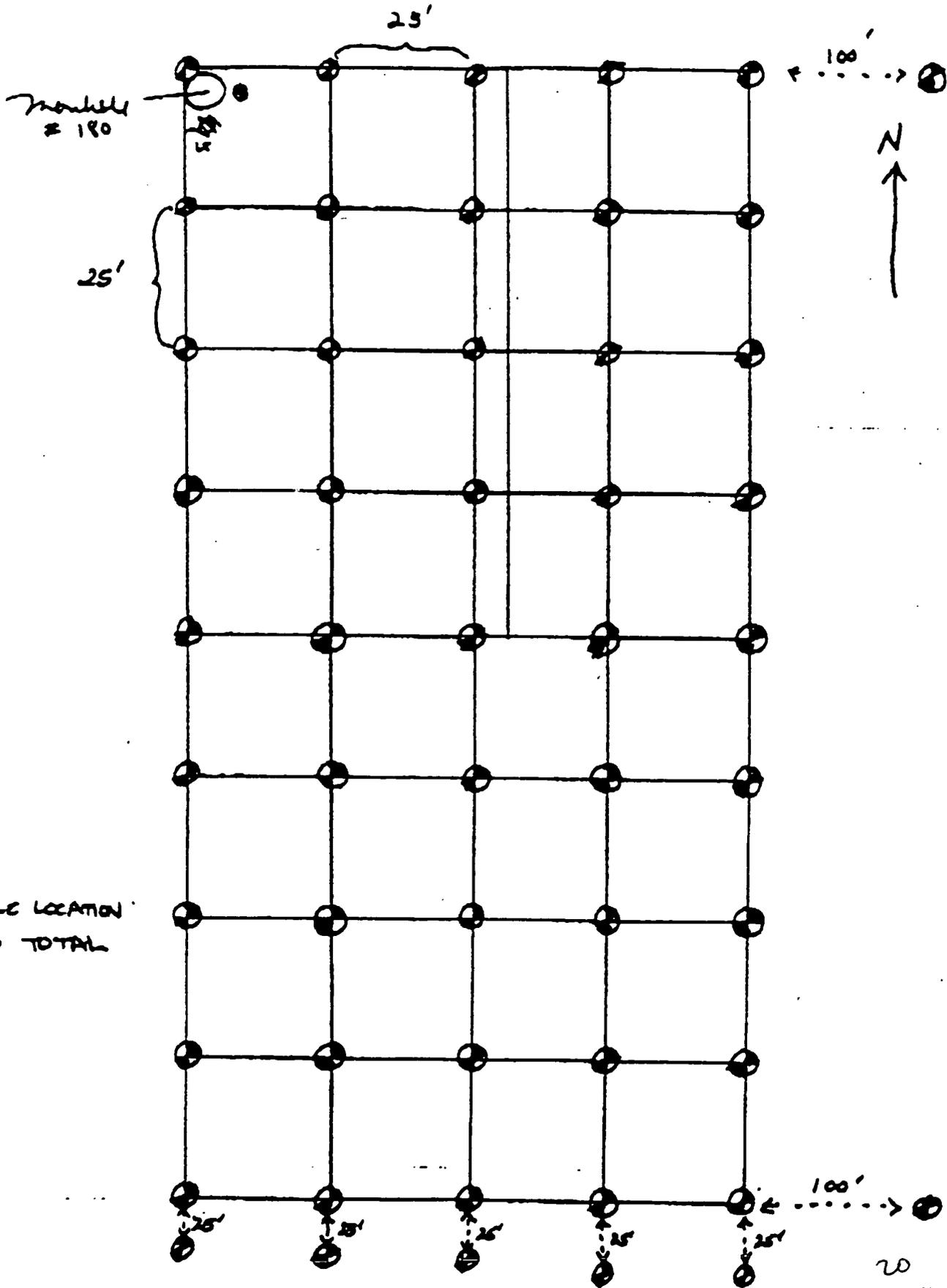
N \_\_\_\_\_  
 E \_\_\_\_\_

COMMENTS: FIDLER integrated counts in a 25' x 25' grid in accordance with procedure ASL 2004.

FIDLER

SCALER MODEL 2220 SERIAL NO. 52  
 PROBE MODEL 68 SERIAL NO. 42

By LJT Date 3-7-89 Subject Manhole 180 Sample Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Location Proj. No. 30337 09



⊙ - SAMPLE LOCATION  
53 TOTAL

FERNALD  
R/FS

Surface Measurements Field Logbook Form

DATE	0	5	0	4	8	9
TIME	1	6	0	0		
PAGE	OF					
PAGE						
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SITE: EMEC AREA: Trunkline 180 P&A

SURVEYORS: L. TRYBOSKI

RECORDED BY: L. TRYBOSKI, J. WHITESIDES

COUNT TIME: 2 MIN. BACKGROUND: 1.51 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 8.24 x 10<sup>3</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 1.53 x 10<sup>3</sup>

Trunkline 180 

1.55 x 10 <sup>4</sup>	1.27 x 10 <sup>4</sup>	1.33 x 10 <sup>4</sup>	1.44 x 10 <sup>4</sup>
1.93 x 10 <sup>4</sup>	1.01 x 10 <sup>4</sup>	1.49 x 10 <sup>4</sup>	1.01 x 10 <sup>4</sup>
1.65 x 10 <sup>4</sup>	1.82 x 10 <sup>4</sup>	1.94 x 10 <sup>4</sup>	2.15 x 10 <sup>4</sup>
2.04 x 10 <sup>4</sup>	2.07 x 10 <sup>4</sup>	2.19 x 10 <sup>4</sup>	2.29 x 10 <sup>4</sup>



N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 1.11 x 10<sup>4</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 1.12 x 10<sup>4</sup>

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SCALER MODEL ESP-1 SERIAL NO. 1794  
PROBE MODEL SPA-3 SERIAL NO. 20

SPAS

**FERNALD  
R/FS**

Surface Measurements Field Logbook Form

DATE	0	5	0	4	8	9
TIME	1	6	0	0		
PAGE	2F					
PAGE						
CHKD. BY						

SITE: FMPC AREA: Trunkline 180 Pnt B

SURVEYORS: J. WHITESIDES

RECORDED BY: L. TRIGOSKI J. WHITESIDES

COUNT TIME: 2 MIN. BACKGROUND: 1.42 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 7.93 x 10<sup>3</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 9.61 x 10<sup>3</sup>

<u>2.05 x 10<sup>4</sup></u>	<u>2.05 x 10<sup>4</sup></u>	<u>1.98 x 10<sup>4</sup></u>	<u>1.87 x 10<sup>4</sup></u>
<u>2.17 x 10<sup>4</sup></u>	<u>2.15 x 10<sup>4</sup></u>	<u>2.10 x 10<sup>4</sup></u>	<u>2.10 x 10<sup>4</sup></u>
<u>2.19 x 10<sup>4</sup></u>	<u>2.19 x 10<sup>4</sup></u>	<u>2.20 x 10<sup>4</sup></u>	<u>2.19 x 10<sup>4</sup></u>
<u>2.23 x 10<sup>4</sup></u>	<u>2.21 x 10<sup>4</sup></u>	<u>2.23 x 10<sup>4</sup></u>	<u>2.23 x 10<sup>4</sup></u>



N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 4.03 x 10<sup>4</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 1.04 x 10<sup>4</sup>

COMMENTS: SPA 9 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SCALER MODEL ESP-1 SERIAL NO. 1725  
PROBE MODEL SPA-3 SERIAL NO. 23

SPAS

**FERNALD  
R/FS**

Surface Measurements Field Logbook Form

DATE	0	5	0	5	1	9
TIME	1	0	3	0		
PAGE					OF	
PAGE						
CHKD. BY						

SITE: FMPC AREA: Trunkhole 180 PktC  
 SURVEYORS: J. WHITESIDES, L. TRV BOSKI  
 RECORDED BY: L. TRV BOSKI  
 COUNT TIME: 2 MIN. BACKGROUND: 1.15 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 9.70 x 10<sup>3</sup>

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 1.04 x 10<sup>4</sup>

<u>2.18 x 10<sup>4</sup></u>	<u>2.20 x 10<sup>4</sup></u>	<u>2.22 x 10<sup>4</sup></u>	<u>2.27 x 10<sup>4</sup></u>
<u>2.18 x 10<sup>4</sup></u>	<u>2.29 x 10<sup>4</sup></u>	<u>2.31 x 10<sup>4</sup></u>	<u>2.31 x 10<sup>4</sup></u>
<u>2.16 x 10<sup>4</sup></u>	<u>2.28 x 10<sup>4</sup></u>	<u>2.28 x 10<sup>4</sup></u>	<u>2.26 x 10<sup>4</sup></u>
<u>2.26 x 10<sup>4</sup></u>	<u>2.36 x 10<sup>4</sup></u>	<u>2.32 x 10<sup>4</sup></u>	<u>2.28 x 10<sup>4</sup></u>



N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 1.07 x 10<sup>4</sup>

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 1.11 x 10<sup>4</sup>

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SCALER MODEL ESP-1 SERIAL NO. 1794  
 PROBE MODEL SPA-9 SERIAL NO. 20

SPAS

**FERNALD  
R/FB**

Surface Measurements Field Logbook Form

DATE	0	5	0	5	8	9
TIME	1	0	3	0		
PAGE	OF					
PAGE						
CHKD. BY						

SITE: FMPC AREA: Manhale, 180 Part b

SURVEYORS: J. WHITEHEAD, G. TRUBSKI

RECORDED BY: J. TRUBSKI

COUNT TIME: 2 MIN. BACKGROUND: 1.13 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 1.13 x 10<sup>4</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 1.02 x 10<sup>4</sup>

<u>2.22 x 10<sup>4</sup></u>	<u>2.18 x 10<sup>4</sup></u>	<u>2.20 x 10<sup>4</sup></u>	<u>2.18 x 10<sup>4</sup></u>
<u>2.23 x 10<sup>4</sup></u>	<u>2.22 x 10<sup>4</sup></u>	<u>2.21 x 10<sup>4</sup></u>	<u>2.19 x 10<sup>4</sup></u>
<u>2.23 x 10<sup>4</sup></u>	<u>2.23 x 10<sup>4</sup></u>	<u>2.24 x 10<sup>4</sup></u>	<u>2.17 x 10<sup>4</sup></u>
<u>2.22 x 10<sup>4</sup></u>	<u>2.23 x 10<sup>4</sup></u>	<u>2.23 x 10<sup>4</sup></u>	<u>2.20 x 10<sup>4</sup></u>



N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 1.10 x 10<sup>4</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 1.11 x 10<sup>4</sup>

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SPAS

SCALER MODEL ESP-1 SERIAL NO. 1795  
PROBE MODEL SPA-3 SERIAL NO. 23

FERNALD  
R/F8

Surface Measurements Field Logbook Form

DATE	0	5	0	4	8	9
TIME	1	7	5	0		
PAGE	OF					
PAGE						
CHKD. BY						

SITE: EMPC AREA: Manhole 180 Part E

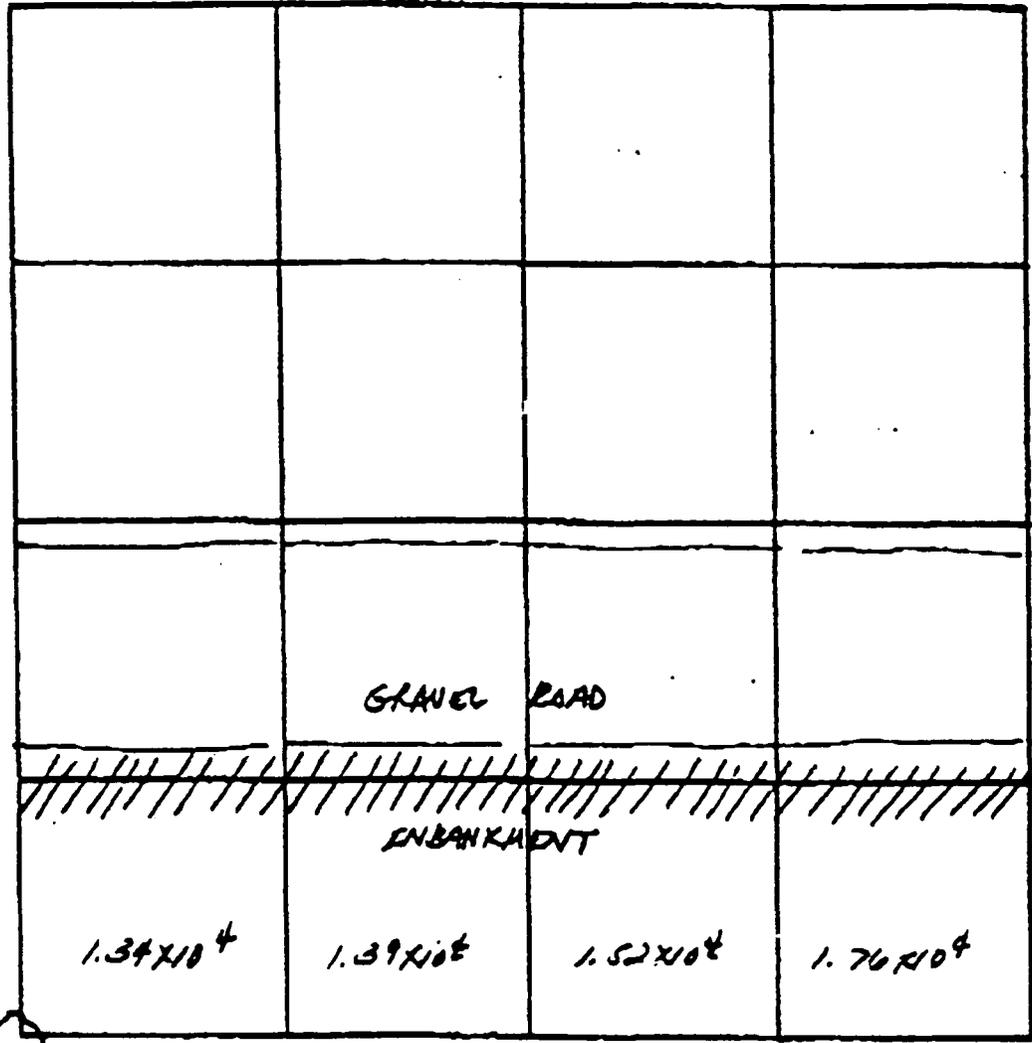
SURVEYORS: L. TRUBSKI

RECORDED BY: L. TRUBSKI

COUNT TIME: 2 MIN. BACKGROUND: 1.51x10<sup>4</sup> CPM

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_



Manhole  
# 180 →

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 8.24 x 10<sup>3</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 8.52 x 10<sup>3</sup>

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SCALER MODEL ESP-1 SERIAL NO. 1794  
PROBE MODEL SPA-3 SERIAL NO. 30

SPAS

**FERNALD  
RI/FS**

Surface Measurements Field Logbook Form

DATE	0	5	0	4	8	9
TIME	1	7	5	0		
PAGE	OF					
PAGE						
CHKD. BY						

SITE: FMPC AREA: Tranahale 180 Part 1

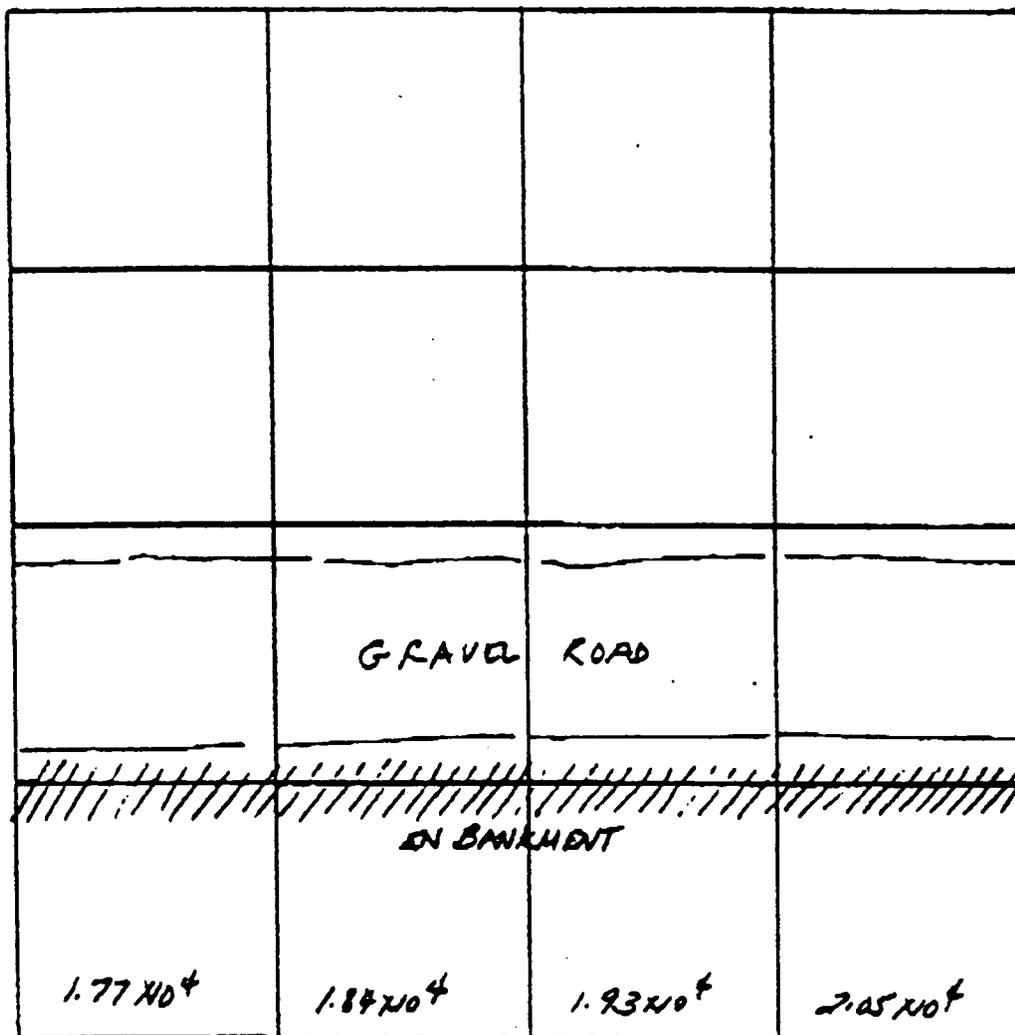
SURVEYORS: J. WHOLES

RECORDED BY: L. TRYBOSKI

COUNT TIME: 2 MIN. BACKGROUND: 1.42 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM \_\_\_\_\_



N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 2.92 x 10<sup>3</sup>

N \_\_\_\_\_  
E \_\_\_\_\_  
CPM 9.61 x 10<sup>3</sup>

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SPA3

SCALER MODEL ESP-1 SERIAL NO. 1795  
PROBE MODEL SPA-3 SERIAL NO. 23

FERNALD  
R/VFS

Surface Measurements Field Logbook Form

DATE	0	5	0	6	8	9
TIME	1	2	3	5		
PAGE	OF					
PAGE						
CHKD. BY						

SITE: FMPC AREA: Manhole 120 Part C

SURVEYORS: J. WHITESIDES, L. TRUBSKI

RECORDED BY: LAURA TRUBSKI, J. WHITESIDES

COUNT TIME: 3 MIN. BACKGROUND: FIELD 1070 CPM

N \_\_\_\_\_  
E \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_

4011	3857 4326	4053	3977
3841	4082	3963	3952
3799	4078 4154	3932	3994
3804	4022	3890	3972



N \_\_\_\_\_  
E \_\_\_\_\_

N \_\_\_\_\_  
E \_\_\_\_\_

COMMENTS: FIDLER integrated counts in a 25' x 25' grid in accordance with procedure RSL 2004.

FIDLER

SCALER MODEL 2220 SERIAL NO. 52839  
PROBE MODEL 65 SERIAL NO. A302K

FERNALD  
R/FS

Surface Measurements Field Logbook Form

DATE	0	5	0	6	8	9
TIME	0	9	3	0		
PAGE	OF					
PAGE						
CHKD. BY						

SITE: EMPC AREA: Manhasset Pt Sta

SURVEYORS: J. WHITESIDES

RECORDED BY: L. TRUBOSKI

COUNT TIME: 3 MIN. BACKGROUND: 579 LT 1070 CPM

N \_\_\_\_\_

N \_\_\_\_\_

E \_\_\_\_\_

E \_\_\_\_\_

Manhasset  
180

3218	2290	2062	3128
2961	2715	3123	3557
3247	3272	3743	3487 3377
3640	3740	3761	3800 3772



N \_\_\_\_\_

N \_\_\_\_\_

E \_\_\_\_\_

E \_\_\_\_\_

COMMENTS: FIDLER integrated counts in a 25' x 25' grid in accordance with procedure RSL 2004.

FIDLER

SCALER MODEL 2220

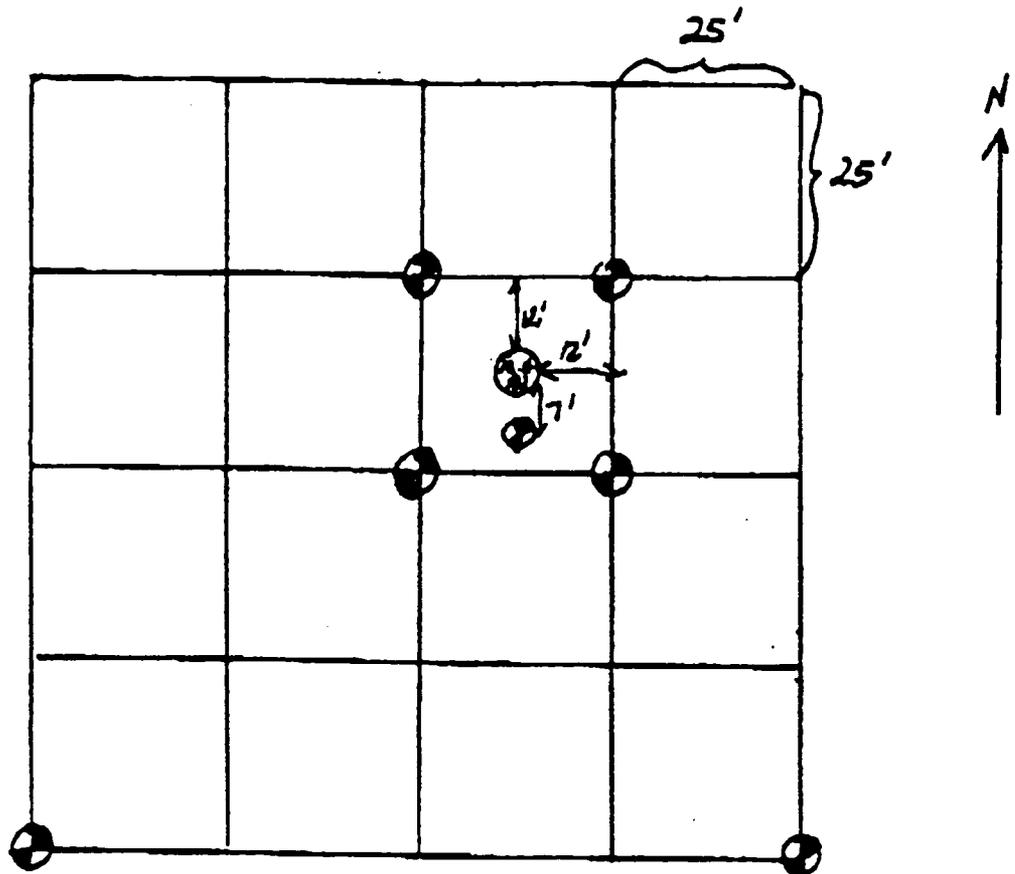
SERIAL NO. ~~52138~~ 52138

PROBE MODEL 65

SERIAL NO. A 2032



By LJT Date 5-7-89 Subject Muswell 181 Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Soil Sample Locations Proj. No. 33317.09



⊙ - SAMPLE LOCATIONS  
7 TOTAL

FERNALD  
R/FS

Surface Measurements Field Logbook Form

DATE	050589
TIME	0800
PAGE	OF
PAGE	
CHKD. BY	

SITE: FMPC AREA: Manhole #181  
 SURVEYORS: L. Trubski, J. Whitesides  
 RECORDED BY: J. Whitesides, L. Trubski  
 COUNT TIME: 2 MIN. BACKGROUND: 1.15 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 7.34 x 10<sup>3</sup>

N \_\_\_\_\_  
 E \_\_\_\_\_  
 at 1 meter CPM 10.87 x 10<sup>3</sup>

at 1 meter

Gravel Road 1.42 x 10 <sup>4</sup>	1.36 x 10 <sup>4</sup>	1.40 x 10 <sup>4</sup>	1.33 x 10 <sup>4</sup>
1.62 x 10 <sup>4</sup>	1.73 x 10 <sup>4</sup>	MANHOLE #181 1.91 x 10 <sup>4</sup>	1.72 x 10 <sup>4</sup>
1.73 x 10 <sup>4</sup> <del>1.72</del> LT	1.70 x 10 <sup>4</sup>	1.73 x 10 <sup>4</sup>	1.72 x 10 <sup>4</sup>
1.70 x 10 <sup>4</sup>	1.69 x 10 <sup>4</sup>	1.69 x 10 <sup>4</sup>	1.69 x 10 <sup>4</sup>



N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 7.93 x 10<sup>3</sup>  
 at 1 meter

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM 2.91 x 10<sup>3</sup>  
 at 1 meter

COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

SPAS

SCALER MODEL ESP-1 SERIAL NO. 1714  
 PROBE MODEL SPA-3 SERIAL NO. 20

FERNALD  
R/FS

Surface Measurements Field Logbook Form

DATE	050589
TIME	0800
PAGE	OF
PAGE	
CHKD. BY	

SITE: FMPC AREA: Manhole #181  
 SURVEYORS: L. Trybucki, J. Whitesides  
 RECORDED BY: J. Whitesides, L. Trybucki  
 COUNT TIME: 2 MIN. BACKGROUND: 1.15 x 10<sup>4</sup> CPM

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_

N \_\_\_\_\_  
 E \_\_\_\_\_  
 at 1 meter CPM \_\_\_\_\_

at 1 meter

Gravel Road 1.42 x 10 <sup>4</sup>	1.36 x 10 <sup>4</sup>	1.40 x 10 <sup>4</sup>	1.33 x 10 <sup>4</sup>
1.68 x 10 <sup>4</sup>	1.73 x 10 <sup>4</sup>	MANHOLE #181 1.91 x 10 <sup>4</sup>	1.72 x 10 <sup>4</sup>
1.73 x 10 <sup>4</sup> 1.72 LT	1.70 x 10 <sup>4</sup>	1.73 x 10 <sup>4</sup>	1.72 x 10 <sup>4</sup>
1.70 x 10 <sup>4</sup>	1.68 x 10 <sup>4</sup>	1.69 x 10 <sup>4</sup>	1.69 x 10 <sup>4</sup>

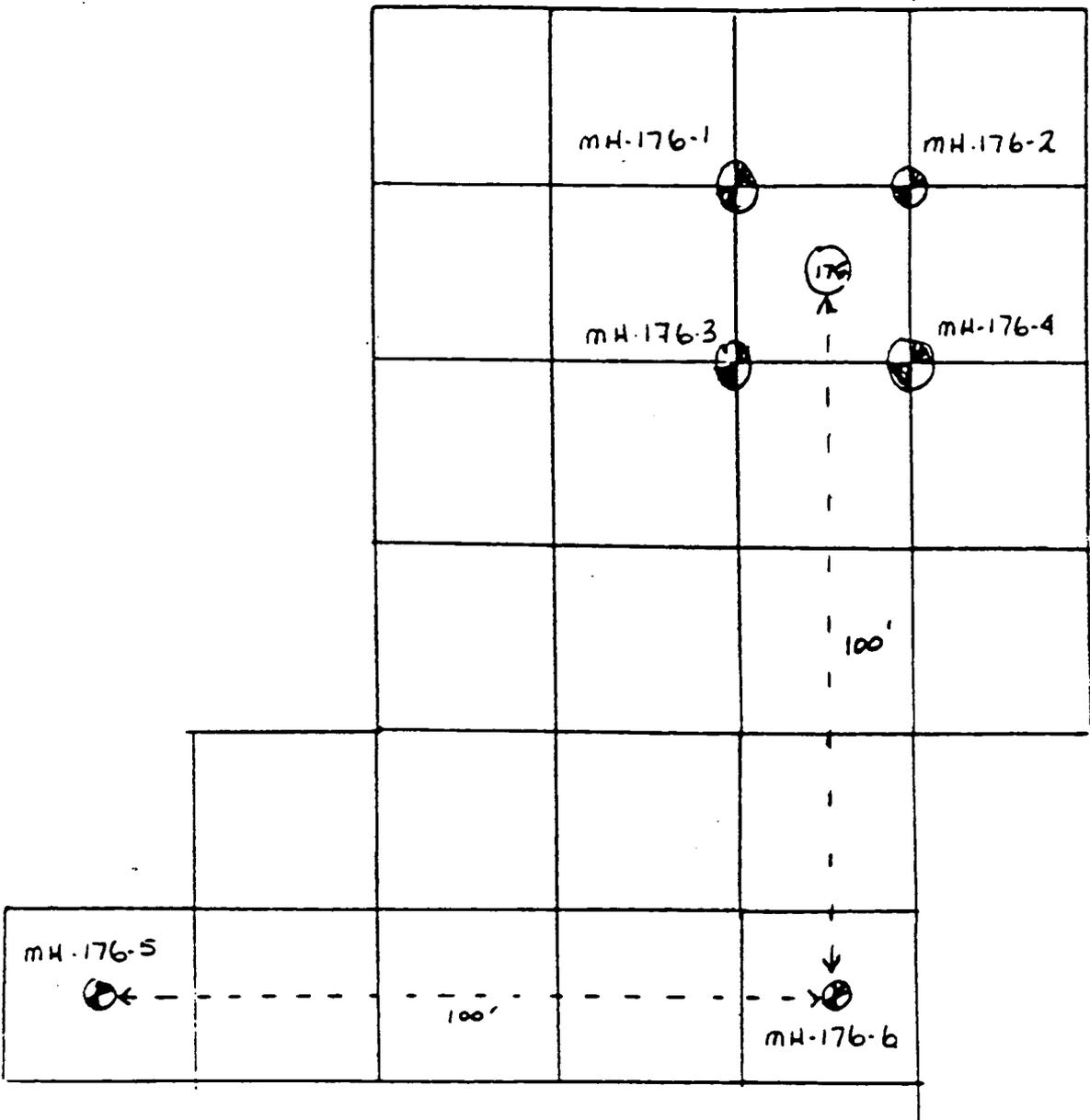


N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_  
 at 1 meter

N \_\_\_\_\_  
 E \_\_\_\_\_  
 CPM \_\_\_\_\_  
 at 1 meter

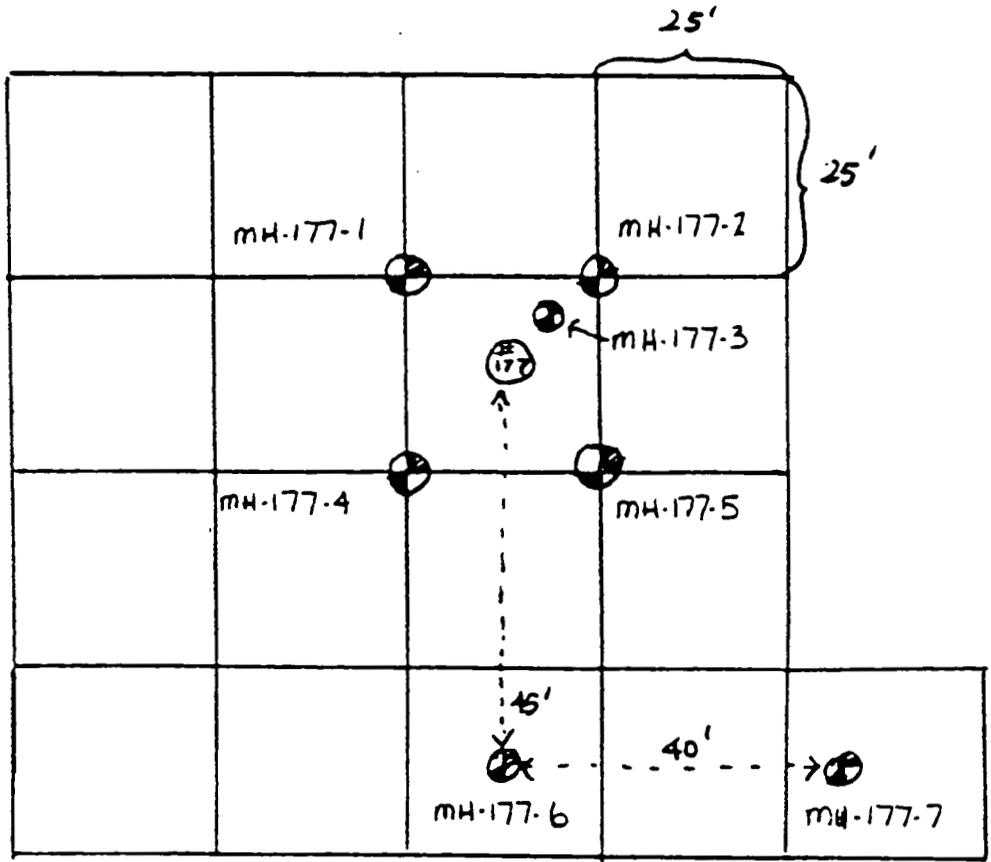
COMMENTS: SPA 3 25' x 25' grids integrated counts in accordance with procedure RSL 2003 Rev. 1

By LJT Date 5-7-89 Subject Remhole # 176 Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Soil Sample Locations Proj. No. 303317.09



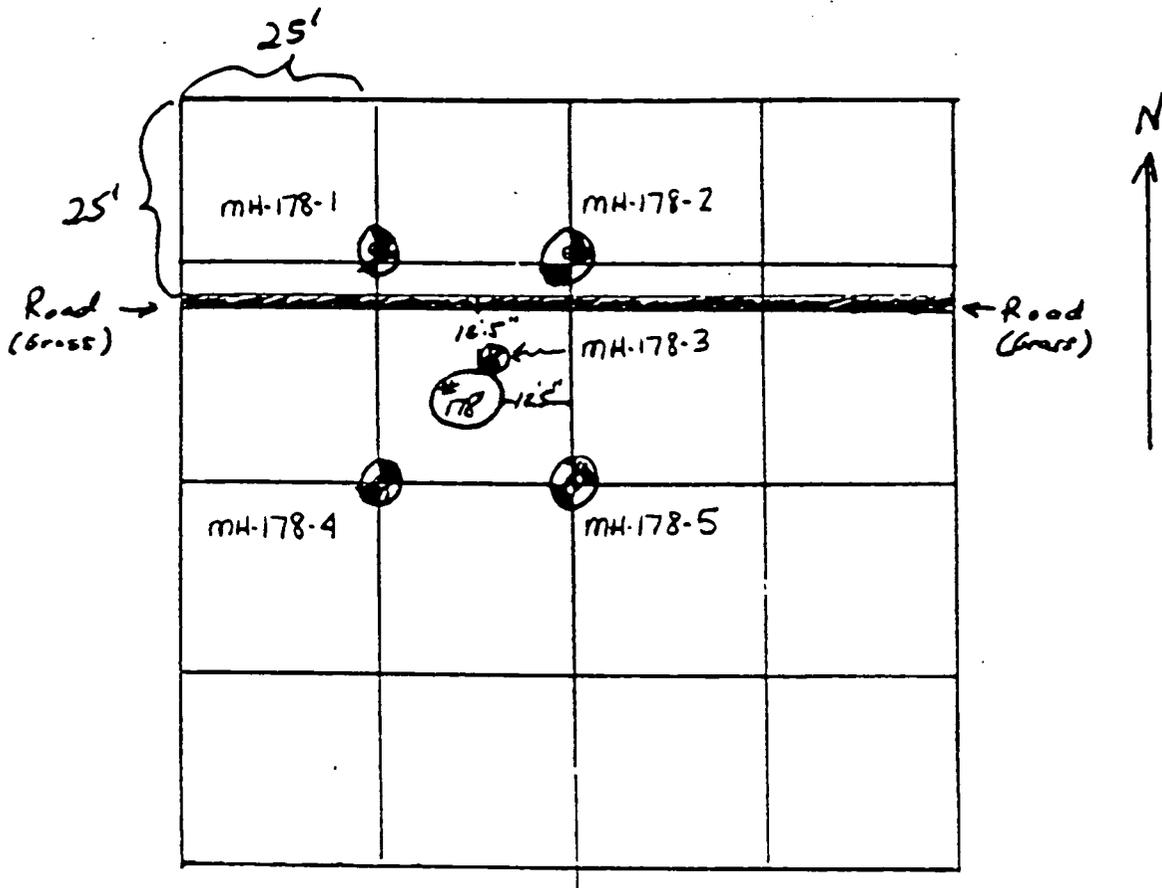
⊙ - SAMPLE LOCATION  
6 TOTAL

By JT Date 5-7-89 Subject Manhole 177 Sheet No.      of       
Chkd. By      Date      Soil Sample Locations Proj. No.     



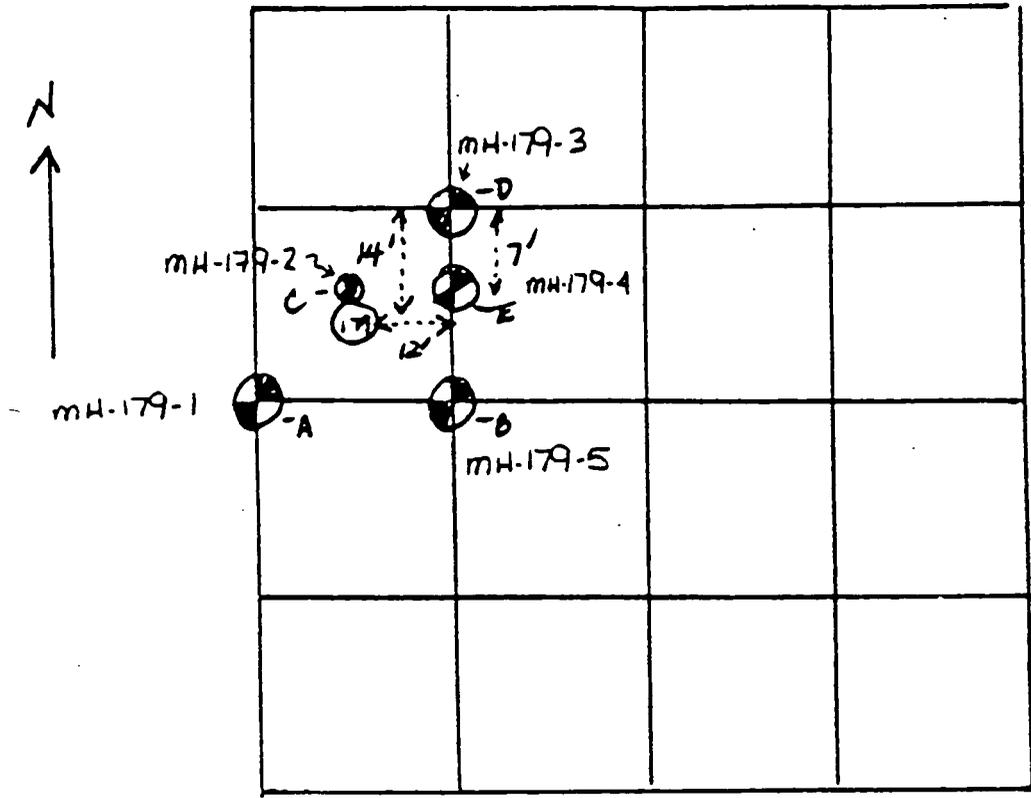
 - SAMPLE LOCATIONS  
7 TOTAL

By LJT Date 5-7-89 Subject Manhole #178 Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Soil Sample Locations Proj. No. 303317.09



⊗ - SAMPLE LOCATIONS  
5 TOTAL

By LJT Date 5-7-89 Subject Mandrel #179 Sheet No. 1 of 1  
 Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Soil Sample Locations Proj. No. 303317.09.

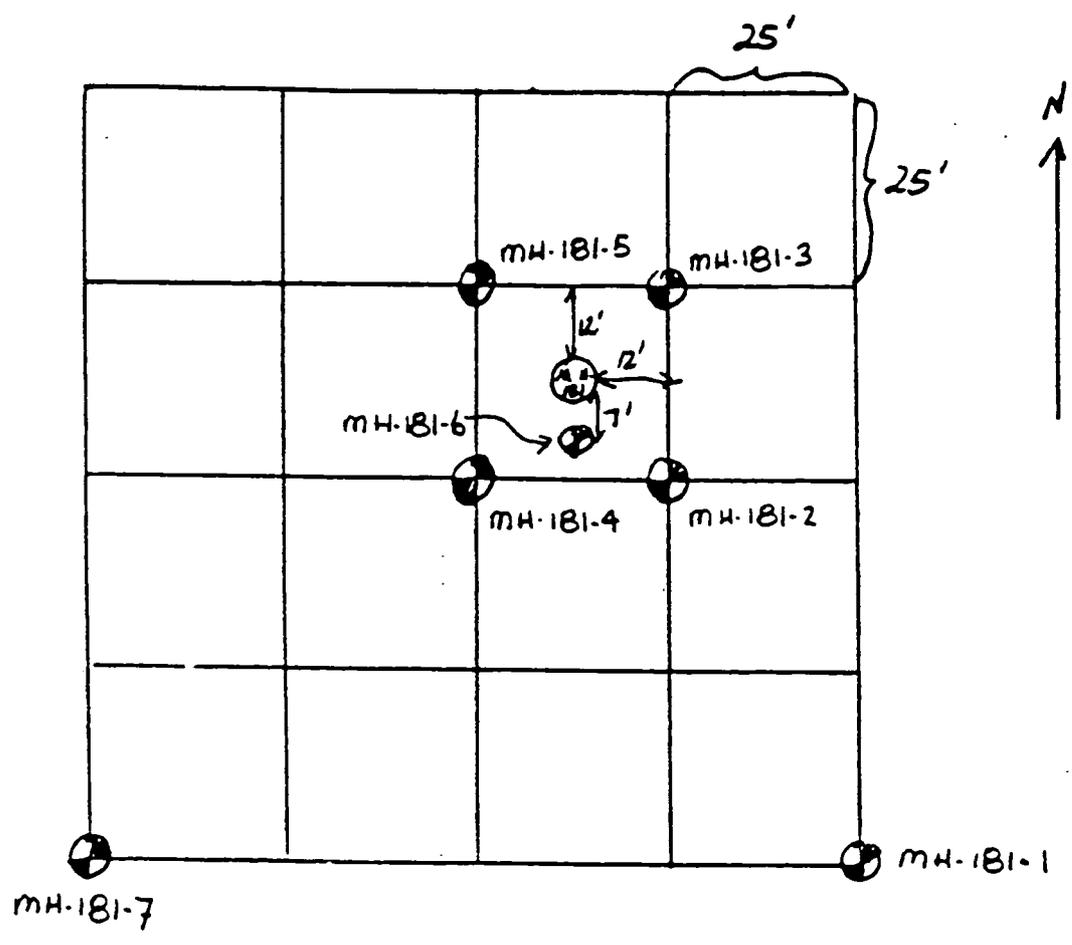


⊙ - SAMPLE LOCATIONS 5 TOTAL

	<u>SURFACE RADIATION MEASUREMENTS</u>	<u>FLUOR (A303K/52838)</u>
⊙-A	<u>SPA-3 (1794/20)</u> 8.51 x 10 <sup>3</sup> CPM	964 CPM
⊙-B	9.55 x 10 <sup>3</sup> CPM	1040 CPM
⊙-C	8.47 x 10 <sup>3</sup> CPM	825 CPM
⊙-D	8.20 x 10 <sup>3</sup>	842 CPM
⊙-E	1.03 x 10 <sup>4</sup>	1040 CPM



By LJT Date 5-7-89 Subject Moshell 181 Sheet No. 1 of 1  
Chkd. By \_\_\_\_\_ Date \_\_\_\_\_ Soil Sample Locations Proj. No. 303317.09.



 - SAMPLE LOCATIONS  
7 TOTAL