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REMOVAL SITE EVALUATION ANNUAL FIXED FIRE PUMP TEST APRIL 1991

04/01/91

DOE-FMPC/WMCO
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REPORT

REMOVAL SITE EVALUATION

ANNUAL FIXED FIRE PUMP TEST

Feed Materials Production Center

U. S. Department of Energy

April 1991

REMOVAL SITE EVALUATION

ANNUAL FIXED FIRE PUMP TEST

Introduction

In order to meet the requirements of DOE Order 5480.7 "Fire Protection"; the fixed fire pumps must be tested at least annually. In the past these tests have been conducted with the water discharged to the field west of the facility. Due to environmental compliance concerns, this practice is not acceptable and the testing methods need to be amended. To facilitate the new test requirements, WMCO Fire Protection Engineering has designed a new test rack which will permit the water from the fire pump test to be safely discharged and collected using the existing storm water system at the FMPC.

The new test rack securing the discharge hoses will be positioned near the west truck scales (See Attachment I). Prior to the test, the storm water collection system will be diverted to the storm water retention basins to collect all discharge. To complete the warm-up cycle for each pump unit, the water pumped during this warm-up cycle will be returned to the ground storage tank. During the flow test, the discharge of water will be directed towards the storm drain at the corner of 102 street and "A" street. This intersection will be closed for the duration of the test.

This Removal Site Evaluation is being initiated by the Department of Energy authorities delegated by Executive Order 12580 under Section 104 of CERCLA and is consistent with Section 300.410 of the National Contingency Plan (NCP). The Removal Site Evaluation is being conducted to determine whether conditions are present to warrant the implementation of a removal action. This Removal Site Evaluation consists of an evaluation of the factors defined in Section 300.415 of the NCP which are to be considered in determining the appropriateness of a removal action.

Source and Nature of Threat of a Release

The discharge area for the water (approximately 150,000 gallons) has no history of being utilized for RCRA material handling. In addition, this area has been decontaminated to meet the requirements of a radiologically regulated area. This area requires no cover clothing and only personnel monitoring to leave the area.

Evaluation of the Magnitude of the Potential Threat

As indicated by the monthly contamination survey (See Attachment II), the radiological contamination levels are within the acceptable limits established by Industrial, Radiological Safety & Training.

In order to reduce the potential threat of contaminant release during the annual fixed fire pump test, control measures will be administered as follows:

1. All water discharge will be onto a hard paved surface to minimize soil disturbances.

2. A sea/land container will be located at the storm drain to break-up the water discharge stream and make runoff to storm drain less violent.

3. Sand bags will be placed to direct water away from Plant 2 west collection sump to limit amount of water which will run onto the contaminated drum storage pad.

Assessment of the Need for a Removal Action

Consistent with Section 40 CFR 300.410 of the National Contingency Plan, the Department of Energy shall determine the appropriateness of a Removal Action. Section 40 CFR 300.415 (b)(2) of the National Contingency Plan (NCP) defines eight factors which should be considered in determining the appropriateness of a Removal Action. Based on the data presented herein, the following factors, listed in the NCP, are applicable to the annual fixed fire pump test.

40 CFR 300.415 (b)(2)(iv)

High levels of hazardous substances or pollutants or contaminants to migrate or be released.

40 CFR 300.415 (b)(2)(viii)

Other situations or factors that may pose threats to public health or welfare or the environment.

These factors are considered appropriate as a result of the potential exposure to, or release of hazardous waste constituents, pollutants or contaminants from locations where the test is to be conducted.

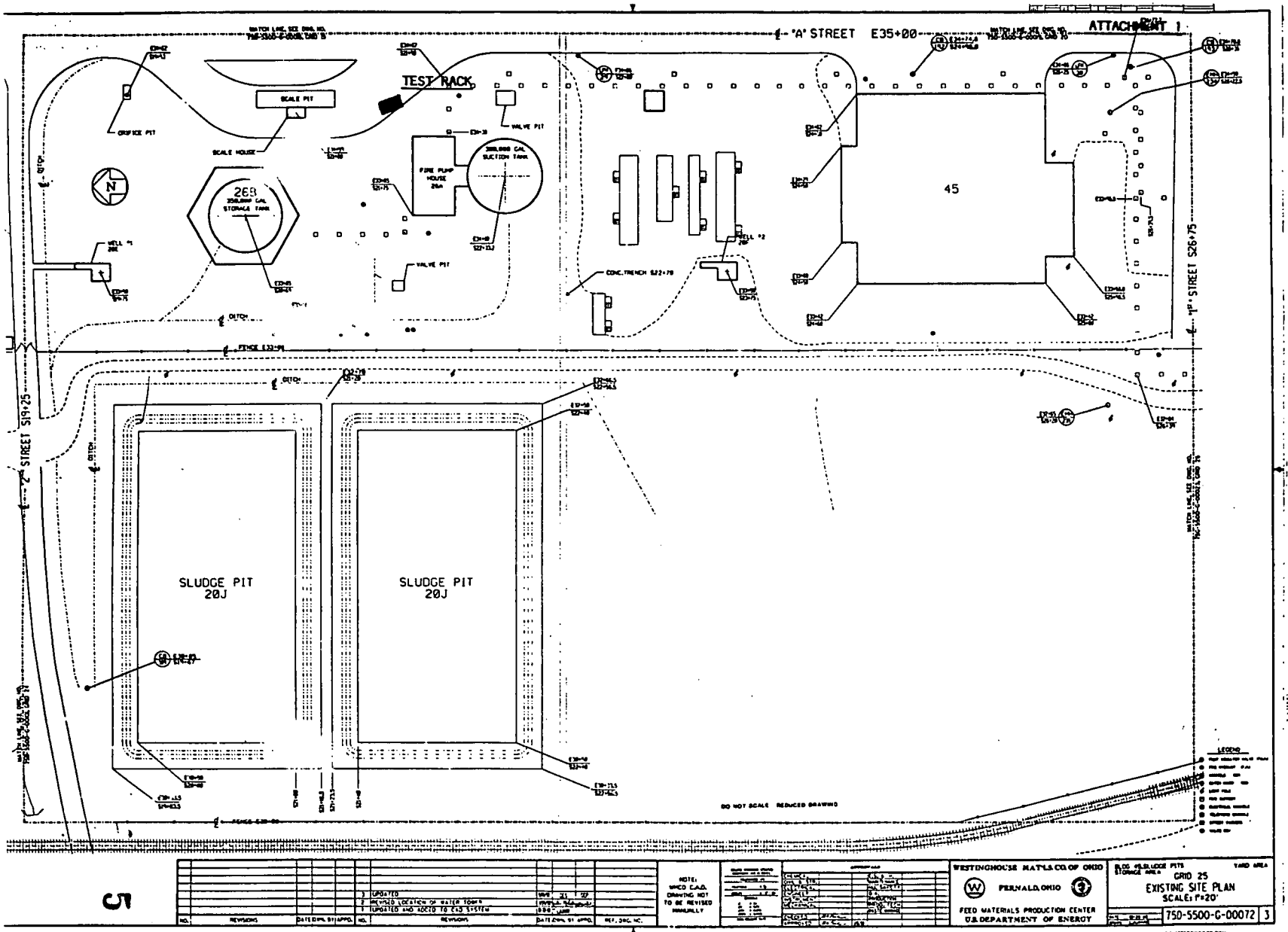
Appropriateness of a Response

If a planning period of less than six months exists prior to initiation of a response, DOE will prepare a Action Memorandum. The Action Memorandum will describe the selected response and supporting documentation for the decision.

If it is determined that there is a planning period greater than six months before response is initiated, DOE will prepare an Engineering Evaluation/Cost Analysis (EE/CA) Approval Memorandum. This memorandum is to be used to document the threat to public health and the environment. It will also serve as a decision document to be included in the Administrative Record.

If it is determined that a response is appropriate due to the potential for elevated levels of radionuclides to be found in the runoff from the test area, a Removal Action may be required to address the existing situation.

Based on the evaluation of all the above factors, it has been determined that existing controls for the planned action are adequate and a Removal Action is not required.


ATTACHMENT 1
"A" STREET E35+00
TEST RACK
SCALE PIT
ORIFICE PIT
SCALE HOUSE
VALVE PIT
FIRE PUMP HOUSE 20A
269 350,000 GAL STORAGE TANK
350,000 GAL SUCTION TANK
WELL #1
WELL #2
45
CONC. TRENCH 522+78
DITCH
FENCE 533+99
11th STREET S26+75
2nd STREET S19+25
SLUDGE PIT 20J
SLUDGE PIT 20J
DO NOT SCALE REDUCED DRAWING
LEGEND
1 UPDATED
2 REVISED LOCATION OF WATER TOWER
1 UPDATED AND ADDED TO CAD SYSTEM
NOTE: WPCO CAD DRAWING NOT TO BE REVISED MANUALLY
WESTINGHOUSE MATLS.CO.OF OHIO
FERNALD, OHIO
FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY
BLDG. 45/SLUDGE PITS STORAGE AREA
YARD AREA
GRID 25
EXISTING SITE PLAN
SCALE: 1"=20'
750-5500-G-00072
3

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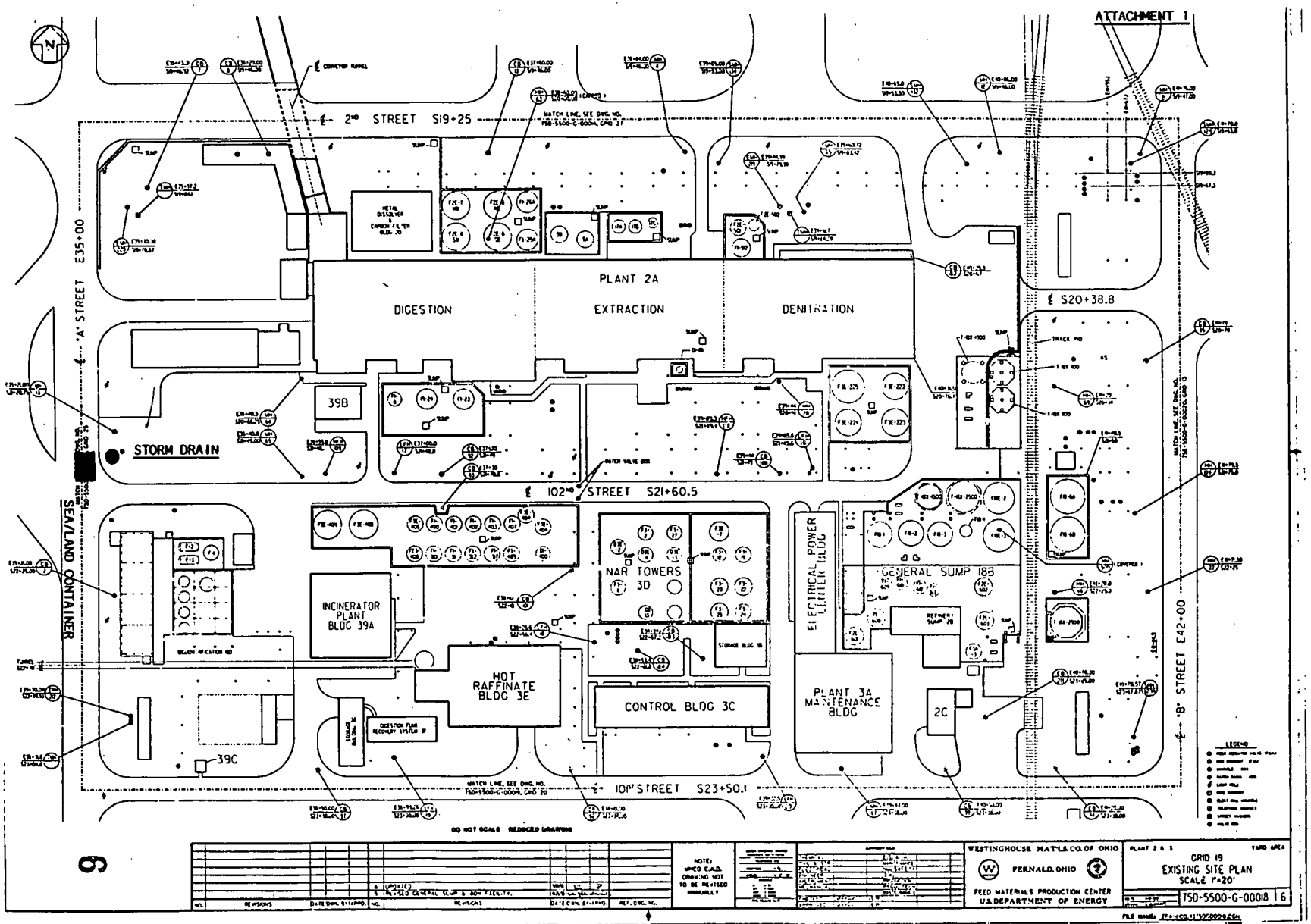
ATTACHMENT 1
2ND STREET S19+25
'A' STREET E35+00
PLANT 2A
DIGESTION
EXTRACTION
DENITRATION
℄ S20+38.8
STORM DRAIN
39B
℄ 102ND STREET S21+60.5
SEA/LAND CONTAINER
INCINERATOR PLANT BLDG 39A
NAR TOWERS 3D
ELECTRICAL POWER CENTER BLDG
GENERAL SUMP 18B
HOT RAFFINATE BLDG 3E
CONTROL BLDG 3C
PLANT 3A MAINTENANCE BLDG
2C
39C
'B' STREET E42+00
10TH STREET S23+50.1
DO NOT SCALE REDUCED DRAWING
WESTINGHOUSE MATLS CO OF OHIO
FERNALD, OHIO
FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY
GRID 19
EXISTING SITE PLAN
SCALE 1"=20'
750-5500-G-00018 | 6

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ATTACHMENT 2

FMPC

OPERATIONS SAFETY & HEALTH - RADIOLOGICAL SAFETY

RADIOLOGICAL SURVEY REPORT

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Date: 2-24-91	LOCATION: SECTION 4	RST: RCC / GLC	Page 1 of 4
Time: 1430	LEVEL:		

REASON FOR SURVEY: ☑ ROUTINE ☐ SPECIAL REQUEST ☐ RWP ☐ INCIDENT

COMMENTS:

MONTHLY CONTAMINATION SURVEY ON ROADWAY SECTION 4. ALL ROADWAYS DIRECT-FRISKED <1000 DPM BY Except LOCATIONS NOTED ON MAP

FOLLOW-UP SURVEY ATTACHED ☐ YES ☑ NO

SURVEY MAP ATTACHED ☑ YES ☐ NO

INSTRUMENTS

MODEL	SERIAL NUMBER	CALIBRATION DATE		BKRD.	EFF.
TENNELEC	LB300 #2	5/91	∝ AK	0.58 / 4.88	.217 / .391
BICRON	A298P	6/91	B	100	10%
14C-4	44490	7/91	B	100	10%

ANALYZE FOR: ☑ ALPHA ☑ BETA-GAMMA ☐ OTHER

TYPE OF SURVEY: ☑ CONTAMINATION ☐ RADIATION ☐ OTHER

ITEM NUMBER	GRID COORDINATES	DESCRIPTION	CORRECTED DOSE RATE (mRem/hr) γ CONTACT	CORRECTED DOSE RATE (mRem/hr) β/γ CONTACT	CORRECTED DOSE RATE (mRem/hr) γ 3 FT.	CORRECTED DOSE RATE (mRem/hr) β/γ 3 FT.	DPM ALPHA 100 CM²	DPM ALPHA PROBE	DPM BETA-GAMMA 100 CM²	DPM BETA-GAMMA PROBE
1	SEE MAP	ROADWAY					15		18	>1K BKGD
2							6		23	
3							ND		ND	
4							6		13	
5							24		2	
6							6		2	
7							24		33	
8							6		2	
9							ND		7	
10							ND		ND	
11							ND		2	
12							6		2	
13							ND		ND	
14							ND		23	>1K BKGD
15							ND		12	20K
16	SEE MAP	ROADWAY					ND	7	13	6K

NO.	DISTRIBUTION OF COPIES
1	Radiological Safety Technician Supervisor
2	Radiological Safety Engineer
3	Facility Supervisor

NOTIFICATION OF SURVEY RESULTS

SUPERVISOR NOTIFIED	TIME	DATE	NOTIFIED BY	REVIEWED BY	DATE
				[signature]	2/25/91

FMPC-OSH-1003-1 (REV. 11/4/88)

ATTACHMENT 2

FMPC

INDUSTRIAL, RADIOLOGICAL SAFETY & TRAINING - RADIOLOGICAL SAFETY

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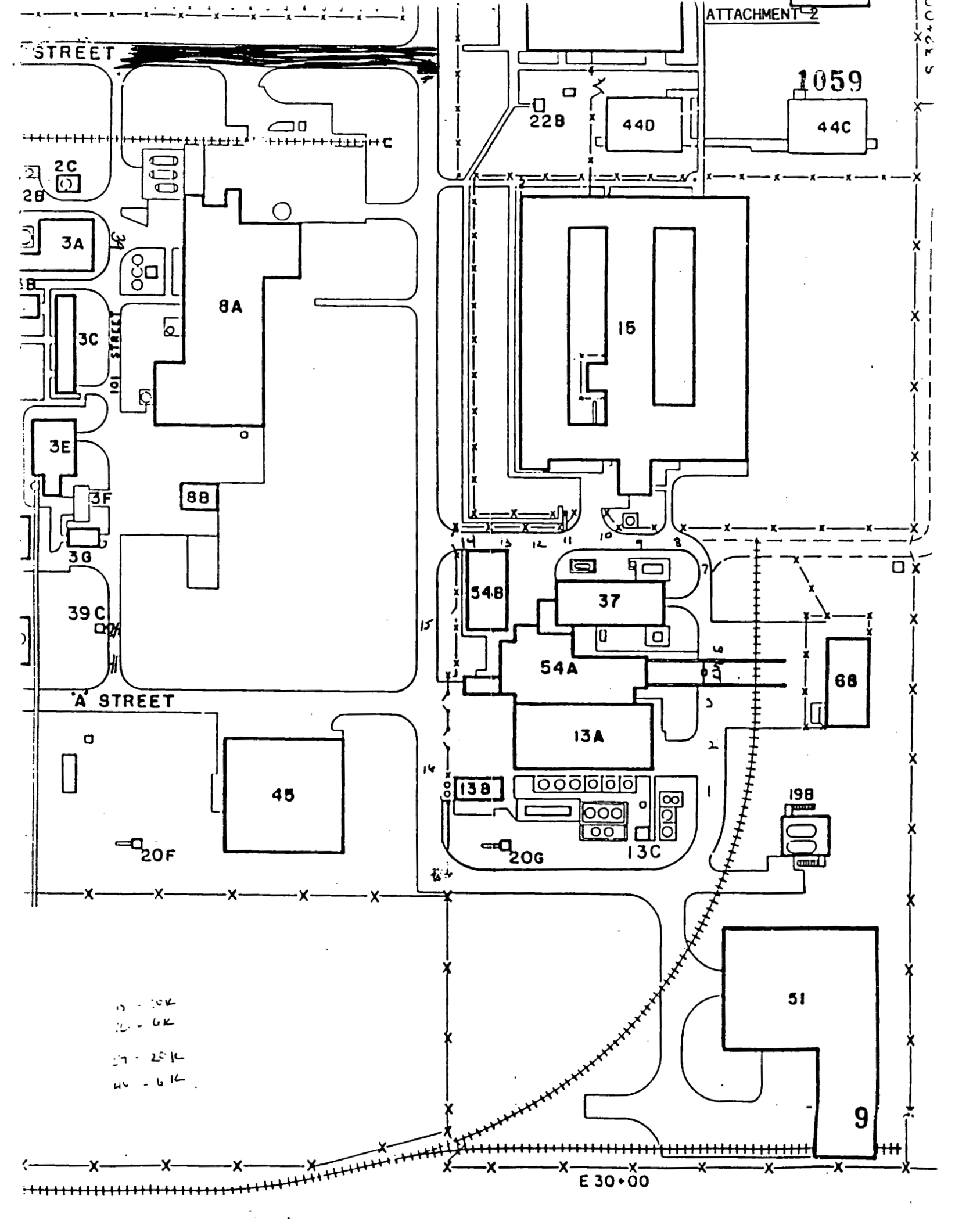
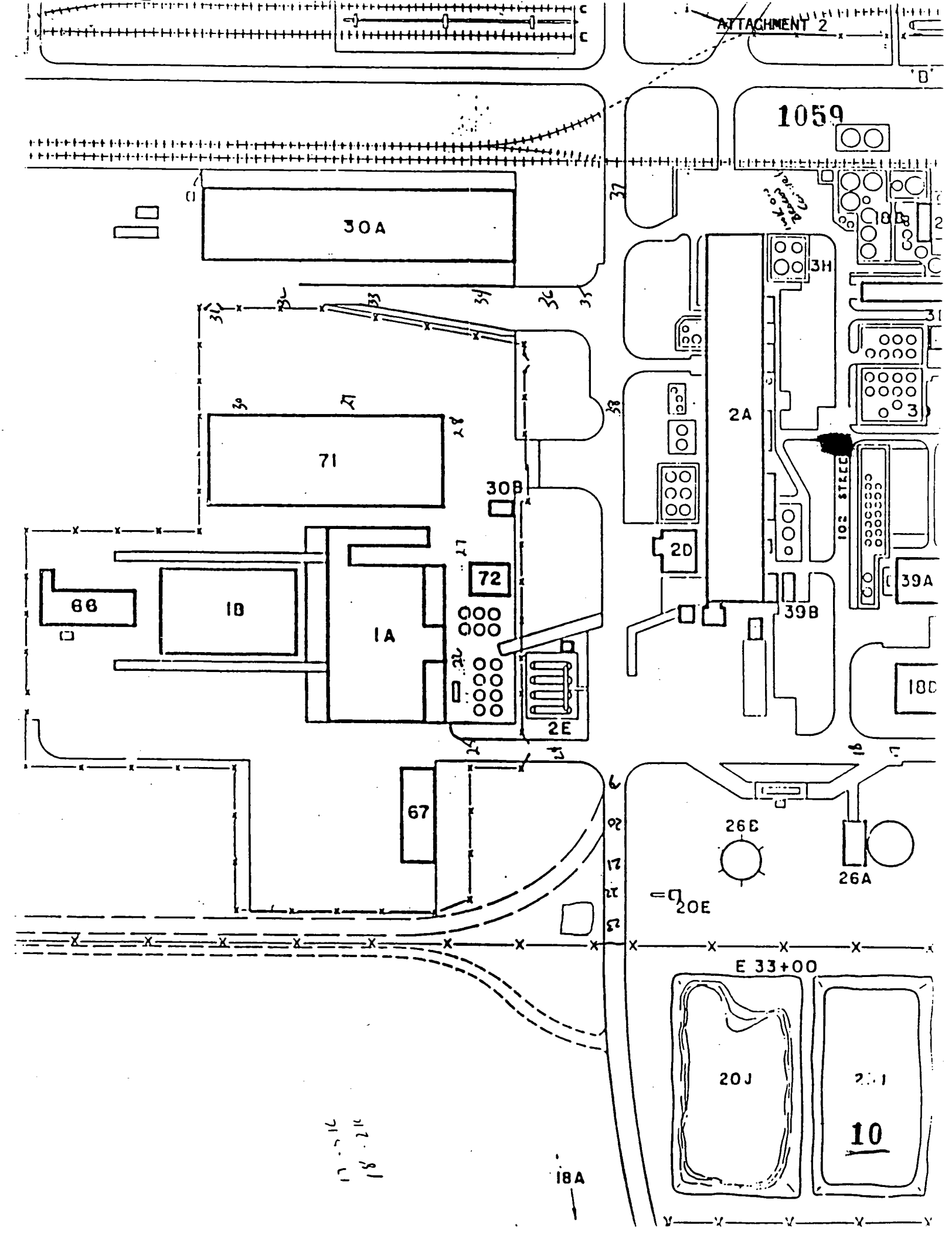
RADIOLOGICAL SURVEY REPORT (CONTINUATION SHEET)

ITEM NUMBER	GRID COORDINATES	DESCRIPTION	CORRECTED DOSE RATE (mRem/hr) γ CONTACT	CORRECTED DOSE RATE (mRem/hr) β/γ CONTACT	CORRECTED DOSE RATE (mRem/hr) γ 3 FT.	CORRECTED DOSE RATE (mRem/hr) β/γ 3 FT.	DPM ALPHA 100 CM²	DPM ALPHA PROBE	DPM BETA-GAMMA 100 CM²	DPM BETA-GAMMA PROBE
17	SEE MAP	ROADWAY					ND		2	5K
18							ND		13	2K
19							15		ND	>1K BKGD
20							ND		ND	
21							ND		ND	
22							24		ND	
23							ND		7	
24							6		33	
25							ND		ND	
26							6		ND	
27							ND		7	
28							15		28	
29							ND		7	
30							6		7	>1K BKGD
31							6		33	3K
32							ND		ND	>1K BKGD
33							6		ND	
34							6		ND	
35							ND		ND	
36							ND		ND	>1K BKGD
37							34		38	300K
38							6		2	10K
39							6		18	3K
40							24		74	20K
41	SEE MAP	ROADWAY					15	8	54	6K


ATTACHMENT 2
STREET
1059
228
440
44C
2C
2B
3A
8A
3C
101 STREET
3E
3F
88
3G
39C
15
16
54B
37
54A
68
13A
138
198
13C
20G
20F
45
'A' STREET
51
9
E 30+00


ATTACHMENT 2
1059
30A
71
30B
72
66
1B
1A
2E
67
3H
2A
2D
39A
39B
18C
26C
26A
20E
E 33+00
20J
10
18A