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4107

DRUMMED HYDROFLUORIC AID RESIDUE/ASSOCIATED STORAGE AREAS INSIDE PLANT 4 CLOSURE PLAN INFORMATION AND DATA, RESPONSE TO NOTICE OF DEFICIENCIES

02/11/93

DOE-FN/OEPA
DOE-1121-93
75
LETTER

4107

Department of Energy
Fernald Environmental Management Project
P.O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 738-6357

FEB 1 1 1993

DOE-1121-93

Mr. Crepeau
Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Data Management Section
P.O. Box 1049
Columbus, Ohio 43266-0149

DRUMMED HYDROFLUORIC ACID RESIDUE/ASSOCIATED STORAGE AREAS INSIDE PLANT 4 CLOSURE PLAN INFORMATION AND DATA, RESPONSE TO NOTICE OF DEFICIENCIES

Reference: Letter, Ohio EPA to U.S. DOE-FEMP, Donald R. Schregardus to W. D. Adams, OH6 890 008 976, 05-31-0681, January 11, 1993.

Dear Mr. Crepeau:

This letter is in response to the Notice of Deficiencies (NOD) for the Drummed Hydrofluoric Acid (HF) Residue/Associated Storage Areas Inside Plant 4 Closure Plan Information and Data (CPID) that were identified in the above referenced letter. Enclosed are the Fernald Environmental Management Project (FEMP) responses to the deficiencies noted by the Ohio Environmental Protection Agency (OEPA). Also enclosed is a modified CPID which is edited to highlight the changes.

If you or your staff have any questions, please contact John M. Sattler at 513-738-8672.

Sincerely,

Tom Rowland

Thomas J. Rowland
Acting Manager

FN:Sattler

Enclosure: As Stated

Recycled and Recyclable

cc w/enc:

K. A. Hayes, EM-424 TREV
J. A. Saric, USEPA-Region V
R. Fisher, OEPA-Dayton
R. Meyer, OEPA-Columbus
G. E. Mitchell, OEPA-Dayton
H. O'Connell, OEPA-Dayton
P. D. Pardi, OEPA-Dayton

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M. Mc Dermontt, DOJ
J. Van Kley, Ohio AGO
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J. W. Thiesing, FERMCO/2
D. P. Dubois, FERMCO/65-2
P. F. Clay, FERMCO/19
AR Coordinator, FERMCO

bcc w/o encl:

W. J. Quaider, DOE-FN
D. M. Rast, DOE-FN
R. J. Janke, DOE-FN
B. P. Schroff, DOE-FN
P. J. Yerace, DOE-FN

CLOSURE PLAN INFORMATION AND DATA FOR THE DRUMMED HF/ASSOCIATED STORAGE AREAS INSIDE PLANT 4

RESPONSE TO NOD COMMENTS

FEMP GENERAL COMMENTS:

On January 22, 1993 the Stipulated Amendment to Consent Decree was signed by Department of Energy and the State of Ohio. Thus, changing the name of the Proposed Amended Consent Decree, CIVIL NO. 81-86-0217 (PACD) to the Stipulated Amendment to Consent Decree, CIVIL NO. C-1-86-0217. This document describes the activities that will be conducted to complete RCRA closure of the Hazardous Waste Management Units (HWMUs) at the FEMP. As a result the following changes will be made to the text on Page 1 (new wording is capitalized and old wording is struck out):

Consistent with OAC 3745-66 (40 CFR 265 Subpart G) and the State of Ohio STIPULATED AMENDMENT TO CONSENT DECREE, CIVIL NO. C-1-86-0217, ~~Proposed Amended Consent Decree, CIVIL NO. 81-86-0217 (PACD)~~, this document describes the activities that will be conducted to complete RCRA closure of HWMU No. 6.

Ohio EPA Specific Comments:

1. *Section 3.1.1, Page 11, Item 2 - The closure plan states that the Cleanup Action Level (CAL) for pH will be 2.0 to 12.5. This is acceptable; however, the plan states that this range is based on the normal pH levels of soils in Ohio according to the May 1, 1991 Ohio EPA Closure Plan Review Guidance. The Guidance actually states the background soil pH in Ohio ranges from about 4.7 to 9.0 (see p. 33 of the Closure Plan Review Guidance). Regardless, the use of Ohio farm soil data should not be used as a clean standard for rinseate from a concrete pad. Please modify this section of the closure plan to indicate that the 2.0 to 12.5 pH range to be used for the CAL is based on the definition of a characteristic corrosive waste and not on the normal pH level of Ohio farm soils. This information must be provided in accordance with OAC 3745-66-12(B)(4).*

   FEMP RESPONSE:

   FEMP agrees with the comment. Item 2, on Page 11 will be changed as follows (new wording is capitalized and old wording is struck out):

   Lacking other guidance, A 2.0 TO 12.5 PH RANGE WILL BE USED FOR THE CAL FOR CORROSIVITY BASED ON THE DEFINITION OF A CHARACTERISTIC CORROSIVE WASTE. ~~the pH concentrations are greater than 2.0 and less than 12.5 were used for the CAL for corrosivity. This is based on the normal range for pH of soils in Ohio as discussed in the May 1, 1991 OEPA Closure Plan Review Guidance.~~

2. *Section 3.2.1, Page 13, Item 5 - The plan does not provide an adequate description of the cleansing process of the storage pad. Specifically,*

please include the type of equipment and personnel that will be needed for this procedure. This information must be provided in accordance with OAC 3745-66-12(B)(4).

FEMP RESPONSE

FEMP agrees with the comment. Item 5, on Page 13 will be changed as follows (new wording is capitalized and old wording is struck out):

ONCE ALL THE PREPARATIONS HAVE BEEN MADE, WASH THE FLOOR SURFACE USING A POWER WASHER. THE POWER WASHER IS SIMILAR IN APPEARANCE AND USE TO A LAWN MOWER. THE OPERATOR WILL PUSH THE POWER WASHER ALONG WHILE THE SURFACE IS WASHED USING A REGULATED PRESSURE SPRAY (BETWEEN 0 AND 10,000 PSI) OF TAP WATER. THE PRESSURE OF THE SPRAYER IS REGULATED, AS NEEDED, TO REMOVE CONTAMINATION. IF NECESSARY, A 10,000 PSI SPRAY CAN BE USED TO REMOVE A THIN SURFACE LAYER OF THE CONCRETE. HOWEVER, THE DANGERS ASSOCIATED WITH PRESSURE SPRAYERS ARE SIGNIFICANTLY GREATER AS THE PRESSURE IS INCREASED. USE OF HIGH PRESSURES WILL ONLY BE USED IF CONTAMINATION CANNOT BE REMOVED USING A LOWER PRESSURE. AFTER THE WASH IS COMPLETED, THE FLOOR SURFACE WILL BE RINSED WITH TAP WATER AS NEEDED TO REMOVE VISIBLE WASH RESIDUES. THE WASHING AND RINSING OF THE FLOOR SURFACE CONSTITUTES A SINGLE WASH CYCLE. ~~The floor surface of the unit will be washed with a non-phosphate laboratory grade detergent and tap water solution. After the wash is completed, the floor surface will be rinsed with tap water as needed to remove visible wash residues. The washing and rinsing of the floor surface constitutes a single wash cycle.~~

3. *Section 3.2.2, Page 15, Item 1 - The Sampling and Analysis Plan states that containment dikes will be used to control run-off during the decontamination process. Section 3.2.2 also outlines the procedures for decontamination of equipment during closure but fails to include this provision. Please modify this section of the closure plan to indicate that contamination dikes will be used during the decontamination process. This information must be provided in accordance with OAC 3745-66-12(B)(5).*

FEMP RESPONSE:

FEMP agrees with the comment. Item 1 and 3 on Page 15 and Page 16 will be changed as follows (new wording is capitalized and old wording is struck out):

ESTABLISH A DECONTAMINATION LINE ON CLEAN PLASTIC SHEETING NEAR THE UNIT. CONSTRUCT THE DECONTAMINATION AREA WITH A DOUBLE LAYER OF 6-MIL POLYETHYLENE, OR OTHER APPROVED IMPERVIOUS SHEETING. USE BOARDS, SORBENT SOCKS, OR OTHER SUITABLE MATERIALS IN BETWEEN THE SHEETING ALONG THE PERIMETER OF THE DECONTAMINATION AREA TO PROVIDE CONTAINMENT DIKES TO CONTROL RUN-OFF. IDENTIFY A CLEAN AND DIRTY SIDE AND ESTABLISH 2 TO 3 WASH OR RINSE STATIONS ON EACH SIDE. PROVIDE A MINIMUM OF 3-FEET SEPARATION BETWEEN THE DECONTAMINATION STATIONS ON EACH SIDE (I.E., CLEAN AND DIRTY) FOR CONTAMINATION REMOVAL. ~~All reusable equipment used during the HWMU cleaning effort will be properly decontaminated to remove possible contamination. Two decontamination stations will be established on clean plastic sheeting near the unit (to prevent the spread of~~

~~contamination). The stations shall consist of two stages: a dirty stage and a clean side stage spaced approximately 3 feet apart.~~

TRIPLE ~~Double~~ rinse with deionized water. All wash water and rinseate will be collected and managed in accordance with approved procedures.

4. *Section 5.0, Page 21 - The closure plan schedule indicates that closure activities would not be completed within 180 days of Ohio EPA approval of the plan. DOE-FEMP must remove the extra time period from the closure schedule or supply justification for the extension. The Ohio EPA would not normally consider internal administrative activities sufficient cause for an extension. This information must be provided in accordance with OAC 3745-66-13(B).*

FEMP RESPONSE:

CLOSURE OF HWMU NO. 6 WILL BE INITIATED ON THE DATE THAT THE FEMP RECEIVES THE OEPA APPROVAL OF THIS CPID. ASSUMING NO MODIFICATIONS TO THE PLAN ARE REQUIRED OR UNEXPECTED EVENTS ARE ENCOUNTERED, IT IS EXPECTED THAT CLOSURE ACTIVITIES CAN BE COMPLETED WITHIN 180 DAYS FROM THE DATE FEMP RECEIVES APPROVAL OF THE CPID. THE SCHEDULE IS ILLUSTRATED IN FIGURE 4. CLOSURE CERTIFICATION WILL BE SUBMITTED WITHIN 60 DAYS OF COMPLETION. IF UNEXPECTED EVENTS ARISE OR CLEAN CLOSURE CANNOT BE ACHIEVED, A REVISED CPID WILL BE SUBMITTED WITHIN 30 DAYS OF THAT DETERMINATION.

THE SCHEDULE DOES NOT ANTICIPATE UNEXPECTED EVENTS SUCH AS ADVERSE WEATHER, SAMPLES LOST OR DAMAGED IN SHIPMENT, OR INVALIDATED DATA DUE TO THE ANALYTICAL LABORATORY EXCEEDING SAMPLE HOLDING TIMES. IF NECESSARY, A REQUEST WITH JUSTIFICATIONS FOR AN EXTENSION OF THE TIME REQUIRED FOR COMPLETION OF ACTIVITIES WILL BE SUBMITTED TO THE AGENCY ACCORDING TO OAC 3745-66-13(A) AND OAC 3745-66-13(B) [40 CFR 265.113(A) AND 40 CFR 265.113(B)]. THE OEPA AND AN INDEPENDENT, QUALIFIED, REGISTERED PROFESSIONAL ENGINEER WILL BE NOTIFIED AT LEAST FIVE (5) BUSINESS DAYS BEFORE CRITICAL ACTIVITIES BEGIN (SEE FIGURE 4).

~~Prior to initiating a project at the FEMP, documentation required for compliance with the National Environmental Policy Act (NEPA) must be completed and approved. In addition, to comply with DOE orders, several internal FEMP procedures must be prepared, reviewed, approved, and implemented. Examples of the DOE project specific requirements are:~~

- ~~Operational Readiness Reviews~~
- ~~Site Work Plans~~
- ~~Radiological and Chemical Health and Safety Risk Assessments~~
- ~~Health and Safety Plans~~
- ~~Worker Training Plans and Instruction~~

~~Internal FEMP NEPA and DOE compliance activities require up to 180 days to complete and are initiated concurrently with the submittal of the Closure Plan Information and Data. However, before NEPA and DOE compliance requirements can be completed, the final requirements and specifications of the OEPA approved Closure Plan Information and Data must be defined and incorporated.~~

~~Upon receipt of approval of the Closure Plan Information and Data for HWMU No. 6, the FEMP will complete the remaining NEPA and DOE compliance requirements. Assuming no modifications to the plan are required, closure activities will be completed within 240 days from the start of closure activities. The FEMP will notify the OEPA at least 45 days prior to the date on which closure activities will begin. It is anticipated that the 45 day notice can be provided when OEPA approval is received. If more time is required to complete NEPA and DOE compliance documentation and activities, a revised schedule will be submitted to the OEPA. Figure 4 shows the anticipated schedule for closure of HWMU No. 6.~~

5. *Table 1, Page 23 and Page A-15 - The Cleanup Action Level (CAL) for total Fluorides listed in the closure plan as 60 mg/l (fifteen times the MCL). The Ohio EPA requires that if the product of fifteen times the MCL or MCLG exceeds 1 mg/l, 1 mg/l shall be used as the clean standard. Please modify Table 1 to indicate that the CAL for Total Fluorides is 1 mg/l. This information must be provided in accordance with OAC 3745-66-11.*

FEMP RESPONSE:

FEMP agrees with the comment. Table 1, on Page 23 and Page A-15 will be changed as follows (new wording is capitalized and old wording is struck out):

Total Fluorides	NA	1.0	~~60.0~~

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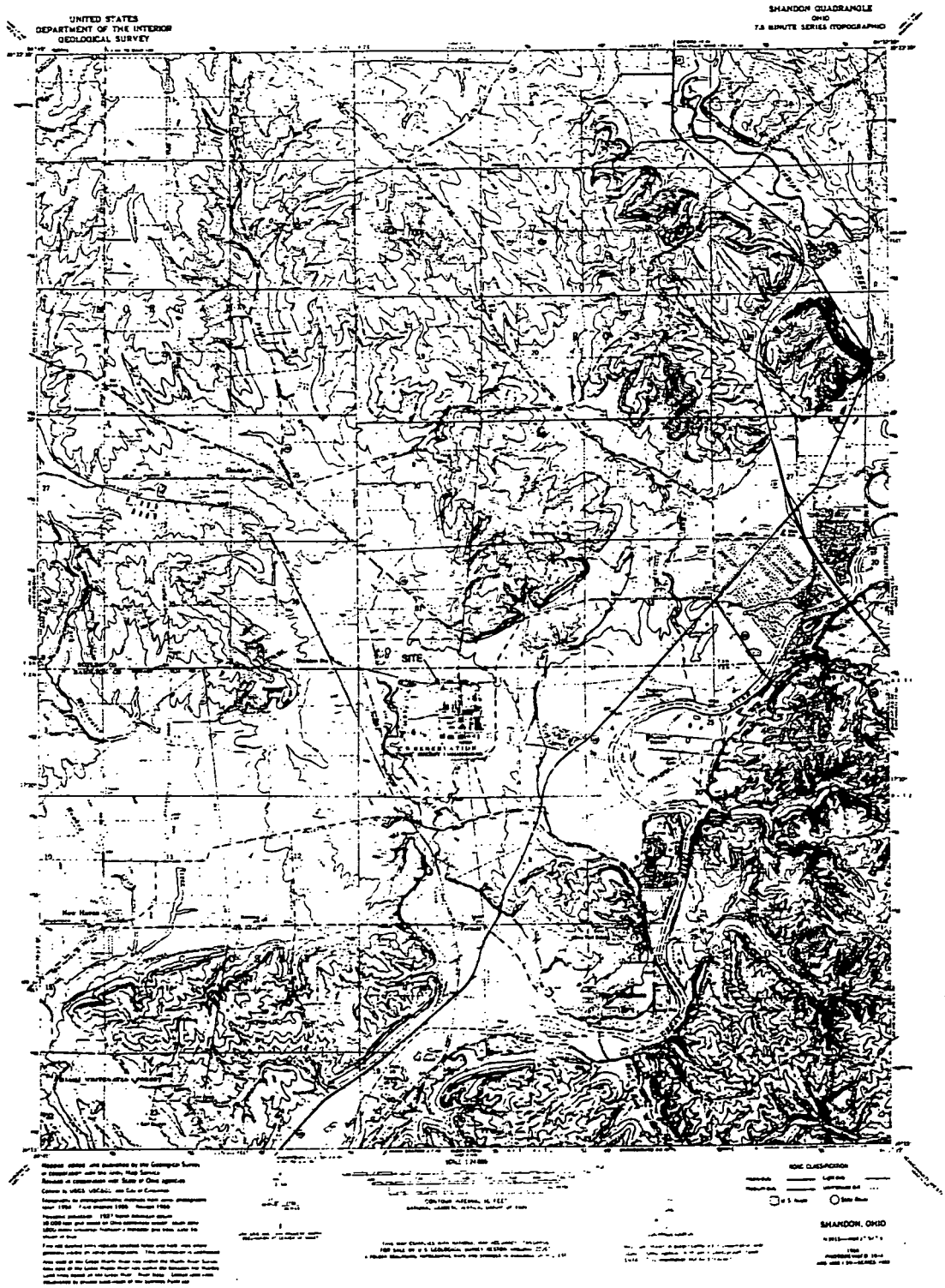

FIGURE 1

SITE LOCATION MAP
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

8

REVISIONS | DATE | DWN. BY | APP'D | NO. | REVISIONS | DATE | DWN. BY | APP'D | REF. DWG. NO. | REF. DWG. TITLE

APPROVALS

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FERNALD, OHIO
FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY

PROJ. NO.
DATE
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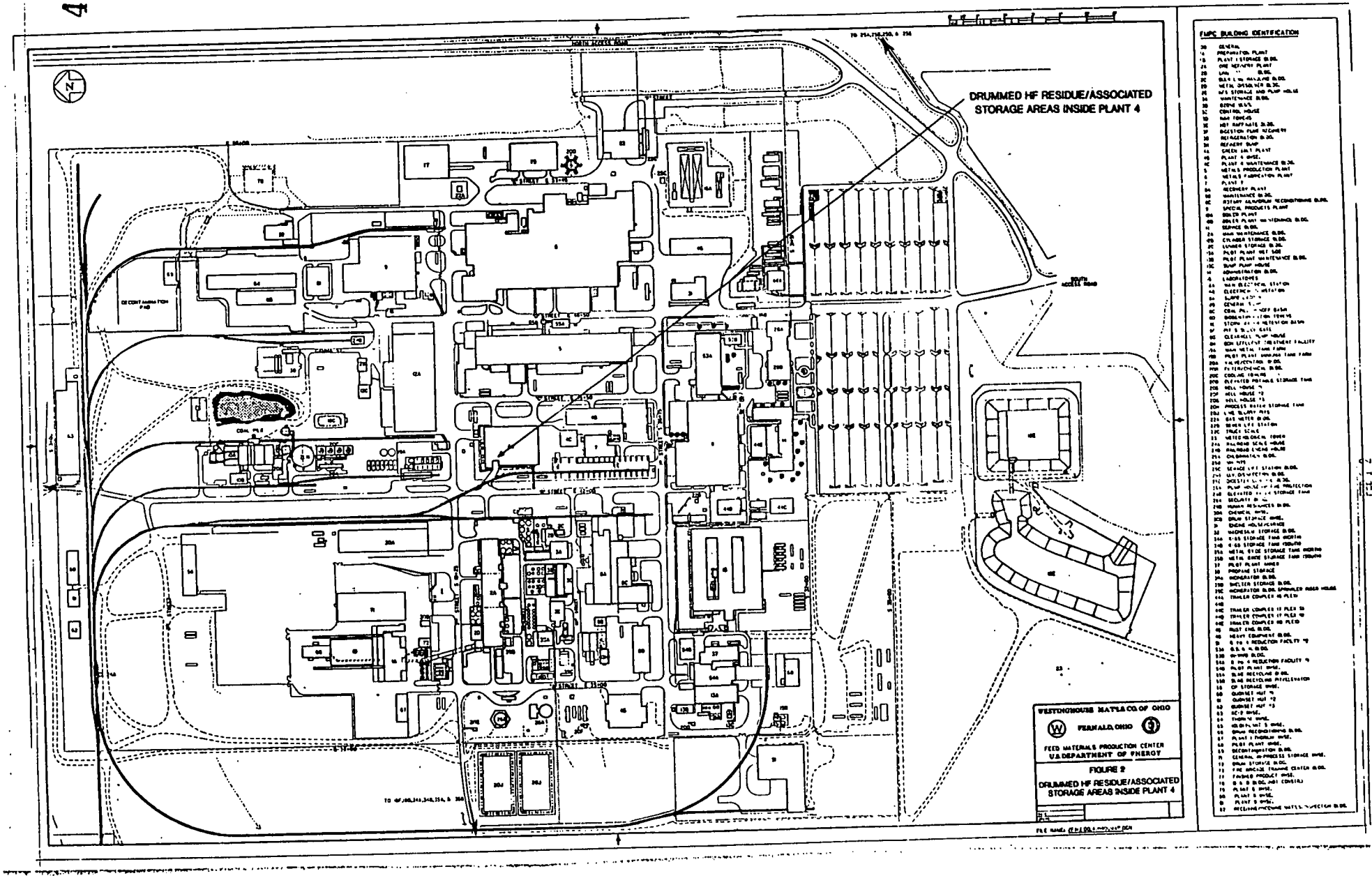
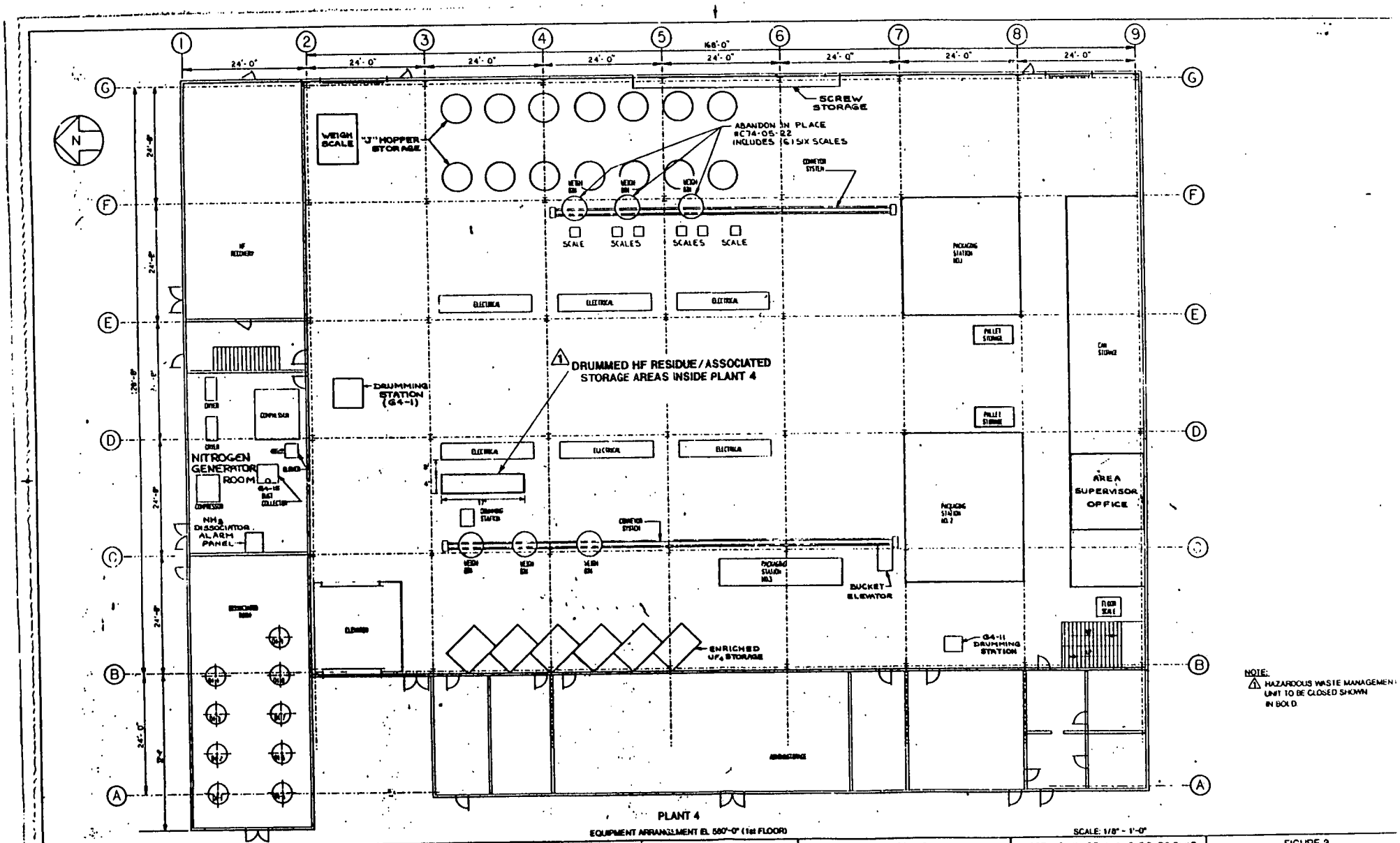
4107


DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS INSIDE PLANT 4
FMPC BUILDING IDENTIFICATION
WESTINGHOUSE MAT'LS CO. OF OHIO
FERNALD, OHIO
FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY
FIGURE 2
DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS INSIDE PLANT 4

6



NOTE:
1 HAZARDOUS WASTE MANAGEMENT UNIT TO BE CLOSED SHOWN IN BOLD

PLANT 4
EQUIPMENT ARRANGEMENT EL. 580'-0" (1st FLOOR)

SCALE: 1/8" = 1'-0"

NO.	REVISIONS	DATE	DWN BY	APPD
1	UPDATED			
0	IDENTIFIED A.I.P. PER KES 550			

REF. DWG. NO. | REF. DWG. TITLE

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FERNALD, OHIO
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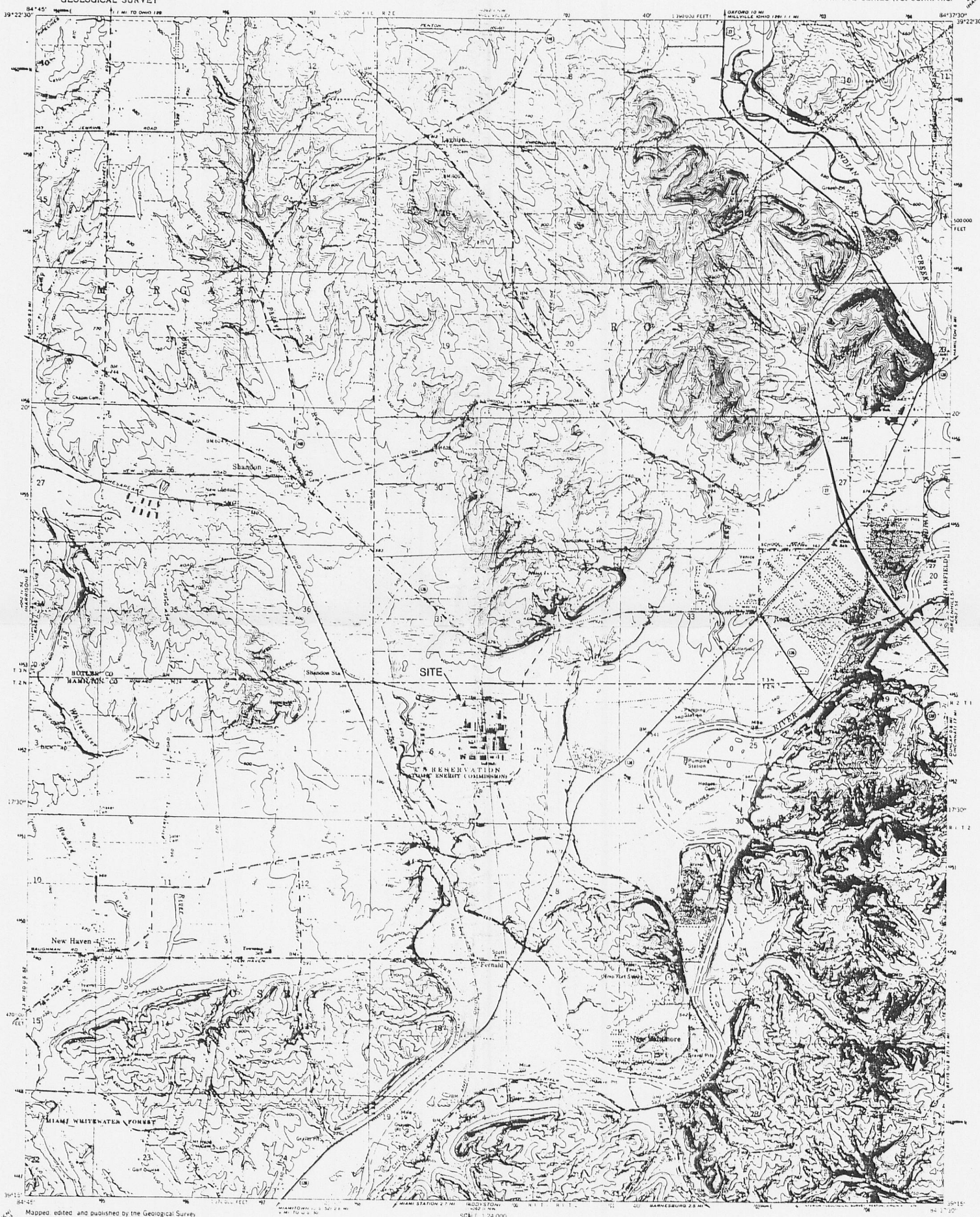
U.S. DEPARTMENT OF ENERGY

FIGURE 3
DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS INSIDE PLANT 4

4107

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SHANDON QUADRANGLE
OHIO
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey in cooperation with the Army Map Service
Revised in cooperation with State of Ohio agencies
Control by USGS, USC&GS, and City of Cincinnati
Topography by photogrammetric methods from aerial photographs taken 1954. Field checked 1955. Revised 1965
Polyconic projection. 1927 North American datum
10,000 foot grid based on Ohio coordinate system, south zone
1000-metre Universal Transverse Mercator grid ticks, zone 16, shown in blue
Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked
Area west of the Great Miami River lies within the Miami River Survey. Area east of the Great Miami River lies within the between the Miamis Land lines based on the Great Miami River Base. Dotted land lines established by private subdivision of the Symmes Purchase

UTM GRID AND 1974 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

FIGURE 1

SITE LOCATION MAP
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

08

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.	REF. DWG. TITLE

APPROVALS

CHEMICAL		E.S.&H.	
CIVIL & STR.		MAINTENANCE	
ELECTRICAL		NU SAFETY	
ENGINEER		Q.A.	
INSTRUMENT		PRODUCTION	
MECHANICAL		PROD. TECH.	
CHECKED		WASTE MANAGE.	
APPROVED			

WESTINGHOUSE MAT'LS. CO. OF OHIO
FERNALD, OHIO
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U.S. DEPARTMENT OF ENERGY

PROJ. NO.
DATE
DRAWN

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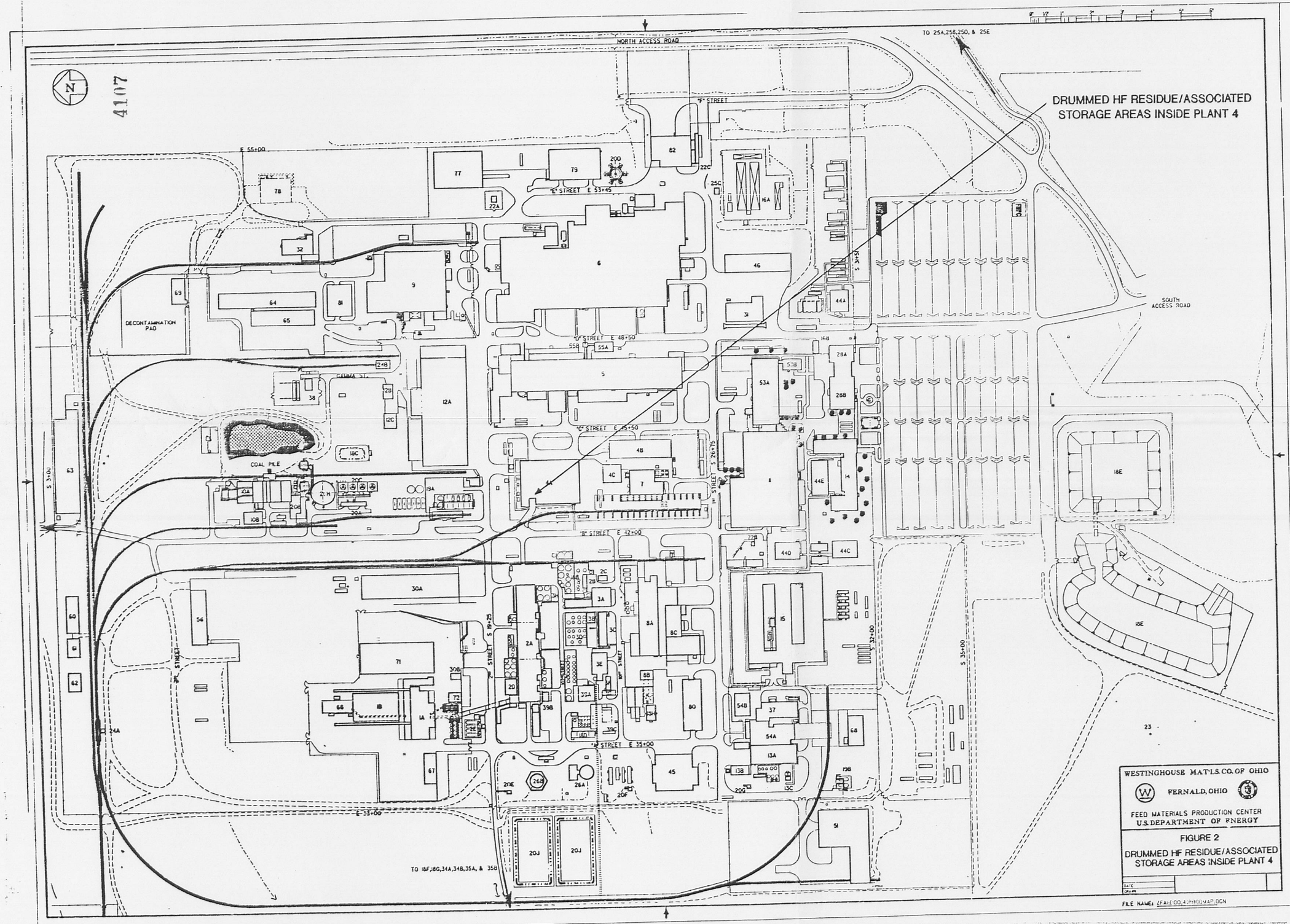


FMPC BUILDING IDENTIFICATION

00	GENERAL
1A	PREPARATION PLANT
1B	PLANT 1 STORAGE BLDG.
2A	ORE REFINERY PLANT
2B	LIME [illegible] BLDG.
2C	BULK LIME HANDLING BLDG.
2D	METAL DISSOLVER BLDG.
2E	NFS STORAGE AND PUMP HOUSE
3A	MAINTENANCE BLDG.
3B	OZONE BLDG.
3C	CONTROL HOUSE
3D	NAH TOWERS
3E	HOT RAFFINATE BLDG.
3F	DIGESTION FLAME RECOVERY
3G	REFRIGERATION BLDG.
3H	REFINERY SUMP
4A	GREEN SALT PLANT
4B	PLANT 4 WHSE.
4C	PLANT 4 MAINTENANCE BLDG.
5	METALS PRODUCTION PLANT
6	METALS FABRICATION PLANT
7	PLANT 7
8A	RECOVERY PLANT
8B	MAINTENANCE BLDG.
8C	ROTARY KILN/DRUM RECONDITIONING BLDG.
9	SPECIAL PRODUCTS PLANT
10A	BOILER PLANT
10B	BOILER PLANT MAINTENANCE BLDG.
11	SERVICE BLDG.
12A	MAIN MAINTENANCE BLDG.
12B	CYLINDER STORAGE BLDG.
12C	LUMBER STORAGE BLDG.
13A	PILOT PLANT WET SIDE
13B	PILOT PLANT MAINTENANCE BLDG.
13C	SUMP PUMP HOUSE
14	ADMINISTRATION BLDG.
15	LABORATORIES
16A	MAIN ELECTRICAL STATION
16B	ELECTRICAL SUBSTATION
18A	SURGE LAGOON
18B	GENERAL SUMP
18C	COAL PILE RUNOFF BASIN
18D	BIODENITRIFICATION TOWERS
18E	STORM WATER RETENTION BASIN
18F	PIT 5 SLUICE GATE
18G	CLEARWELL PUMP HOUSE
18H	BDN EFFLUENT TREATMENT FACILITY
19A	MAIN METAL TANK FARM
19B	PILOT PLANT AMMONIA TANK FARM
20A	VALVE/CONTROL BLDG.
20B	FILTER/CHEMICAL BLDG.
20C	COOLING TOWERS
20D	ELEVATED POTABLE STORAGE TANK
20E	WELL HOUSE #1
20F	WELL HOUSE #2
20G	WELL HOUSE #3
20H	PROCESS WATER STORAGE TANK
20J	LIME SLURRY PITS
22A	GAS METER BLDG.
22B	SEWER LIFT STATION
22C	TRUCK SCALE
23	METEOROLOGICAL TOWER
24A	RAILROAD SCALE HOUSE
24B	RAILROAD ENGINE HOUSE
25A	CHLORINATION BLDG.
25B	WH PITS
25C	SEWAGE LIFT STATION BLDG.
25D	U.V. DISINFECTION BLDG.
25E	DIGESTER CONTROL BLDG.
25A	PUMP HOUSE FOR FIRE PROTECTION
25B	ELEVATED WATER STORAGE TANK
28A	SECURITY BLDG.
28B	HUMAN RESOURCES BLDG.
30A	CHEMICAL WHSE.
30B	DRUM STORAGE WHSE.
31	ENGINE HOUSE/GARAGE
32	MAGNESIUM STORAGE BLDG.
34A	K-65 STORAGE TANK (NORTH)
34B	K-65 STORAGE TANK (SOUTH)
35A	METAL OXIDE STORAGE TANK (NORTH)
35B	METAL OXIDE STORAGE TANK (SOUTH)
37	PILOT PLANT ANNEX
38	PROPANE STORAGE
39A	INCINERATOR BLDG.
39B	SHELTER STORAGE BLDG.
39C	INCINERATOR BLDG. SPRINKLER RISER HOUSE
44A	TRAILER COMPLEX (6-PLEX)
44B	
44C	TRAILER COMPLEX (7 PLEX S)
44D	TRAILER COMPLEX (7 PLEX N)
44E	TRAILER COMPLEX (10 PLEX)
45	RUST ENG. BLDG.
46	HEAVY EQUIPMENT BLDG.
51	6 TO 4 REDUCTION FACILITY #2
53A	O.S. & H. BLDG.
53B	IN-VIVO BLDG.
54A	6 TO 4 REDUCTION FACILITY #1
54B	PILOT PLANT WHSE.
55A	SLAG RECYCLING BLDG.
55B	SLAG RECYCLING PIT/ELEVATOR
56	CP STORAGE WHSE.
60	QUONSET HUT #1
61	QUONSET HUT #2
62	QUONSET HUT #3
63	KC-2 WHSE.
64	THORIUM WHSE.
65	(OLD) PLANT 5 WHSE.
66	DRUM RECONDITIONING BLDG.
67	PLANT 1 THORIUM WHSE.
68	PILOT PLANT WHSE.
69	DECONTAMINATION BLDG.
71	GENERAL IN-PROCESS STORAGE WHSE.
72	DRUM STORAGE BLDG.
73	FIRE BRIGADE TRAINING CENTER BLDG.
77	FINISHED PRODUCT WHSE.
78	D & D BLDG. (NOT CONSTR.)
79	PLANT 6 WHSE.
80	PLANT 8 WHSE.
81	PLANT 9 WHSE.
82	RECEIVING/INCOMING MAT'LS. INSPECTION BLDG.

WESTINGHOUSE MAT'LS. CO. OF OHIO

FERNALD, OHIO

FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY

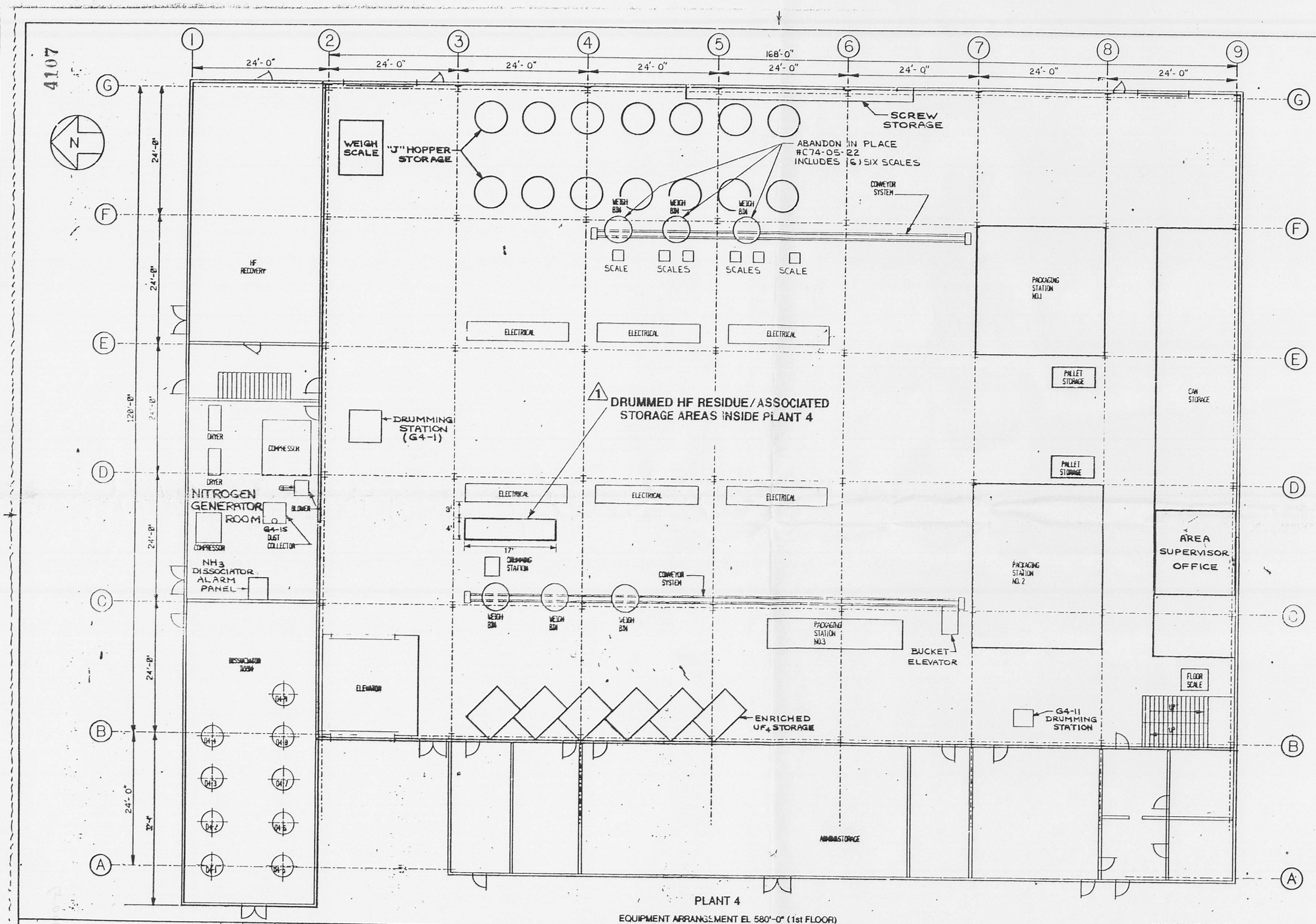
FIGURE 2

DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS INSIDE PLANT 4

DATE
DRAWN

FILE NAME: (FAILE00,4;PHOTOMAP.DGN

FEB 12



NOTE:
1 HAZARDOUS WASTE MANAGEMENT UNIT TO BE CLOSED SHOWN IN BOLD.

PLANT 4

EQUIPMENT ARRANGEMENT EL 580'-0" (1st FLOOR)

SCALE: 1/8" = 1'-0"

NO	REVISIONS	DATE	DWN. BY	APPD

NO	REVISIONS	DATE	DWN. BY	APPD
1	UPDATED	5-26-88	W.E.H.	
0	IDENTIFIED A.I.P. PER RES 558	11-6-87	LAM	

REF. DWG. NO.	REF. DWG. TITLE

APPROVALS

CHECKED
APPROVED

WESTINGHOUSE MAT'LS. CO. OF OHIO
FERNALD, OHIO
FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY

FIGURE 3
DRUMMED HF RESIDUE/ASSOCIATED STORAGE AREAS INSIDE PLANT 4

PROJ NO ——
DATE 11-16-87
DRAWN L. MAINS

SK-12-P-3