2484

G-000-102.58

RCRA PART B PERMIT APPLICATION SECTION J: CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS VOLUME 10 OF 13 OCTOBER 31, 1991

10/31/91

DOE-FO/EPA
~~100~~ 38
APPLICATION

[redacted]

2484

RCRA PART B PERMIT APPLICATION

October 31, 1991

SECTION J: CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

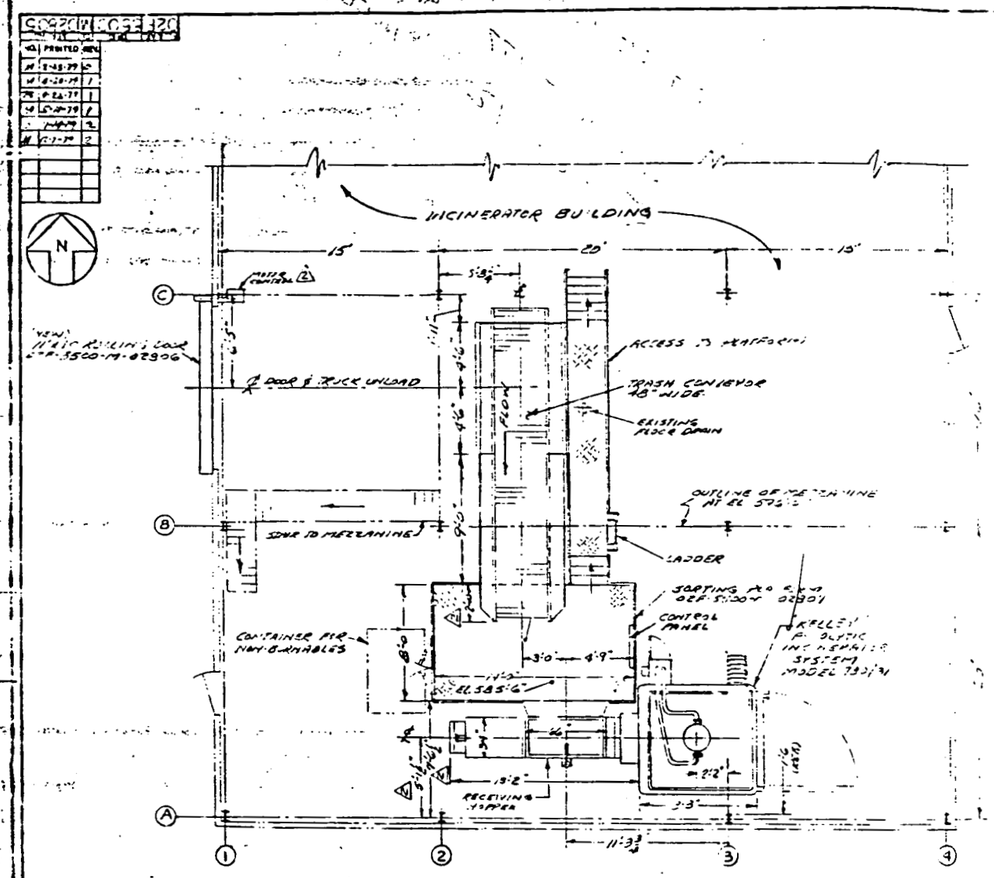
(Volume 10 of 13)

Fernald Environmental Management Project

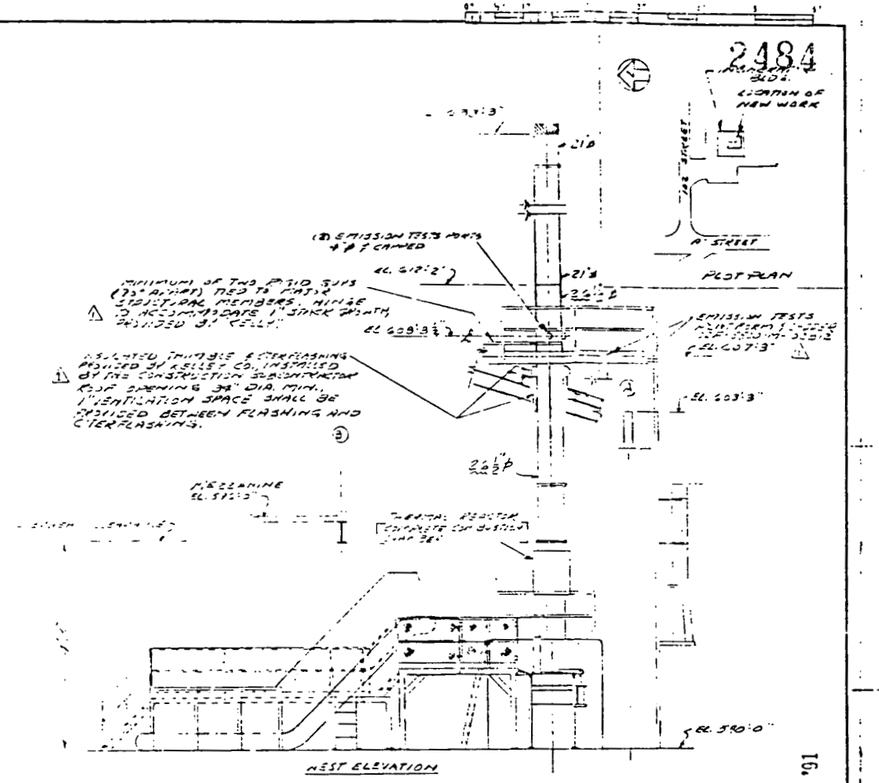
U.S. EPA Identification No. 0H6890008976
Ohio EPA Permit No. 05-31-0681

SECTION J:
ATTACHMENT J-2

2484



PLAN
SCALE 1/4" = 1'-0"



WEST ELEVATION

JUN 4 '91

NATIONAL LEAD COMPANY OF OHIO
FEED MATERIALS PRODUCTION CENTER
FERNALD, OHIO

U. S. DEPARTMENT OF ENERGY

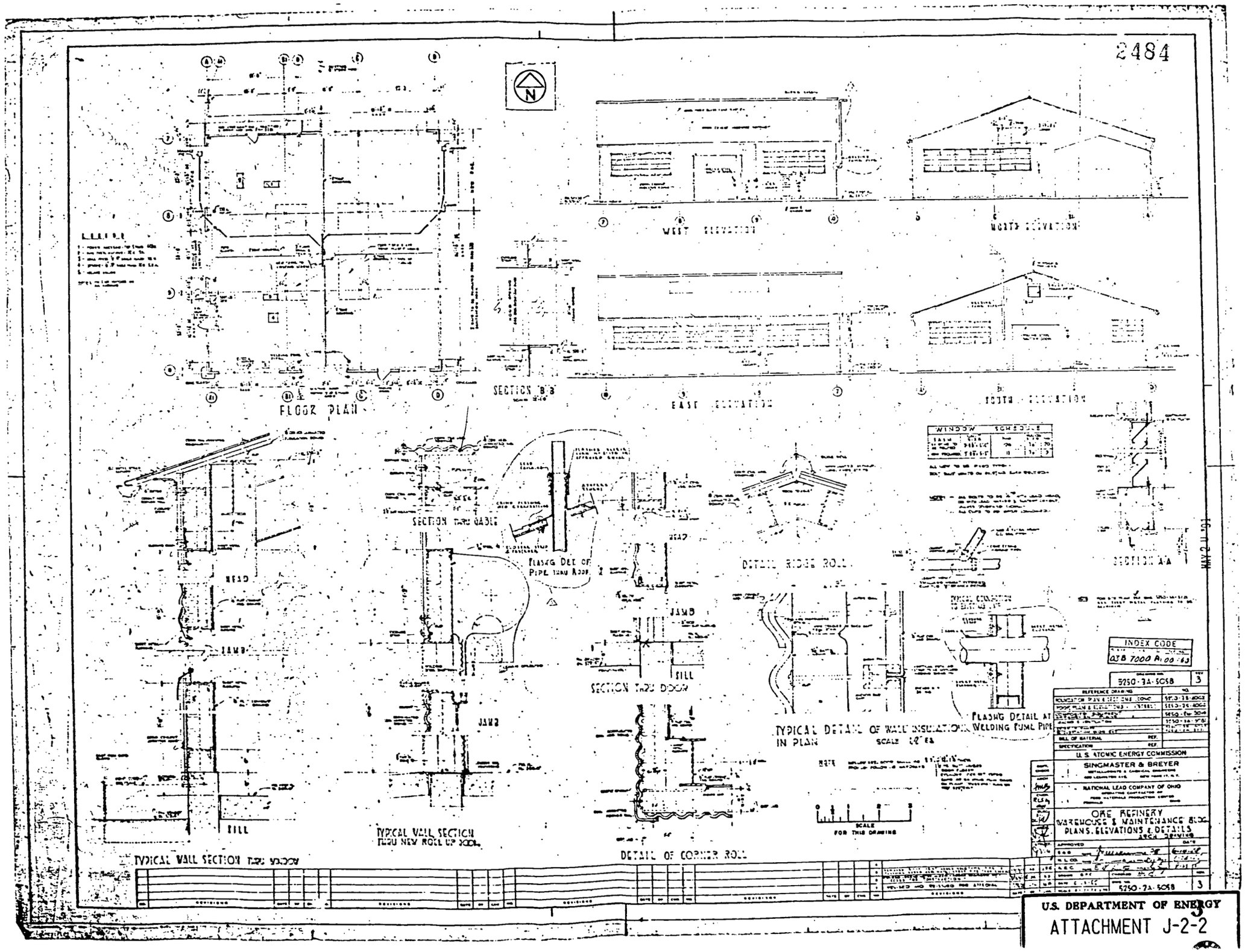
INCINERATOR BLDG.
SOLID WASTE INCINERATOR
GENERAL ARRANGEMENT
PLAN & ELEV

ENGINEERING DIVISION

APPROVALS

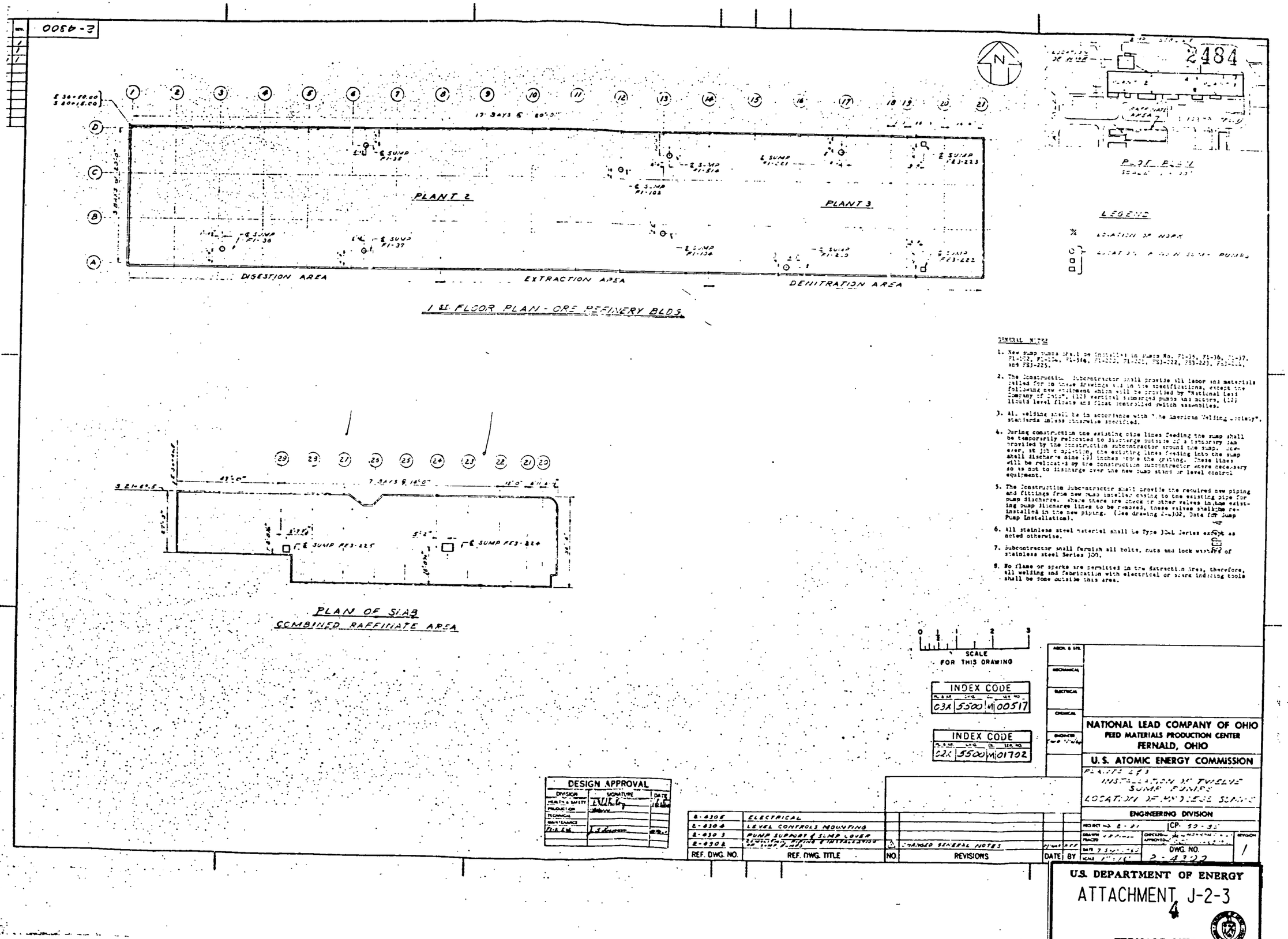
INDEX CODE
02F5500M02805

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-2-12

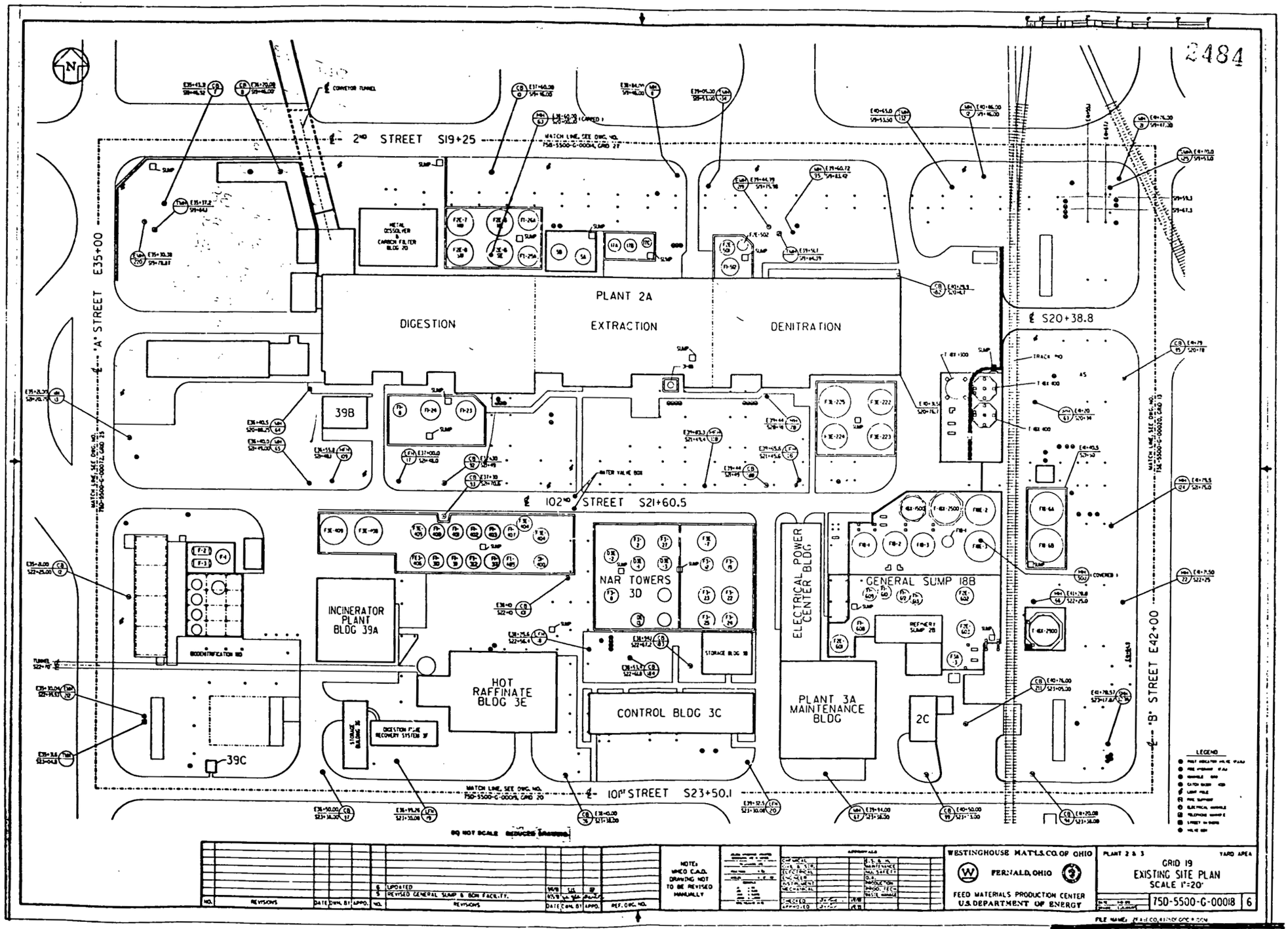


U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-2-2



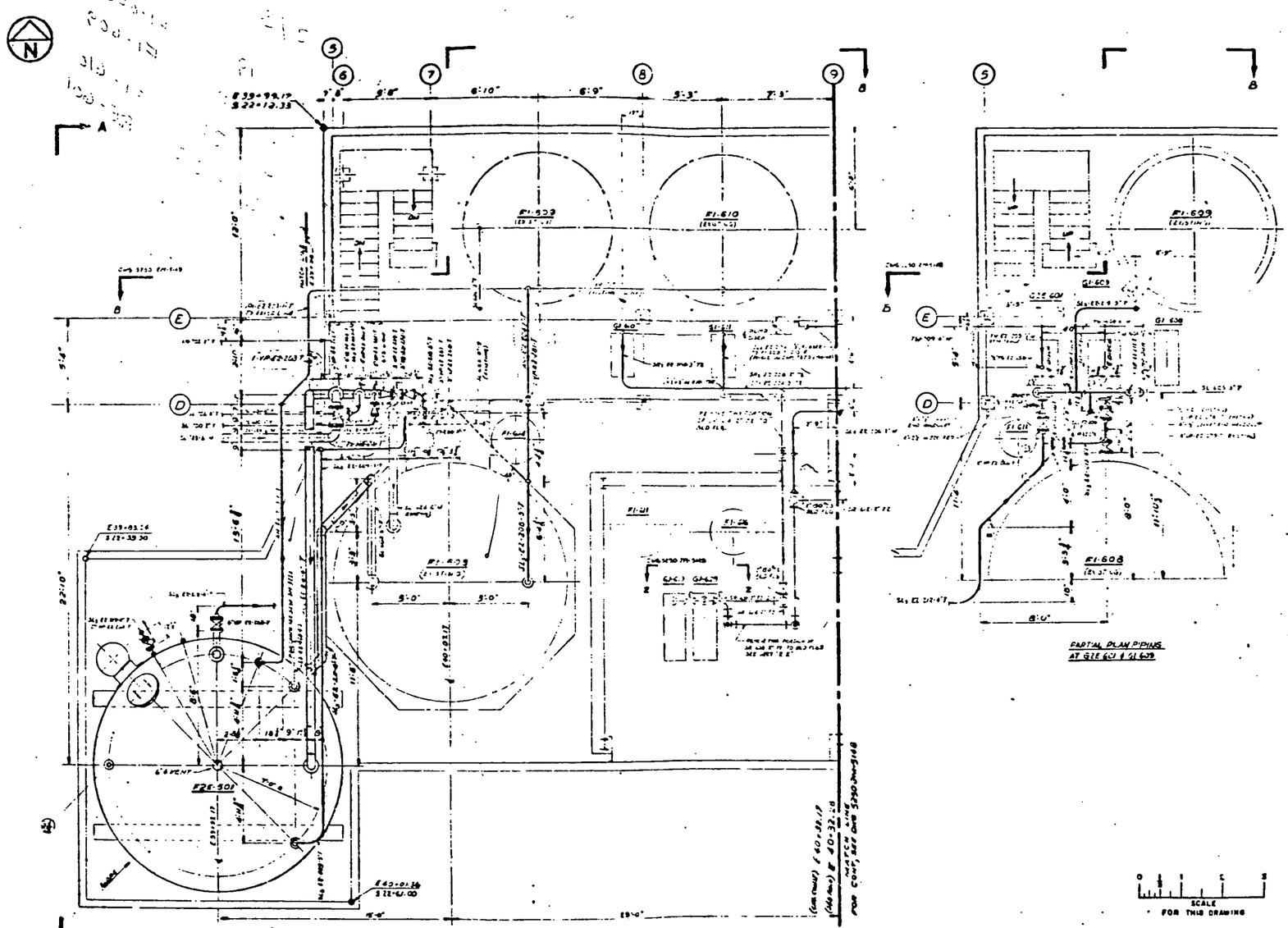
2-4300
2484
PLANT 2
PLANT 3
DIGESTION AREA
EXTRACTION AREA
DENITRATION AREA
1 ST FLOOR PLAN - ORE REFINERY BLDG
PLOT PLAN
LEGEND
LOCATION OF WORK
PLAN OF SLAB
COMBINED RAFFINATE AREA
SCALE FOR THIS DRAWING
INDEX CODE
C3X 5500 M 00517
INDEX CODE
C2X 5500 M 01702
DESIGN APPROVAL
DIVISION
SIGNATURE
DATE
HEALTH & SAFETY
PRODUCTION
TECHNICAL
MAINTENANCE
2-4305 ELECTRICAL
2-4304 LEVEL CONTROLS MOUNTING
2-4303 PUMP SUPPORT & SUMP COVER
2-4302 REMOVAL PIPING & INSTALLATION OF SUMP PUMPS
REF. DWG. NO.
REF. DWG. TITLE
NO.
REVISIONS
DATE
BY
CHANGED GENERAL NOTES
NATIONAL LEAD COMPANY OF OHIO
FEED MATERIALS PRODUCTION CENTER
FERNALD, OHIO
U.S. ATOMIC ENERGY COMMISSION
PLANTS 2 & 3
INSTALLATION OF TWELVE SUMP PUMPS
LOCATION OF PROCESS SUMPS
ENGINEERING DIVISION
PROJECT NO. 2-91
CP-50-95
DRAWN
CHECKED
APPROVED
DATE
SCALE
DWG. NO.
2-4302
REVISION
1
U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-2-3
4
FERNALD OHIO



U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-2-45

2484

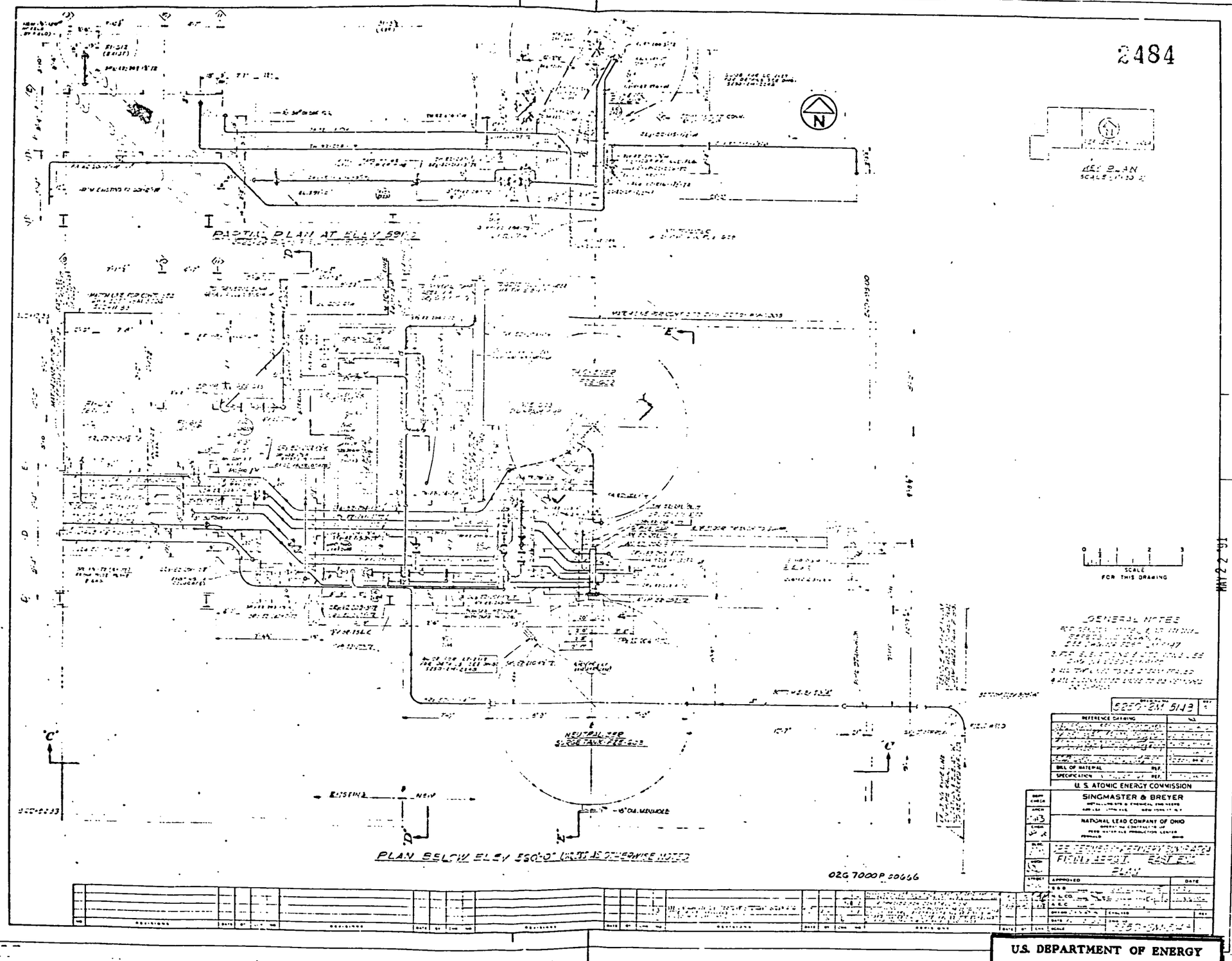


U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-2-5

FERNALD OHIO

2484

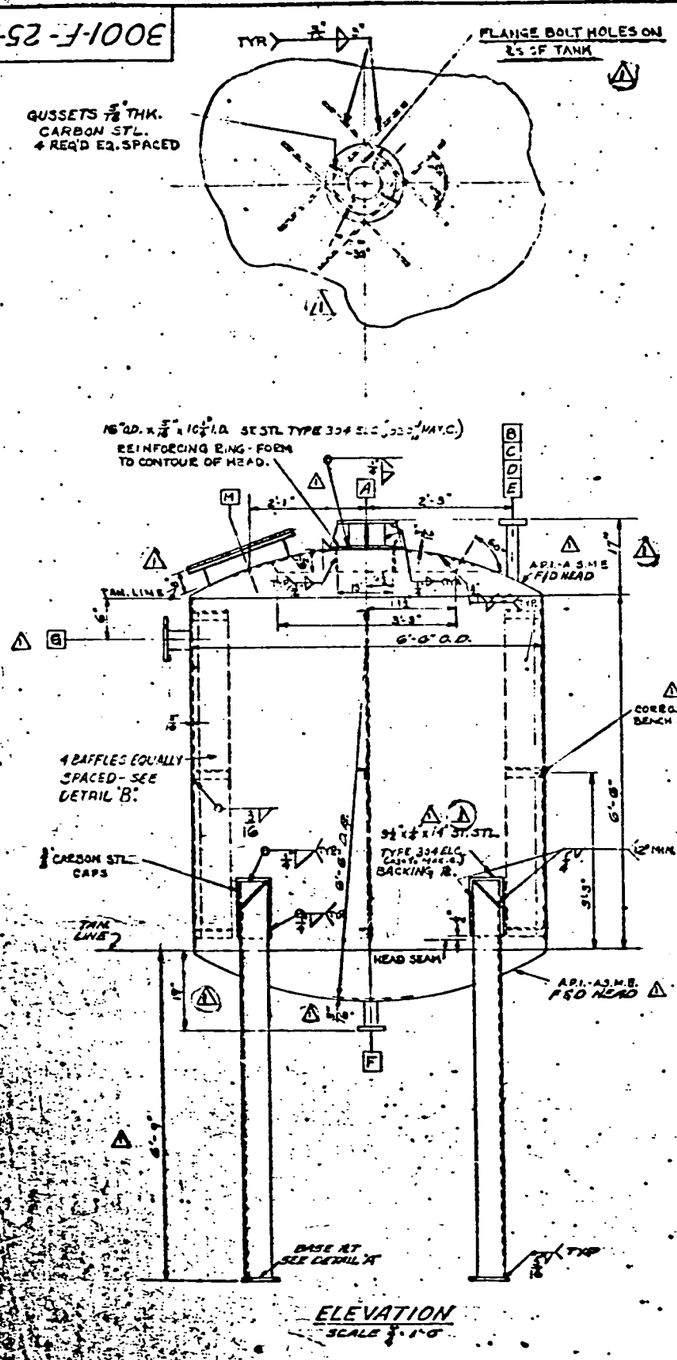


U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-2-6
7
FERNALD OHIO

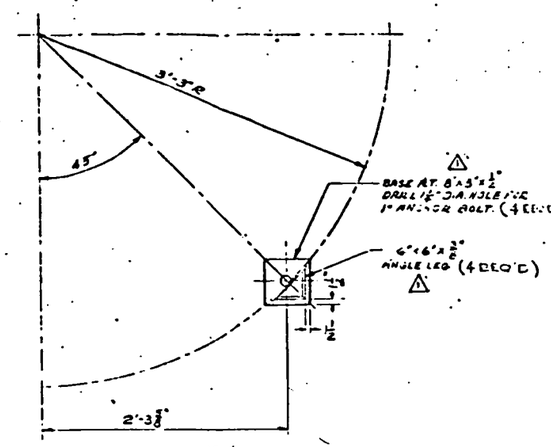
3001-F-25-B

REQ'D. NO. ONE
REQ. NO. 3001-F-5
PUR. ORD. NO. 1282

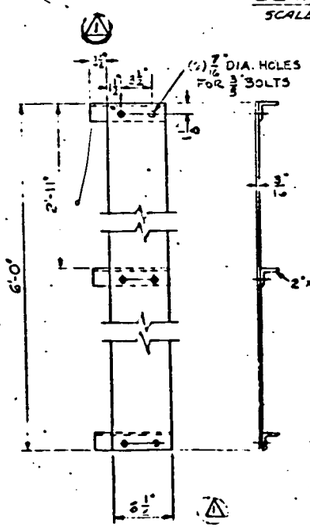
2484



ELEVATION
SCALE 3/4" = 1'-0"



DETAIL "A"
SCALE 1 1/2" = 1'-0"



DETAIL "B"
SCALE 1 1/2" = 1'-0"
(4 REQ'D)

SCALE FOR THIS DRAWING

GENERAL NOTES

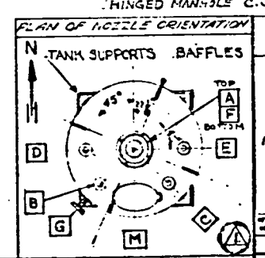
TANK TO BE ALL WELDED CONSTRUCTION IN ACCORDANCE WITH LATEST REVISION OF THE AMERICAN WELDING SOCIETY PROCEDURE.
ALL BOLT HOLES TO STRADDLE NATURAL ℄'S UNLESS OTHERWISE NOTED.

MATERIAL:
SHELL & HEADS: STAINLESS STEEL TYPE 304 ELC (.030% MAX. C.)
SUPPORTS: ASTM A-7 CR. COL. EXCEPT AS NOTED.
FLANGES: STAINLESS STEEL TYPE 304 ELC (.030% MAX. C.)
COUPLINGS: STAINLESS STEEL TYPE 304 ELC (.030% MAX. C.)
GASKETS: 1/8" TEFLON
PIPE: STAINLESS STEEL TYPE 304 ELC (.030% MAX. C.)
BOLTS & NUTS: S.S. 304
STUD NUTS: S.S. 403

REMOVE ALL RUST, GREASE, MILL SCALE, ETC.
ALL EXTERNAL CARBON STEEL MEMBERS SHALL BE PAINTED WITH ONE SHOP COAT OF "AMERCOAT #13" WASH PRIMER & ONE SHOP COAT OF "AMERCOAT #13" SEAL COAT.
NORTH AMERICAN [illegible] TO BE [illegible] IN VES. EL.
ALL STAINLESS STEEL TO BE 2B FINISH.
TEST:
HYDROSTATIC TEST - 35 PSI.

SHIPPING WEIGHT ____ 3,250 LBS.
OPERATING WEIGHT (SHELL PLUS AGITATOR) ____ 22,400 LBS.
TEST WEIGHT ____ 21,000 LBS.
CAPACITY ____ 2200 GALS.
REFERENCE: CORROSION BENCH MARK - DSF-107
VESSEL TO BE FABRICATED TO C.C.Co. SPECIFICATIONS PRESSURE VESSEL INDEX PART II SECTION 1
HINGED MANHOLE C.C.Co. STD. DSF-10 MATERIAL TO BE STL TYPE 304 ELC (.030% MAX. C.)

PLAN OF NOZZLE ORIENTATION



REV. NO.	DATE	DESCRIPTION	DRAWN BY	APPD.
		ADDED NOZZLE ORIENTATION; NOZZLE "F" WAS 8" NOZZLE "F" WAS 3"; AGITATOR REMOVAL DIMENSIONS WERE 17" FROM TANK; WAS 20"; CHG'D. DIM. "A" WAS 20" TO 21"; ADDED BACKING PL. & CHG'D. NOZZLE "B" WAS 3"		
1	3/1/52	VESSEL WAS ATMOSPHERIC; HYDROSTATIC TEST ADDED. DIM. "A" WAS 17", DIM. AT "F" WAS 17" MANHOLE PROJECTION "M" IS 9"	J.P.Q.	
		CH'G D. AGITATOR MOUNT DESIGN; CODE HEAD WAS STD.; LEGS WERE 3 1/2" x 3 1/2" x 1/4"; BACKING PL. WAS 1/4"; FLOOR PL. WAS 3" x 3" x 1/4"; REMOVED NOZZLE "G"; NOZZLE "M" WAS 1" COUPLING; REVISED WEIGHTS ADDED CORROSION BENCH MARK; G-1" DIM. WAS 6'-4 1/2"; HEAD THK. WAS 1/4"; CHANGED BAFFLE DESIGN.		

REVISIONS

M	1	13"	150# A.S.A. FLAT FACE		MANHOLE	HINGED
G	1	4"	150# A.S.A. FLAT FACE	3'-10"	LEVEL ALARM	
F	1	3"	150# A.S.A. FLAT FACE		DRAIN	
E	1	8"	150# A.S.A. FLAT FACE		AUTO INLET	
D	1	2"	150# A.S.A. FLAT FACE		WATER INLET	
C	1	2"	150# A.S.A. FLAT FACE		SLURRY INLET	
B	1	6"	150# A.S.A. FLAT FACE		VENT	
A	1	8"	150# A.S.A. FLAT FACE		AGITATOR MOUNT	
CONN.	NO. REQ'D	SIZE	RATING & FACING	PROJECTION FROM VESSEL	SERVICE	REMARKS

NOZZLE SCHEDULE

PL. & SH.	OPN.	CL.	MAN. NO.
026	1450	M	00187

INDEX CODE

APPROVED FOR A. E. C. BY ____
DATE ____

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

CONTRACT No. AT(30-1)-1060
FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

FILTER CAKE RECEIVER TANK
6'-6" O.D. X 6'-6" HIGH
ITSM NO. F1-612

DATE 11-5-51
SCALE 3/4" = 1'-0" EXCEPT AS NOTED
DRAWN J.W. FORNESS
CHECKED R. Ulrich 11-5-51

OFFICE OF CATALYTIC CONSTRUCTION CO. 1528 WALNUT STREET PHILA. 2, PA.

APPROVED FOR CONSTRUCTION

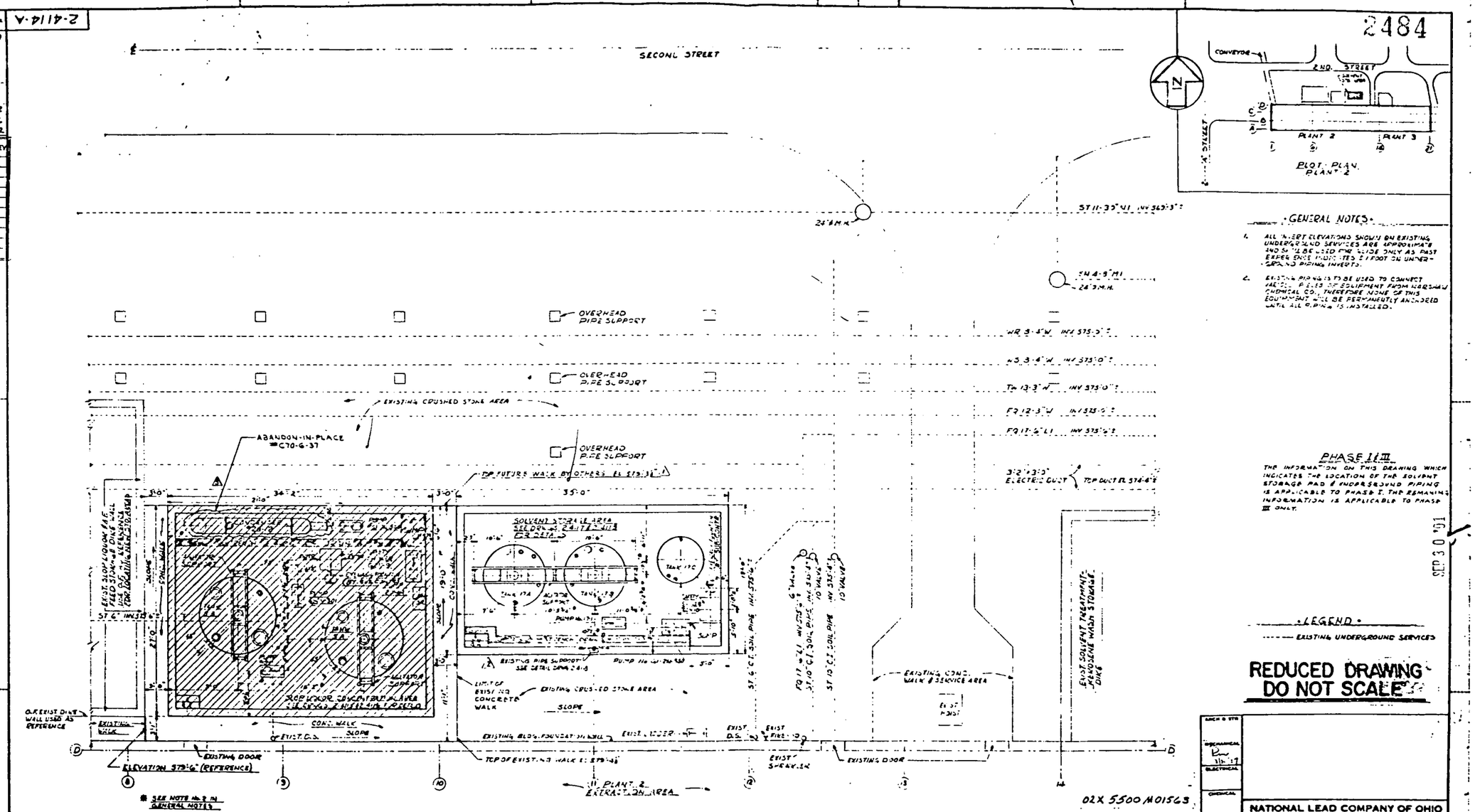
DRAWING NO. 3001-F-25-B
REVISION NO. 1

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-2-7
8
FERNALD, OHIO

2484

2-4114-A

PRINTED	REV
12-9-57	0
12-17-57	1
12-23-57	1
12-26-57	1
1-13-58	1
1-24-58	1
1-7-58	1
2-18-58	2
5-13-58	2
7-21-58	2



GENERAL NOTES

1. ALL INVERT ELEVATIONS SHOWN ON EXISTING UNDERGROUND SERVICES ARE APPROXIMATE AND SHOULD BE USED FOR GUIDE ONLY AS PAST EXPERIENCE INDICATES 2 FOOT ON UNDERGROUND PIPING INVERTS.
2. EXISTING PIPING IS TO BE USED TO CONNECT PARTIAL PIECES OF EQUIPMENT FROM WORSHAM CHEMICAL CO., THEREFORE NONE OF THIS EQUIPMENT WILL BE PERMANENTLY ANCHORED UNTIL ALL PIPING IS INSTALLED.

PHASE II & III

THE INFORMATION ON THIS DRAWING WHICH INDICATES THE LOCATION OF THE SOLVENT STORAGE PAD & UNDERGROUND PIPING IS APPLICABLE TO PHASE I. THE REMAINING INFORMATION IS APPLICABLE TO PHASE III ONLY.

SEP 30 '01

LEGEND

EXISTING UNDERGROUND SERVICES

REDUCED DRAWING DO NOT SCALE

DESIGN APPROVAL		
DIVISION	SIGNATURE	DATE
HEALTH & SAFETY		
PRODUCTION		
TECHNICAL	Ron Wright	
MAINTENANCE		

REF. DWG. NO.	REF. DWG. TITLE
2-4135-8	MIXER-SETTLER EMER. FLOW DIAGRAM
2-6106-1	PRELIM. EXIST. PLAN DIAGRAM
2-6115	CONCRETE FOUNDATIONS - SECTIONS & DETAILS
2-6117	CONCRETE FOUNDATIONS - PLAN & ELEVATIONS
2-6116	CONCRETE FOUNDATIONS - SECOND & DETAILS
2-6138	CONCRETE FOUNDATIONS - ALL DRAWING TEXTURE
2-6115	CONCRETE FOUNDATIONS - PLAN & ELEVATIONS

NO.	REVISIONS	DATE	BY
A	IDENTIFIED A.I.P. PER RED LINE	9-21-57	[illegible]
0	CHANGED NEW PIPE SUPPORT TO EXISTING PIPE SUPPORT	2-13-58	A.S.
1	CHANGED NOTE - TOP EXISTING WALK	7-21-58	[illegible]

INDEX CODE: 03A 5500 M 00396

02X 5500 M01563

NATIONAL LEAD COMPANY OF OHIO
FEED MATERIALS PRODUCTION CENTER
FERNALD, OHIO

U.S. ATOMIC ENERGY COMMISSION

PLANT-2 ORE REFINERY
SLOP LIQUOR CONCENTRATION AND SOLVENT STORAGE AREA
PLOT PLAN AND EQUIPMENT LAYOUT

ENGINEERING DIVISION

PROJECT NO. 2.5.3 | CP-F-57-81

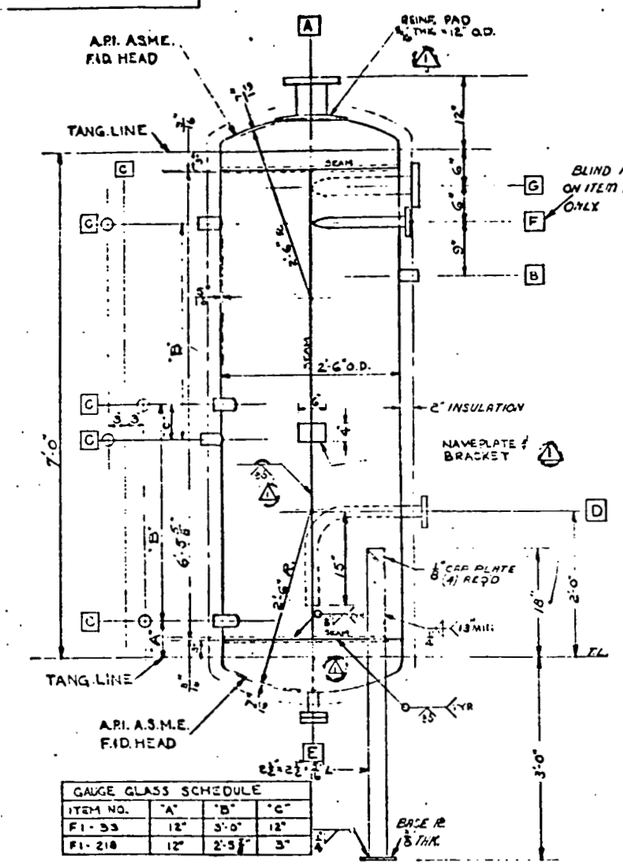
DATE 1-30-57 | DWG. NO. 2-4114-A | SHEET 3

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-2-8
FERNALD, OHIO

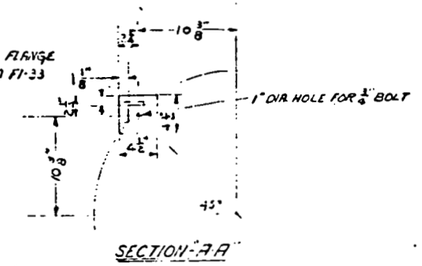
3001-F-96-B

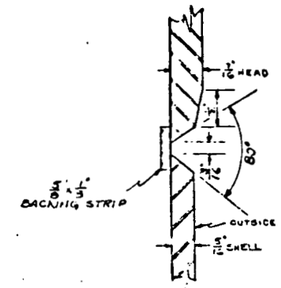
REQ'D. Nº. 2
REQ. Nº. 3001-F-16
PUR. ORD. Nº 2254

2484

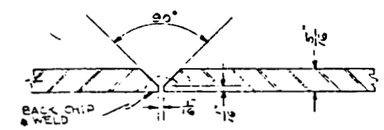


GAUGE GLASS SCHEDULE			
ITEM NO.	"A"	"B"	"C"
F1-33	12"	3'-0"	12"
F1-218	12"	2'-9½"	3"



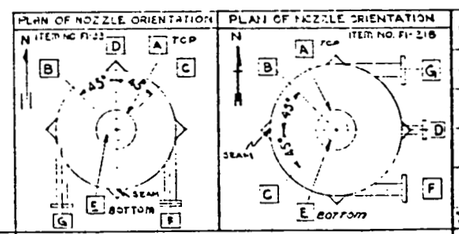


PREPARATION OF TYPICAL HEAD SEAM WELD
FULL SCALE



PREPARATION OF SHELL SEAM WELD
FULL SCALE

0 ½ 1 2 3
SCALE FOR THIS DRAWING



DESIGN NOTES

PRESSURE: OPERATING - 150 PSI. DESIGN - 165 PSI.
TEMPERATURE: OPERATING - 460°F. DESIGN - 500°F
CORROSION ALLOWANCE - 1/16"
JOINT EFFICIENCY - SHELL - 78% HEAD - 100%
STRESS RELIEVE - NO
RADIOGRAPH - NO
HAMMER TEST - 282 P.S.I.
MAX. ALLOWABLE W.P. - NEW AND COLD - 226 P.S.I.
MAX. ALLOWABLE W.P. FULLY CORRODED @ DESIGN TEMP. 160 P.S.I.
HYDROSTATIC TEST PRESSURE - 339 P.S.I.
CONSTRUCTION: FUSION WELDED IN ACCORDANCE WITH LATEST REVISION OF A.P.I. A.S.M.E. CODE FOR UNFIRED PRESSURE VESSELS.
FABRICATOR TO REINFORCE OPENINGS TO MEET REQUIREMENTS OF A.P.I. A.S.M.E. CODE.

MATERIAL NOTES

SHELL AND HEAD - A.S.T.M. A283 GR. C FLANGE STEEL
SUPPORTS: - A.S.T.M. - A-7
INTERNAL BOLTS: - A.S.T.M. - A-193 GR. B-7
MANHOLE STUDS: - NONE
FLANGES: - A.S.T.M. A-283 GR. C
MANHOLE & COVER PL: - NONE
COUPLINGS: - A.S.T.M. A-181 GR. I
PIPE: - A.S.T.M. A-53 GR. A
GASKETS: - 1/16" ASBESTOS
NUTS: - A.S.T.M. A-194 GR. 2H

GENERAL NOTES

INSPECTION: VESSEL TO BE INSPECTED AND STAMPED (CODE SYMBOL)
PAINTING: ALL EXTERNAL CARBON STEEL MEMBERS SHALL BE PAINTED WITH ONE SHOP COAT OF AMERCOAT #13 WASH PRIMER AND ONE SHOP COAT OF AMERCOAT #13 SEAL COAT.
INSULATION - NONE
SHIPPING WEIGHT - 1200 LBS.
OPERATING WEIGHT (FULL) - 3850 LBS.
TEST WEIGHT - 3500 LBS.
CAPACITY (FULL) - 275 GALS.
ALL BOLT HOLES TO STRADDLE NATURAL ℄'S UNLESS OTHERWISE NOTED
NORTH ARROW AND ITEM No. TO BE PAINTED ON VESSEL.

REFERENCE DRAWINGS

VESSEL TO BE FABRICATED TO C.C.CO. SPECIFICATIONS, PRESSURE VESSEL INDEX PART IX, SECTION 1

INDEX CODE
02A 1450 M00229

INDEX CODE
02C 1450 M00230

SYM.	NO. REQ'D.	SIZE	RATING & FACING	PROJECTION FROM ℄ OF VESSEL	SERVICE	REMARKS
G	1	3"	150# A.S.A. FLAT FACE	18"	INLET	
F	1	2"	150# A.S.A. FLAT FACE	16"	INLET	
E	1	2"	150# A.S.A. FLAT FACE		CLEAN OUT PLUG	BLIND FLANGE
D	1	3"	150# A.S.A. FLAT FACE	21"	SUCTION PUMP	PIPE CAP TO SUIT
C	4	½"	3000# COUPLING		GAUGE GLASS	
B	1	1½"	3000# COUPLING		RELIEF VALVE	
A	1	6"	150# A.S.A. FLAT FACE		STM. OUTLET	

NOZZLE SCHEDULE

REV. NO.	DATE	DESCRIPTION	BY	APP'D
5				
4				
3				
2				
1	9-12-52	ADDED SECTION (C) TO PREVENT SINK IN OF WELD DUE TO ADDED BACKING PLATE. ADDED AN APPROXIMATE NUMBER OF NOZZLES. NOZZLE & GAUGE TAPS CHGD. HOLES REQ'D. FLED ON NOZ'S. FLANGES WERE WITH A 150 LB. ELL SHELLS & HEADS. ALSO ADDED ALTERNATE	LPS.	

REVISIONS

APPROVED FOR A.E.C. BY
DATE

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

CONTRACT No. AT(30-1)-1060
FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

STEAM CONDENSATE FLASH TANK
2'-6" O.D. × 7'-0" HIGH
ITEM NO. F-1-33, 218

DATE 4-9-52	OFFICE: CATALYTIC CONSTRUCTION CO. 1528 WALNUT STREET PHILA. 2, PA.	APPROVED PRE. TOP
SCALE 1"=1'-0" EX. AS NOTED		
DRAWN L.D. SCHERER	APPROVED FOR CONSTRUCTION	A.E.C.
CHECKED A.S.-6-52 DIVSURE	DRAWING NO. 3001-F-96-B	REVISION NO. 1

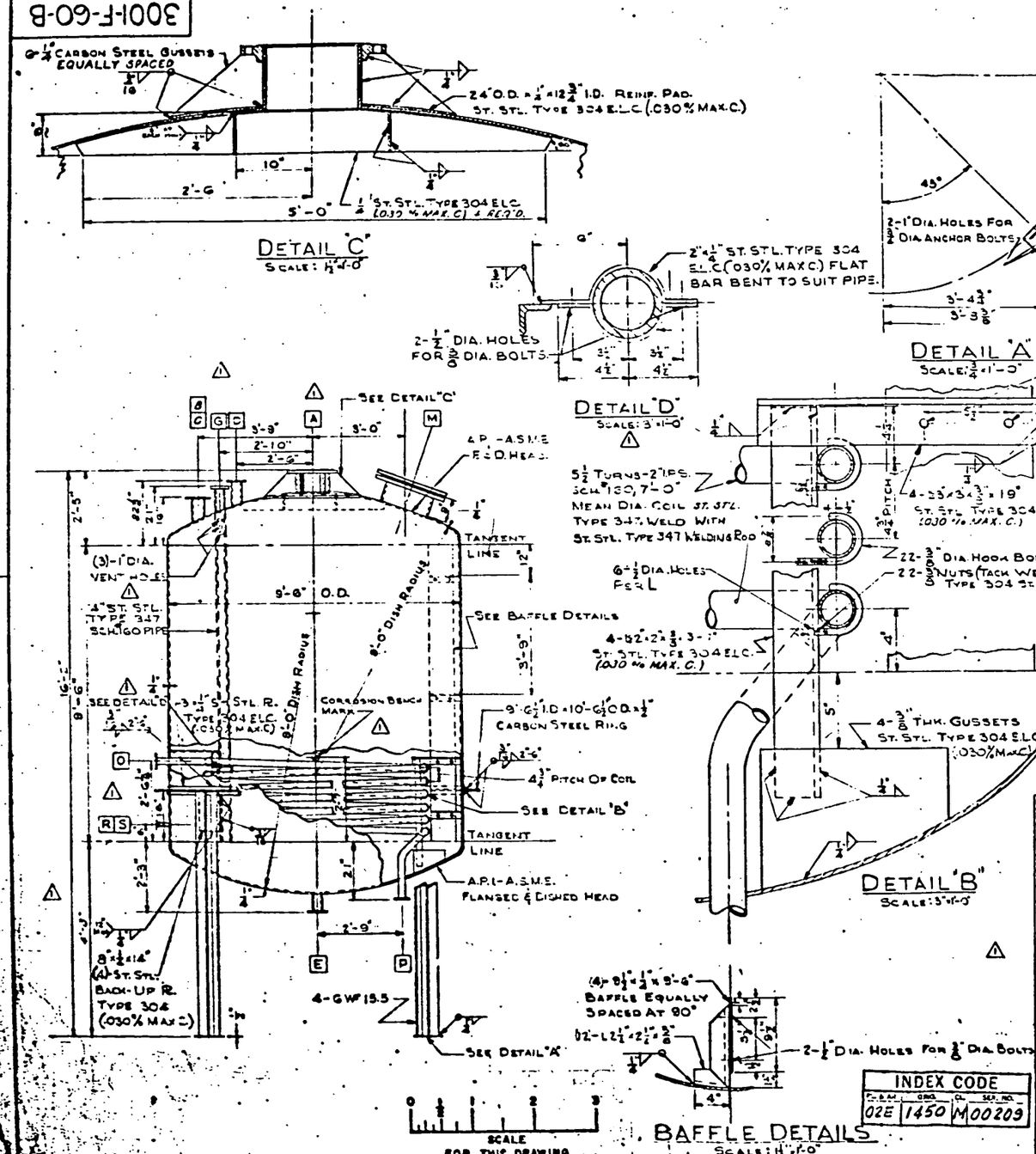
SEP 30 1951

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-2-9
10
FERNALD, OHIO

3001-F-60-B

REQ'D. No. ONE
REQ. No. 3001-F-10
PUR. ORD. No. 2127

2484



GENERAL NOTES

1. VESSEL TO BE ALL WELDED CONSTRUCTION IN ACCORDANCE WITH LATEST REVISION OF AMERICAN WELDING SOCIETY PROCEDURE.

MATERIALS:
SHELL & HEADS — STAINLESS STEEL, TYPE 304 E.L.C. (.030% MAX. C.)
FLANGES — STAINLESS STEEL, TYPE 304 E.L.C. (.030% MAX. C.)
COUPLINGS — NONE
BOLTS — STAINLESS STEEL, TYPE 304
NUTS — STAINLESS STEEL, TYPE 303 EXTERNAL & TYPE 304 INTERNAL
PIPE — STAINLESS STEEL, TYPE 347
SUPPORTS — A.S.T.M. A-7 OR EQUAL, EXCEPT AS NOTED.
GASKETS — 1/8" TEFLON
INSULATION — 2" BLOCK MAGNESIA (FIELD INSTALLED)
ALL BOLTS HOLES TO STRADDLE NATURAL ℄'S UNLESS OTHERWISE NOTED

PAINTING:
REMOVE ALL RUST, GREASE, MILL SCALE, ETC.
ALL EXTERNAL CARBON STEEL MEMBERS SHALL BE PAINTED WITH ONE SHOP COAT OF AMERCOAT #13 WASH PRIMER AND ONE SHOP COAT OF AMERCOAT #13 SEAL COAT.
NORTH, ARROW AND ITEM NO. TO BE PAINTED ON VESSEL.

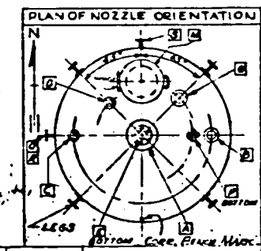
TEST
SHELL - HYDROSTATIC TEST — 35 PSI
COILS - HYDROSTATIC TEST BEFORE INSTALLING — 300 PSI

WEIGHTS:
SHIPPING WEIGHT — 8,300 LBS.
OPERATING WEIGHT (FULL + AGITATOR) — 102,400 LBS.
TEST WEIGHT — 58,300 LBS.
CAPACITY (FULL) — 6,000 GALS.

REFERENCE DRAWINGS:
FOR MANHOLE DETAILS - SEE C.C.CO. STD. D.S.F.HCG
FOR INSULATION DETAILS - SEE C.C.CO. STD. DSL-115. HOOK BOLTS - SK.-3001-D-34-9.
SPECIFICATIONS: FOR CORROSION BENCH MARK - SEE C.C.CO. STD. DSF-107
VESSEL TO BE FABRICATED TO C.C.CO. SPEC. PRESSURE VESSEL INDEX PART 3, SECTION 1

MATERIAL TABLE ST. STL. TYPE 304 E.L.C. (.030%, MAX. C.)

PLAN OF NOZZLE ORIENTATION



REV. No.	DATE	DESCRIPTION	DRAWN BY	APP'D
5				
4				
3				
2	9/20/52	ADDED HYDROSTATIC TEST FOR COILS	J.K.G.	SJ
1	8/10/51	REVISED TO STEAM COIL, ADDED DETAIL REMOVED CORROSION BENCH MARK, REVISED NOTES, WEIGHTS & NOZZLE SCHEDULE, ADDED PLAN OF NOZZLE ORIENTATION, ADDED PIPE WALL TO NOZZLE "S", ADDED CERTAIN DETAILS, DELETED DETAIL OF SAMPLE COIL	J.C.C.	

REVISIONS

APPROVED FOR A.E.C. BY _____
DATE _____

S	1	1"	150# ASA FLAT FACE	5'-4"	SAMPLE COIL	
R	1	3/4"		5'-4"	THERMOCOUPLE	
P	1	2"			WATER INLET & STEAM OUTLET	
O	1	2"		5'-4"	STEAM INLET & WATER OUTLET	
M	1	20"	150# ASA RAISED FACE		MANHOLE	HINGED
G	1	4"	150# ASA FLAT FACE		A.S.L.E. & HIGH LEVEL ALARM	3/8" STL. WIRE 14'-8" LONG
E	1	3"	150# ASA FLAT FACE		DRAIN	
D	1	2"			RECIRCULATION	
C	1	3"			VENT	
B	1	2"			INLET	
A	1	12"	150# ASA RAISED FACE		AGITATOR MOUNT	
COMM.	NO. REQ'D.	SIZE	RATING & FACING	PROJECTION FROM ℄ VESSEL	SERVICE	REMARKS

NOZZLE SCHEDULE

INDEX CODE			
CLASS	ORIG.	CL.	SER. NO.
02E	1450	M	00209

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

CONTRACT No. AT(30-1)-1060
FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

EVAPORATOR BOTTOM SURGE TANK
9'-6" O.D. x 3'-6" T. to T.
ITEM FI-405

DATE 12-13-51
SCALE 1/4"=1'-0" EXCEPT AS NOTED
DRAWN J. J. VANTLAND, JR. COCCHI
CHECKED 12-14-51

OFFICE OF CATALYTIC CONSTRUCTION CO.
1528 WALNUT STREET
PHILA. 2, PA.

APPROVED FOR CONSTRUCTION

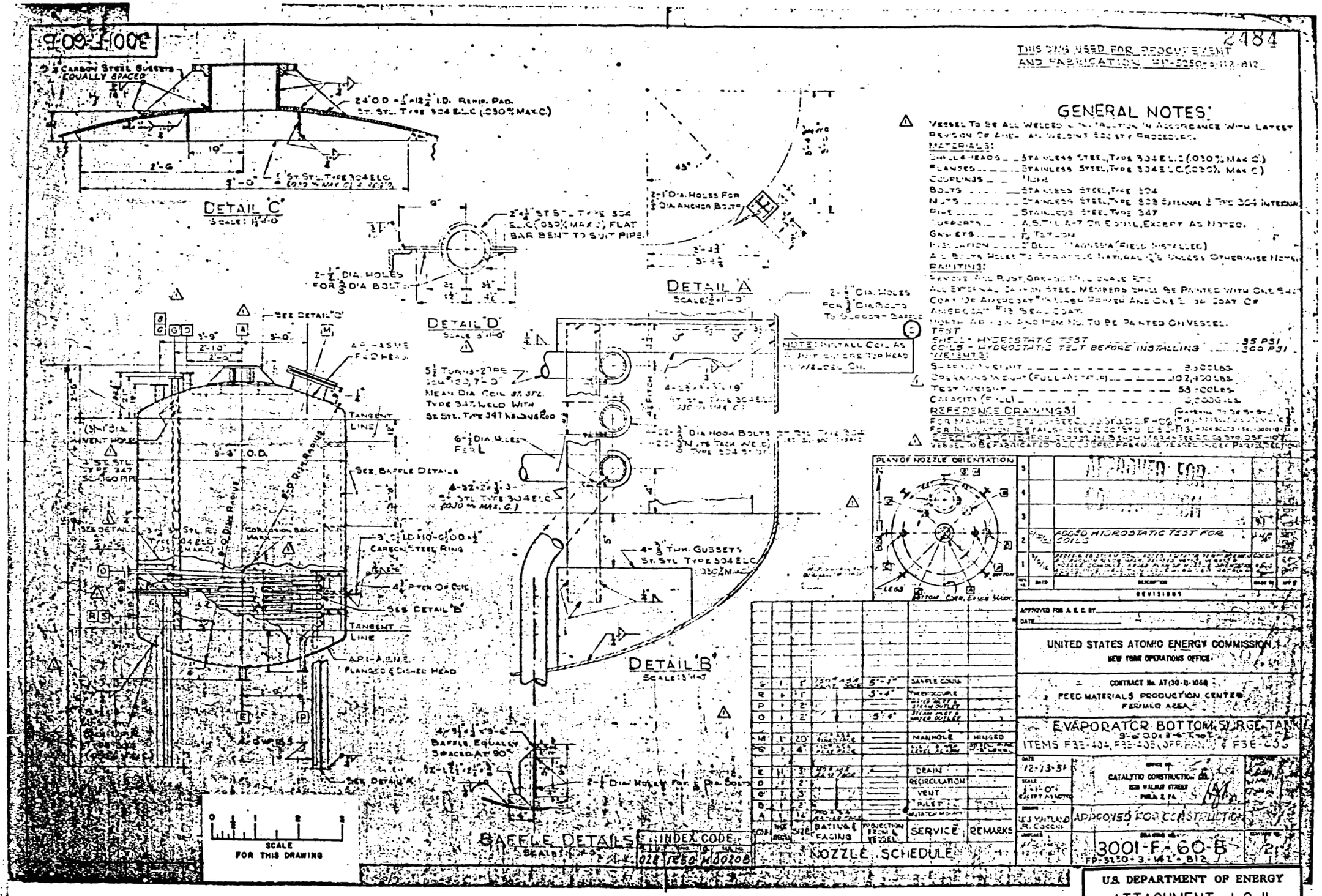
DRAWING No. 3001-F-60-B
REVISION No. 2

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-2-10
FERNALD, OHIO

3001-F-60-B

2484

THIS DWG USED FOR PROCUREMENT AND FABRICATION FP-3250-3-142-812



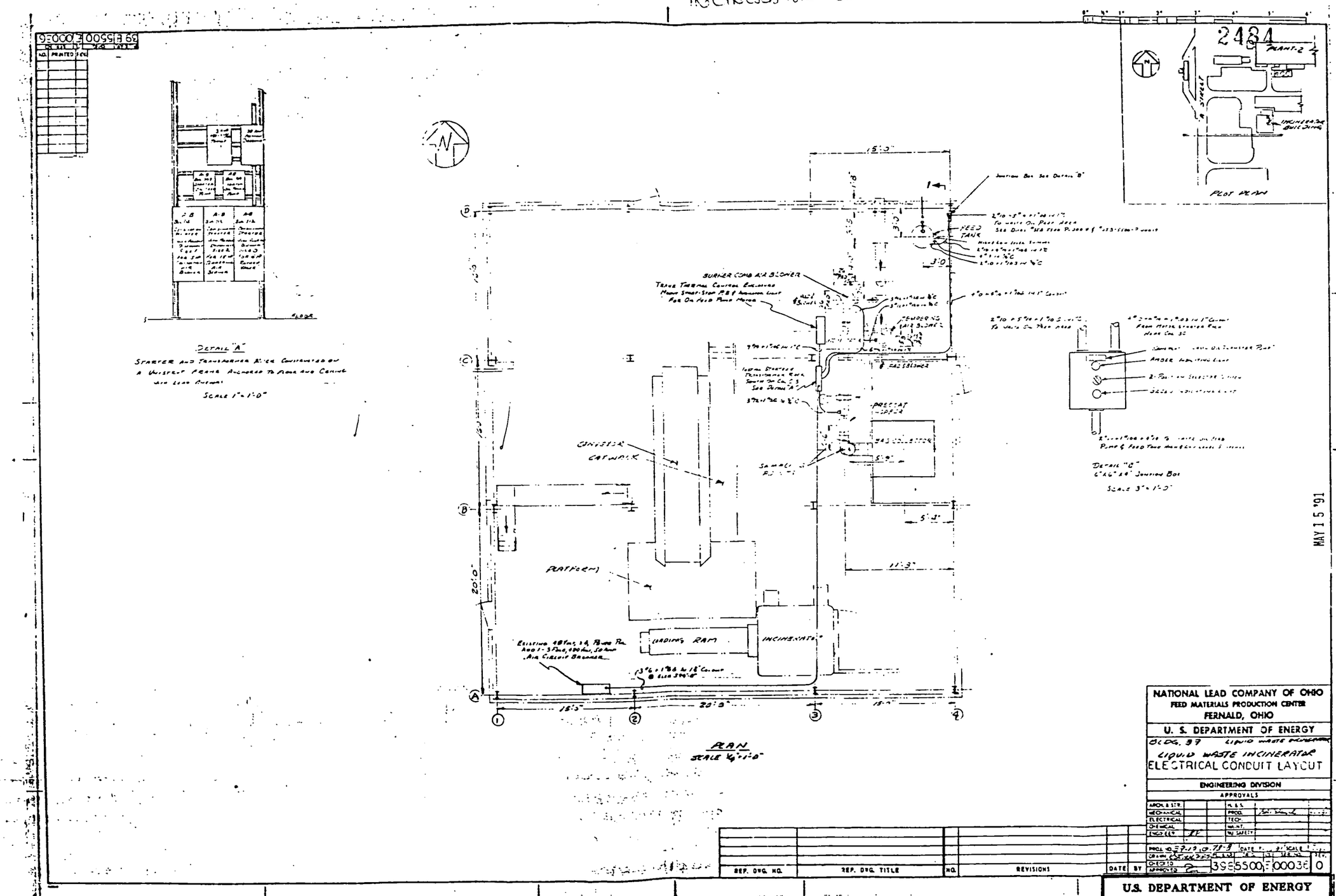
U.S. DEPARTMENT OF ENERGY

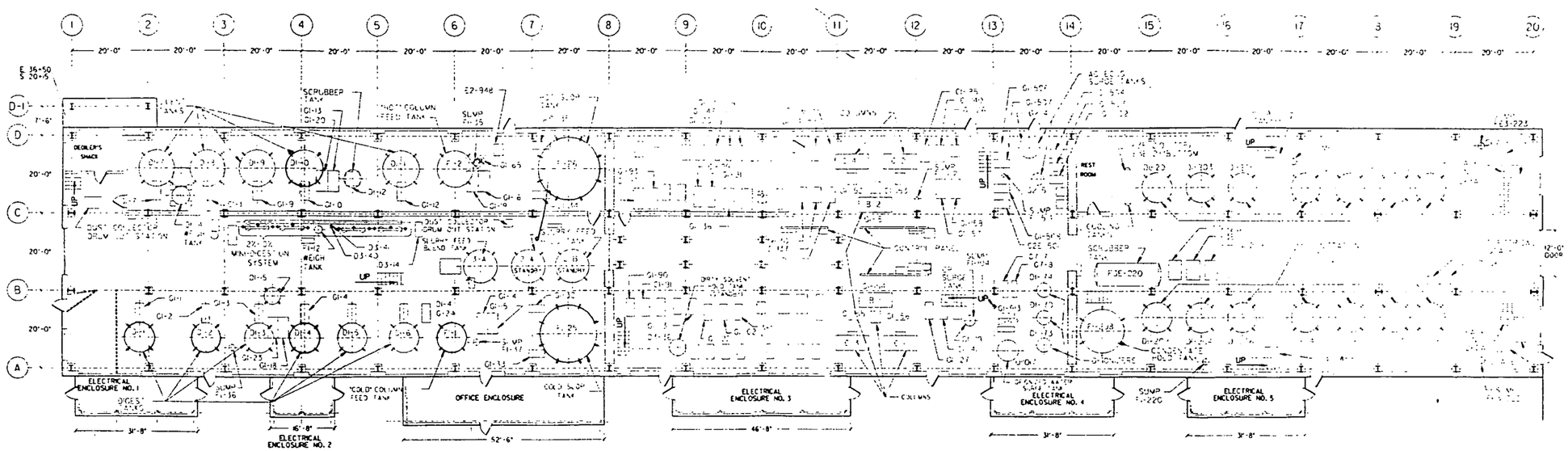
ATTACHMENT J-2-II

12

FERNALD, OHIO

TRANE THERMAL LIQUID INCINERATOR. GRID -19.





FLOOR PLAN @ EL. 580'-0"

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-2-13
FERNALD, OHIO

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.

NOTE: #MOD C.A.D. DRAWING NOT TO BE REVISED MANUALLY

APPROVALS

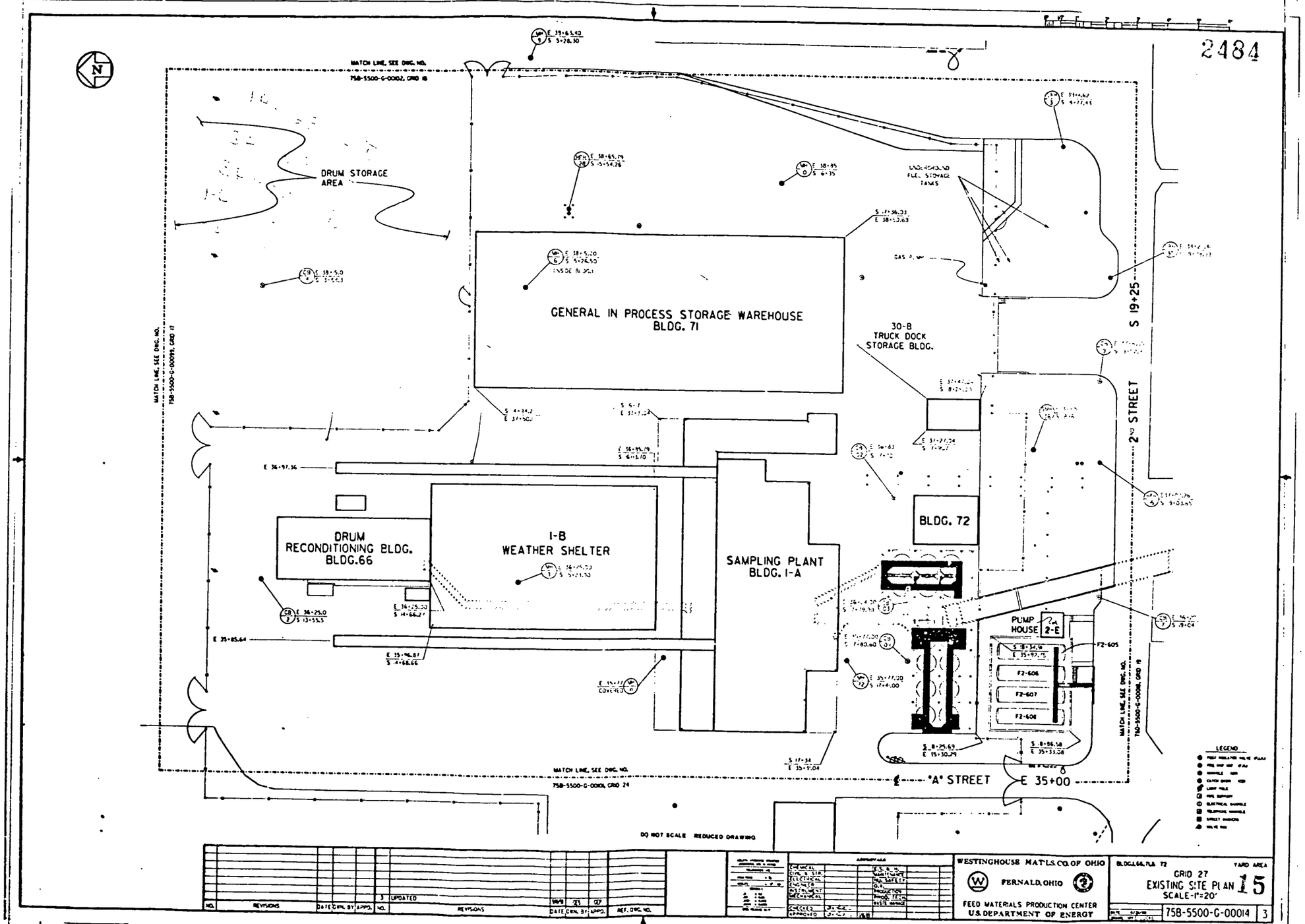
CHEMICAL		RADIOLOGICAL	
CIVIL & STR.		MAINTENANCE	
ELECTRICAL		IND. SAFETY	
ENGINEER		HQ &	
INSTRUMENT		PRODUCTION	
MECHANICAL		FIRE & SAFETY	
		WASTE MANAGT.	
CHECKED			
APPROVED			

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

PLANT 2A — FIRST FLOOR, EL. 580'-0"
ORE REFINERY PLANT 14
FLOOR PLAN
1/12" = 1'-0"

02X-5500-A-03342 | 0

FILE NAME:

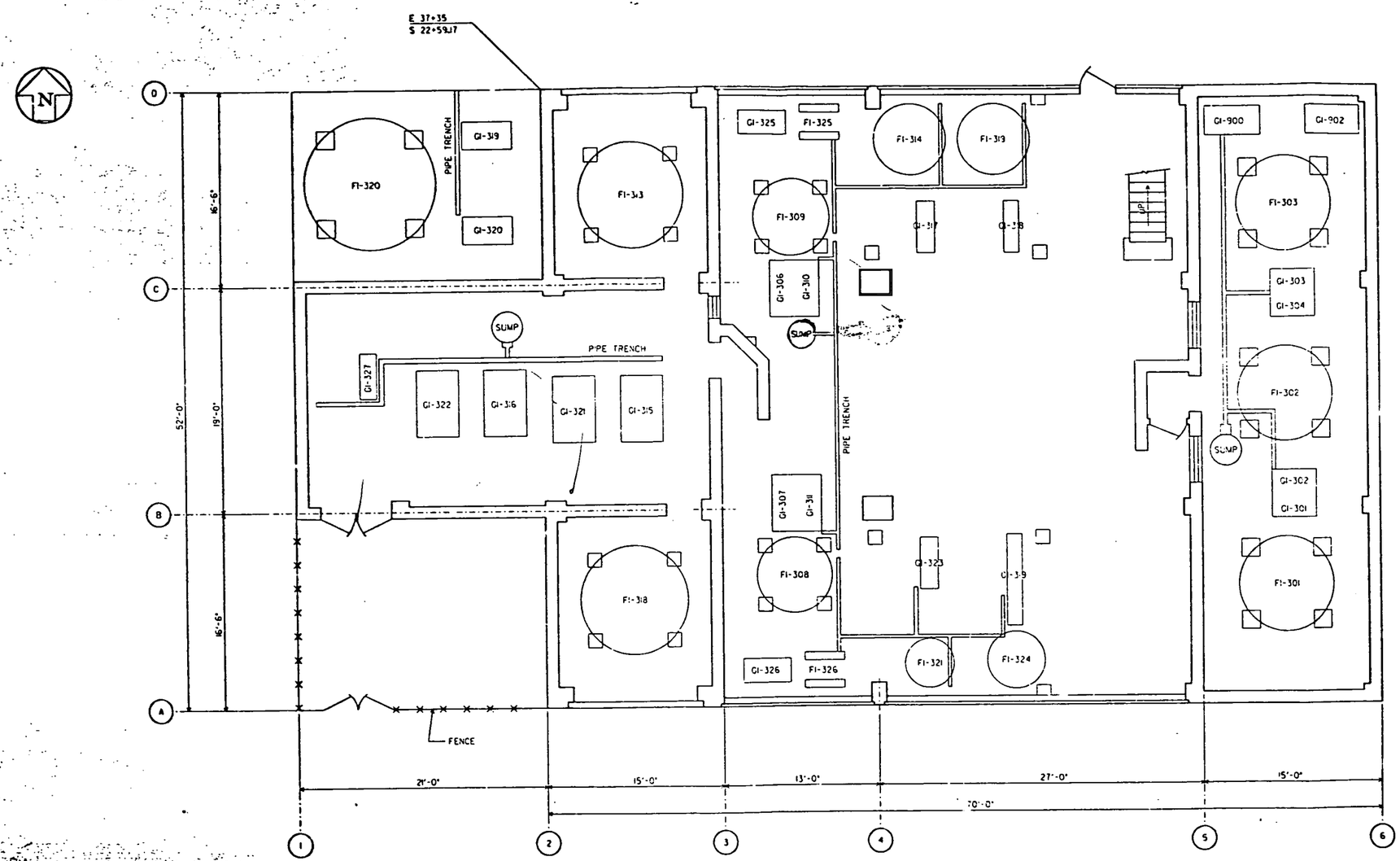


U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-2-14

SEP 25 '91

2484



PLAN AT ELEVATION 580'-0"

DO NOT SCALE REDUCED DRAWING

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
										02XA03552.DGN
										02XA03551.DGN
										02X-1450-S-00059

NOTE: WMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

APPROVALS

CHEMICAL		I.R.S. & T.	
CIVIL & STR.		MAINTENANCE	
ELECTRICAL		NU. SAFETY	
ENGINEER		Q.A.	
INSTRUMENT		PRODUCTION	
MECHANICAL		FIRE & SAFETY	
		WASTE MANAGE	
CHECKED		D.O.E.	
APPROVED		SECURITY	

WESTINGHOUSE MAT'LS. CO. OF OHIO

FERNALD, OHIO

FERNALD SITE OFFICE
U.S. DEPARTMENT OF ENERGY

BUILDING 3E — FIRST FLOOR

HOT RAFFINATE BUILDING

FLOOR PLAN 16

1/4" = 1'-0"

02X-5500-A-03350 | 0

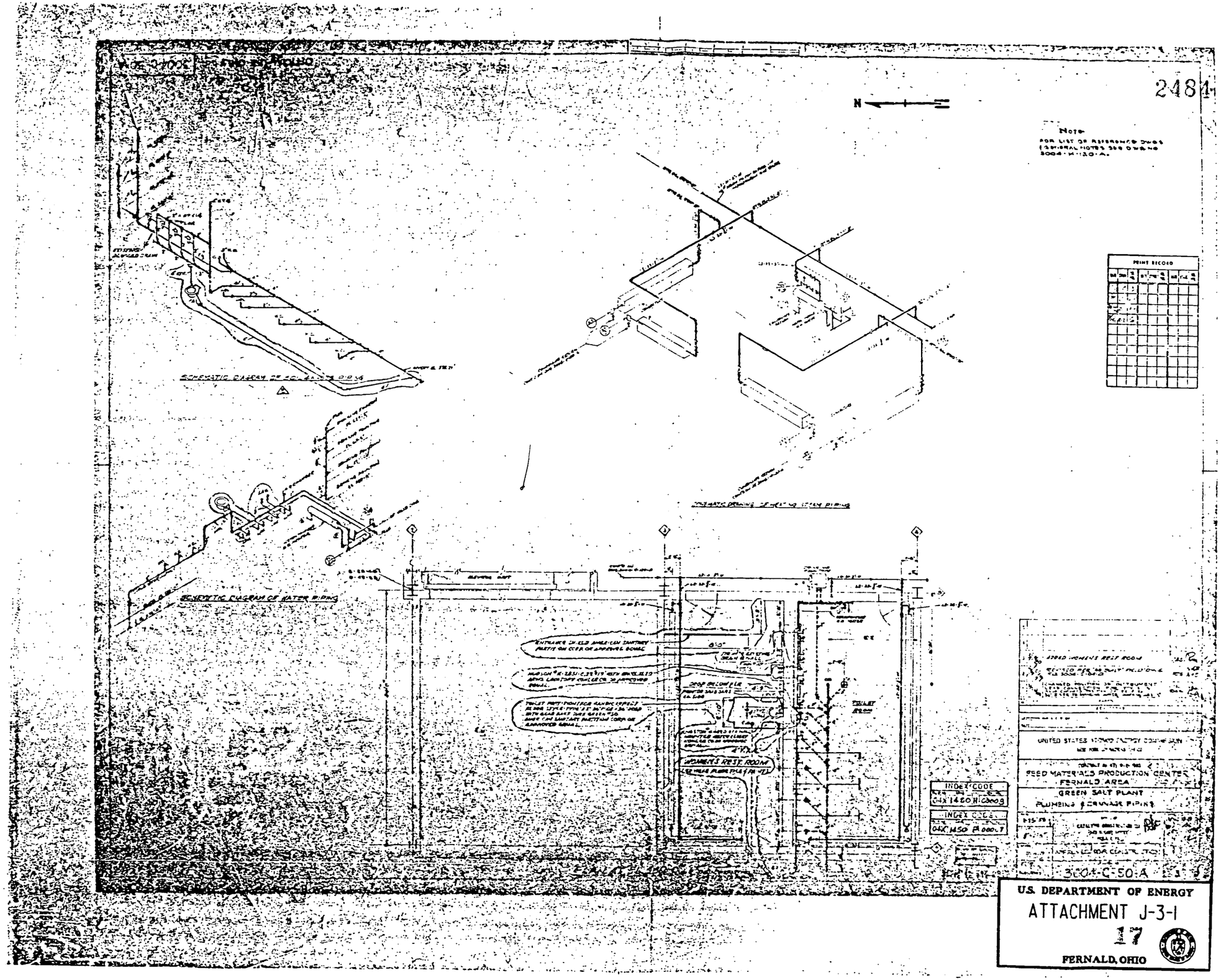
CAD CAM INC. FILE NAME: /USR/FSO/FLOOR/02XA03350.DGN

OCT 2 1 '91

U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-2-15

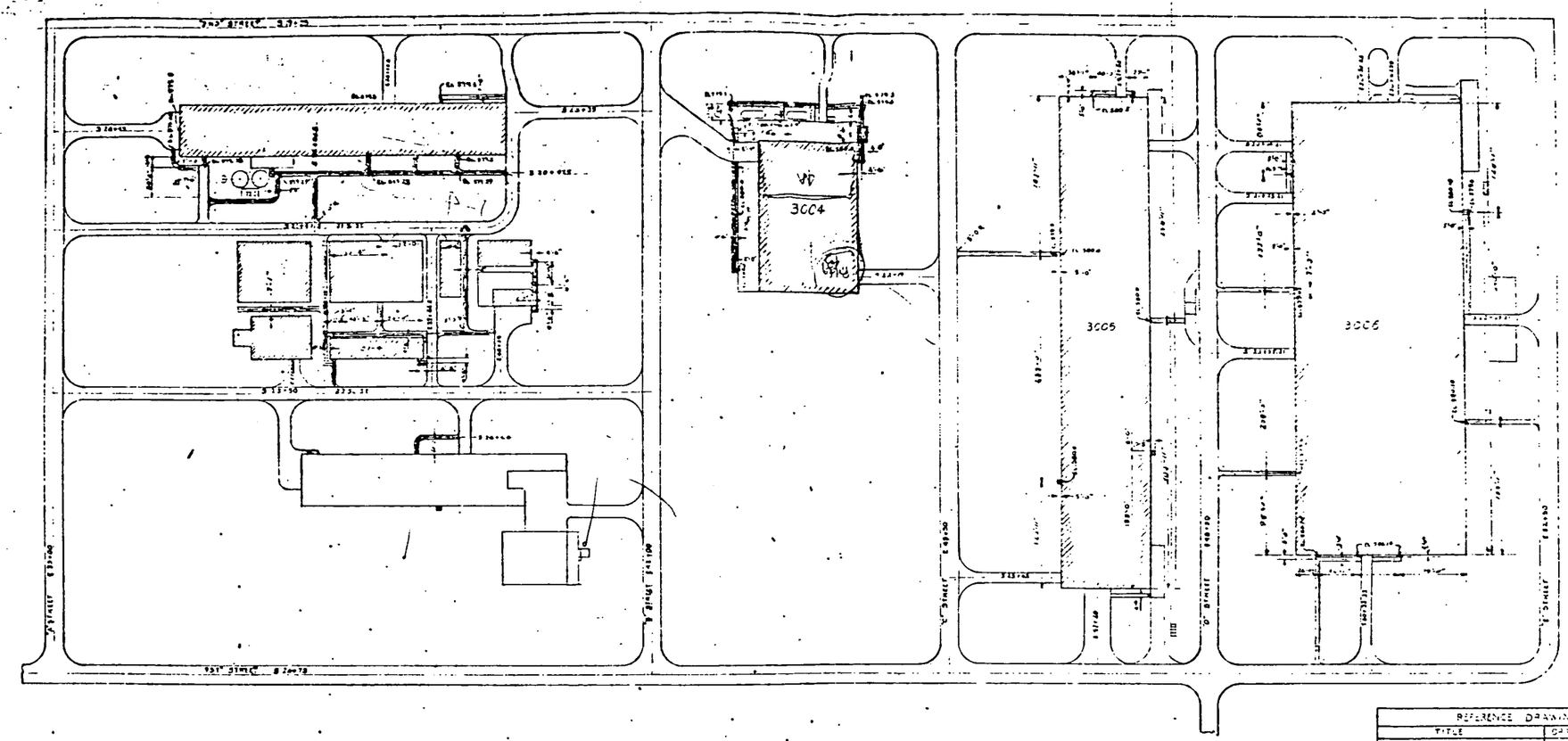
SECTION J:
ATTACHMENT J-3

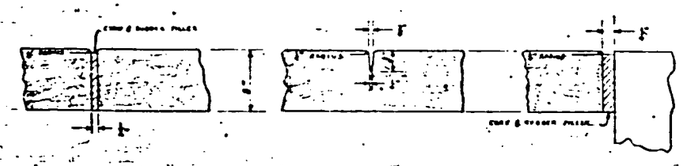

2481
N
Note
PRINT RECORD
SCHEMATIC DIAGRAM OF WATER PIPING
SCHEMATIC DRAWING OF HEATING STEAM PIPING
WOMEN'S REST ROOM
INDEX CODE
INDEX CODE
UNITED STATES ENERGY COMMISSION
FEED MATERIALS PRODUCTION CENTER
FERNALD AREA
GREEN SALT PLANT
PLUMBING & DRAINAGE PIPING
3C04-C-50-A
U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-3-1
17
FERNALD, OHIO

SEP 30 '91

DRUMMED HF RESIDUE AND ASSO. STORAGE AREAS INSIDE PH 4.

2484





GENERAL NOTES

1. CONCRETE TO BE TYPE C, 3000#
2. EXPANSION JOINTS TO BE 300'0" MAXIMUM
3. PLACE EXPANSION JOINTS AT ALL INTERSECTIONS WITH OTHER WALKS, DRIVES, ROADS, OR BUILDINGS
4. SLOPE WALKS 1/4" PER FT. AWAY FROM BUILDINGS FOR DRAINAGE
5. DUMMY JOINTS TO BE SPACED 5'0"
6. WOOD FLOAT FINISH
7. SIDEWALKS TO BE 5'-0" WIDE UNLESS INDICATED OTHERWISE.
8. BETWEEN SIDEWALK RAMP TO BE 3'0" EXCEPT WHERE NOTED OTHERWISE
9. WHEN SCARIFIED CROSS STICK PLACE NEW MATERIAL ON COMPACTED SUBGRADE

SCALE FOR THIS DRAWING

INDEX CODE
06X 1450 G00554

INDEX CODE
05X 1450 G00017

INDEX CODE
06X 1450 G00501

INDEX CODE
21X 1450 G00039

INDEX CODE
02X 1450 G00537

INDEX CODE
03X 1450 G00148

INDEX CODE
09X 1450 G00513

INDEX CODE

REFERENCE DRAWINGS

TITLE	DRAWING NUMBER
PLOT PLAN PRODUCTION AREA	3300-AA-01-A
SIDEWALK PLAN AREA 3 BETWEEN 1ST & 2ND STS	3021-S-35-A
MISCELLANEOUS SIDEWALKS	3021-S-37-A

U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-3-2

FERNALD, OHIO

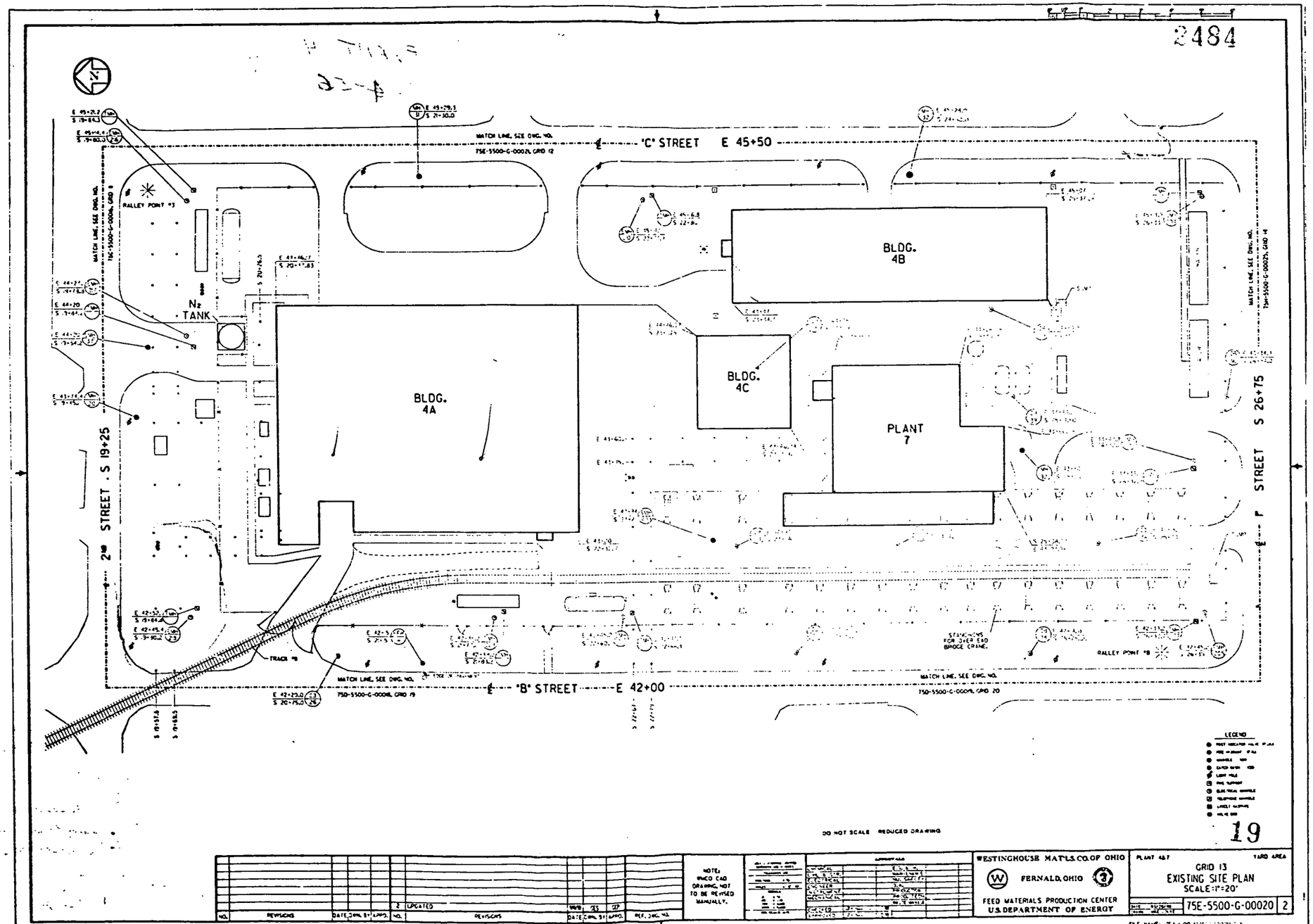
SIDEWALK PLAN
AREA BETWEEN 1ST & 2ND STREETS

DATE 8-21-92
DESIGNED BY SATELLITE CONSTRUCTION CO.
SCALE 1" = 20'-0"
DESIGNED APPROVED FOR CONSTRUCTION
DRAWN
DRAWING NO. 3021-S-38-A

MAY 15 '91

Drummed HF Residue and Asso. Storage Area NW of Pert 4

2484



MAY 15 '91

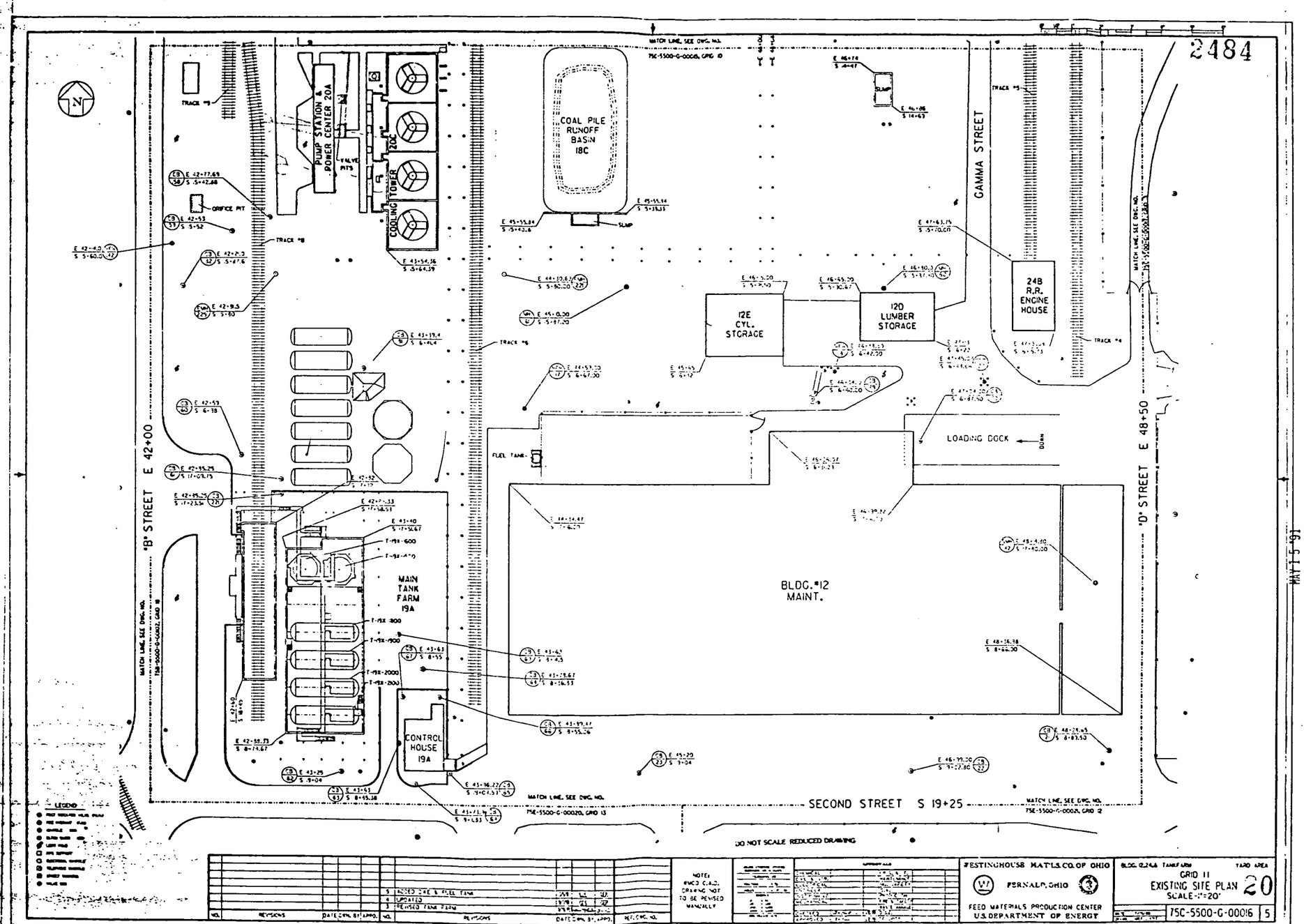
U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-3-3

FERNALD, OHIO

DRUMMED HF RESIDUE AND ASSO.
Stg. Areas S. of Cooling Tower

2484



U.S. DEPARTMENT OF ENERGY

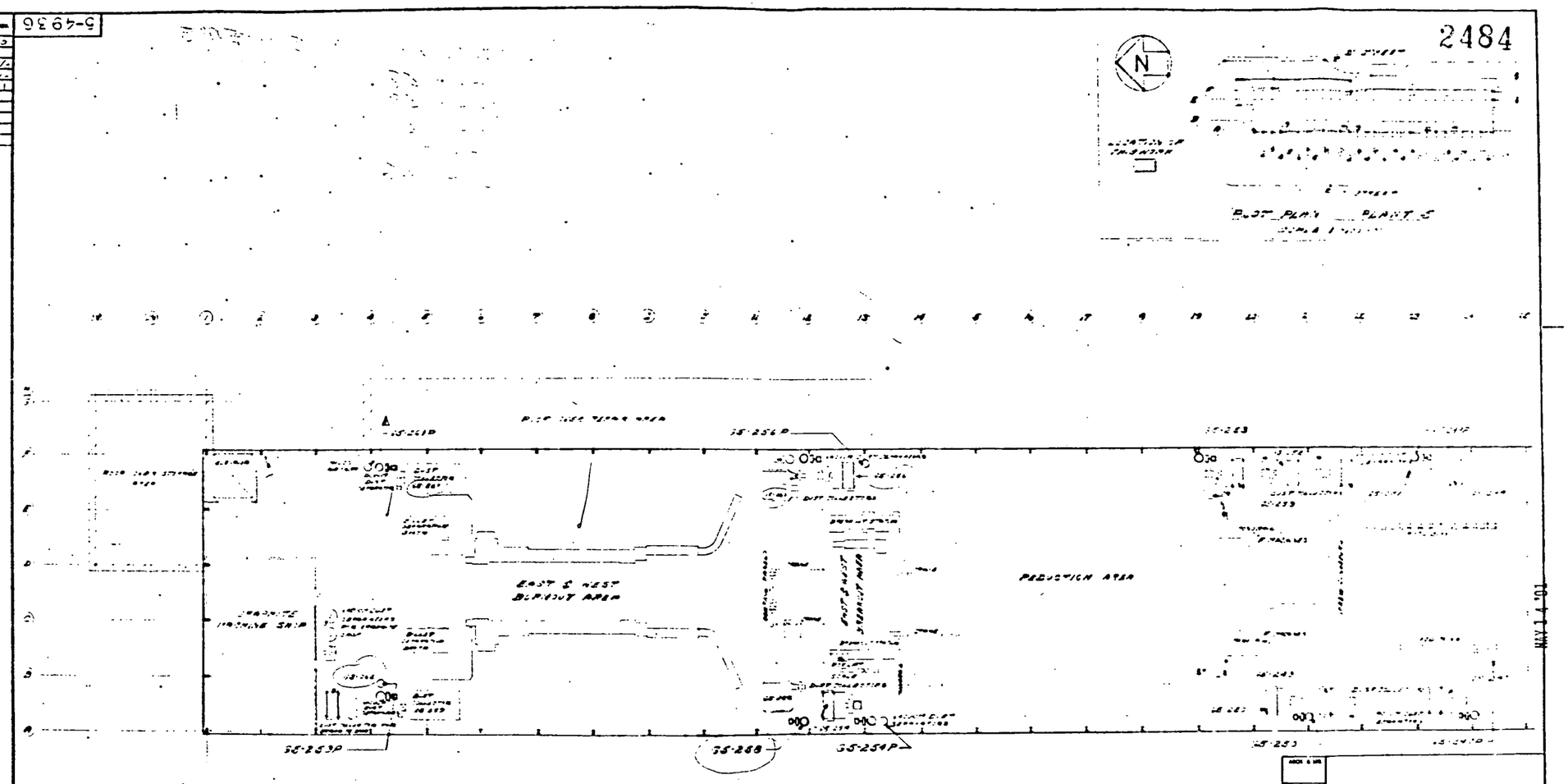
ATTACHMENT J-3-4

FERNALD, OHIO

SECTION J:
ATTACHMENT J-4

2484

5-4936



SECOND FLOOR PLAN

ELEVATION - 696'-0"

SCALE FOR THIS DRAWING

INDEX CODE

05X 5500 H 02716

DESIGN APPROVAL

DIVISION	SIGNATURE	DATE
HEALTH & SAFETY		
PRODUCTION		
TECHNICAL		
MAINTENANCE		

REF. DWG. NO.	REF. DWG. TITLE
5-4934	EXCAVATION STRUCTURE REINFORCEMENT & DETAILS
5-4937	NITRIC ACID DISTILLATION STATION

NO.	REVISIONS	DATE	BY
1	35-261P ADDED.		

ARCH & STR
MECHANICAL
ELECTRICAL
CHEMICAL
ENGINEERING

NATIONAL LEAD COMPANY OF OHIO
FEED MATERIALS PRODUCTION CENTER
FERNALD, OHIO

U.S. ATOMIC ENERGY COMMISSION

PLANT 5
LOCATION OF PROC. EQ.
COLLECTOR DRAINAGE SYSTEM
PLAN

ENGINEERING DIVISION

PROJECT NO. 5-152 CP: 67-7

DRAWN: MAR 9, 1963

DWG. NO. 5-4935

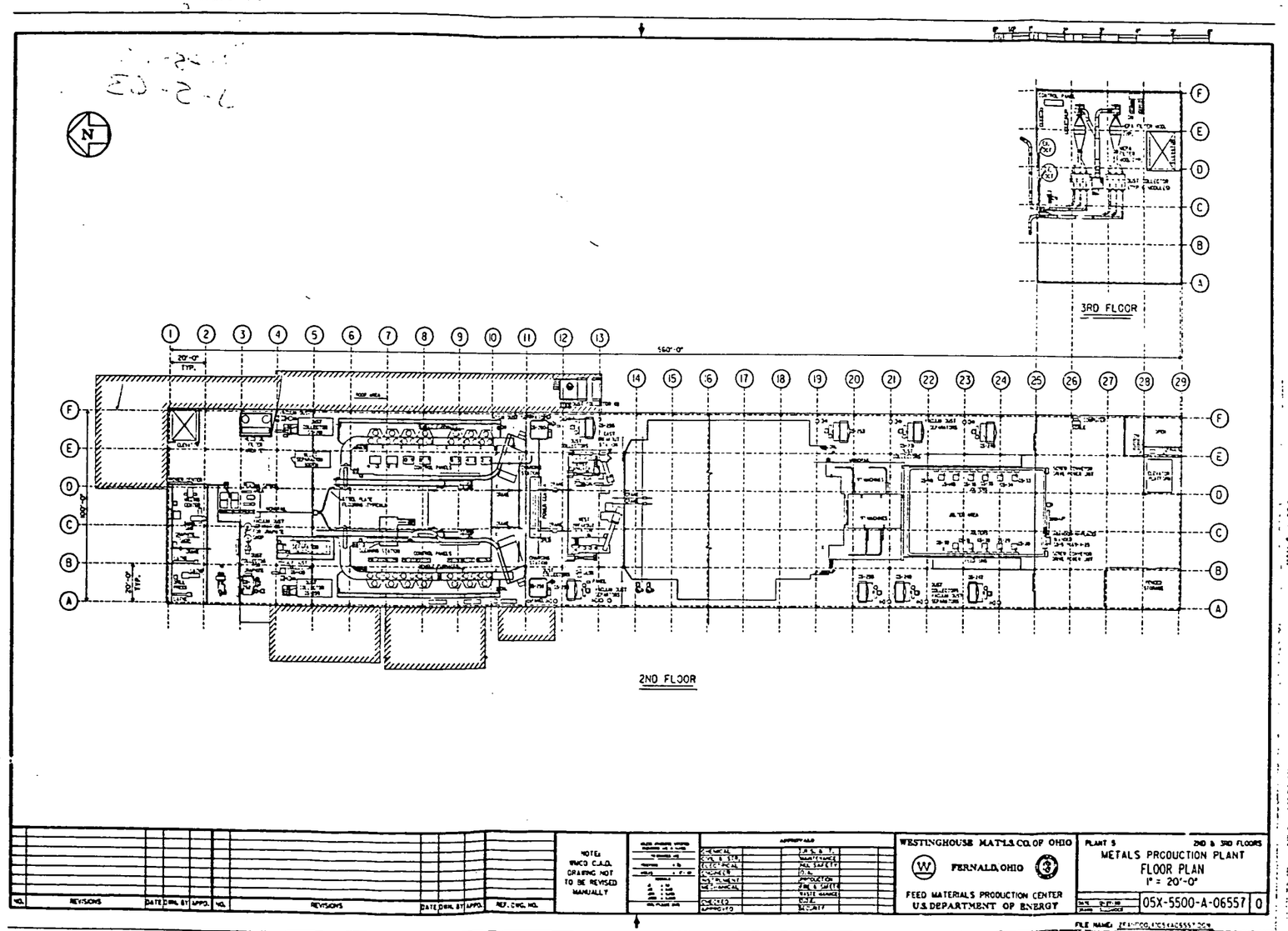
SHEET 1

MAY 1 4 '90

U.S. DEPARTMENT OF ENERGY

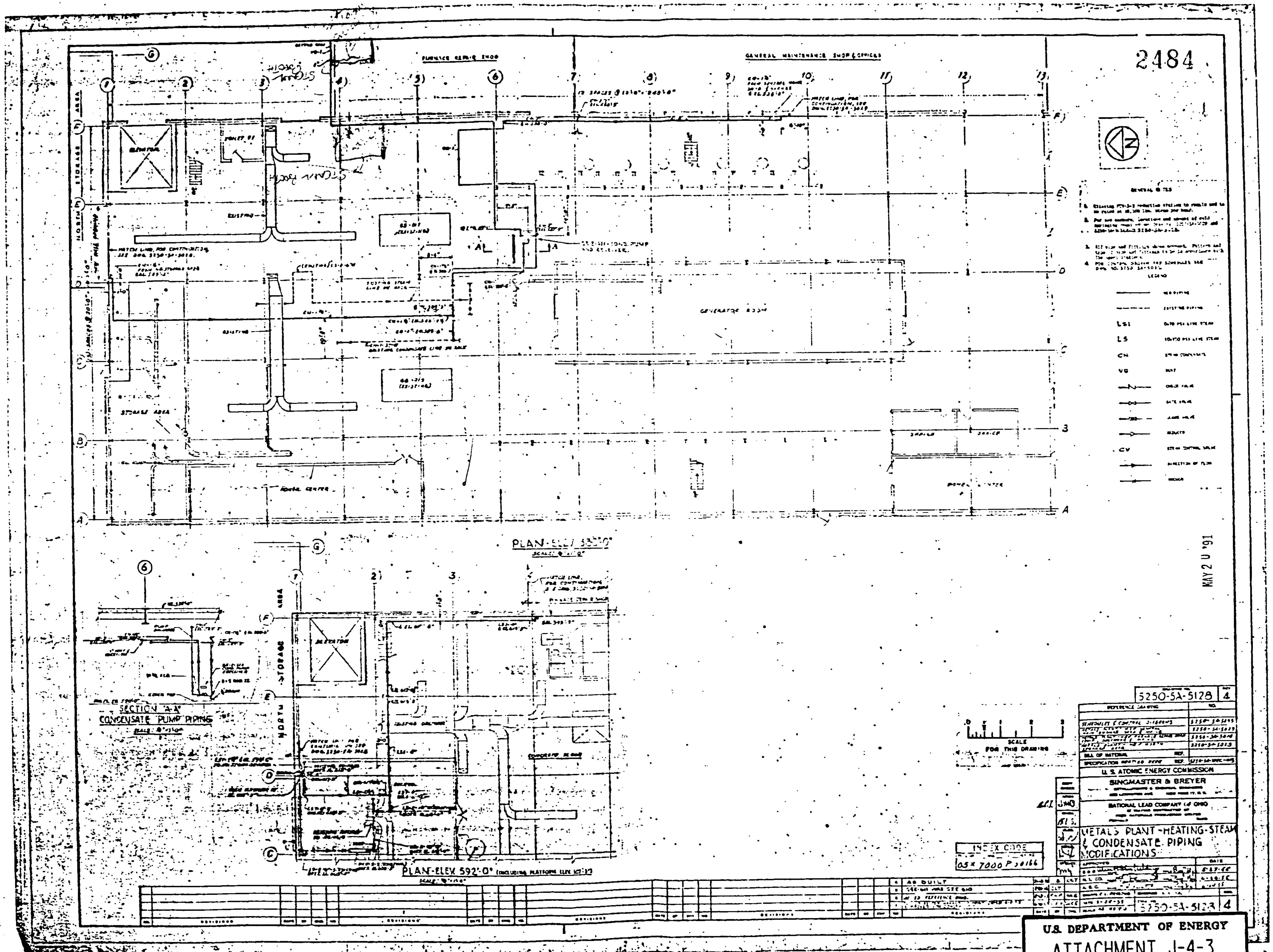
ATTACHMENT J-4-121

FERNALD, OHIO



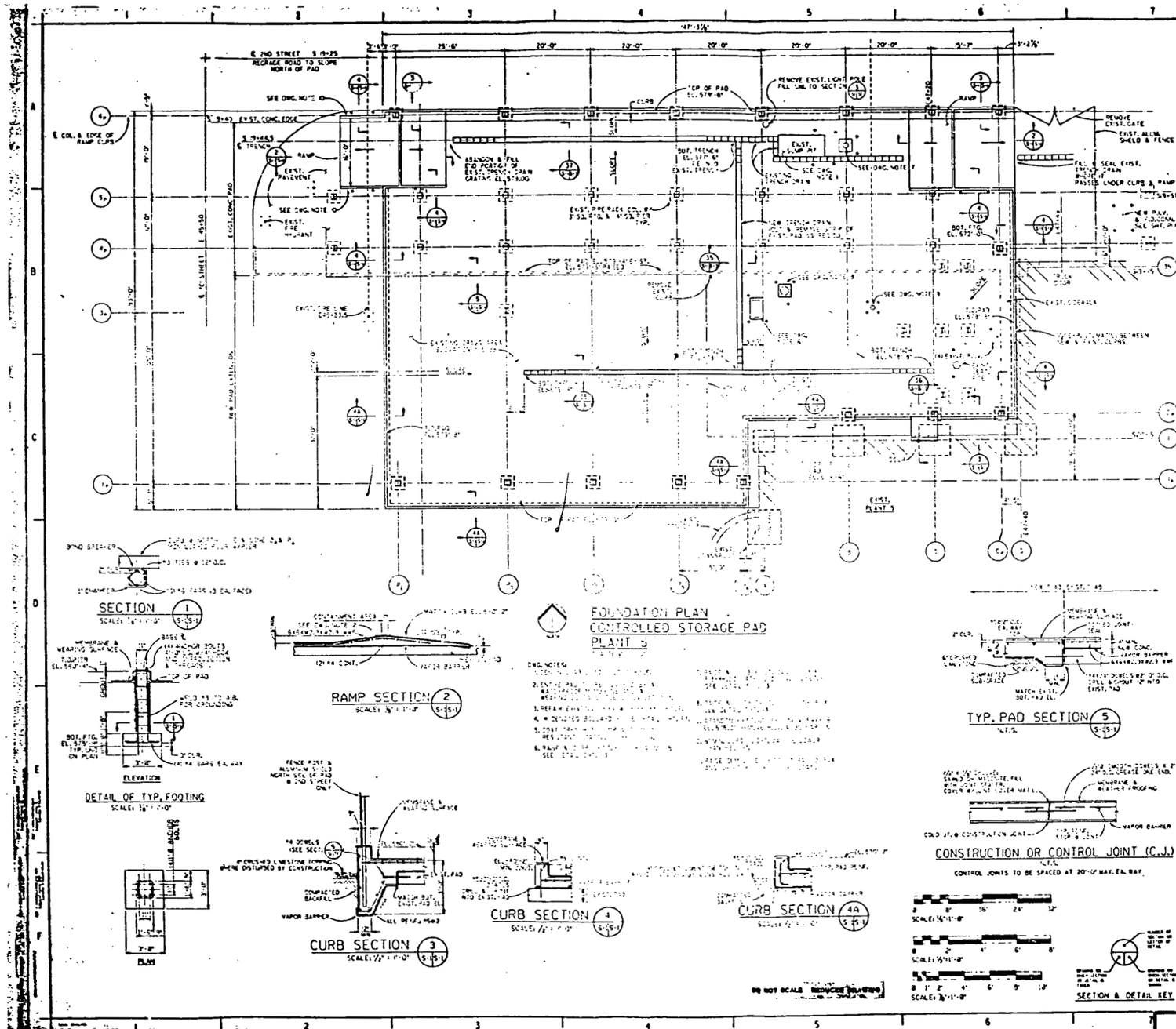
U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-4-2
22
FERNALD, OHIO

MAY 14 '91



U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-4-3
23
FERNALD, OHIO

2484



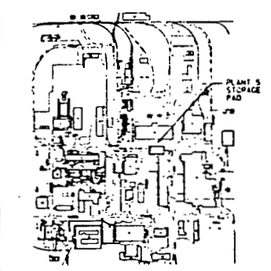
NOTES

CONCRETE NOTES

1. ALL CONCRETE HAS BEEN DESIGNED AND THE DETAILING, FABRICATION AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST EDITION OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) LATEST EDITION.
2. UNLESS OTHERWISE NOTED, ALL CONCRETE IS TO BE NORMAL WEIGHT CONCRETE WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:

FOOTINGS	4000 PSI
PIERS	4000 PSI
SLABS & CURBS	4000 PSI

3. ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED. SEE SPECIFICATIONS FOR MIX.
4. CHAMFER ALL EXPOSED EDGES 3/4" UNLESS OTHERWISE SHOWN OR NOTED.
5. ALL CORNERS ARE TO HAVE CORNER BARS, 1 SIZE LARGER THAN MATCH HORIZONTAL REINFORCING, 60 DIAGONAL BARS 10 BETWEEN 2 FACES OF OUTSIDE FACE UNLESS OTHERWISE NOTED.
6. ALL BAR SPLICES TO CONFORM TO CLASS "B" TENSION SPLICE UNLESS OTHERWISE NOTED.
7. ALL REINFORCING STEEL TO BE ASTM A615 GRADE 60, TYPE 1 OR GRADE 40.
8. ALL SURFACE LAYERS TO BE FINISHED TO PROVIDE A SMOOTH FINISH AND TO PROVIDE A MINIMUM COVER OF 1" TO THE REINFORCING.
9. NO PLANT REINFORCING REPRESENTS MINIMUM REQUIREMENTS. SHALL BE ADJUSTED TO PROVIDE CLEARANCE FOR PLANT REINFORCING.
10. ALL FILL LAYERS SHALL BE COMPACTED TO 95% OF SAMPLE PROCTOR DENSITY.
11. EXCAVATION SHALL BE NOTIFIED TO THE ENGINEER FOR ALL ELEVATIONS OF EXCAVATION TO BE VERIFIED BY THE ENGINEER PRIOR TO PLACEMENT OF FILL OR CONCRETE. ALL EXCAVATION TO BE PROTECTED FROM WATER DAMAGE.
12. CONCRETE TO BE DESIGNED FOR IN ALL AREAS (SEE SPECIFICATIONS FOR MIX).



TO CORRELATE REFERENCED "AME SHEET No's" TO FMPC DRAWING NUMBERS, SEE FMPC DRAWING No. 05X-4445-E-0639

0	CFC		

UNITED STATES
DEPARTMENT OF ENERGY
FEED MATERIALS PRODUCTION CENTER

A. M. KINNEY, INC.
CONSULTING ENGINEERS
CINCINNATI, OHIO

ENVIRONMENTAL, HEALTH & SAFETY IMPROVEMENTS

COVERED CONTROLLED STORAGE PAD - PLANT 5
FOUNDATION PLAN & DETAILS

JAW	E.S.R.		
5	CP2-A0	AS NOTED	

87-D-159	0067502 WBS U.2.1.02	05X-4445-S-06392	S-1	0

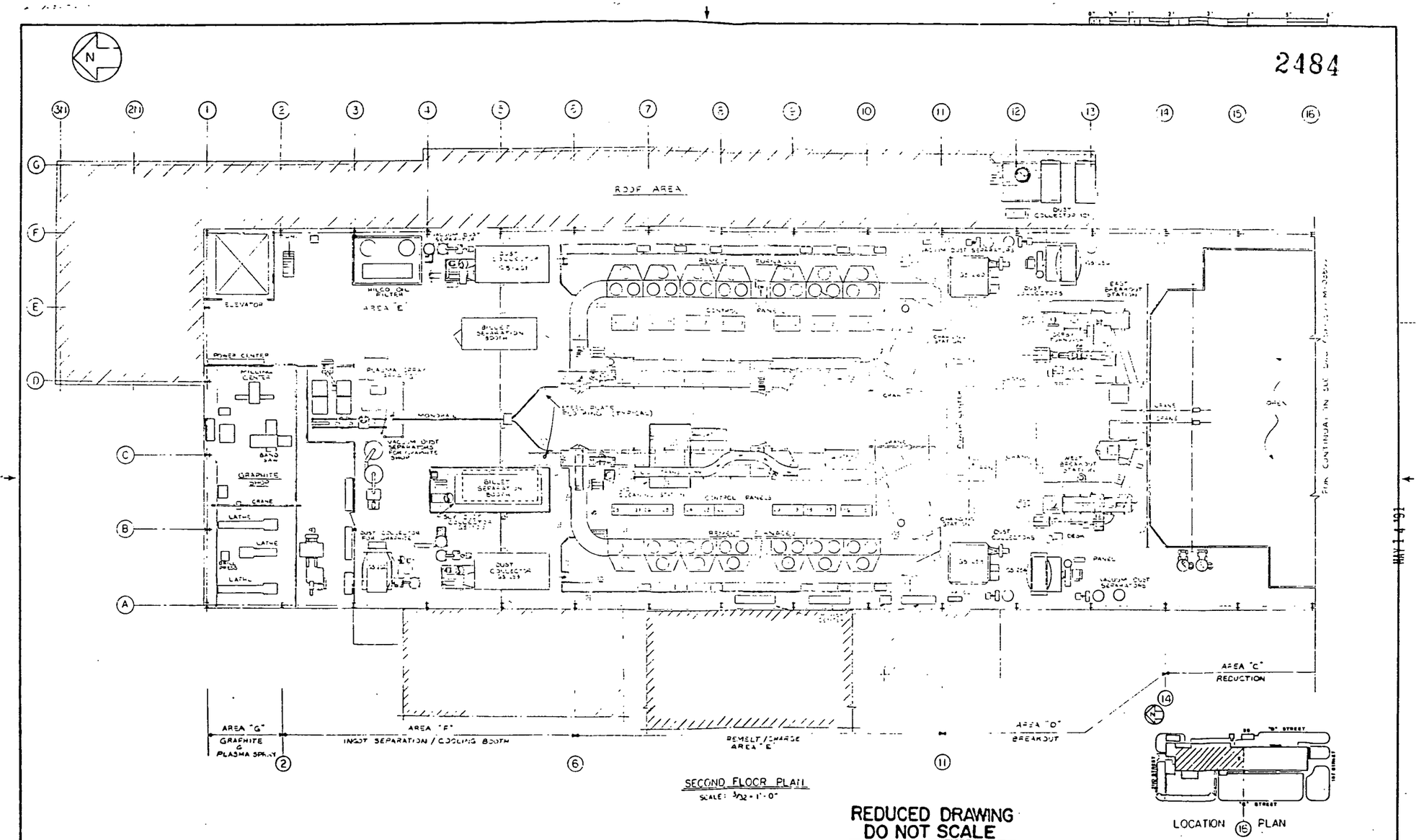
SEP 30 '91

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-4-4
24
FERNALD, OHIO

Hilco oil Recovery GRID 12

NOTE:
HILCO oil System corrs two floors.

2484



REDUCED DRAWING
DO NOT SCALE

NO.	REVISIONS	DATE	DWN. BY	APPD.
2	UPDATED DWG. PER REG. 555			
1	GENERAL REV. UPDATED EQUIPMENT			

REF. DWG. NO.	REF. DWG. TITLE
05X-5500-M-03800	2ND FLR. EQUIP. LAYOUT
05X-5500-M-03703	1ST FLR. EQUIP. LAYOUT
05X-5500-M-03707	1ST FLR. EQUIP. LAYOUT
	"FOR INFORMATION ONLY"
[illegible]	PLANT 5 EQUIPMENT LAYOUT

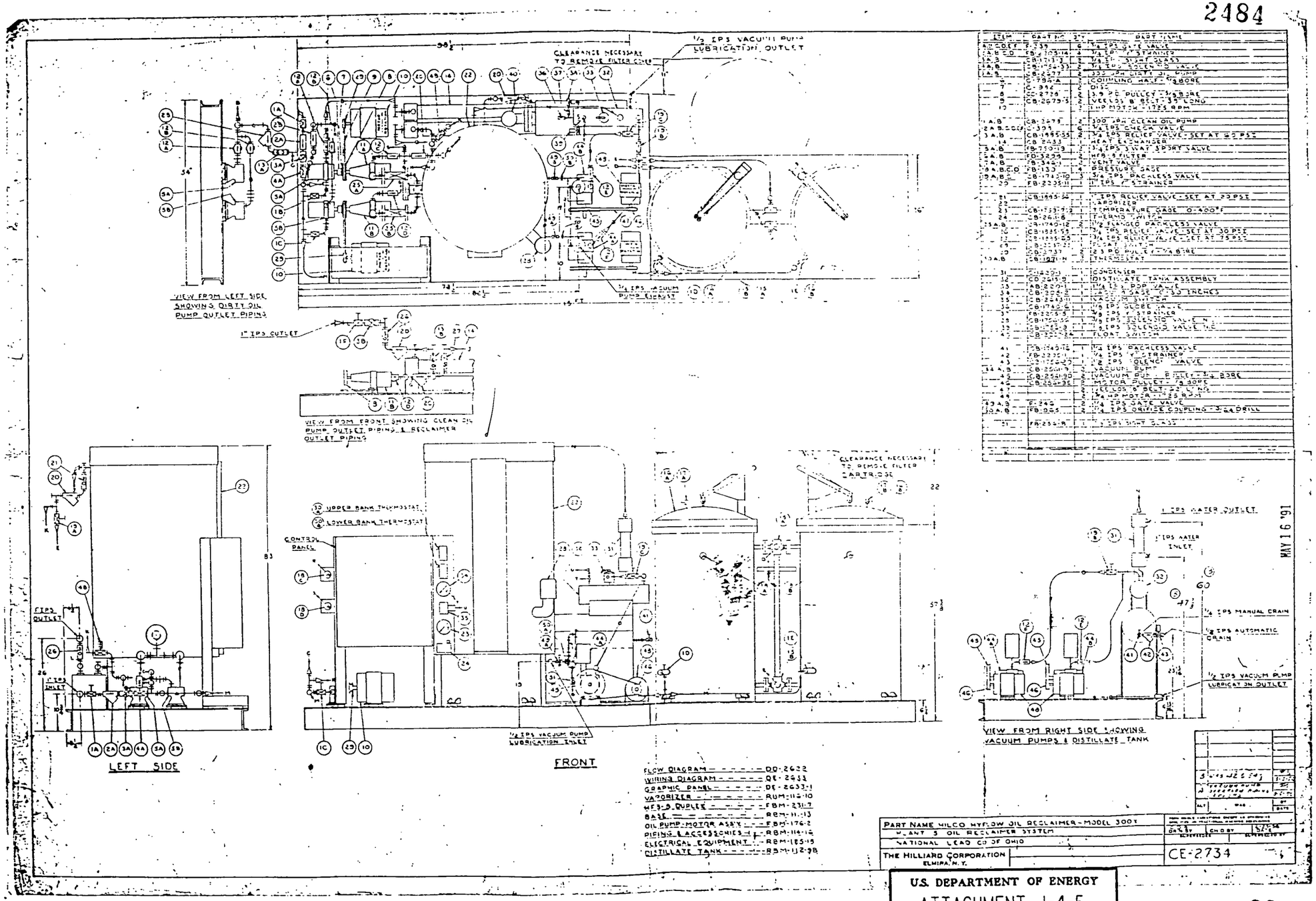
APPROVALS

CIVIL & STR.		H. & S.	
MECHANICAL		PRODUCTION	
ELECTRICAL		TECHNICAL	
CHEMICAL		MAINTENANCE	
ENGINEER		NU. SAFETY	
CHECKED			
APPROVED			

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

PLANT 5 NORTH END
PLANT 5 - 2ND FLOOR EXISTING EQUIPMENT LAYOUT
ENGINEERING DIVISION
PROJ. NO. [illegible]
DATE 12-06-85
05X-5500-M-03799 2

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-4-5
25
FERNALD, OHIO



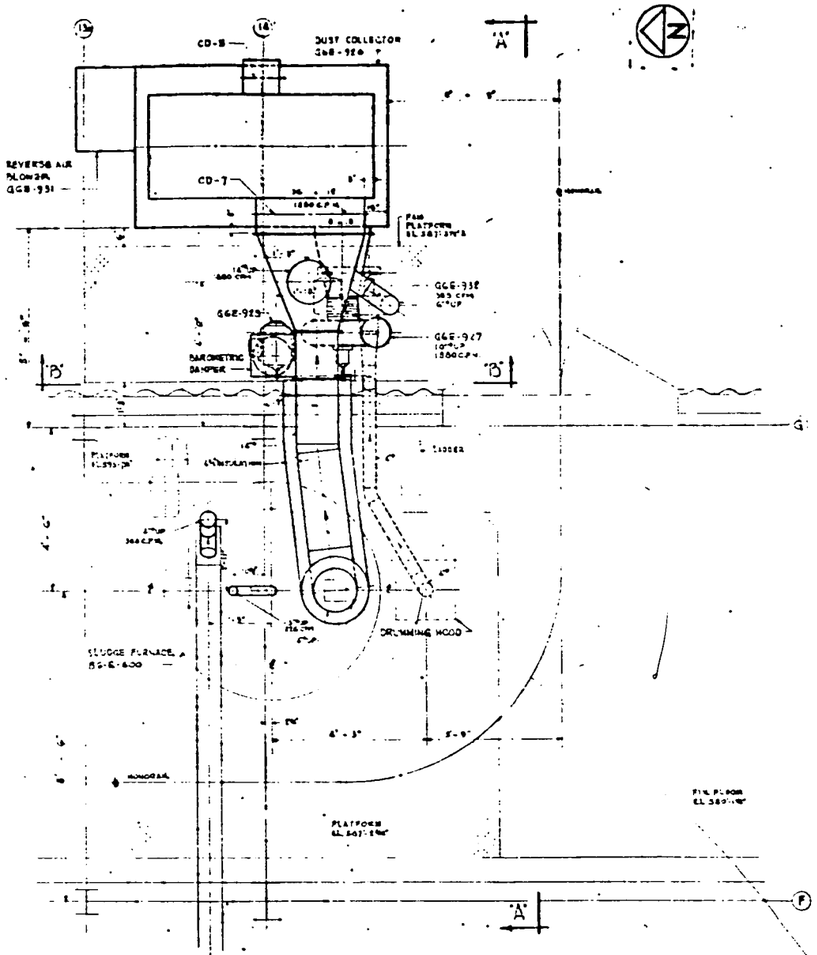
ITEM	PART NO.	QTY.	PART NAME
1A,B,C,D	F-339	8	1/4 IPS GATE VALVE
1A,B,C,D	FB-2705-14	4	1/4 IPS Y STRAINER
1A,B	CB-1731-3	2	VALVE SIGHT GLASS
1A,B	CB-1754-33	2	1/4 IPS SOLENOID VALVE
1A,B	CB-2577	2	350 GPM CLEAN OIL PUMP
2	C-792-A	2	COUPLING HALF - 1/4 BORE
7	C-394	2	DISC
8	CC-2734	2	3.9 PD PULLEY - 3/4 BORE
9	CB-2679-5	2	VEE LOS B BELT - 35" LONG
10		2	1 HP MOTOR - 1725 RPM
1A,B	CB-2679	2	300 GPM CLEAN OIL PUMP
2A,B,C,D	C-391	8	1/4 IPS CHECK VALVE
3A,B	CB-1755-55	2	1/4 IPS RELIEF VALVE - SET AT 60 PSI
14	CB-2433	1	HEAT EXCHANGER
3A,B	CB-750-19	2	3/4 IPS 3 WAY SPDT VALVE
4A,B	FD-3295	2	HFB-5 FILTER
4A,B	FB-3461	2	VENT VALVE
4A,B,C,D	FB-133	4	PRESSURE GAGE
5A,B	CB-1743-10	3	3/4 IPS PACKLESS VALVE
29	FB-2235-11	1	1" IPS Y STRAINER
21	CB-1755-56	1	1" IPS RELIEF VALVE - SET AT 22 PSI
22		1	VAPORIZER
23	CB-1733-72	1	TEMPERATURE GAGE 0-400°F
24	CB-2611-8	1	THERMO SWITCH
25A,B	CB-1740-12	2	1/2 FLANGED PACKLESS VALVE
10	CB-1755-55	1	3/4 IPS RELIEF VALVE - SET AT 30 PSI
12	CB-1755-53	1	3/4 IPS RELIEF VALVE - SET AT 75 PSI
43	CB-2237-21	1	FLOAT SWITCH
10	CC-2737	2	2.3 PD PULLEY - 1/4 BORE
10A,B	CB-1971-N	1	THERMOSTAT
31	CH-2393	1	CONDENSER
32	CD-2615-B	1	DISTILLATE TANK ASSEMBLY
33	CB-2270-1	1	1/4 IPS DOP VALVE
34	CB-3262-2	1	VACUUM GAGE 0-30 INCHES
35	CB-2443-11	1	VACUUM SYSTEM
36	CB-1740-6	1	1/2 IPS GLOBE VALVE
37	FB-2235-5	1	1/2 IPS Y STRAINER
38	CB-1754-56	1	1/2 IPS SOLENOID VALVE - N.O.
39	CB-1754-8	1	1/2 IPS SOLENOID VALVE - N.C.
42	CB-2237-24	1	FLOAT SWITCH
41	CB-1743-16	1	1/4 IPS PACKLESS VALVE
42	FB-2235-1	1	1/4 IPS Y STRAINER
43	CB-1754-20	1	1/2 IPS SOLENOID VALVE
44A,B	CB-2511-3	2	VACUUM PUMP
45	CB-2561-90	2	VACUUM PUMP PULLEY - 3/4 BORE
46	CB-2561-95	2	MOTOR PULLEY - 1/4 BORE
47		2	VEE LOS B BELT - 22" LONG
48		2	1/4 HP MOTOR - 1725 RPM
49A,B	F-243	2	1/4 IPS GATE VALVE
50A,B	FB-935	2	1/4 IPS ORIFICE COUPLING - 3/64" DRILL
51	FB-2341-R	1	1 IPS SIGHT GLASS

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-4-5
FERNALD, OHIO

VENDOR DWG. NOT IN OUR SYSTEM
363 NORMAN HAS BLUE PRINT.
RCS 1167

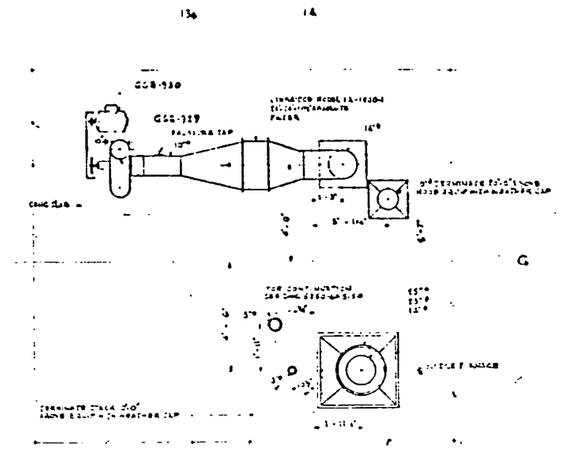
SECTION J:
ATTACHMENT J-5

2484



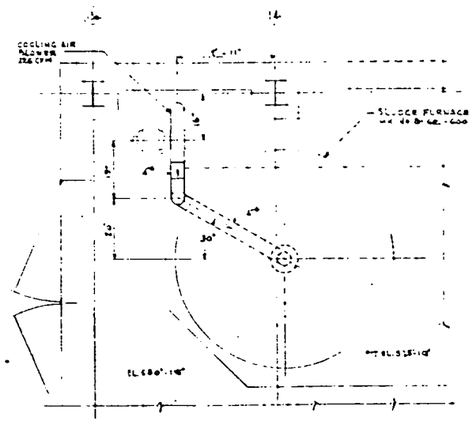
PLAN ELEV. 580'-1¼"

SCALE: ¼"=1'-0"



ROOF PLAN ELEV. 599'-3"

SCALE: ¼"=1'-0"



PIT PLAN ELEV. 575'-10"

SCALE: ¼"=1'-0"

SCALE FOR THIS DRAWING

GENERAL NOTES

1. The exhaust fan (GGE-928) shall be continuous in operation, and control damper CD-1 shall open.
2. The filter bag differential pressure switch shall function to (GGE-927) automatically operate the blow ring drive and the reverse air blower when the bag pressure drop reaches 3.5" w.g. and shall stop the operation when the bag pressure drop is reduced to 0.5" w.g.
3. Should the reverse air blower or the blow ring drive fail the high limit pressure differential switch shall stop the operation of exhaust fan (GGE-927), dampers CD-5 & CD-6 shall open and emergency exhaust fan (GGE-929) shall start.
4. The high limit temperature controller shall function to open the emergency control damper CD-5 when the exhaust temperature reaches 175°F.
5. Upon complete electrical failure of the exhaust fans control damper CD-1 shall open and control damper CD-2 shall close.
6. Ionization detector (I-1-A) shall function to stop exhaust fan (GGE-927), open control dampers CD-5 and CD-6 and start exhaust fan (GGE-929).
7. Air flow switch (F-1-A) shall function to stop exhaust fan (GGE-927), open control dampers CD-5 and CD-6 and start exhaust fan (GGE-929) when the air velocity goes below 1000 FPM.
8. For electrical wiring and alarm systems to controls see electrical drawing [illegible].
9. The electric motorized damper CD-1 shall be linked to control damper CD-2 so that when damper CD-1 opens damper CD-2 shall close. All linkage, bearings and supports shall be outside of the air stream. Damper stops shall be located as shown on the drawing. The continuous tie type frame joints the stack shall be allowed. The damper shaft bearings shall extend beyond the insulation. Electric actuated damper CD-6 shall be linked to control damper CD-7 so as to open shall reply to stated above for dampers CD-1 and CD-2 except as insulation is required.
10. The exhaust stack fiberglass duct shall be insulated as shown on the drawing and finished in accordance with specification [illegible], specification [illegible] for temperature up to 350°F. Lacking an inner layer of insulation thickness shall be [illegible] and an outer layer thickness of 2".
11. All 14" control dampers shall be electrically operated low pressure dampers.
12. The sludge furnace flue and dampers stack shall be 1/4" steel from, in rolled seams and flanged joints as shown on the drawings.
13. 1/2" diameter pipe sleeves shall be provided for all pneumatic tubing leading from units.
14. All fan drives shall be equipped with belt guards in the field.
15. Flexible inlet and outlet connections shall be provided on all fans.
16. Vibration isolation bases shall be furnished for all fans by the fan manufacturer.
17. All pneumatic tubing from the dust collector to the pneumatic final hoses shall be 1/4" copper tubing furnished by the contractor. The vendor shall furnish all fittings for attaching the tubing to the dust collector and to the transducers.
18. [illegible]
19. [illegible]
20. [illegible]

EQUIPMENT SCHEDULE

EQUIPMENT NO.	EQUIPMENT	OPERATING CONDITIONS	REMARKS
GGE-928	DUST COLLECTOR, BLOW RING DRIVE AND 8" HOPPER TIPPING VALVES	MATERIAL HANDLED: [illegible] CAPACITY: 2500 C.F.M. @ [illegible] FILTER AREA: [illegible] PRESSURE DROP: [illegible] EXCLUSIVE OF COLLECTOR "VANES"	DUST COLLECTOR IS [illegible] TYPE WITH REVERSE AIR BLOWER
GGE-927	NORMAL EXHAUST FAN	CW ROTATION, UPBLAST DISCHARGE, V BELT DRIVE, ARR. E, 2" MOTOR POSITION, 1880 C.F.M. @ 175°F, S.P. = 8.25" W.G. @ 175°F.	CAST IRON EXHAUSTER
GGE-928	NORMAL EXHAUST FAN MOTOR	5 H.P., 1.8 F.L., 1750 R.P.M., 440V, 60 CYCLE, 3 PHASE	
GGE-929	EMERGENCY EXHAUST FAN	CW ROTATION, UPBLAST DISCHARGE, V BELT DRIVE, ARR. E, 2" MOTOR POSITION, 1880 C.F.M. @ 175°F, S.P. = 8.25" W.G. @ 175°F	CAST IRON EXHAUSTER
GGE-930	EMERGENCY EXHAUST FAN — MOTOR	5 H.P., 1.8 F.L., 1750 R.P.M., 440V, 60 CYCLE, 3 PHASE	
GGE-931	REVERSE AIR BLOWER — MOTOR	5 H.P. ROTARY POSITIVE DISPLACEMENT BLOWER	
GGE-932	HOOD EXHAUST FAN MOTOR	CW ROTATION, UPBLAST DISCHARGE, V BELT DRIVE, ARR. E, 2" MOTOR POSITION, 5 H.P. MOTOR, 1.8 F.L., 3500 C.F.M., S.P. = 5.0" W.G., 3600 R.P.M., 440V, 60 CYCLE, 3 PHASE	CAST IRON EXHAUSTER

REVISIONS	DATE	BY	CHK	NO.

U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-5-1

FERNALD, OHIO

27

INDEX CODE

06A 7000H 00680

METALS FABRICATION - PLANT 6
VENTILATION - SLUDGE FURNACE
DUST REMOVAL SYSTEM
PLAN & SECTIONS

APPROVED	DATE
R.E.D.	6-29-86
H.L.C.O.	
A.E.C.	
[illegible]	6-29-86

DATE 6-1-86 — DRAWING NO. 5250-GA-5197 — REV. 0

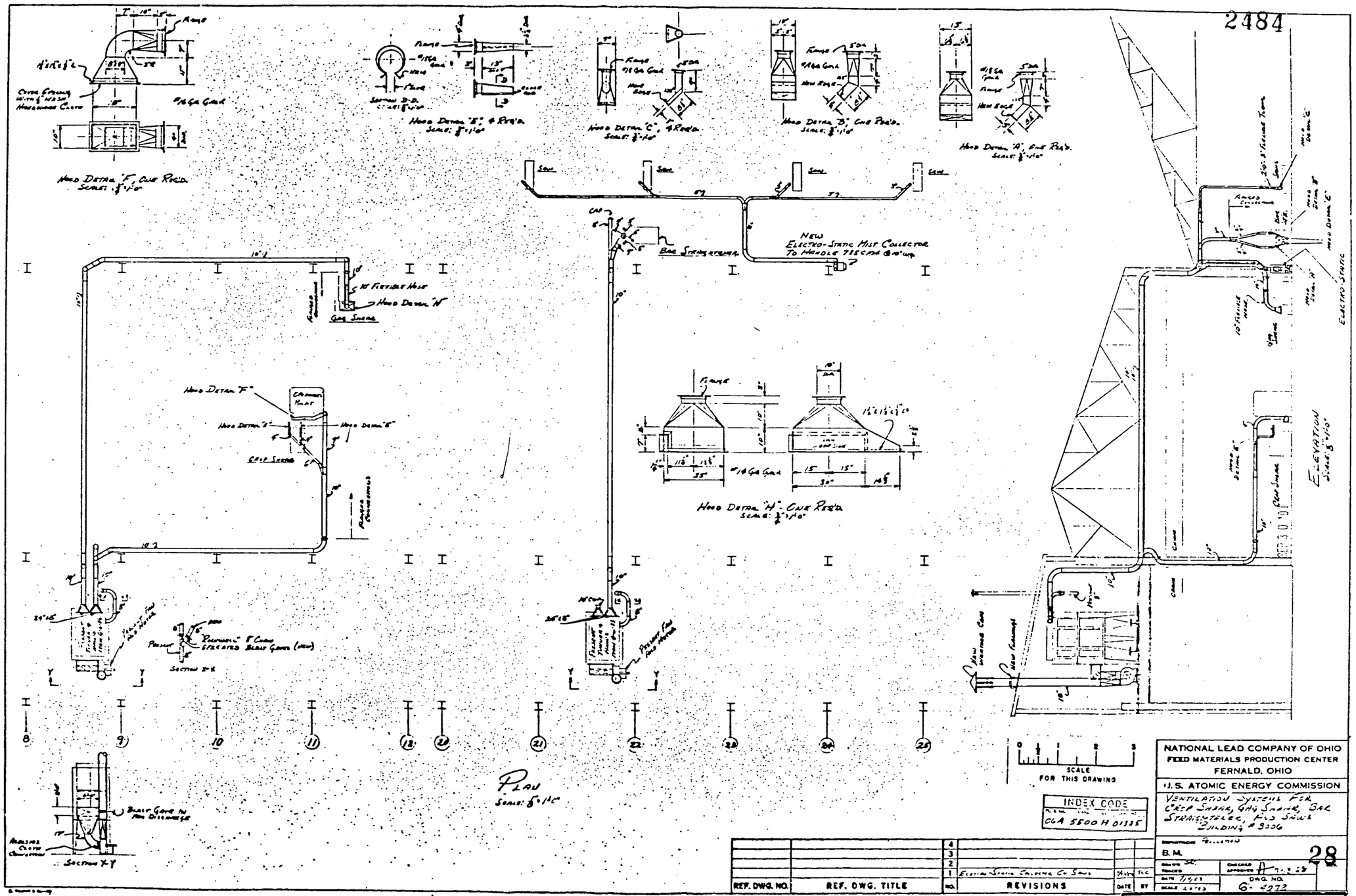
SCALE AS NOTED

5250-GA-5197 — REV. 0

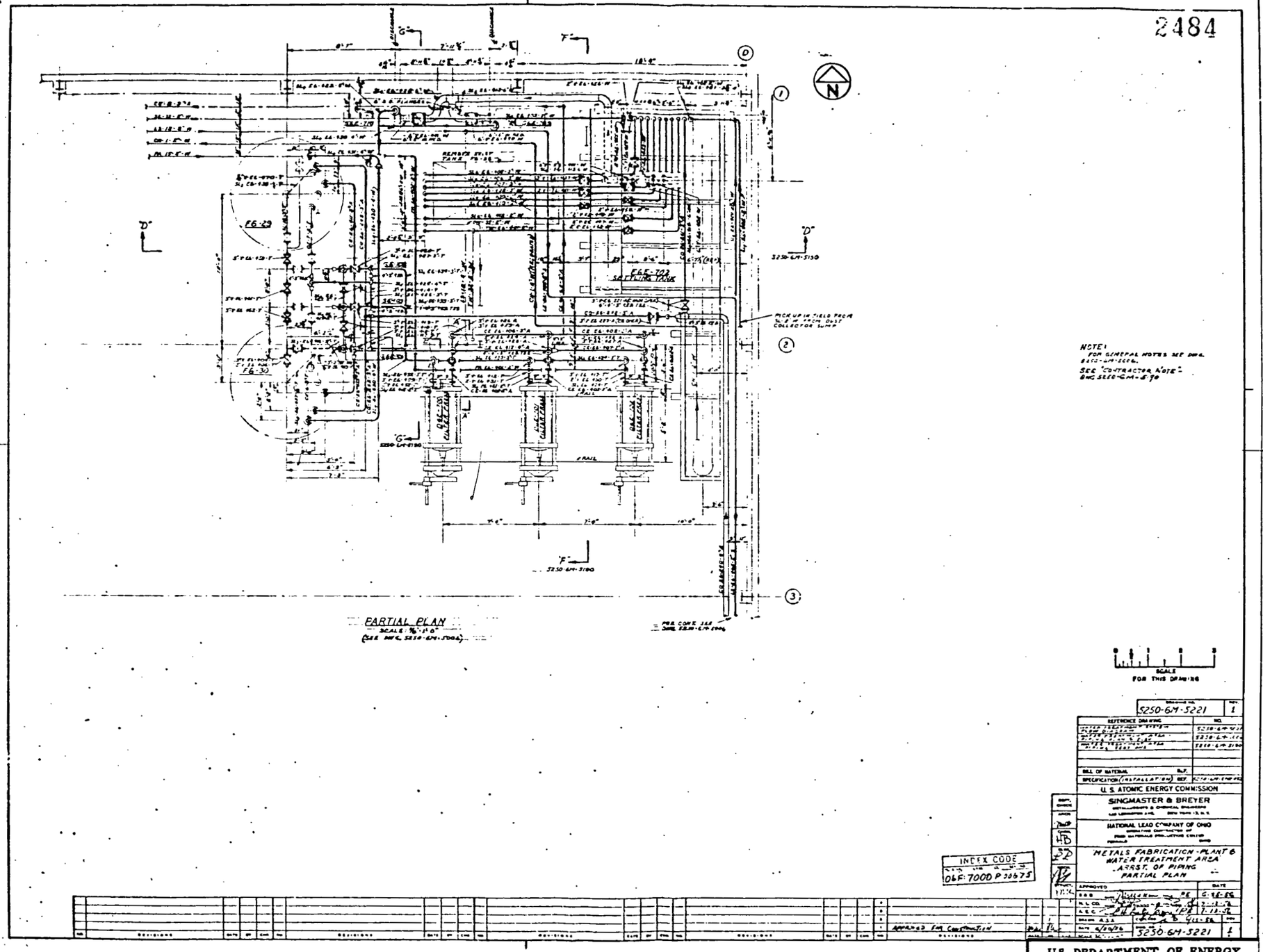
REFERENCE DRAWINGS — NO.

[illegible]

SEP 3 0 1991


2484
Hood Detail "F", One Req'd.
Hood Detail "E", 4 Req'd.
Hood Detail "C", 4 Req'd.
Hood Detail "B", One Req'd.
Hood Detail "A", One Req'd.
New Electro-Static Mist Collector To Handle 7.85 CFM @ 10" wg.
Bar Straightener
Hood Detail "H"
Gag Shear
Hood Detail "F"
Crop Shear
Hood Detail "H" - One Req'd.
Elevation
Plan
Section X-X
Section Y-Y
Scale for this drawing
Index Code
06A 5500 H 01325
NATIONAL LEAD COMPANY OF OHIO
FEED MATERIALS PRODUCTION CENTER
FERNALD, OHIO
U.S. ATOMIC ENERGY COMMISSION
Ventilation Systems For Crop Shear, Gag Shear, Bar Straightener, And Saws Building # 3006
B.M.
28
Dwg. No. 6-4272
REF. DWG. NO.
REF. DWG. TITLE
REVISIONS
U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-5-2
FERNALD, OHIO

2484

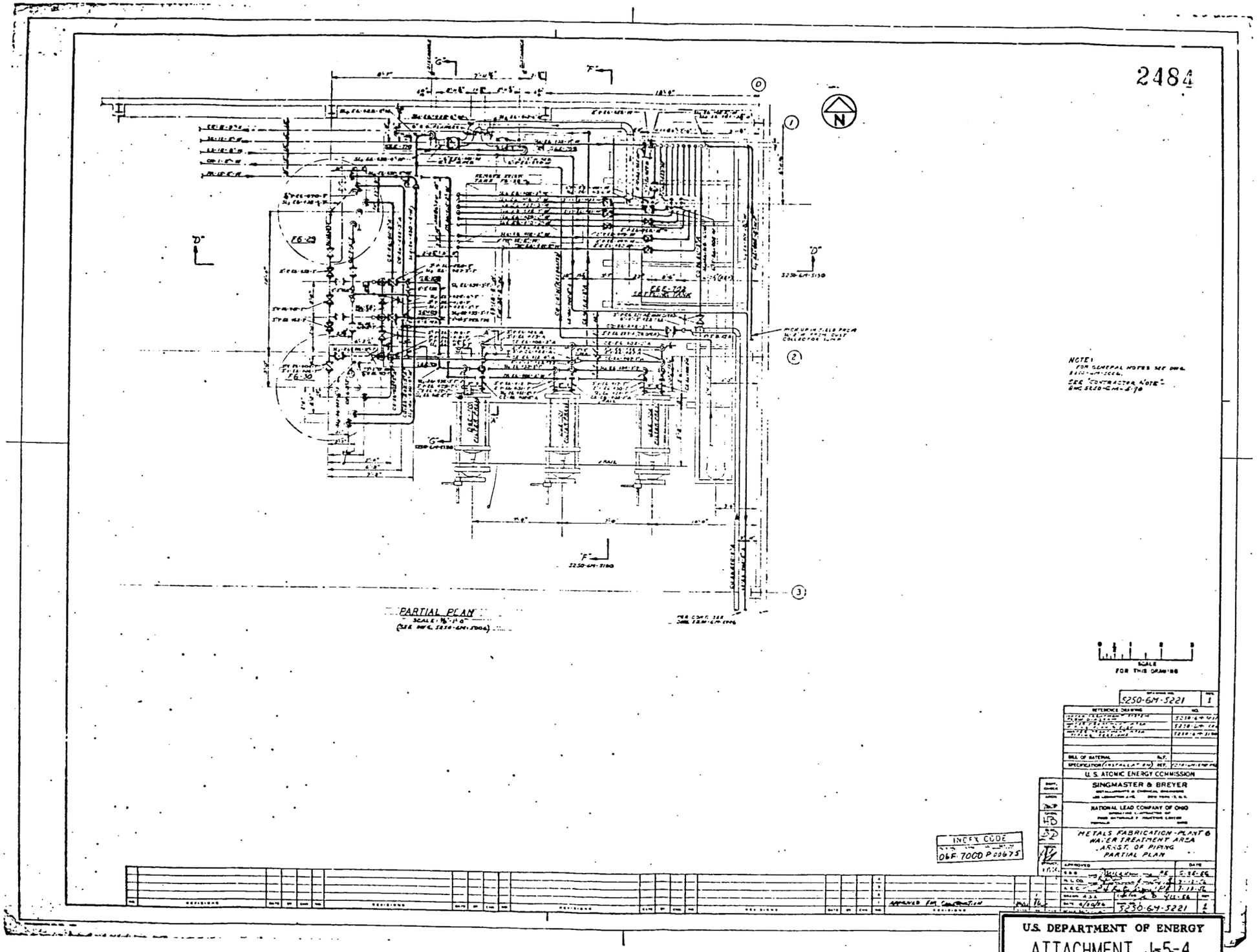


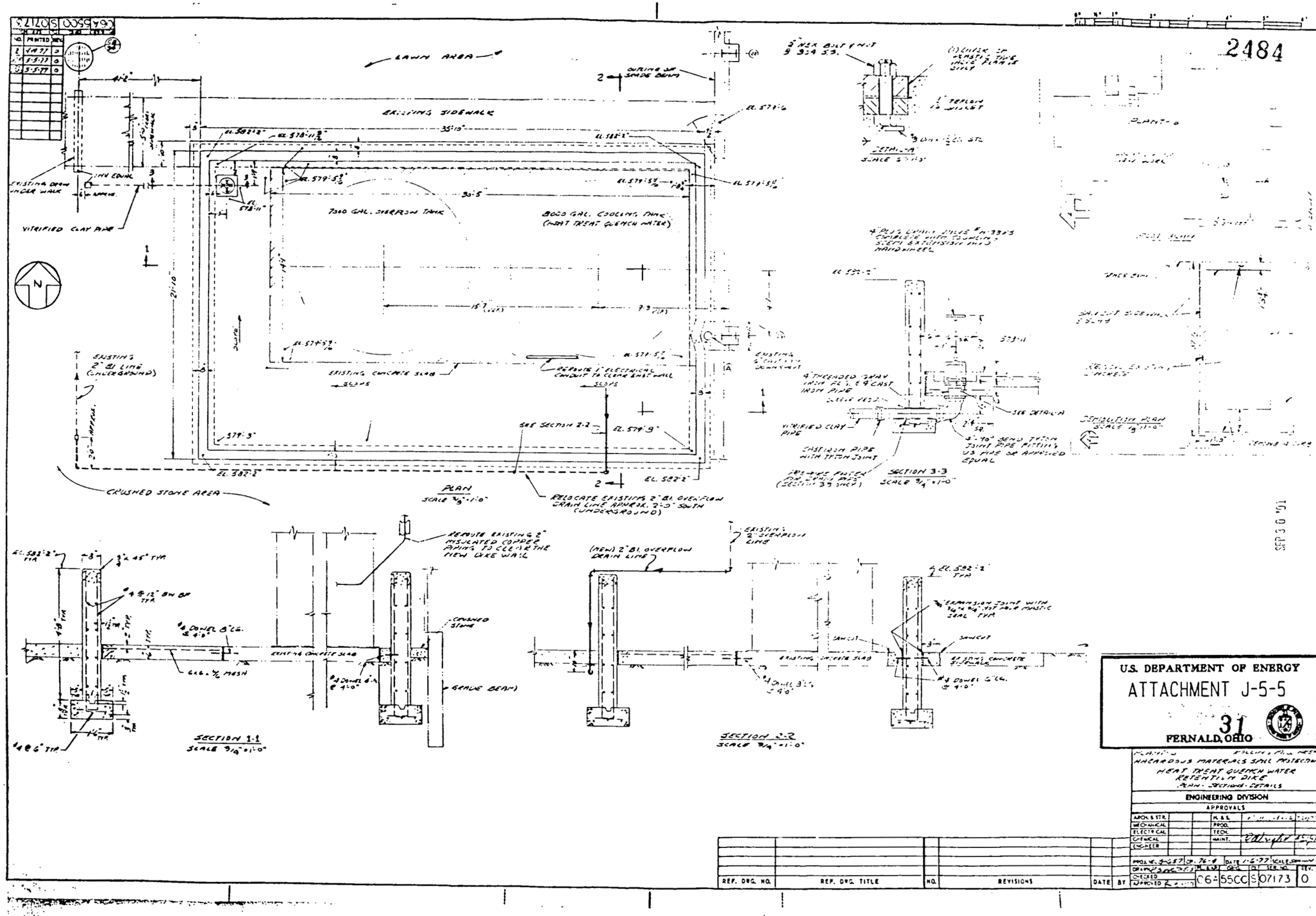
U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-5-3

2

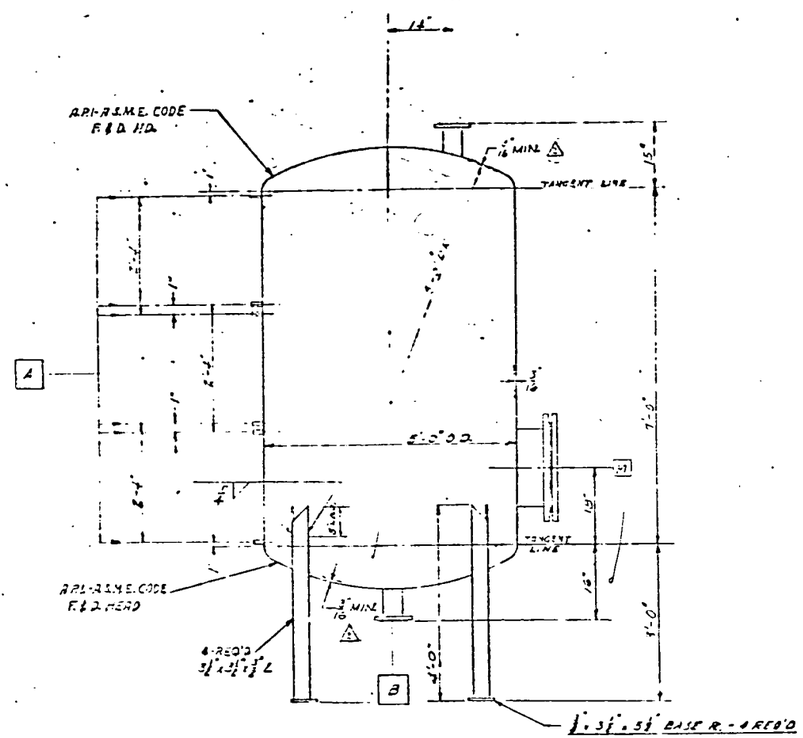
FERNALD, OHIO

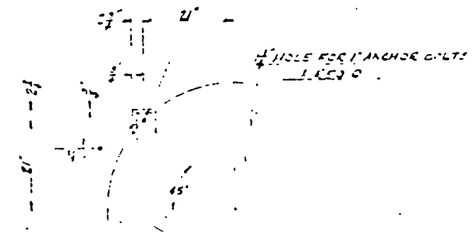

2484
PARTIAL PLAN
NOTE:
FOR GENERAL NOTES SEE DWG.
SEE "CONTRACTOR NOTE"
SCALE
FOR THIS DRAWING
5250-6M-5221
U.S. ATOMIC ENERGY COMMISSION
SINGMASTER & BREYER
NATIONAL LEAD COMPANY OF OHIO
METALS FABRICATION-PLANT 6
WATER TREATMENT AREA
ARRGT. OF PIPING
PARTIAL PLAN
INDEX CODE
06F 7000 P 00675
APPROVED FOR CONSTRUCTION
U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-5-4
FERNALD, OHIO


2484
LAWN AREA
EXISTING SIDEWALK
7000 GAL. OVERFLOW TANK
8000 GAL. COOLING TANK (HEAT TREAT QUENCH WATER)
EXISTING CONCRETE SLAB
CRUSHED STONE AREA
VITRIFIED CLAY PIPE
PLAN
SCALE 3/8"=1'-0"
SECTION 1-1
SCALE 3/4"=1'-0"
SECTION 2-2
SCALE 3/4"=1'-0"
SECTION 3-3
SCALE 3/4"=1'-0"
DETAIL A
DEMOLITION PLAN
SEP 30 '91
U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-5-5
31
FERNALD, OHIO
HAZARDOUS MATERIALS SPILL PROTECTION
HEAT TREAT QUENCH WATER RETENTION DIKE
PLAN - SECTIONS - DETAILS
ENGINEERING DIVISION
APPROVALS
REF. DWG. NO.
REF. DWG. TITLE
NO.
REVISIONS
DATE
BY
C6A 55CC S 07173 0

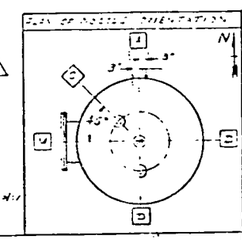
3006-F07-B

REQ'D Nº 1
REQ. Nº
PUR. ORD. Nº 2484





DETAIL OF BASE PLATE



INDEX CODE
CLD 1150 M 00397

REV. NO.	DATE	DESCRIPTION	BY	APPD
5				
4				
3				
2	4-14-55	FEED NOZZLE WAS TECHNICALLY FIXED PRIOR TO ISSUE OF REVISED MATERIAL NOTES.		
1	3-1-51	FEED NOZZLE - ORIENTATION CHANGED PER ITEM 4 OF RAWLS PACE.		

REVISIONS

DESIGN NOTES

PERSONAL ... OPERATING ... 15 P.S.I. DESIGN ... 30 P.S.I.
TEMPERATURE ... " ... 150°F. " ... 200°F.
CORROSION ALLOWANCE ... NONE
JOINT EFFICIENCY ... SHELL ... 80%; HEAD ... 100%
STRESS REDUCER ... NO
RADIOGRAM ... NO
MAX. ALLOWABLE WORKING COLD ... 38 P.S.I.
MAX. ALLOW. W.P. FULLY CORRODED ... DESIGN TEMPERATURE ... 70 P.S.I.
HYDROSTATIC TEST PRESSURE ... 60 P.S.I.
HANGER TEST PRESSURE ... 60 P.S.I.
CONSTRUCTION ... FUSION WELDED IN ACCORDANCE WITH LATEST REVISION OF A.P.I.-A.S.M.E. FOR UNFIRED PRESSURE VESSELS.

FABRICATOR TO REINFORCE OPENINGS TO MEET REQUIREMENTS OF A.P.I.-A.S.M.E. CODE

MATERIAL NOTES

SHELL & HEADS: ... STAINLESS STEEL-304-E.L.C. (.030% MAX. CARB.)
FLANGES: ASTM A182, GR.1 EXCEPT AS NOTED
COUPLINGS: STAINLESS STEEL TYPE 304-E.L.C. (.030% MAX.)
MANHOLE COVER: B.A.S.T.M. A182, GR.1, 302 OR 347 FACING.
MANHOLE STUD: ASTM A193 GR. B-7
MANHOLE NUTS: ASTM A-194 GR. 2-H
GUSSETS: ... A.S.T.M. A7
GASKETS: ... 1/16" TEFLON
PIPE: STAINLESS STEEL TYPE 304-E.L.C. (.030% MAX.)
STAINLESS STEEL FLANGES THE FACE OF THE FLANGE WHICH CONTACTS THE CORROSIVE MATERIAL SHALL BE COVERED WITH A CORROSION RESISTANT MATERIAL. THE CORROSION RESISTANT MATERIAL SHALL BE PHOSPHORIZED TO CC CCA. FRONT SHOP TEST SHALL NOT EXCEED 60 LBS. PER SQ. IN. TWO SETS OF SHOULDER STUDS TO BE PLATED WITH FULL STAINLESS STEEL.

GENERAL NOTES

INSPECTION: VESSEL TO BE INSPECTED AND STAMPED (CODE SYMBOL)
PAINTING: ALL EXTERNAL CARBON STEEL MATERIALS SHALL BE PAINTED WITH ONE SHOP COAT OF INHIBITANT #13 WITH PRIMER & ONE SHOP COAT OF PRIMER COAT #13 SERIES COAT
SHIPPING WEIGHT ... 1,975#
OPERATING WEIGHT ... 15,400# FULL
TEST WEIGHT ... 16,730#
CAPACITY ... 1175 GAL.
NOZZLE BOLT HOLES TO STRADDLE NATURAL N.D. NORTH HEADING ITEM 4 B TO BE PAINTED ON TANK

REFERENCE DRAWINGS

CATALYTIC STUDS
CUP-106 - HINGED MANHOLE DETAIL
EXCEPT MATL. TO BE STAINLESS STL TYPE 304 E.L.C. (.030% MAX. CARB.)
VESSEL TO BE PHOSPHORIZED TO CC CCA
SPEC. PRESSURE VESSEL INDEX PART 35 SECTI

N	1	12	3" - 2"	MANHOLE	HINGED	
D	1	2		VENT		
C	1	2		INLET		
B	1	2		OUTLET		
A	3	2		DRAIN		
SYM.	NO. REQ'D	SIZE	RATING & FACING	POSITION FROM HEAD	SERVICE	REMARKS

NOZZLE SCHEDULE

SCALE FOR THIS DRAWING: 0 ½ 1 2 3

APPROVED FOR A.E.C. BY ____
DATE ____

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

CONTRACT No. AT(33-1)-1020
FEED MATERIALS PRODUCTION CENTER
FERNALD AREA

SPENT PICKLE LIQUOR TANK
ITEM NO. F6-3
6'-0" D.O. x 7'-0" HIGH

DATE 10-26-51	OFFICE OF CATALYTIC CONSTRUCTION Co. 828 WALNUT STREET PHILA. 2, PA.		APPROVED
SCALE 1/2" = 1'-0"	APPROVED FOR CONSTRUCTION		
DRAWN			
CHECKED J. G. Sweer 10-23-51	DRAWING NO. 3006-F-07-B		REVISION NO. 2

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-5-6
32
FERNALD, OHIO

2484

EXISTING SALT OIL HEAT TREAT BLDG.

NEW CONCRETE APRON

EXISTING 1000 GAL. DUMPSTER PORTABLE TANK

SEE DETAILS

SEE DETAIL C DWG. OGE-5500-S-07158 FOR RELOCATION OF TANK FILL LINE

3" EXPANSION JOINT & HOT POUR SEAL

NEW DIKED CONCRETE PAD

NEW CONCRETE PAD

(4" VITRIFIED CLAY)

EXISTING 4'-0" x 5'-4" CONCRETE PAD FOR PUMP TOP ELEV. 580-0"

NEW DIKED CONCRETE PAD

EXISTING 7'-0" x 5'-6" CONCRETE PAD FOR TANK TOP ELEV. 580-0"

EXISTING 1000 GAL. OIL STORAGE TANK

EXISTING DRIVEWAY

INVERT ELEV. APPROX. 571-8"

EXISTING ST-10"

(4" VITRIFIED CLAY)

PLAN

FOR SECTIONS 1-1 THRU 4-4 SEE DWG. OGE-5500-S-07158

SCALE 3/8" = 1'-0"

EXISTING ST-10"

INVERT ELEV. 569-3"

EXISTING CATCH BASIN-31

S26+53.12

CONT. TO MANHOLE #2

PLANT 5 PLOT PLAN

LOCATION OF WORK

SALT-OIL HEAT TREAT BLDG.

REMOVE EXISTING CONCRETE PAD

DEMOLITION PLAN

REP. DRG. NO.	REP. DRG. TITLE	NO.	REVISIONS	DATE
	SECTIONS & DETAILS			

NATIONAL LEAD COMPANY OF OHIO
FEED MATERIALS PRODUCTION CENTER
FERNALD, OHIO

U. S. ATOMIC ENERGY COMMISSION

PLANT 5 SALT-OIL HEAT TREAT BLDG. #8

OIL SPILL PREVENTION MODIFICATIONS

DIKED PADS FOR OIL STORAGE

PLAN & DETAILS

ENGINEERING DIVISION

APPROVALS

ARCH. & STR.		H.&S.	
MECHANICAL		PROD.	
ELECTRICAL		TECH.	
CHEMICAL		MAINT.	
ENGINEER			

PROJ. NO. 5-124 | DATE 1-27-87 | SCALE 3/8" = 1'-0"

DRAWN BY | CHK. | DES. | APR. | REV. NO. | REV.

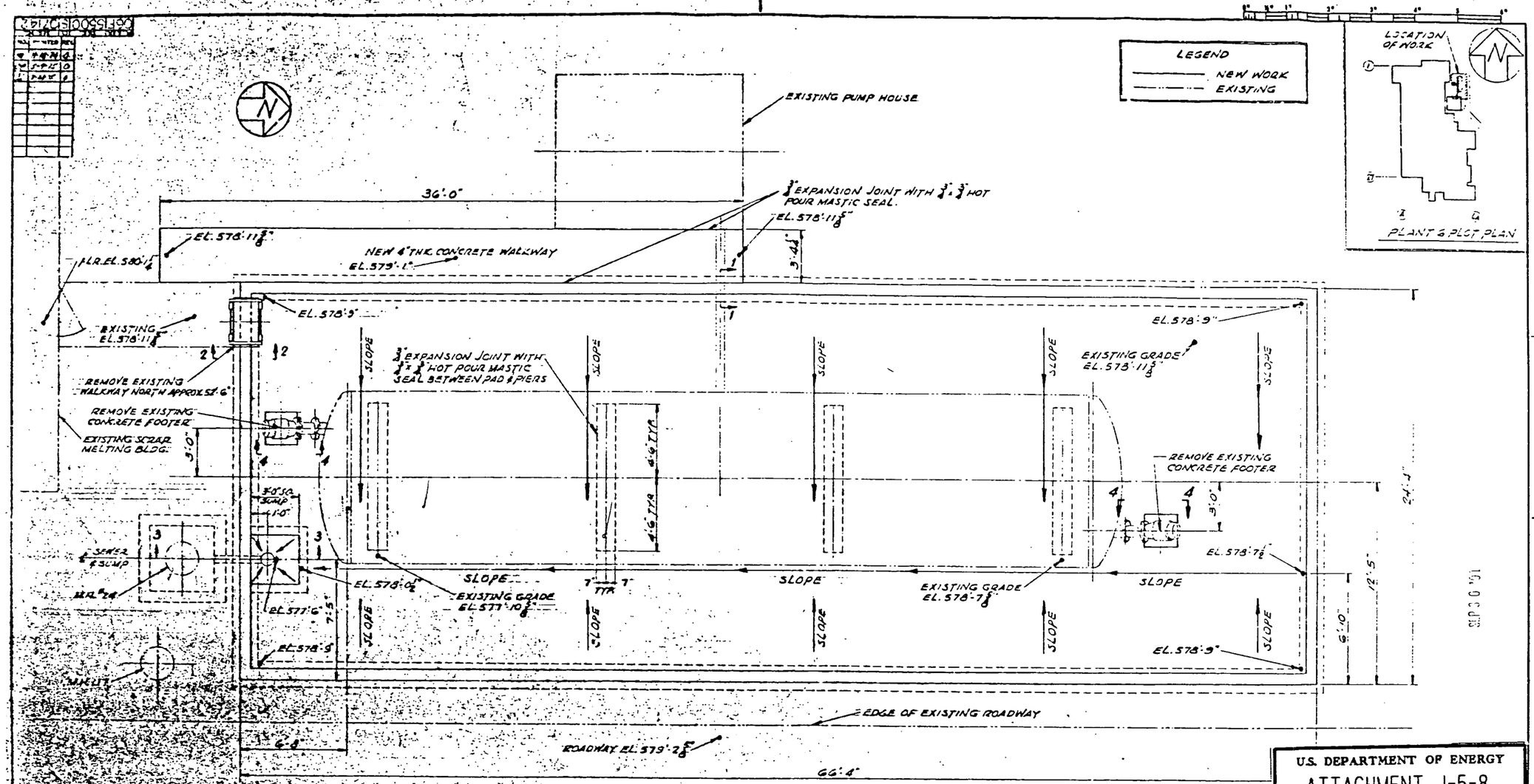
CODE 65F5500 | 5907157 | 0

U.S. DEPARTMENT OF ENERGY

ATTACHMENT J-5-7

33

FERNALD, OHIO



GENERAL NOTES

1. FOR SECTIONS 1-1 & 2-2 SEE DWG. 06F-5500-S-07143.
2. FOR SECTION 3-3 & VIEW 4-4 SEE DWG. 06F-5500-S-07144.

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-5-8
FERNALD, OHIO

PLANT 6 WATER TREATMENT AREA
OIL SPILL PREVENTION MODIFICATIONS
SPILL RETENTION DIKE
LAYOUT

ENGINEERING DIVISION

APPROVALS

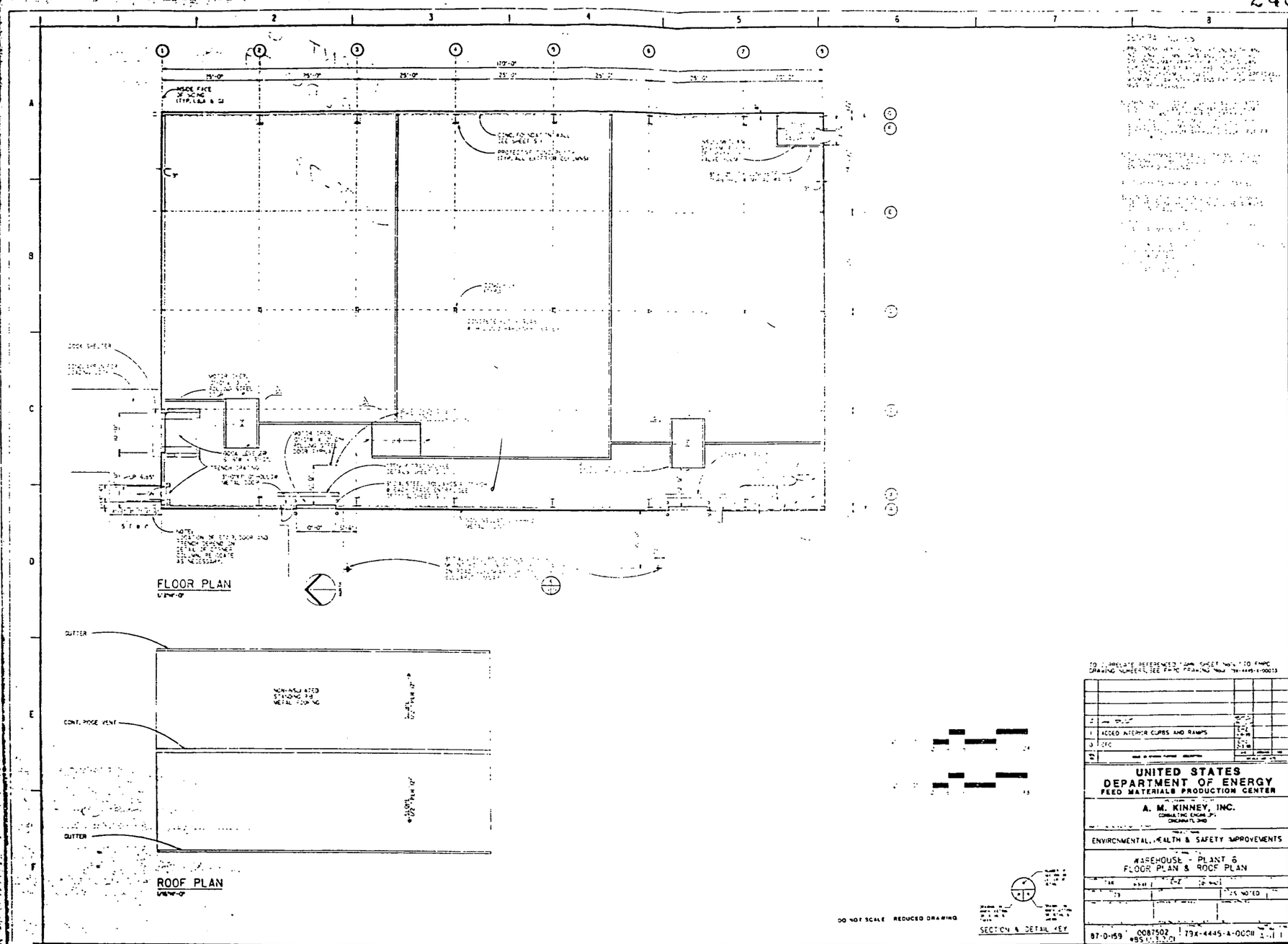
ARCH. & STR.			M. B. S.		
MECHANICAL			PROD.		
ELECTRICAL			TECH.		
CHEMICAL			MAINT.		
ENGINEER					

PROJ. NO. 5-614 DT. 7-5-3 DATE 8-74 SCALE 1"=10'-0"
DRAWN BY: J. LEE CHK. CL. APP. CL. REV.
DESIGNED
APPROVED

06F 5500 S 07142 0

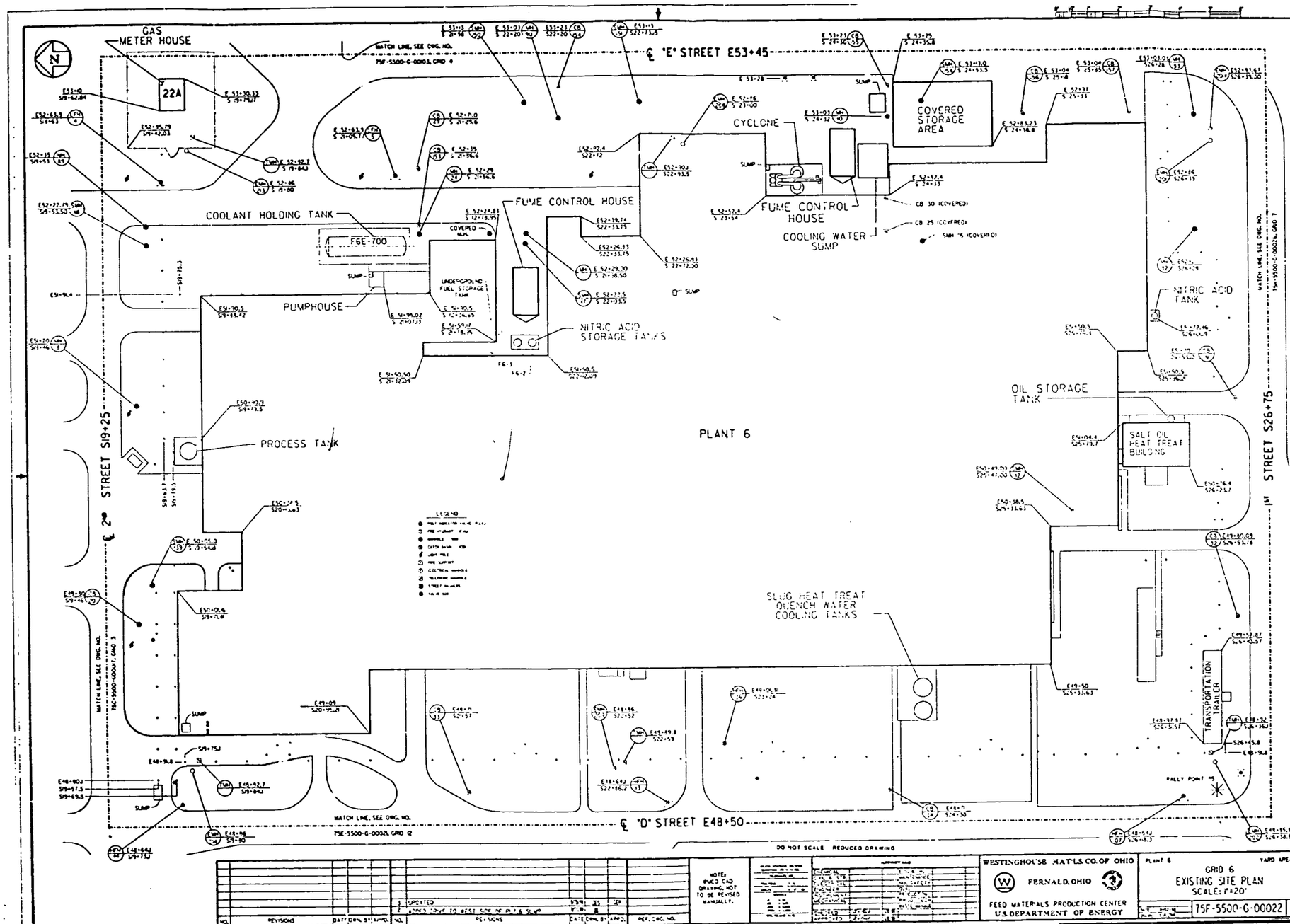
REF. DWG. NO.	REF. DWG. TITLE	NO.	REVISIONS	DATE	BY
06F-5500-S-07141	SLAB & WALL SUPPORT				
06F-5500-S-07143	CONCRETE REINFORCING FACTORS & LENGTHS				

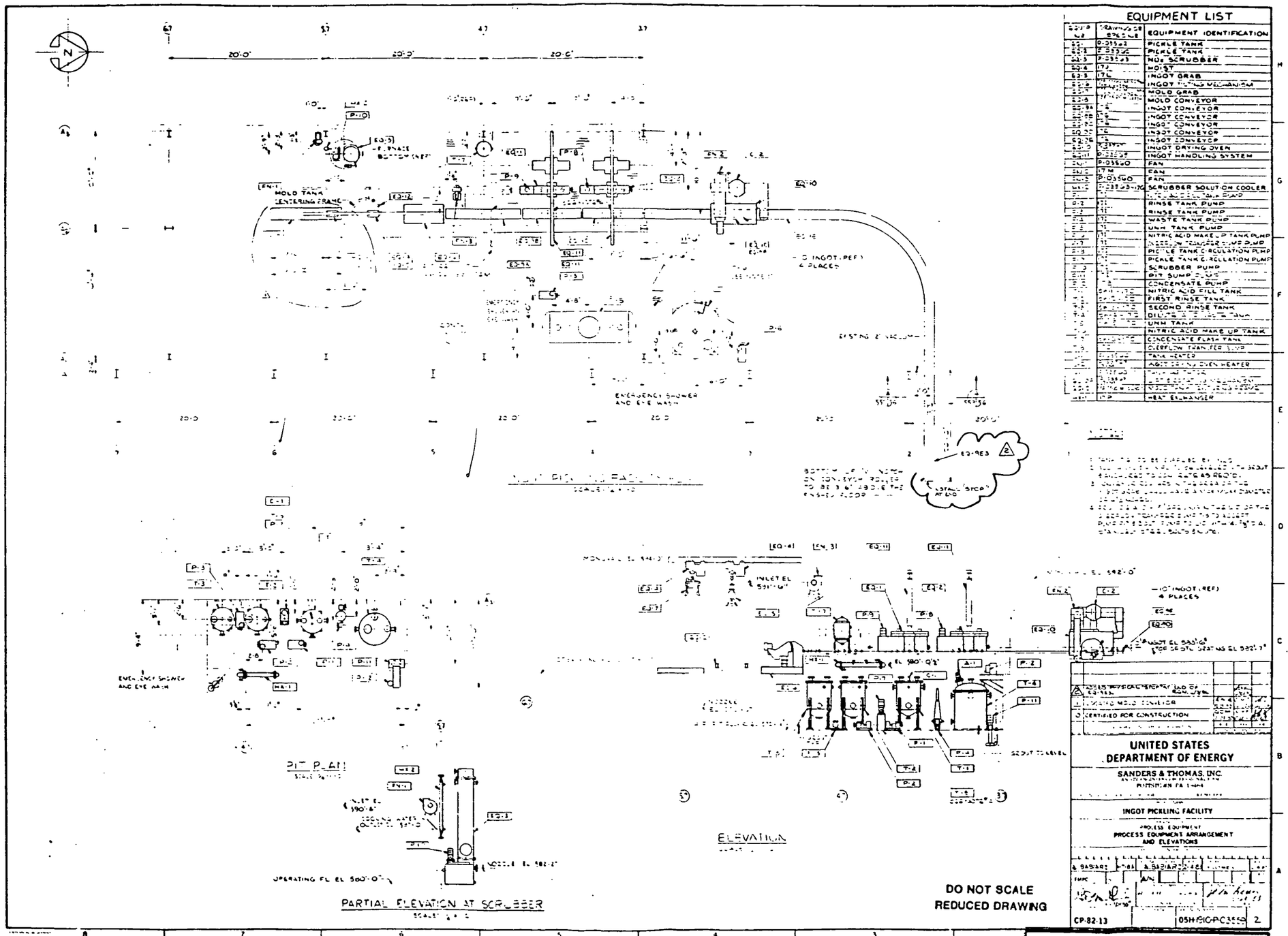
2484



MAY 10 '91

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-5-9
35
FERNALD, OHIO


GAS METER HOUSE
22A
℄ 'E' STREET E53+45
COVERED STORAGE AREA
CYCLONE
FUME CONTROL HOUSE
COOLING WATER SUMP
COOLANT HOLDING TANK
FGE-700
PUMPHOUSE
NITRIC ACID STORAGE TANKS
NITRIC ACID TANK
OIL STORAGE TANK
SALT OIL HEAT TREAT BUILDING
PROCESS TANK
PLANT 6
SLUG HEAT TREAT QUENCH WATER COOLING TANKS
TRANSPORTATION TRAILER
RALLY POINT #5
℄ 2nd STREET S19+25
℄ 1st STREET S26+75
℄ 'D' STREET E48+50
MATCH LINE, SEE DWG. NO.
DO NOT SCALE REDUCED DRAWING
WESTINGHOUSE MAT'LS CO. OF OHIO
FERNALD, OHIO
FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY
GRID 6
EXISTING SITE PLAN
SCALE: 1"=20'
75F-5500-G-00022
U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-5-10
36
FERNALD, OHIO



EQUIPMENT LIST

EQUIP. NO.	DRAWING OR SPECSHEET	EQUIPMENT IDENTIFICATION
EQ-1	P-03562	PICKLE TANK
EQ-2	P-03562	PICKLE TANK
EQ-3	P-03563	NO_x SCRUBBER
EQ-4	17J	HOIST
EQ-5	17L	INGOT GRAB
EQ-6	[illegible]	INGOT [illegible] MECHANISM
EQ-7	[illegible]	MOLD GRAB
EQ-8	[illegible]	MOLD CONVEYOR
EQ-9A	[illegible]	INGOT CONVEYOR
EQ-9B	[illegible]	INGOT CONVEYOR
EQ-9C	[illegible]	INGOT CONVEYOR
EQ-9D	[illegible]	INGOT CONVEYOR
EQ-9E	[illegible]	INGOT CONVEYOR
EQ-9F	[illegible]	INGOT CONVEYOR
EQ-10	[illegible]	INGOT DRYING OVEN
EQ-11	P-03565	INGOT HANDLING SYSTEM
EQ-12	P-03560	FAN
EQ-13	17M	FAN
EQ-14	P-03560	FAN
EQ-15	P-03563-17C	SCRUBBER SOLUTION COOLER
P-1	[illegible]	[illegible] PUMP
P-2	[illegible]	RINSE TANK PUMP
P-3	[illegible]	RINSE TANK PUMP
P-4	17J	WASTE TANK PUMP
P-5	[illegible]	UNH TANK PUMP
P-6	[illegible]	NITRIC ACID MAKE-UP TANK PUMP
P-7	[illegible]	[illegible] TRANSFER PUMP
P-8	[illegible]	PICKLE TANK CIRCULATION PUMP
P-9	[illegible]	PICKLE TANK CIRCULATION PUMP
P-10	[illegible]	SCRUBBER PUMP
P-11	[illegible]	PIT SUMP PUMP
P-12	[illegible]	CONDENSATE PUMP
T-1	[illegible]	NITRIC ACID FILL TANK
T-2	[illegible]	FIRST RINSE TANK
T-3	[illegible]	SECOND RINSE TANK
T-4	[illegible]	DILUTION [illegible] TANK
T-5	[illegible]	UNH TANK
T-6		NITRIC ACID MAKE UP TANK
T-7	[illegible]	CONDENSATE FLASH TANK
T-8	[illegible]	OVERFLOW TRANSFER SUMP
T-9	[illegible]	TANK HEATER
T-10	[illegible]	INGOT DRYING OVEN HEATER
T-11	[illegible]	[illegible] TANK
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
HEX-1	[illegible]	HEAT EXCHANGER

NOTES:

1. [illegible] TO BE [illegible] BY [illegible]
2. [illegible] WITH [illegible] AND [illegible] TO [illegible] AND GAS REGIONS.
3. [illegible] AND [illegible] TO BE [illegible] PIT [illegible] HAVE A [illegible] DIAMETER [illegible] OF [illegible].
4. [illegible] TO BE [illegible] OF THE [illegible] TO BE [illegible] PUMP [illegible] WITH [illegible] STAINLESS STEEL [illegible] SEALS.

1 CERTIFIED FOR CONSTRUCTION

UNITED STATES
DEPARTMENT OF ENERGY

SANDERS & THOMAS, INC.
POTTSTOWN, PA 19464

INGOT PICKLING FACILITY

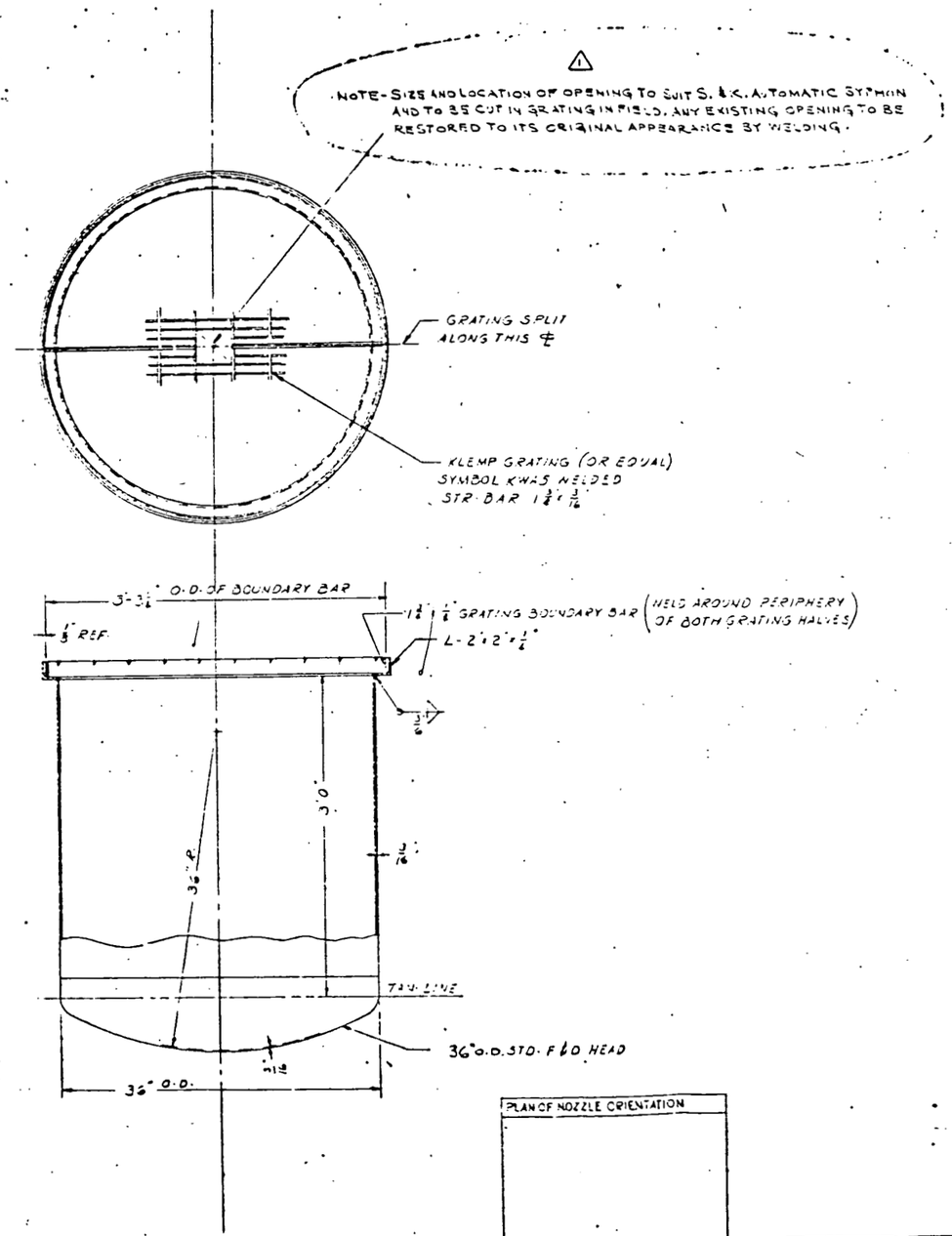
PROCESS EQUIPMENT
PROCESS EQUIPMENT ARRANGEMENT
AND ELEVATIONS

CP-82-13 | 05H-S10-P-C3555 | 2

SEP 30 '91

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-6-1
37
FERNALD, OHIO

3241-B08008



PLAN OF NOZZLE ORIENTATION

CONN	NO. REQD	SIZE	RATING & FACING	PROJECTION FROM VESSEL	SIZE OF PIPE NOZZLE	SERVICE	REMARKS

NOZZLE SCHEDULE

0 1/2 1 2 3
SCALE FOR THIS DRAWING

INDEX CODE
07D 1450 M 00057

PLANT RECORD
DATE 7/21/53 2437

GENERAL NOTES 2484

MATERIAL:

SHELL & HEAD	MONEL
PIPE	MONEL
FLANGES	MONEL
STRUCTURAL ANGLE RING	MONEL
GRATING	CARBON STEEL

PAINTING
GRATING ONLY - PER C.C.CO SPECS. #3241-2301 ITEM No. TO BE PAINTED ON VESSEL

TEST
FILL WITH WATER - VESSEL TO BE WATERTIGHT

WEIGHTS

SHIPPING WEIGHT	500#
OPERATING WEIGHT	1700#
TEST WEIGHT	1320#
CAPACITY (FULL)	170 GAL.

SPECIFICATIONS
TANK TO BE FABRICATED TO C.C.CO. SPECS. FOR ATMOSPHERIC TANKS & HOPPERS #3241-0803.

NOTE
GRATING TO BE REMOVABLE
TANK TO BE SET IN MASTIC

APPROVED
C.C.CO. W.E. Jones DATE 4/13/53
NATL LEAD CO. DATE 4/23/53
A.E.C. DATE 4/23/53

REV. NO.	DATE	DESCRIPTION	MADE BY	APP'D
5				
4				
3				
2				
1	3-16-53	4"x4" OPENING IN GRATING REPLACED BY NOTE. THIS REVISION INCLUDES AMENDMENT #1	MB	

REVISIONS

APPROVED FOR A.E.C. BY
DATE

UNITED STATES ATOMIC ENERGY COMMISSION
NEW YORK OPERATIONS OFFICE

CONTRACT No. AT(30-1)-1060
PRODUCTION PLANT
FERNALD AREA

ACID SUMP TANK
ITEM NO. 0817
PRODUCTION AREA

DATE 6-23-53
SCALE 1/4"=1'-0"
DRAWN T.M. JOHNSTON
CHECKED MB 4-22-53
OFFICE OF CATALYTIC CONSTRUCTION CO. 528 WALNUT STREET PHILA. 2, PA.
APPROVED FOR CONSTRUCTION
DRAWING NO. 3241-B08008
REVISION NO. 1

U.S. DEPARTMENT OF ENERGY
ATTACHMENT J-6-2
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FERNALD, OHIO