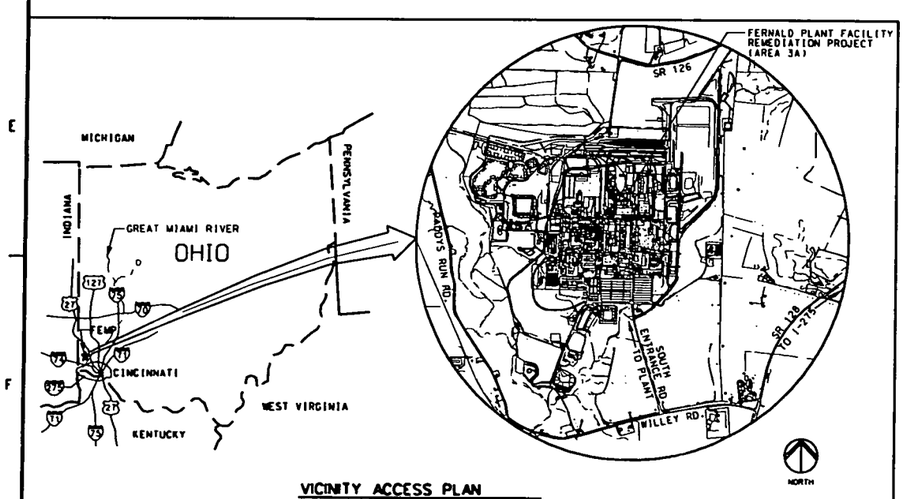
2890

FLUOR FERNALD

UNITED STATES DEPARTMENT OF ENERGY

Fernald Environmental Management Project

SOIL AND DISPOSAL FACILITY PROJECT REMEDIATION OF AREAS 3A AND 4A PACKAGE I - AREA 3A EXCAVATION



VICINITY ACCESS PLAN
SCALE: NONE

Construction Contract
No. FSC 642
Task Order No. L-010
FLUOR Fernald
Project No. 20800

000001

90% ISSUE

INFORMATION ONLY

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	06DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
TECHNOLOGIES

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
COVER SHEET

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	28JUL99	M. JERALD	28JUL99	M. RITTER	04JAN00
PLANT/BLDG. NO.		FLOOR		SCALE	CLASS
FEMP		NONE		NONE	U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD M. JERALD		TECH LEAD M. JERALD		TECH LEAD J. ALCORN	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800			
LCI PROJECT NO. 300-008919.01	FILENAME CPKG2001.DGN	99X-1900-X-00001	1	1

PROJECT DRAWING INDEX

SHEET NO.	DRAWING NO.	REV.	DRAWING TITLE
1	99X-1900-X-00001	I	COVER SHEET
2	99X-1900-X-00002	I	DRAWING INDEX SHEET 1 OF 2
3	99X-1900-X-00046	A	DRAWING INDEX SHEET 2 OF 2
4	99X-1900-X-00003	I	LEGEND AND GENERAL NOTES
5	99X-1900-G-00004	I	MASTER PLAN
6	99X-1900-G-00005	I	EXISTING CONDITIONS AREA 3A
7	99X-1900-G-00006	I	SITE LAYOUT PLAN AREA 3A
8	99X-1900-G-00007	I	TRAFFIC FLOW
9	99X-1900-G-00008	I	DRAINAGE PLAN (NW) AREA 3A
10	99X-1900-G-00009	I	DRAINAGE PLAN (NE) AREA 3A
11	99X-1900-G-00010	I	DRAINAGE PLAN (SW) AREA 3A
12	99X-1900-G-00011	I	DRAINAGE PLAN (SE) AREA 3A
13	99X-1900-G-00012	I	TANK FARM SETTLING BASIN PLAN AND SECTIONS
14	99X-1900-G-00013	G	TANK FARM SETTLING BASIN PROFILE
15	99X-1900-X-00014	G	UTILITY ISOLATION PLAN AREA 3A
16	99X-1900-G-00017	D	ABOVE-WAC DETAILS
17	99X-1900-G-00018	I	GRADING PLAN (NW) AREA 3A
18	99X-1900-G-00019	I	GRADING PLAN (NE) AREA 3A
19	99X-1900-G-00020	I	GRADING PLAN (SW) AREA 3A
20	99X-1900-G-00021	I	GRADING PLAN (SE) AREA 3A
21	99X-1900-G-00022	E	CROSS SECTIONS AREA 3A SHEET 1 OF 4
22	99X-1900-G-00023	F	CROSS SECTIONS AREA 3A SHEET 2 OF 4
23	99X-1900-G-00024	E	CROSS SECTIONS AREA 3A SHEET 3 OF 4
24	99X-1900-G-00025	E	CROSS SECTIONS AREA 3A SHEET 4 OF 4
25	99X-1900-G-00026	I	BOILER PLANT AREA FOUNDATIONS
26	99X-1900-G-00029	H	CROSS SECTIONS BOILER PLANT AREA
27	99X-1900-G-00030	E	CROSS SECTIONS BOILER PLANT AREA
28	99X-1900-G-00031	G	MAIN MAINTENANCE BLDG. AREA FOUNDATIONS
29	99X-1900-G-00033	F	CROSS SECTIONS MAIN MAINTENANCE BLDG. AREA
30	99X-1900-G-00034	E	CROSS SECTIONS MAIN MAINTENANCE BLDG. AREA
31	99X-1900-G-00035	H	PLANT 9 FOUNDATIONS
32	99X-1900-G-00038	F	CROSS SECTIONS PLANT 9
33	99X-1900-G-00039	E	CROSS SECTIONS PLANT 9
34	99X-1900-G-00040	F	CIVIL DETAILS SHEET 1 OF 3
35	99X-1900-G-00041	F	CIVIL DETAILS SHEET 2 OF 3
36	99X-1900-G-00042	F	CIVIL DETAILS SHEET 3 OF 3
37	99X-1900-G-00043	D	MATERIAL TRACKING PLAN
38	99X-1900-G-00044	D	PRECERTIFICATION CONFIGURATION AREA 3A
39	99X-1900-G-00045	D	UTILITY REMOVAL METHODS

① UTILITY GRID REFERENCE DRAWING INDEX

DRAWING NO.	DRAWING TITLE
22X-5500-P-00659	MASTER GRID OF UNDERGROUND UTILITY PLANS
22C-5500-P-00660	GRID 1 UNDERGROUND UTILITIES
22C-5500-P-00661	GRID 2 UNDERGROUND UTILITIES
22C-5500-P-00662	GRID 3 UNDERGROUND UTILITIES
22F-5500-P-00665	GRID 6 UNDERGROUND UTILITIES
22C-5500-P-00668	GRID 9 UNDERGROUND UTILITIES
22C-5500-P-00669	GRID 10 UNDERGROUND UTILITIES
22C-5500-P-00706	GRID 10A UNDERGROUND UTILITIES
22C-5500-P-00670	GRID 11 UNDERGROUND UTILITIES
22E-5500-P-00671	GRID 12 UNDERGROUND UTILITIES
22E-5500-P-00672	GRID 13 UNDERGROUND UTILITIES
22H-5500-P-00673	GRID 14 UNDERGROUND UTILITIES
22B-5500-P-00675	GRID 16 UNDERGROUND UTILITIES
22B-5500-P-00676	GRID 17 UNDERGROUND UTILITIES
22B-5500-P-00677	GRID 18 UNDERGROUND UTILITIES
22D-5500-P-00678	GRID 19 UNDERGROUND UTILITIES
22B-5500-P-00686	GRID 27 UNDERGROUND UTILITIES
00X-5500-G-01846	MASTER FEMP GPS BENCHMARK LOCATION PLAN

GENERAL NOTES

1. DESIGN BASED ON CURRENT REVISION OF UTILITY GRID DRAWINGS AT CFC ISSUE DATE.
2. CONTRACTOR SHALL REFER TO CURRENT UTILITY GRID DRAWINGS AT TIME OF EXCAVATION.

2890

KEYED NOTES

① REFERENCE DRAWINGS ARE NOT INCLUDED IN THIS PACKAGE. THE REFERENCE DRAWINGS WILL BE PROVIDED SEPARATELY TO THE CONTRACTOR BY FLUOR FERNALD.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
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E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

DETAILS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
TECHNOLOGIES

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
DRAWING INDEX
SHEET 1 OF 2

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	28JUL99	M. JERALD	28JUL99	W.W. CLARK	25JAN00

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
FEMP	NONE	NONE	U

SUBMITTED FOR 30% ISSUE	SUBMITTED FOR 60% ISSUE	SUBMITTED FOR 90% ISSUE
TECH LEAD M. JERALD	TECH LEAD M. JERALD	TECH LEAD M. JERALD
DATE 13AUG99	DATE 01NOV99	DATE 28JAN00

F.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-X-00002	2	I
LCI PROJECT NO. 300-008919.01	FILENAME CPKG2002.DGN			

000002

90% ISSUE

① BUILDING FOUNDATIONS REFERENCE DRAWING INDEX

DRAWING NO.	REV.	DRAWING TITLE
09E-5900-S-03984	1	BUILDING 9F FOUNDATION AND SLAB PLAN
09E-5900-S-03985	1	PLANT 9A OIL STORAGE TANK FOUNDATION AND SLAB PLAN
09X-5900-S-03977	1	PLANT 9A - NORTH FOUNDATION PLAN
09X-5900-S-03978	1	PLANT 9A - SOUTH FOUNDATION PLAN
09X-5900-S-03979	1	PLANT 9A - EAST FOUNDATION PLAN
09X-5900-S-03980	1	PLANT 9A - NORTH SLAB PLAN
09X-5900-S-03981	1	PLANT 9A - SOUTH SLAB PLAN
09X-5900-S-03982	1	PLANT 9A - EAST SLAB PLAN
09X-5900-S-03986	1	PAD 74K FOUNDATION AND SLAB PLAN
10C-5900-S-00793	1	PRECIPITATOR - PLANT 10A FOUNDATION AND SLAB PLAN
10E-5900-S-00794	1	BOILER PLANT MAINTENANCE BUILDING 10B FOUNDATION AND SLAB PLAN
10F-5900-S-00796	0	BUILDING 10E - FOUNDATION AND SLAB PLAN
10X-5900-S-00791	1	BOILER HOUSE - PLANT 10A FOUNDATION PLAN
10X-5900-S-00792	1	BOILER HOUSE - PLANT 10A SLAB PLAN
10X-5900-S-00795	1	OIL BURNER PAD - 10D FOUNDATION AND SLAB PLAN
12B-5900-S-00480	0	BUILDING 12B FOUNDATION AND SLAB PLAN
12B-5900-S-00481	0	BUILDING 12C FOUNDATION AND SLAB PLAN
12F-5900-S-00482	0	BUILDING 12D FOUNDATION AND SLAB PLAN
12X-5900-S-00476	0	BUILDING 12A - EAST FOUNDATION PLAN
12X-5900-S-00477	0	BUILDING 12A - WEST FOUNDATION PLAN
12X-5900-S-00478	0	BUILDING 12A - EAST SLAB PLAN
12X-5900-S-00479	0	BUILDING 12A - WEST SLAB PLAN
19X-5900-S-00696	0	TANK FARM 19A FOUNDATION PLAN
19X-5900-S-00697	0	TANK FARM 19A SLAB PLAN
19X-5900-S-00699	0	TANK FARM 19D FOUNDATION AND SLAB PLAN
20B-5900-S-00449	1	WET SALT STORAGE BIN - 10C FOUNDATION AND SLAB PLAN
20B-5900-S-00450	1	WATER TREATMENT PLANT - 20B FOUNDATION PLAN
20B-5900-S-00451	1	WATER TREATMENT PLANT - 20B SLAB PLAN
20B-5900-S-00452	1	CLEARWELL TANK BUILDING FOUNDATION AND SLAB PLAN
20B-5900-S-00453	1	EAST REACTIVATOR FOUNDATION AND SLAB PLAN
20B-5900-S-00454	1	WEST REACTIVATOR FOUNDATION AND SLAB PLAN
20B-5900-S-00455	1	PROCESS WATER STORAGE TANK - 20H FOUNDATION PLAN
22X-5900-S-00931	0	NORTHEAST SUMP FOUNDATION AND SLAB PLAN
24C-5900-S-00109	0	BUILDING 24B FOUNDATION AND SLAB PLAN
32X-5900-S-00060	0	BUILDING 32A AND 32B FOUNDATION PLAN
32X-5900-S-00061	0	BUILDING 32A AND 32B SLAB PLAN
38X-5900-S-00030	1	BUILDING 38A AND 38B FOUNDATION AND SLAB PLAN
38X-5900-S-00031	1	PROPANE TANKS FOUNDATION PLAN
64X-5900-S-00118	0	BUILDING 64 - NORTH FOUNDATION PLAN
64X-5900-S-00119	0	BUILDING 64 - SOUTH FOUNDATION AND SLAB PLAN
64X-5900-S-00120	0	BUILDING 64 - NORTH SLAB PLAN
64X-5900-S-00121	0	BUILDING 64 - SOUTH SLAB PLAN
65X-5900-S-00063	0	BUILDING 65 - NORTH FOUNDATION PLAN
65X-5900-S-00064	0	BUILDING 65 - SOUTH FOUNDATION PLAN
65X-5900-S-00065	0	BUILDING 65 - NORTH SLAB PLAN
65X-5900-S-00066	0	BUILDING 65 - SOUTH SLAB PLAN
69X-5500-A-00012	0	DECONTAMINATION BUILDING ARCHITECTURAL FOOTING & FOUNDATION DETAILS
69X-5500-A-00013	0	DECONTAMINATION BUILDING ARCHITECTURAL FLOOR PLAN
69X-5500-A-00017	1	DECONTAMINATION BUILDING ARCHITECTURAL ROOF PLANS & ELECTRICAL CONTROL CENTER RW
69X-5500-A-00078	0	DECONTAMINATION BUILDING FLOOR PALN
69X-5500-S-00020	1	DECONTAMINATION BUILDING STRUCTURAL CONCRETE FLOOR DETAILS
69X-5500-S-00021	1	DECONTAMINATION BUILDING STRUCTURAL DIP TANK CONCRETE DETAILS
69X-5500-S-00065	0	DECONTAMINATION BUILDING STRUCTURAL FOUNDATION PLAN FOR NEW BLOWERS PLAN & DETAILS
81X-5900-S-00029	1	BUILDING 81 FOUNDATION PLAN
81X-5900-S-00030	1	BUILDING 81 SLAB PLAN
09C-5500-M-01992	0	PLANT 9 - HYDRAULIC RAMS SUPPORT & ASSEMBLY (ELEVATIONS, SECTIONS & DETAILS)

① PARSONS 3D FOUNDATION SKETCHES INDEX

SKETCH NO.	REV.	DRAWING TITLE
SK9F-1	1	BUILDING 9F FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK9F-2	1	BUILDING 9F FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK9ADIL-1	2	PLANT 9A - OIL STORAGE TANK FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK9ADIL-2	2	PLANT 9A - OIL STORAGE TANK FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK9AN-1	1	PLANT 9A NORTH FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK9AN-2	1	PLANT 9A NORTH FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK9AS-1	1	PLANT 9A SOUTH FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK9AS-2	1	PLANT 9A SOUTH FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK9AE-1	1	PLANT 9A EAST FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK9AE-2	1	PLANT 9A EAST FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK74K-1	0	PAD 74K FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK74K-2	0	PAD 74K FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK10APREC-1	1	PRECIPITATOR - PLANT 10A FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK10APREC-2	1	PRECIPITATOR - PLANT 10A FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK10B-1	1	BOILER PLANT MAINTENANCE BLDG 10B FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK10B-2	1	BOILER PLANT MAINTENANCE BLDG 10B FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK10E-1	0	BUILDING 10E FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK10E-2	0	BUILDING 10E FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK10A-1	1	BOILER HOUSE - PLANT 10A FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK10A-2	1	BOILER HOUSE - PLANT 10A FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK10D-1	1	OIL BURNER PAD - 10D SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK10D-2	1	OIL BURNER PAD - 10D SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK12B-1	0	BUILDING 12B FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK12B-2	0	BUILDING 12B FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK12C-1	0	BUILDING 12C SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK12C-2	0	BUILDING 12C SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK12D-1	0	BUILDING 12D FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK12D-2	0	BUILDING 12D FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK12AE-1	0	BUILDING 12A - EAST FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK12AE-2	0	BUILDING 12A - EAST FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK12AW-1	0	BUILDING 12A - WEST FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK12AW-2	0	BUILDING 12A - WEST FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK19A-1	0	TANK FARM 19A FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK19A-2	0	TANK FARM 19A FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK10C-1	1	WET SALT STORAGE BIN - 10C FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK10C-2	1	WET SALT STORAGE BIN - 10C FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK20B-1	1	WATER TREATMENT PLANT - 20B FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK20B-2	1	WATER TREATMENT PLANT - 20B FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK20C-1	0	BUILDING 20C FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK20C-2	0	BUILDING 20C FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SKCLEAR-1	1	CLEARWELL TANK BUILDING FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SKCLEAR-2	1	CLEARWELL TANK BUILDING FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SKEREACT-1	1	EAST REACTIVATOR FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SKEREACT-2	1	EAST REACTIVATOR FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SKWREACT-1	1	WEST REACTIVATOR FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SKWREACT-2	1	WEST REACTIVATOR FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK20H-1	1	PROCESS WATER STORAGE TANK -20H FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK20H-2	1	PROCESS WATER STORAGE TANK -20H FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SKSNE-1	0	NORTHEAST SUMP FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SKSNE-2	0	NORTHEAST SUMP FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK24B-1	0	BUILDING 24B FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK24B-2	0	BUILDING 24B FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK32AB-1	0	BUILDING 32A AND 32B FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK32AB-2	0	BUILDING 32A AND 32B FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK38AB-1	1	BUILDING 38A AND 38B FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK38AB-2	1	BUILDING 38A AND 38B FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SKPROP-1	1	PROPANE TANKS FOUNDATION ISOMETRIC VIEW WITHOUT HIDDEN LINES
SKPROP-2	1	PROPANE TANKS FOUNDATION ISOMETRIC VIEW WITH HIDDEN LINES
SK64N-1	0	BUILDING 64 - NORTH FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK64N-2	0	BUILDING 64 - NORTH FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK64S-1	0	BUILDING 64 - SOUTH FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK64S-2	0	BUILDING 64 - SOUTH FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK65N-1	0	BUILDING 65 - NORTH FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK65N-2	0	BUILDING 65 - NORTH FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK65S-1	0	BUILDING 65 - SOUTH FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK65S-2	0	BUILDING 65 - SOUTH FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK81-1	1	BUILDING 81 FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK81-2	1	BUILDING 81 FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES

000003

90% ISSUE

GENERAL NOTES

2890

KEYED NOTES

① REFERENCE DRAWINGS ARE NOT INCLUDED IN THIS PACKAGE. THE REFERENCE DRAWINGS WILL BE PROVIDED SEPARATELY TO THE CONTRACTOR BY FLUOR FERNALD.

REF DWG NO.	DRAWING TITLE

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A	ISSUED FOR 90% EPA REVIEW	31MAR00		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
DRAWING INDEX
SHEET 2 OF 2

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	03MAR00	M. JERALD	03MAR00	W.W. CLARK	03MAR00

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
TEMP	NONE	NONE	U

SUBMITTED FOR 30% ISSUE	SUBMITTED FOR 90% ISSUE	SUBMITTED FOR 100% ISSUE
TECH LEAD NONE	TECH LEAD NONE	TECH LEAD W.W. CLARK
DATE NONE	DATE NONE	DATE 31MAR00

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-X-00046	3	A
LET PROJECT NO. 500-008919.01	FILENAME CPKG2058.DGN			

SYMBOLS LEGEND

EXISTING		PROPOSED
●	MANHOLE	N/A
⊙	CATCH BASIN	○
—▶—	STORM SEWER	N/A
— — —	ABOVE-GRADE WATERLINE	N/A
Ø	ELECTRIC POLE	N/A
	ELECTRIC MANHOLE	N/A
N/A	TEMPORARY DIVERSION W/ SILT FENCE	
	GRAVEL ROADWAY	N/A
	PAVED ROADWAY	N/A
	BUILDING SLAB / CONCRETE PAD / TRAILER	N/A
	CHAIN LINK FENCE	N/A
	TRAFFIC GATE	
N/A	CONSTRUCTION FENCE	—xCx—
N/A	RAD FENCE	—xRx—
N/A	EXCAVATION BOUNDARY	
N/A	PROTECTED AREA	
OR	BENCHMARK	N/A
	LIMIT OF ABOVE-WAC AND RCRA MATERIAL	N/A
	LIMIT OF ABOVE-WAC AND RCRA MATERIAL TO BE TREATED	N/A
	PIPE PLUG	
N/A	AIR GAP FOR STORM SEWER	
N/A	PROJECT BOUNDARY	
	RAILROAD TIES	N/A
N/A	FENCE REMOVAL	
	UNDERGROUND UTILITIES BEYOND DESIGN SURFACE TO BE REMOVED DURING TRENCHING	N/A
	UNDERGROUND UTILITIES REMOVED DURING GRADING	N/A
	ABANDONED UNDERGROUND ① UTILITIES	N/A
N/A	HAUL ROAD	
N/A	20 MG/KG URANIUM FRL AREA	—HL—
—584—	CONTOUR - MINOR	—584—
—585—	CONTOUR - MAJOR	—585—
N/A	PUMP STATION	
N/A	APPROXIMATE CERTIFICATION BOUNDARY	
N/A	DEWATERING CHANNEL	
N/A	PUMP STATION MAINTENANCE ROAD	
N/A	AREA ISOLATION TRENCH	

SYMBOLS LEGEND

EXISTING		PROPOSED
	CONCRETE TRENCH	N/A

2890

ABBREVIATIONS

BR - BRINE LINE
CB - CATCH BASIN
CE - CONTAMINATED EFFLUENT LINES
CI - CAST IRON
CMP - CORRUGATED METAL PIPE
CN - STEAM & CONDENSATE LINES
DF - DEIONIZED FEEDLINES
DW - DOMESTIC/POTABLE WATER LINES
EC - EDGE OF CONCRETE
EP - EDGE OF PAVEMENT
EL - ELECTRICAL LINES
ELEV - ELEVATION
FEMP - FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FG - FUEL GAS LINES
FRL - FINAL REMEDIATION LEVEL
FT - FILTRATE OR EFFLUENT LINES
FO1 - HIGH PRESSURE FIRE PROTECTION LINES
GMA - UNSATURATED SANDS AND GRAVELS OF THE GREAT MIAMI AQUIFER
GW - GROUND WATER LINES
HWMU - HAZARDOUS WASTE MANAGEMENT UNIT
MH - MANHOLE
OMTA - OSDF MATERIAL TRANSFER AREA
OSDF - ON-SITE DISPOSAL FACILITY
PA - PLANT AIR LINES
PVC - POLYVINYL CHLORIDE
RAD - RADIOLOGICAL
RCP - REINFORCED CONCRETE PIPE
RCRA - RESOURCE CONSERVATION AND RECOVERY ACT
RW - RAW WATER LINES
SA - INSTRUMENT AIR SUPPLY LINES
SD - SUBSURFACE DRAINS
SL - SUMP LIQUOR LINES
SMTA - SPECIAL MATERIAL TRANSFER AREA
SN - SANITARY SEWER LINES
SP - STOCKPILE / SOIL PILE
ST - STORM SEWER
TYP - TYPICAL
TW - TREATED WATER LINES
UST - UNDERGROUND STORAGE TANK
VCP - VITRIFIED CLAY PIPE
WAC - WASTE ACCEPTANCE CRITERIA
WR - WATER RETURN-COOLING LINES
WS - WATER SUPPLY-COOLING LINES

SECTION CUTS

GENERAL NOTES

1. EXISTING TOPOGRAPHY SHOWN ON DRAWINGS PROVIDED BY FLUOR FERNALD. THESE SOURCES INCLUDE:

   EXISTING SITE DATA SOURCE (IN-PLANT FILES)
   FEMP CADD GRID/UTILITY DRAWINGS

2. HORIZONTAL CONTROL SHOWN ON THE DRAWINGS IS BASED UPON NORTH AMERICAN DATUM 1983 (NAD 83).
3. VERTICAL CONTROL SHOWN ON THE DRAWINGS IS BASED UPON NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29).
4. SILT FENCES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS.
5. TEMPORARY DIVERSION CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02275.
6. DESIGN SURFACES FOR REMEDIATION ARE DERIVED FROM A COMBINATION OF FOUNDATION STRUCTURES AND UNDERGROUND UTILITY DRAWINGS AND FRL SURFACES PROVIDED BY FLUOR FERNALD.
7. GEOLOGICAL AND CROSS SECTION INFORMATION TAKEN FROM (FEMP) OU-2 RI, 1995, OU-2 FS, 1995, GEOTECHNICAL REPORTS, AND FEMP 3-D CADD MODEL. ACTUAL GEOLOGICAL CONDITIONS AND DEPTHS SHOWN ON CROSS SECTIONS MAY VARY AND SHALL BE DETERMINED IN THE FIELD DURING EXCAVATION. FIELD ADJUST THE EXCAVATION DEPTHS AS REQUIRED TO REMOVE IMPACTED MATERIAL.
8. LOCATION AND DEPTH OF EXISTING UTILITIES AND FOUNDATION STRUCTURES ARE APPROXIMATE. IF UNIDENTIFIED UTILITIES ARE DISCOVERED, STOP WORK AND NOTIFY THE CONSTRUCTION MANAGER IMMEDIATELY.
9. DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
10. FIGURED DIMENSIONS AND/OR ELEVATIONS MARKED THUS (+/-) SHALL BE VERIFIED IN THE FIELD BEFORE START OF REMEDIATION.
11. RESTRICT ACTIVITIES TO THE IMMEDIATE PROJECT AREA DEFINED BY RADIOLOGICAL CONTROL OR CONSTRUCTION FENCE AND WITHIN THE "LIMITS OF WORK". AREAS DISTURBED OUTSIDE THE LIMIT OF WORK SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO FLUOR FERNALD.
12. MAINTAIN AND PROTECT UTILITY LOCATION MARKINGS.
13. PROVIDE TEMPORARY SHORING, BRACING, OR OTHER METHODS AS NECESSARY TO SAFELY SUPPORT EXCAVATION. PROTECTION SHALL BE IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P-EXCAVATIONS, LATEST EDITION.

KEYED NOTES

① LINE SYMBOL APPLIES FOR DRAINAGE PLANS & TANK FARM SETTLING BASIN DRAWINGS ONLY.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	13MAR00	INITIALS AND DATE	
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	14JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	08OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

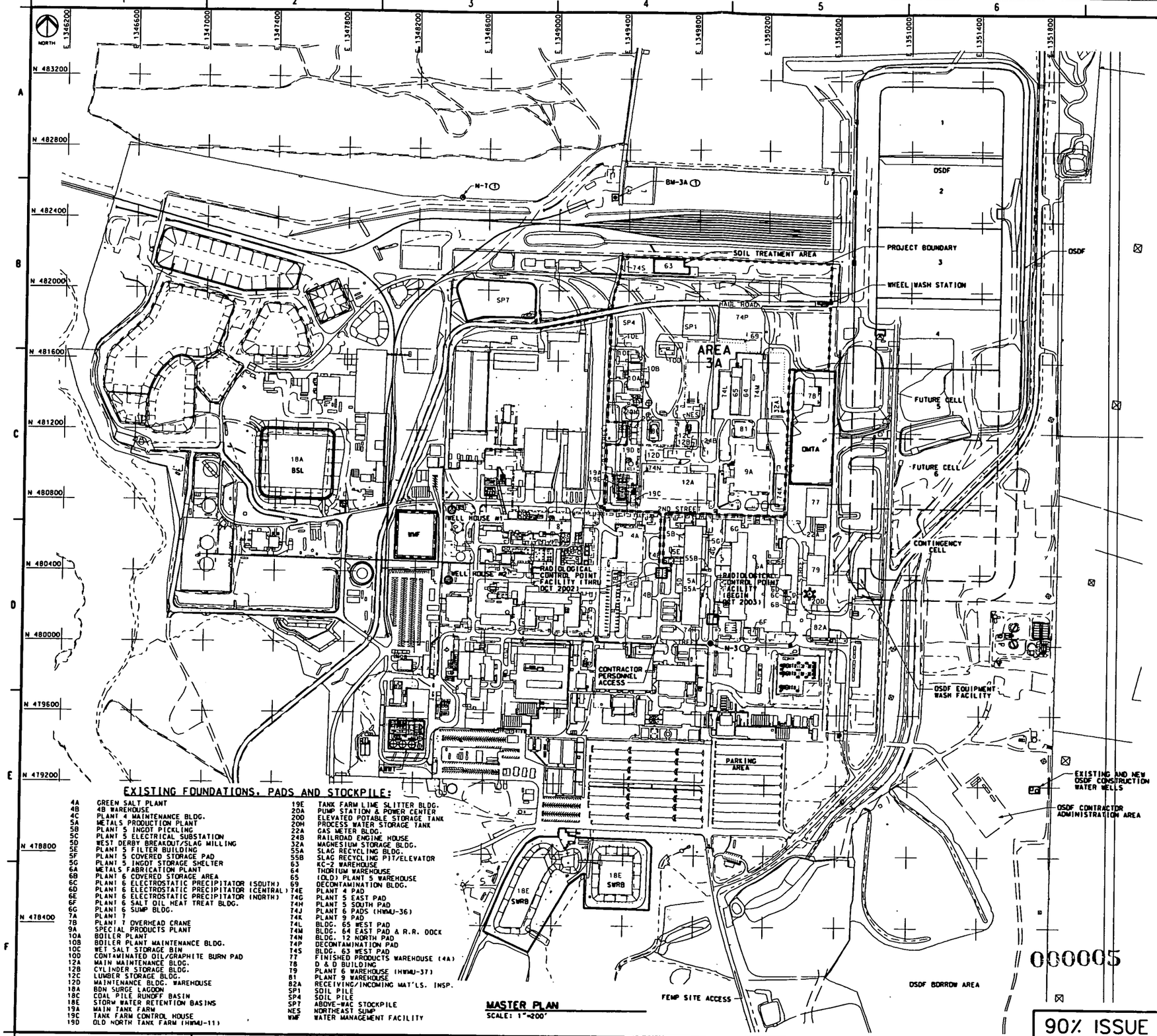
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
LEGEND AND GENERAL NOTES

DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99	CHECKED BY N. ROBERTS	DATE 25JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE NONE	CLASS U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD M. JERALD		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	
F.O. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-X-00003		SHEET NO. 4	REV. NO. 1
LST PROJECT NO. 300-008919.01	TEMPLATE CPKG2003.DGN				

000004

90% ISSUE



EXISTING FOUNDATIONS, PADS AND STOCKPILE:

4A	GREEN SALT PLANT
4B	4B WAREHOUSE
4C	PLANT 4 MAINTENANCE BLDG.
5A	METALS PRODUCTION PLANT
5B	PLANT 5 INGOT PICKLING
5C	PLANT 5 ELECTRICAL SUBSTATION
5D	WEST DERBY BREAKOUT/SLAG MILLING
5E	PLANT 5 FILTER BUILDING
5F	PLANT 5 COVERED STORAGE PAD
5G	PLANT 5 INGOT STORAGE SHELTER
6A	METALS FABRICATION PLANT
6B	PLANT 6 COVERED STORAGE AREA
6C	PLANT 6 ELECTROSTATIC PRECIPITATOR (SOUTH)
6D	PLANT 6 ELECTROSTATIC PRECIPITATOR (CENTRAL)
6E	PLANT 6 ELECTROSTATIC PRECIPITATOR (NORTH)
6F	PLANT 6 SALT OIL HEAT TREAT BLDG.
6G	PLANT 6 SUMP BLDG.
7A	PLANT 7
7B	PLANT 7 OVERHEAD CRANE
9A	SPECIAL PRODUCTS PLANT
10A	BOILER PLANT
10B	BOILER PLANT MAINTENANCE BLDG.
10C	WET SALT STORAGE BIN
10D	CONTAMINATED OIL/GRAPHITE BURN PAD
12A	MAIN MAINTENANCE BLDG.
12B	CYLINDER STORAGE BLDG.
12C	LUMBER STORAGE BLDG.
12D	MAINTENANCE BLDG. WAREHOUSE
18A	BDN SURGE LAGOON
18C	COAL PILE RUNOFF BASIN
18E	STORM WATER RETENTION BASINS
19A	MAIN TANK FARM
19C	TANK FARM CONTROL HOUSE
19D	OLD NORTH TANK FARM (HWMU-11)
19E	TANK FARM LIME SLITTER BLDG.
20A	PUMP STATION & POWER CENTER
20D	ELEVATED POTABLE STORAGE TANK
20H	PROCESS WATER STORAGE TANK
22A	GAS METER BLDG.
24B	RAILROAD ENGINE HOUSE
32A	MAGNESIUM STORAGE BLDG.
55A	SLAG RECYCLING BLDG.
55B	SLAG RECYCLING PIT/ELEVATOR
63	KC-2 WAREHOUSE
64	THORIUM WAREHOUSE
65	(OLD) PLANT 5 WAREHOUSE
69	DECONTAMINATION BLDG.
74E	PLANT 4 PAD
74G	PLANT 5 EAST PAD
74H	PLANT 5 SOUTH PAD
74J	PLANT 6 PADS (HWMU-36)
74K	PLANT 9 PAD
74L	BLDG. 65 WEST PAD
74M	BLDG. 64 EAST PAD & R.R. DOCK
74N	BLDG. 12 NORTH PAD
74P	DECONTAMINATION PAD
74S	BLDG. 63 WEST PAD
77	FINISHED PRODUCTS WAREHOUSE (4A)
78	D & D BUILDING
79	PLANT 6 WAREHOUSE (HWMU-37)
81	PLANT 9 WAREHOUSE
82A	RECEIVING/INCOMING MAT'LS. INSP.
SP1	SOIL PILE
SP4	SOIL PILE
SP7	ABOVE-WAC STOCKPILE
NES	NORTHEAST SUMP
WMF	WATER MANAGEMENT FACILITY

MASTER PLAN
SCALE: 1"=200'

000005

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. MAJOR COMPONENTS OUTSIDE THE PROJECT AREA ARE FOR REFERENCE AND ORIENTATION ONLY.
3. NEW AND EXISTING SURVEY MONUMENTS OUTSIDE THE EXCAVATION BOUNDARY ARE TO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT.

2890

KEYED NOTES

1. REFER TO MASTER FEMP BENCHMARK LOCATION PLAN, DRAWING 00X-5500-G-01846 FOR EXISTING BENCHMARK LOCATIONS.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	08OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

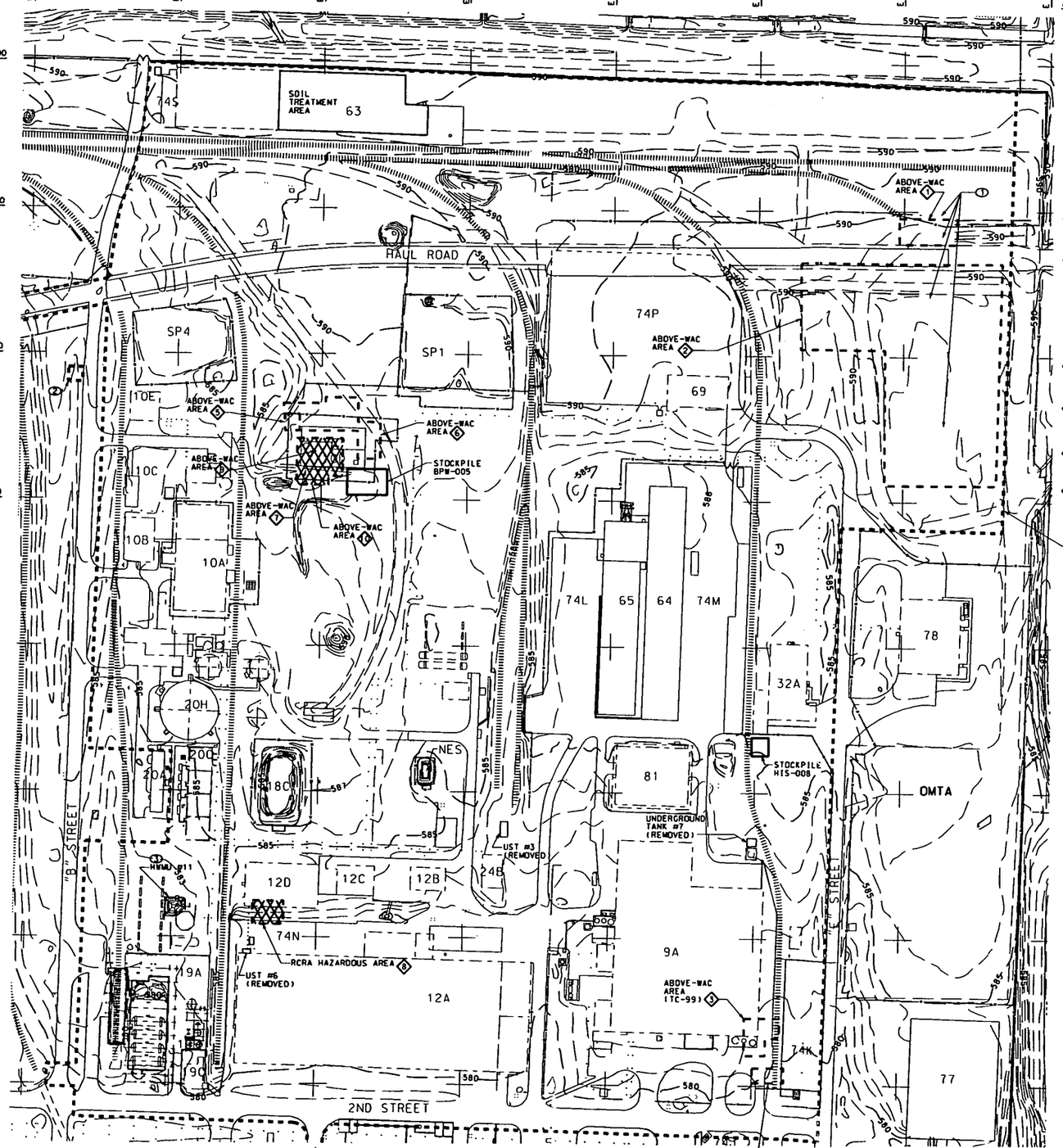
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
MASTER PLAN

DRAWN BY K. DAVIS	DATE 28JUL99	TECHNICAL LEAD N. ROBERTS	DATE 28JUL99	CHECKED BY M. RITTER	DATE 04JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=200'	CLASS U
SUBMITTED FOR 30% CODE		SUBMITTED FOR 60% CODE		SUBMITTED FOR 90% CODE	
TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

F.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00004	SHEET NO. 5	REV. NO. I
LCI PROJECT NO. 300-008919.01	FILENAME CPKG1004.DGN			

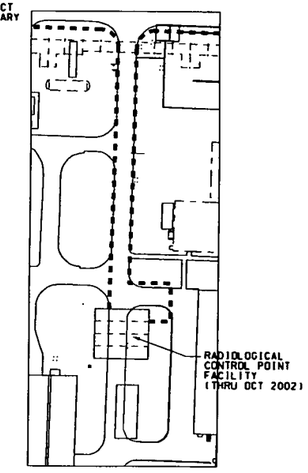


TO RADIOLOGICAL CONTROL POINT FACILITY. SEE INSET PLAN THIS DWG.

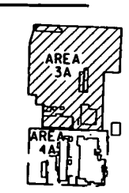
EXISTING CONDITIONS - AREA 3A
SCALE: 1"=60'

COORDINATES OF ABOVE-WAC AND RCRA AREAS

AREA	DESCRIPTION	NORTHING	EASTING	DEPTH
1	NE CORNER - NORTH OF HAUL ROAD	481990.10 481990.10 481954.74 481954.74	1350393.92 1350472.42 1350472.42 1350393.92	1 FT
2	NE CORNER - SOUTH OF HAUL ROAD	481927.76 481927.76 481622.70 481622.70 481809.10 481809.10	1350259.10 1350534.84 1350526.49 1350374.53 1350374.53 1350259.10	1FT
3	SOUTHEAST CORNER PLANT 9 (TC-99)	480891.15 480891.15 480863.84 480863.84 480840.09 480840.09	1350189.19 1350237.89 1350237.84 1350218.20 1350218.20 1350189.19	7FT
4	BETWEEN PLANT 9 AND PLANT 6	480823.58 480823.58 480803.56 480803.56	1350200.74 1350243.80 1350243.80 1350200.74	1FT
5	INCINERATOR PAD - NW CORNER	481716.71 481716.71 481694.15 481694.15	1349549.90 1349569.90 1349569.90 1349549.90	4FT
6	INCINERATOR PAD - NORTH AND EAST	481731.99 481731.99 481740.00 481740.00 481705.83 481705.83 481655.91 481655.91 481694.15 481694.15 481716.71 481716.71	1349548.01 1349605.00 1349605.00 1349649.81 1349649.81 1349680.00 1349680.00 1349649.41 1349649.41 1349569.90 1349569.90 1349548.01	2FT
7	INCINERATOR PAD - SW CORNER	481648.64 481648.64 481639.58 481639.58	1349572.19 1349609.95 1349609.95 1349572.19	3FT
8	RCRA HAZARDOUS AREA	481048.96 481048.96 481016.95 481016.95	1349513.37 1349555.49 1349555.49 1349513.37	10.5FT
9	INCINERATOR PAD (SHALLOW)	481683.53 481683.53 481648.64 481648.64	1349566.99 1349599.21 1349599.21 1349566.99	1.5FT
10	INCINERATOR PAD (DEEP)	481683.53 481683.53 481631.16 481631.16 481619.93 481619.93	1349566.99 1349629.30 1349629.30 1349609.95 1349609.95 1349566.62	6-13.5FT



RADIOLOGICAL CONTROL POINT FACILITY INSET PLAN
SCALE: 1"=60'



KEY PLAN
SCALE: NONE

0' 20' 40' 60' 120' 180'
SCALE: 1 INCH=60 FEET

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. EXISTING FENCING LOCATION BASED ON FIELD OBSERVATIONS MADE BY LGT DURING 15DEC99 SITE VISIT.

2890

KEYED NOTES

1. CONTRACTOR TO FIELD VERIFY EXISTING TOPOGRAPHIC DISCREPANCY IN THESE AREAS.
2. STORM SEWER MODIFICATION (AIR GAPS AND PIPE PLUGS) TO BE PERFORMED BY THE CONTRACTOR OUTSIDE OF THE PROJECT BOUNDARY. SEE DWGS. 99X-1900-G-00008 THRU 99X-1900-G-00011.
3. HMMU #11 SHALL NOT BE DISTURBED.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

REVISIONS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
EXISTING CONDITIONS AREA 3A

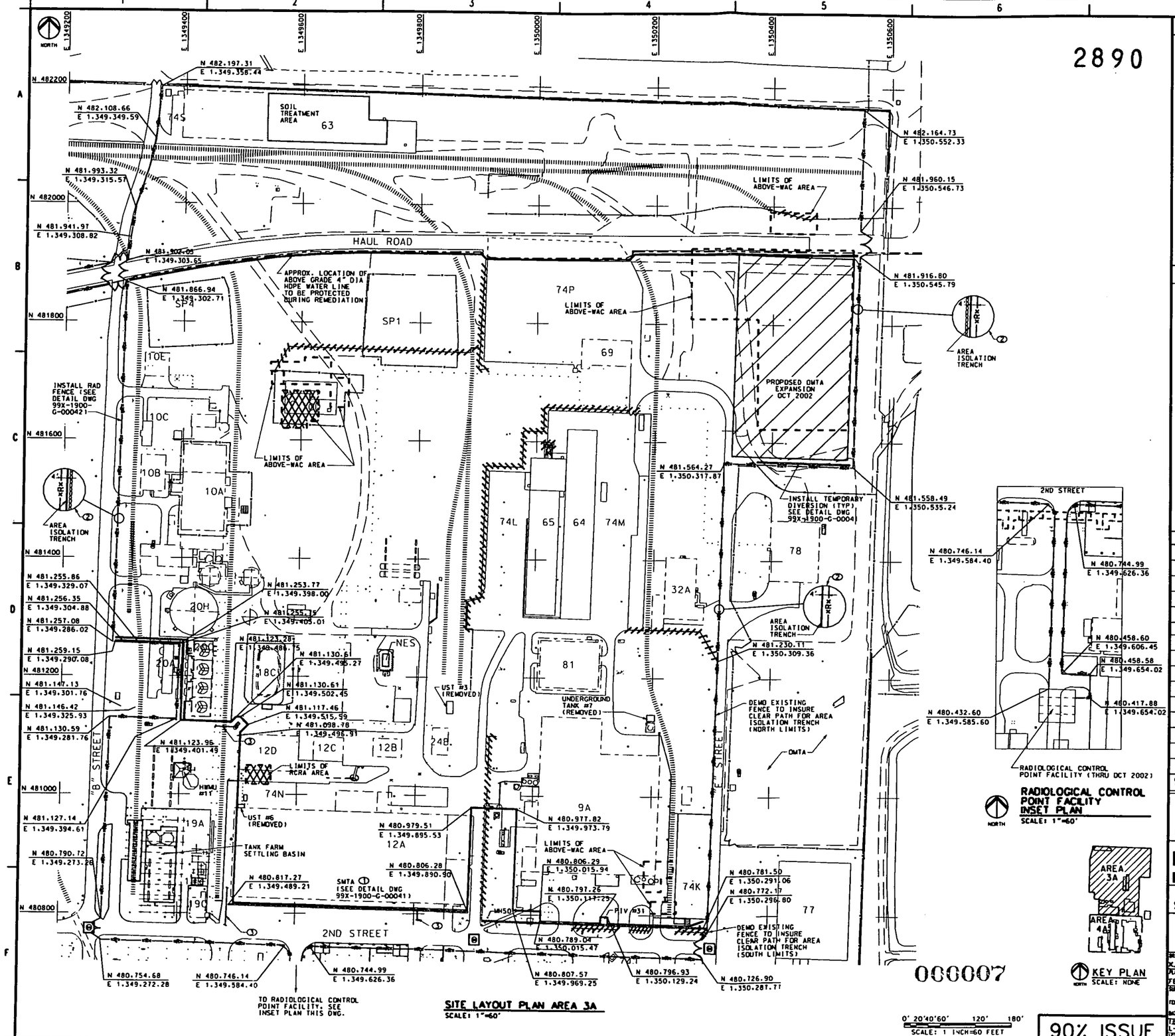
DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	28JUL99	M. JERALD	28JUL99	M. RITTER	04JAN00
PLANT/BLDG. NO.		FLOOR		SCALE	CLASS
TEMP		NONE		1"=60'	U
SUBMITTED FOR 30% CONC.		SUBMITTED FOR 60% CONC.		SUBMITTED FOR 90% CONC.	
TECH LEAD M. JERALD		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

I.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00005	6	1
LGT PROJECT NO. 300-006919.01	FILENAME CPKG2006.DGN			

90% ISSUE

000006

2890



GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. EXISTING FENCE WITHIN PROJECT AREA TO BE REMOVED AFTER PERIMETER FENCE IS INSTALLED. THE REMOVAL SEQUENCE OF THE FENCING IS TO BE DETERMINED BY THE CONTRACTOR.
3. ALL DEBRIS INCLUDING FENCE FROM ABOVE-WAC AND RCRA HAZARDOUS AREAS SHALL BE CLEANED IN ACCORDANCE WITH SPECIFICATION 02205 PRIOR TO DISPOSITION.
4. CONTRACTOR SUPPORT FACILITIES WITHIN THE PROJECT BOUNDARY SHALL BE FIELD LOCATED BY CONTRACTOR.
5. FOR COORDINATES OF ABOVE-WAC AND RCRA AREAS, SEE DRAWING 99X-1900-G-00005.
6. DETERMINE THAT FENCE POST WILL NOT DAMAGE EXISTING UNDERGROUND UTILITIES THAT ARE TO REMAIN ENERGIZED DURING INSTALLATION OF CONSTRUCTION FENCE OR RADIOLOGICAL CONTROL FENCE.
7. REMOVAL OF IDENTIFIED ABOVE-WAC AND RCRA HAZARDOUS AREAS TO BE FIRST EXCAVATION ACTIVITY TO PROVIDE STORM WATER DETENTION FOR INITIAL EXCAVATION AS DESCRIBED IN THE CONTRACTOR'S APPROVED SWMP.

KEYED NOTES

1. THE SMTA SHALL BE IDENTIFIED IN THE CONTRACTOR'S EXCAVATION WORK PLAN. PAD 12A IS THE PROPOSED LOCATION FOR THE SMTA. CONTRACTOR MAY PROPOSE AN ALTERNATE APPROACH.
2. UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 6' FROM EXISTING CHAIN LINK FENCE OR 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.
3. VERIFY LOCATION AND PROTECT EXISTING ENERGIZED UNDERGROUND UTILITIES. SEE AREA ISOLATION PLAN AREA 3A DRAWING 99X-1900-X-00014.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	31JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

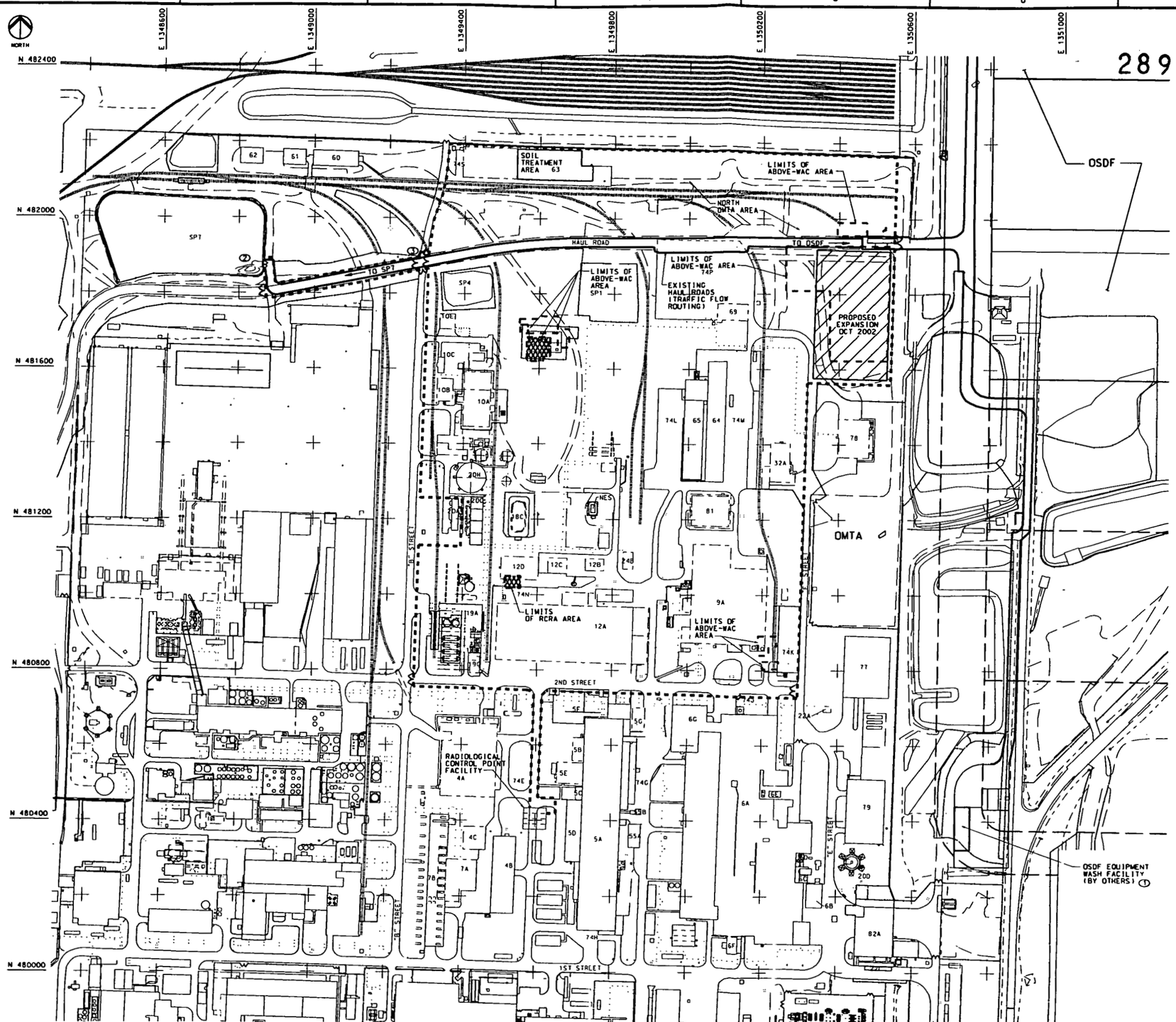
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
TECHNOLOGIES

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
SITE LAYOUT PLAN
AREA 3A

DRAWN BY: K. DAVIS	DATE: 28JUL99	TECHNICAL LEAD: N. ROBERTS	DATE: 28JUL99	CHECKED BY: M. RITTER	DATE: 04JAN00
PLANT/BLDG. NO.: FEMP		FLOOR: NONE		SCALE: 1"=60'	CLASS: U
SUBMITTED FOR 36" OSHE		SUBMITTED FOR 60% OSHE		SUBMITTED FOR 90% OSHE	
TECH LEAD: N. ROBERTS		TECH LEAD: N. ROBERTS		TECH LEAD: N. ROBERTS	
DATE: 13AUG99		DATE: 01NOV99		DATE: 28JAN00	

I.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00006	7	1
LIST PROJECT NO.: 300-008919.01	FILENAME: CPKG1030.DGN			



TRAFFIC FLOW
SCALE: 1"=100'

0' 50' 100' 200' 300'
SCALE: 1 INCH=100 FEET

90% ISSUE

000008

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. CONTRACTOR TO DETERMINE ENTRANCE LOCATIONS AT HAUL ROAD. SEE DRAWING 99X-1900-G-00041 FOR TYPICAL CONSTRUCTION ENTRANCE DETAIL.
3. SEE DRAWING 99X-1900-G-00042 FOR TRAFFIC CONTROL GATE DETAIL.
4. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH SPECIFICATION 02150.
5. CONTRACTOR SUPPORT FACILITIES AND SMTA SHALL BE IDENTIFIED IN THE CONTRACTOR'S EXCAVATION WORK PLAN. PAD 12A IS THE PROPOSED LOCATION FOR THE SMTA. CONTRACTOR MAY PROPOSE AN ALTERNATE APPROACH.

KEYED NOTES

1. TRAFFIC LEAVING THE CONSTRUCTION AREA TO GO OFFSITE MUST PASS THROUGH THE OSDF EQUIPMENT WASH FACILITY LOCATED NORTHEAST OF RIMIA (BLDG. 82A).
2. REFER TO DRAWING 99X-1900-G-00017 FOR SPT ENTRANCE DETAIL.
3. GATES ON IMPACTED MATERIAL HAUL ROAD WILL BE OPEN AT ALL TIMES EXCEPT WHEN CROSSING OF "B" STREET IS NECESSARY BY OTHER SITE TRAFFIC. CONSTRUCTION MANAGER WILL NOTIFY CONTRACTOR PRIOR TO CLOSING GATES.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	03DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	05OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

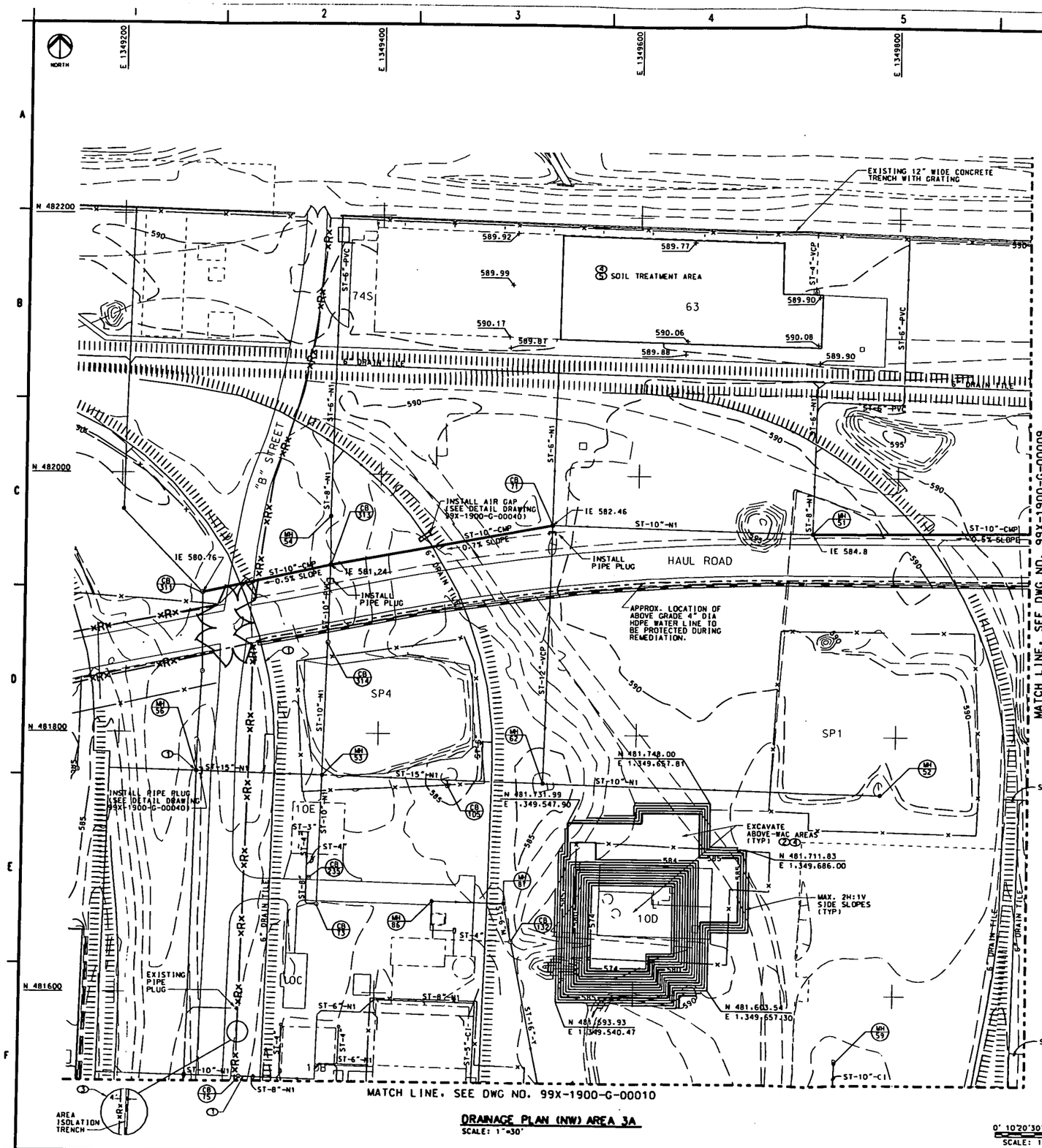
THIS DRAWING PREPARED BY
LOCKWOOD GREENE TECHNOLOGIES

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
TRAFFIC FLOW

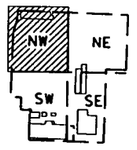
DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99	CHECKED BY M. RITTER	DATE 11JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=100'	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD M. JERALD		SUBMITTED FOR 60% ISSUE TECH LEAD M. JERALD		SUBMITTED FOR 90% ISSUE TECH LEAD M. JERALD	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

T.S. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00007	8	1
LGT PROJECT NO. 300-008919.01	FILENAME CPXG2005.DGN			



DRAINAGE PLAN (NW) AREA 3A
SCALE: 1"=30'

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET



AREA 3A KEY PLAN
NORTH SCALE: NONE

000009

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. REFER TO FLUOR FERNALD UNDERGROUND UTILITIES REFERENCE DRAWINGS 22C-5500-P-00668 (GRID 9), 22C-5500-P-00669 (GRID 10) AND 22C-5500-P-00675 (GRID 16) FOR EXISTING STORM SEWER SYSTEM LOCATIONS.
3. CONTRACTOR MAY USE EXISTING STORM SEWER SYSTEM TO CONTROL RUNOFF DURING REMEDIATION. HOWEVER, STORMSEWER PIPES TO BE CUT DURING AREA ISOLATION SHALL BE PLUGGED AT THE EXCAVATION BOUNDARY IN ACCORDANCE WITH SPECIFICATION SECTION 02275.

2890

KEYED NOTES

1. CONTRACTOR TO PROVIDE CONTINUATION OF DRAINAGE TO SETTLING BASIN IN ACCORDANCE WITH CONTRACTOR'S APPROVED SWMP.
2. EXCAVATE ABOVE-WAC MATERIAL TO PROVIDE STORMWATER DETENTION FOR INITIAL EXCAVATION AS DESCRIBED IN THE CONTRACTORS APPROVED SWMP. (CONTRACTOR HOLD POINT)
3. UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 6' FROM EXISTING CHAIN LINK FENCE OR 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.
4. VOC WATER FROM THIS AREA WILL BE PUMPED INTO PORTABLE TANKS FOR TRANSPORT BY FLUOR FERNALD.
5. SPOT ELEVATIONS PROVIDED TO SHOW EXISTING DRAINAGE IN FORMER BUILDING AREA. CONTRACTOR TO FIELD VERIFY ELEVATIONS AND MANAGE RUNOFF IN ACCORDANCE WITH CONTRACTOR'S APPROVED SWMP.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	09DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	08OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

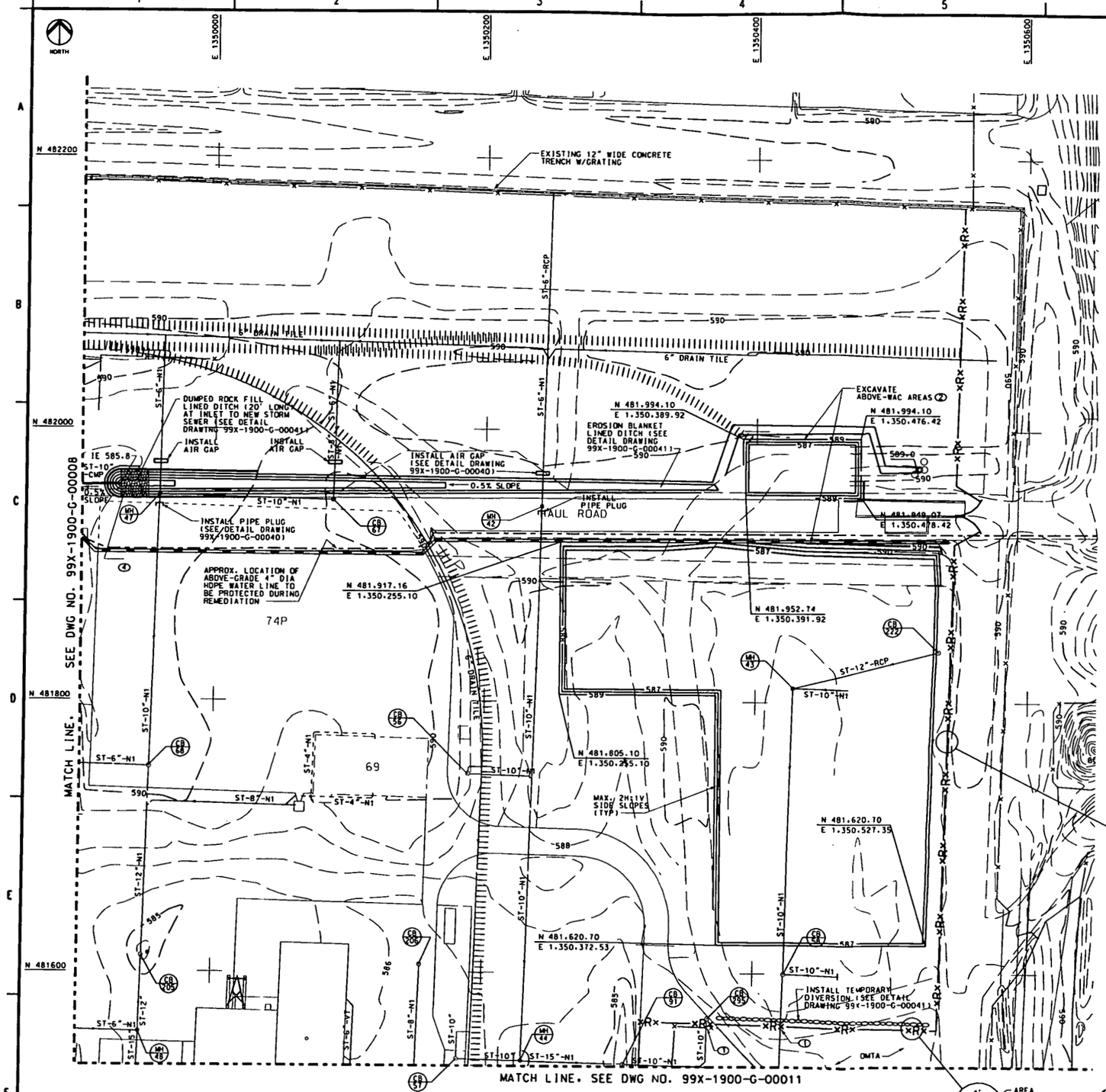
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
DRAINAGE PLAN (NW) AREA 3A

DRAWN BY K. DAVIS	DATE 28JUL99	TECHNICAL LEAD N. ROBERTS	DATE 28JUL99	CHECKED BY M. RITTER	DATE 05JAN00
PLANT/BLDG. NO. TEMP		FLOOR NONE		SCALE 1"=30'	CLASS U
SUBMITTED FOR 30% DATE		SUBMITTED FOR 60% DATE		SUBMITTED FOR 90% DATE	
TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	
T.O. NUMBER L-010	PROJECT NO. 20000	DRAWING INDEX CODE NO.		SHEET NO. 9	REV. NO. 1
LET PROJECT NO. 300-008919.01	FILENAME CPKG1010.DGN	99X-1900-G-00008			



DRAINAGE PLAN (NE) AREA 3A
SCALE: 1"=30'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. REFER TO FLUOR FERNALD UNDERGROUND UTILITIES DRAWINGS 22C-5500-P-00660 (GRID 1) AND 22C-5500-P-00661 (GRID 2) FOR EXISTING STORM SEWER SYSTEM LOCATIONS.
3. CONTRACTOR MAY USE EXISTING STORM SEWER SYSTEM TO CONTROL RUNOFF DURING REMEDIATION. HOWEVER, STORMSEWER PIPES TO BE CUT DURING AREA ISOLATION SHALL BE PLUGGED AT THE EXCAVATION BOUNDARY IN ACCORDANCE WITH SPECIFICATION SECTION 02275.

2890

KEYED NOTES

(1) CONTRACTOR TO PROVIDE CONTINUATION OF DRAINAGE TO SETTLING BASIN IN ACCORDANCE WITH CONTRACTOR'S APPROVED SWMP.

(2) EXCAVATE ABOVE-WAC MATERIAL TO PROVIDE STORMWATER DETENTION FOR INITIAL EXCAVATION AS DESCRIBED IN THE CONTRACTORS APPROVED SWMP. (CONTRACTOR HOLD POINT)

(3) UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 6' FROM EXISTING CHAIN LINK FENCE OR 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.

(4) ATTACH TRASH BARS (NO. 3 REBAR) TO PIPE INLET, SPACED VERTICALLY 3 INCHES APART.

REF DWG NO.	DRAWING TITLE

REV NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	09NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	15OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS & CONSTRUCTORS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
DRAINAGE PLAN (NE) AREA 3A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
K. DAVIS	28JUL99	N. ROBERTS	28JUL99	M. RITTER	05JAN00
PLANNING NO.		FLOOR		SCALE	CLASS
FEMP		NONE		1"=30'	U
SUBMITTED FOR 30% BASE		SUBMITTED FOR 60% BASE		SUBMITTED FOR 90% BASE	
TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS	
DATE 13AUG99		DATE 09NOV99		DATE 28JAN00	

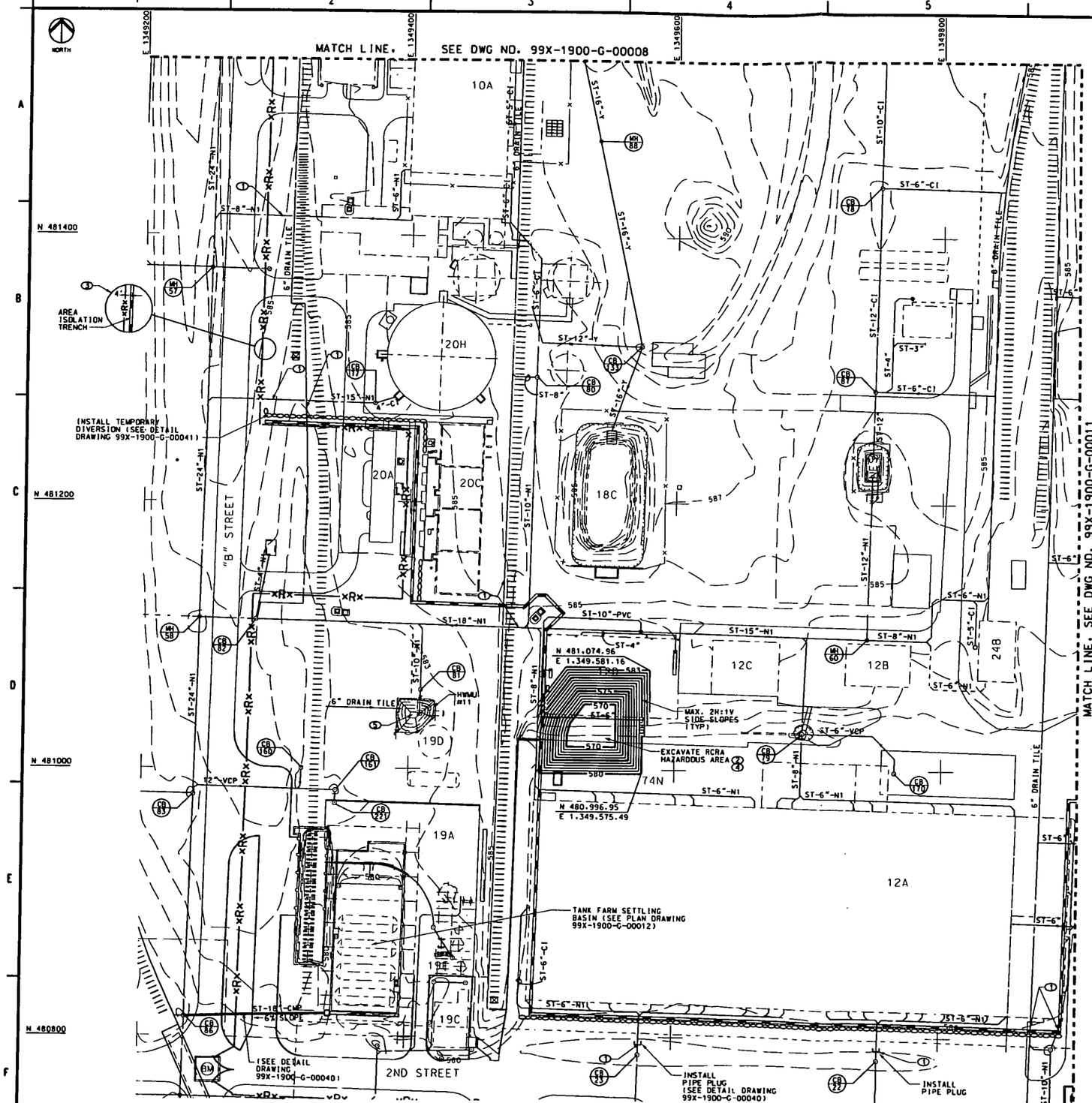
F.S. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00009	10	I
EST PROJECT NO. 300-008919.01	FEDNME CPKG1011.DGN			

NW NE SW SE
AREA 3A KEY PLAN
NORTH SCALE: NONE

0' 10'20'30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE

000010



DRAINAGE PLAN (SW) AREA 3A
SCALE: 1"=30'

SCALE: 1 INCH=30 FEET

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. REFER TO FLUOR FERNALD UNDERGROUND UTILITIES DRAWINGS 22C-5500-P-00669 (GRID 10), 22C-5500-P-00706 (GRID 10A), 22C-5500-P-00670 (GRID 11) AND 22C-5500-P-00677 (GRID 18) FOR EXISTING STORM SEWER SYSTEM LOCATIONS.
3. CONTRACTOR MAY USE EXISTING STORM SEWER SYSTEM TO CONTROL RUNOFF DURING REMEDIATION. HOWEVER, STORMSEWER PIPES TO BE CUT DURING AREA ISOLATION SHALL BE PLUGGED AT THE EXCAVATION BOUNDARY IN ACCORDANCE WITH SPECIFICATION SECTION 02275.

2890

KEYED NOTES

1. CONTRACTOR TO PROVIDE CONTINUATION OF DRAINAGE TO SETTLING BASIN IN ACCORDANCE WITH CONTRACTOR'S APPROVED SWMP.
2. EXCAVATE RCRA HAZARDOUS MATERIAL TO PROVIDE STORMWATER DETENTION FOR INITIAL EXCAVATION AS DESCRIBED IN THE CONTRACTORS APPROVED SWMP. (CONTRACTOR HOLD POINT)
3. UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 6' FROM EXISTING CHAIN LINK FENCE OR 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.
4. VOC WATER FROM THIS AREA WILL BE PUMPED INTO PORTABLE TANKS FOR TRANSPORT BY FLUOR FERNALD.
5. HWMU #11 SHALL NOT BE DISTURBED.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	3MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	15OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

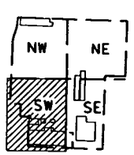
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
DRAINAGE PLAN (SW) AREA 3A

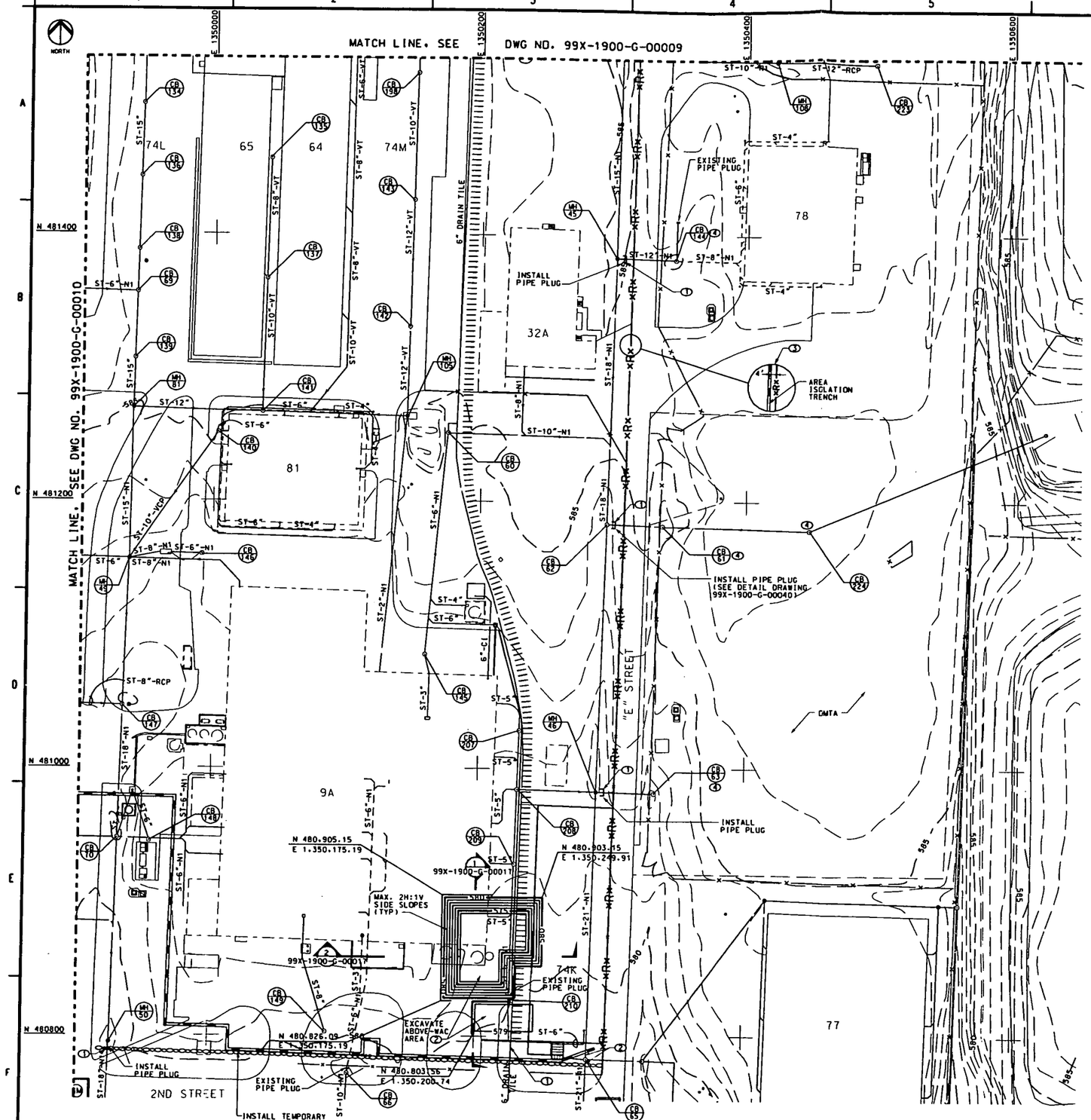
DRAWN BY K. DAVIS	DATE 28JUL99	TECHNICAL LEAD N. ROBERTS	DATE 28JUL99	CHECKED BY M. RITTER	DATE 05JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=30'	CLASS U
SUBMITTED FOR 30% BASE TECH LEAD N. ROBERTS DATE 13AUG99		SUBMITTED FOR 60% BASE TECH LEAD N. ROBERTS DATE 01NOV99		SUBMITTED FOR 90% BASE TECH LEAD N. ROBERTS DATE 28JAN00	
T.O. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO.		SHEET NO.	REV. NO.
LCI PROJECT NO. 300-008919.01	FILENAME CPKG012.DGN	99X-1900-G-00010		11	1

000011



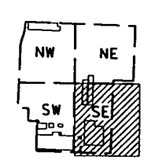
AREA 3A KEY PLAN
NORTH SCALE: NONE

90% ISSUE



DRAINAGE PLAN (SE) AREA 3A
SCALE: 1"=30'

000012



AREA 3A KEY PLAN
SCALE: NONE

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES. SEE DRAWING 99X-1900-X-00003.
2. REFER TO FLUOR FERNALD UNDERGROUND UTILITIES DRAWINGS 22C-5500-P-00661 (GRID 2) AND 22C-5500-P-00662 (GRID 3) FOR EXISTING STORM SEWER SYSTEM LOCATIONS.
3. CONTRACTOR MAY USE EXISTING STORM SEWER SYSTEM TO CONTROL RUNOFF DURING REMEDIATION. HOWEVER, STORMSEWER PIPES TO BE CUT DURING AREA ISOLATION SHALL BE PLUGGED AT THE EXCAVATION BOUNDARY IN ACCORDANCE WITH SPECIFICATION SECTION 02275.

2890

KEYED NOTES

1. CONTRACTOR TO PROVIDE CONTINUATION OF DRAINAGE TO SETTLING BASIN IN ACCORDANCE WITH CONTRACTOR'S APPROVED SWMP.
2. EXCAVATE ABOVE-WAC MATERIAL TO PROVIDE STORMWATER DETENTION FOR INITIAL EXCAVATION AS DESCRIBED IN THE CONTRACTORS APPROVED SWMP. (CONTRACTOR HOLD POINT)
3. UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 6' FROM EXISTING CHAIN LINK FENCE OR 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.
4. CONSTRUCTION MANAGER WILL COORDINATE REDIRECTION OF DRAINAGE IN THIS AREA.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	15OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

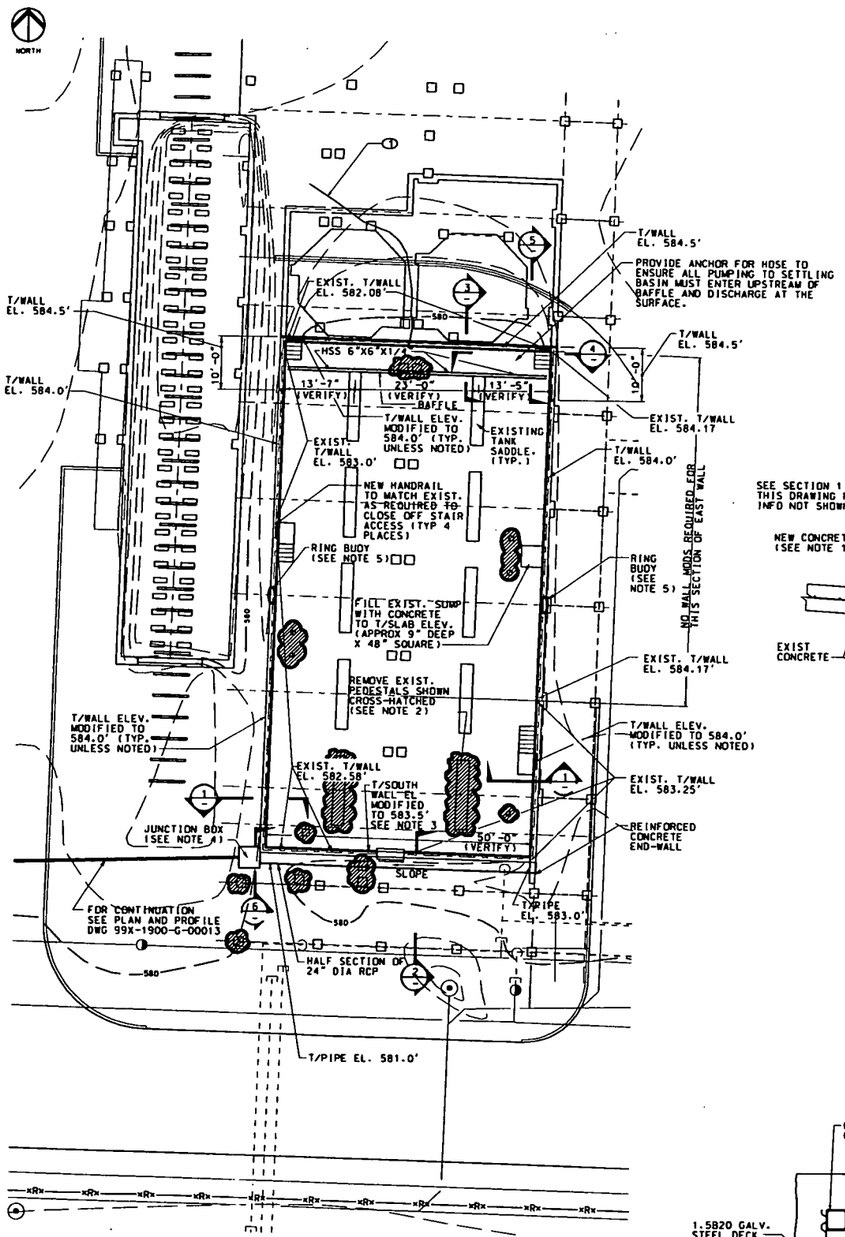
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

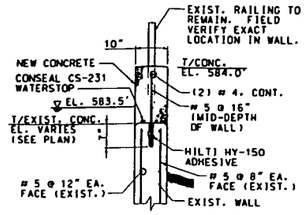
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
DRAINAGE PLAN (SE) AREA 3A

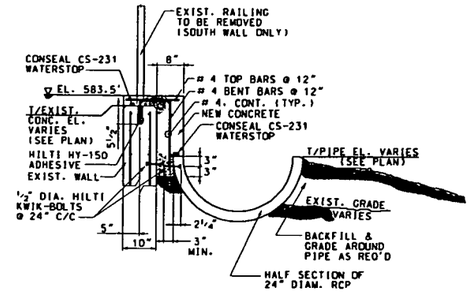
DRAWN BY K. DAVIS	DATE 28JUL99	TECHNICAL LEAD N. ROBERTS	DATE 28JUL99
CHECKED BY M. RITTER	DATE 05JAN00	PLANT/BLDG. NO. FEMP	FLOOR NONE
SCALE 1"=30'	CLASS U	SUBMITTED FOR 30% DSGN. TECH LEAD N. ROBERTS DATE 13AUG99	SUBMITTED FOR 60% DSGN. TECH LEAD N. ROBERTS DATE 01NOV99
SUBMITTED FOR 90% DSGN. TECH LEAD N. ROBERTS DATE 28JAN00			
I.D. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00011	SHEET NO. 12
REV. NO. 1			
LST PROJECT NO. 300-008919.01	FILENAME CPKG1013.DGN		



PLAN
SCALE: 1" = 10'



SECTION 1
SCALE: NOT TO SCALE



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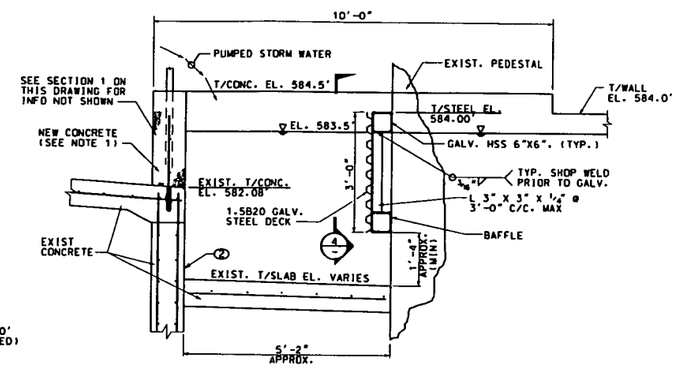
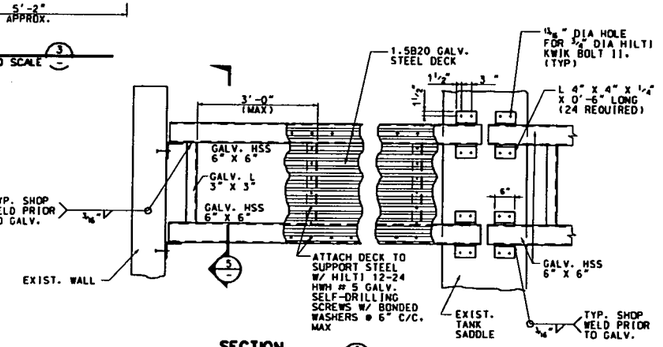


SECTION 3
SCALE: NOT TO SCALE



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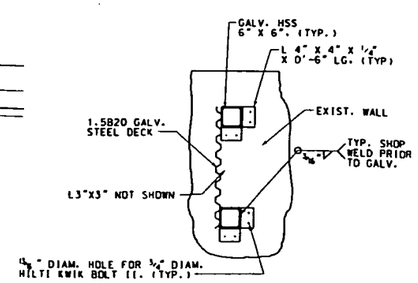
SCALE: NOT TO SCALE



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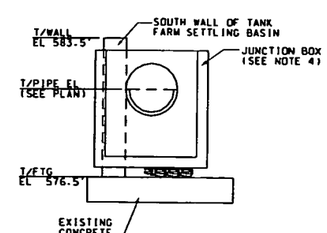
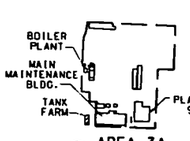
SCALE: NOT TO SCALE



SECTION 6
SCALE: NOT TO SCALE

000013



AREA 3A KEY PLAN
SCALE: NONE

90% ISSUE

GENERAL NOTES

1. SEE 99X-1900-G-00013 FOR CONCRETE NOTES.
2. PEDESTALS INDICATED TO BE REMOVED SHALL BE CUT OFF WITHIN 4" OF THE WALKING SURFACE.
3. TOP OF SOUTH WALL SHALL BE FLAT AND LEVEL TO WITHIN 1/8" OVER ENTIRE LENGTH.
4. JUNCTION BOX SHALL BE 4'x 4'x 6' DEEP.
5. RING BUOYS & ROPE SHALL BE MOUNTED TO RAILING. TWO PLACES AS INDICATED IN PLAN. BUOY, ROPE & ATTACHMENTS SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS.
6. SEE DRAWING 99X-1900-G-00013 FOR GENERAL CONCRETE AND STEEL NOTES.
7. ALL IMPACTED MATERIAL REMOVAL SHALL BE HANDLED IN ACCORDANCE WITH SPECIFICATION SECTION 02205.

2890

KEYED NOTES

1. DEWATER EXCAVATED AREA BY PUMPING TO SETTLING BASIN.
2. MAXIMUM ALLOWABLE SEDIMENT DEPTH SHALL BE 10 INCHES MARKED WITH ORANGE STRIPE AROUND BASIN.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	31JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	01DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	01OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

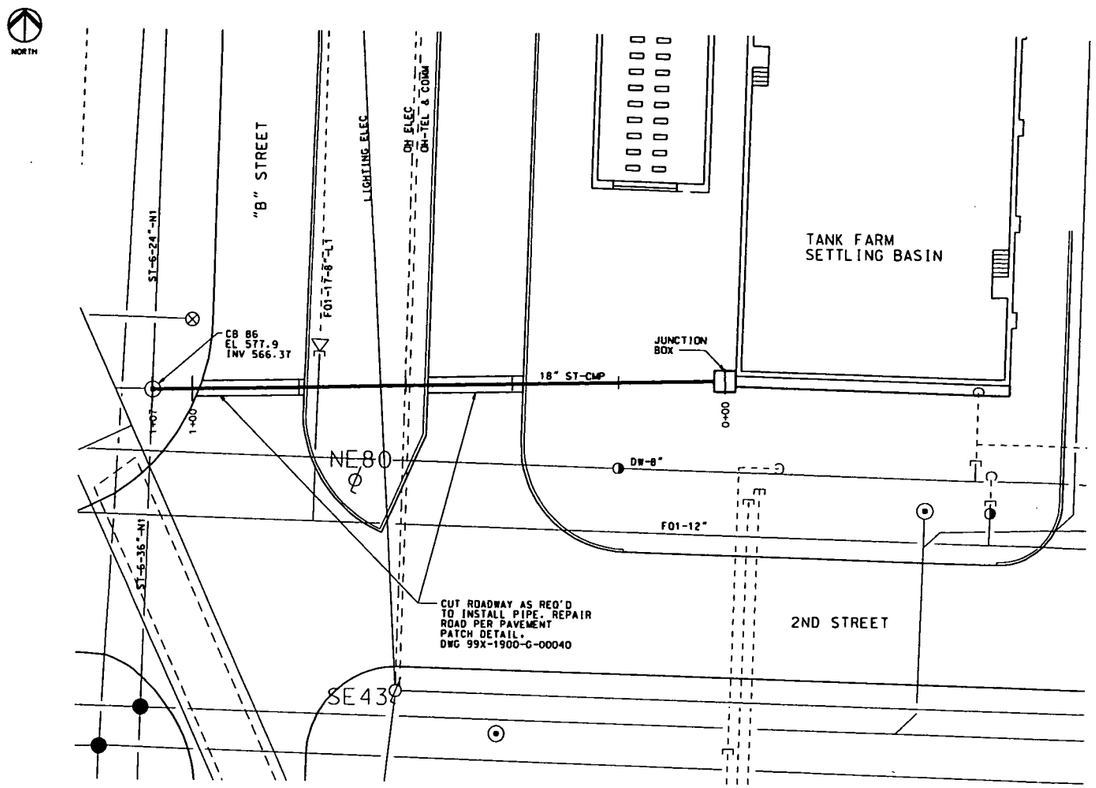
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
TANK FARM SETTLING BASIN
PLAN AND SECTIONS

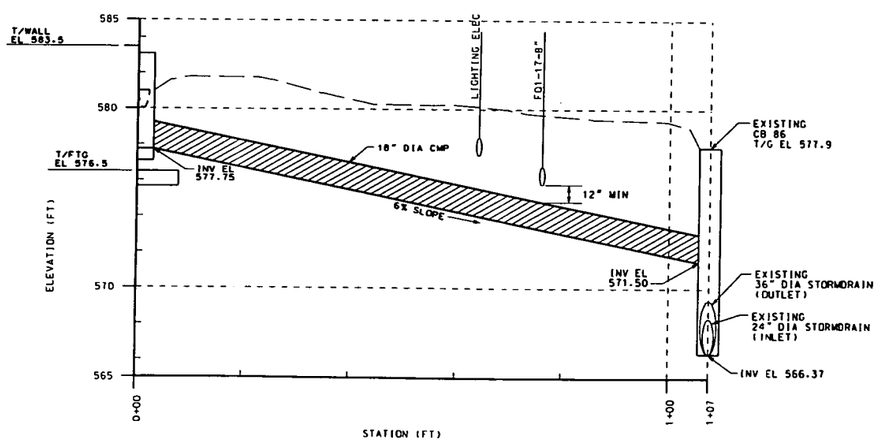
DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
K. DAVIS	28JUL99	N. ROBERTS	28JUL99	S. CAMPBELL	24JAN00
PLANT/AREA NO.		FLOOR		SCALE	DWG SIZE
FEMP		NONE		NOTED	U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

F.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV NO.
L-010	20900			
LCT PROJECT NO. 300-008919.01	FILENAME CPKG1039.DGN	99X-1900-G-00012	13	I



PARTIAL TANK FARM SETTLING BASIN PLAN

SCALE: 1"=10'



SETTLING BASIN OUTLET PROFILE

HORIZ SCALE: 1"=10'
VERT SCALE: 1"=3'

CONCRETE NOTES

1. CONSTRUCTION SHALL CONFORM TO THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-95) AND SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-89) AND IN ADDITION SHALL COMPLY WITH ALL LOCAL LAWS AND ORDINANCES. WHERE CONFLICTING REQUIREMENTS OCCUR, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
2. TOLERANCES FOR CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 117.
3. FORMWORK SHALL CONFORM TO ACI 347.
4. HOT WEATHER CONCRETING SHALL CONFORM TO ACI 305. COLD WEATHER CONCRETING SHALL CONFORM TO ACI 306.
5. CONCRETE SHALL DEVELOP A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
6. CONDUCT CONCRETE COMPRESSIVE STRENGTH TESTS IN ACCORDANCE WITH ASTM C31.
7. ALL CONCRETE MATERIALS AND ADMIXTURES BE IN ACCORDANCE WITH ASTM C150-94, ASTM 260-94, ACI 306.1 AND ACI 221R.
8. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BARS, CONFORMING TO ASTM A615.
9. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO DETAILS AND DETAILING OF CONCRETE REINFORCING ACI 315-86, CRSI MANUAL OF STANDARD PRACTICE AND CRSI PLACING REINFORCING BARS.
10. BAR SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES IN ACCORDANCE WITH ACI 318-95.
11. INTERSECTING WALLS, IF POURED SEPARATELY, SHALL BE KEYED AND DOWELLED TOGETHER WITH BARS OF THE SAME SIZE AND SPACING AS HORIZONTAL WALL REINFORCING.
12. PROVIDE CORNER BARS AT ALL WALL CORNERS. BARS SHALL BE THE SAME SIZE AND SPACING AS HORIZONTAL WALL REINFORCING AND LAP WITH HORIZONTAL REINFORCING IN EACH DIRECTION.
13. EXPANSION ANCHORS SHALL BE "HILTI KWIK BOLT II", CARBON STEEL (OR STAINLESS STEEL IF REQUIRED) AS SUPPLIED BY HILTI FASTENING SYSTEMS.
14. INJECTION-TYPE ADHESIVE ANCHORING MATERIAL SHALL BE "HILTI HIT HY-150 SYSTEM" USING "HIT THREADED RODS", AS SUPPLIED BY HILTI FASTENING SYSTEMS.
15. REBAR DOWELS SHALL BE INSTALLED USING THE "HILTI HIT HY-150 SYSTEM" AS SUPPLIED BY HILTI FASTENING SYSTEMS.

STEEL DECK NOTES

1. GALVANIZED DECK SHALL CONFORM TO ASTM A653-94, STRUCTURAL QUALITY, GRADE 33 OR HIGHER. GALVANIZING SHALL CONFORM TO ASTM A924-94 WITH A MINIMUM COATING CLASS OF G60 AS DEFINED IN ASTM A653-94. MATERIAL, FABRICATION AND INSTALLATION SHALL CONFORM TO SDI SPECIFICATIONS INCLUDED IN THE SDI "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS", SDI PUBLICATION 28.
2. STEEL DECK SHALL BE 1½" DEEP X 20 GAGE, GALVANIZED, WIDE RIB, "VULCRAFT 1.5B20" OR APPROVED SUBSTITUTE.
3. ATTACH DECK TO SUPPORTING STEEL WITH HILTI 12-24 HWH #5 GALVINIZED SELF-DRILLING SCREWS WITH BONDED WASHERS ON A 36/7 PATTERN (6" MAX C/C SPACING). LAP DECK 2" MINIMUM AT SUPPORTS. IN ADDITION ATTACH DECK TO ALL PERIMETER STEEL AT 6 INCHES, MAX ON CENTER.

STEEL NOTES

1. DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN", NINTH EDITION.
2. STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572, GRADE 50 (FY=50 KSI). MISCELLANEOUS PLATES, CLIP ANGLES, AND CONNECTION PIECES SHALL BE FABRICATED FROM ASTM A36 (FY=36 KSI).
3. SQUARE AND RECTANGULAR STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B (FY=46 KSI). ROUND STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A53 TYPE E OR S, GRADE B (FY=35 KSI).
4. SHOP CONNECTIONS SHALL BE MADE BY WELDING OR HIGH STRENGTH BOLTING USING ¾" DIAMETER BOLTS.
5. WELDING SHALL CONFORM TO THE CURRENT SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY, AND SHALL COMPLY WITH ALL LOCAL LAWS AND ORDINANCES. WELDING ELECTRODES SHALL BE E-70 SERIES. MINIMUM FILLET WELD SIZE SHALL BE 3/16".
6. WELDS SHOWN ON THE DRAWINGS ARE THE MINIMUM SIZE REQUIRED BY DESIGN FORCES. THE FABRICATOR'S DRAWINGS SHALL SHOW ALL WELDS AND THEY SHALL CONFORM TO AWS SPECIFICATIONS.
7. FIELD CONNECTIONS SHALL BE MADE WITH HOT-DIP GALVANIZED ¾" DIAMETER HIGH STRENGTH BOLTS CONFORMING TO ASTM A325. CONNECTIONS SHALL BE DESIGNED AS SHEAR/BEARING TYPE WITH THREADS IN THE SHEAR PLANE. WHERE INDICATED, HIGH STRENGTH BOLTS SHALL BE FULLY PRETENSIONED.
8. SHOP DRAWINGS SHOWING ALL STRUCTURAL STEEL CONSTRUCTION SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER UNLESS SPECIFICALLY NOTED OTHERWISE. MINIMUM SHOP DRAWING REQUIREMENTS ARE TO SHOW ALL CONNECTION DETAILS WITH NUMBER AND SIZE OF BOLTS, CLIP ANGLES, WELDS, COPES, AND OTHER ITEMS AS SHOWN BY THE AISC "DETAILING FOR STEEL CONSTRUCTION" MANUAL.
9. NO OPENINGS SHALL BE CUT IN STRUCTURAL MEMBERS.
10. WELDS FOR EXTERIOR STEEL (EXPOSED TO WEATHER) SHALL BE CONTINUOUS ON TOP AND SIDES TO SEAL CONTACT SURFACES.
11. ALL STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123-89 AFTER WELDING IS COMPLETE. ALL NUTS, BOLTS, WASHERS, MISC PLATES, CLIP ANGLES OR OTHER ITEMS SHALL ALSO BE HOT-DIP GALVANIZED.

000014

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.

2890

KEYED NOTES

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
G	ISSUED FOR 90% EPA REVIEW	30MAR00		
F	ISSUED FOR 90% DOE REVIEW	28JAN00		
E	JANUARY 2000 COORDINATION PACKAGE	31JAN00		
D	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
C	ISSUED FOR 60% REVIEW	01NOV99		
B	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
A	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		

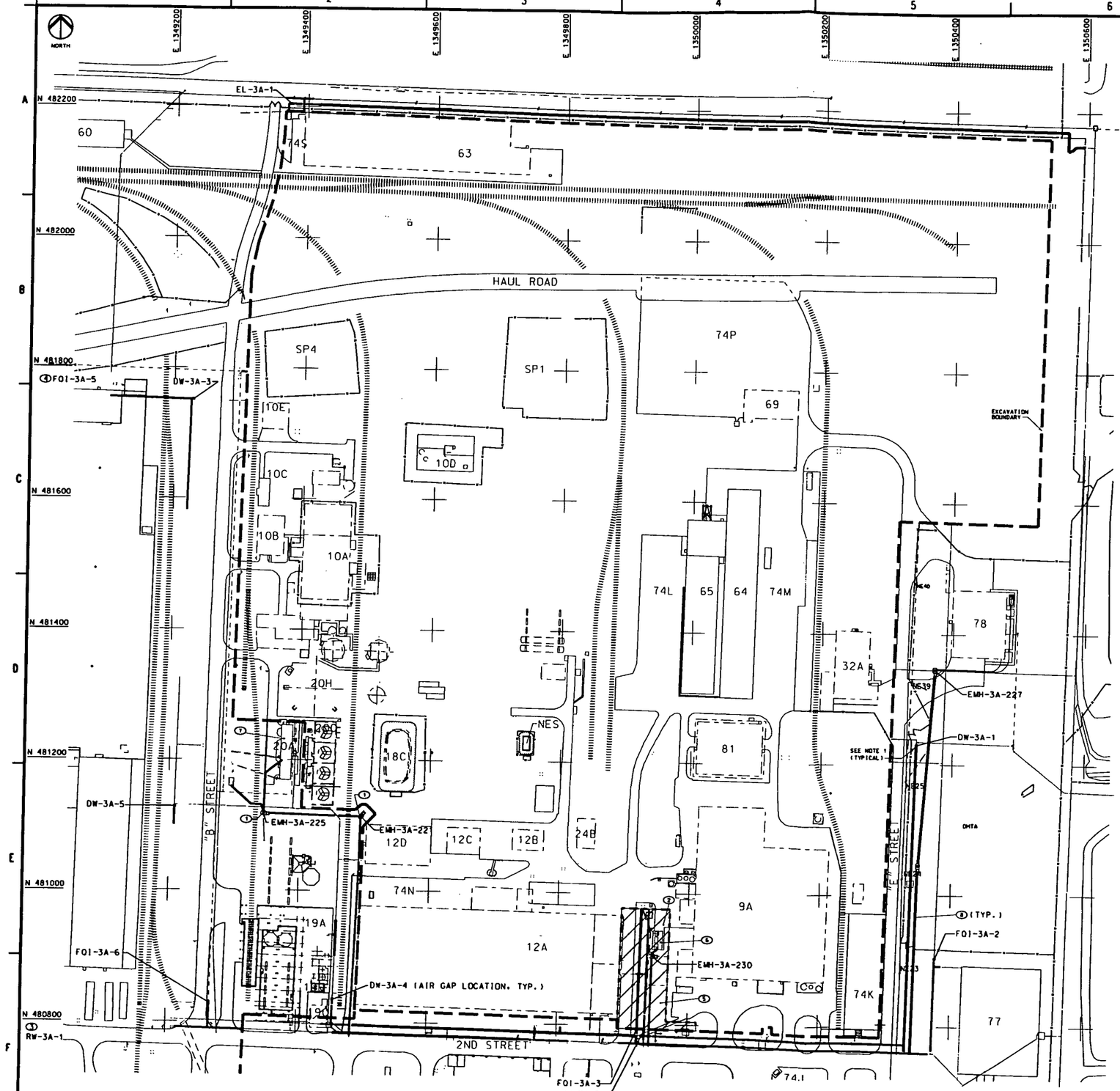
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
TANK FARM SETTLING BASIN PROFILE

DRAWN BY K. DAVIS	DATE 28JUL99	TECHNICAL LEAD N. ROBERTS	DATE 28JUL99	CHECKED BY S. CAMPBELL	DATE 24JAN00
PLANT/BLDG. NO. TEMP		FLOOR NONE		SCALE 1"=10'	CLASS U
SUBMITTED FOR 30% DATE		SUBMITTED FOR 60% DATE		SUBMITTED FOR 90% DATE	
TECH LEAD NONE		TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS	
DATE NONE		DATE 01NOV99		DATE 28JAN00	
T.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00013		SHEET NO. 14	REV. NO. G
LET PROJECT NO. 300-008919.01	FILENAME CPKG1047.DGN				



UTILITY ISOLATION PLAN - AREA 3A
SCALE: 1"=60'

0' 20' 40' 60' 120' 180'
SCALE: 1 INCH=60 FEET

LEGEND

EL-ELECTRICAL/COMMUNICATION LINE
DW-DOMESTIC/POTABLE WATER LINE
FOI-HIGH PRESSURE FIRE LINE
FT-FILTRATE LINE
RW-RAW WATER LINE
SN-SANITARY SEWER LINE
TW-TREATED WATER LINE
WS-WATER SUPPLY
EMH-ELECTRICAL MANHOLE (EX. 3A-5 (UTILITY ISOLATION/AIR GAP TO BE PERFORMED BY FLUOR FERNALD)
- AIR GAP SEQUENCE NUMBER
- WORK AREA

GENERAL NOTES

1. UTILITY AIR GAPS INDICATED ON THIS DRAWING TO BE PERFORMED BY FLUOR FERNALD. UTILITY AIR GAPS ARE IDENTIFIED IN ACCORDANCE TO UTILITY TYPE.
2. UTILITY AIR GAPS WILL BE LOCATED OUTSIDE THE WORK AREA AS INDICATED BY THE EXCAVATION BOUNDARY.
3. ALL UTILITY TIE-INS SHALL BE COMPLETED PER FLUOR FERNALD LOCKOUT/TAGOUT PROCEDURES. NEW ELECTRICAL FEEDERS TO TRAILERS SHALL BE INSTALLED PER THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE. TEMPORARY POWER DROPS AND FEEDS SHALL COMPLY WITH NEC ARTICLE 305.
4. AREA ISOLATION TRENCHING ACTIVITIES SHALL BE PERFORMED PRIOR TO ANY GROUND BREAKING ACTIVITIES WITHIN THE EXCAVATION AREA.

2890

KEYED NOTES

1. ALL UTILITIES WITHIN THIS MANHOLE TO BE TERMINATED WITH THE EXCEPTION OF ELECTRICAL; ELECTRICAL FEEDS SHALL REMAIN ACTIVE.
2. HATCHED AREA TO BE EXCAVATED AS PART OF AREA 4A.
3. THE AIR GAP FOR THE RAW WATER LINE RW-3A-1 IS LOCATED AT THE CORNER OF 2ND & A STREETS. SEE SITE GRID 27.
4. THE AIR GAP FOR THE FIRE WATER LINE FOI-3A-5 IS LOCATED AT THE NORTHWEST CORNER OF BUILDING 56.
5. ITEMS WITHIN THE HATCHED AREA WILL BE REMOVED BY FLUOR FERNALD. THE CONTRACTOR IS NOT RESPONSIBLE FOR THE REMOVAL OF ABOVE-GRADE ITEMS OR INSTALLING AIR GAPS.
6. EXISTING OUTDOOR SUBSTATION #N93-2 (1000KVA) WILL BE AVAILABLE FOR POWER NEEDS. THE SECONDARY VOLTAGE IS 480V. 3-PHASE.
7. 480V 3-PHASE POWER IS AVAILABLE FROM EXISTING SUBSTATIONS #N8-1 & 2 IN BUILDING 20A.
8. ALL UTILITY LINES WHICH ARE BOLD INDICATE ACTIVE LINES AND MUST BE PROTECTED DURING TRENCHING ACTIVITIES.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
G	ISSUED FOR 90% EPA REVIEW	31MAR00		
F	ISSUED FOR 90% DOE REVIEW	28JAN00		
E	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
D	DECEMBER 1999 COORDINATION PACKAGE	06DEC99		
C	ISSUED FOR INFORMATION ONLY	02SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

000015

AREA 3A
AREA 4A

KEY PLAN
NORTH
SCALE: NONE

90% ISSUE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

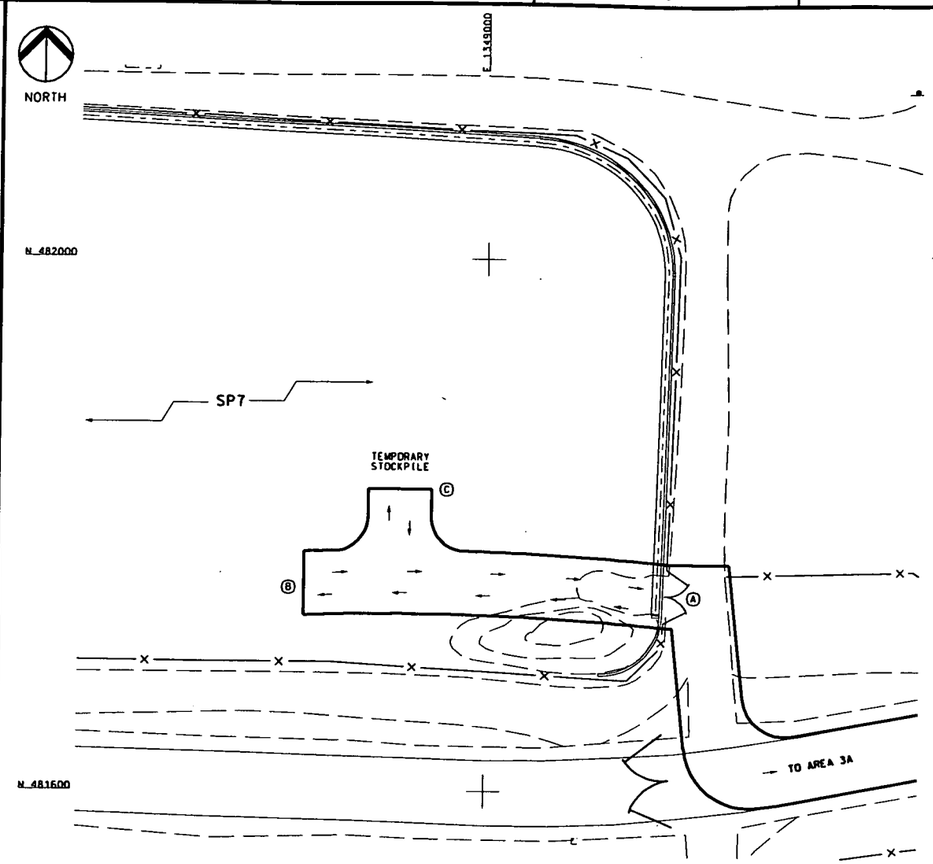
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS & CONSTRUCTORS

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
UTILITY ISOLATION PLAN
AREA 3A

DRAWN BY K. DAVIS	DATE 28JUL99	TECHNICAL LEAD JERALD/RRS	DATE 28JUL99
CHECKED BY D. CHRISTMAN	DATE 28JAN00	PLANT/BLDG. NO. FEMP	FLOOR NONE
SCALE 1"=60'	CLASS U	SUBMITTED FOR 30% ISSUE	SUBMITTED FOR 60% ISSUE
SUBMITTED FOR 90% ISSUE	TECH LEAD R. SOUTHERN	TECH LEAD NONE	TECH LEAD R. SOUTHERN
DATE 13AUG99	DATE NONE	DATE 28JAN00	

F.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
LGT PROJECT NO. 300-008919.01	FILENAME CPKG1065.DGN	99X-1900-X-00014	15	G



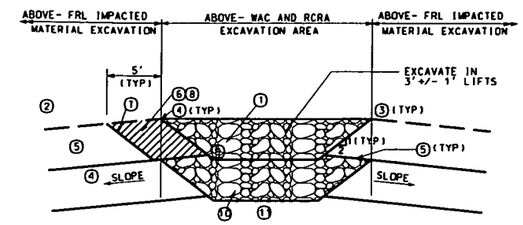
SP7 ENTRANCE DETAIL

99X-1900-G-00007

NOTES:

TRUCKS ENTER GATE Ⓐ, PULL FORWARD UP THE RAMP TO POINT Ⓑ, BACK UP TO EXISTING WHEEL STOPS AT POINT Ⓒ AND DUMP. TRUCKS EXIT GATE Ⓐ. MATERIAL IS THEN PUSHED INTO PLACE USING DEDICATED EQUIPMENT WITHIN THE STOCKPILE AREA.

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET



① EXCAVATE ABOVE-WAC MATERIAL IN 3' +/- 1' LIFTS AND MAINTAIN SAFE SLOPES.

② LOAD TRUCKS IN BUFFER ZONE OUTSIDE OF ABOVE-WAC MATERIAL AREA AS SPECIFIED IN TECHNICAL SPECIFICATION SECTION 02205 AND HAUL TO SPT.

③ SURVEY LIMITS AND ELEVATION OF EACH EXCAVATED LIFT IN ABOVE-WAC MATERIAL EXCAVATION AREA.

④ FLUOR FERNALD WILL MONITOR THE EXCAVATION ALONG THE SIDE SLOPES OF THE ABOVE-WAC EXCAVATION AREA AFTER EACH LIFT (CONTRACTOR HOLD POINT).

⑤ EXCAVATE SUBSEQUENT ABOVE- FRL IMPACTED MATERIAL IN 3 +/- 1 FOOT LIFTS OUTSIDE LIMITS OF ABOVE-WAC MATERIAL EXCAVATION AREA WITH EQUIPMENT APPROVED BY THE CONSTRUCTION MANAGER TO FACILITATE SAFE SLOPES FOR LOWER LIFTS. HAUL EXCAVATED MATERIAL TO OSDF.

⑥ IF MONITORING FINDS ABOVE-WAC MATERIAL ALONG THE SIDES OF THE ABOVE-WAC EXCAVATION AREA, EXTEND THE EXCAVATION LIMIT LATERALLY BY 5 FEET IN ALL DIRECTIONS OF THE ABOVE-WAC AND RCRA MONITORING RESULTS.

⑦ FLUOR FERNALD WILL MONITOR ALONG THE EXTENDED LIMITS OF EXCAVATION (CONTRACTOR HOLD POINT).

⑧ REPEAT STEPS ⑤ AND ⑥ IF MONITORING FINDS ABOVE-WAC MATERIAL WITHIN THE EXTENDED LIMIT.

⑨ MAINTAIN POSITIVE DRAINAGE WITHIN THE ABOVE-WAC AREA EXCAVATION TO COLLECT WATER AND PUMP TO THE TANK FARM SETTLING BASIN.

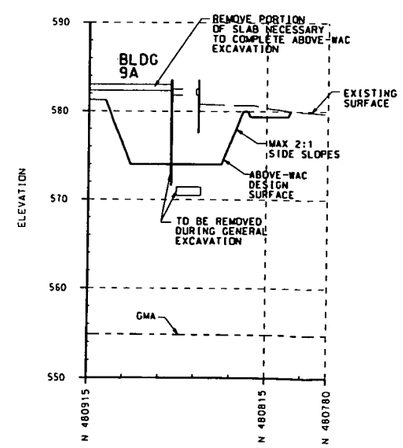
⑩ CONTINUE STEPS ① THROUGH ⑨ AS DIRECTED BY THE CONSTRUCTION MANAGER FOR MAXIMUM DEPTH OF EXCAVATION EQUAL TO 6'. FOR DEEPER EXCAVATIONS, CONTRACTOR TO PROVIDE BENCHES TO FACILITATE SAFE SLOPES.

⑪ SURVEY FINAL EXCAVATION LIMITS. FLUOR FERNALD TO CONDUCT CONFIRMATION MONITORING AT BOTTOM OF ABOVE-WAC MATERIAL EXCAVATION (CONTRACTOR HOLD POINT).

ABOVE-WAC MATERIAL EXCAVATION DETAIL

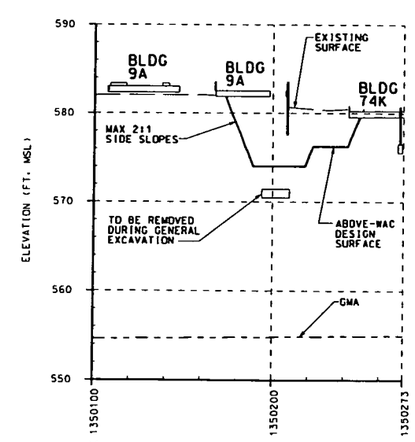
SCALE: NONE

99X-1900-G-00008
99X-1900-G-00009
99X-1900-G-00010
99X-1900-G-00011



E 1350200
SECTION 1

SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00011



N 480859.0
SECTION 2

SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00011

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

0' 2' 4' 6' 12' 18'
SCALE: 1 INCH=6 FEET

000016

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. INITIALLY EXCAVATE ABOVE-WAC AREAS AS SHOWN ON THIS DRAWING. CONSTRUCTION MANAGER WILL VERIFY THE LIMITS OF ABOVE-WAC MATERIAL IN THE FIELD, AND ADDITIONAL EXCAVATION MAY BE REQUIRED.

2890

KEYED NOTES

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	31MAR00		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	5JAN00		
A	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		

INITIALS AND DATE

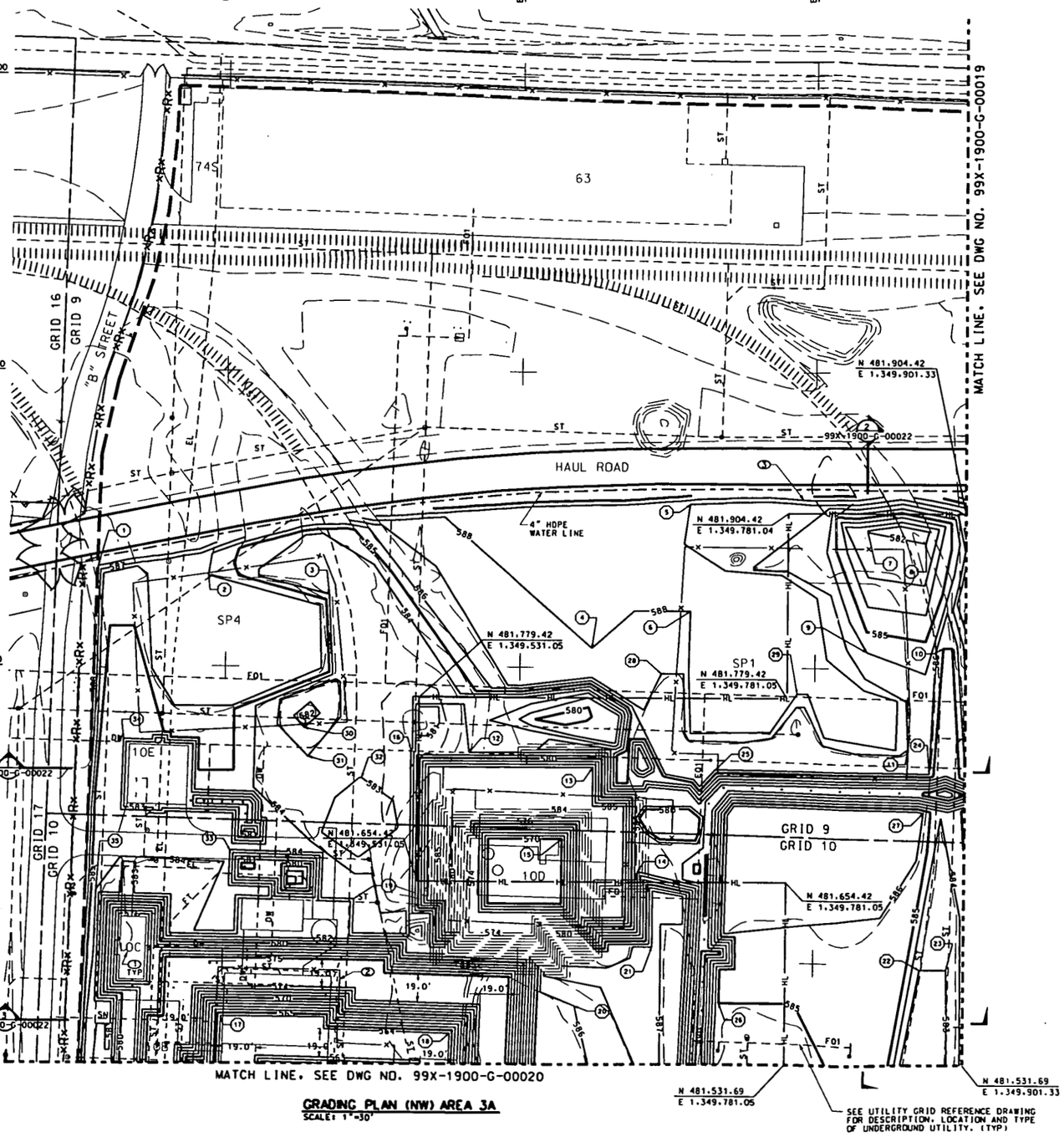
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
ABOVE-WAC DETAILS

DRAWN BY C. COX	DATE 23OCT99	TECHNICAL LEAD J. ALCORN	DATE 23OCT99	CHECKED BY M. ROBERTS	DATE 17JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% BASE TECH LEAD NONE		SUBMITTED FOR 60% BASE TECH LEAD NONE		SUBMITTED FOR 90% BASE TECH LEAD J. ALCORN	
DATE NONE		DATE NONE		DATE 28JAN00	
I.D. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO.		SHEET NO. 16	REV. NO. D
LBT PROJECT NO. 300-000919.01	FILENAME CPKG2048.DGN	99X-1900-G-00017			



GRADING PLAN (NW) AREA 3A
SCALE: 1"=30'

PT NO.	NORTHING	EASTING
1	481867.39	1349313.08
2	481861.41	1349387.75
3	481848.87	1349469.88
4	481813.00	1349648.84
5	481910.53	1349714.04
6	481838.20	1349714.69
7	481892.48	1349835.89
8	481884.44	1349874.37
9	481810.74	1349835.19
10	481813.68	1349886.36
11	481745.15	1349863.28
12	481742.10	1349565.33
13	481732.10	1349649.81
14	481661.60	1349680.84
15	481683.53	1349629.30
16	481744.10	1349526.01
17	481563.40	1349399.44
18	481552.27	1349554.20
19	481642.44	1349488.39
20	481571.12	1349638.98
21	481610.76	1349690.84
22	481595.64	1349872.11
23	481595.64	1349889.95
24	481728.31	1349877.60
25	481730.90	1349732.37
26	481572.60	1349735.96
27	481702.36	1349874.06
28	481795.91	1349695.56
29	481782.52	1349787.88
30	481758.34	1349453.86
31	481738.96	1349456.41
32	481724.61	1349492.13
33	481674.73	1349404.42
34	481750.47	1349331.30
35	481648.30	1349313.98

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. GRID NUMBERS REFER TO THE UNDERGROUND UTILITIES GRID DRAWINGS AS SHOWN IN UTILITY GRID REFERENCE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
3. FOR EXCAVATION OF ABOVE-WAC AREAS SEE DRAWING 99X-1900-G-00008.
4. DEWATER EXCAVATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTORS APPROVED SWMP.
5. FOR ADDITIONAL SECTION LOCATIONS SEE FOUNDATION DRAWINGS.

2890

KEYED NOTES

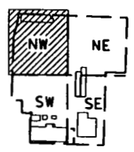
1. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
2. CONTRACTOR TO SEQUENCE FENCE REMOVAL WITH EXCAVATION OF BASEMENT.
3. LIMIT CUT SLOPE ALONG HAUL ROAD TO 3H:1V MAX.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	30JAN00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	11OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

MTHLS AND DATE

000017



AREA 3A KEY PLAN
SCALE: NONE

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
TECHNOLOGIES

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
GRADING PLAN (NW) AREA 3A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	28JUL99	M. JERALD	28JUL99	N. ROBERTS	13JAN00

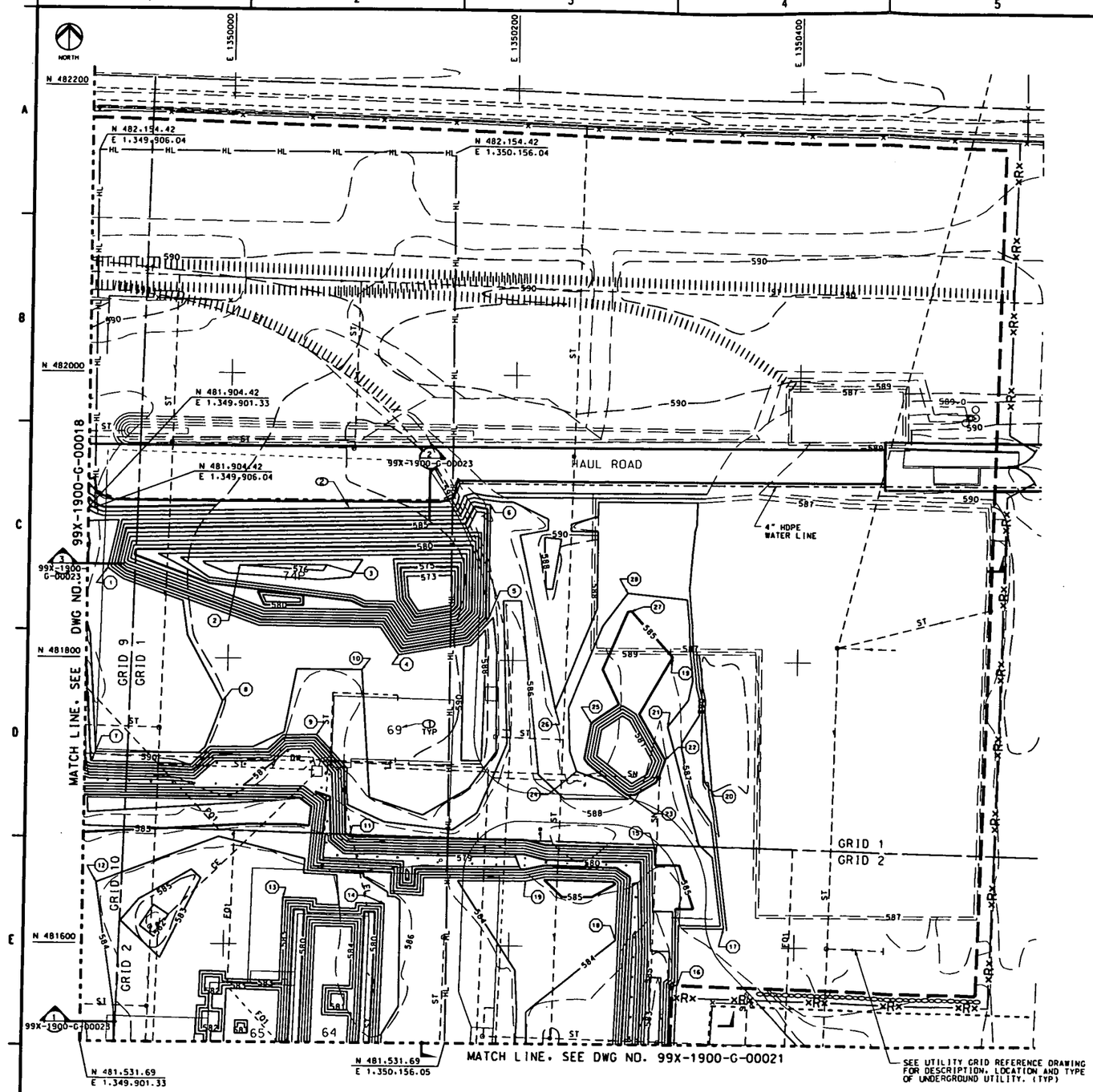
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
FEMP	NONE	1"=30'	U

SUBMITTED FOR 30% REVIEW	SUBMITTED FOR 60% REVIEW	SUBMITTED FOR 90% REVIEW
TECH LEAD M. JERALD	TECH LEAD M. JERALD	TECH LEAD M. JERALD
DATE 13AUG99	DATE 01NOV99	DATE 28JAN00

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800			

TOT PROJECT NO.	FILENAME	
X00-008919.01	CPKG2010.DGN	99X-1900-G-00018

17 | 1



GRADING PLAN (NE) AREA 3A
SCALE: 1"=30'

PT NO.	NORTHING	EASTING
1	481862.36	1349915.82
2	481864.99	1350007.33
3	481865.47	1350069.45
4	481803.24	1350120.35
5	481829.19	1350182.48
6	481908.75	1350182.48
7	481727.30	1349906.28
8	481769.92	1349996.94
9	481747.12	1350063.80
10	481792.65	1350094.95
11	481675.83	1350087.71
12	481642.38	1349910.77
13	481632.72	1350041.63
14	481628.78	1350112.51
15	481669.33	1350301.64
16	481573.09	1350318.37
17	481613.13	1350350.32
18	4816604.51	1350275.00
19	481802.96	1350312.22
20	481715.66	1350335.66
21	481754.51	1350309.36
22	481731.10	1350307.94
23	481706.42	1350281.76
24	481722.65	1350246.34
25	481756.46	1350256.21
26	481765.96	1350230.51
27	481835.06	1350283.02
28	481847.53	1350280.40

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. GRID NUMBERS REFER TO THE UNDERGROUND UTILITIES GRID DRAWINGS AS SHOWN IN UTILITY GRID REFERENCE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
3. FOR EXCAVATION OF ABOVE-WAC AREAS SEE DRAWING 99X-1900-G-00009.
4. DEWATER EXCAVATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTORS APPROVED SWMP.
5. FOR ADDITIONAL SECTION LOCATIONS SEE FOUNDATION DRAWINGS.

2890

KEYED NOTES

1. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
2. LIMIT CUT SLOPE ALONG HAUL ROAD TO 3H:1V MAX.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	5MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	09NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	15OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

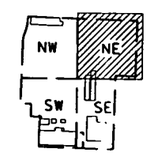
000018

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
GRADING PLAN (NE) AREA 3A

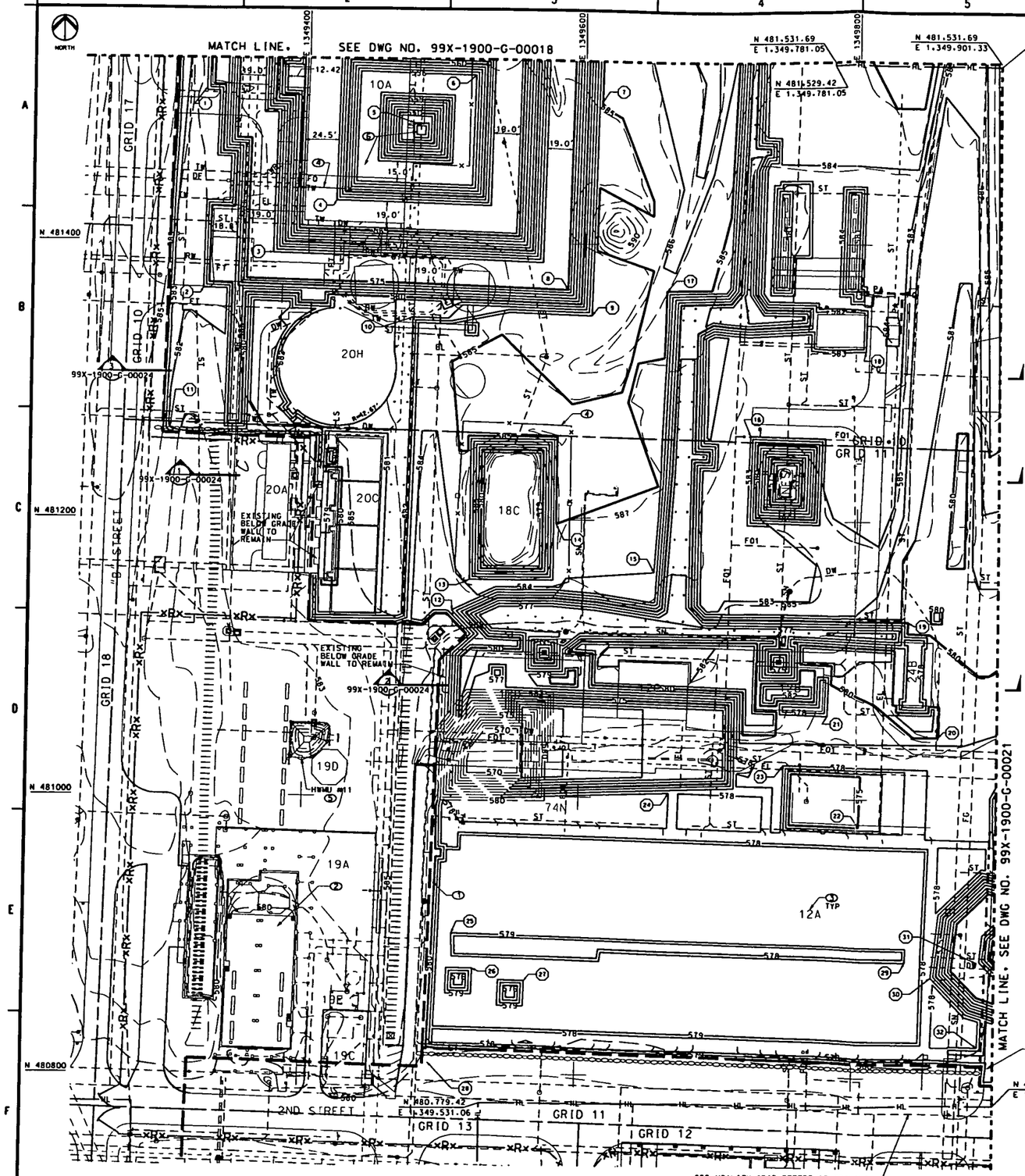


AREA 3A KEY PLAN
NORTH SCALE: NONE

0' 10'20'30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE

DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99	CHECKED BY N. ROBERTS	DATE 13JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=30'	CLASS U
SUBMITTED FOR 30% BASE		SUBMITTED FOR 60% BASE		SUBMITTED FOR 90% BASE	
TECH LEAD M. JERALD		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE 13AUG99		DATE 09NOV99		DATE 28JAN00	
T.O. NUMBER L-010	PROJECT NO. 20300	DRAWING INDEX CODE NO. 99X-1900-G-00019		SHEET NO. 18	REV. NO. 1
LGT PROJECT NO. 300-008919.01	FILENAME CPKG2011.DGN				



GRADING PLAN (SW) AREA 3A
SCALE: 1"=30'

PT NO.	NORTHING	EASTING
1	481509.84	1349325.37
2	481365.99	1349324.20
3	481391.62	1349374.74
4	481429.39	1349420.29
5	481485.39	1349475.84
6	481520.19	1349520.31
7	481502.45	1349611.86
8	481366.78	1349588.14
9	481348.29	1349605.64
10	481345.67	1349476.59
11	481264.94	1349301.25
12	481134.53	1349506.62
13	481156.62	1349519.10
14	481196.96	1349581.80
15	481182.41	1349653.16
16	481261.67	1349721.53
17	481366.15	1349660.08
18	481322.65	1349805.47
19	481127.83	1349837.28
20	481044.77	1349859.05
21	481060.01	1349779.37
22	480979.75	1349803.14
23	481024.28	1349747.84
24	481003.40	1349665.28
25	480901.00	1349509.57
26	480875.82	1349524.74
27	480867.11	1349562.27
28	480808.43	1349494.03
29	480882.01	1349837.78
30	480871.39	1349856.07
31	480882.39	1349888.54
32	480821.40	1349889.98

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES. SEE DRAWING 99X-1900-X-00003.
2. GRID NUMBERS REFER TO THE UNDERGROUND UTILITIES GRID DRAWINGS AS SHOWN IN UTILITY GRID REFERENCE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
3. FOR EXCAVATION OF RCRA AREAS SEE DRAWING 99X-1900-G-00010.
4. DEWATER EXCAVATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTORS APPROVED SWMP.
5. FOR ADDITIONAL SECTION LOCATIONS SEE FOUNDATION DRAWINGS.

← 2890

KEYED NOTES

1. THE FOUNDATION ALONG THE WEST SIDE OF BUILDING 12A WILL BE RETAINED DURING REMEDIATION OF AREA 34. THIS WILL ENSURE THE ELECTRICAL DUCT BANK IN THE VICINITY OF THE FOUNDATION WILL NOT BE DAMAGED BY CONCRETE DEMOLITION ACTIVITIES.
2. FOR DETAILS OF TANK FARM SETTLING BASIN. SEE DRAWING 99X-1900-G-00012.
3. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
4. CONTRACTOR TO SEQUENCE FENCE REMOVAL WITH EXCAVATION.
5. HHMU #11 SHALL NOT BE DISTURBED.
6. INSTALL GMA PLUG IN ACCORDANCE WITH SECTION 02206. FOR GMA PROTECTION BENCH. SEE DETAIL DRAWING 99X-1900-G-00042.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	13AUG99		
H	ISSUED FOR 90% DOE REVIEW	28JUN99		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

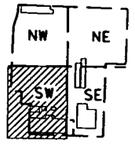
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
GRADING PLAN (SW) AREA 3A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	28JUL99	M. JERALD	28JUL99	N. ROBERTS	11JAN00
PLANT/BLDG. NO.		FLOOR		SCALE	CLASS
TEMP		NONE		1"=30'	U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD M. JERALD		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800			
DET PROJECT NO. 300-000919.01	FILENAME CPKG2012.DGN	99X-1900-G-00020	19	1

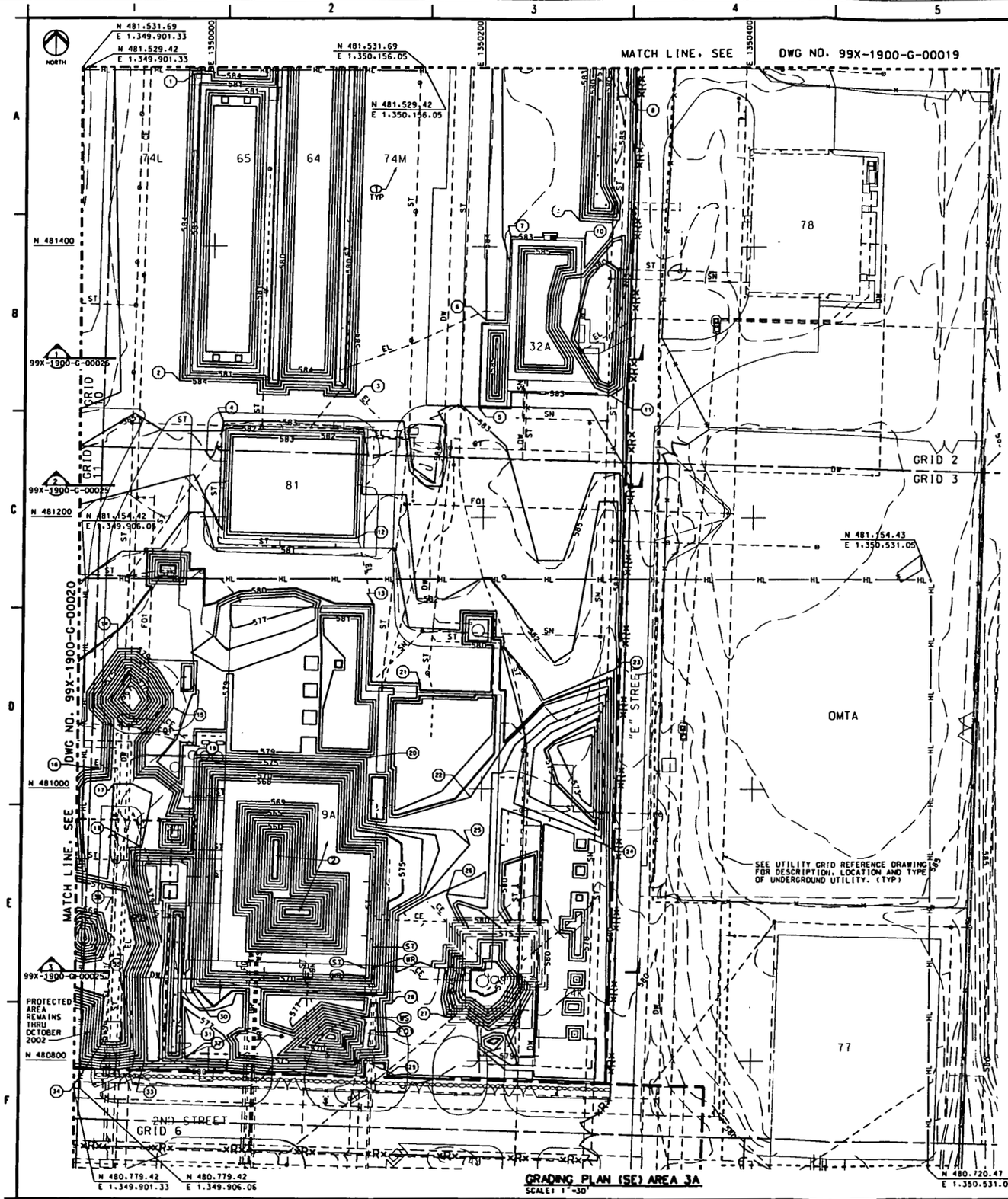
000019



AREA 3A KEY PLAN
NORTH
SCALE: NONE

0' 10'20'30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE



GRADING PLAN (SE) AREA 3A
SCALE: 1"=30'

0' 10'20'30' 60' 90'
SCALE: 1 INCH=30 FEET

PT NO.	NORTHING	EASTING
1	481526.87	1349984.68
2	481300.64	1349974.49
3	481288.85	1350105.21
4	481270.83	1350007.34
5	481281.03	1350198.58
6	481345.92	1350201.41
7	481407.58	1350219.25
8	481510.71	1350306.33
9	481419.22	1350270.40
10	481406.06	1350274.81
11	481290.61	1350294.27
12	481184.54	1350106.35
13	481135.83	1350119.56
14	481102.86	1349930.11
15	481059.68	1349971.95
16	481013.81	1349918.60
17	481003.06	1349929.19
18	480956.37	1349949.31
19	481024.69	1349987.52
20	481023.17	1350115.52
21	481077.86	1350153.99
22	480993.80	1350191.96
23	481088.27	1350297.74
24	480959.30	1350291.11
25	480958.84	1350191.53
26	480922.36	1350175.37
27	480832.09	1350174.12
28	480841.77	1350135.51
29	480789.32	1350132.07
30	480851.85	1349988.78
31	480839.22	1349982.40
32	480801.30	1349982.47
33	480799.43	1349953.03
34	480813.57	1349922.36
35	480871.51	1349921.98
36	480909.81	1349923.15

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. GRID NUMBERS REFER TO THE UNDERGROUND UTILITIES GRID DRAWINGS AS SHOWN IN UTILITY GRID REFERENCE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
3. FOR EXCAVATION OF ABOVE-WAC AREAS SEE DRAWING 99X-1900-G-00011.
4. DEWATER EXCAVATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTORS APPROVED SWMP.
5. FOR ADDITIONAL SECTION LOCATIONS SEE FOUNDATION DRAWINGS.

← 2890

KEYED NOTES

1. BUILDING NUMBERS REFER TO THE FORMER LOCATIONS OF BUILDINGS OR PADS.
2. INSTALL GMA PLUG IN ACCORDANCE WITH SECTION 02206. FOR GMA PROTECTION BENCH, SEE DETAIL DRAWING 99X-1900-G-00042.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	30NOV99		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	31JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	15OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

000020

NW NE SW SE
AREA 3A KEY PLAN
NORTH SCALE: NONE

90% ISSUE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS & CONSTRUCTORS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
GRADING PLAN (SE) AREA 3A

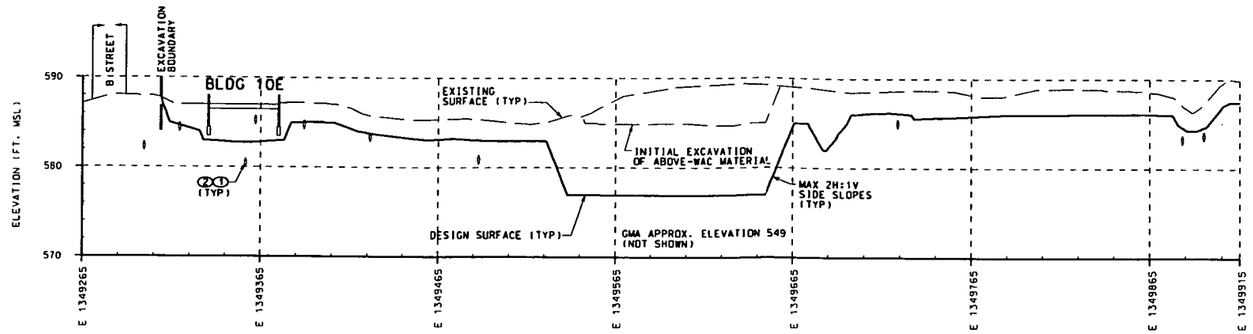
DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	28JUL99	M. JERALD	28JUL99	N. ROBERTS	31JAN00

PLANT/BLDG NO.	FLOOR	SCALE	CLASS
FEMP	NONE	1"=30'	U

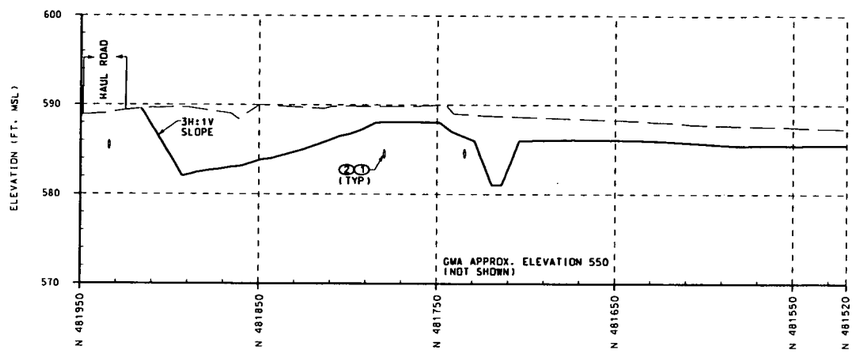
SUBMITTED FOR 30% REVIEW	SUBMITTED FOR 60% REVIEW	SUBMITTED FOR 90% REVIEW
TECH LEAD M. JERALD	TECH LEAD M. JERALD	TECH LEAD M. JERALD
DATE 13AUG99	DATE 01NOV99	DATE 28JAN00

F.A. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00021	20	I

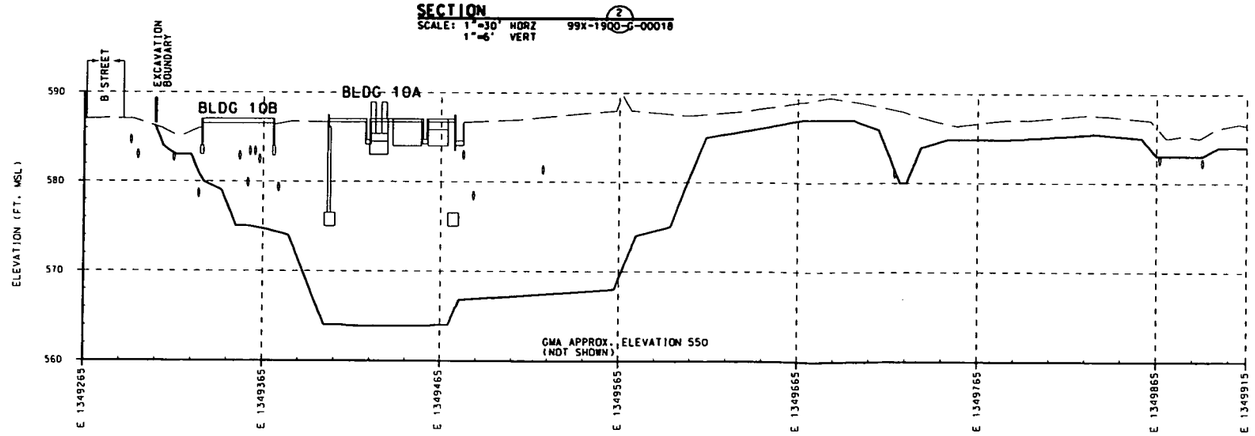
LIST PROJECT NO.	FILENAME
300-008919.01	CPKG2013.DGN



N 481730.0
SECTION (1)
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00018



E 1349835.0
SECTION (2)
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00018

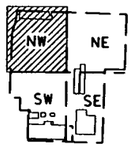


N 481560.0
SECTION (3)
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00018

SCALE: 1 INCH=30 FEET

SCALE: 1 INCH=6 FEET

000021



AREA 3A KEY PLAN
NORTH SCALE: NONE

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.

2890

KEYED NOTES

(1) PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.

(2) REMAINING UTILITY TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205, AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

REF DWG NO.	DRAWING TITLE

REV NO	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	31MAR00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	14JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

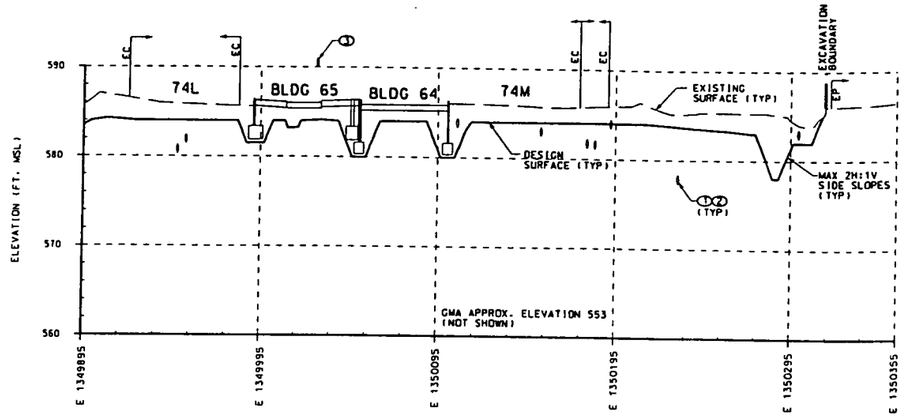
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. I

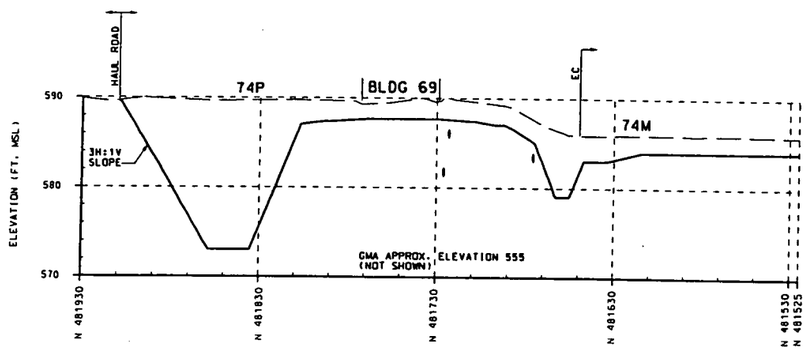
DRAWING TITLE
CROSS SECTIONS AREA 3A
SHEET 1 OF 4

DRAWN BY C. COX	DATE 28JAN99	TECHNICAL LEAD M. JERALD	DATE 28JAN99
CHECKED BY N. ROBERTS	DATE 18JAN00	PLANT/BLDG. NO. TEMP	FLOOR NONE
SCALE AS NOTED	CLASS U	SUBMITTED FOR 30% IssUE	SUBMITTED FOR 60% IssUE
SUBMITTED FOR 90% IssUE		TECH LEAD NONE	TECH LEAD M. JERALD
TECH LEAD M. JERALD		DATE NONE	DATE 01NOV99
DATE 28JAN00			

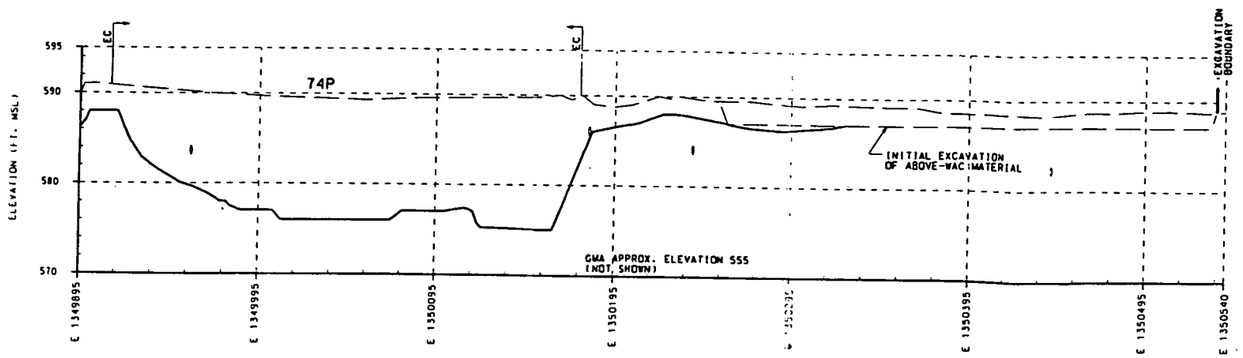
T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00022	21	E
EST PROJECT NO. 300-008919.01	FILENAME CPKG2020.DGN			



N 481545.0
SECTION 1
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00019



E 1350140.0
SECTION 2
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00019

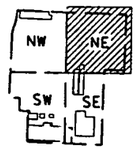


N 481865.0
SECTION 3
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00019

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

0' 2' 4' 6' 12' 18'
SCALE: 1 INCH=6 FEET

000022



AREA 3A KEY PLAN
NORTH SCALE: NONE

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR
F	ISSUED FOR 90% EPA REVIEW	[illegible]		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	[illegible]		
C	DECEMBER 1999 COORDINATION PACKAGE	[illegible]		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	DRAWING NUMBER REASSIGNED	[illegible]		

DETAILS AND DATE

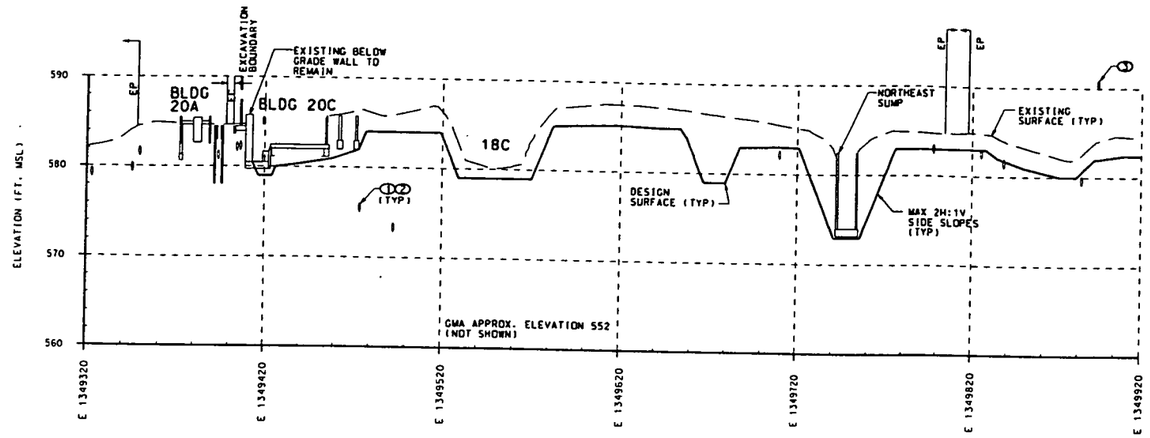
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

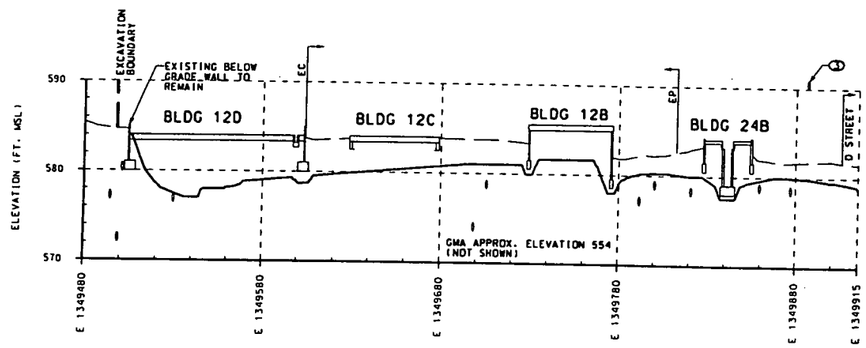
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
CROSS SECTIONS AREA 3A
SHEET 2 OF 4

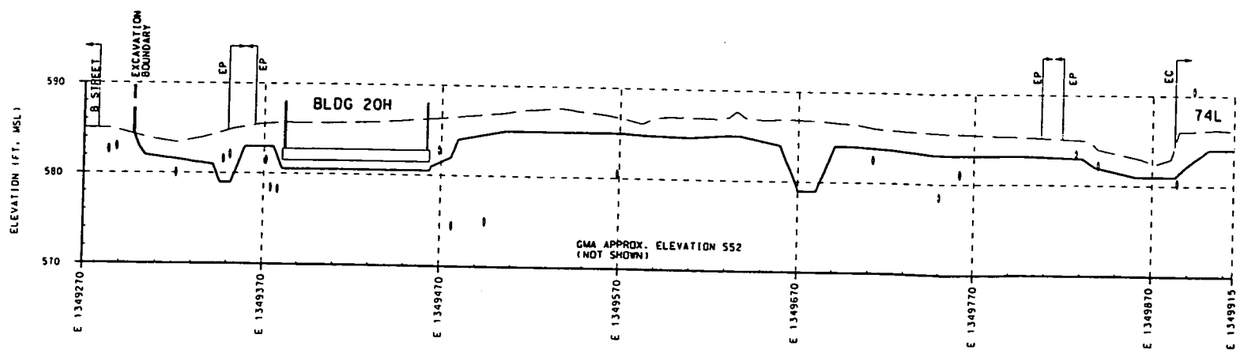
DRAWN BY C. COX	DATE 28JAN99	TECHNICAL LEAD M. JERALD	DATE 28JAN99	CHECKED BY M. ROBERTS	DATE 28JAN00
PLANT/BLDG NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% CHECK TECH LEAD NONE		SUBMITTED FOR 60% CHECK TECH LEAD M. JERALD		SUBMITTED FOR 90% CHECK TECH LEAD M. JERALD	
DATE NONE		DATE 01NOV99		DATE 28JAN00	
F.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00023		SHEET NO. 22	REV. NO. F
LCI PROJECT NO. 300-008919.01	FILENAME CPKG2021.DGN				



N 481230.0
SECTION 1
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00020

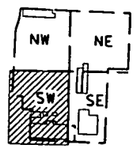


N 481080.0
SECTION 2
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00020



N 481305.0
SECTION 3
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00020

000023



AREA 3A KEY PLAN
SCALE: NONE

SCALE: 1 INCH=30 FEET

SCALE: 1 INCH=6 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	[illegible]		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	[illegible]		
B	DECEMBER 1999 COORDINATION PACKAGE	[illegible]		
A	ISSUED FOR 60% REVIEW	[illegible]		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

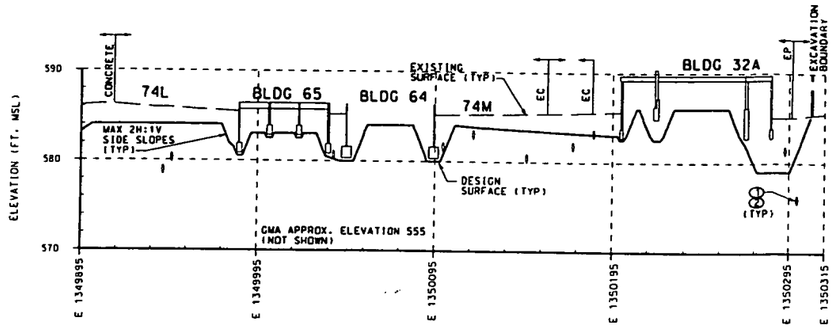
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

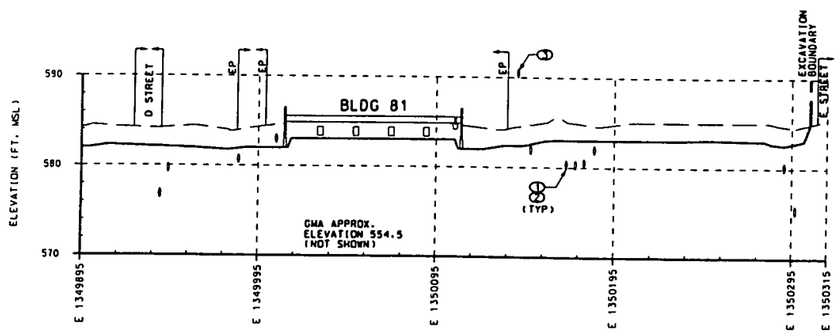
DRAWING TITLE
CROSS SECTIONS AREA 3A
SHEET 3 OF 4

DRAWN BY C. COX	DATE 28JAN99	TECHNICAL LEAD M. JERALD	DATE 28JAN99	CHECKED BY M. ROBERTS	DATE [illegible]
PROJECT NO. TEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% DATE		SUBMITTED FOR 60% DATE		SUBMITTED FOR 90% DATE	
TECH LEAD NONE		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

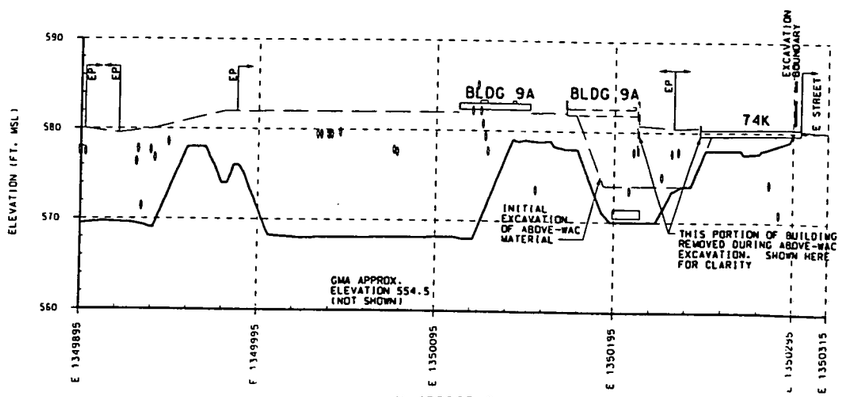
T.B. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00024	SHEET NO. 23	REV. NO. E
DOE PROJECT NO. 300-008919.01	FILENAME CPMG2022.DGN			



N 481317.0
SECTION 1
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00021



N 481223.0
SECTION 2
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00021

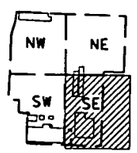


N 480865.0
SECTION 3
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00021

SCALE: 1 INCH=30 FEET

SCALE: 1 INCH=6 FEET

000024



AREA 3A KEY PLAN
NORTH SCALE: NONE

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	30JAN00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	14JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
A	ISSUED FOR 60% REVIEW	03NOV99		

DETAILS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

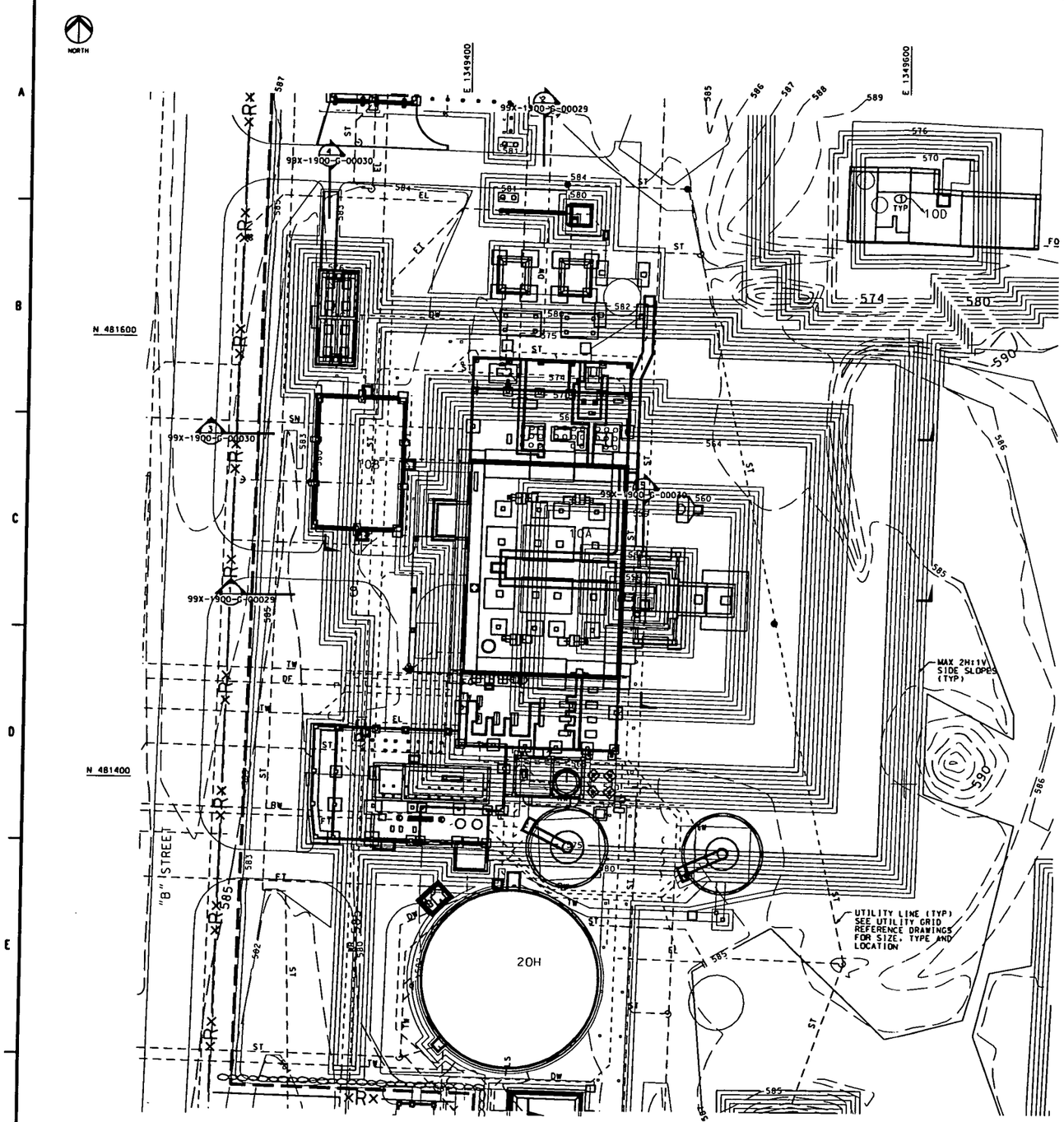
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
CROSS SECTIONS AREA 3A
SHEET 4 OF 4

DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99
CHECKED BY N. ROBERTS	DATE 10JAN00	PLANT/AREA NO. FEMP	FLOOR NONE
SCALE AS NOTED	CLASS U	SUBMITTED FOR 30% BASE	SUBMITTED FOR 60% BASE
SUBMITTED FOR 90% BASE	TECH LEAD NONE	TECH LEAD M. JERALD	TECH LEAD M. JERALD
DATE NONE	DATE 03NOV99	DATE 28JAN00	

F/S NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00025	SHEET NO. 24	REV. NO. E
EST PROJECT NO. 300-008919.01	FILENAME CPKG2023.DGN			

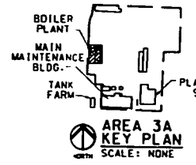
000024



BOILER PLANT AREA FOUNDATIONS
SCALE: 1"=20'

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

000025



AREA 3A KEY PLAN
SCALE: NONE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. FOR UNDERGROUND UTILITY GRID REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
3. FOR FOUNDATION REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
4. DEWATER EXCAVATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTORS APPROVED SWMP.

2890

KEYED NOTES

1. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

MONTHS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

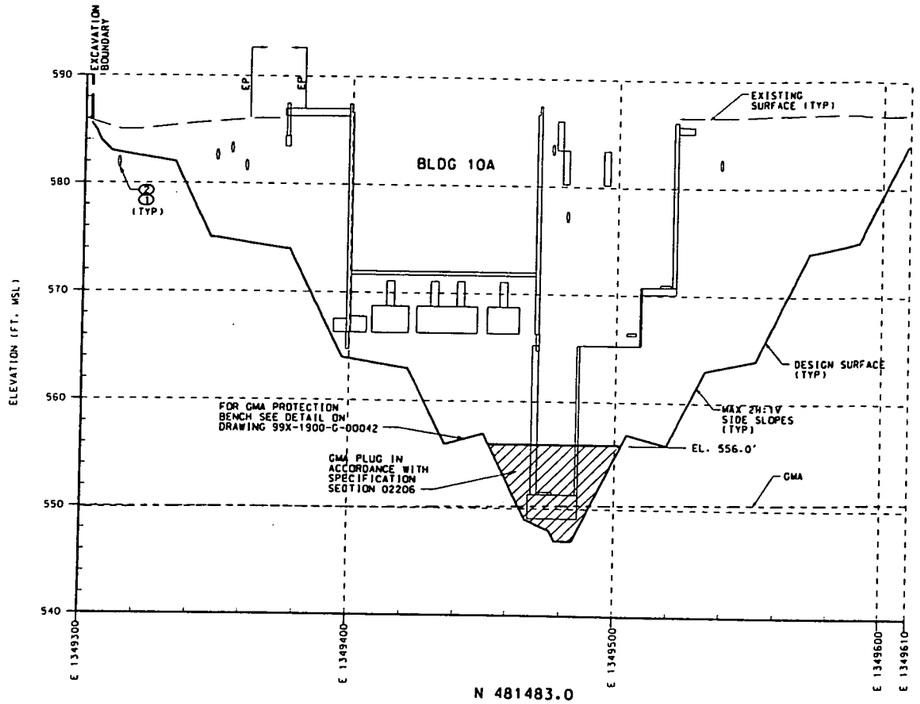
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
BOILER PLANT AREA FOUNDATIONS

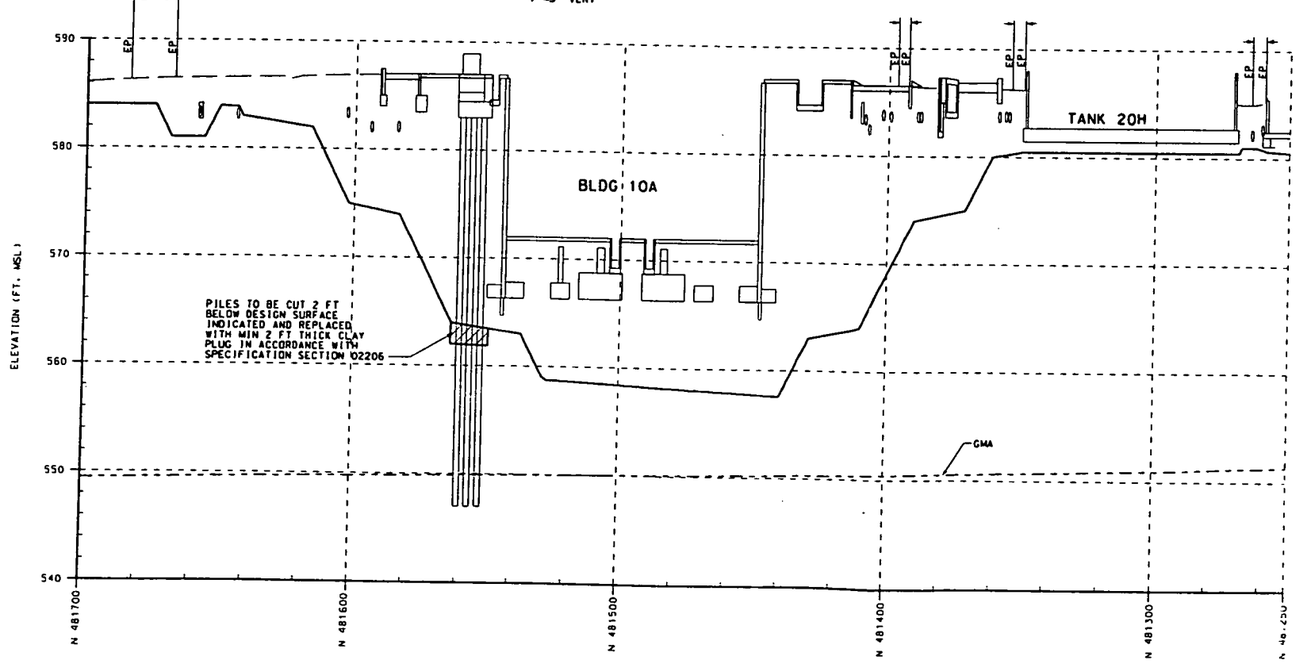
DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99	CHECKED BY M. ROBERTS	DATE 28JAN00
PLANT/BLDG NO. FEMP		FLOOR NONE		SCALE 1"=20'	CLASS U
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 60% ISSUE		SUBMITTED FOR 90% ISSUE	
TECH LEAD M. JERALD		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	
T.A. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00026		SHEET NO. 25	REV. NO. 1
LGT PROJECT NO. 300-005919.01	FILENAME CPKG2030.DGN				

90% ISSUE



N 481483.0

SECTION 1
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00026



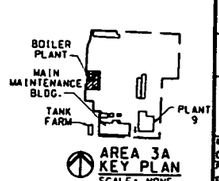
E 1349432.5

SECTION 2
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00026

SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

000026



AREA 3A KEY PLAN
SCALE: NONE

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. FOR TYPICAL BENCH DETAIL, SEE DRAWING 99X-1900-G-00042.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
H	ISSUED FOR 90% EPA REVIEW	31MAR00		
G	ISSUED FOR 90% DOE REVIEW	28JAN00		
F	JANUARY 2000 COORDINATION PACKAGE	6JAN00		
E	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
D	ISSUED FOR 60% REVIEW	01NOV99		
C	OCTOBER 1999 COORDINATION PACKAGE	15OCT99		
B	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
A	ISSUED FOR 30% REVIEW	13AUG99		

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

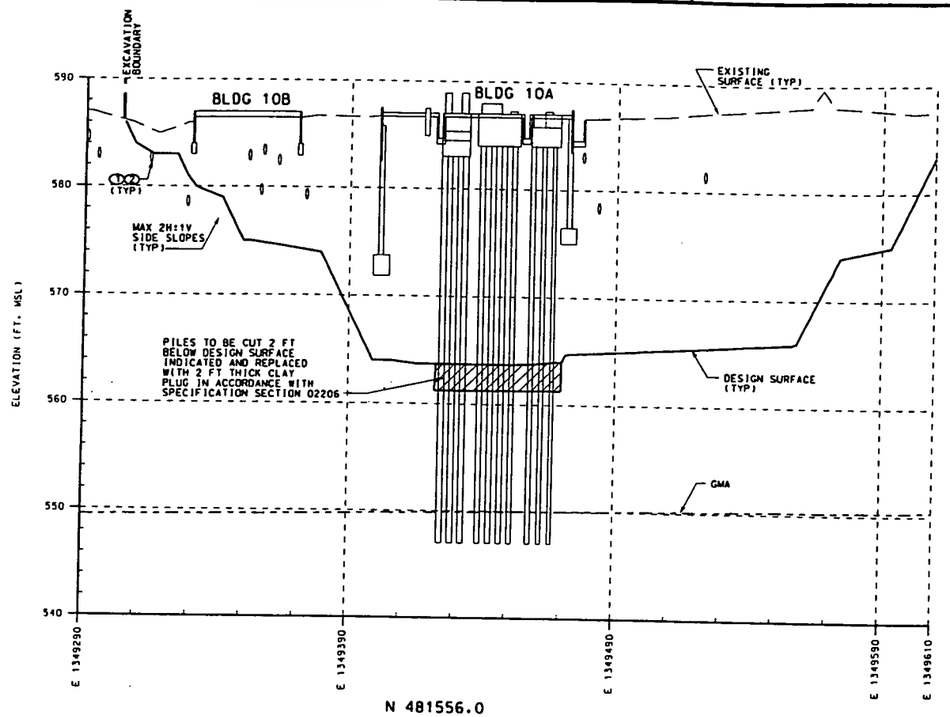
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. 1

DRAWING TITLE
CROSS SECTIONS
BOILER PLANT AREA

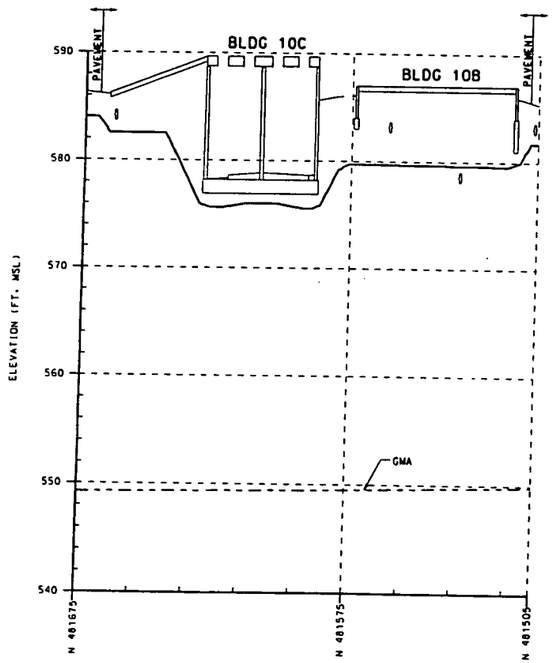
DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99	CHECKED BY N. ROBERTS	DATE 28JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD M. JERALD		SUBMITTED FOR 60% ISSUE TECH LEAD M. JERALD		SUBMITTED FOR 90% ISSUE TECH LEAD M. JERALD	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

I.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00029	26	H
EST PROJECT NO. 300-008919.01	FILENAME CPKG2033.DGN			



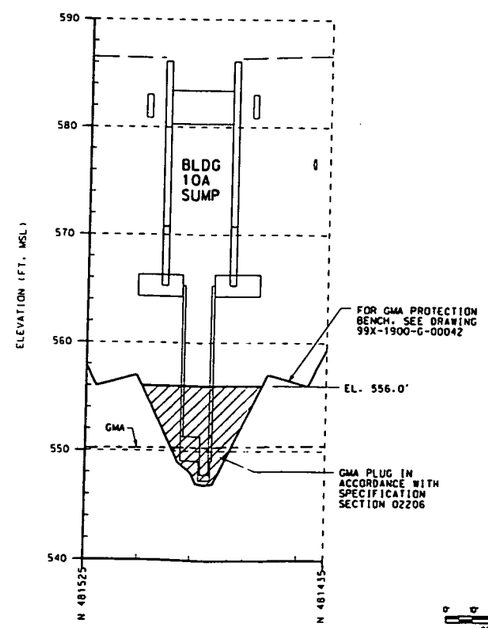
N 481556.0

SECTION (3)
SCALE: 1"=20' HORZ, 1"=5' VERT — 99X-1900-G-00026



E 1349335.0

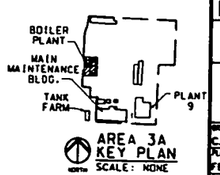
SECTION (4)
SCALE: 1"=20' HORZ, 1"=5' VERT — 99X-1900-G-00026



E 1349480.0

SECTION (5)
SCALE: 1"=20' HORZ, 1"=5' VERT — 99X-1900-G-00026

000027



AREA 3A KEY PLAN
SCALE: NONE

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

0' 5' 10' 15'
SCALE 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. FOR TYPICAL BENCH DETAIL, SEE DRAWING 99X-1900-G-00042.

2890

KEYED NOTES

(1) PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.

(2) REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	31MAR00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	03DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

DETAILS AND DATE

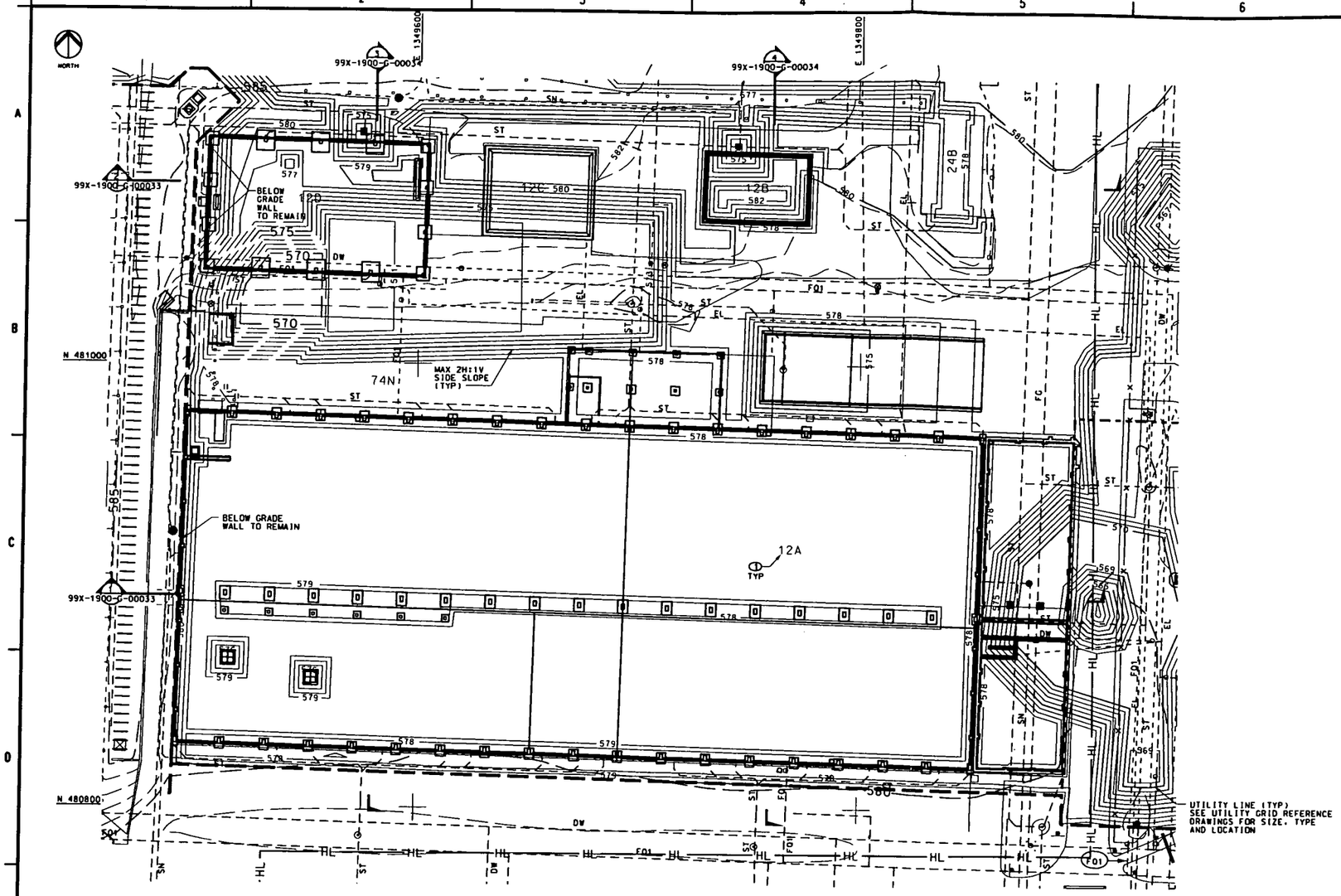
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
CROSS SECTIONS
BOILER PLANT AREA

DRAWN BY C. COX	DATE 28JAN99	TECHNICAL LEAD M. JERALD	DATE 28JAN99
DRAWN BY M. ROBERTS	DATE 20JAN00	PLANT/AREA NO. FEMP	FLOOR NONE
SCALE AS NOTED	CODE U	SUBMITTED FOR 30% ISSUE: TECH LEAD NONE	DATE NONE
SUBMITTED FOR 60% ISSUE: TECH LEAD M. JERALD	DATE 01NOV99	SUBMITTED FOR 90% ISSUE: TECH LEAD M. JERALD	DATE 28JAN00
T.B. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00030	SHEET NO. 27
REV. E	REF PROJECT NO. 300-008919.01	FILENAME CPKG2034.DGN	



MAIN MAINTENANCE BLDG. AREA FOUNDATIONS
SCALE: 1"=20'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. FOR UNDERGROUND UTILITY GRID REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
3. FOR FOUNDATION REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
4. DEWATER EXCAVATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTORS APPROVED SWMP.

2890

KEYED NOTES

① BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
G	ISSUED FOR 90% EPA REVIEW	3MAR00		
F	ISSUED FOR 90% DOE REVIEW	28JAN00		
E	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
D	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
C	ISSUED FOR 60% REVIEW	01NOV99		
B	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

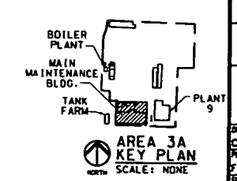
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
MAIN MAINTENANCE BLDG. AREA FOUNDATIONS

DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99
CHECKED BY M. ROBERTS	DATE 28JAN00	PLANT/BLDG NO. SFEMP	FLOOR NONE
SCALE 1"=20'	CLASS U	SUBMITTED FOR 30% ISSUE TECH LEAD NONE	DATE NONE
SUBMITTED FOR 60% ISSUE TECH LEAD M. JERALD	DATE 01NOV99	SUBMITTED FOR 90% ISSUE TECH LEAD M. JERALD	DATE 28JAN00
T.R. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00031	SHEET NO. 28
REV. NO. G	LEX PROJECT NO. 300-000919.01	FILENAME CPKG2035.DGN	

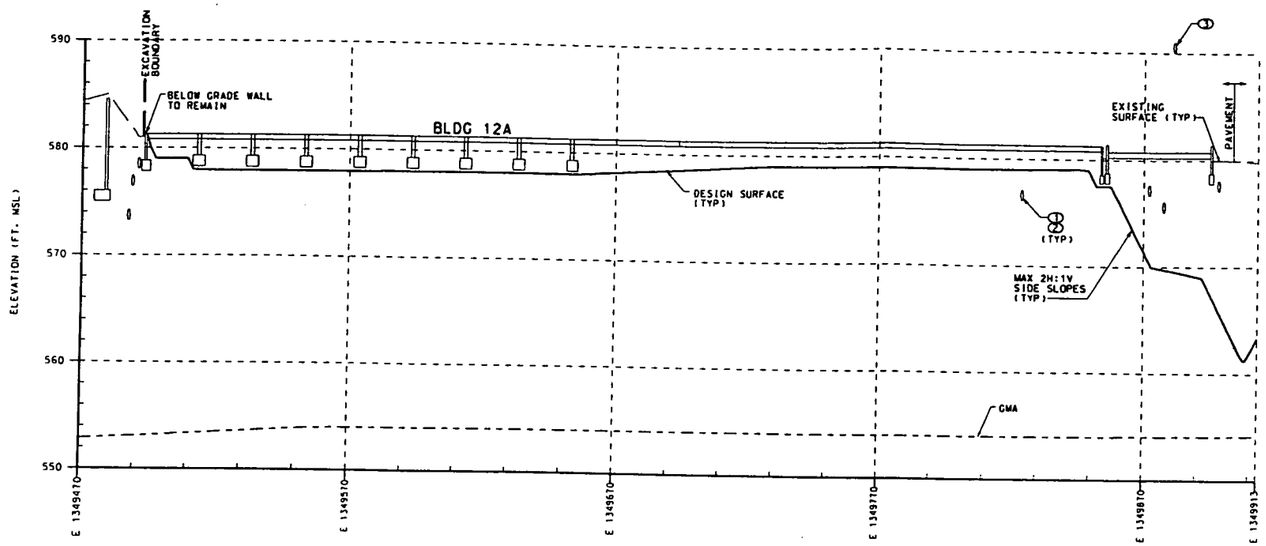
000028



AREA 3A KEY PLAN
SCALE: NONE

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

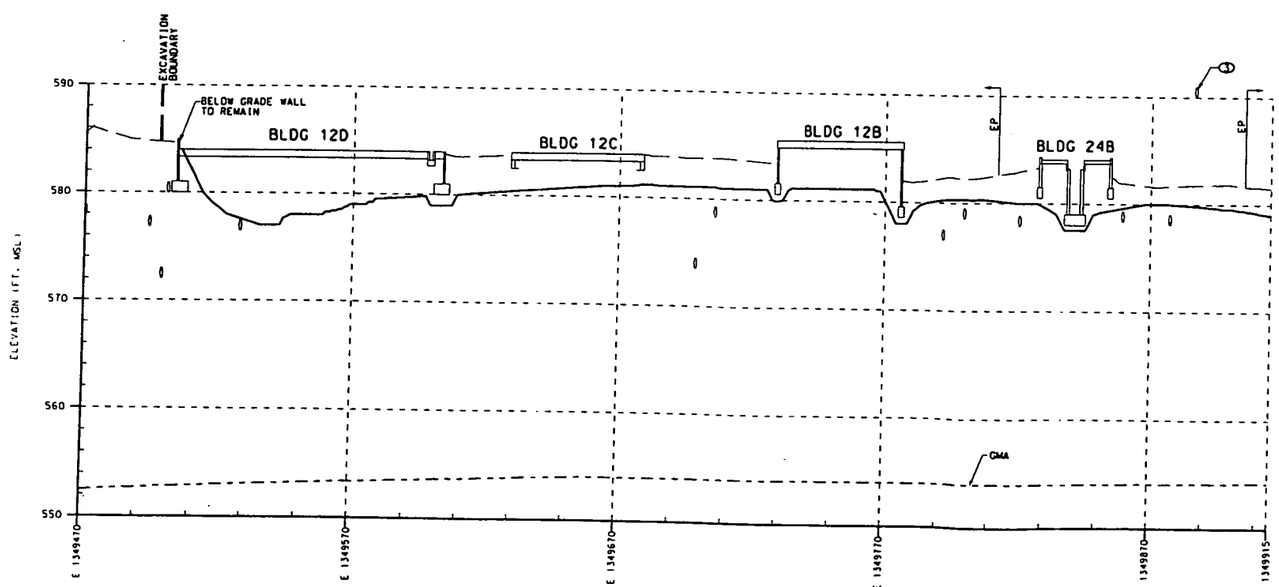
90% ISSUE



N 480895.0

SECTION 1

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00031



N 481081.0

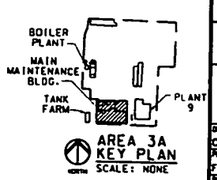
SECTION 2

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00031

SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

000029



AREA 3A KEY PLAN

SCALE: NONE

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. FOR TYPICAL BENCH DETAIL, SEE DRAWING 99X-1900-G-00042.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	31MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	06DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		

REVISIONS AND DATE

UNITED STATES DEPARTMENT OF ENERGY

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY

LOCKWOOD GREENE

PROJECT NAME

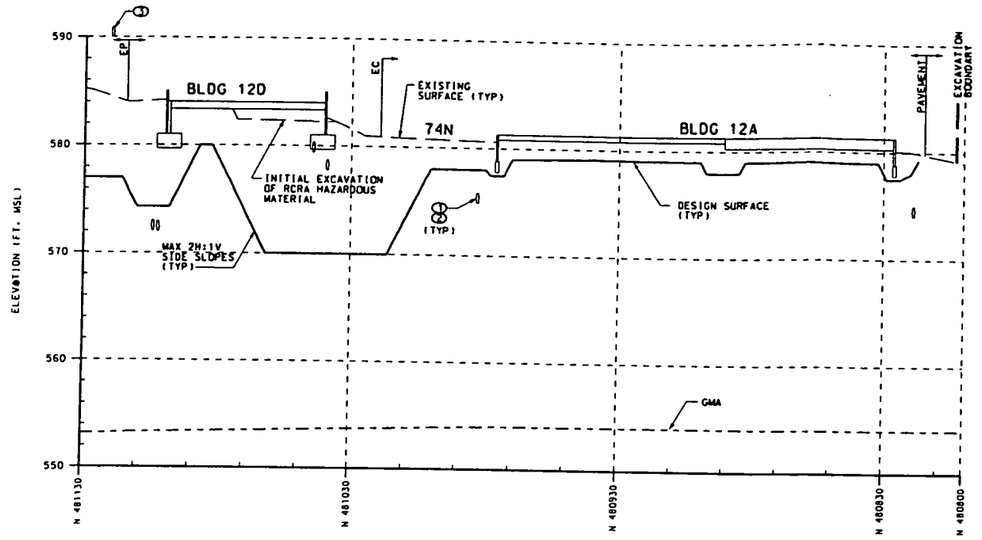
SOFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE

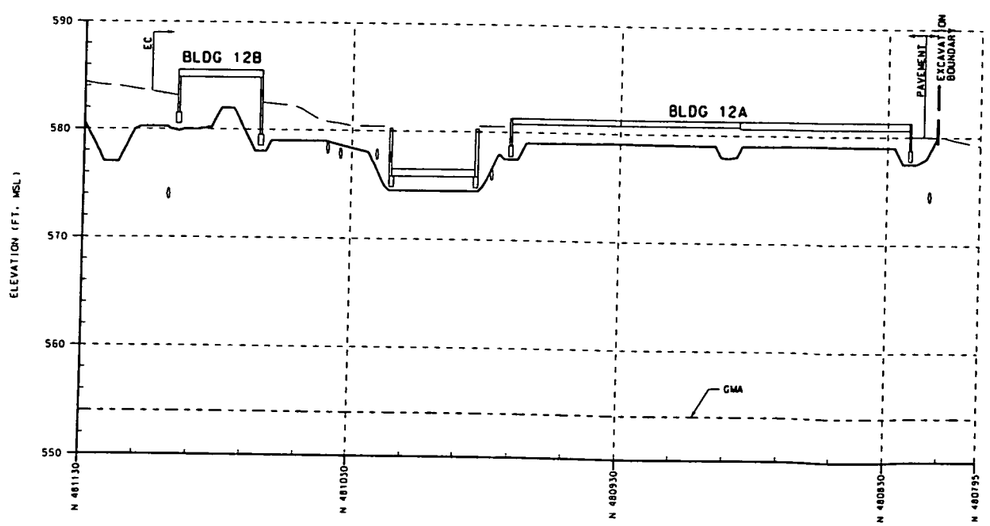
CROSS SECTIONS
MAIN MAINTENANCE BLDG AREA

DESIGN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99
CHECKED BY N. ROBERTS	DATE 28JAN00	SCALE AS NOTED	CLASS U
FEMP		FLOOR NONE	
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW	SUBMITTED FOR 90% REVIEW
TECH LEAD NONE		TECH LEAD M. JERALD	TECH LEAD M. JERALD
DATE NONE		DATE 01NOV99	DATE 28JAN00

T & NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800			
1ST PROJECT NO. 300-008919.01	FILENAME CPKG2037.DGN	99X-1900-G-00033	29	F

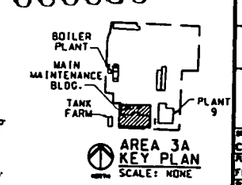


E 1349580.0
SECTION
SCALE: 1"=20' HORZ
1"=5' VERT
99X-1900-G-00031



E 1349760.0
SECTION
SCALE: 1"=20' HORZ
1"=5' VERT
99X-1900-G-00031

000030



SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	28JAN00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	06DEC99		
A	ISSUED FOR 60% REVIEW	07NOV99		

DETAILS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

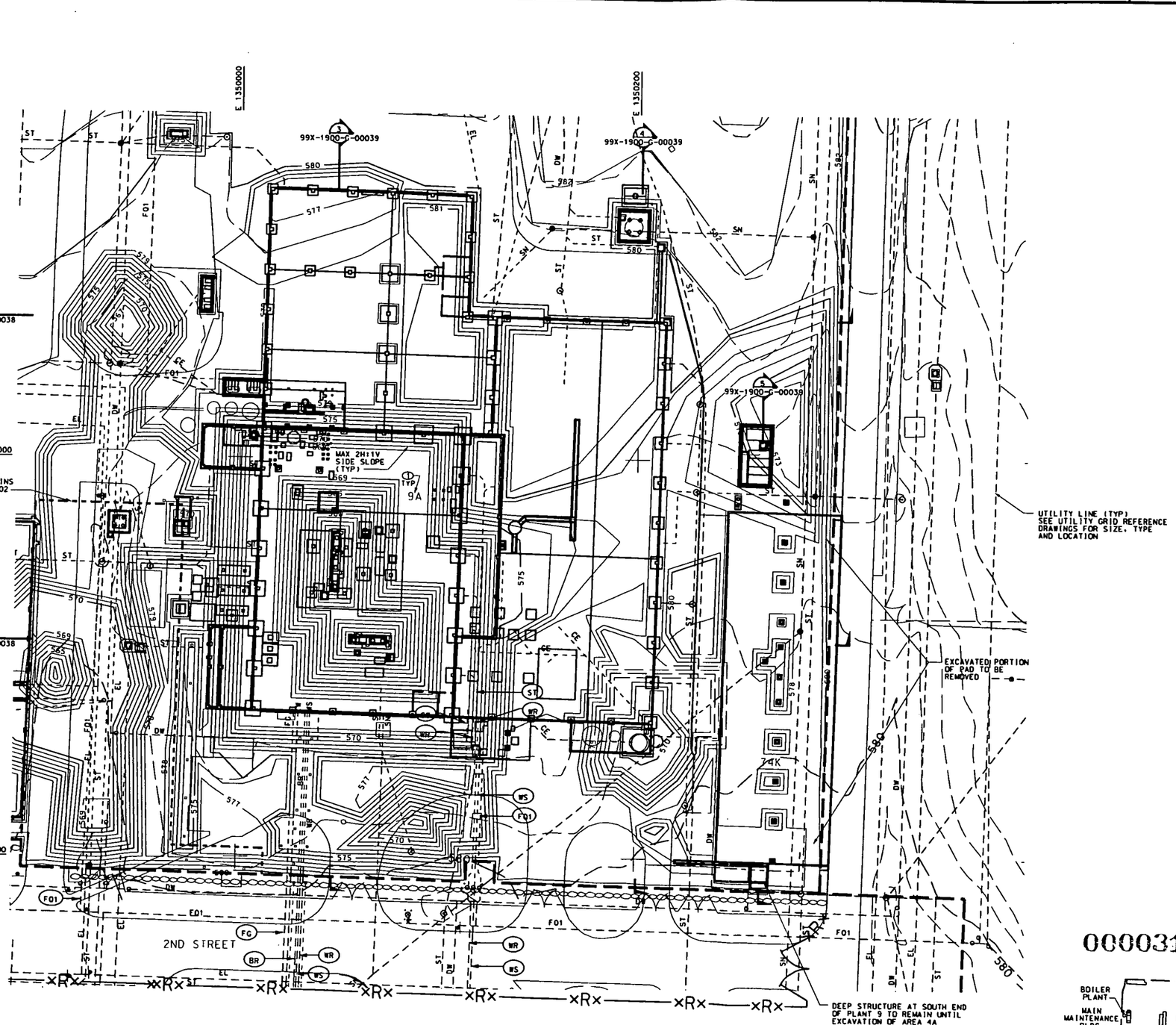
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
CROSS SECTIONS
MAIN MAINTENANCE BLDG AREA

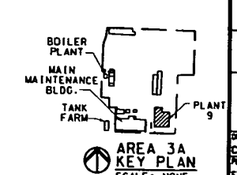
DRAWN BY C. COX	DATE 28JAN99	TECHNICAL LEAD M. JERALD	DATE 28JAN99	CHECKED BY N. ROBERTS	DATE 28JAN00
PLANT/BLDG NO. TEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% DATE		SUBMITTED FOR 60% DATE		SUBMITTED FOR 90% DATE	
TECH LEAD NONE		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

FA NUMBER L-010	PROJECT NO. 20800	DRAWING AREA CODE NO.	SHEET NO.	REV. NO.
KEY PROJECT NO. 300-003919.01	FILENAME CPKG7038.DGN	99X-1900-G-00034	30	E



PLANT 9 FOUNDATIONS
SCALE: 1"=20'

000031



AREA 3A KEY PLAN
SCALE: NONE

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. FOR UNDERGROUND UTILITY GRID REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
3. FOR FOUNDATION REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00002.
4. DEWATER EXCAVATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTORS APPROVED SWMP.

2890

KEYED NOTES

① BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
H	ISSUED FOR 90% EPA REVIEW	31MAR00		
G	ISSUED FOR 90% DOE REVIEW	28JAN00		
F	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
E	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
D	ISSUED FOR 60% REVIEW	01NOV99		
C	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
B	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

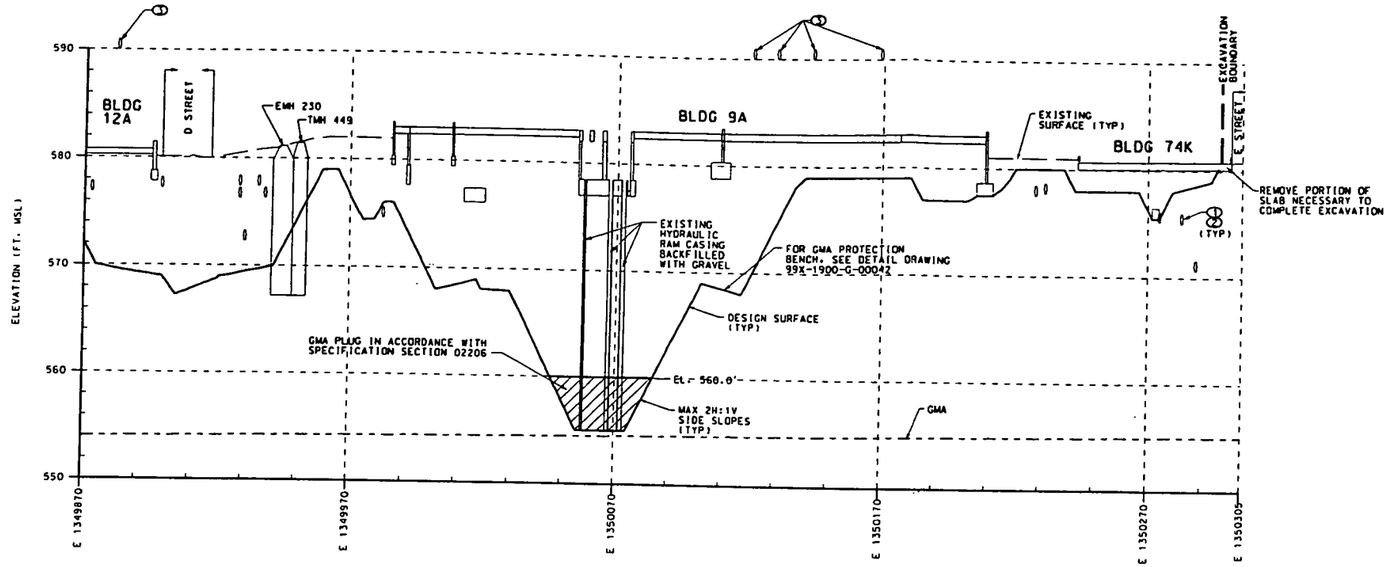
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

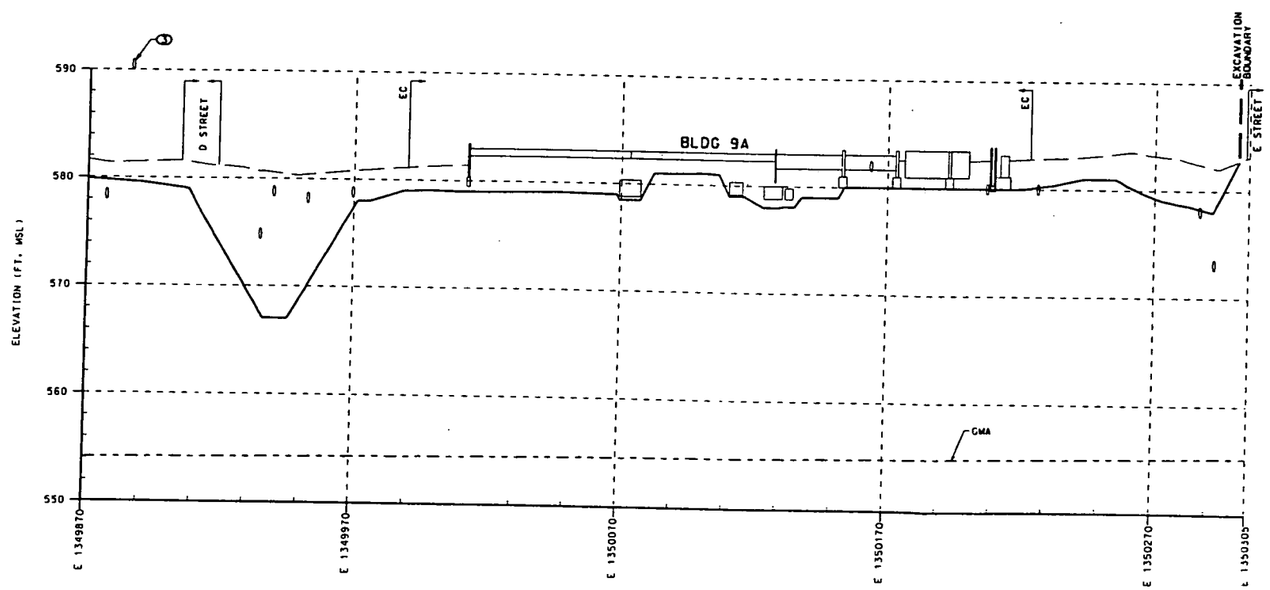
PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
PLANT 9 FOUNDATIONS

DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99
CHECKED BY N. ROBERTS	DATE 20JAN00	PLANT/BLDG. NO. FEMP	FLOOR NONE
SCALE 1"=20'	CLASS U	SUBMITTED FOR 30% ISSUE TECH LEAD NONE	SUBMITTED FOR 60% ISSUE TECH LEAD M. JERALD
SUBMITTED FOR 90% ISSUE TECH LEAD M. JERALD	DATE NONE	DATE 01NOV99	DATE 28JAN00
F.A. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00035	SHEET NO. 31
REV. NO. H			
CET PROJECT NO. 300-008919.01	FILENAME CPKG2039.DGN		

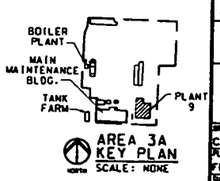


N 480908.0
SECTION 1
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00035



N 481070.0
SECTION 2
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00035

000032



AREA 3A KEY PLAN
SCALE: NONE

SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES. SEE DRAWING 99X-1900-X-00003.
2. FOR TYPICAL BENCH DETAIL. SEE DRAWING 99X-1900-G-00042.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	[illegible]		
E	ISSUED FOR 90% DOE REVIEW	[illegible]		
D	JANUARY 2000 COORDINATION PACKAGE	[illegible]		
C	DECEMBER 1999 COORDINATION PACKAGE	[illegible]		
B	ISSUED FOR 60% REVIEW	[illegible]		
A	OCTOBER 1999 COORDINATION PACKAGE	[illegible]		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

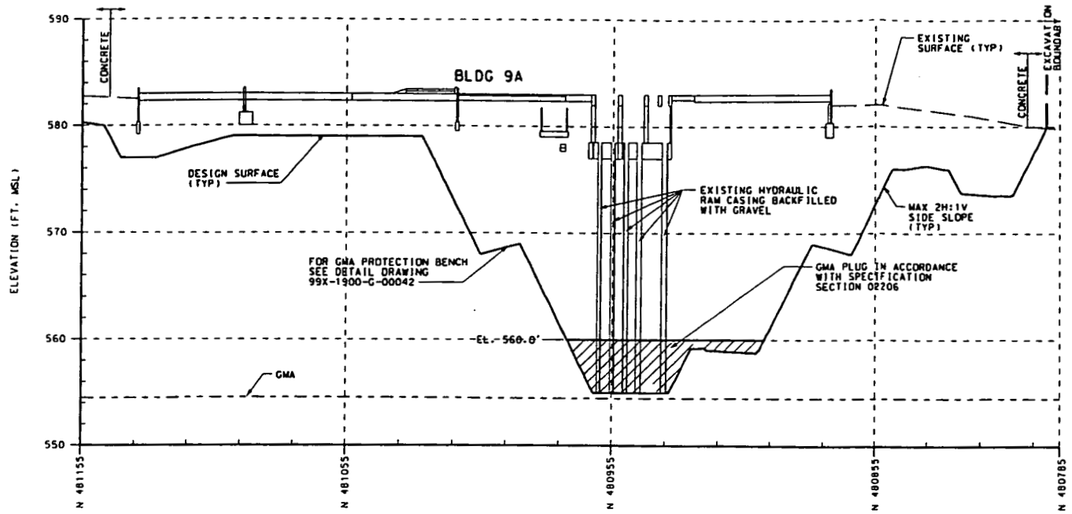
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. I

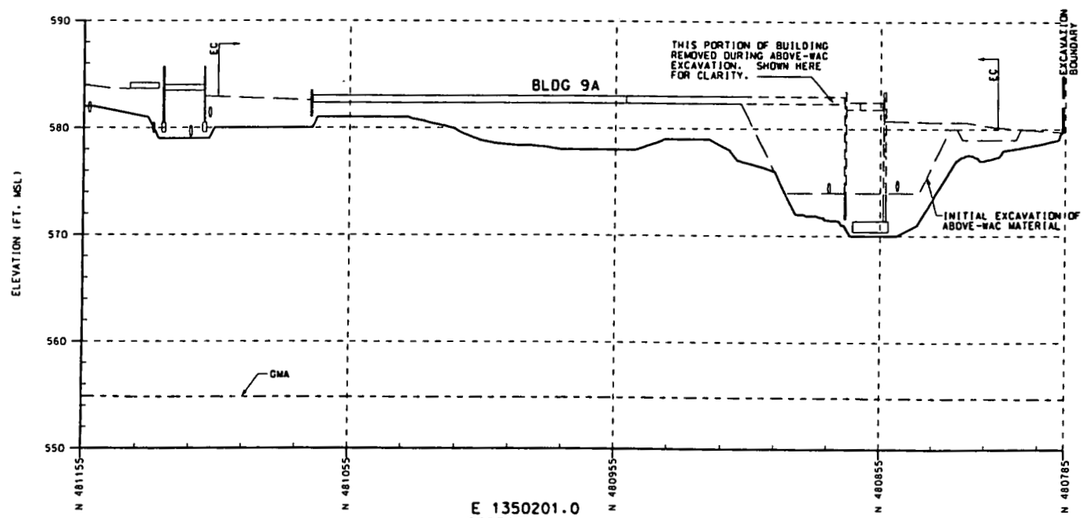
DRAWING TITLE
CROSS SECTIONS
PLANT 9

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	[illegible]	M. JERALD	[illegible]	N. ROBERTS	28JAN00
PLANT/AREA NO.		FLOOR		SCALE	CLASS
FEMP		NONE		AS NOTED	U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD NONE		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

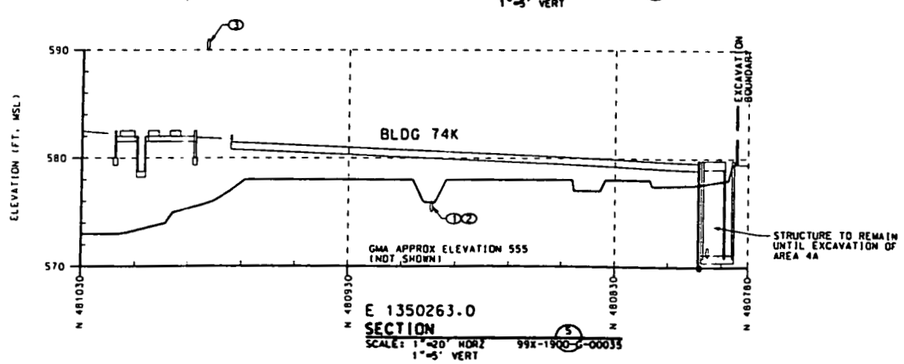
T.A. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00038	32	F
DOE PROJECT NO. 500-008919.01	FILENAME CPKG2042.DGN			



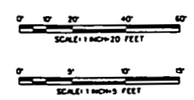
E 1350048.0
SECTION 1
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00035

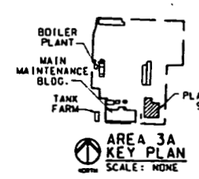


E 1350201.0
SECTION 4
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00035



E 1350263.0
SECTION 5
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00035





AREA 3A KEY PLAN
SCALE: NONE

000033

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. FOR TYPICAL BENCH DETAIL, SEE DRAWING 99X-1900-G-00042.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	5MAR00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

DETAILS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

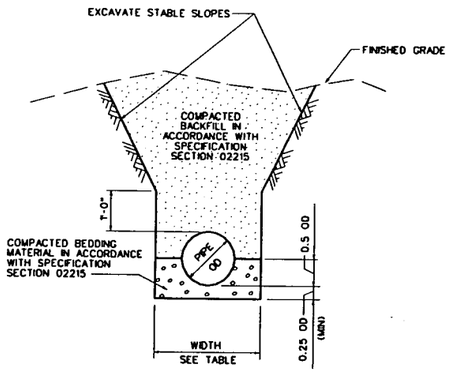
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
CROSS SECTIONS
PLANT 9

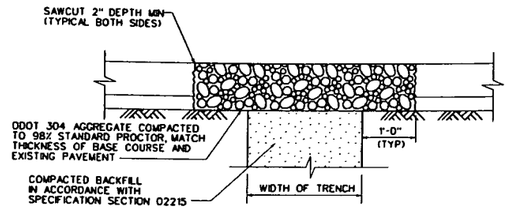
DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	28JAN00	M. JERALD	28JAN00	N. ROBERTS	28JAN00
PLANT/BLDG NO.		FLOOR		SCALE	CLASS
FEMP		NONE		AS NOTED	U
SUBMITTED FOR 30% DATE		SUBMITTED FOR 60% DATE		SUBMITTED FOR 90% DATE	
TECH LEAD NONE		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

F.S. NUMBER	PROJECT NO.	DRAWING CODE NO.	SHEET NO.	REV. NO.
L-010	20800			
LGT PROJECT NO.	FILENAME	99X-1900-G-00039	33	E
300-000919.01	CPKG2043.DGN			

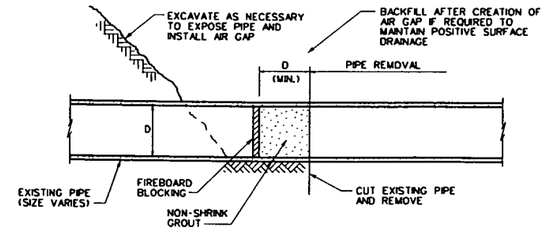


PIPE OD	TRENCH WIDTH
24" & SMALLER	OD + 1'-4"
30" & LARGER	OD + 2'-0"

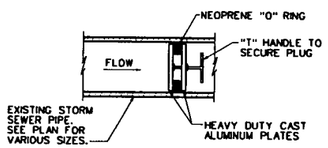
CLASS "B" PIPE BEDDING DETAIL
SCALE: NONE
99X-1900-G-00010



CONCRETE PAVEMENT PATCH DETAIL
SCALE: NONE
99X-1900-G-00010



TYPICAL AIR GAP DETAIL
SCALE: NONE
99X-1900-G-00008
99X-1900-G-00009
99X-1900-G-00010
99X-1900-G-00011



NOTE:
PIPE PLUGS SHALL BE CHERNE ALUMINUM GRIPPER PLUGS OR APPROVED EQUAL.

TYPICAL PIPE PLUG DETAIL
SCALE: NONE
99X-1900-G-00008
99X-1900-G-00009
99X-1900-G-00010
99X-1900-G-00011

GENERAL NOTES

1. PLACE AND COMPACT BEDDING AND BACKFILL MATERIAL FOR PIPES IN ACCORDANCE WITH SPECIFICATION SECTION 02215.

2890

KEYED NOTES

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	31MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

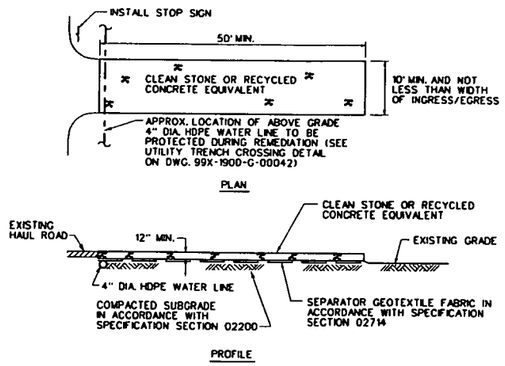
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
CIVIL DETAILS
SHEET 1 OF 3

DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99	CHECKED BY M. RITTER	DATE 05JAN00
PLANT/BLDG NO. TEMP		FLOOR NONE		SCALE NONE	CLASS U
SUBMITTED FOR 30% OBSE TECH LEAD NONE DATE NONE		SUBMITTED FOR 60% OBSE TECH LEAD M. JERALD DATE 01NOV99		SUBMITTED FOR 90% OBSE TECH LEAD M. JERALD DATE 28JAN00	
T.D. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00040		SHEET NO. 34	REV. NO. F
LCI PROJECT NO. 300-008919.01	FILENAME CPKG2044.DGN				

000034

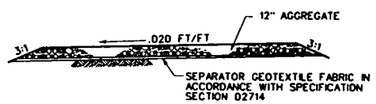
90% ISSUE



NOTES:

1. PROVIDE POSITIVE CROSS DRAINAGE FOR ENTRANCE.
2. SEPARATOR GEOTEXTILE IS TO BE PLACED DIRECTLY ON GROUND WITH MINIMAL GRADING

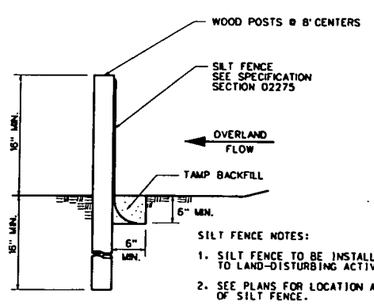
TYPICAL CONSTRUCTION ENTRANCE DETAIL
SCALE: NONE — LOCATION VARIES



NOTE:

1. SEE SPECIFICATION SECTION 02205 FOR SMTA CRITERIA.

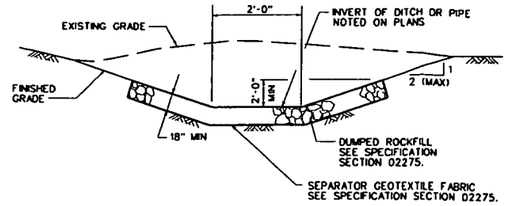
SMTA DETAIL
SCALE: NONE — 99X-1900-G-00008



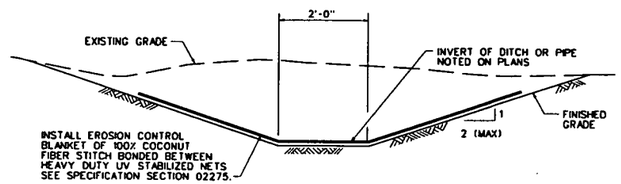
SILT FENCE NOTES:

1. SILT FENCE TO BE INSTALLED PRIOR TO LAND-DISTURBING ACTIVITIES.
2. SEE PLANS FOR LOCATION AND LENGTH OF SILT FENCE.
3. WOOD POSTS SHALL BE 2"X2" MIN. OF OAK OR SIMILAR HARDWOOD.

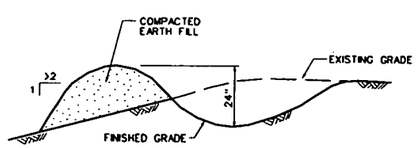
SILT FENCE DETAIL
SCALE: NONE
99X-1900-G-00006
99X-1900-G-00007
99X-1900-G-00008
99X-1900-G-00009
99X-1900-G-00010
99X-1900-G-00011



DUMPED ROCK FILL LINED DITCH DETAIL
SCALE: NONE — 99X-1900-G-00009



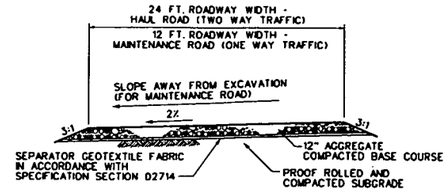
EROSION BLANKET LINED DITCH DETAIL
SCALE: NONE — 99X-1900-G-00008



GENERAL NOTES:

1. INSTALL SILT FENCE ON DOWNGRADIENT SIDE OF DIVERSION PRIOR TO LAND-DISTURBING ACTIVITIES. MAINTAIN SILT FENCE IN ACCORDANCE WITH SPECIFICATION SECTION 02275. UNTIL GRASS HAS BEEN ESTABLISHED ON ENTIRE DIVERSION.
2. SEED AND MULCH ENTIRE DIVERSION SEE SPECIFICATION SECTION 02930.
3. DIVERSION SLOPES SHALL NOT BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
4. COMPACTED EARTH FILL SHALL CONSIST OF SOILS EXCAVATED ON SITE AND PLACED AS NECESSARY TO PROVIDE MINIMUM 24 INCH DITCH DEPTH. EARTH FILL SHALL BE COMPACTED BY 4 PASSES OF COMPACTION EQUIPMENT AS APPROVED BY THE CONSTRUCTION MANAGER.

TEMPORARY DIVERSION DETAIL
SCALE: NONE
99X-1900-G-00006
99X-1900-G-00007
99X-1900-G-00008
99X-1900-G-00009
99X-1900-G-00010
99X-1900-G-00011



NOTE:

1. SEE SPECIFICATION SECTION 02230 FOR ROAD CONSTRUCTION.

TYPICAL HAUL ROAD/ MAINTENANCE ROAD DETAIL
SCALE: NONE — 99X-1900-G-00044

000035

90% ISSUE

GENERAL NOTES

2890

KEYED NOTES

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	3JAN00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

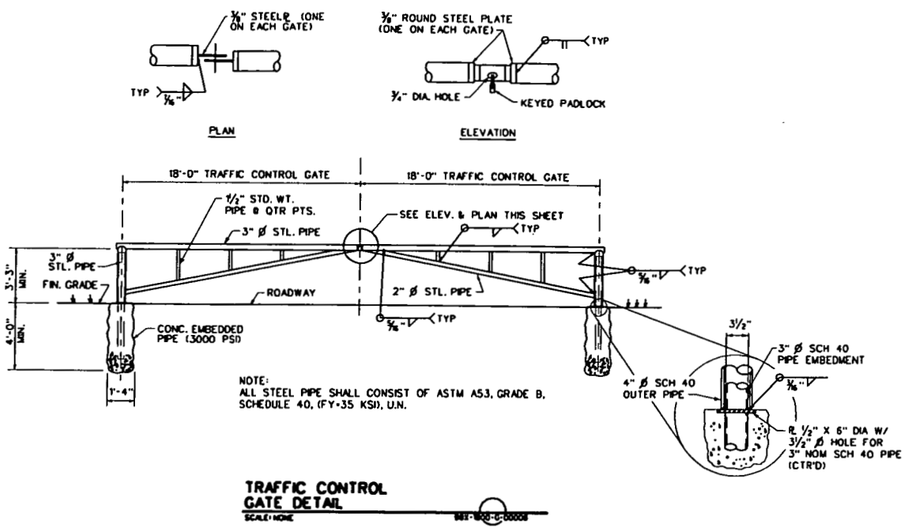
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

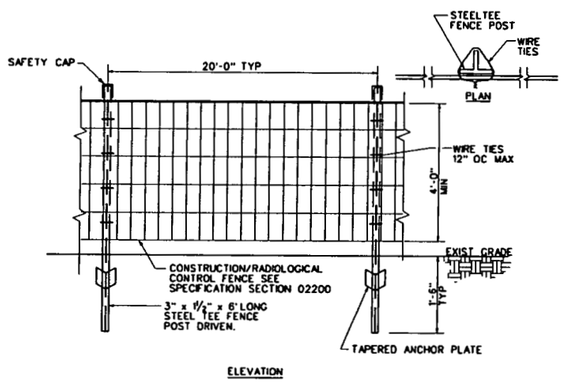
DRAWING TITLE
CIVIL DETAILS
SHEET 2 OF 3

DRAWN BY C. COX	DATE 25JUL99	TECHNICAL LEAD M. JERALD	DATE 25JUL99	CHECKED BY M. RITTER	DATE 05JAN00
PLANT/AREA NO. STEMP		FLOOR NONE		SCALE NONE	CLASS U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD NONE		TECH LEAD M. JERALD		TECH LEAD M. JERALD	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

I.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800			
LEX PROJECT NO. 300-008919.01	FILENAME CPKG2045.DGN	99X-1900-G-00041	35	F

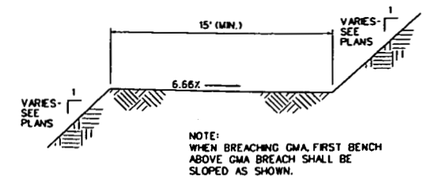


TRAFFIC CONTROL GATE DETAIL
SCALE: NONE



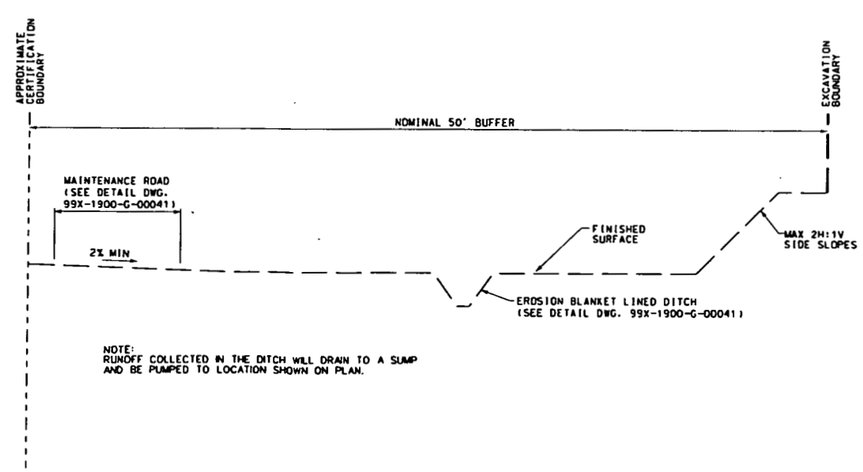
NOTE:
INSTALL SAFETY CAPS ON T-POSTS THAT PROTRUDE BEYOND THE SURFACE OF THE GROUND LESS THAN 4 FEET.

CONSTRUCTION/RADIOLOGICAL CONTROL FENCE DETAIL
SCALE: NONE



NOTE:
WHEN BREACHING GMA, FIRST BENCH ABOVE GMA BREACH SHALL BE SLOPED AS SHOWN.

GMA PROTECTION BENCH DETAIL
SCALE: NONE



NOTE:
RUNOFF COLLECTED IN THE DITCH WILL DRAIN TO A SUMP AND BE PUMPED TO LOCATION SHOWN ON PLAN.

PRECERTIFICATION BUFFER AREA DETAIL
SCALE: NONE

000036

90% ISSUE

GENERAL NOTES

2890

KEYED NOTES

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	5MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	15OCT99		

INITIALS AND DATE

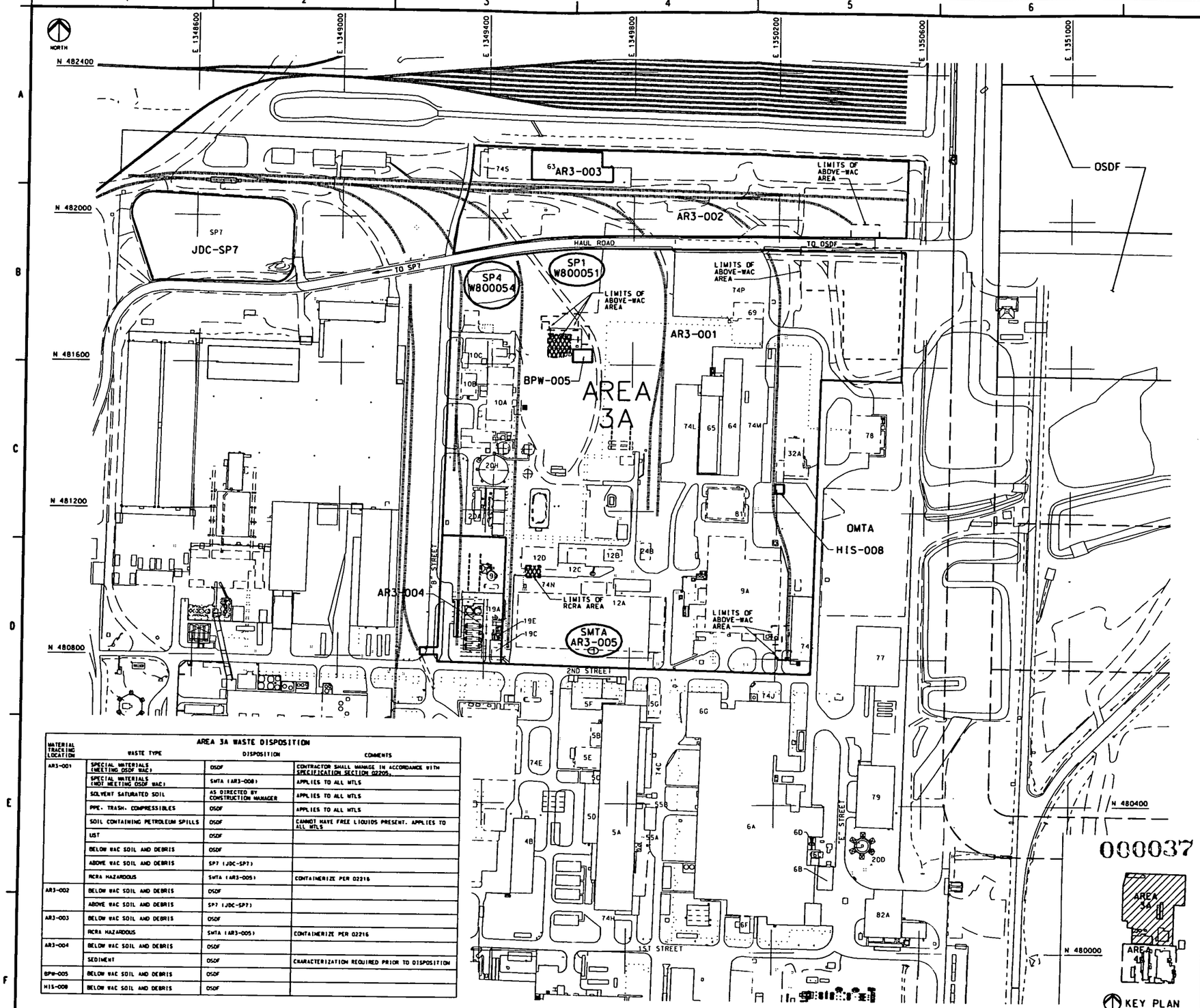
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. I

DRAWING TITLE
CIVIL DETAILS
SHEET 3 OF 3

DRAWN BY C. COX	DATE 28JUL99	TECHNICAL LEAD M. JERALD	DATE 28JUL99
CHECKED BY M. RITTER	DATE 05JAN00	PLANT/BLDG. NO. TEMP	FLOOR NONE
SCALE NONE	CLASS U	SUBMITTED FOR 30% ISSUE	SUBMITTED FOR 60% ISSUE
SUBMITTED FOR 90% ISSUE		TECH LEAD NONE	TECH LEAD M. JERALD
TECH LEAD M. JERALD		DATE NONE	DATE 01NOV99
DATE 28JAN00		T.O. NUMBER L-010	PROJECT NO. 20800
DRAWING INDEX CODE NO. 99X-1900-G-00042	SHEET NO. 36	REV. NO. F	
LST PROJECT NO. 300-003919.01	FILENAME CPKG2046.DGN		



MATERIAL TRACKING PLAN
SCALE: 1"=100'

0' 50' 100' 200' 300'
SCALE: 1 INCH=100 FEET

AREA 3A WASTE DISPOSITION

MATERIAL TRACKING LOCATION	WASTE TYPE	DISPOSITION	COMMENTS
AR3-001	SPECIAL MATERIALS (MEETING OSDF WAC)	OSDF	CONTRACTOR SHALL MANAGE IN ACCORDANCE WITH SPECIFICATION SECTION 02205.
	SPECIAL MATERIALS (NOT MEETING OSDF WAC)	SMTA (AR3-008)	APPLIES TO ALL MTLS
	SOLVENT SATURATED SOIL	AS DIRECTED BY CONSTRUCTION MANAGER	APPLIES TO ALL MTLS
	PPE, TRASH, COMPRESSIBLES	OSDF	APPLIES TO ALL MTLS
	SOIL CONTAINING PETROLEUM SPILLS	OSDF	CANNOT HAVE FREE LIQUIDS PRESENT. APPLIES TO ALL MTLS
	UST	OSDF	
	BELOW WAC SOIL AND DEBRIS	OSDF	
	ABOVE WAC SOIL AND DEBRIS	SP7 (JDC-SP7)	
	RCRA HAZARDOUS	SMTA (AR3-005)	CONTAINERIZE PER 02216
AR3-002	BELOW WAC SOIL AND DEBRIS	OSDF	
	ABOVE WAC SOIL AND DEBRIS	SP7 (JDC-SP7)	
AR3-003	BELOW WAC SOIL AND DEBRIS	OSDF	
	RCRA HAZARDOUS	SMTA (AR3-005)	CONTAINERIZE PER 02216
AR3-004	BELOW WAC SOIL AND DEBRIS	OSDF	
	SEDIMENT	OSDF	CHARACTERIZATION REQUIRED PRIOR TO DISPOSITION
BPW-005	BELOW WAC SOIL AND DEBRIS	OSDF	
HIS-008	BELOW WAC SOIL AND DEBRIS	OSDF	

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. THIS DRAWING PRESENTS THE SOURCE MATERIAL TRACKING LOCATIONS (MTL'S) OF THE MATERIALS EXCAVATED, STOCK-PILED, REUSED OR TRANSPORTED TO THE OSDF, SP7, AND SMTA. THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION MANAGER WITH THE QUANTITY, MATERIAL TYPE, SOURCE LOCATION (MTL), AND DESTINATION LOCATION (MTL) OF ALL MATERIALS MOVED BETWEEN MTL'S DAILY. NO TRACKING IS REQUIRED FOR MATERIALS MOVED WITHIN A MTL.
3. MATERIALS TRANSPORTED TO THE OSDF, SP7, AND SMTA WILL BE TRACKED BY THE CONSTRUCTION MANAGER.

2890

KEYED NOTES

(1) THE SMTA LOCATION SHALL BE PROPOSED IN THE CONTRACTOR'S EXCAVATION WORK PLAN. BUILDING 12A CONCRETE PAD MAY BE UTILIZED FOR THIS PURPOSE.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	5JAN00		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
A	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		

MTHLS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

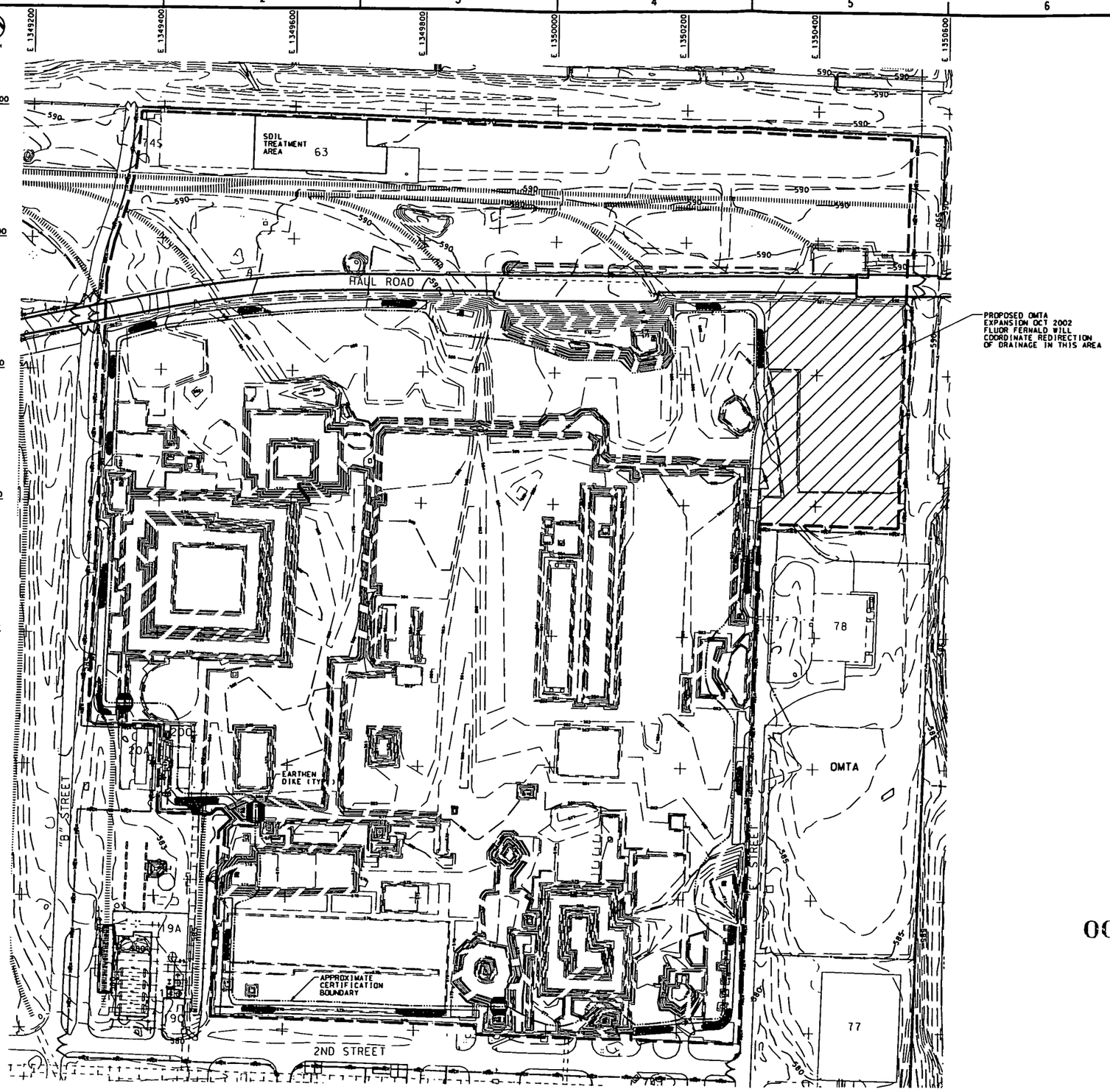
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
MATERIAL TRACKING PLAN

DRAWN BY C. COX	DATE 8DEC99	TECHNICAL LEAD J. ALCORN	DATE 8DEC99	CHECKED BY D. MORGAN	DATE 28JAN00
PLANT/BLDG. NO. TEMP		FLOOR NONE		SCALE 1"=100'	CLASS U
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 60% ISSUE		SUBMITTED FOR 90% ISSUE	
TECH LEAD NONE		TECH LEAD NONE		TECH LEAD W.W. CLARK	
DATE NONE		DATE NONE		DATE 28JAN00	
F.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO.		SHEET NO.	REV. NO.
ICT PROJECT NO. 300-008919.01	FILENAME CPKG2049.DGN	99X-1900-G-00043		37	D

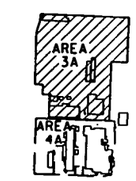
90% ISSUE



PRECERTIFICATION CONFIGURATION AREA 3A
SCALE: 1"=60'

0' 20'40'60' 120' 180'
SCALE: 1 INCH=60 FEET

000038



KEY PLAN
NORTH SCALE: NONE

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00003.
2. FOR PRECERTIFICATION BUFFER AREA DETAIL, SEE DRAWING 99X-1900-G-00042.
3. EARTHEN DIKE CONSTRUCTION AS NECESSARY SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
4. PROVIDE ROADS TO ACCESS ALL PUMP LOCATIONS. ROUTING FOR ROADS WILL BE DETERMINED BY FINAL EXCAVATION AND CONTRACTOR'S APPROVED SWMP.
5. DRAINAGE FROM ALL PUMP LOCATIONS WITHIN THE PRECERTIFICATION BUFFER AREA SHALL BE PUMPED TO THE SETTLING BASIN. DRAINAGE FROM THE CERTIFIED AREAS OUTSIDE THE PRECERTIFICATION BUFFER AREA SHALL BE PUMPED TO PADDY'S RUN.

KEYED NOTES

2890

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	[illegible]		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	[illegible]		
A	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

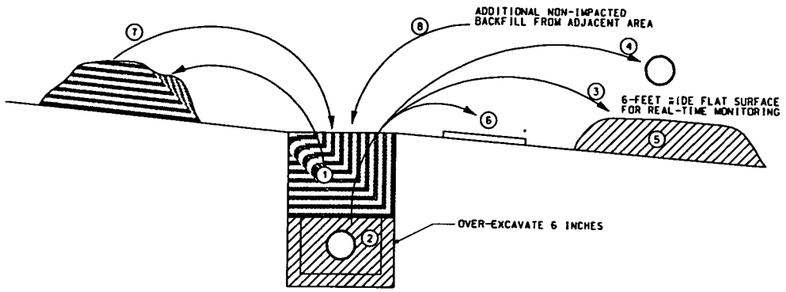
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
PRECERTIFICATION CONFIGURATION
AREA 3A

DRAWN BY C. COX	DATE 08DEC99	TECHNICAL LEAD J. ALCORN	DATE 08DEC99	CHECKED BY W. W. CLARK	DATE 28JAN00
PLANT/BLDG. NO.		FLOOR NONE		SCALE 1"=60'	CLASS U
FEMP					
Submitted for Use Date		Submitted for Use Date		Submitted for Use Date	
TECH LEAD NONE		TECH LEAD NONE		TECH LEAD N. ROBERTS	
DATE NONE		DATE NONE		DATE 28JAN00	

F.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00044	SHEET NO. 38	REV. NO. D
LGI PROJECT NO. 300-008919.01	FILENAME CPKG2059.DGN			



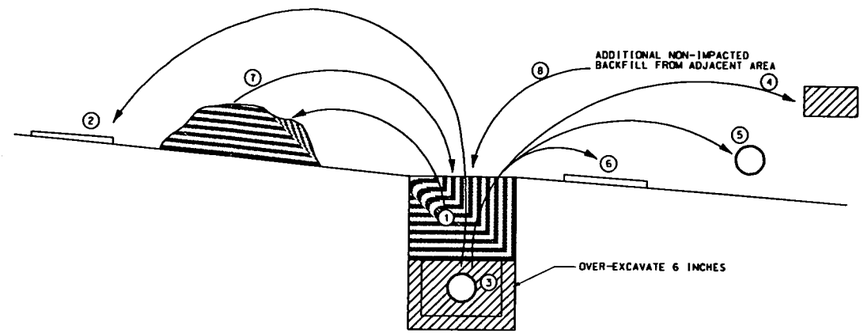
1. TRENCH OVERBURDEN SOIL FROM ABOVE THE PIPE* AND PIPE BEDDING AND TEMPORARILY STOCKPILE OVERBURDEN SOIL ADJACENT TO, AND UPGRADIENT OF, THE UTILITY TRENCH. REMAINING SOIL IN THE TRENCH SHALL BE CONSIDERED PIPE BEDDING.
2. EXCAVATE PIPE AND PIPE BEDDING, PLUS OVER-EXCAVATE 6 INCHES ADJACENT TO AND BELOW THE PIPE TO ENSURE REMOVAL OF IMPACTED MATERIAL.
3. TEMPORARILY STOCKPILE PIPE BEDDING ADJACENT TO, AND DOWN-GRADIENT OF, THE UTILITY TRENCH. STOCKPILED MATERIAL SHALL HAVE A 6-FEET WIDE FLAT SURFACE FOR REALTIME MONITORING BY THE CONSTRUCTION MANAGER.
4. THE CONSTRUCTION MANAGER VISUALLY INSPECTS PIPE DURING EXCAVATION. PIPE FREE OF VISIBLE PROCESS RESIDUE SHALL BE DISPOSITIONED IN THE DSDF IN ACCORDANCE WITH SECTION 02205. PIPE THAT CANNOT BE CLEANED OF VISIBLE PROCESS RESIDUE SHALL BE DISPOSITIONED IN SP7 IN ACCORDANCE WITH SECTION 02205.
5. THE CONSTRUCTION MANAGER PERFORMS PHYSICAL SAMPLING OF STOCKPILED PIPE BEDDING FOR WAC ATTAINMENT AND DIRECTS THE CONTRACTOR TO DISPOSITION THE MATERIAL IN EITHER THE DSDF OR SP7, PENDING SAMPLE RESULTS. OVER-EXCAVATE THE STOCKPILE FOOTPRINT 6 INCHES TO ENSURE REMOVAL OF IMPACTED MATERIAL.
6. AT 50-FEET INTERVALS, EXCAVATE A BUCKET-LOAD FROM THE TRENCH BOTTOM AND PLACE IT ADJACENT TO, AND DOWNGRADIENT OF, THE TRENCH. FLATTEN THIS MATERIAL TO CREATE 6-INCH MINIMUM THICKNESS PADS FOR REAL-TIME MONITORING AND PHYSICAL SAMPLING BY THE CONSTRUCTION MANAGER. POSITION PADS UPGRADIENT OF STOCKPILED PIPE BEDDING.
7. UPON COMPLETION OF REAL-TIME MONITORING AND PHYSICAL SAMPLING OF SOIL PADS, BACKFILL THE TRENCH WITH OVER-BURDEN SOIL AND COMPACT IN ACCORDANCE WITH SECTION 02206.
8. BACKFILL ADDITIONAL NON-IMPACTED SOIL FROM THE IMMEDIATE PRE-CERTIFIED AREA AND COMPACT IN ACCORDANCE WITH SECTION 02206 AS NEEDED TO MEET SURROUNDING GRADE.

NOTE:

1. AS DIRECTED BY THE CONSTRUCTION MANAGER, PENDING SOIL PAD PHYSICAL SAMPLING RESULTS, RE-EXCAVATE AT TRENCH LOCATIONS DESIGNATED BY THE CONSTRUCTION MANAGER TO REMOVE ADDITIONAL IMPACTED MATERIAL. THE CONSTRUCTION MANAGER CERTIFIES THE BACKFILLED TRENCH AND SURROUNDING AREA.

* THE TERM "PIPE" IS USED AS A GENERIC REFERENCE TO UNDERGROUND UTILITIES.

METHOD 1
TRENCHING FOR PROCESS PIPING BELOW THE DESIGN SURFACE



1. TRENCH PRECERTIFIED OVERBURDEN SOIL FROM ABOVE THE PIPE* AND PIPE BEDDING AND TEMPORARILY STOCKPILE IT ADJACENT TO AND UPGRADIENT OF, THE UTILITY TRENCH. REMAINING SOIL IN THE TRENCH SHALL BE CONSIDERED PIPE BEDDING.
2. EXCAVATE AN INITIAL BUCKET-LOAD OF PIPE BEDDING AND PLACE IT ADJACENT TO THE TRENCH IN A 6-INCH MINIMUM THICKNESS PAD FOR REAL-TIME MONITORING BY THE CONSTRUCTION MANAGER FOR WAC.
3. EXCAVATE PIPE BEDDING AND PIPE, PLUS OVER-EXCAVATE 6 INCHES ADJACENT TO AND BELOW THE PIPE TO ENSURE REMOVAL OF IMPACTED MATERIAL.
4. THE CONSTRUCTION MANAGER VISUALLY MONITORS EXCAVATION OF PIPE BEDDING. DISPOSITION NON-PROCESS PIPE BEDDING IN THE DSDF IN ACCORDANCE WITH SECTION 02205 UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
5. THE CONSTRUCTION MANAGER VISUALLY INSPECTS PIPE DURING EXCAVATION. DISPOSITION NON-PROCESS PIPE BEDDING IN THE DSDF IN ACCORDANCE WITH SECTION 02205 UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
6. AT 50-FEET INTERVALS, EXCAVATE A BUCKET-LOAD FROM THE TRENCH BOTTOM AND PLACE IT ADJACENT TO THE TRENCH IN 6-INCH MINIMUM THICKNESS PADS FOR REAL-TIME MONITORING AND PHYSICAL SAMPLING BY THE CONSTRUCTION MANAGER.
7. UPON COMPLETION OF REAL-TIME MONITORING AND PHYSICAL SAMPLING OF SOIL PADS, BACKFILL THE TRENCH WITH OVER-BURDEN SOIL AND COMPACT IN ACCORDANCE WITH SECTION 02206.
8. BACKFILL ADDITIONAL NON-IMPACTED SOIL FROM THE IMMEDIATE PRE-CERTIFIED AREA AND COMPACT IN ACCORDANCE WITH SECTION 02206 AS NEEDED TO MEET SURROUNDING GRADE.

NOTE:

1. AS DIRECTED BY THE CONSTRUCTION MANAGER, PENDING SOIL PAD PHYSICAL SAMPLING RESULTS, RE-EXCAVATE AT TRENCH LOCATIONS DESIGNATED BY THE CONSTRUCTION MANAGER TO REMOVE ADDITIONAL IMPACTED MATERIAL. THE CONSTRUCTION MANAGER CERTIFIES THE BACKFILLED TRENCH AND SURROUNDING AREA.

* THE TERM "PIPE" IS USED AS A GENERIC REFERENCE TO UNDERGROUND UTILITIES.

METHOD 2
TRENCHING NON-PROCESS PIPING BELOW THE DESIGN SURFACE

000039

90% ISSUE

GENERAL NOTES

1. ALL UNDERGROUND UTILITY PIPING LOCATIONS ARE SHOWN ON THE GRADING PLAN DRAWINGS 99X-1099-G-00018 THRU 99X-1900-G-00021. LEGEND SYMBOLS DIFFERENTIATE BETWEEN UTILITIES REMOVED DURING GRADING AND UTILITIES BEYOND DESIGN SURFACE TO BE REMOVED BY TRENCHING.
2. PROCESS PIPES ARE DESIGNATED AS CE, FT, SL, AND SW LINES ON GRADING DRAWINGS (SEE DRAWING NUMBERS IN NOTE 1) OR MAY BE DESIGNATED IN THE FIELD BY THE CONSTRUCTION MANAGER.

KEYED NOTES

2890

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	28JAN00		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	14JAN00		
A	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.1

DRAWING TITLE
UTILITY REMOVAL METHODS

DRAWN BY C. COX	DATE 07DEC99	TECHNICAL LEAD J. ALCORN	DATE 07DEC99	CHECKED BY D. MORGAN	DATE 28JAN00
PLANT/BLDG NO. SFEMP		FLOOR NONE		SCALE NONE	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD NONE		SUBMITTED FOR 60% ISSUE TECH LEAD NONE		SUBMITTED FOR 90% ISSUE TECH LEAD W.W. CLARK	
DATE NONE		DATE NONE		DATE 28JAN00	

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20300	99X-1900-G-00045	39	D
LIST PROJECT NO. 300-008919.01	FILENAME CPKG2080.DGN			

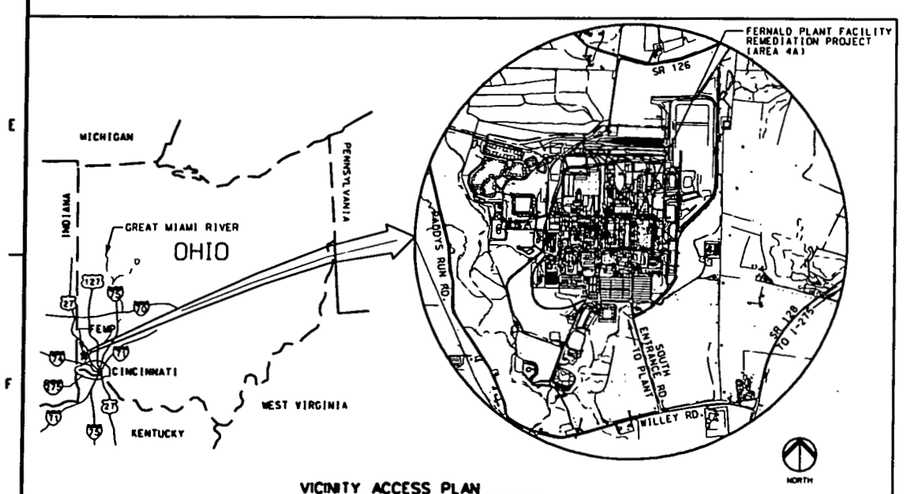
2890

FLUOR FERNALD

UNITED STATES DEPARTMENT OF ENERGY

Fernald Environmental Management Project

SOIL AND DISPOSAL FACILITY PROJECT REMEDIATION OF AREAS 3A AND 4A PACKAGE II - AREA 4A EXCAVATION



VICINITY ACCESS PLAN
SCALE: NONE

Construction Contract
No. FSC 642
Task Order No. L-010
FLUOR Fernald
Project No. 20800

000040

90% ISSUE

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	28JAN00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
COVER SHEET

DRAWN BY C. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99	CHECKED BY M. RITTER	DATE 05JAN00
PLANT/BLDG. NO. FEMP		FLUOR NONE		SCALE NONE	CLASS U
SUBMITTED FOR 30% REVIEW TECH LEAD J. ALCORN DATE 13AUG99		SUBMITTED FOR 60% REVIEW TECH LEAD J. ALCORN DATE 01NOV99		SUBMITTED FOR 90% REVIEW TECH LEAD J. ALCORN DATE 28JAN00	
F/B NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-X-00055		SHEET NO. 1	REV. NO. 1
LGI PROJECT NO. 300-008919.01	FILENAME CPKG3001.DGN				

PROJECT DRAWING INDEX

SHEET NO.	DRAWING NO.	REV.	DRAWING TITLE
1	99X-1900-X-00055	I	COVER SHEET
2	99X-1900-X-00056	I	DRAWING INDEX
3	99X-1900-X-00057	I	LEGEND AND GENERAL NOTES
4	99X-1900-G-00058	I	MASTER PLAN
5	99X-1900-G-00059	I	EXISTING CONDITIONS AREA 4A
6	99X-1900-G-00060	I	SITE LAYOUT PLAN AREA 4A
7	99X-1900-G-00061	I	TRAFFIC FLOW
8	99X-1900-G-00062	I	DRAINAGE PLAN (NW) AREA 4A
9	99X-1900-G-00063	I	DRAINAGE PLAN (NE) AREA 4A
10	99X-1900-G-00064	I	DRAINAGE PLAN (SW) AREA 4A
11	99X-1900-G-00065	I	DRAINAGE PLAN (SE) AREA 4A
12	99X-1900-X-00068	F	UTILITY ISOLATION PLAN AREA 4A
13	99X-1900-G-00071	F	ABOVE-WAC DETAILS
14	99X-1900-G-00072	I	GRADING PLAN (NW) AREA 4A
15	99X-1900-G-00073	I	GRADING PLAN (NE) AREA 4A
16	99X-1900-G-00074	I	GRADING PLAN (SW) AREA 4A
17	99X-1900-G-00075	I	GRADING PLAN (SE) AREA 4A
18	99X-1900-G-00076	F	CROSS SECTIONS AREA 4A SHEET 1 OF 4
19	99X-1900-G-00077	F	CROSS SECTIONS AREA 4A SHEET 2 OF 4
20	99X-1900-G-00078	D	CROSS SECTIONS AREA 4A SHEET 3 OF 4
21	99X-1900-G-00079	D	CROSS SECTIONS AREA 4A SHEET 4 OF 4
22	99X-1900-G-00080	H	PLANT 4 FOUNDATIONS
23	99X-1900-G-00082	F	CROSS SECTIONS PLANT 4
24	99X-1900-G-00083	E	CROSS SECTIONS PLANT 4
25	99X-1900-G-00084	H	PLANT 7 FOUNDATIONS
26	99X-1900-G-00086	F	CROSS SECTIONS PLANT 7
27	99X-1900-G-00087	E	CROSS SECTIONS PLANT 7
28	99X-1900-G-00088	H	PLANT 5 NORTH FOUNDATIONS
29	99X-1900-G-00089	H	PLANT 5 SOUTH FOUNDATIONS
30	99X-1900-G-00092	F	CROSS SECTIONS PLANT 5
31	99X-1900-G-00093	F	CROSS SECTIONS PLANT 5
32	99X-1900-G-00094	E	CROSS SECTIONS PLANT 5
33	99X-1900-G-00095	E	CROSS SECTIONS PLANT 5
34	99X-1900-G-00096	H	PLANT 6 NORTH FOUNDATIONS
35	99X-1900-G-00097	H	PLANT 6 SOUTH FOUNDATIONS
36	99X-1900-G-00100	F	CROSS SECTIONS PLANT 6
37	99X-1900-G-00101	F	CROSS SECTIONS PLANT 6
38	99X-1900-G-00102	E	CROSS SECTIONS PLANT 6
39	99X-1900-G-00103	E	CROSS SECTIONS PLANT 6
40	99X-1900-G-00104	E	CIVIL DETAILS SHEET 1 OF 2
41	99X-1900-G-00110	B	CIVIL DETAILS SHEET 2 OF 2
42	99X-1900-G-00105	D	MATERIAL TRACKING PLAN
43	99X-1900-G-00106	D	PRECERTIFICATION CONFIGURATION AREA 4A
44	99X-1900-G-00107	D	UTILITY REMOVAL METHODS

① UTILITY GRID REFERENCE DRAWING INDEX

DRAWING NO.	DRAWING TITLE
22X-5500-P-00659	MASTER GRID OF UNDERGROUND UTILITY PLANS
22C-5500-P-00662	GRID 3 UNDERGROUND UTILITIES
22F-5500-P-00663	GRID 4 UNDERGROUND UTILITIES
22F-5500-P-00665	GRID 6 UNDERGROUND UTILITIES
22H-5500-P-00666	GRID 7 UNDERGROUND UTILITIES
22C-5500-P-00670	GRID 11 UNDERGROUND UTILITIES
22E-5500-P-00671	GRID 12 UNDERGROUND UTILITIES
22E-5500-P-00672	GRID 13 UNDERGROUND UTILITIES
22H-5500-P-00673	GRID 14 UNDERGROUND UTILITIES
22B-5500-P-00677	GRID 18 UNDERGROUND UTILITIES
22D-5500-P-00678	GRID 19 UNDERGROUND UTILITIES
22D-5500-P-00679	GRID 20 UNDERGROUND UTILITIES
00X-5500-G-01846	MASTER FEMP GPS BENCHMARK LOCATION PLAN

① BUILDING FOUNDATIONS REFERENCE DRAWING INDEX

DRAWING NO.	REV.	DRAWING TITLE
04J-5900-S-02530	0	BUILDING 4B FOUNDATION PLAN
04J-5900-S-02531	0	BUILDING 4B SLAB PLAN
04K-5900-S-02532	0	BUILDING 4C FOUNDATION & SLAB PLAN
04X-5900-S-02528	0	PLANT 4A FOUNDATION PLAN
04X-5900-S-02529	0	PLANT 4A SLAB PLAN
05X-5500-S-04935	0	PLANT 5 FOUNDATION/FOOTER PLAN
05X-5500-S-04936	0	PLANT 5 FOUNDATION/FOOTER PLAN
05X-5500-S-04934	0	PLANT 5 FOUNDATION/SLAB PLAN
06X-5900-S-08264	0	PLANT 6 - NORTHEAST QUADRANT FOUNDATION PLAN
06X-5900-S-08265	0	PLANT 6 - CENTRALEAST QUADRANT FOUNDATION PLAN
06X-5900-S-08266	0	PLANT 6 - SOUTHEAST QUADRANT FOUNDATION PLAN
06X-5900-S-08267	0	PLANT 6 - NORTHWEST QUADRANT FOUNDATION PLAN
06X-5900-S-08268	0	PLANT 6 - CENTRALWEST QUADRANT FOUNDATION PLAN
06X-5900-S-08269	0	PLANT 6 - SOUTHWEST QUADRANT FOUNDATION PLAN
06X-5900-S-08270	0	PLANT 6 - NORTHEAST QUADRANT SLAB PLAN
06X-5900-S-08271	0	PLANT 6 - CENTRALEAST QUADRANT SLAB PLAN
06X-5900-S-08272	0	PLANT 6 - SOUTHEAST QUADRANT SLAB PLAN
06X-5900-S-08273	0	PLANT 6 - NORTHWEST QUADRANT SLAB PLAN
06X-5900-S-08274	0	PLANT 6 - CENTRALWEST QUADRANT SLAB PLAN
06X-5900-S-08275	0	PLANT 6 - SOUTHWEST QUADRANT SLAB PLAN
06X-5900-S-08279	0	PLANT 6 - NORTHEAST QUADRANT MASTER REFERENCE DRAWING LIST
06X-5900-S-08280	0	PLANT 6 - CENTRALEAST QUADRANT MASTER REFERENCE DRAWING LIST
06X-5900-S-08281	0	PLANT 6 - SOUTHEAST QUADRANT MASTER REFERENCE DRAWING LIST
06X-5900-S-08282	0	PLANT 6 - NORTHWEST QUADRANT MASTER REFERENCE DRAWING LIST
06X-5900-S-08283	0	PLANT 6 - CENTRALWEST QUADRANT MASTER REFERENCE DRAWING LIST
06X-5900-S-08284	0	PLANT 6 - SOUTHWEST QUADRANT MASTER REFERENCE DRAWING LIST
07X-5900-S-00484	0	PLANT 7A FOUNDATION PLAN
07X-5900-S-00485	0	PLANT 7A SLAB PLAN
07X-5900-S-00486	0	PLANT 7A BRIDGE CRANE FOUNDATION AND SLAB PLAN
05E-T000-M-00139	3	PLANT 5 - METALS PLANT - REMELT AREA: INSTALLATION OF FURNACE RAMS: SHEET NO. 1
05E-T000-M-00140	1	PLANT 5 - METALS PLANT - REMELT AREA: INSTALLATION OF FURNACE RAMS: SHEET NO. 2
05E-1450-S-00005	1	PLANT 5 - TRENCH FOR HYDRAULIC LIFTS - REMELT AREA: METALS PLANT

① PARSONS 3D FOUNDATION SKETCHES INDEX

SKETCH NO.	REV.	DRAWING TITLE
SK4B-1	0	BUILDING 4B FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK4B-2	0	BUILDING 4B FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK4C-1	0	BUILDING 4C FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK4C-2	0	BUILDING 4C FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK4A-1	0	PLANT 4A FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK4A-2	0	PLANT 4A FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK6ONE-1	0	PLANT 6 - NORTHEAST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK6ONE-2	0	PLANT 6 - NORTHEAST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK6OCE-1	0	PLANT 6 - CENTRALEAST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK6OCE-2	0	PLANT 6 - CENTRALEAST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK6OSE-1	0	PLANT 6 - SOUTHEAST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK6OSE-2	0	PLANT 6 - SOUTHEAST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK6ONW-1	0	PLANT 6 - NORTHWEST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK6ONW-2	0	PLANT 6 - NORTHWEST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK6ONW-3	0	PLANT 6 - NORTHWEST QUADRANT FOUNDATION ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK6OCW-1	0	PLANT 6 - CENTRALWEST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK6OCW-2	0	PLANT 6 - CENTRALWEST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK6OCW-3	0	PLANT 6 - CENTRALWEST QUADRANT FOUNDATION ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK6OSW-1	0	PLANT 6 - SOUTHWEST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK6OSW-2	0	PLANT 6 - SOUTHWEST QUADRANT FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK6OSW-3	0	PLANT 6 - SOUTHWEST QUADRANT FOUNDATION ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK5O5-1	0	PLANT 5 FOUNDATION/FOOTER PLAN
SK7A-1	0	PLANT 7A FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK7A-2	0	PLANT 7A FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES
SK7YD-1	0	PLANT 7A BRIDGE CRANE FOUNDATION AND SLAB ISOMETRIC VIEW WITHOUT HIDDEN LINES
SK7YD-2	0	PLANT 7A BRIDGE CRANE FOUNDATION AND SLAB ISOMETRIC VIEW WITH HIDDEN LINES

000041

90% ISSUE

GENERAL NOTES

1. DESIGN BASED ON CURRENT REVISION OF UTILITY GRID DRAWINGS AT LGT ISSUE DATE.
2. CONTRACTOR SHALL REFER TO CURRENT UTILITY GRID DRAWINGS AT TIME OF EXCAVATION.

2890

KEYED NOTES

① REFERENCE DRAWINGS ARE NOT INCLUDED IN THIS PACKAGE. THE REFERENCE DRAWINGS WILL BE PROVIDED SEPARATELY TO THE CONTRACTOR BY FLUOR FERNALD.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	13AUG99		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	14JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	09NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
DRAWING INDEX

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
G. THURMAN	28JUL99	J. ALCORN	28JUL99	W.W. CLARK	25JAN00

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
FEMP	NONE	NONE	U

SUBMITTED FOR 30% REVIEW	SUBMITTED FOR 60% REVIEW	SUBMITTED FOR 90% REVIEW
TECH LEAD J. ALCORN	TECH LEAD J. ALCORN	TECH LEAD J. ALCORN
DATE 13AUG99	DATE 09NOV99	DATE 28JAN00

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-X-00056	2	I

LGT PROJECT NO. 300-008919.01 FILENAME CPKG3002.DGN

2890

SYMBOLS LEGEND

EXISTING		PROPOSED
●	MANHOLE	N/A
⊙	CATCH BASIN	○
—▶—	STORM SEWER	N/A
— - —	ABOVE-GRADE WATERLINE	N/A
Ø°	ELECTRIC POLE	N/A
	ELECTRIC MANHOLE	N/A
N/A	TEMPORARY DIVERSION W/ SILT FENCE	
	GRAVEL ROADWAY	N/A
	PAVED ROADWAY	N/A
	BUILDING SLAB / CONCRETE PAD / TRAILER	N/A
	CHAIN LINK FENCE	N/A
	TRAFFIC GATE	
N/A	CONSTRUCTION FENCE	—xCx—
N/A	RAD FENCE	—xRx—
N/A	EXCAVATION BOUNDARY	
N/A	PROTECTED AREA	
OR	BENCHMARK	N/A
	LIMIT OF ABOVE-WAC AND RCRA MATERIAL	N/A
	LIMIT OF ABOVE-WAC AND RCRA MATERIAL TO BE TREATED	N/A
	PIPE PLUG	
N/A	AIR GAP FOR STORM SEWER	
N/A	PROJECT BOUNDARY	
	RAILROAD TIES	N/A
N/A	FENCE REMOVAL	
	UNDERGROUND UTILITIES BEYOND DESIGN SURFACE TO BE REMOVED DURING TRENCHING	N/A
	UNDERGROUND UTILITIES REMOVED DURING GRADING	N/A
	ABANDONED UNDERGROUND UTILITIES (1)	N/A
N/A	HAUL ROAD	
N/A	20 MG/KG URANIUM FRL AREA	—HL—
—584—	CONTOUR - MINOR	—584—
—585—	CONTOUR - MAJOR	—585—
N/A	PUMP STATION	
N/A	APPROXIMATE CERTIFICATION BOUNDARY	
N/A	DEWATERING CHANNEL	
N/A	PUMP STATION MAINTENANCE ROAD	
N/A	AREA ISOLATION TRENCH	

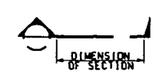
SYMBOLS LEGEND

EXISTING		PROPOSED
	CONCRETE TRENCH	N/A

ABBREVIATIONS

BR - BRINE LINE
CB - CATCH BASIN
CE - CONTAMINATED EFFLUENT LINES
CI - CAST IRON
CMP - CORRUGATED METAL PIPE
CN - STEAM & CONDENSATE LINES
DF - DEIONIZED FEEDLINES
DW - DOMESTIC/POTABLE WATER LINES
EC - EDGE OF CONCRETE
EP - EDGE OF PAVEMENT
EL - ELECTRICAL LINES
ELEV - ELEVATION
FEMP - FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FG - FUEL GAS LINES
FRL - FINAL REMEDIATION LEVEL
FT - FILTRATE OR EFFLUENT LINES
FO1 - HIGH PRESSURE FIRE PROTECTION LINES
GMA - UNSATURATED SANDS AND GRAVELS OF THE GREAT MIAMI AQUIFER
GW - GROUND WATER LINES
HWMU - HAZARDOUS WASTE MANAGEMENT UNIT
MH - MANHOLE
OMTA - OSDF MATERIAL TRANSFER AREA
OSDF - ON-SITE DISPOSAL FACILITY
PA - PLANT AIR LINES
PVC - POLYVINYL CHLORIDE
RAD - RADIOLOGICAL
RCP - REINFORCED CONCRETE PIPE
RCRA - RESOURCE CONSERVATION AND RECOVERY ACT
RW - RAW WATER LINES
SA - INSTRUMENT AIR SUPPLY LINES
SD - SUBSURFACE DRAINS
SL - SUMP LIQUOR LINES
SMTA - SPECIAL MATERIAL TRANSFER AREA
SN - SANITARY SEWER LINES
SP - STOCKPILE / SOIL PILE
ST - STORM SEWER
TYP - TYPICAL
TW - TREATED WATER LINES
UST - UNDERGROUND STORAGE TANK
VCP - VITRIFIED CLAY PIPE
WAC - WASTE ACCEPTANCE CRITERIA
WR - WATER RETURN-COOLING LINES
WS - WATER SUPPLY-COOLING LINES

SECTION CUTS



GENERAL NOTES

1. EXISTING TOPOGRAPHY SHOWN ON DRAWINGS PROVIDED BY FLUOR FERNALD. THESE SOURCES INCLUDE:

   EXISTING SITE DATA SOURCE (IN-PLANT FILES)
   FEMP CADD GRID/UTILITY DRAWINGS

2. HORIZONTAL CONTROL SHOWN ON THE DRAWINGS IS BASED UPON NORTH AMERICAN DATUM 1983 (NAD 83).
3. VERTICAL CONTROL SHOWN ON THE DRAWINGS IS BASED UPON NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29).
4. SILT FENCES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS.
5. TEMPORARY DIVERSION CONSTRUCTION AND OTHER SITE GRADING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02205.
6. DESIGN SURFACES FOR REMEDIATION ARE DERIVED FROM A COMBINATION OF FOUNDATION STRUCTURES AND UNDERGROUND UTILITY DRAWINGS AND FRL SURFACES PROVIDED BY FLUOR FERNALD.
7. GEOLOGICAL AND CROSS SECTION INFORMATION TAKEN FROM (FEMP) OU-2 RI, 1995, OU-2 FS, 1995, GEOTECHNICAL REPORTS, AND FEMP 3-D CADD MODEL. ACTUAL GEOLOGICAL CONDITIONS AND DEPTHS SHOWN ON CROSS SECTIONS MAY VARY AND SHALL BE DETERMINED IN THE FIELD DURING EXCAVATION. FIELD ADJUST THE EXCAVATION DEPTHS AS REQUIRED TO REMOVE IMPACTED MATERIAL.
8. LOCATION AND DEPTH OF EXISTING UTILITIES AND FOUNDATION STRUCTURES ARE APPROXIMATE. IF UNIDENTIFIED UTILITIES ARE DISCOVERED, STOP WORK AND NOTIFY THE CONSTRUCTION MANAGER IMMEDIATELY.
9. DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
10. FIGURED DIMENSIONS AND/OR ELEVATIONS MARKED THUS (+/-) SHALL BE VERIFIED IN THE FIELD BEFORE START OF REMEDIATION.
11. RESTRICT ACTIVITIES TO THE IMMEDIATE PROJECT AREA DEFINED BY RADIOLOGICAL CONTROL OR CONSTRUCTION FENCE AND WITHIN THE "LIMITS OF WORK". AREAS DISTURBED OUTSIDE THE LIMIT OF WORK SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO FLUOR FERNALD.
12. MAINTAIN AND PROTECT UTILITY LOCATION MARKINGS.
13. PROVIDE TEMPORARY SHORING, BRACING, OR OTHER METHODS AS NECESSARY TO SAFELY SUPPORT EXCAVATION. PROTECTION SHALL BE IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P-EXCAVATIONS, LATEST EDITION.

KEYED NOTES

(1) LINE SYMBOL APPLIES FOR DRAINAGE PLAN DRAWINGS ONLY.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	[illegible]		
H	ISSUED FOR 90% DOE REVIEW	[illegible]		
G	JANUARY 2000 COORDINATION PACKAGE	[illegible]		
F	DECEMBER 1999 COORDINATION PACKAGE	[illegible]		
E	ISSUED FOR 60% REVIEW	[illegible]		
D	OCTOBER 1999 COORDINATION PACKAGE	[illegible]		
C	SEPTEMBER 1999 COORDINATION PACKAGE	[illegible]		
B	ISSUED FOR 30% REVIEW	[illegible]		
A	JULY 1999 COORDINATION PACKAGE	[illegible]		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
LEGEND AND GENERAL NOTES

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
G. THURMAN	[illegible]	J. ALCORN	[illegible]	N. ROBERTS	25JAN00

PLANT/SITE NO.	FLOOR	SCALE	CLASS
FEMP	NONE	NONE	U

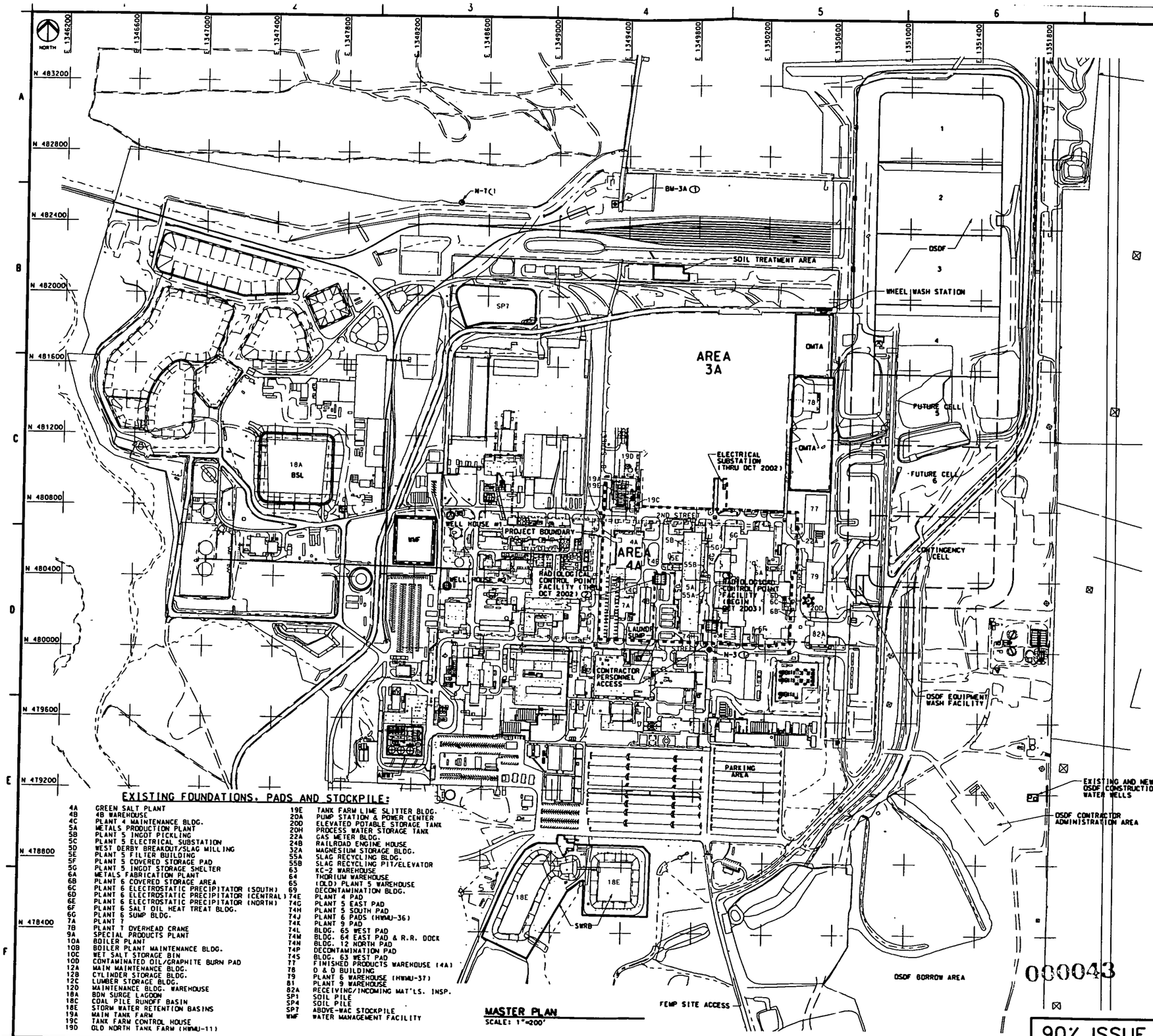
SUBMITTED FOR 30% ISSUE	SUBMITTED FOR 60% ISSUE	SUBMITTED FOR 90% ISSUE
TECH LEAD J. ALCORN	TECH LEAD J. ALCORN	TECH LEAD J. ALCORN
DATE 13AUG99	DATE 01NOV99	DATE 28JAN00

T.O. NUMBER	PROJECT NO.	DRAWING AREA CODE NO.	SHEET NO.	REV NO.
L-010	20800	99X-1900-X-00057	3	1

CET PROJECT NO.	FILENAME
300-008919.01	CPKG3003.DGN

000042

90% ISSUE



EXISTING FOUNDATIONS, PADS AND STOCKPILE:

4A	GREEN SALT PLANT
4B	4B WAREHOUSE
4C	PLANT 4 MAINTENANCE BLDG.
5A	METALS PRODUCTION PLANT
5B	PLANT 5 INGOT PICKLING
5C	PLANT 5 ELECTRICAL SUBSTATION
5D	WEST DERBY BREAKOUT/SLAG MILLING
5E	PLANT 5 FILTER BUILDING
5F	PLANT 5 COVERED STORAGE PAD
5G	PLANT 5 INGOT STORAGE SHELTER
6A	METALS FABRICATION PLANT
6B	PLANT 6 COVERED STORAGE AREA
6C	PLANT 6 ELECTROSTATIC PRECIPITATOR (SOUTH)
6D	PLANT 6 ELECTROSTATIC PRECIPITATOR (CENTRAL)
6E	PLANT 6 ELECTROSTATIC PRECIPITATOR (NORTH)
6F	PLANT 6 SALT OIL HEAT TREAT BLDG.
6G	PLANT 6 SUMP BLDG.
7A	PLANT 7
7B	PLANT 7 OVERHEAD CRANE
9A	SPECIAL PRODUCTS PLANT
10A	BOILER PLANT
10B	BOILER PLANT MAINTENANCE BLDG.
10C	WET SALT STORAGE BIN
10D	CONTAMINATED OIL/GRAPHITE BURN PAD
12A	MAIN MAINTENANCE BLDG.
12B	CYLINDER STORAGE BLDG.
12C	LUMBER STORAGE BLDG.
12D	MAINTENANCE BLDG. WAREHOUSE
18A	BDN SURGE LAGOON
18C	COAL PILE RUNOFF BASIN
18E	STORM WATER RETENTION BASINS
19A	MAIN TANK FARM
19C	TANK FARM CONTROL HOUSE
19D	OLD NORTH TANK FARM (HWMU-11)
19E	TANK FARM LIME SLITTER BLDG.
20A	PUMP STATION & POWER CENTER
20D	ELEVATED POTABLE STORAGE TANK
20H	PROCESS WATER STORAGE TANK
22A	GAS METER BLDG.
24B	RAILROAD ENGINE HOUSE
32A	MAGNESIUM STORAGE BLDG.
55A	SLAG RECYCLING BLDG.
55B	SLAG RECYCLING PIT/ELEVATOR
63	KC-2 WAREHOUSE
64	THORIUM WAREHOUSE
65	(OLD) PLANT 5 WAREHOUSE
69	DECONTAMINATION BLDG.
74E	PLANT 4 PAD
74G	PLANT 5 EAST PAD
74H	PLANT 5 SOUTH PAD
74J	PLANT 6 PADS (HWMU-36)
74K	PLANT 9 PAD
74L	BLDG. 65 WEST PAD
74M	BLDG. 64 EAST PAD & R.R. DOCK
74N	BLDG. 12 NORTH PAD
74P	DECONTAMINATION PAD
74S	BLDG. 63 WEST PAD
77	FINISHED PRODUCTS WAREHOUSE (4A)
78	D & D BUILDING
79	PLANT 6 WAREHOUSE (HWMU-37)
81	PLANT 9 WAREHOUSE
82A	RECEIVING/INCOMING MAT'LS. INSP.
SP1	SOIL PILE
SP4	SOIL PILE
SP7	ABOVE-WAC STOCKPILE
WMF	WATER MANAGEMENT FACILITY

MASTER PLAN
SCALE: 1"=200'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. MAJOR COMPONENTS THAT ARE SHOWN OUTSIDE THE PROJECT AREA ARE FOR REFERENCE AND ORIENTATION ONLY.
3. NEW AND EXISTING SURVEY MONUMENTS OUTSIDE THE EXCAVATION BOUNDARY ARE TO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT.

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KEYED NOTES

1. REFER TO MASTER FEMP BENCHMARK LOCATION PLAN, DRAWING 00X-5500-G-01846 FOR EXISTING BENCHMARK LOCATIONS.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	26JUL99		

DETAILS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

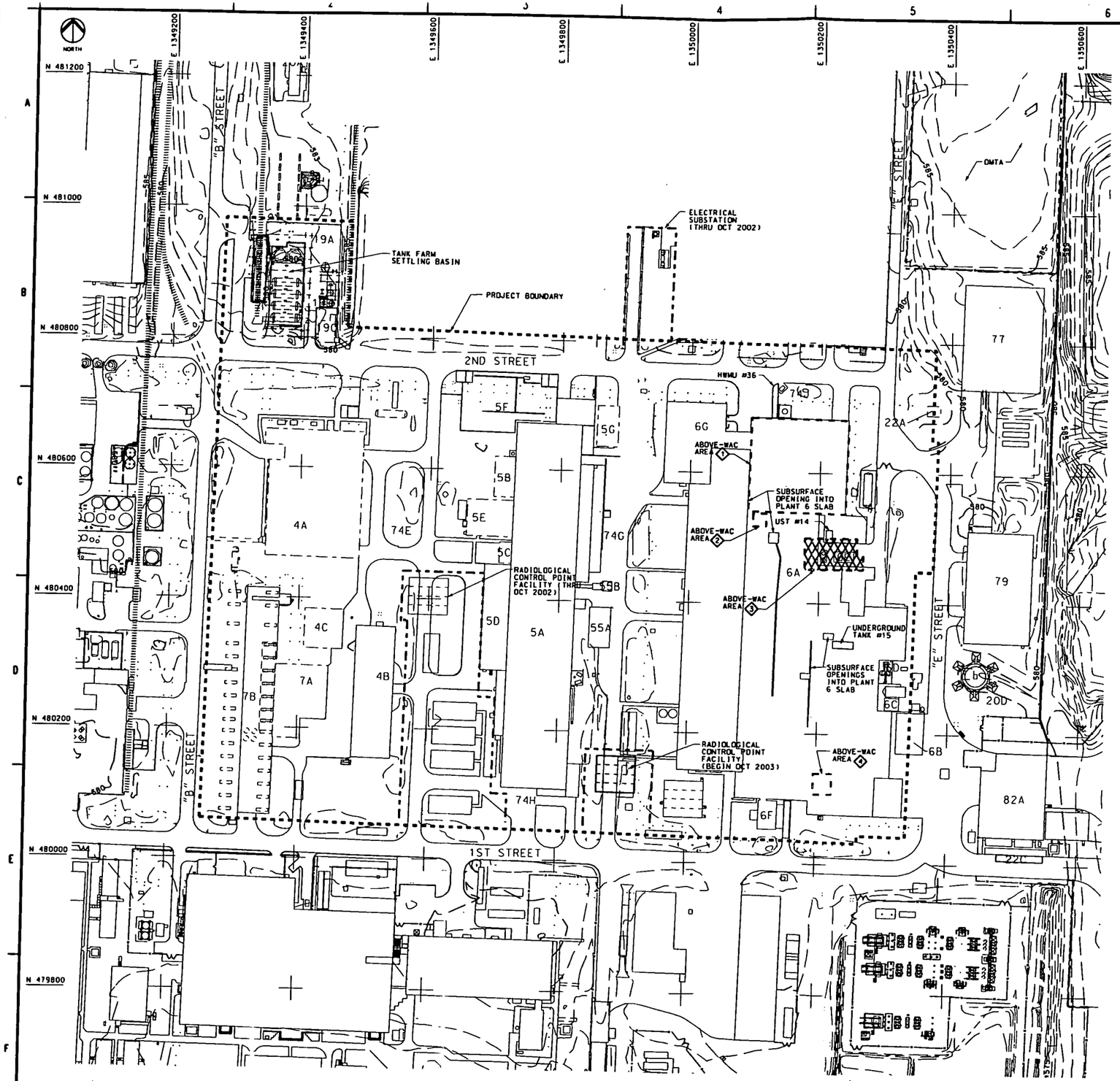
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
MASTER PLAN

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
G. THURMAN	26JUL99	J. ALCORN	26JUL99	M. RITTER	05JAN00
PLANT/BLDG. NO.		FLOOR		SCALE	CLASS
FEMP		NONE		1"=200'	U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD J. ALCORN		TECH LEAD J. ALCORN		TECH LEAD J. ALCORN	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800			
TEST PROJECT NO.	FILENAME			
300-008919.01	CPKG3004.DGN	99X-1900-G-00058	4	I



EXISTING CONDITIONS - AREA 4A (SPRING 2002)
SCALE: 1"=60'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. EXISTING CONDITIONS SHOWN ON DRAWING ARE EFFECTIVE THROUGH SPRING 2002.

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KEYED NOTES

COORDINATES OF ABOVE-WAC AREAS

AREA	DESCRIPTION	NORTHING	EASTING	DEPTH
1	NORTHEAST PLANT 6 (TC-99)	480685.25 480681.25 480537.25 480541.25	1350094.00 1350244.00 1350240.00 1350090.00	6FT
2	NORTH CENTRAL PLANT 6	480537.65 480517.65 480517.65 480537.65	1350097.09 1350097.09 1350117.09 1350117.09	4.5FT
3	EAST PLANT 6 (TC-99)	480500.06 480500.06 480475.79 480475.79 480452.14 480452.14	1350176.94 1350258.31 1350258.31 1350267.91 1350267.91 1350176.94	10.5FT
4	SOUTH PLANT 6	480139.70 480139.70 480107.70 480107.70	1350196.11 1350223.97 1350223.97 1350196.11	5.5FT

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
EXISTING CONDITIONS
AREA 4A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
G. THURMAN	28JUL99	J. ALCORN	28JUL99	M. RITTER	05JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=60'	CLASS U
SUBMITTED FOR 30% ISSUE: TECH LEAD J. ALCORN, DATE 13AUG99		SUBMITTED FOR 60% ISSUE: TECH LEAD J. ALCORN, DATE 01NOV99		SUBMITTED FOR 90% ISSUE: TECH LEAD J. ALCORN, DATE 28JAN00	

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00059	5	1

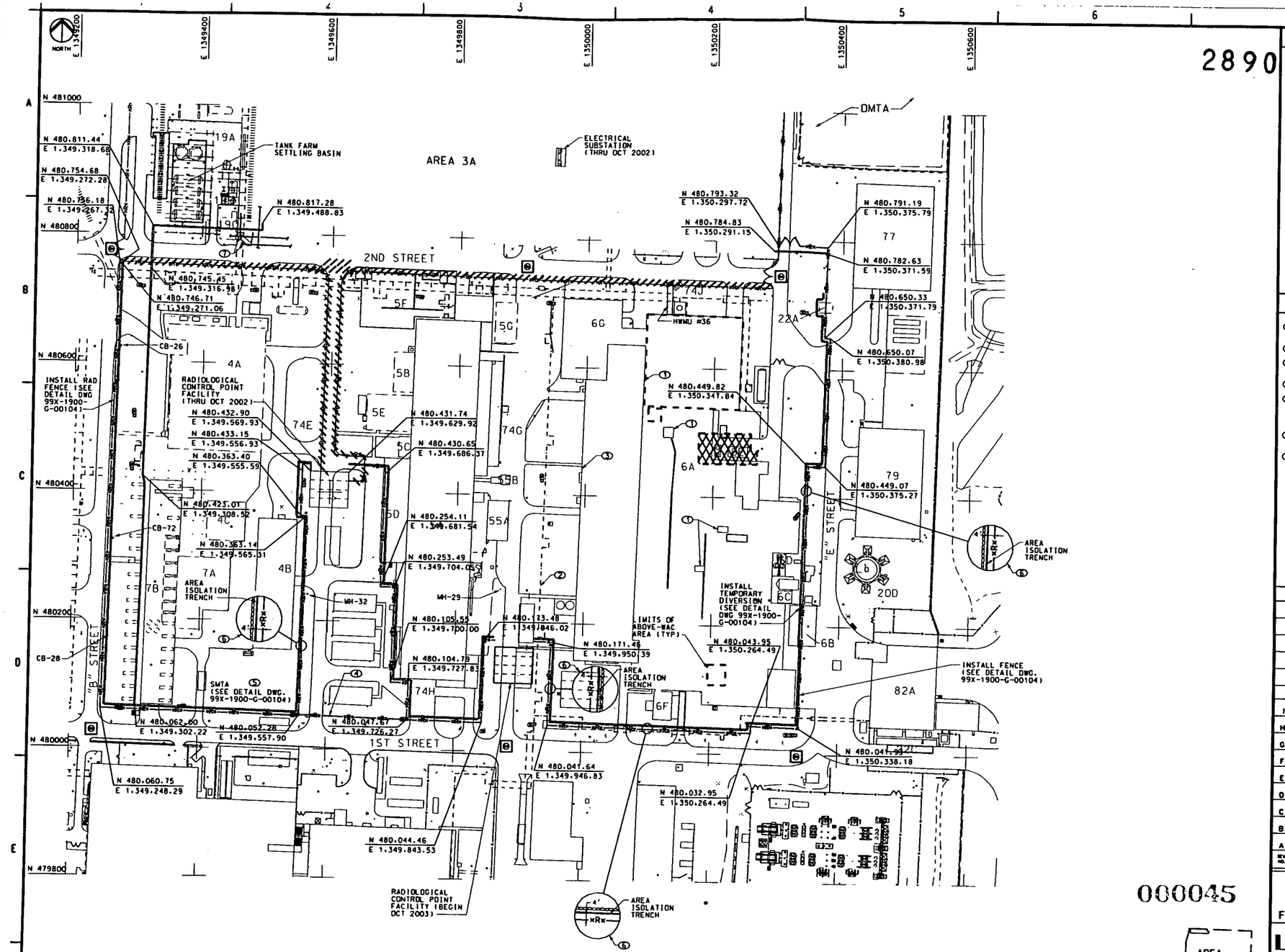
LBT PROJECT NO. 300-008919.01 FILENAME CPKG3005.DGN

90% ISSUE

000044

KEY PLAN
NORTH SCALE: NONE

2890



SITE LAYOUT PLAN AREA 4A
SCALE: 1"=60'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. EXISTING RADIOLOGICAL CONTROL FENCE ALONG NORTHERN BOUNDARY AND AREA 3A ACCESS CORRIDOR TO BE REMOVED AFTER AREA 4A PERIMETER FENCE IS INSTALLED.
3. ALL DEBRIS INCLUDING FENCE FROM ABOVE-WAC AREAS SHALL BE CLEANED IN ACCORDANCE WITH SPECIFICATION 02205 PRIOR TO DISPOSITION.
4. CONTRACTOR SUPPORT FACILITIES WITHIN THE PROJECT BOUNDARY SHALL BE FIELD LOCATED BY CONTRACTOR.
5. FOR COORDINATES OF ABOVE-WAC AREAS, SEE DRAWING 99X-1900-G-00059.
6. FOR REMEDIATION OF HWMU #36, SEE SPECIFICATION SECTION 02205.
7. DETERMINE THAT FENCE POST WILL NOT DAMAGE EXISTING UNDERGROUND UTILITIES THAT ARE TO REMAIN ENERGIZED DURING INSTALLATION OF CONSTRUCTION FENCE OR RADIOLOGICAL CONTROL FENCE.
8. REMOVAL OF IDENTIFIED ABOVE-WAC AND RCRA HAZARDOUS AREAS TO BE FIRST EXCAVATION ACTIVITY TO PROVIDE STORM WATER DETENTION FOR INITIAL EXCAVATION AS DESCRIBED IN THE CONTRACTOR'S APPROVED SWMP.

KEYED NOTES

1. CONTRACTOR TO MAINTAIN SAFETY FENCE AROUND SUBSURFACE OPENINGS INTO PLANT 6 SLAB.
2. CONTRACTOR TO PROTECT STEAM LINE UNTIL FY2003.
3. VOC WATER FROM THIS AREA WILL BE PUMPED INTO PORTABLE TANKS FOR TRANSPORT BY FLUOR FERNALD.
4. RAD FENCE TO BE ADDED FOR OCT 2003 CONSTRUCTION.
5. THE SMTA SHALL BE IDENTIFIED IN THE CONTRACTOR'S EXCAVATION WORK PLAN. GRAVEL AREA SOUTH OF BLDG 4B IS THE PROPOSED LOCATION FOR THE SMTA. CONTRACTOR MAY PROPOSE AN ALTERNATE APPROACH.
6. UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.
7. VERIFY LOCATION AND PROTECT EXISTING ENERGIZED UNDERGROUND UTILITIES. SEE AREA ISOLATION PLAN AREA 3A DRAWING 99X-1900-X-00014.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	3MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	29JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
SITE LAYOUT PLAN
AREA 4A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
K. DAVIS	29JUL99	M. ROBERTS	29JUL99	M. RITTER	05JAN00
PLANT/BLDG. NO.		FLOOR		SCALE	CLASS
FEMP		NONE		1"=60'	U
SUBMITTED FOR 30% GBGE		SUBMITTED FOR 60% GBGE		SUBMITTED FOR 90% GBGE	
TECH LEAD M. ROBERTS		TECH LEAD M. ROBERTS		TECH LEAD M. ROBERTS	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

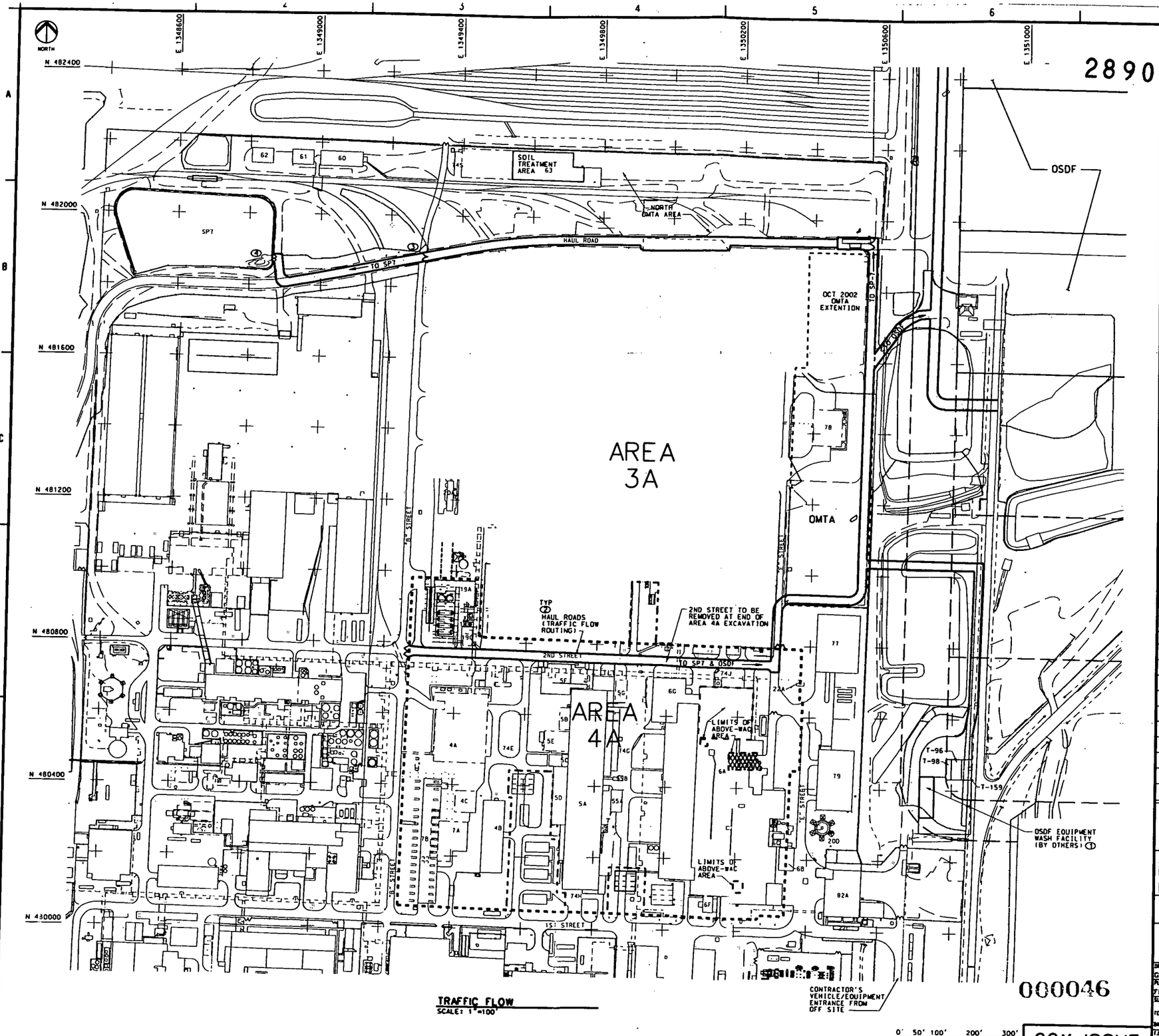
T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00060	6	I
LOT PROJECT NO. 300-005919.01	FILENAME CPKG1031.DGN			

000045

KEY PLAN
SCALE: NONE

0' 20'40'60' 120' 180'
SCALE: 1 INCH=60 FEET

90% ISSUE



TRAFFIC FLOW
SCALE: 1"=100'

000046

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES. SEE DRAWING 99X-1900-X-00057.
2. REFER TO DRAWING 99X-1900-G-00104 FOR TYPICAL CONSTRUCTION ENTRANCE DETAIL.
3. REFER TO DRAWING 99X-1900-G-00104 FOR TRAFFIC CONTROL GATE DETAIL.
4. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02150.
5. CONTRACTOR SUPPORT FACILITIES AND SMTA SHALL BE IDENTIFIED IN THE CONTRACTOR'S EXCAVATION WORK PLAN. GRAVEL AREA SOUTH OF BLDG 4B IS THE PROPOSED LOCATION FOR THE SMTA. CONTRACTOR CAN PROPOSE AN ALTERNATE APPROACH.

KEYED NOTES

① TRAFFIC LEAVING THE CONSTRUCTION AREA TO GO OFFSITE MUST PASS THROUGH THE OSDF EQUIPMENT WASH FACILITY LOCATED NORTH EAST OF RIMIA (BLDG. 82A).

② HAUL ROADS CAN BE WIDENED AT CONTRACTOR'S DISCRETION TO ACHIEVE TWO-WAY TRAFFIC.

③ GATES ON IMPACTED MATERIAL HAUL ROAD WILL BE OPEN AT ALL TIMES EXCEPT WHEN CROSSING OF "B" STREET IS NECESSARY BY OTHER SITE TRAFFIC. CONSTRUCTION MANAGER WILL NOTIFY CONTRACTOR PRIOR TO CLOSING GATES.

④ REFER TO DRAWING 99X-1900-G-00071 FOR SP7 ENTRANCE DETAIL.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE TECHNOLOGIES

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
TRAFFIC FLOW

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
G. THURMAN	28JUL99	J. ALCORN	28JUL99	M. RITTER	11JAN00

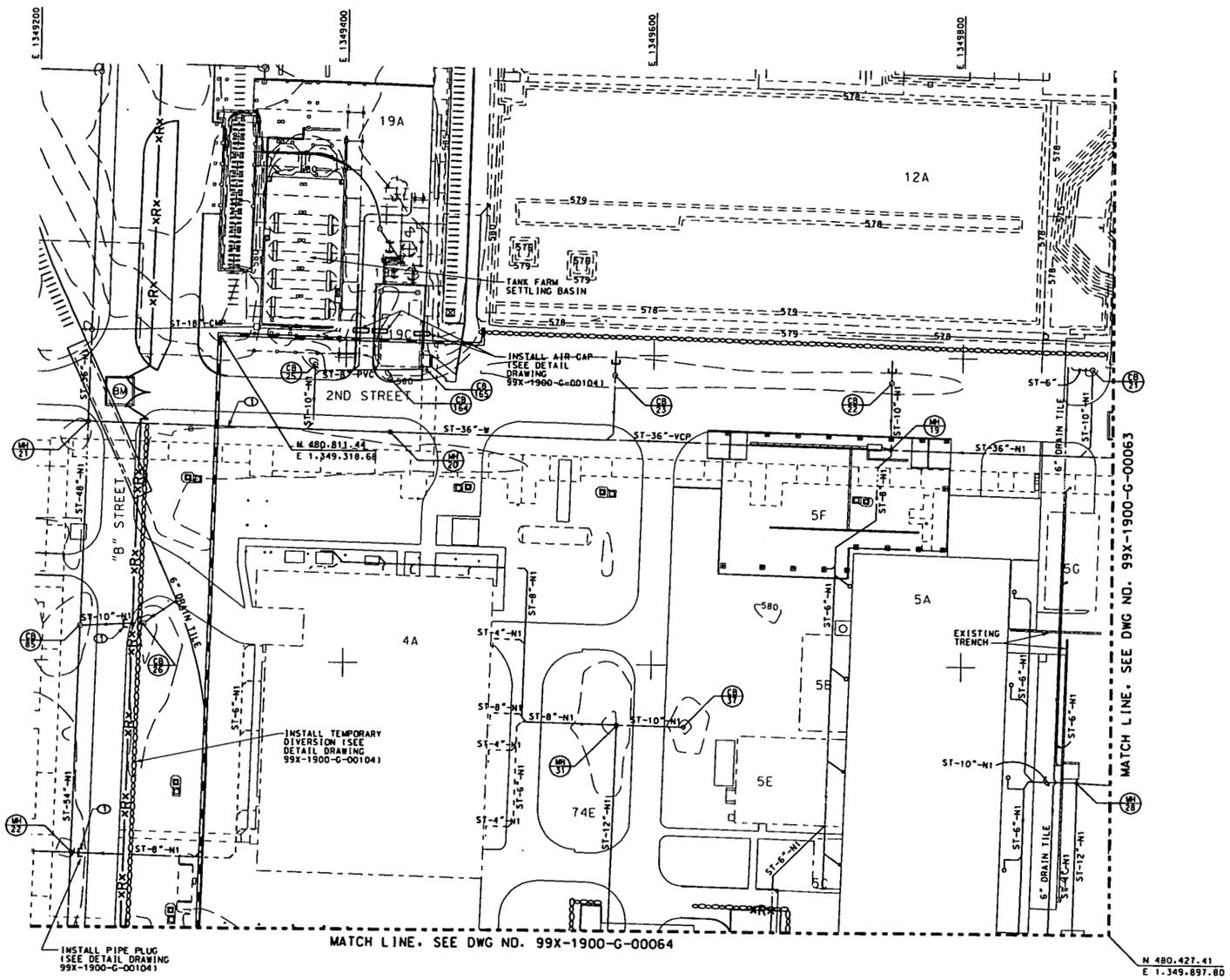
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
TEMP	NONE	1"=100'	U

SUBMITTED FOR 30% ISSUE	SUBMITTED FOR 60% ISSUE	SUBMITTED FOR 90% ISSUE
TECH LEAD J. ALCORN	TECH LEAD J. ALCORN	TECH LEAD J. ALCORN
DATE 13AUG99	DATE 01NOV99	DATE 28JAN00

F.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00061	7	I

LCT PROJECT NO.	FILENAME
300-000919.01	CPKG3005.DGN

90% ISSUE



DRAINAGE PLAN (NW) AREA 4A
SCALE: 1"=30'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES SEE DRAWING 99X-1900-X-00057.
2. REFER TO FLUOR FERNALD UNDERGROUND UTILITIES DRAWINGS 22C-5500-P-00670 (GRID 11), 22C-5500-P-00671 (GRID 12), 22C-5500-P-00672 (GRID 13), AND 22C-5500-P-00678 (GRID 19) FOR EXISTING STORM SEWER SYSTEM LOCATIONS.
3. CONTRACTOR MAY USE EXISTING STORM SEWER SYSTEM TO CONTROL RUNOFF DURING REMEDIATION. HOWEVER, STORMSEWER PIPES TO BE CUT DURING AREA ISOLATION SHALL BE PLUGGED AT THE EXCAVATION BOUNDARY IN ACCORDANCE WITH SPECIFICATION SECTION 02275.

2890

KEYED NOTES

① CONTRACTOR TO PROVIDE CONTINUATION OF DRAINAGE TO SETTLING BASIN IN ACCORDANCE WITH CONTRACTOR'S APPROVED SWMP.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	03DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	08OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

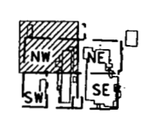
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
DRAINAGE PLAN (NW) AREA 4A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
K. DAVIS	28JUL99	N. ROBERTS	28JUL99	M. RITTER	05JAN00
PLANT/BLDG. NO.		FLOOR		SCALE	CLASS
FEMP		NONE		1"=30'	U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

T.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00062	8	I
LET PROJECT NO. 300-008919.01	FILENAME CPKG1020.DGN			

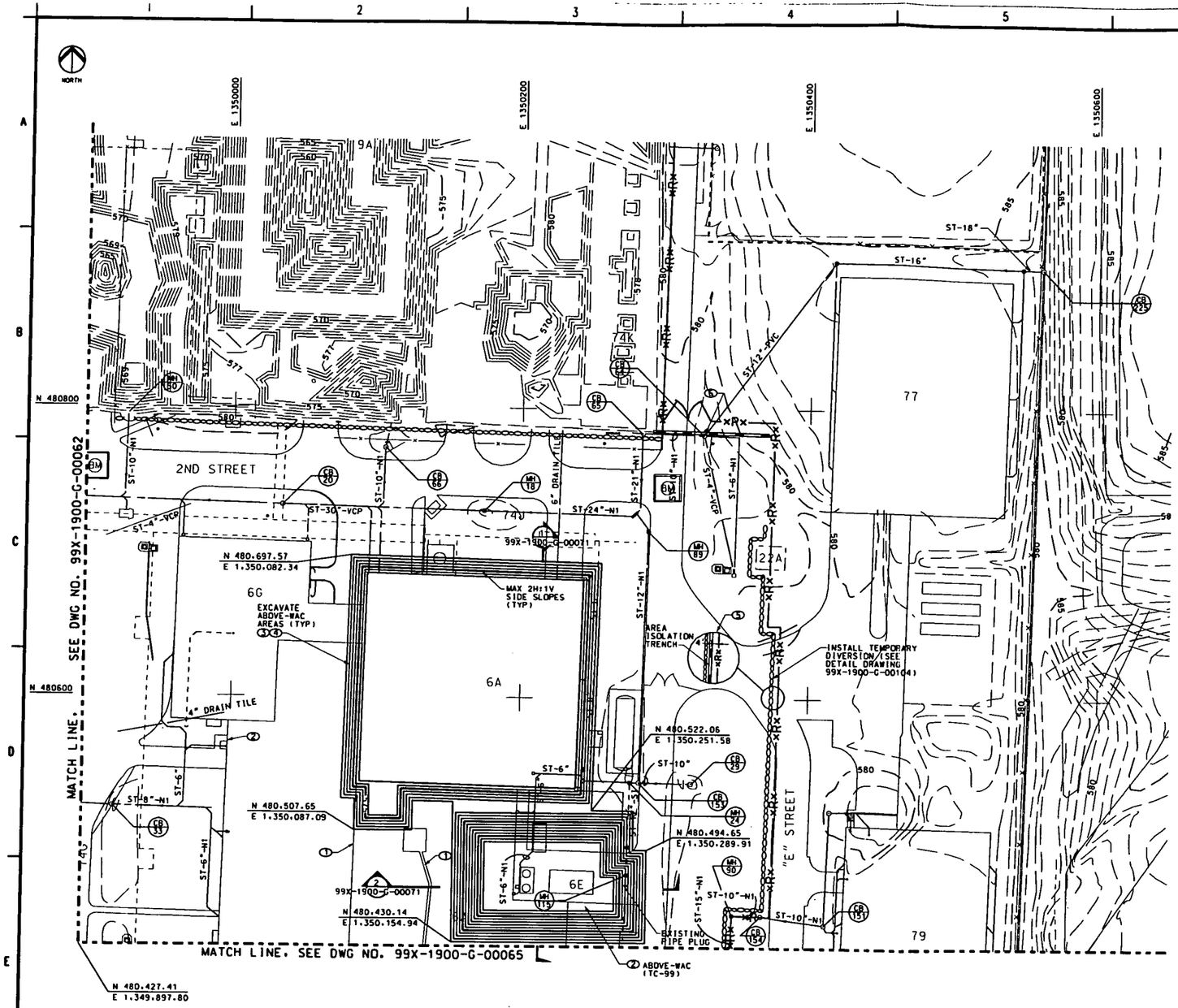
000047



AREA 4A KEY PLAN
NORTH SCALE: NONE

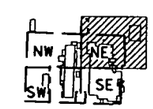
0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE



DRAINAGE PLAN (NE) AREA 4A
SCALE: 1"=30'

000048



AREA 4A KEY PLAN
NORTH SCALE: NONE

0' 10 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES SEE DRAWING 99X-1900-X-00057.
2. REFER TO FLUOR FERNALD UNDERGROUND UTILITIES DRAWINGS 22C-5500-P-00662 (GRID 3), 22C-5500-P-00663 (GRID 4), AND 22C-5500-P-00665 (GRID 6) FOR EXISTING STORM SEWER SYSTEM LOCATIONS.
3. CONTRACTOR MAY USE EXISTING STORM SEWER SYSTEM TO CONTROL RUNOFF DURING REMEDIATION. HOWEVER, STORMSEWER PIPES TO BE CUT DURING AREA ISOLATION SHALL BE PLUGGED AT THE EXCAVATION BOUNDARY IN ACCORDANCE WITH SPECIFICATION SECTION 02275.

2890

KEYED NOTES

1. CONTRACTOR TO MAINTAIN FENCE AROUND SUBSURFACE OPENINGS INTO PLANT 6 SLAB.
2. VOC WATER FROM THIS AREA WILL BE PUMPED INTO PORTABLE TANKS FOR TRANSPORT BY FLUOR FERNALD.
3. ABOVE-WAC AREAS SHALL BE EXCAVATED FIRST UNLESS ACCESS IS RESTRICTED BY D&D ACTIVITIES (BY OTHERS).
4. EXCAVATE ABOVE-WAC MATERIAL TO PROVIDE STORM WATER DETENTION FOR INITIAL EXCAVATION AS DESCRIBED IN THE CONTRACTOR'S APPROVED SWMP (CONTRACTOR HOLD POINT).
5. UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.
6. FLUOR FERNALD WILL COORDINATE REDIRECTION OF DRAINAGE IN THIS AREA.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

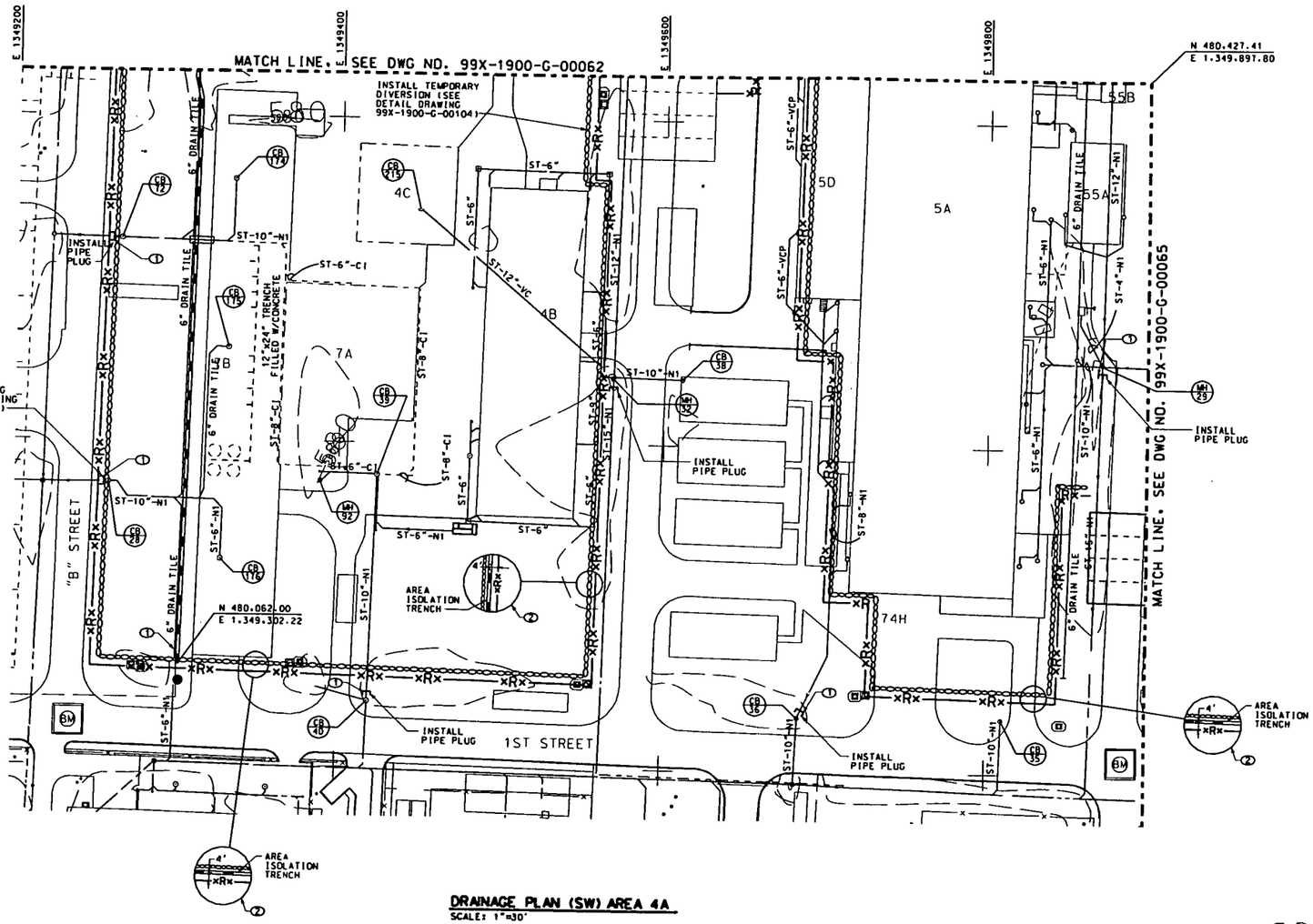
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
DRAINAGE PLAN (NE) AREA 4A

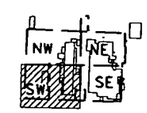
DRAWN BY K. DAVIS	DATE 28JUL99	TECHNICAL LEAD N. ROBERTS	DATE 28JUL99	CHECKED BY M. RITTER	DATE 28JAN00
PLANT/BLDG NO. F CMP		FLOOR NONE		SCALE 1"=30'	CLASS U
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 60% ISSUE		SUBMITTED FOR 90% ISSUE	
TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

T.A. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00063	9	I
TEC PROJECT NO. 300-008919.01	FILENAME CPKG1021.DGN			



DRAINAGE PLAN (SW) AREA 4A
SCALE: 1"=30'

000049



AREA 4A KEY PLAN
NORTH SCALE: NONE

0' 10 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES SEE DRAWING 99X-1900-X-00057.
2. REFER TO FLUOR FERNALD UNDERGROUND UTILITIES DRAWINGS 22C-5500-P-00671 (GRID 12), 22C-5500-P-00672 (GRID 13), 22C-5500-P-00673 (GRID 14), AND 22C-5500-P-00679 FOR EXISTING STORM SEWER SYSTEM LOCATIONS.
3. CONTRACTOR MAY USE EXISTING STORM SEWER SYSTEM TO CONTROL RUNOFF DURING REMEDIATION. HOWEVER, STORMSEWER PIPES TO BE CUT DURING AREA ISOLATION SHALL BE PLUGGED AT THE EXCAVATION BOUNDARY IN ACCORDANCE WITH SPECIFICATION SECTION 02275.

2890

KEYED NOTES

(1) CONTRACTOR TO PROVIDE CONTINUATION OF DRAINAGE TO SETTLING BASIN IN ACCORDANCE WITH CONTRACTOR'S APPROVED SWMP.

(2) UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	3MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

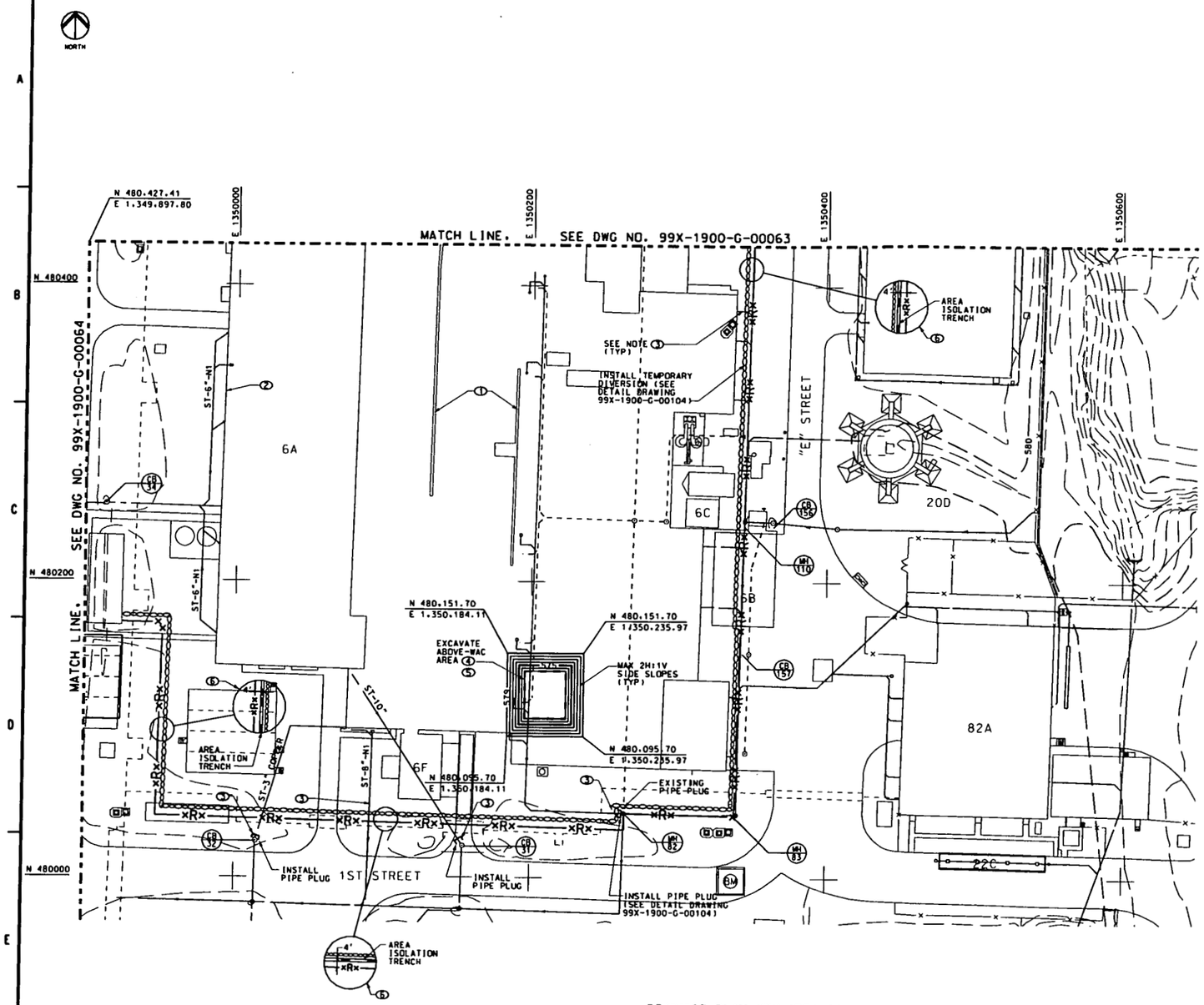
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS & CONSTRUCTORS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG.II

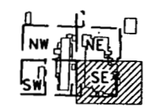
DRAWING TITLE
DRAINAGE PLAN (SW) AREA 4A

DRAWN BY K. DAVIS	DATE 28JUL99	TECHNICAL LEAD N. ROBERTS	DATE 28JUL99	CHECKED BY M. RITTER	DATE 05JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=30'	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD N. ROBERTS DATE 13AUG99		SUBMITTED FOR 60% ISSUE TECH LEAD N. ROBERTS DATE 01NOV99		SUBMITTED FOR 90% ISSUE TECH LEAD N. ROBERTS DATE 28JAN00	
F.D. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00064		SHEET NO. 10	REV. NO. 1
LGT PROJECT NO. 300-008919.01	FILENAME CPKG1022.DGN				



DRAINAGE PLAN (SE) AREA 4A
SCALE: 1"=30'

000050



AREA 4A KEY PLAN
SCALE: NONE

0' 10'20'30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES SEE DRAWING 99X-1900-X-00057.
2. REFER TO FLUOR FERNALD UNDERGROUND UTILITIES DRAWINGS 22C-5500-P-00663 (GRID 4), 22C-5500-P-00665 (GRID 6), AND 22C-5500-P-00666 (GRID 7) FOR EXISTING STORM SEWER SYSTEM LOCATIONS.
3. CONTRACTOR MAY USE EXISTING STORM SEWER SYSTEM TO CONTROL RUNOFF DURING REMEDIATION. HOWEVER, STORMSEWER PIPES TO BE CUT DURING AREA ISOLATION SHALL BE PLUGGED AT THE EXCAVATION BOUNDARY IN ACCORDANCE WITH SPECIFICATION SECTION 02275.

2890

KEYED NOTES

1. CONTRACTOR TO MAINTAIN FENCE AROUND SUBSURFACE OPENINGS INTO PLANT 6 SLAB.
2. VOC WATER FROM THIS AREA WILL BE PUMPED INTO PORTABLE TANKS FOR TRANSPORT BY FLUOR FERNALD.
3. CONTRACTOR TO PROVIDE CONTINUATION OF DRAINAGE TO SETTLING BASIN IN ACCORDANCE WITH CONTRACTOR'S APPROVED SWMP.
4. ABOVE-WAC AREAS SHALL BE EXCAVATED FIRST UNLESS ACCESS IS RESTRICTED BY D&D ACTIVITES (BY OTHERS).
5. EXCAVATE ABOVE-WAC MATERIAL TO PROVIDE STORM WATER DETENTION FOR INITIAL EXCAVATION AS DESCRIBED IN THE CONTRACTOR'S APPROVED SWMP (CONTRACTOR'S HOLD POINT).
6. UNLESS OTHERWISE INDICATED, LOCATE AREA ISOLATION TRENCH 4' FROM PROPOSED RADIOLOGICAL CONTROL FENCE.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	3NOV99		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
E	ISSUED FOR 60% REVIEW	09NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

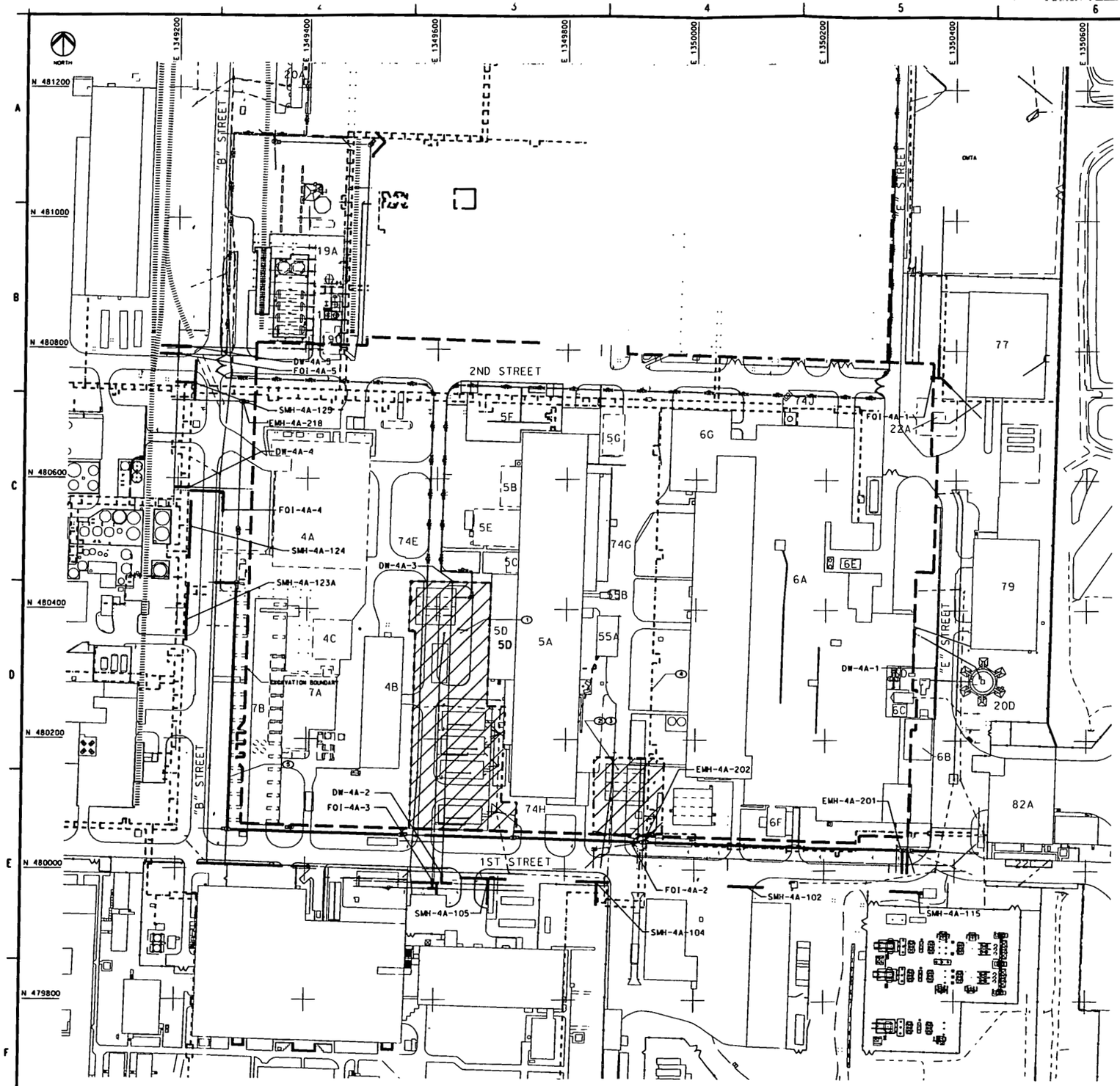
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
DRAINAGE PLAN (SE) AREA 4A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
K. DAVIS	28JUL99	N. ROBERTS	28JUL99	M. RITTER	03JAN00
PLANT/BLDG NO.		FLOOR		SCALE	CLASS
FEMP		NONE		1"=30'	U
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 60% ISSUE		SUBMITTED FOR 90% ISSUE	
TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS		TECH LEAD N. ROBERTS	
DATE 13AUG99		DATE 09NOV99		DATE 28JAN00	

T.S. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00065	11	1
LGI PROJECT NO. 300-008919.01	FILENAME CPKG1023.DGN			



UTILITY ISOLATION PLAN - AREA 4A
SCALE: 1"=60'

0' 20' 40' 60' 120' 180'
SCALE: 1 INCH=60 FEET

000051

KEY PLAN
NORTH SCALE: NONE

90% ISSUE

GENERAL NOTES

1. UTILITY AIR GAPS INDICATED ON THIS DWG. TO BE PERFORMED BY FLUOR FERNALD. UTILITY AIR GAPS ARE IDENTIFIED IN ACCORDANCE TO UTILITY TYPE.
2. UTILITY AIR GAPS WILL BE LOCATED OUTSIDE THE WORK AREA AS INDICATED BY THE EXCAVATION BOUNDARY.
3. ALL UTILITY TIE-INS SHALL BE COMPLETED PER FLUOR FERNALD LOCKOUT/TAGOUT PROCEDURES. NEW ELECTRICAL FEEDERS TO TRAILERS SHALL BE INSTALLED PER THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.

2890

KEYED NOTES

1. RADIOLOGICAL CONTROL POINT FACILITY AREA. THIS AREA TO BE EXCAVATED AFTER FY2002.
2. THESE TRAILERS WILL REPLACE THE RADIOLOGICAL CONTROL POINT FACILITY IN FY2003.
3. POWER FOR CONTRACTOR NEEDS WILL BE AVAILABLE FROM A NEW 480 V. 800 AMP FEEDER FROM THE SOUTH OF THE TRAILERS. POWER FOR AREA 4A IS AVAILABLE FOR THE CONTRACTOR'S USE FROM THE SUBSTATIONS IN BUILDING 20A.
4. EXISTING OVERHEAD STEAM RACK WILL BE REMOVED BY FLUOR FERNALD. THE CONTRACTOR IS NOT RESPONSIBLE FOR REMOVAL OF ABOVE-GRADE ITEMS AND INSTALLATION OF AIR GAPS.
5. ALL UTILITY LINES WHICH ARE BOLD INDICATE ACTIVE LINES AND MUST BE PROTECTED DURING TRENCHING ACTIVITIES.

LEGEND

EL----ELECTRICAL/COMMUNICATION LINE
DW----DOMESTIC/PORTABLE WATER LINE
FOI---HIGH PRESSURE FIRE LINE
FT----FILTRATE LINE
RW----RAW WATER LINE
SN----SANITARY SEWER LINE
TW----TREATED WATER LINE
WS----WATER SUPPLY

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	31MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
C	ISSUED FOR 60% REVIEW	01NOV99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

METHOD AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS & CONSTRUCTORS

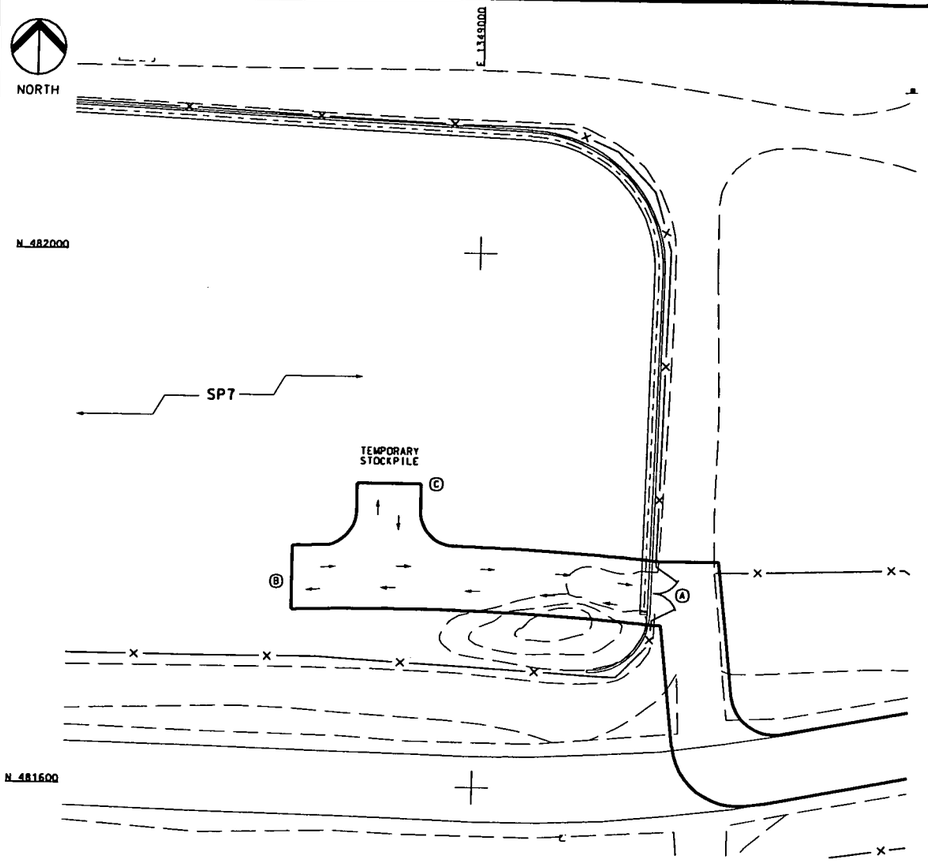
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
UTILITY ISOLATION PLAN
AREA 4A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
K. DAVIS	28JUL99	JERALD/RRS	28JUL99	D. CHRISTMAN	28JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=60'	CLASS U
SUBMITTED FOR 30% BASE: TECH LEAD R. SOUTHERN, DATE 13AUG99		SUBMITTED FOR 60% BASE: TECH LEAD R. SOUTHERN, DATE 01NOV99		SUBMITTED FOR 90% BASE: TECH LEAD R. SOUTHERN, DATE 28JAN00	

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-X-00068	12	F

LGI PROJECT NO. 300-008919.01 FILENAME CPKG1068.DGN

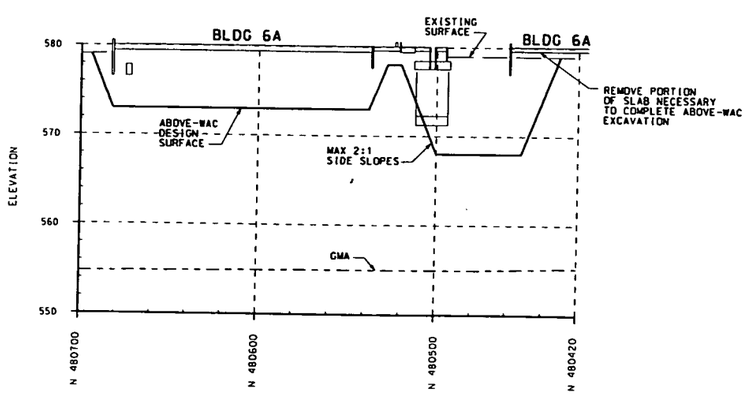


SP7 ENTRANCE DETAIL (1)

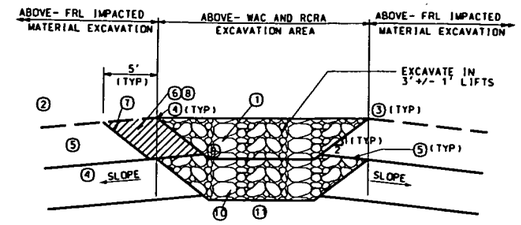
SCALE: APPROX. 1"=20' 99X-1900-G-00061

NOTES:

TRUCKS ENTER GATE Ⓐ, PULL FORWARD UP THE RAMP TO POINT Ⓑ, BACK UP TO EXISTING WHEEL STOPS AT POINT Ⓒ AND DUMP. TRUCKS EXIT GATE Ⓐ. MATERIAL IS THEN PUSHED INTO PLACE USING DEDICATED EQUIPMENT WITHIN THE STOCKPILE.



E 1350215.0
SECTION (1)
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00063

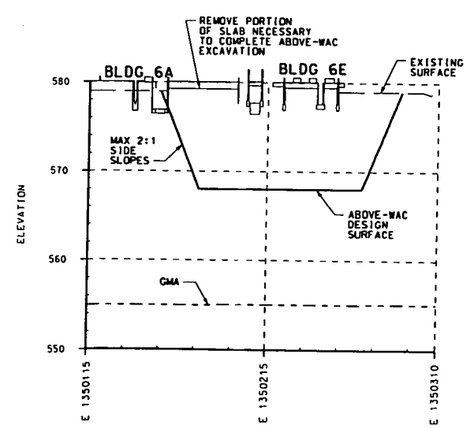


1. EXCAVATE ABOVE-WAC MATERIAL IN 3' LIFTS AND MAINTAIN SAFE SLOPES.
2. LOAD TRUCKS IN BUFFER ZONE OUTSIDE OF ABOVE-WAC MATERIAL AREA AS SPECIFIED IN TECHNICAL SPECIFICATION SECTION 02205 AND HAUL TO SP7.
3. SURVEY LIMITS AND ELEVATION OF EACH EXCAVATED LIFT IN ABOVE-WAC MATERIAL EXCAVATION AREA.
4. FLUOR FERNALD WILL MONITOR THE EXCAVATION ALONG THE SIDE SLOPES OF THE ABOVE-WAC EXCAVATION AREA AFTER EACH LIFT (CONTRACTOR HOLD POINT).
5. EXCAVATE SUBSEQUENT ABOVE- FRL IMPACTED MATERIAL IN 3 +/- 1 FOOT LIFTS OUTSIDE LIMITS OF ABOVE-WAC MATERIAL EXCAVATION AREA WITH EQUIPMENT APPROVED BY THE CONSTRUCTION MANAGER TO FACILITATE SAFE SLOPES FOR LOWER LIFTS. HAUL EXCAVATED MATERIAL TO OSDF.
6. IF MONITORING FINDS ABOVE-WAC MATERIAL ALONG THE SIDES OF THE ABOVE-WAC EXCAVATION AREA, EXTEND THE EXCAVATION LIMIT LATERALLY BY 5 FEET IN ALL DIRECTIONS OF THE ABOVE-WAC AND RCRA MONITORING RESULTS.
7. FLUOR FERNALD WILL MONITOR ALONG THE EXTENDED LIMITS OF EXCAVATION (CONTRACTOR HOLD POINT).
8. REPEAT STEPS (5) AND (6) IF MONITORING FINDS ABOVE-WAC MATERIAL WITHIN THE EXTENDED LIMIT.
9. MAINTAIN POSITIVE DRAINAGE WITHIN THE ABOVE-WAC AREA EXCAVATION TO COLLECT WATER AND PUMP TO THE TANK FARM SETTLING BASIN.
10. CONTINUE STEPS (1) THROUGH (9) AS DIRECTED BY THE CONSTRUCTION MANAGER FOR MAXIMUM DEPTH OF EXCAVATION EQUAL TO 6'. FOR DEEPER EXCAVATIONS, CONTRACTOR TO PROVIDE BENCHES TO FACILITATE SAFE SLOPES.
11. SURVEY FINAL EXCAVATION LIMITS. FLUOR FERNALD TO CONDUCT CONFIRMATION MONITORING AT BOTTOM OF ABOVE-WAC MATERIAL EXCAVATION (CONTRACTOR HOLD POINT).

ABOVE-WAC MATERIAL EXCAVATION DETAIL (2)

SCALE: NONE

99X-1900-G-00062
99X-1900-G-00063
99X-1900-G-00064
99X-1900-G-00065



N 480868.0
SECTION (2)
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00063

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

000052

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. INITIALLY EXCAVATE ABOVE-WAC AREAS AS SHOWN ON THIS DRAWING. CONSTRUCTION MANAGER WILL VERIFY THE LIMITS OF ABOVE-WAC MATERIAL IN THE FIELD, AND ADDITIONAL EXCAVATION MAY BE REQUIRED.

2890

KEYED NOTES

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	31MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DRAWING NUMBER REASSIGNED DECEMBER 1999 COORDINATION PACKAGE	03DEC99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

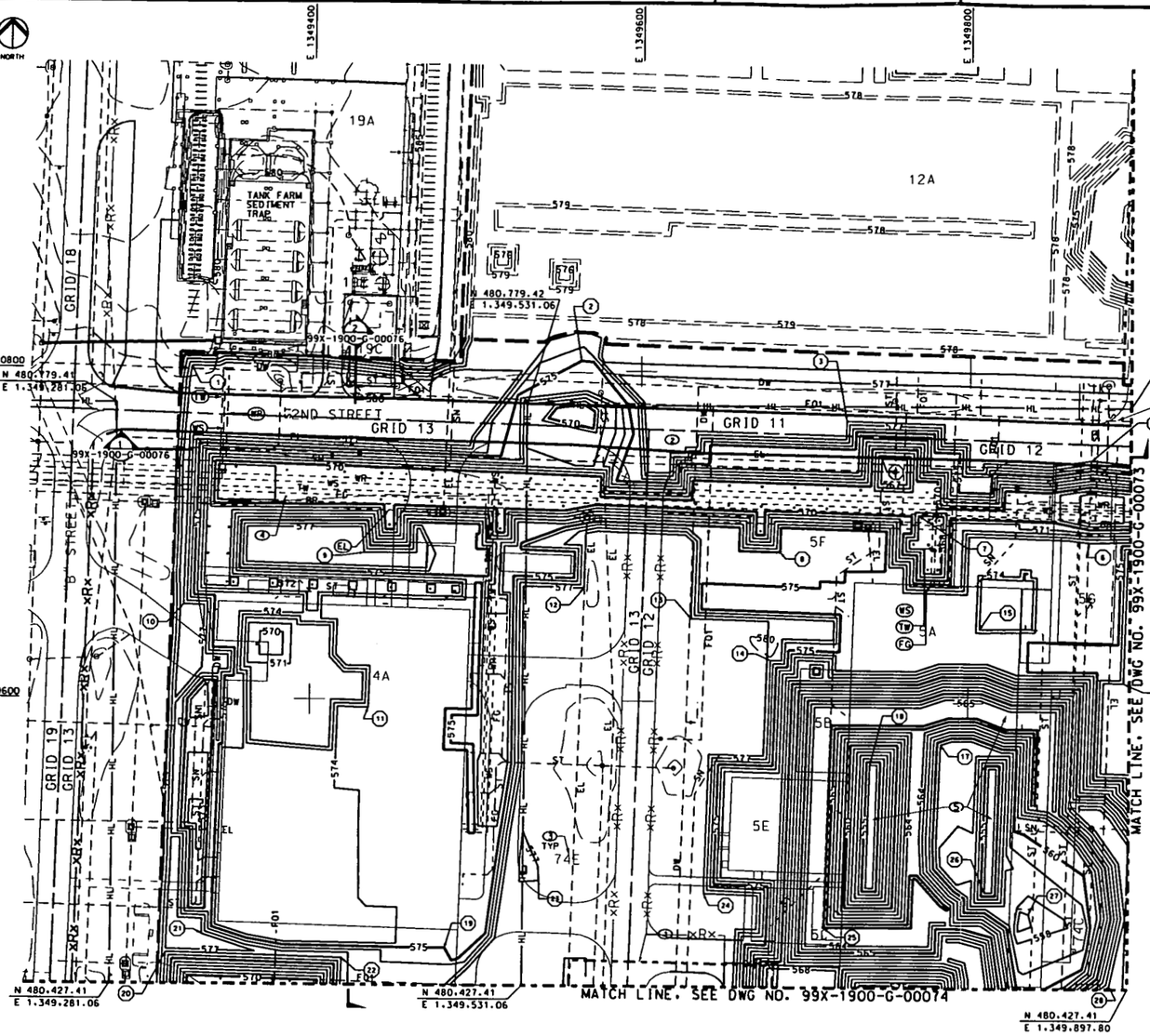
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE ENGINEERS

PROJECT NAME: SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE: ABOVE-WAC DETAILS

DRAWN BY C. COX	DATE 23NOV99	TECHNICAL LEAD J. ALCORN	DATE 23NOV99	CHECKED BY N. ROBERTS	DATE 17JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 60% ISSUE		SUBMITTED FOR 90% ISSUE	
TECH LEAD NONE		TECH LEAD NONE		TECH LEAD J. ALCORN	
DATE NONE		DATE NONE		DATE 28JAN00	
T.O. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO.		SHEET NO.	REV. NO.
LAST PROJECT NO. 300-008919.01	FILENAME CPKG3058.DGN	99X-1900-G-00071		13	F



GRADING PLAN (NW) AREA 4A
SCALE: 1"=30'

PT NO.	NORTHING	EASTING
1	480801.87	1349326.95
2	480806.17	1349563.55
3	480770.64	1349725.22
4	480748.04	1349746.61
5	480747.74	1349874.03
6	480697.90	1349872.88
7	480713.78	1349769.05
8	480650.86	1349685.29
9	480688.87	1349432.44
10	480657.00	1349323.13
11	480595.39	1349436.04
12	480668.36	1349566.08
13	480650.37	1349631.39
14	480625.34	1349679.81
15	480644.78	1349806.60
16	480612.64	1349894.25
17	480574.97	1349783.48
18	480562.34	1349740.86
19	480450.00	1349484.19
20	480446.40	1349314.76
21	480457.61	1349336.23
22	480443.49	1349421.33
23	480491.39	1349540.92
24	480484.10	1349640.68
25	480463.80	1349714.11
26	480485.56	1349811.03
27	480472.44	1349837.87
28	480429.29	1349886.95

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. GRID NUMBERS REFER TO THE UNDERGROUND UTILITIES GRID DRAWINGS AS SHOWN IN UTILITY GRID REFERENCE DRAWING INDEX ON DRAWING 99X-1900-X-00056.
3. FOR EXCAVATION OF ABOVE-WAC AREAS SEE DRAWING 99X-1900-G-00062.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTOR'S APPROVED SWMP.
5. FOR ADDITIONAL SECTION LOCATIONS SEE FOUNDATION DRAWINGS.

2890

KEYED NOTES

1. RAD AREA, RADIOLOGICAL CONTROL POINT FACILITY AND FENCE TO REMAIN AT AREA 4A THRU FY2002.
2. 2ND STREET TO REMAIN UNTIL NEAR END FY2003.
3. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
4. PROTECT EXISTING STEAM LINE AND SUPPORT FOUNDATION UNTIL JUNE 2003.
5. INSTALL GMA PLUG IN ACCORDANCE WITH SECTION 02206. FOR GMA PROTECTION BENCH, SEE DETAIL DRAWING 99X-1900-G-00110.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	13JAN00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
GRADING PLAN (NW)
AREA 4A

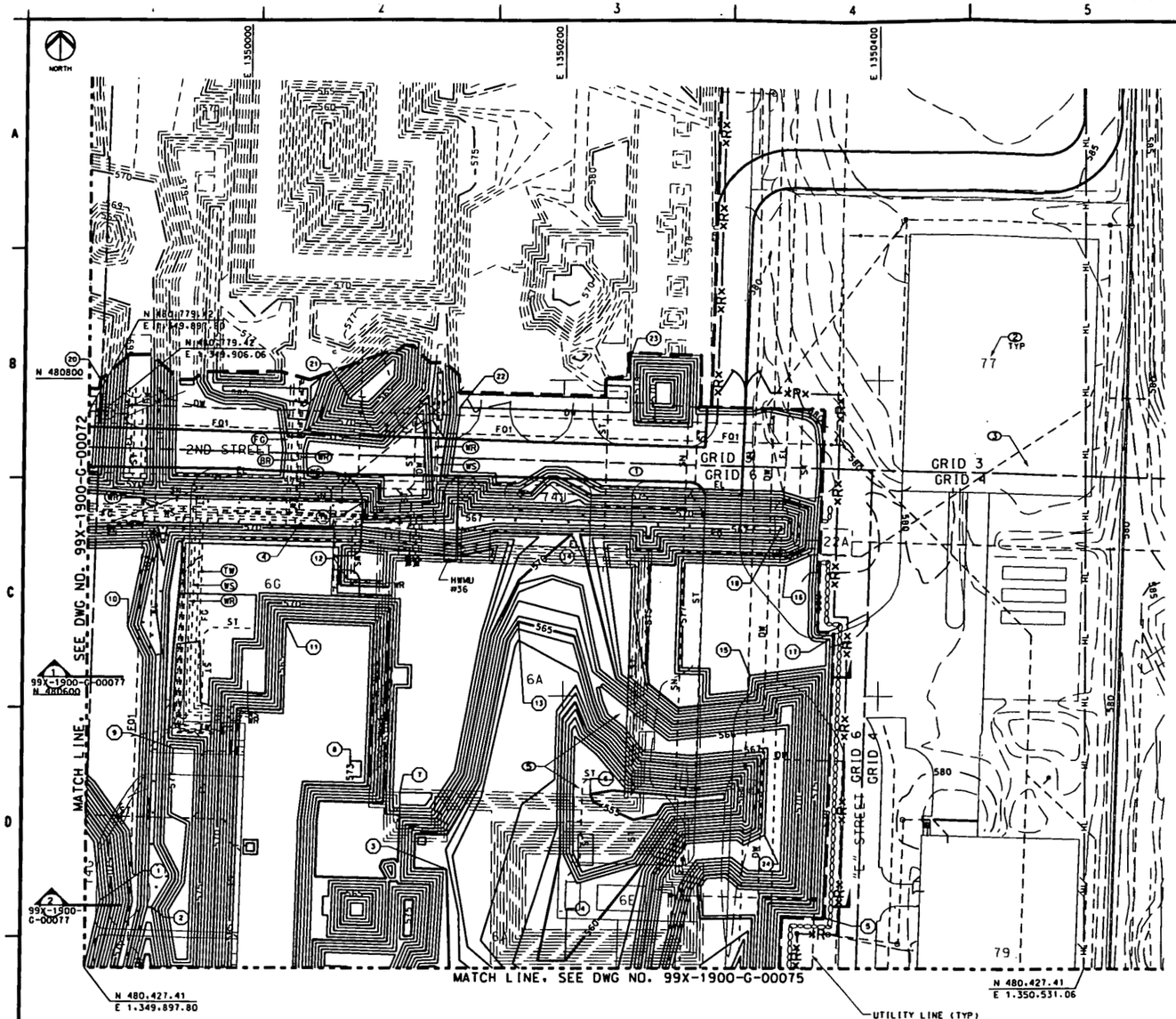
DRAWN BY G. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99	CHECKED BY N. ROBERTS	DATE 10JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=30'	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD J. ALCORN DATE 13AUG99		SUBMITTED FOR 60% ISSUE TECH LEAD J. ALCORN DATE 01NOV99		SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN DATE 28JAN00	
F.B. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00072		SHEET NO. 14	REV. NO. I
LOT PROJECT NO. 300-008919.01	FILENAME CPKG3010.DGN				

000053

AREA 4A KEY PLAN
NORTH SCALE: NONE

0' 10'20'30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE



GRADING PLAN (NE) AREA 4A
SCALE: 1"=30'

PT NO.	NORTHING	EASTING
1	480470.11	1349907.28
2	480464.03	1349940.25
3	480490.25	1350126.76
4	480432.24	1350202.74
5	480460.19	1350365.51
6	480538.03	1350218.24
7	480539.06	1350097.09
8	480558.95	1350065.65
9	480566.69	1349952.70
10	480643.58	1349923.34
11	480648.13	1350024.44
12	480673.61	1350062.95
13	480647.01	1350171.57
14	480702.25	1350205.33
15	480613.20	1350318.40
16	480682.71	1350341.43
17	480636.35	1350369.37
18	480707.81	1350338.51
19	480722.23	1350072.72
20	4807999.32	1349905.24
21	480787.11	1350064.16
22	480782.51	1350133.41
23	480815.33	1350242.76
24	480512.45	1350328.23

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. GRID NUMBERS REFER TO THE UNDERGROUND UTILITIES GRID DRAWINGS AS SHOWN IN UTILITY GRID REFERENCE DRAWING INDEX ON DRAWING 99X-1900-X-00056.
3. FOR EXCAVATION OF ABOVE-WAC AREAS SEE DRAWING 99X-1900-G-00063.
4. FOR REMEDIATION OF HWMU #36, SEE SPECIFICATION SECTION 02205.
5. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02215 AND THE CONTRACTOR'S APPROVED SWMP.
6. FOR ADDITIONAL SECTION LOCATIONS SEE FOUNDATION DRAWINGS.

2890

KEYED NOTES

1. 2ND STREET TO REMAIN UNTIL NEAR END FY2003.
2. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
3. ROAD TO BE CONSTRUCTED BY CONTRACTOR. SEE DRAWING 99X-1900-G-00104 FOR HAUL ROAD DETAIL.
4. PROTECT EXISTING STEAM LINE AND SUPPORT FOUNDATION UNTIL JUNE 2003.
5. INSTALL GMA PLUG IN ACCORDANCE WITH SECTION 02206. FOR GMA PROTECTION BENCH, SEE DETAIL DRAWING 99X-1900-G-00110.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	28JAN00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	03DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	08OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

REVISIONS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
TECHNOLOGIES

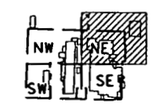
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
GRADING PLAN (NE)
AREA 4A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. THURMAN	28JUL99	J. ALCORN	28JUL99	M. ROBERTS	11JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=30'	CLASS U
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 60% ISSUE		SUBMITTED FOR 90% ISSUE	
TECH LEAD J. ALCORN		TECH LEAD J. ALCORN		TECH LEAD J. ALCORN	
DATE 13AUG99		DATE 01NOV99		DATE 28JAN00	

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800			
LGT PROJECT NO. 300-008919.01	FILENAME CPKG3011.DGN	99X-1900-G-00073	15	1

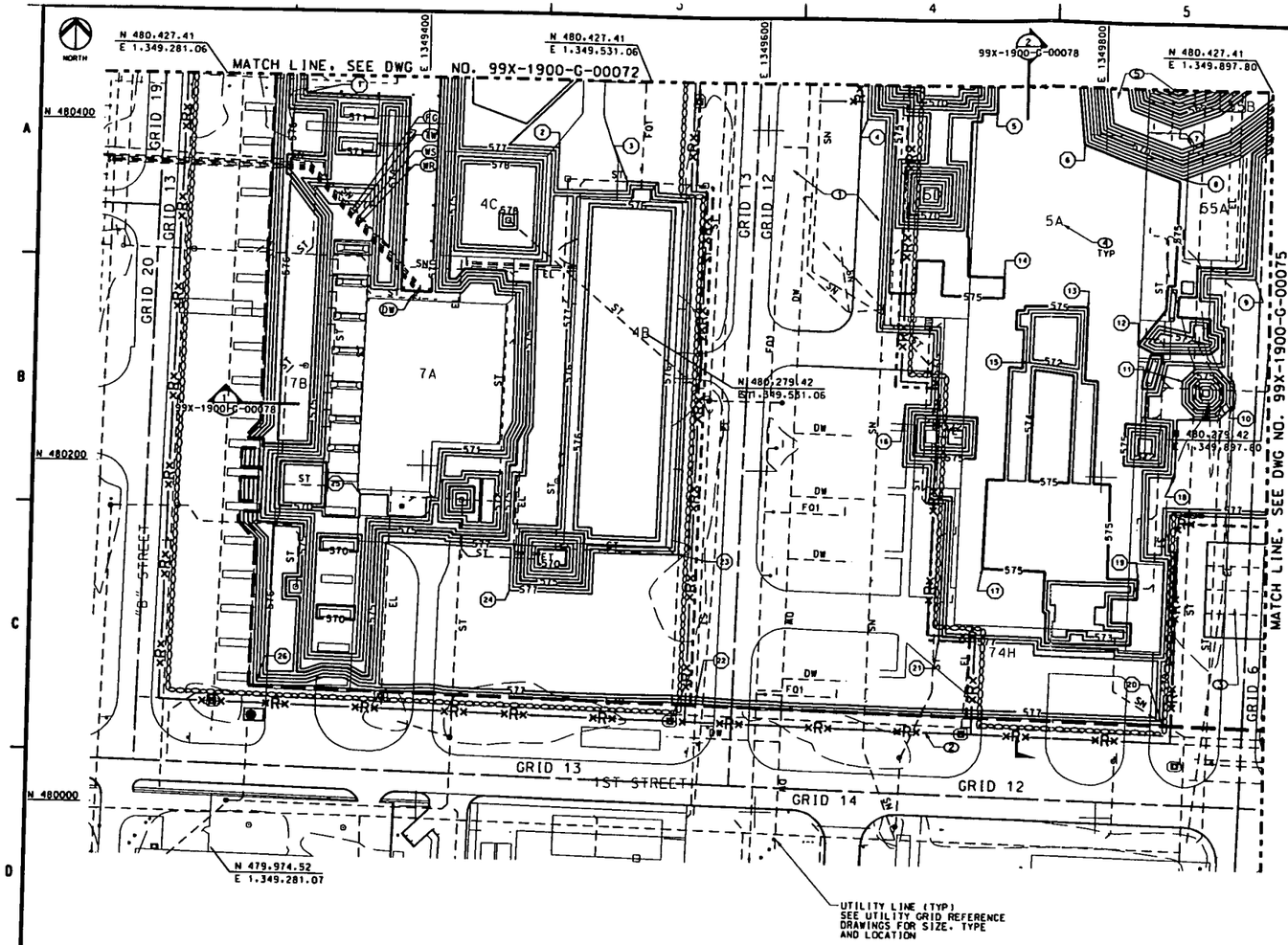
000054



AREA 4A
KEY PLAN
NORTH
SCALE: NONE

0' 10'20'30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE



GRADING PLAN (SW) AREA 4A
SCALE: 1"=30'

PT NO.	NORTHING	EASTING
1	480417.03	1349327.84
2	480387.77	1349477.45
3	480368.86	1349517.56
4	480407.65	1349658.93
5	480411.57	1349735.07
6	480394.07	1349787.04
7	480404.91	1349843.67
8	480375.46	1349846.05
9	480317.64	1349889.50
10	480243.35	1349877.08
11	480257.12	1349847.08
12	480277.88	1349820.55
13	480299.19	1349790.73
14	480315.87	1349740.95
15	480266.41	1349756.39
16	480375.46	1349846.05
17	480145.12	1349731.08
18	480200.37	1349843.33
19	480140.05	1349822.90
20	480055.20	1349838.73
21	480102.13	1349706.61
22	480065.09	1349564.50
23	480150.02	1349552.15
24	480127.59	1349453.26
25	480182.70	1349384.18
26	480071.71	1349305.60

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES. SEE DRAWING 99X-1900-X-00057.
2. GRID NUMBERS REFER TO THE UNDERGROUND UTILITIES GRID DRAWINGS AS SHOWN IN UTILITY GRID REFERENCE DRAWING INDEX ON DRAWING 99X-1900-X-00056.
3. FOR EXCAVATION OF ABOVE-WAC AREAS SEE DRAWING 99X-1900-G-00064.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02215 AND THE CONTRACTOR'S APPROVED SWMP.
5. FOR ADDITIONAL SECTION LOCATIONS SEE FOUNDATION DRAWINGS.

2890

KEYED NOTES

1. RAD AREA. RADIOLOGICAL CONTROL POINT FACILITY AND FENCE TO REMAIN AT AREA 4A THRU FY2002.
2. ADD RAD FENCE FOR FY2003 CONSTRUCTION.
3. RADIOLOGICAL CONTROL POINT FACILITY TO BEGIN FY2003.
4. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
5. INSTALL GMA PLUG IN ACCORDANCE WITH SECTION 02206. FOR GMA PROTECTION BENCH. SEE DETAIL DRAWING 99X-1900-G-00110.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	31MAR00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	09NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

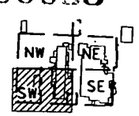
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS & CONSTRUCTORS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
GRADING PLAN (SW)
AREA 4A

DRAWN BY G. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99	CHECKED BY N. ROBERTS	DATE 10JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=30'	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD J. ALCORN DATE 13AUG99		SUBMITTED FOR 60% ISSUE TECH LEAD J. ALCORN DATE 09NOV99		SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN DATE 28JAN00	
T.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO.		SHEET NO.	REV. NO.
LST PROJECT NO. 300-000919.01	FILENAME CPXG3012.DGN	99X-1900-G-00074		16	I

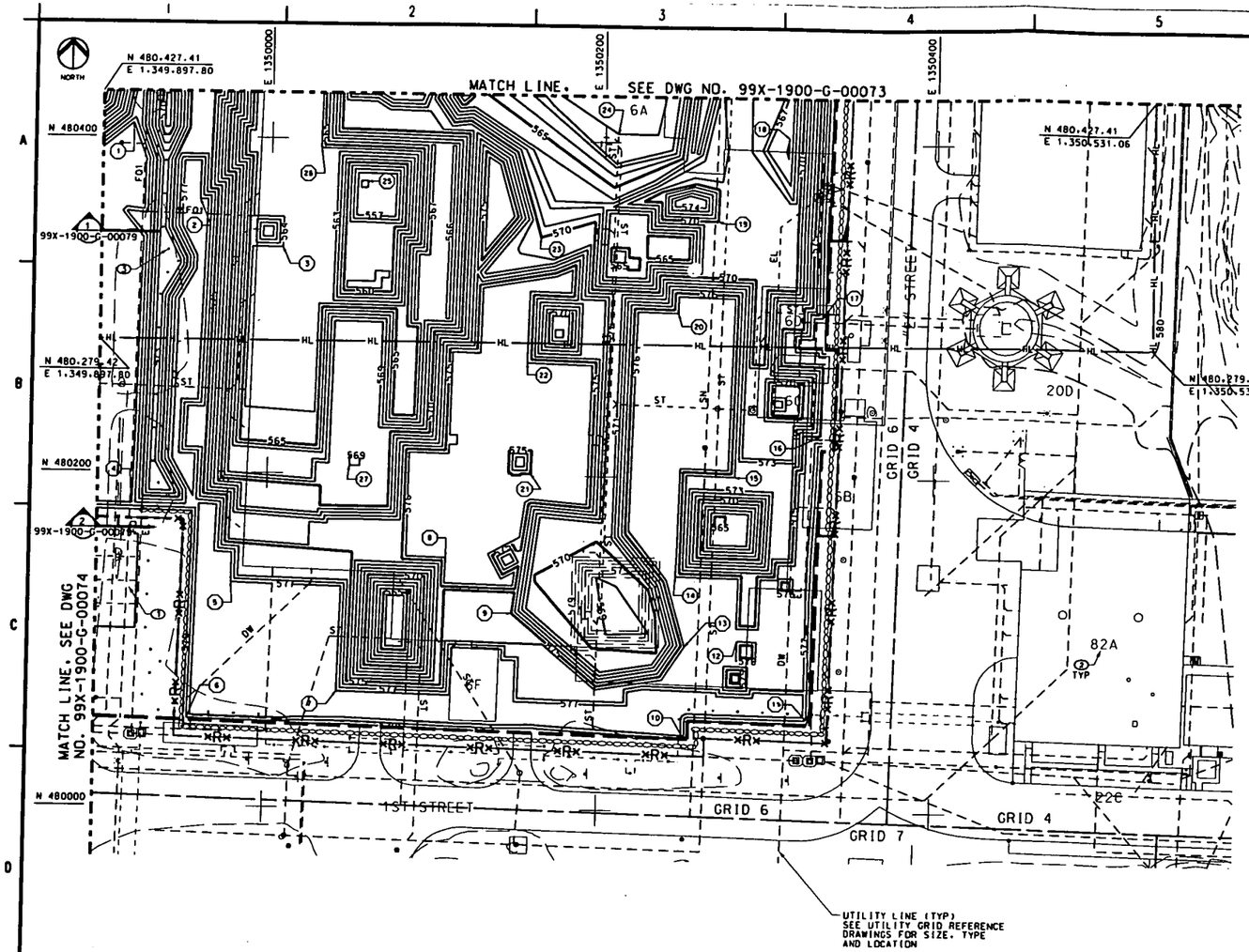
000055



AREA 4A
KEY PLAN
NORTH SCALE: NONE

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

90% ISSUE



GRADING PLAN (SE) AREA 4A
SCALE: 1"=30'

PT NO.	NORTHING	EASTING
1	480408.07	1349916.58
2	480363.10	1349957.25
3	480334.97	1350007.17
4	480181.07	1349919.14
5	480134.16	1349979.11
6	480052.39	1349954.13
7	480069.71	1350043.26
8	480150.31	1350107.82
9	480117.27	1350148.08
10	480043.10	1350252.43
11	480055.61	1350325.16
12	480102.07	1350283.65
13	480098.60	1350251.94
14	480140.61	1350245.94
15	480200.70	1350280.60
16	480226.05	1350331.81
17	480296.54	1350332.30
18	480403.52	1350310.84
19	480353.50	1350268.36
20	480298.44	1350245.30
21	480201.12	1350158.18
22	480267.55	1350155.38
23	480342.41	1350162.40
24	480405.00	1350207.68
25	480374.75	1350057.69
26	480394.38	1350029.30
27	480204.98	1350048.98

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. GRID NUMBERS REFER TO THE UNDERGROUND UTILITIES GRID DRAWINGS AS SHOWN IN UTILITY GRID REFERENCE DRAWING INDEX ON DRAWING 99X-1900-X-00056.
3. FOR EXCAVATION OF ABOVE-WAC AREAS SEE DRAWING 99X-1900-G-00065.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTOR'S APPROVED SWMP.
5. FOR ADDITIONAL SECTION LOCATIONS SEE FOUNDATION DRAWINGS.

2890

KEYED NOTES

1. RADIOLOGICAL CONTROL POINT FACILITY TO BEGIN FY2003.
2. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
3. PROTECT EXISTING STEAM LINE AND SUPPORT FOUNDATION UNTIL JUNE 2003.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
I	ISSUED FOR 90% EPA REVIEW	28JAN00		
H	ISSUED FOR 90% DOE REVIEW	28JAN00		
G	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
F	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
E	ISSUED FOR 60% REVIEW	01NOV99		
D	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
C	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
GRADING PLAN (SE)
AREA 4A

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
G. THURMAN	28JUL99	J. ALCORN	28JUL99	N. ROBERTS	11JAN00

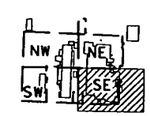
PLANT/BLDG NO.	FLOOR	SCALE	CLASS
FEMP	NONE	1"=30'	U

SUBMITTED FOR 30% REVIEW	SUBMITTED FOR 60% REVIEW	SUBMITTED FOR 90% REVIEW
TECH LEAD J. ALCORN	TECH LEAD J. ALCORN	TECH LEAD J. ALCORN
DATE 13AUG99	DATE 01NOV99	DATE 28JAN00

I.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00075	17	I

LGT PROJECT NO. 300-008919.01 FILENAME CPKG3013.DGN

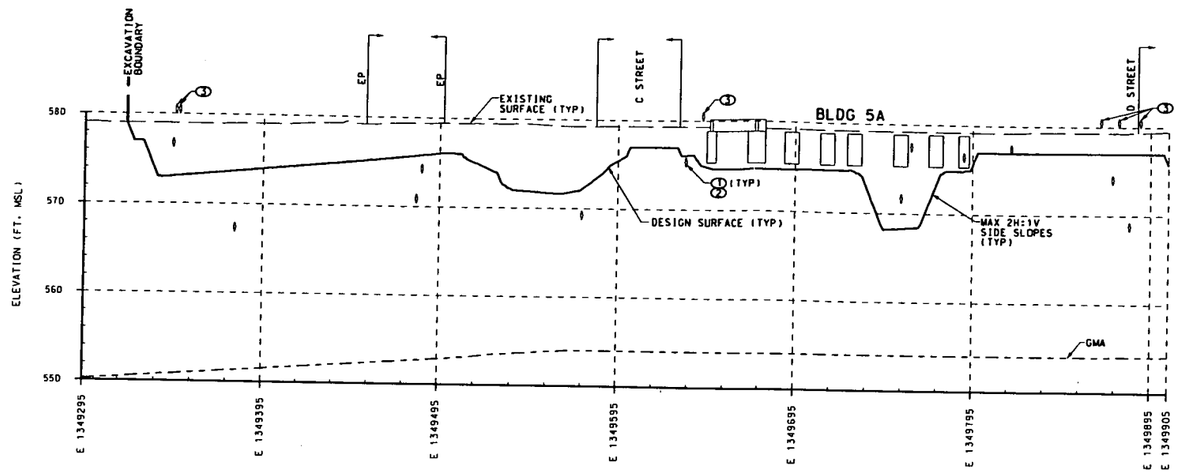
000056



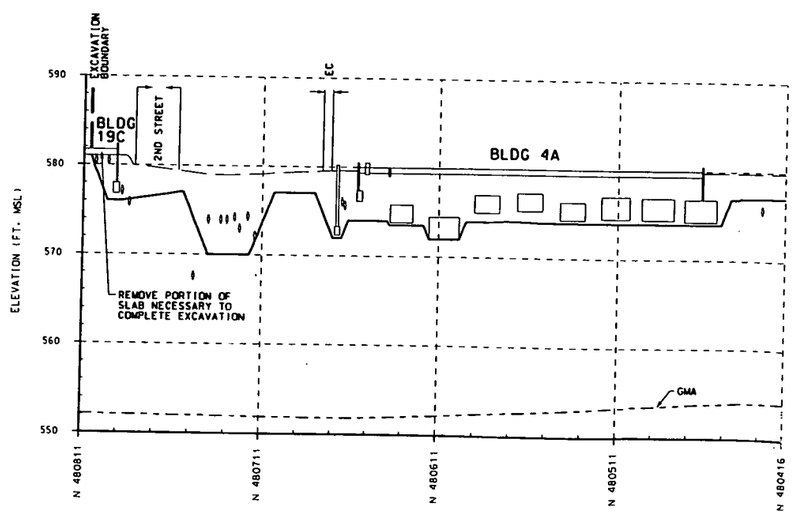
AREA 4A KEY PLAN
NORTH SCALE: NONE

0' 10'20'30' 60' 90'
SCALE: 1 INCH=10 FEET

90% ISSUE



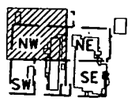
N 480750.5
SECTION 1
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00072



E 1349426.0
SECTION 2
SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00072

SCALE: 1 INCH=30 FEET

SCALE: 1 INCH=6 FEET



AREA 4A KEY PLAN
SCALE: NONE

000057

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	3MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DRAWING NUMBER REASSIGNED DECEMBER 1999 COORDINATION PACKAGE	10DEC99		
B	ISSUED FOR 30% REVIEW	13NOV99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

REVISIONS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

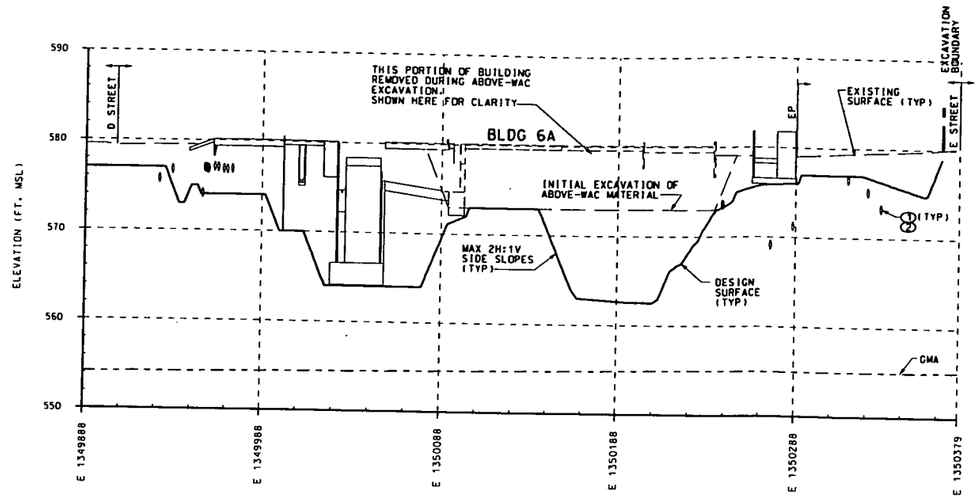
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS AREA 4A
SHEET 1 OF 4

DRAWN BY J. ALCORN	DATE 10DEC99	TECHNICAL LEAD J. ALCORN	DATE 10DEC99
CHECKED BY N. ROBERTS	DATE 11JAN00	PLANT/BUILDING NO. TEMP	FLOOR NONE
SCALE AS NOTED	CLASS U	SUBMITTED FOR 30% ISSUE	SUBMITTED FOR 60% ISSUE
SUBMITTED FOR 90% ISSUE	TECH LEAD NONE	TECH LEAD NONE	TECH LEAD J. ALCORN
DATE NONE	DATE NONE	DATE 28JAN00	

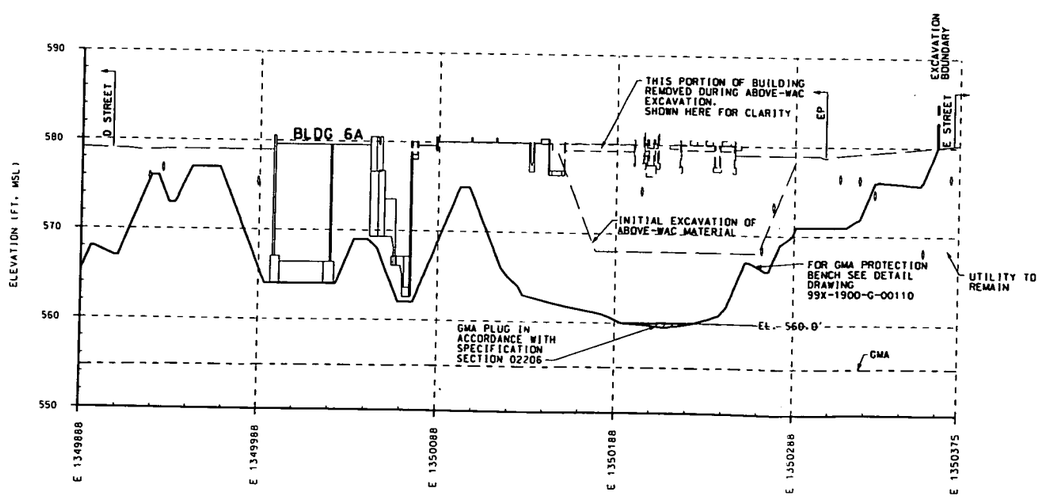
F.S. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00076	18	F
LEI PROJECT NO. 300-008919.01	FILENAME CPKG3020.DGN			



N 480612.0

SECTION 1

SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00073



N 480467.0

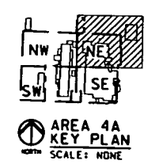
SECTION 2

SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00073

000058

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

0' 2' 4' 6' 12' 18'
SCALE: 1 INCH=6 FEET



AREA 4A KEY PLAN
SCALE: NONE

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	5MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DRAWING NUMBER REASSIGNED DECEMBER 1999 COORDINATION PACKAGE	03DEC99		
B	ISSUED FOR 30% REVIEW	13AUG99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

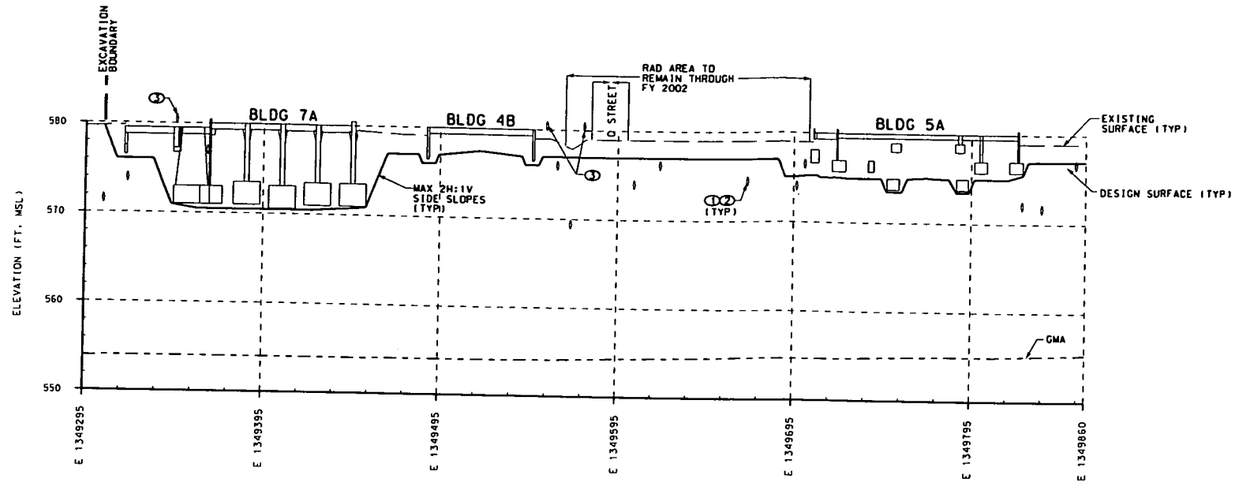
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS AREA 4A
SHEET 2 OF 4

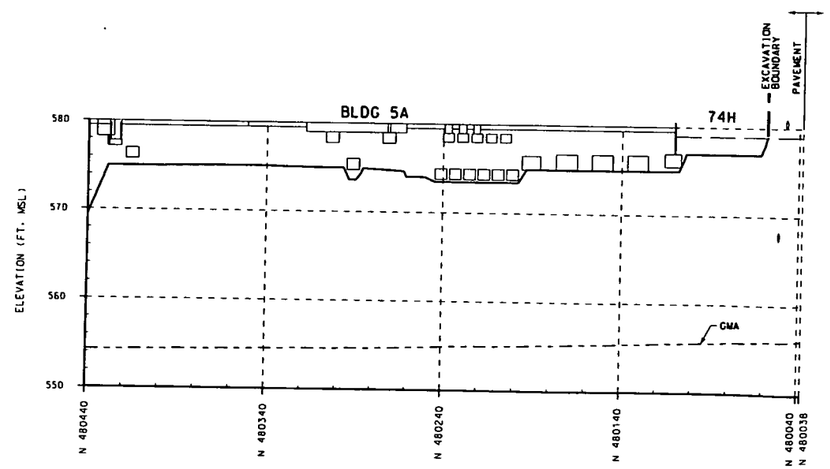
DRAWN BY J. ALCORN	DATE 03DEC99	TECHNICAL LEAD J. ALCORN	DATE 03DEC99
CHECKED BY N. ROBERTS	DATE 11JAN00	PLANT/BLDG. NO. TEMP	FLOOR NONE
SCALE AS NOTED	CLASS U	SUBMITTED FOR 30% REVIEW	SUBMITTED FOR 90% REVIEW
SUBMITTED FOR 90% REVIEW	TECH LEAD NONE	DATE NONE	TECH LEAD NONE
DATE NONE	TECH LEAD J. ALCORN	DATE 28JAN00	T.S. NUMBER L-010
PROJECT NO. 20800	LOT PROJECT NO. 300-009919.01	FILENAME CPKG302.LOGN	DRAWING AREA CODE NO. 99X-1900-G-00077
SHEET NO. 19	REV. NO. F		



N 480235.0

SECTION 1

SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00074



E 1349753.0

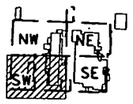
SECTION 2

SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00074

000059

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

0' 2' 4' 6' 12' 18'
SCALE: 1 INCH=6 FEET



AREA 4A KEY PLAN
NORTH SCALE: NONE

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	5MAR00		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
A	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		

INITIALS AND DATE

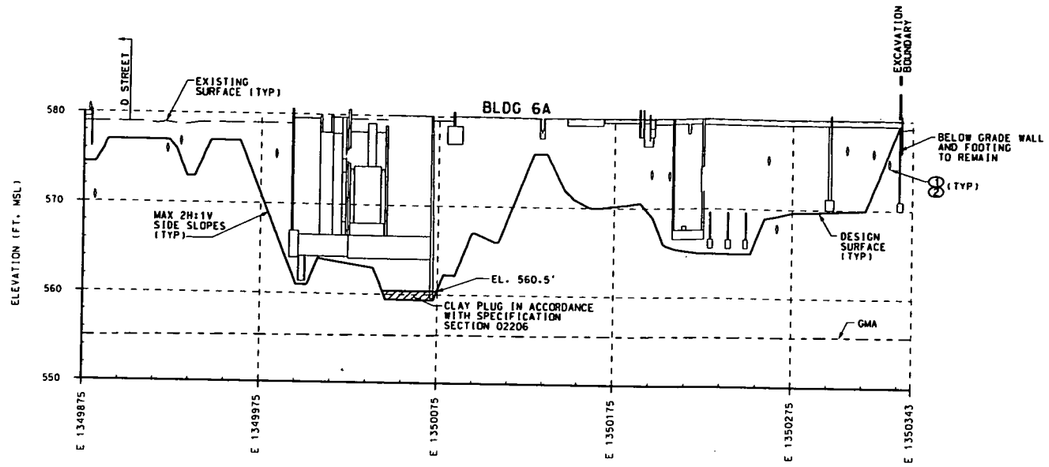
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS AREA 4A
SHEET 3 OF 4

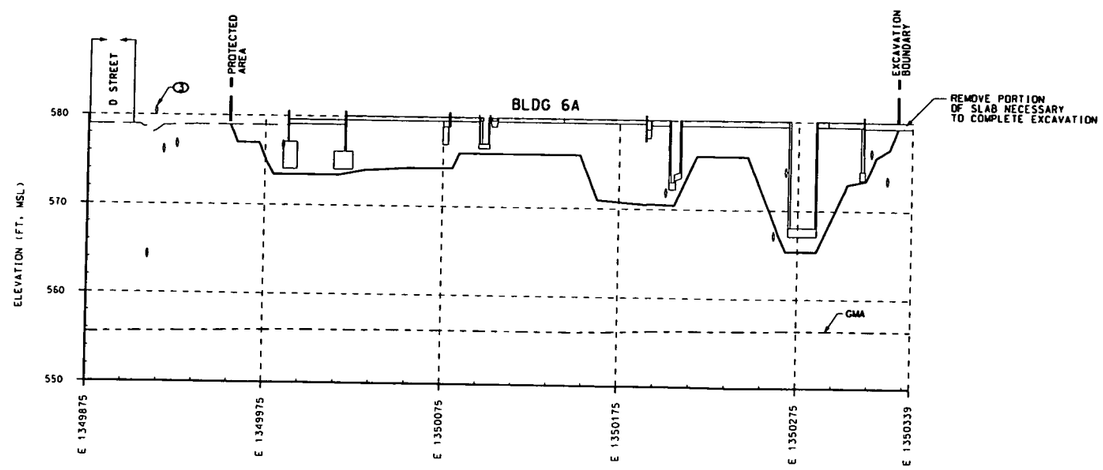
DRAWN BY J. ALCORN	DATE 10DEC99	TECHNICAL LEAD J. ALCORN	DATE 10DEC99
CHECKED BY N. ROBERTS	DATE 11JAN00	PLANT/BLDG. NO. FEMP	FLOOR NONE
SCALE AS NOTED	CLASS U	SUBMITTED FOR 30% ISSUE: TECH LEAD NONE	DATE NONE
SUBMITTED FOR 60% ISSUE: TECH LEAD NONE	DATE NONE	SUBMITTED FOR 90% ISSUE: TECH LEAD J. ALCORN	DATE 28JAN00
T.O. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00078	SHEET NO. 20
LOT PROJECT NO. 300-009910.01	FILENAME CPKG3022.DGN		REV. NO. D



N 480343.0

SECTION 1

SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00075

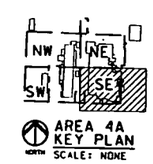


N 480166.0

SECTION 2

SCALE: 1"=30' HORZ 1"=6' VERT 99X-1900-G-00075

000060



AREA 4A KEY PLAN

SCALE: NONE

0' 10' 20' 30' 60' 90'
SCALE: 1 INCH=30 FEET

0' 2' 4' 6' 12' 18'
SCALE: 1 INCH=6 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	30JAN00		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	14JAN00		
A	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

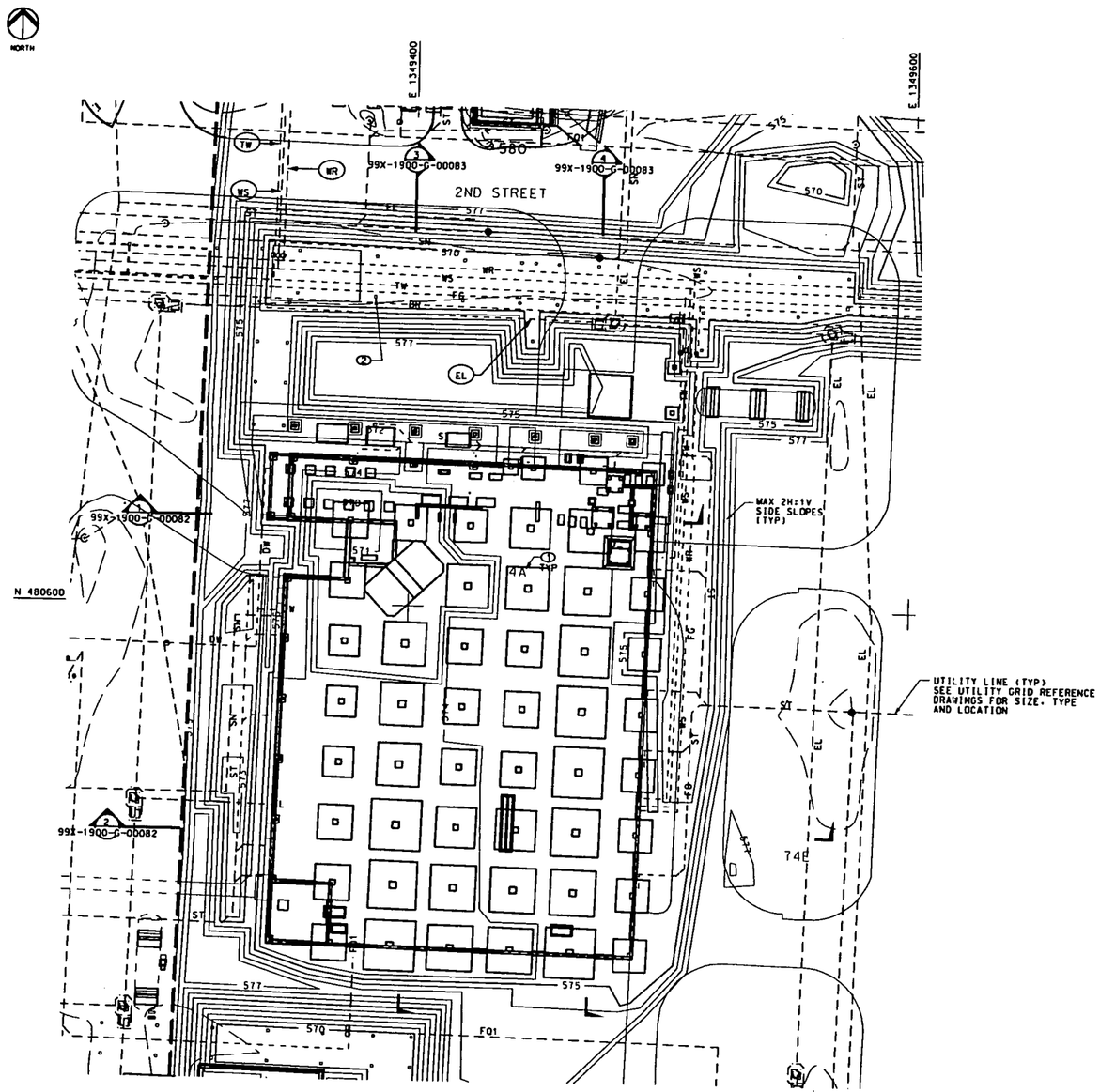
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS AREA 4A
SHEET 4 OF 4

DRAWN BY J. ALCORN	DATE 10DEC99	TECHNICAL LEAD J. ALCORN	DATE 10DEC99
CHECKED BY N. ROBERTS	DATE 14JAN00	PLANT/BLDG. NO. FEMP	FLOOR NONE
SCALE AS NOTED	CLASS U	SUBMITTED FOR 30% ISSUE TECH LEAD NONE	DATE NONE
SUBMITTED FOR 60% ISSUE TECH LEAD NONE	DATE NONE	SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN	DATE 28JAN00
T.A. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00079	SHEET NO. 21
REV. NO. D			

LST PROJECT NO. 300-000919.01 FILENAME CPKG3023.DGN



PLANT 4 FOUNDATIONS
SCALE: 1"=20'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR UNDERGROUND UTILITY GRID REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
3. FOR FOUNDATION REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTOR'S APPROVED SWMP.

2890

KEYED NOTES

1. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
2. PROTECT EXISTING STEAM LINE AND FOUNDATION SUPPORTS UNTIL JUNE 2003.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
H	ISSUED FOR 90% EPA REVIEW	30JUN00		
G	ISSUED FOR 90% DOE REVIEW	28JUN00		
F	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
E	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
D	ISSUED FOR 60% REVIEW	01NOV99		
C	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
B	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS & CONSTRUCTORS

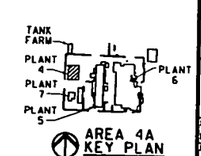
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
PLANT 4 FOUNDATIONS

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
G. THURMAN	28JUL99	J. ALCORN	28JUL99	N. ROBERTS	21JUN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=20'	CLASS U
SUBMITTED FOR 30% BMLR TECH LEAD NONE		SUBMITTED FOR 60% BMLR TECH LEAD J. ALCORN		SUBMITTED FOR 90% BMLR TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JUN00	

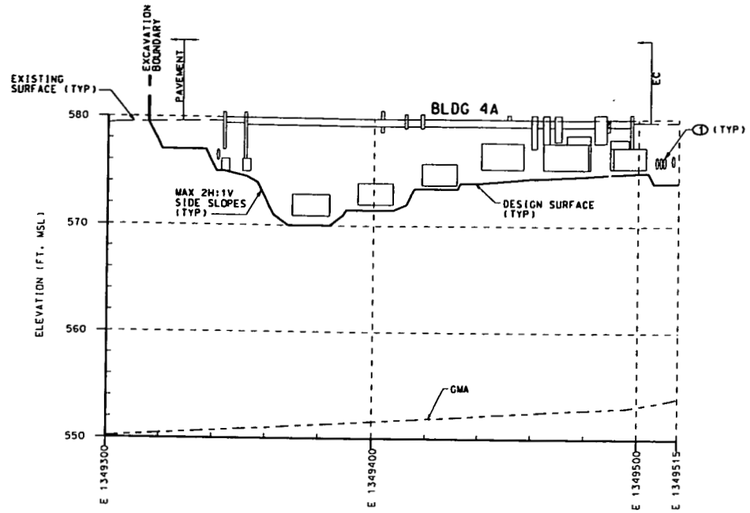
F.A. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00080	22	H
LCI PROJECT NO. 300-008919.01	FILENAME CPKG3030.DGN			

000061



0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

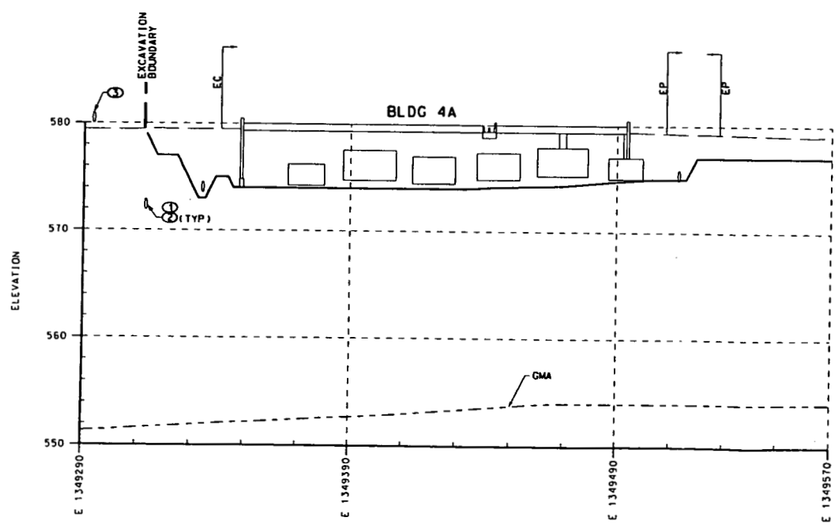
90% ISSUE



N 480635.0

SECTION 1

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00080

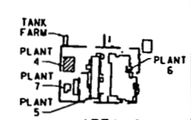


N 480510.0

SECTION 2

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00080

000062



AREA 4A KEY PLAN

SCALE: NONE

SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	28JAN00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	06DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY

LOCKWOOD GREENE

ENGINEERS

PROJECT NAME

SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE

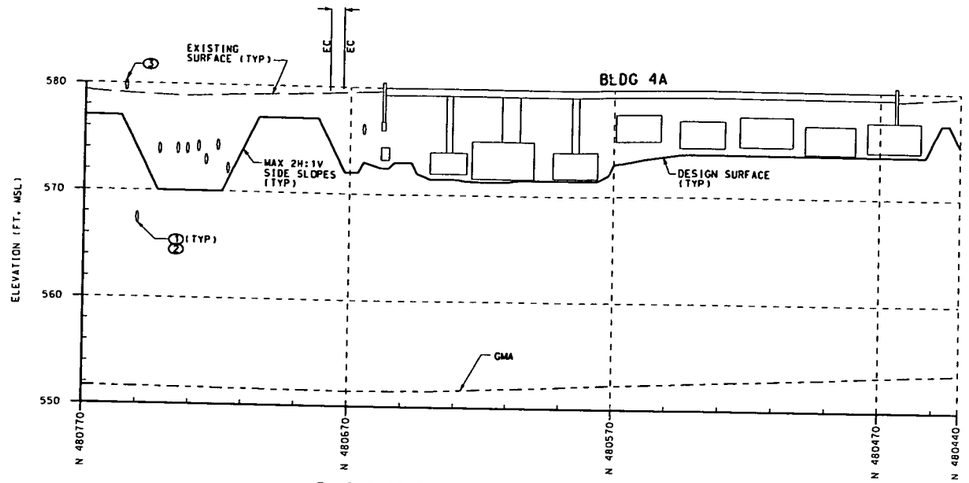
CROSS SECTIONS
PLANT 4

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	27OCT99	J. ALCORN	27OCT99	N. ROBERTS	27JAN00

PLANT/BLDG. NO.: FEMP
FLOOR: NONE
SCALE: AS NOTED
CLASS: U

SUBMITTED FOR 30% ISSUE — TECH LEAD: NONE — DATE: NONE
SUBMITTED FOR 60% ISSUE — TECH LEAD: J. ALCORN — DATE: 01NOV99
SUBMITTED FOR 90% ISSUE — TECH LEAD: J. ALCORN — DATE: 28JAN00

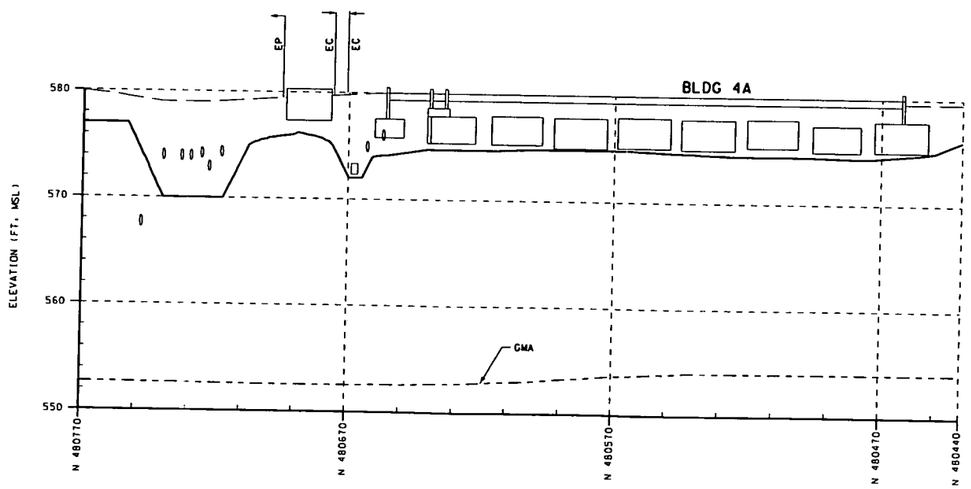
T.S. NUMBER: L-010
PROJECT NO.: 20800
DRAWING INDEX CODE NO.: 99X-1900-G-00082
SHEET NO.: 23
REV. NO.: F
LST PROJECT NO.: 300-009919.01
FILENAME: CPKG3032.DGN



E 1349400.0

SECTION 3

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00080

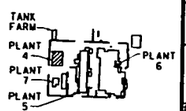


E 1349475.0

SECTION 4

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00080

000063



AREA 4A KEY PLAN

NORTH SCALE: NONE

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

0' 5' 10' 15'
SCALE 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	31MAR00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

INITIALS AND DATE

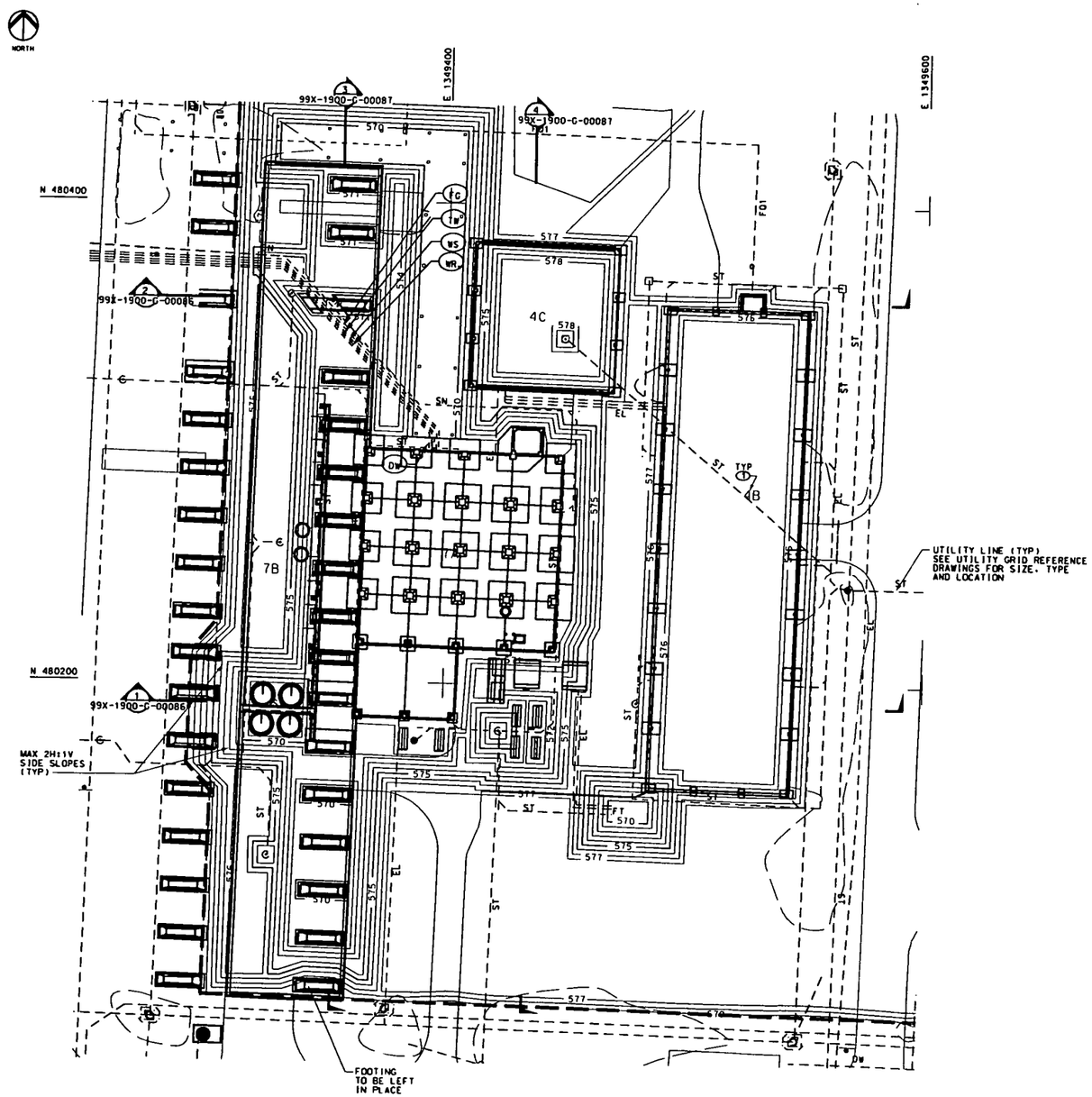
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS
PLANT 4

DRAWN BY C. COX	DATE 27OCT99	TECHNICAL LEAD J. ALCORN	DATE 27OCT99	CHECKED BY N. ROBERTS	DATE 21JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% DATE TECH LEAD NONE		SUBMITTED FOR 60% DATE TECH LEAD J. ALCORN		SUBMITTED FOR 90% DATE TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	
F.A. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00083		SHEET NO. 24	REV. NO. E
LIST PROJECT NO. 300-008919.01	FILENAME CPKG3033.DGN				



PLANT 7 FOUNDATIONS

SCALE: 1"=20'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR UNDERGROUND UTILITY GRID REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
3. FOR FOUNDATION REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTOR'S APPROVED SWMP.

2890

KEYED NOTES

(1) BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
H	ISSUED FOR 90% EPA REVIEW	3MAR00		
G	ISSUED FOR 90% DOE REVIEW	28JAN00		
F	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
E	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
D	ISSUED FOR 60% REVIEW	01NOV99		
C	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
B	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

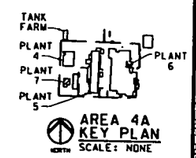
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
TECHNOLOGIES

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
PLANT 7 FOUNDATIONS

DRAWN BY G. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99
CHECKED BY N. ROBERTS	DATE 2JAN00	PLANT/BLDG. NO. FEMP	FLOOR NONE
SCALE 1"=20'	CLASS U	SUBMITTED FOR 30% ISSUE TECH LEAD NONE	DATE NONE
SUBMITTED FOR 60% ISSUE TECH LEAD J. ALCORN	DATE 01NOV99	SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN	DATE 28JAN00
F.D. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO.	SHEET NO. 25
REV. NO. H			
C.S.T. PROJECT NO. 300-008919.01	FILENAME CPKG3034.DGN	99X-1900-G-00084	

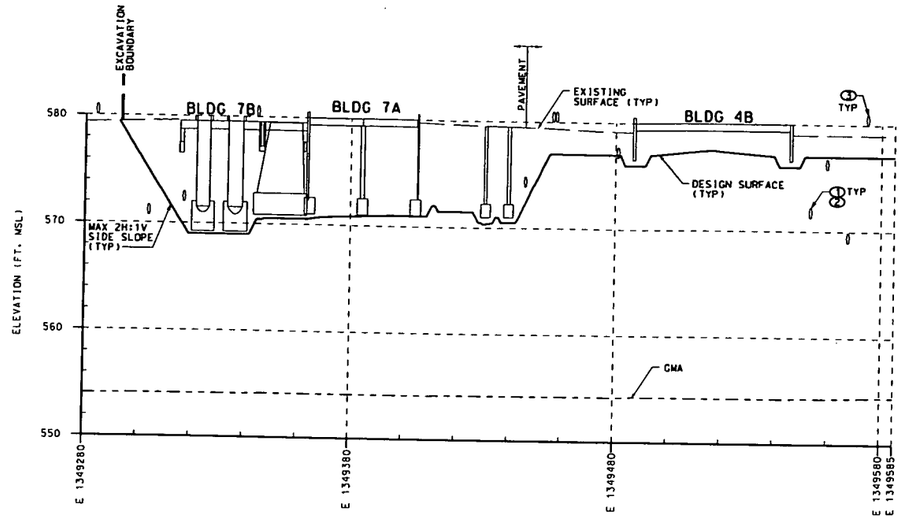
000064



AREA 4A
KEY PLAN
SCALE: NONE

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

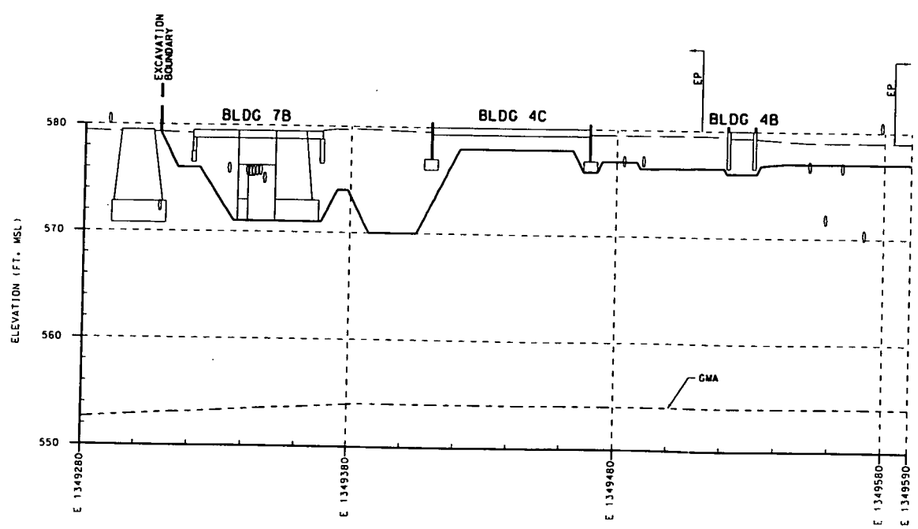
90% ISSUE



N 480191.0

SECTION 1

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-C-00084



N 480360.0

SECTION 2

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-C-00084

000065

AREA 4A KEY PLAN

SCALE: NONE

SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	31MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	15JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	08OCT99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY

LOCKWOOD GREENE

ENGINEERS

PROJECT NAME

SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE

CROSS SECTIONS
PLANT 7

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
C. COX	27OCT99	J. ALCORN	27OCT99	N. ROBERTS	2JUN00

PLANT/BLDG NO. TEMP | FLOOR NONE | SCALE AS NOTED | CLASS U

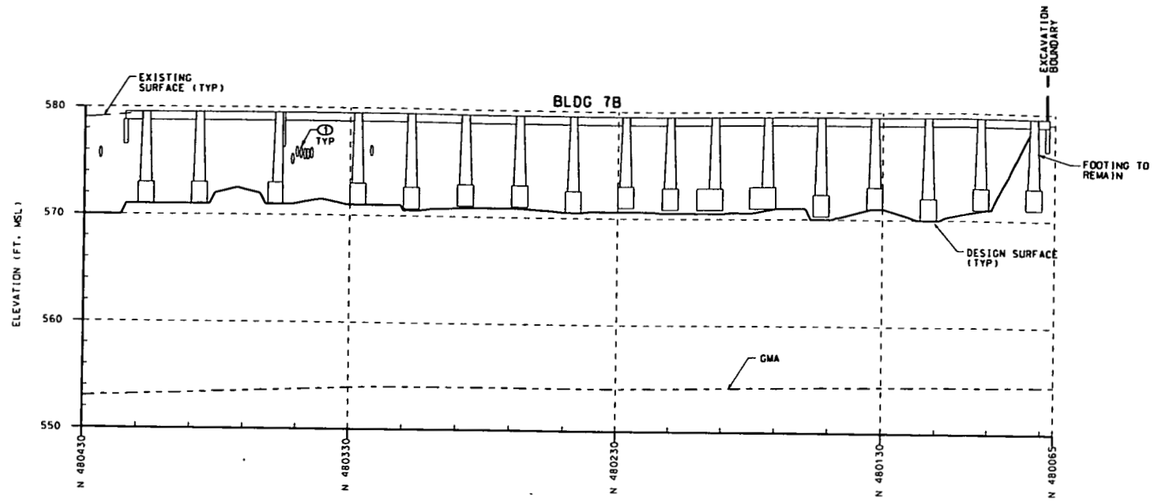
SUBMITTED FOR 30% GBUC | SUBMITTED FOR 60% GBUC | SUBMITTED FOR 90% GBUC

TECH LEAD NONE | TECH LEAD J. ALCORN | TECH LEAD J. ALCORN

DATE NONE | DATE 01NOV99 | DATE 28JAN00

F.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00086	26	F

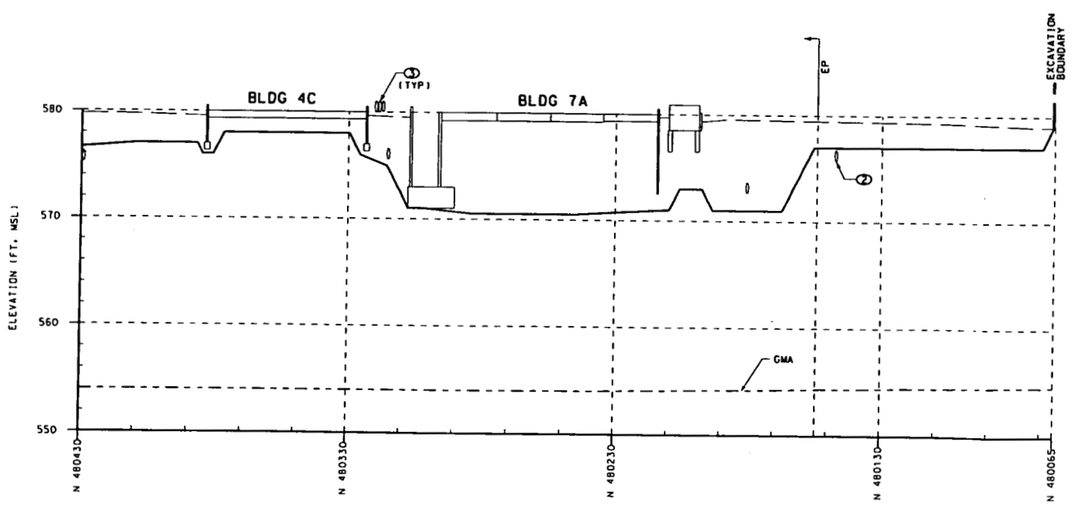
LIST PROJECT NO. 300-008919.01 | FILENAME CPKG3038.DGN



E 1349355.0

SECTION 3 / 99X-1900-G-00084

SCALE: 1"=20' HORZ
1"=5' VERT

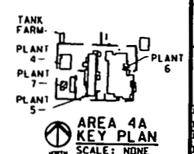


E 1349435.0

SECTION 4 / 99X-1900-G-00084

SCALE: 1"=20' HORZ
1"=5' VERT

000066



AREA 4A KEY PLAN
SCALE: NONE

SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	3JAN000		
D	ISSUED FOR 90% DOE REVIEW	28JAN000		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN000		
B	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

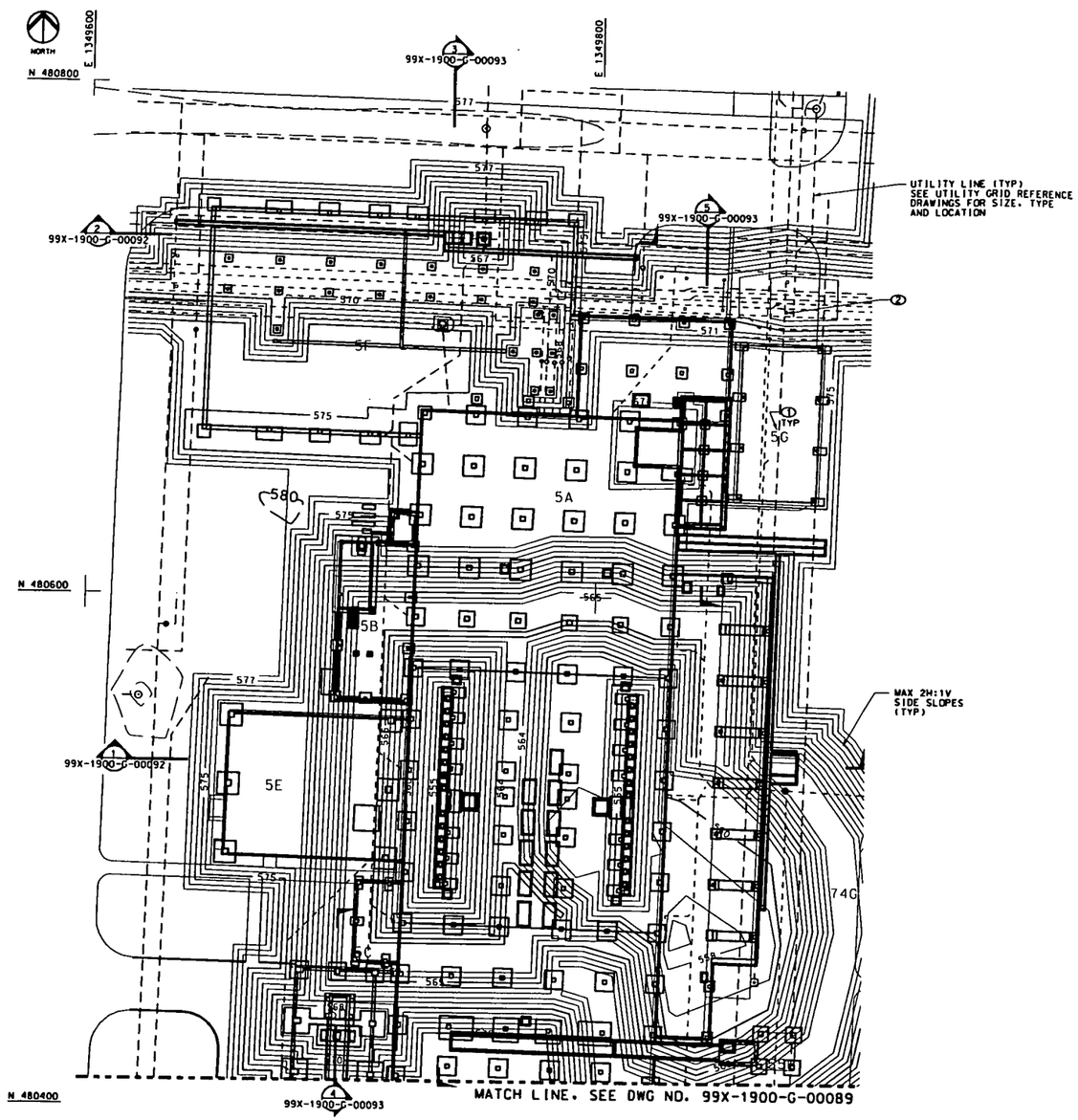
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS
PLANT 7

DRAWN BY C. COX	DATE 27OCT99	TECHNICAL LEAD J. ALCORN	DATE 27OCT99	CHECKED BY N. ROBERTS	DATE 7JAN000
PLANT/BLDG. NO. TEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 90% ISSUE		SUBMITTED FOR 100% ISSUE	
TECH LEAD NONE		TECH LEAD J. ALCORN		TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN000	

T.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00087	27	E
TEST PROJECT NO. 300-008919.01	FILENAME CPKG3037.DGN			



PLANT 5 NORTH FOUNDATIONS
SCALE: 1"=20'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES. SEE DRAWING 99X-1900-X-00057.
2. FOR UNDERGROUND UTILITY GRID REFERENCE. SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
3. FOR FOUNDATION REFERENCE. SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTOR'S APPROVED SWMP.

2890

KEYED NOTES

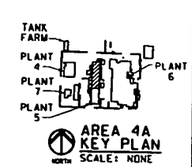
1. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
2. PROTECT EXISTING STEAM LINE AND FOUNDATION SUPPORTS UNTIL JUNE 2003.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
H	ISSUED FOR 90% EPA REVIEW	30JAN00		
G	ISSUED FOR 90% DOE REVIEW	28JAN00		
F	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
E	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
D	ISSUED FOR 60% REVIEW	01NOV99		
C	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
B	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

000067



AREA 4A KEY PLAN
SCALE: NONE

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

90% ISSUE

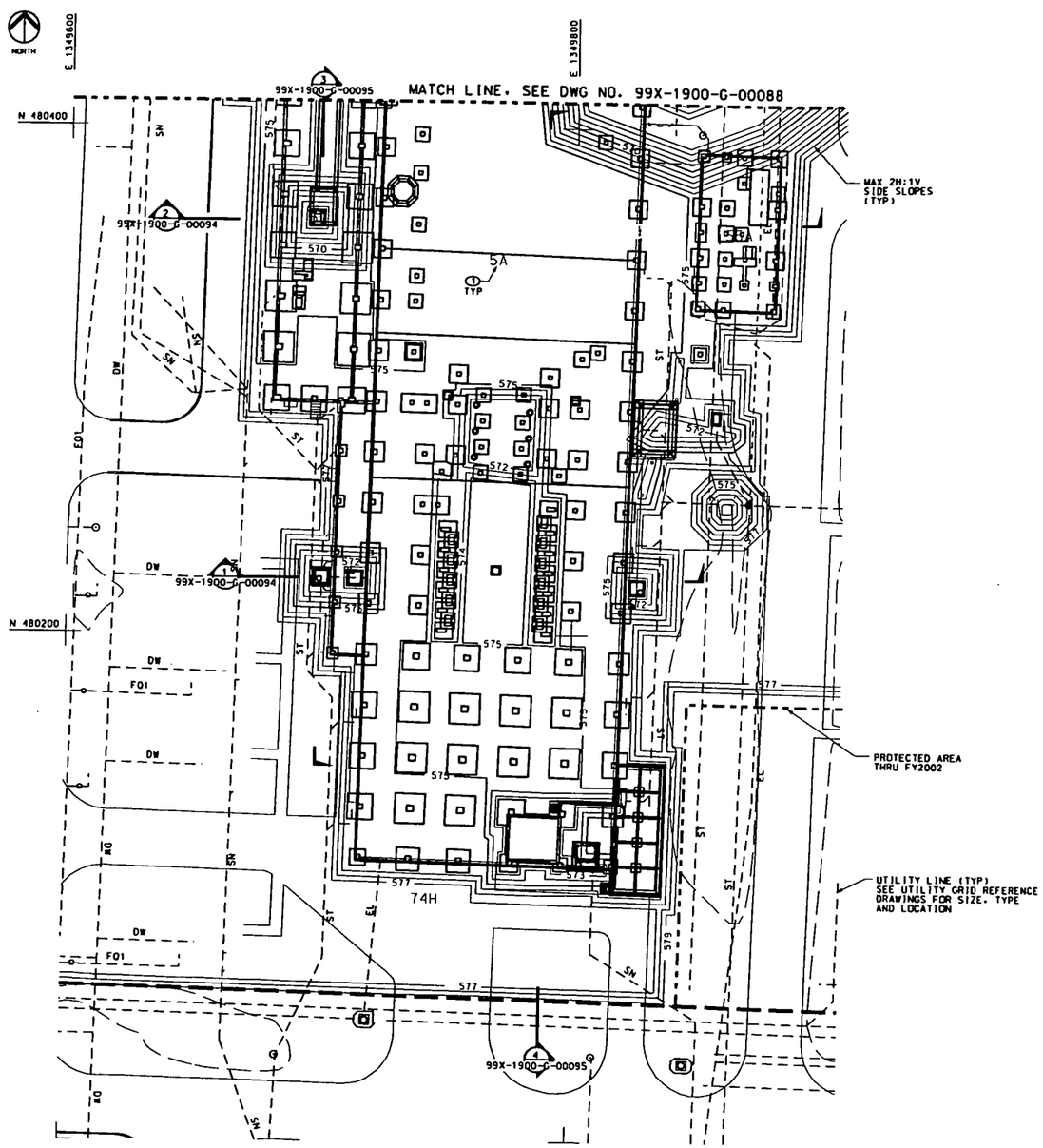
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

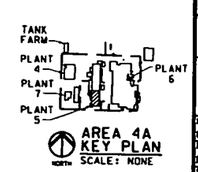
DRAWING TITLE
PLANT 5 NORTH FOUNDATIONS

DRAWN BY G. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99
CHECKED BY N. ROBERTS	DATE 21JAN00	PLANT/BLDG. NO. TEMP	FLOOR NONE
SCALE 1"=20'	CLASS U	SUBMITTED FOR 30% REVIEW	SUBMITTED FOR 60% REVIEW
SUBMITTED FOR 90% REVIEW	TECH LEAD NONE	TECH LEAD J. ALCORN	TECH LEAD J. ALCORN
DATE NONE	DATE 01NOV99	DATE 28JAN00	T.O. NUMBER L-010
PROJECT NO. 20800	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
EST. PROJECT NO. 300-008919.01	FILENAME CPKG3038.DGN	99X-1900-G-00088	28 H



PLANT 5 SOUTH FOUNDATIONS
SCALE: 1"=20'

000068



AREA 4A KEY PLAN
SCALE: NONE

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR UNDERGROUND UTILITY GRID REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
3. FOR FOUNDATION REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTOR'S APPROVED SWMP.

2890

KEYED NOTES

(1) BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
H	ISSUED FOR 90% EPA REVIEW	31MAR00		
G	ISSUED FOR 90% DOE REVIEW	28JAN00		
F	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
E	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
D	ISSUED FOR 60% REVIEW	01NOV99		
C	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
B	SEPTEMBER 1999 COORDINATION PACKAGE	27SEP99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

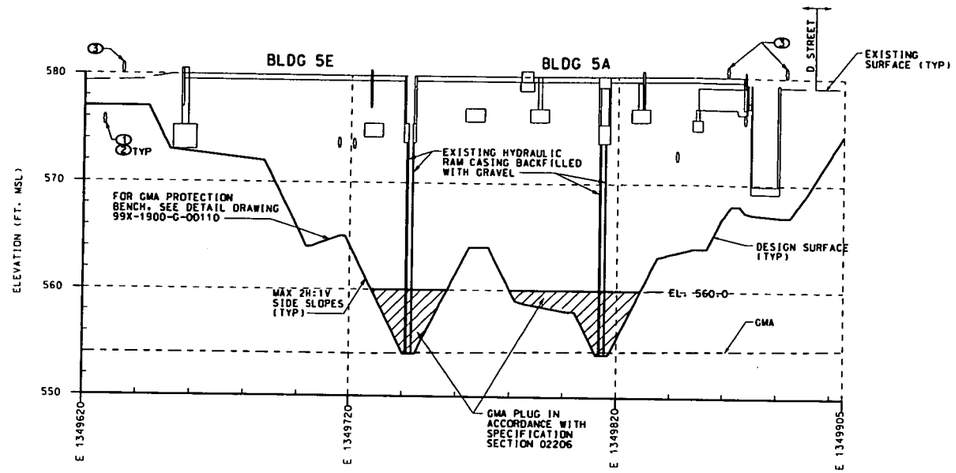
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
PLANT 5 SOUTH FOUNDATIONS

DRAWN BY G. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99	CHECKED BY N. ROBERTS	DATE 21JAN00
PLANT/BLDG NO. FEMP		TLCDR NONE		SCALE 1"=20'	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD NONE		SUBMITTED FOR 60% ISSUE TECH LEAD J. ALCORN		SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

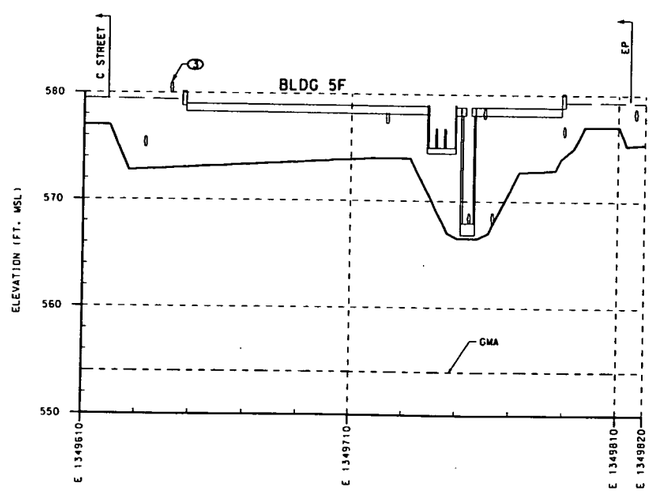
F.D. NUMBER L-010	PROJECT NO. 20300	DRAWING INDEX CODE NO. 99X-1900-G-00089	SHEET NO. 29	REV. NO. H
LCI PROJECT NO. 300-008919.01	FILENAME CPKG3039.DGN			



N 480535.0

SECTION 1

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00088

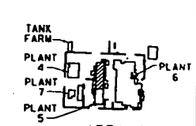


N 480740.0

SECTION 2

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00088

000069



AREA 4A KEY PLAN
NORTH SCALE: NONE

0' 10' 20' 40' 60'
SCALED 1 INCH=20 FEET

0' 5' 10' 15'
SCALED 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR TYPICAL BENCH DETAIL, SEE DRAWING 99X-1900-G-00104.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	3MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

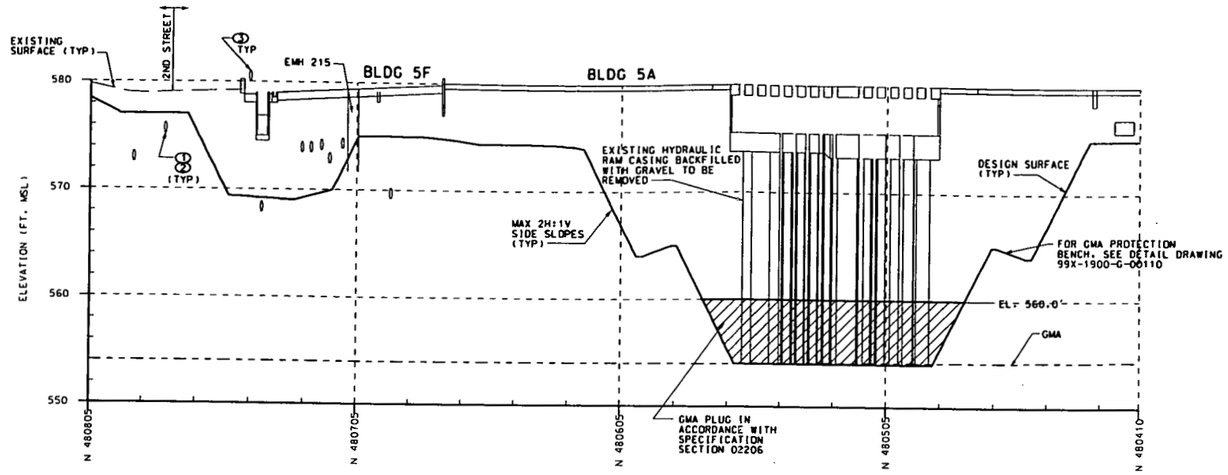
PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS
PLANT 5

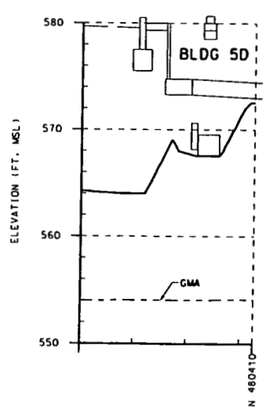
DRAWN BY C. THURMAN	DATE 28JAN99	TECHNICAL LEAD J. ALCORN	DATE 28JAN99
PLANT/AREA NO. F.E.MP	FLOOR NONE		
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 60% ISSUE	
TECH LEAD NONE		TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99	

CHECKED BY N. ROBERTS	DATE 7JAN00	SCALE AS NOTED	CLASS U
SUBMITTED FOR 90% ISSUE			
TECH LEAD J. ALCORN			
DATE 28JAN00			

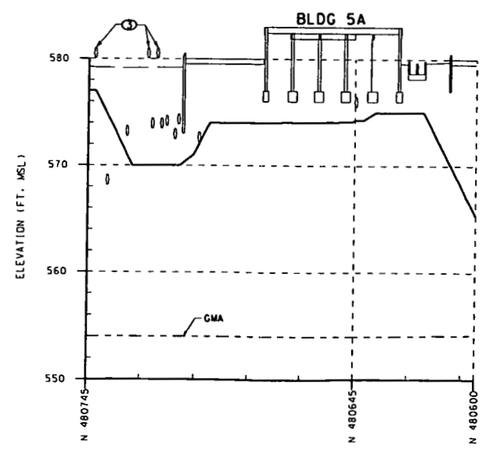
F.D. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00092	SHEET NO. 30	REV. NO. F
LIST PROJECT NO. 300-008919.01	FILENAME CPKG3042.DGN			



E 1349742.0
SECTION (3) 99X-1900-G-00088
SCALE: 1"=20' HORZ
1"=5' VERT

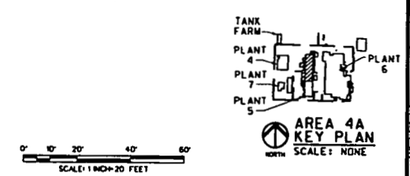


E 1349701.0
SECTION (4) 99X-1900-G-00088
SCALE: 1"=20' HORZ
1"=5' VERT



E 1349842.0
SECTION (5) 99X-1900-G-00088
SCALE: 1"=20' HORZ
1"=5' VERT

000070



0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

0' 5' 10' 15'
SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR TYPICAL BENCH DETAIL, SEE DRAWING 99X-1900-G-00104.

2890

KEYED NOTES

(1) PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.

(2) REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

(3) UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV NO	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	31MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	14JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

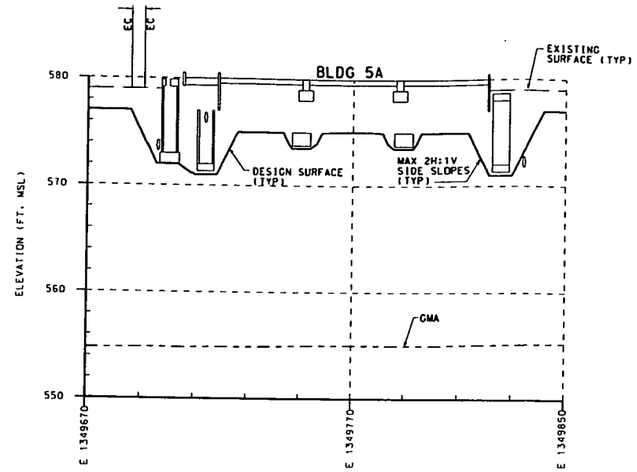
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SOFP REMEDIATION OF AREAS 3A/4A - PKG. II

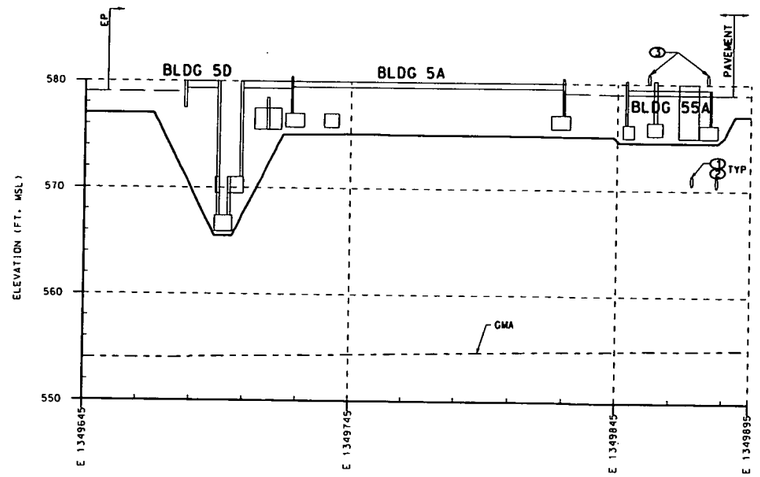
DRAWING TITLE
CROSS SECTIONS
PLANT 5

DRAWN BY	DATE	TECHNICAL LEAD	DATE	CHECKED BY	DATE
G. THURMAN	28JAN00	J. ALCORN	28JAN00	N. ROBERTS	28JAN00
PLANT/BLDG NO.		FLOOR		SCALE	CLASS
FEMP		NONE		AS NOTED	U
SUBMITTED FOR 30% REVIEW		SUBMITTED FOR 60% REVIEW		SUBMITTED FOR 90% REVIEW	
TECH LEAD NONE		TECH LEAD J. ALCORN		TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

T.O. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00093	31	F
LGT PROJECT NO. 300-008919.01	FILENAME CPKG3043.DGN			

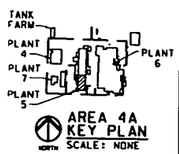


N 480222.0
SECTION 1
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00089



N 480363.0
SECTION 2
SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00089

000071



AREA 4A KEY PLAN
SCALE: NONE

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

0' 5' 10' 15'
SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-0005T.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	[illegible]		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	[illegible]		
B	DECEMBER 1999 COORDINATION PACKAGE	[illegible]		
A	ISSUED FOR 60% REVIEW	01NOV99		

REVISIONS AND DATE

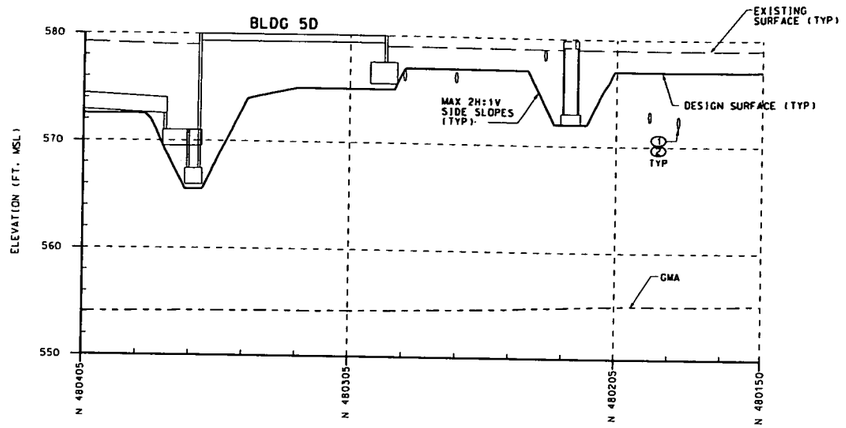
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

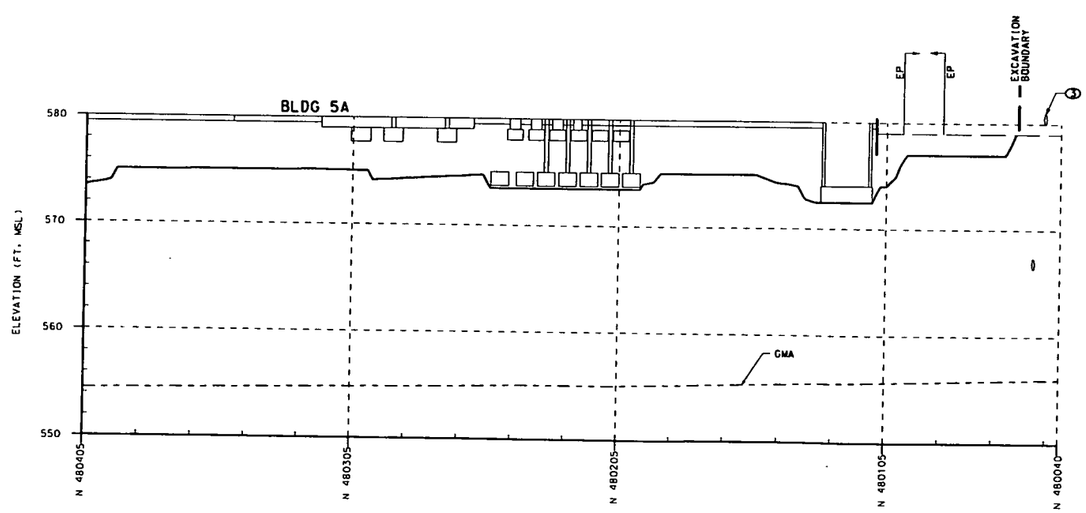
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS
PLANT 5

DRAWN BY G. THURMAN	DATE 28JAN99	TECHNICAL LEAD J. ALCORN	DATE 28JAN99
CHECKED BY N. ROBERTS	DATE 28JAN00	PLANT/BLDG. NO. FEMP	FLOOR NONE
SCALE AS NOTED	SIZE U	SUBMITTED FOR 30% REVIEW TECH LEAD NONE	DATE NONE
SUBMITTED FOR 60% REVIEW TECH LEAD J. ALCORN	DATE 01NOV99	SUBMITTED FOR 90% REVIEW TECH LEAD J. ALCORN	DATE 28JAN00
T.O. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00094	SHEET NO. 32
REV. NO. E			
LCI PROJECT NO. 300-00891D.01	FILENAME CPKG3044.DGN		

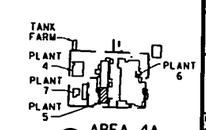


E 1349699.0
SECTION 3
SCALE: 1"=20' HORZ 99X-1900-G-00089
1"=5' VERT



E 1349789.0
SECTION 4
SCALE: 1"=20' HORZ 99X-1900-G-00089
1"=5' VERT

000072



AREA 4A KEY PLAN
SCALE: NONE

SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES. SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION. LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
3. UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	28JAN00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

INITIALS AND DATE

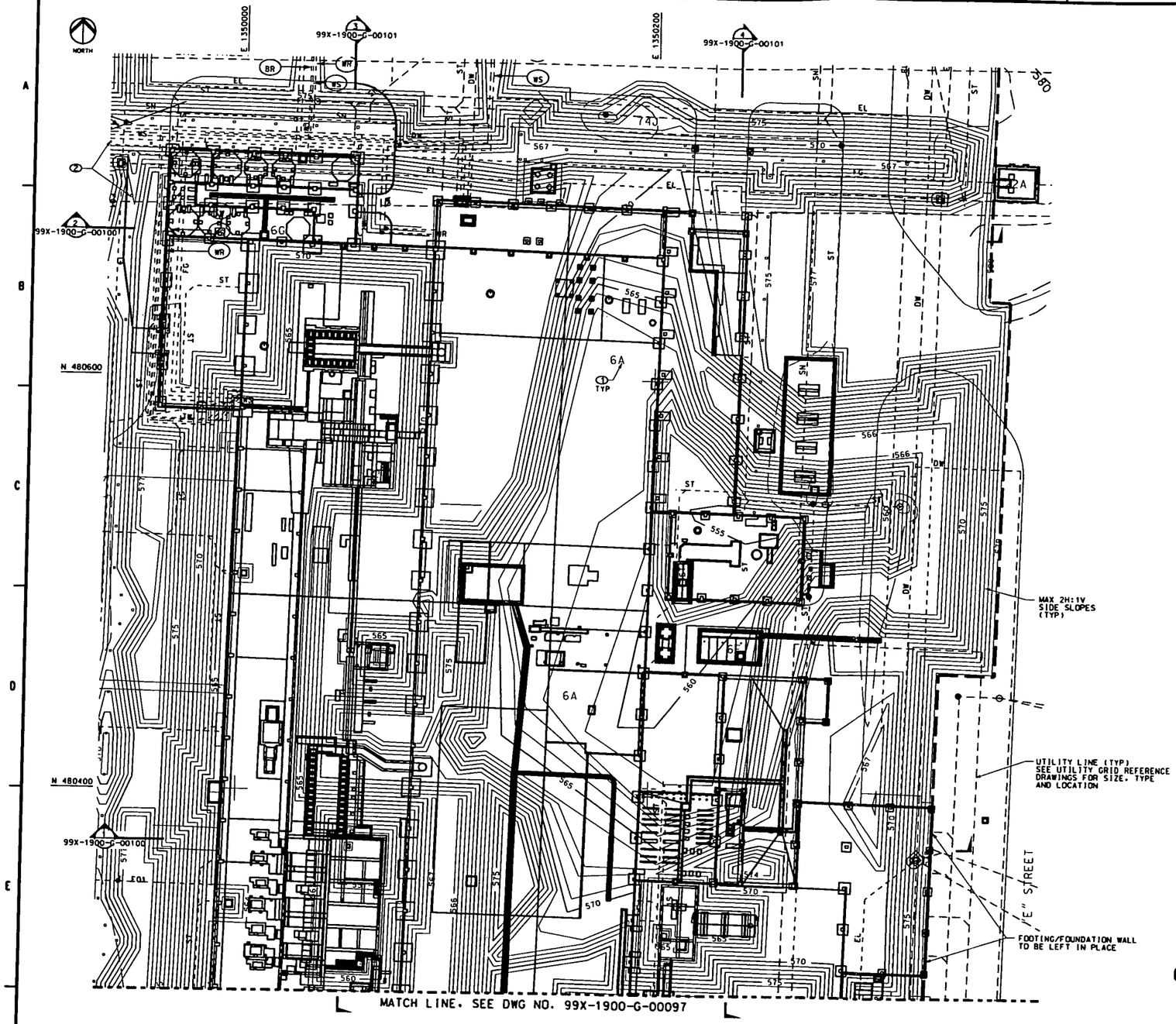
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

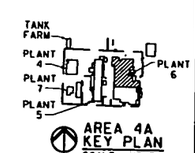
DRAWING TITLE
CROSS SECTIONS
PLANT 5

DRAWN BY G. THURMAN	DATE 28JAN00	TECHNICAL LEAD J. ALCORN	DATE 28JAN00	CHECKED BY M. ROBERTS	DATE 28JAN00
PLANT/BLDG NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD NONE		SUBMITTED FOR 60% ISSUE TECH LEAD J. ALCORN		SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	
T.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00095		SHEET NO. 33	REV. NO. E
LBI PROJECT NO. 300-008919.01	FILENAME CPKG3045.DGN				



PLANT 6 NORTH FOUNDATIONS
SCALE: 1"=20'

000073



0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR UNDERGROUND UTILITY GRID REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
3. FOR FOUNDATION REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTOR'S APPROVED SWMP.

2890

KEYED NOTES

1. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
2. PROTECT EXISTING STEAM LINE AND FOUNDATION SUPPORTS UNTIL JUNE 2003.

REF DWG NO.	DRAWING TITLE

REV NO	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
H	ISSUED FOR 90% EPA REVIEW	30MAR00		
G	ISSUED FOR 90% DOE REVIEW	28JAN00		
F	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
E	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
D	ISSUED FOR 60% REVIEW	09NOV99		
C	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		
B	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

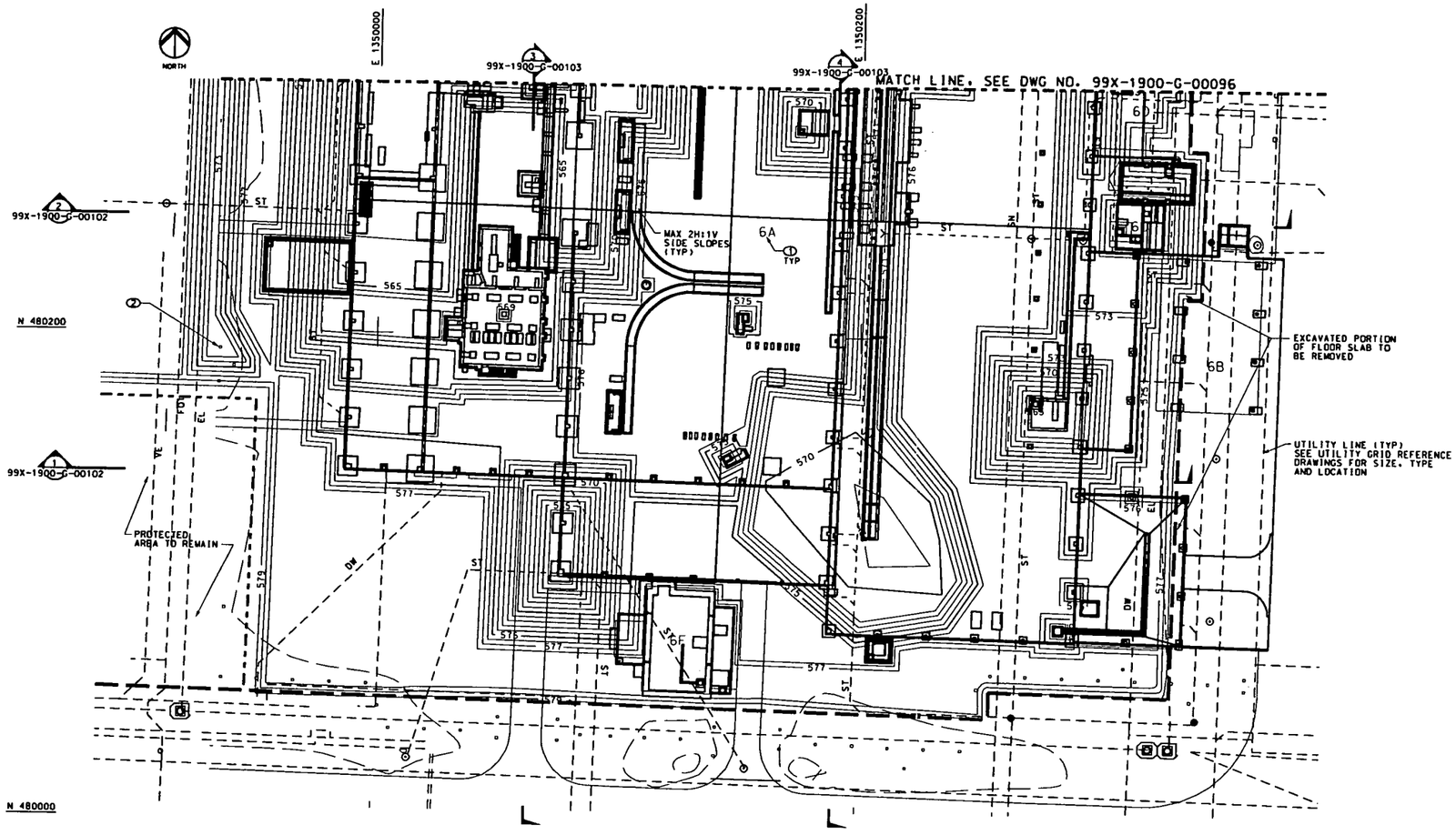
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
PLANT 6 NORTH FOUNDATIONS

DRAWN BY G. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99	CHECKED BY N. ROBERTS	DATE 21JAN00
PLANT/BLDG. NO. FEMP		PLDGB NONE		SCALE 1"=20'	CLASS U
SUBMITTED FOR 30% ISSUE		SUBMITTED FOR 60% ISSUE		SUBMITTED FOR 90% ISSUE	
TECH LEAD NONE		TECH LEAD J. ALCORN		TECH LEAD J. ALCORN	
DATE NONE		DATE 09NOV99		DATE 28JAN00	
F.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00096		SHEET NO. 34	REV. NO. H
LST PROJECT NO. 300-008979.01	FILENAME CPKG3046.DGN				



PLANT 6 SOUTH FOUNDATIONS
SCALE: 1"=20'

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR UNDERGROUND UTILITY GRID REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
3. FOR FOUNDATION REFERENCE, SEE DRAWING INDEX ON DRAWING 99X-1900-X-00058.
4. DEWATER EXCAVATION IN ACCORDANCE WITH SPECIFICATION SECTION 02275 AND THE CONTRACTOR'S APPROVED SWMP.

2890

KEYED NOTES

1. BUILDING NUMBERS REFER TO FORMER LOCATIONS OF BUILDINGS OR PADS.
2. PROTECT EXISTING STEAM LINE AND FOUNDATION SUPPORTS UNTIL JUNE 2003.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
H	ISSUED FOR 90% EPA REVIEW	5MAR00		
G	ISSUED FOR 90% DOE REVIEW	28JAN00		
F	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
E	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
D	ISSUED FOR 60% REVIEW	01NOV99		
C	OCTOBER 1999 COORDINATION PACKAGE	11OCT99		
B	SEPTEMBER 1999 COORDINATION PACKAGE	22SEP99		
A	JULY 1999 COORDINATION PACKAGE	28JUL99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
PLANT 6 SOUTH FOUNDATIONS

DRAWN BY G. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99	CHECKED BY N. ROBERTS	DATE 7JAN00
PLANT/BLDG. NO. FEMP		FLOOR NONE		SCALE 1"=20'	CLASS U
SUBMITTED FOR 30% REVIEW TECH LEAD NONE		SUBMITTED FOR 60% REVIEW TECH LEAD J. ALCORN		SUBMITTED FOR 90% REVIEW TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	
T.O. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00097		SHEET NO. 35	REV. NO. H
LEX PROJECT NO. 300-008919.01	FILENAME CP:G3047.DGN				

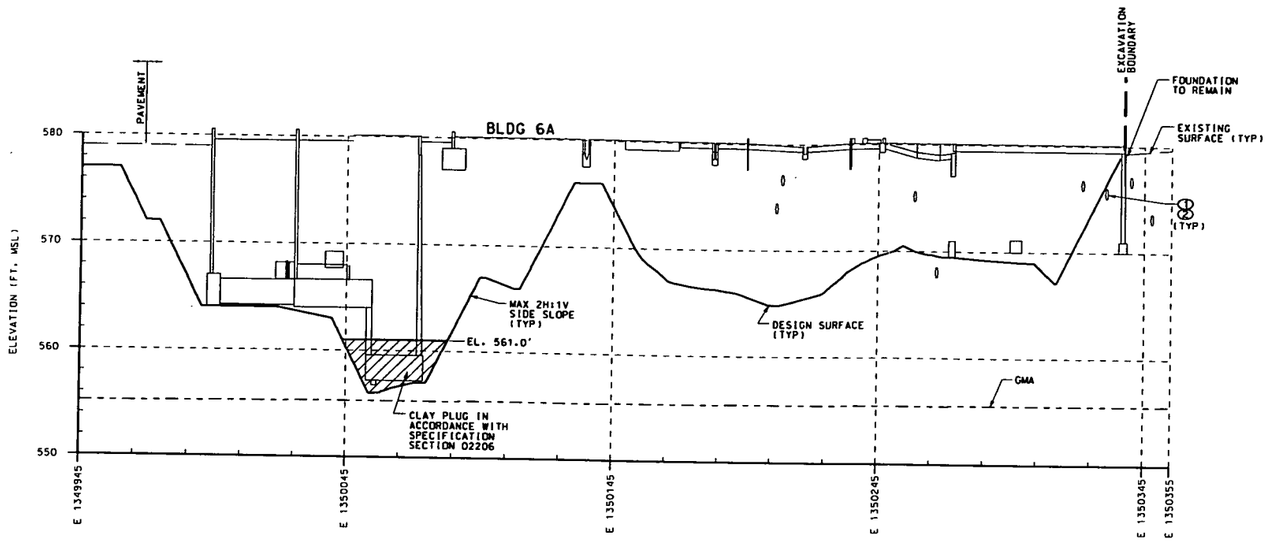
AREA 4A KEY PLAN
NORTH SCALE: NONE

TANK FARM, PLANT 4, PLANT 7, PLANT 5, PLANT 6

0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

90% ISSUE

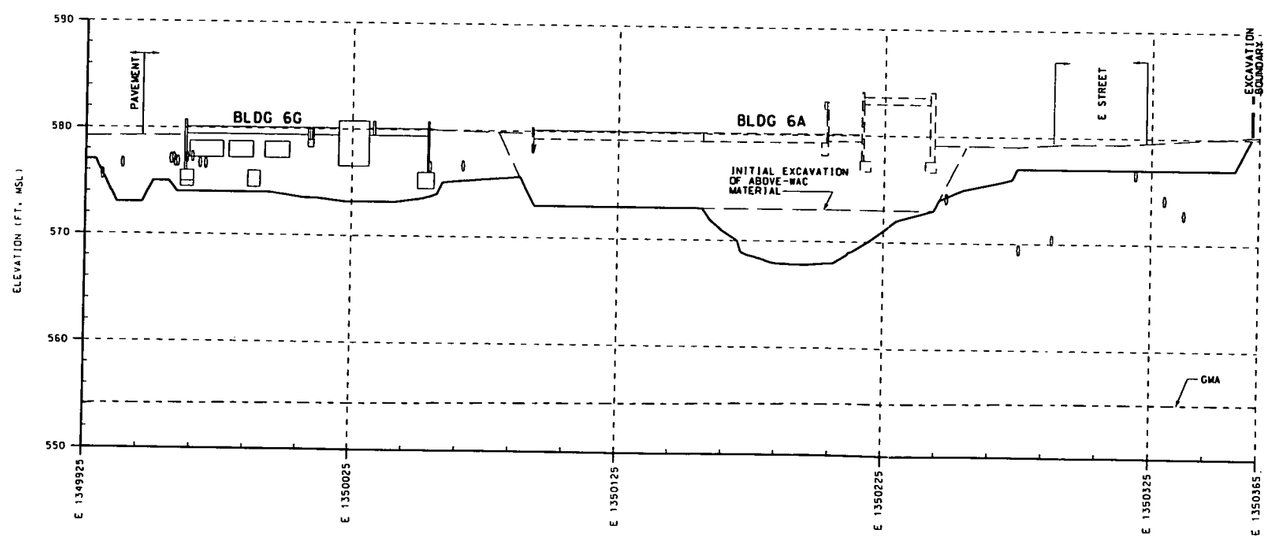
000074



N 480375.0

SECTION 1

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00096

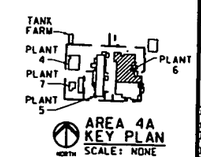


N 480670.0

SECTION 2

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00096

000075



0' 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

0' 5' 10' 15'
SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR TYPICAL BENCH DETAIL, SEE DRAWING 99X-1900-G-00104.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	31MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

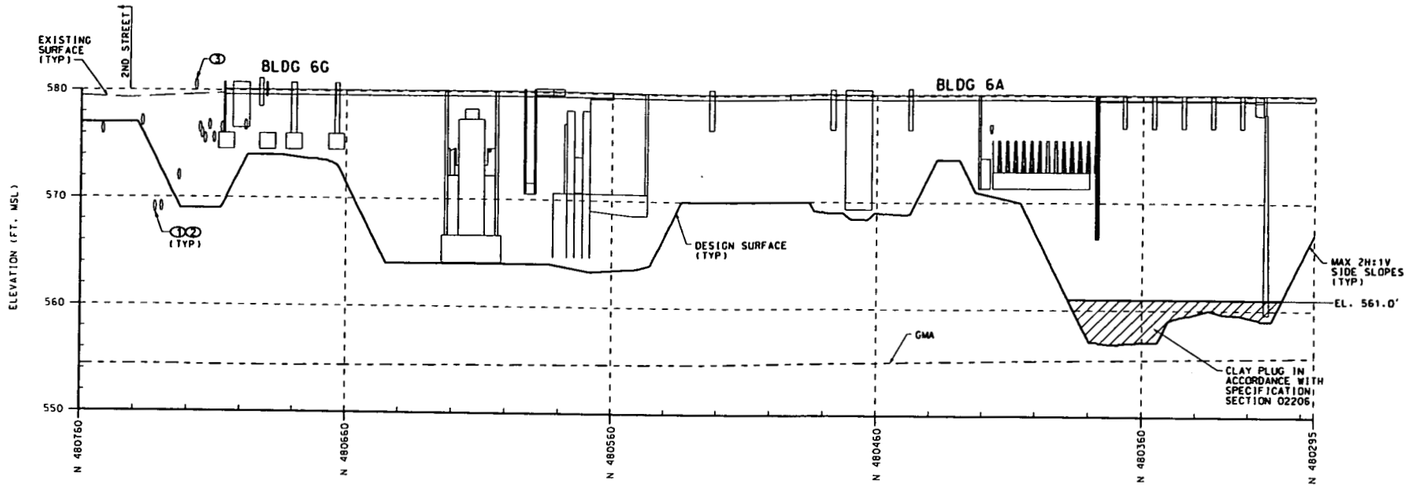
THIS DRAWING PREPARED BY
LOCKWOOD GREENE TECHNOLOGIES

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

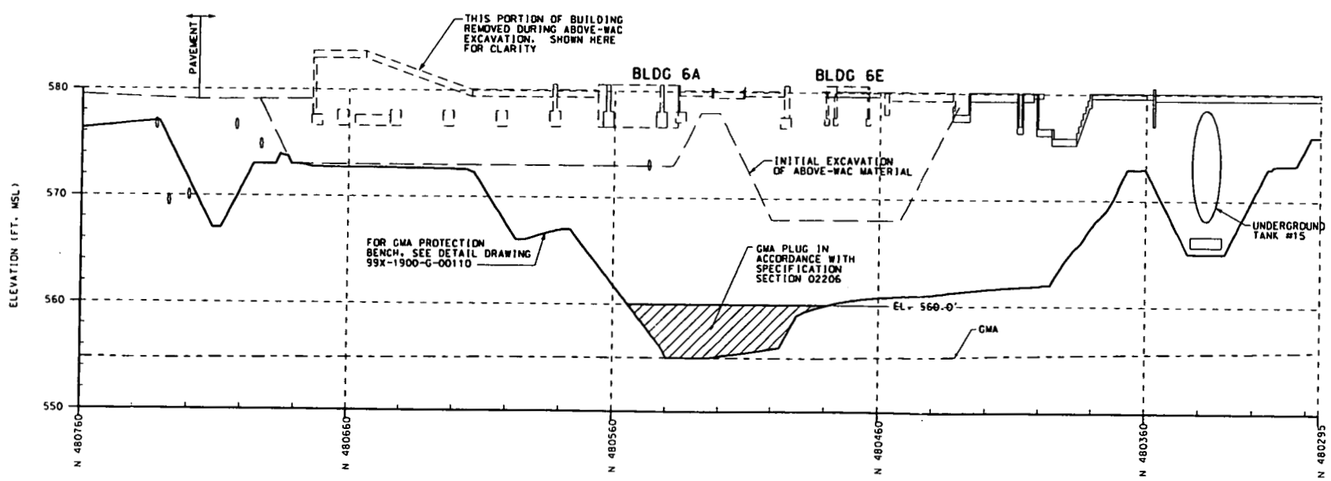
DRAWING TITLE
CROSS SECTIONS
PLANT 6

DRAWN BY G. THURMAN	DATE 28JAN00	TECHNICAL LEAD J. ALCORN	DATE 28JAN00	CHECKED BY N. ROBERTS	DATE 31JAN00
PLANT/BLDG NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% GOAL		SUBMITTED FOR 60% GOAL		SUBMITTED FOR 90% GOAL	
TECH LEAD NONE		TECH LEAD J. ALCORN		TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

T.D. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00100	36	F
LGT PROJECT NO. 300-000919.01	FILENAME CPKG3050.DGN			

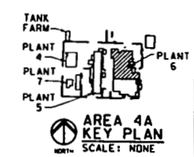


E 1350052.0
SECTION (3) 99X-1900-G-00096
SCALE: 1"=20' HORZ
1"=5' VERT



E 1350240.0
SECTION (4) 99X-1900-G-00096
SCALE: 1"=20' HORZ
1"=5' VERT

000076



AREA 4A KEY PLAN
SCALE: NONE

0' 10' 20' 40' 80'
SCALE: 1 INCH=20 FEET

0' 5' 10' 15'
SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR TYPICAL BENCH DETAIL, SEE DRAWING 99X-1900-G-00104.

2890

KEYED NOTES

(1) PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.

(2) REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

(3) UNDERGROUND PIPE IN THIS AREA AT UNKNOWN ELEVATION.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
F	ISSUED FOR 90% EPA REVIEW	31MAR00		
E	ISSUED FOR 90% DOE REVIEW	28JAN00		
D	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
C	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
B	ISSUED FOR 60% REVIEW	01NOV99		
A	OCTOBER 1999 COORDINATION PACKAGE	18OCT99		

INITIALS AND DATE

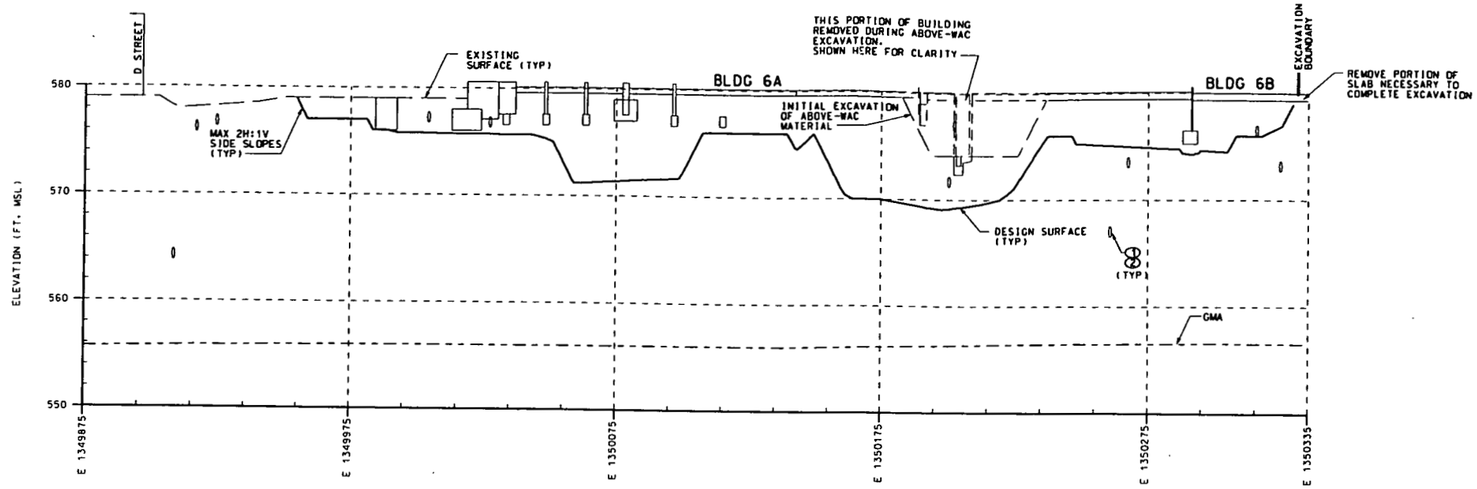
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS
PLANT 6

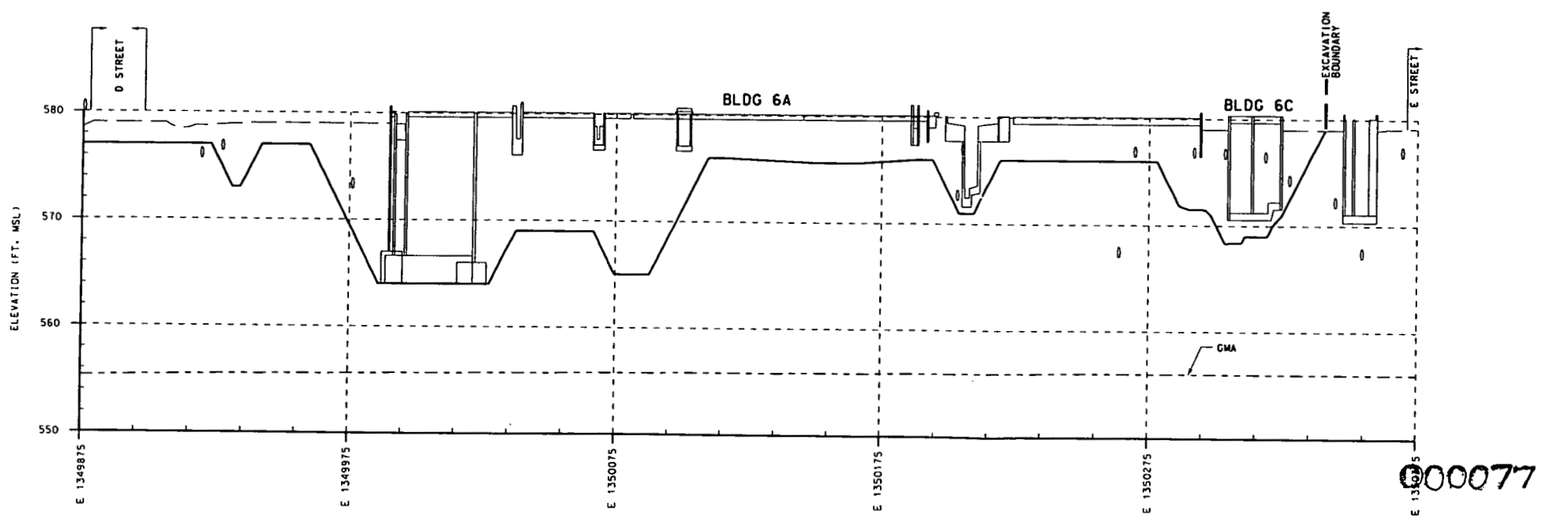
DRAWN BY G. THURMAN	DATE 28JAN00	TECHNICAL LEAD J. ALCORN	DATE 28JAN00	CHECKED BY N. ROBERTS	DATE 28JAN00
PLANT/BLDG NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% DATE		SUBMITTED FOR 60% DATE		SUBMITTED FOR 90% DATE	
TECH LEAD NONE		TECH LEAD J. ALCORN		TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	
T.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO.		SHEET NO. 37	REV. NO. F
LST PROJECT NO. 300-009919.01	FILENAME CPKG3051.DGN	99X-1900-G-00101			



N 480142.0

SECTION 1

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00097

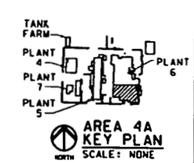


N 480248.0

SECTION 2

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00097

000077



AREA 4A KEY PLAN
SCALE: NONE

SCALE: 1 INCH=20 FEET

SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	3MAR00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	03DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

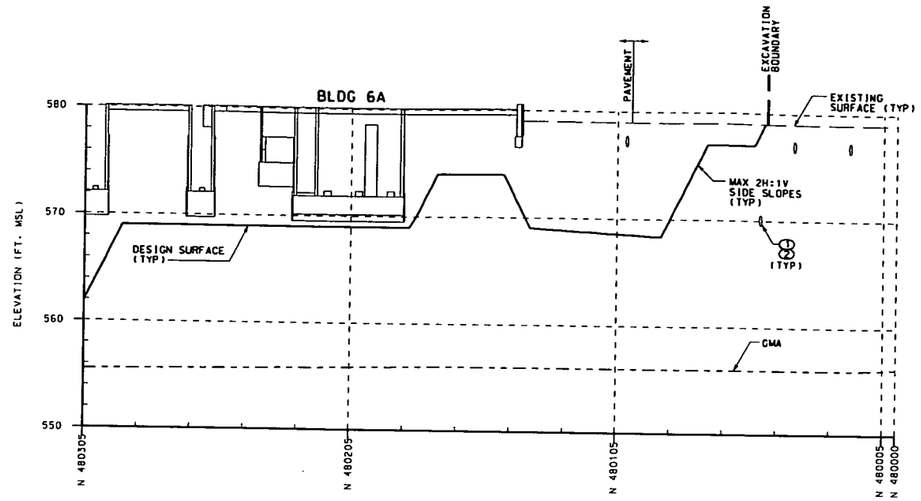
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS
PLANT 6

DRAWN BY G. THURMAN	DATE 28JAN99	TECHNICAL LEAD J. ALCORN	DATE 28JAN99	CHECKED BY M. ROBERTS	DATE 2JAN00
PLANT/BLDG. NO. TEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD NONE		SUBMITTED FOR 60% ISSUE TECH LEAD J. ALCORN		SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

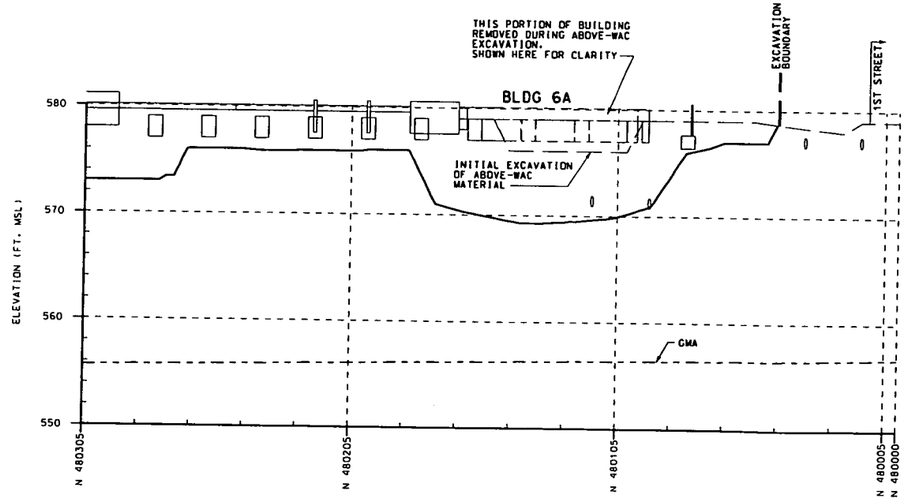
T.A. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00102	38	E
LET PROJECT NO. 300-008919.01	FILENAME CPKG3052.DGN			



E 1350063.0

SECTION 3

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00097

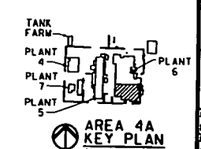


E 1350190.0

SECTION 4

SCALE: 1"=20' HORZ 1"=5' VERT 99X-1900-G-00097

000078



AREA 4A KEY PLAN

SCALE: NONE

0 10' 20' 40' 60'
SCALE: 1 INCH=20 FEET

0 5' 10' 15'
SCALE: 1 INCH=5 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.

2890

KEYED NOTES

1. PIPE SHOWN REPRESENTS UTILITY LINES PRESENT IN THE AREA AT THAT APPROXIMATE INVERT ELEVATION. FOR UTILITY LINE DESCRIPTION, LOCATION AND SIZE SEE UTILITY GRID REFERENCE DRAWINGS.
2. REMAINING UTILITY BELOW DESIGN GRADE TO BE REMOVED BY TRENCHING IN ACCORDANCE WITH SPECIFICATION SECTION 02205 AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02206.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	31MAR00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

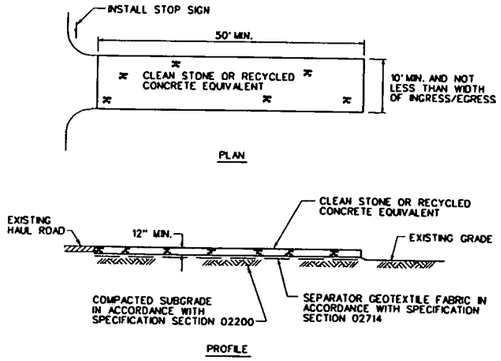
THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CROSS SECTIONS
PLANT 6

DRAWN BY G. THURMAN	DATE 28JAN99	TECHNICAL LEAD J. ALCORN	DATE 28JAN99	CHECKED BY H. ROBERTS	DATE 7JAN00
PLANT/BLDG NO. FEMP		FLOOR NONE		SCALE AS NOTED	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD NONE		SUBMITTED FOR 60% ISSUE TECH LEAD J. ALCORN		SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN	
DATE NONE		DATE 01NOV99		DATE 28JAN00	

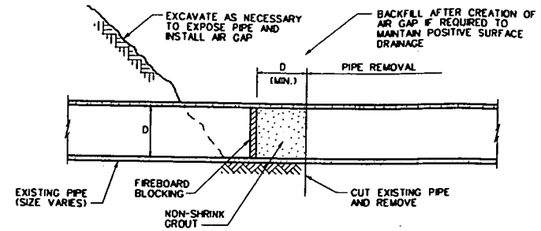
T.S. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00103	39	E
LST PROJECT NO. 300-008919.01	FILENAME CPKG3053.DGN			



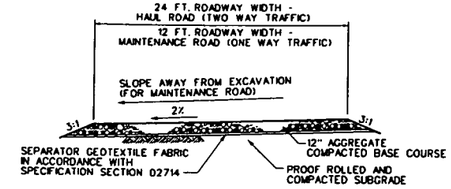
NOTES:

1. PROVIDE POSITIVE CROSS DRAINAGE FOR ENTRANCE.
2. SEPARATOR GEOTEXTILE IS TO BE PLACED DIRECTLY ON GROUND WITH MINIMAL GRADING

TYPICAL CONSTRUCTION ENTRANCE DETAIL
SCALE: NONE — LOCATION VARIES



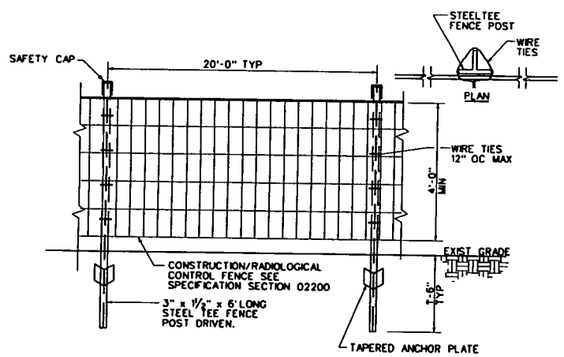
TYPICAL AIR GAP DETAIL
SCALE: NONE — 99X-1900-G-00082, 99X-1900-G-00083, 99X-1900-G-00084, 99X-1900-G-00085



NOTE:

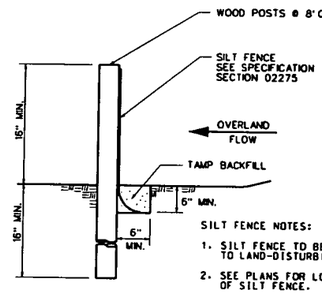
1. SEE SPECIFICATION SECTION 02230 FOR ROAD CONSTRUCTION.

TYPICAL HAUL ROAD/ MAINTENANCE ROAD DETAIL
SCALE: NONE — 99X-1900-G-00081



NOTE:
INSTALL SAFETY CAPS ON T-POSTS THAT PROTRUDE BEYOND THE SURFACE OF THE GROUND LESS THAN 4 FEET.

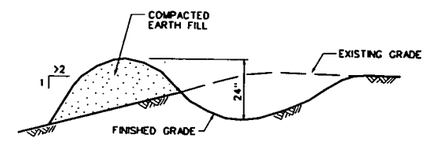
CONSTRUCTION/RADIOLOGICAL CONTROL FENCE DETAIL
SCALE: NONE — 99X-1900-G-00080



SILT FENCE NOTES:

1. SILT FENCE TO BE INSTALLED PRIOR TO LAND-DISTURBING ACTIVITIES.
2. SEE PLANS FOR LOCATION AND LENGTH OF SILT FENCE.
3. WOOD POSTS SHALL BE 2"X2" MIN. OF OAK OR SIMILAR HARDWOOD.

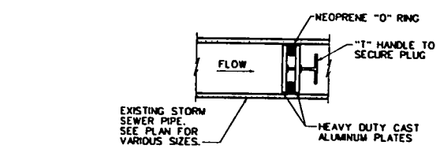
SILT FENCE DETAIL
SCALE: NONE — 99X-1900-G-00080, 99X-1900-G-00082, 99X-1900-G-00083, 99X-1900-G-00084, 99X-1900-G-00085



GENERAL NOTES:

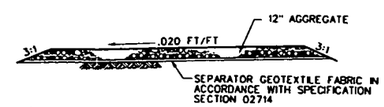
1. INSTALL SILT FENCE ON DOWNGRADIENT SIDE OF DIVERSION PRIOR TO LAND-DISTURBING ACTIVITIES. MAINTAIN SILT FENCE IN ACCORDANCE WITH SPECIFICATION SECTION 02275. UNTIL GRASS HAS BEEN ESTABLISHED ON ENTIRE DIVERSION.
2. SEED AND MULCH ENTIRE DIVERSION SEE SPECIFICATION SECTION 02930.
3. DIVERSION SLOPES SHALL NOT BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
4. COMPACTED EARTH FILL SHALL CONSIST OF SOILS EXCAVATED ON SITE AND PLACED AS NECESSARY TO PROVIDE MINIMUM 24 INCH DITCH DEPTH. EARTH FILL SHALL BE COMPACTED BY 4 PASSES OF COMPACTION EQUIPMENT AS APPROVED BY THE CONSTRUCTION MANAGER.

TEMPORARY DIVERSION DETAIL
SCALE: NONE — 99X-1900-G-00080, 99X-1900-G-00082, 99X-1900-G-00083, 99X-1900-G-00084, 99X-1900-G-00085



NOTE:
PIPE PLUGS SHALL BE CHERNE ALUMINUM GRIPPER PLUGS OR APPROVED EQUAL.

TYPICAL PIPE PLUG DETAIL
SCALE: NONE — 99X-1900-G-00082, 99X-1900-G-00083, 99X-1900-G-00084, 99X-1900-G-00085



NOTE:

1. SEE SPECIFICATION SECTION 02205 FOR SMTA CRITERIA.

SMTA DETAIL
SCALE: NONE — 99X-1900-G-00080

000079

90% ISSUE

GENERAL NOTES

2890

KEYED NOTES

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
E	ISSUED FOR 90% EPA REVIEW	13JAN00		
D	ISSUED FOR 90% DOE REVIEW	28JAN00		
C	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
B	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		
A	ISSUED FOR 60% REVIEW	01NOV99		

INITIALS AND DATE

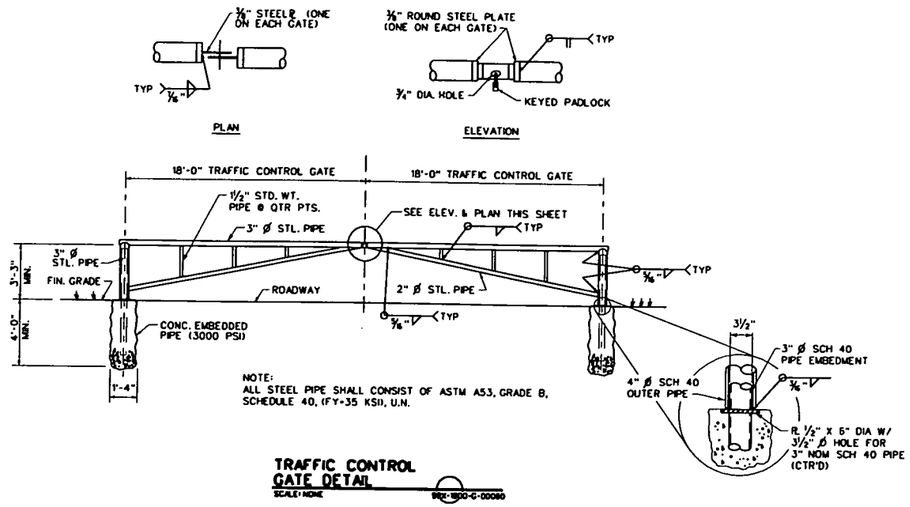
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

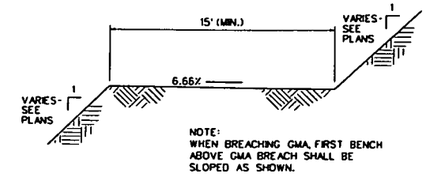
DRAWING TITLE
CIVIL DETAILS
SHEET 1 OF 2

DRAWN BY G. THURMAN	DATE 28JUL99	TECHNICAL LEAD J. ALCORN	DATE 28JUL99
CHECKED BY M. RITTER	DATE 28JAN00	PLANT/BLDG. NO. FEMP	FLOOR NONE
SCALE NONE	CLASS U	SUBMITTED FOR 30% IDBR: TECH LEAD NONE, DATE NONE	SUBMITTED FOR 60% IDBR: TECH LEAD J. ALCORN, DATE 01NOV99
SUBMITTED FOR 90% IDBR: TECH LEAD J. ALCORN, DATE 28JAN00			
T.D. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00104	SHEET NO. 40
REV. NO. E			
LDT PROJECT NO. 300-008919.01	FILENAME CPKG3054.DGN		



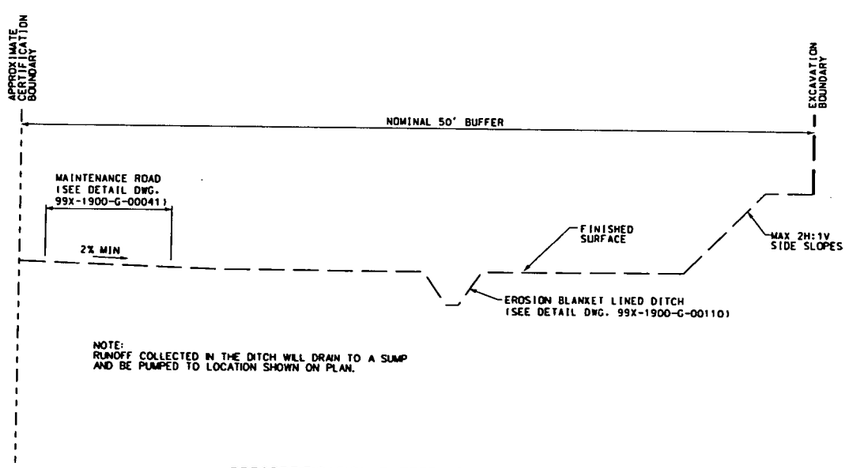
NOTE:
ALL STEEL PIPE SHALL CONSIST OF ASTM A53, GRADE B, SCHEDULE 40, (FY=35 KSI), U.N.

TRAFFIC CONTROL GATE DETAIL
SCALE: NONE — 99X-1900-G-00080



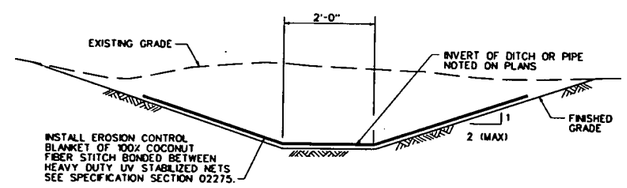
NOTE:
WHEN BREACHING GMA, FIRST BENCH ABOVE GMA BREACH SHALL BE SLOPED AS SHOWN.

GMA PROTECTION BENCH DETAIL
SCALE: NONE — 99X-1900-G-00077, 99X-1900-G-00082, 99X-1900-G-00083, 99X-1900-G-00101



NOTE:
RUNOFF COLLECTED IN THE DITCH WILL DRAIN TO A SUMP AND BE PUMPED TO LOCATION SHOWN ON PLAN.

PRECERTIFICATION BUFFER AREA DETAIL
SCALE: NONE — 99X-1900-G-00106



EROSION BLANKET LINED DITCH DETAIL
SCALE: NONE — 99X-1900-G-00110

000080

90% ISSUE

GENERAL NOTES

2890

KEYED NOTES

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
B	ISSUED FOR 90% EPA REVIEW	23JAN00		
A	ISSUED FOR 90% DOE REVIEW	28JAN00		

INITIALS AND DATE

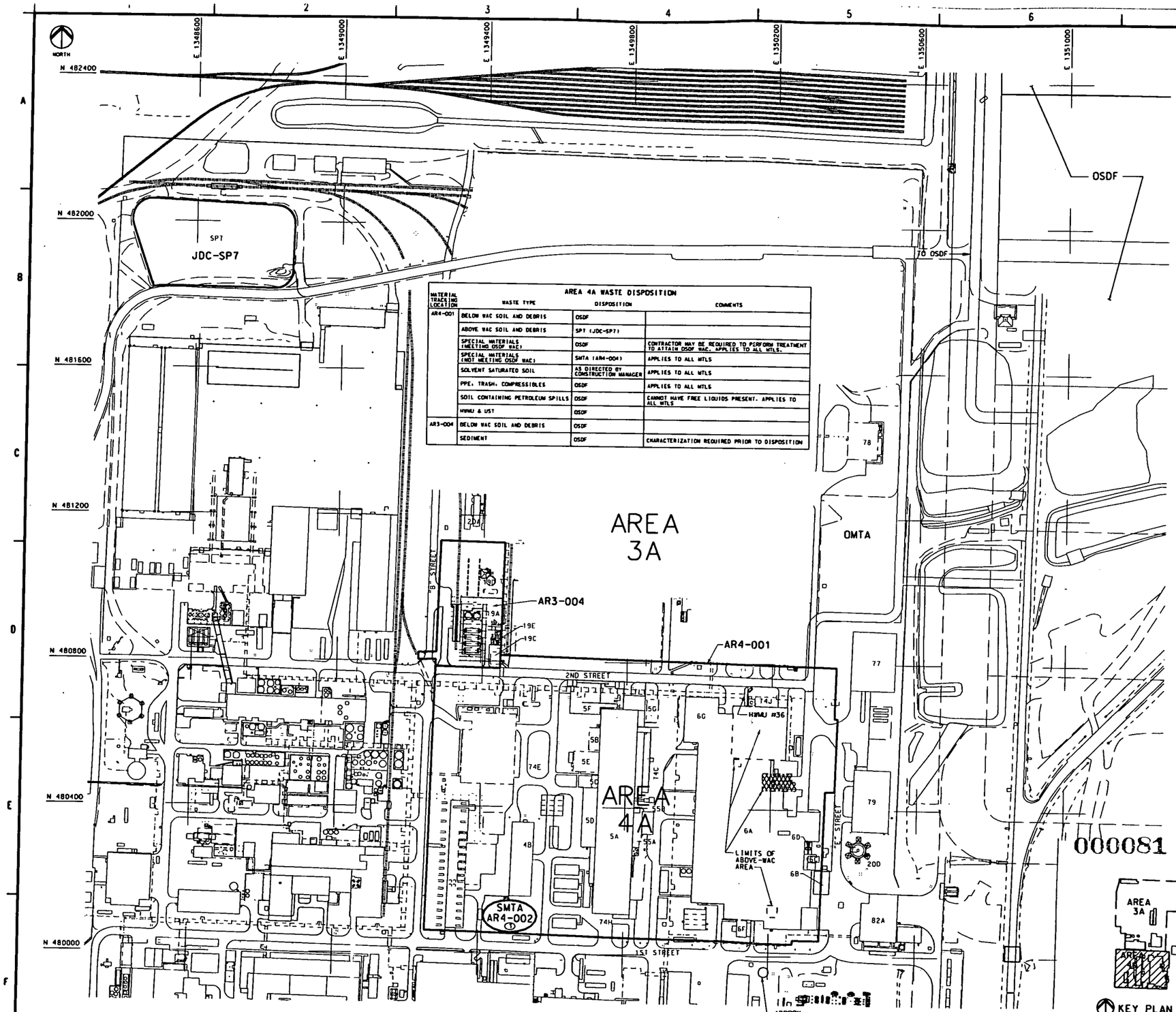
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
CIVIL DETAILS
SHEET 2 OF 2

DRAWN BY G. THURMAN	DATE 25JAN00	TECHNICAL LEAD J. ALCORN	DATE 25JAN00	CHECKED BY N. ROBERTS	DATE 25JAN00
PLANT/BLDG NO. FEMP		FLOOR NONE		SCALE NONE	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD NONE		SUBMITTED FOR 60% ISSUE TECH LEAD NONE		SUBMITTED FOR 90% ISSUE TECH LEAD J. ALCORN	
DATE NONE		DATE NONE		DATE 28JAN00	
T.S. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00110		SHEET NO. 41	REV. NO. B
LCI PROJECT NO. 300-008919.01	FILENAME CPKG3088.DGN				



AREA 4A WASTE DISPOSITION			
MATERIAL TRACKING LOCATION	WASTE TYPE	DISPOSITION	COMMENTS
AR4-001	BELOW WAC SOIL AND DEBRIS	OSDF	
	ABOVE WAC SOIL AND DEBRIS	SPT (JDC-SP7)	
	SPECIAL MATERIALS (MEETING OSDF WAC)	OSDF	CONTRACTOR MAY BE REQUIRED TO PERFORM TREATMENT TO ATTAIN OSDF WAC. APPLIES TO ALL MTLS.
	SPECIAL MATERIALS (NOT MEETING OSDF WAC)	SMTA (AR4-004)	APPLIES TO ALL MTLS
	SOLVENT SATURATED SOIL	AS DIRECTED BY CONSTRUCTION MANAGER	APPLIES TO ALL MTLS
	PPE, TRASH, COMPRESSIBLES	OSDF	APPLIES TO ALL MTLS
	SOIL CONTAINING PETROLEUM SPILLS	OSDF	CANNOT HAVE FREE LIQUIDS PRESENT. APPLIES TO ALL MTLS
	MWMU & UST	OSDF	
AR3-004	BELOW WAC SOIL AND DEBRIS	OSDF	
	SEDIMENT	OSDF	CHARACTERIZATION REQUIRED PRIOR TO DISPOSITION

MATERIAL TRACKING PLAN
SCALE: 1"=100'

0' 50' 100' 200' 300'
SCALE: 1 INCH=100 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. THIS DRAWING PRESENTS THE SOURCE MATERIAL TRACKING LOCATIONS (MTL'S) OF THE MATERIALS EXCAVATED, STOCK-PILED, REUSED OR TRANSPORTED TO THE OSDF, SP7, AND SMTA. THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION MANAGER WITH THE QUANTITY, MATERIAL TYPE, SOURCE LOCATION (MTL), AND DESTINATION LOCATION (MTL) OF ALL MATERIALS MOVED BETWEEN MTL'S DAILY. NO TRACKING IS REQUIRED FOR MATERIALS MOVED WITHIN A MTL.
3. MATERIALS TRANSPORTED TO THE OSDF, SP7, AND SMTA WILL BE TRACKED BY THE CONSTRUCTION MANAGER.

2890

KEYED NOTES

1. THE SMTA LOCATION SHALL BE LOCATED IN THE CONTRACTOR'S EXCAVATION WORK PLAN. THE GRAVEL PAD MAY BE UTILIZED FOR THIS PURPOSE.

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	31MAR00		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
A	DECEMBER 1999 COORDINATION PACKAGE	10DEC99		

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

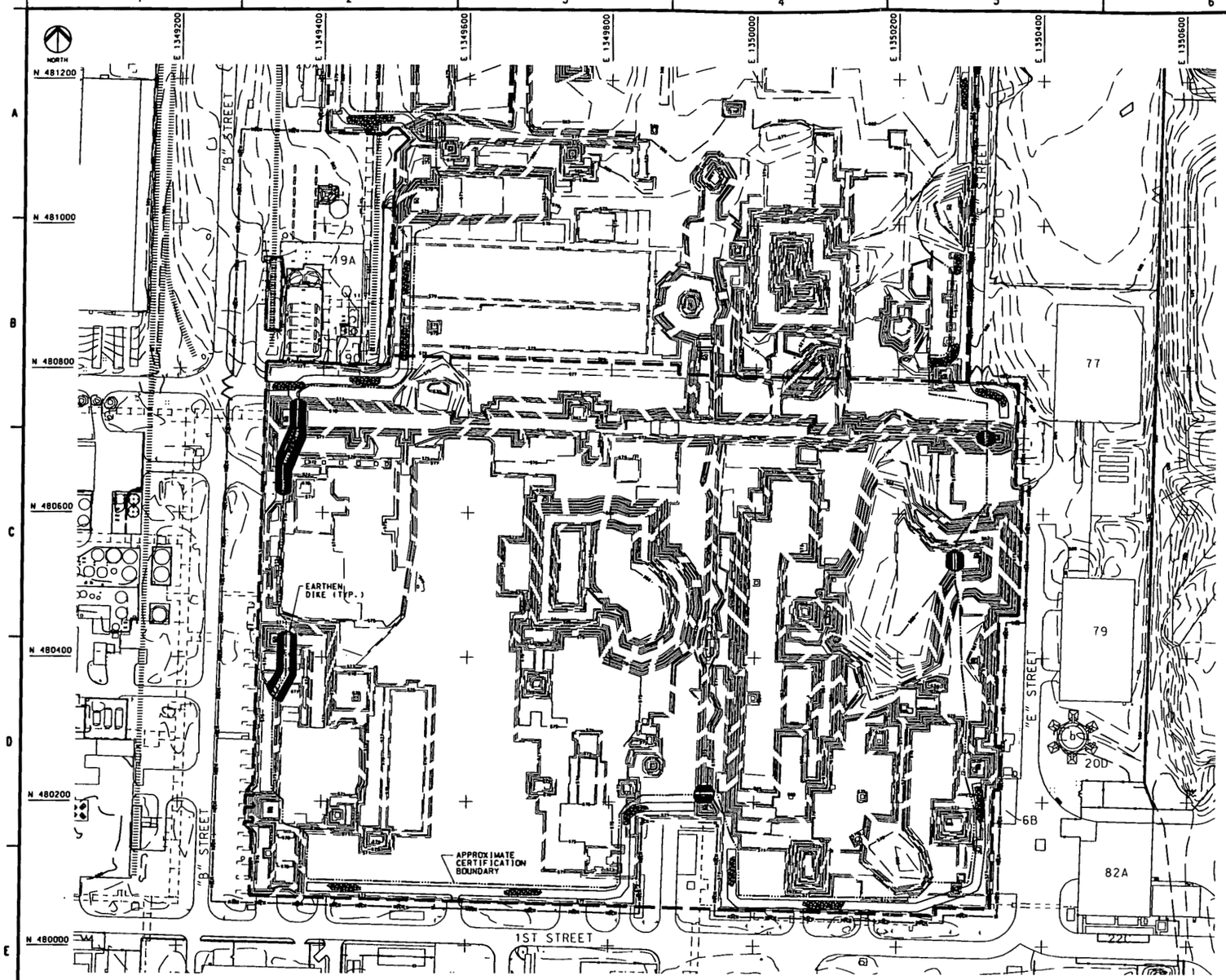
THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
MATERIAL TRACKING PLAN

DRAWN BY C. COX	DATE 8DEC99	TECHNICAL LEAD J. ALCORN	DATE 8DEC99	CHECKED BY D. MORGAN	DATE 28JAN00
PLANT/BLDG NO. 5 EMP		FLOOR NONE		SCALE 1"=100'	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD NONE		SUBMITTED FOR 60% ISSUE TECH LEAD NONE		SUBMITTED FOR 90% ISSUE TECH LEAD W.W. CLARK	
DATE NONE		DATE NONE		DATE 28JAN00	

F.R. NUMBER L-010	PROJECT NO. 20800	DRAWING INDEX CODE NO. 99X-1900-G-00105	SHEET NO. 42	REV. NO. D
LCI PROJECT NO. 300-008919.01	FILENAME CPKG3055.DGN			



000082

PRECERTIFICATION CONFIGURATION AREA 4A
SCALE: 1"=60'

KEY PLAN
NORTH SCALE: NONE

0' 20' 40' 60' 120' 180'
SCALE: 1 INCH=60 FEET

90% ISSUE

GENERAL NOTES

1. FOR LEGEND AND GENERAL NOTES, SEE DRAWING 99X-1900-X-00057.
2. FOR PRECERTIFICATION BUFFER AREA DETAIL, SEE DRAWING 99X-1900-G-00110.
3. EARTHEN DIKE CONSTRUCTION AS NECESSARY SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02206.
4. PROVIDE ROADS TO ACCESS ALL PUMP LOCATIONS. ROUTING FOR ROADS WILL BE DETERMINED BY FINAL EXCAVATION AND CONTRACTOR'S APPROVED SWMP.
5. DRAINAGE FROM ALL PUMP LOCATIONS WITHIN THE PRECERTIFICATION BUFFER AREA SHALL BE PUMPED TO THE SETTLING BASIN. DRAINAGE FROM THE CERTIFIED AREAS OUTSIDE THE PRECERTIFICATION BUFFER AREA SHALL BE PUMPED TO PADDY'S RUN.

KEYED NOTES

2890

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	31MAR00		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
A	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE
ENGINEERS

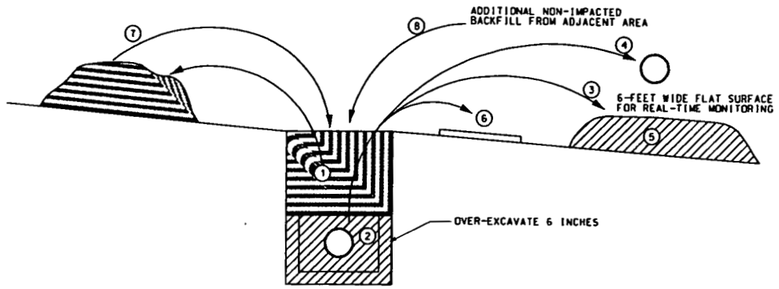
PROJECT NAME
SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE
PRECERTIFICATION CONFIGURATION AREA 4A

DRAWN BY C. COX	DATE 08DEC99	TECHNICAL LEAD J. ALCORN	DATE 08DEC99	CHECKED BY W.W. CLARK	DATE 23JAN00
PLANT/AREA NO. 3/EMP		FLOOR NONE		SCALE 1"=60'	CLASS U
SUBMITTED FOR 30% ISSUE TECH LEAD NONE		SUBMITTED FOR 60% ISSUE TECH LEAD NONE		SUBMITTED FOR 90% ISSUE TECH LEAD N. ROBERTS	
DATE NONE		DATE NONE		DATE 28JAN00	

F.S. NUMBER	PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
L-010	20800	99X-1900-G-00106	43	D

LCI PROJECT NO.	FLOWNET
300-008219.01	CPKGJ058.DGN



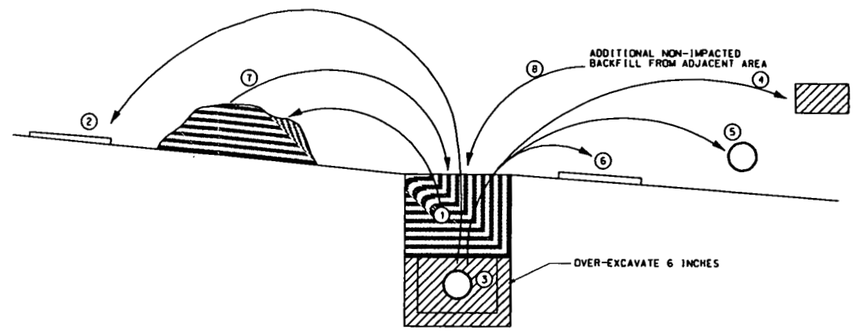
1. TRENCH OVERBURDEN SOIL FROM ABOVE THE PIPE* AND PIPE BEDDING AND TEMPORARILY STOCKPILE OVERBURDEN SOIL ADJACENT TO, AND UPGRADIENT OF, THE UTILITY TRENCH. REMAINING SOIL IN THE TRENCH SHALL BE CONSIDERED PIPE BEDDING.
2. EXCAVATE PIPE AND PIPE BEDDING, PLUS OVER-EXCAVATE 6 INCHES ADJACENT TO AND BELOW THE PIPE TO ENSURE REMOVAL OF IMPACTED MATERIAL.
3. TEMPORARILY STOCKPILE PIPE BEDDING ADJACENT TO, AND DOWN-GRADIENT OF, THE UTILITY TRENCH. STOCKPILED MATERIAL SHALL HAVE A 6-FEET WIDE FLAT SURFACE FOR REALTIME MONITORING BY THE CONSTRUCTION MANAGER.
4. THE CONSTRUCTION MANAGER VISUALLY INSPECTS PIPE DURING EXCAVATION. PIPE FREE OF VISIBLE PROCESS RESIDUE SHALL BE DISPOSITIONED IN THE OSDF IN ACCORDANCE WITH SECTION 02205. PIPE THAT CANNOT BE CLEANED OF VISIBLE PROCESS RESIDUE SHALL BE DISPOSITIONED IN SP7 IN ACCORDANCE WITH SECTION 02205.
5. THE CONSTRUCTION MANAGER PERFORMS PHYSICAL SAMPLING OF STOCKPILED PIPE BEDDING FOR WAC ATTAINMENT AND DIRECTS THE CONTRACTOR TO DISPOSITION THE MATERIAL IN EITHER THE OSDF OR SP7, PENDING SAMPLE RESULTS. OVER-EXCAVATE THE STOCKPILE FOOTPRINT 6 INCHES TO ENSURE REMOVAL OF IMPACTED MATERIAL.
6. AT 50-FEET INTERVALS, EXCAVATE A BUCKET-LOAD FROM THE TRENCH BOTTOM AND PLACE IT ADJACENT TO, AND DOWNGRADIENT OF, THE TRENCH. FLATTEN THIS MATERIAL TO CREATE 6-INCH MINIMUM THICKNESS PADS FOR REAL-TIME MONITORING AND PHYSICAL SAMPLING BY THE CONSTRUCTION MANAGER. POSITION PADS UPGRADIENT OF STOCKPILED PIPE BEDDING.
7. UPON COMPLETION OF REAL-TIME MONITORING AND PHYSICAL SAMPLING OF SOIL PADS, BACKFILL THE TRENCH WITH OVER-BURDEN SOIL AND COMPACT IN ACCORDANCE WITH SECTION 02206.
8. BACKFILL ADDITIONAL NON-IMPACTED SOIL FROM THE IMMEDIATE PRE-CERTIFIED AREA AND COMPACT IN ACCORDANCE WITH SECTION 02206 AS NEEDED TO MEET SURROUNDING GRADE.

NOTES:

1. AS DIRECTED BY THE CONSTRUCTION MANAGER, PENDING SOIL PAD PHYSICAL SAMPLING RESULTS, RE-EXCAVATE AT TRENCH LOCATIONS DESIGNATED BY THE CONSTRUCTION MANAGER TO REMOVE ADDITIONAL IMPACTED MATERIAL. THE CONSTRUCTION MANAGER CERTIFIES THE BACKFILLED TRENCH AND SURROUNDING AREA.

* THE TERM "PIPE" IS USED AS A GENERIC REFERENCE TO UNDERGROUND UTILITIES.

METHOD 1
TRENCHING FOR PROCESS PIPING BELOW THE DESIGN SURFACE



1. TRENCH PRECERTIFIED OVERBURDEN SOIL FROM ABOVE THE PIPE* AND PIPE BEDDING AND TEMPORARILY STOCKPILE IT ADJACENT TO AND UPGRADIENT OF, THE UTILITY TRENCH. REMAINING SOIL IN THE TRENCH SHALL BE CONSIDERED PIPE BEDDING.
2. EXCAVATE AN INITIAL BUCKET-LOAD OF PIPE BEDDING AND PLACE IT ADJACENT TO THE TRENCH IN A 6-INCH MINIMUM THICKNESS PAD FOR REAL-TIME MONITORING BY THE CONSTRUCTION MANAGER FOR WAC.
3. EXCAVATE PIPE BEDDING AND PIPE, PLUS OVER-EXCAVATE 6 INCHES ADJACENT TO AND BELOW THE PIPE TO ENSURE REMOVAL OF IMPACTED MATERIAL.
4. THE CONSTRUCTION MANAGER VISUALLY MONITORS EXCAVATION OF PIPE BEDDING. DISPOSITION NON-PROCESS PIPE BEDDING IN THE OSDF IN ACCORDANCE WITH SECTION 02205 UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
5. THE CONSTRUCTION MANAGER VISUALLY INSPECTS PIPE DURING EXCAVATION. DISPOSITION NON-PROCESS PIPE BEDDING IN THE OSDF IN ACCORDANCE WITH SECTION 02205 UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
6. AT 50-FEET INTERVALS, EXCAVATE A BUCKET-LOAD FROM THE TRENCH BOTTOM AND PLACE IT ADJACENT TO THE TRENCH IN 6-INCH MINIMUM THICKNESS PADS FOR REAL-TIME MONITORING AND PHYSICAL SAMPLING BY THE CONSTRUCTION MANAGER.
7. UPON COMPLETION OF REAL-TIME MONITORING AND PHYSICAL SAMPLING OF SOIL PADS, BACKFILL THE TRENCH WITH OVER-BURDEN SOIL AND COMPACT IN ACCORDANCE WITH SECTION 02206.
8. BACKFILL ADDITIONAL NON-IMPACTED SOIL FROM THE IMMEDIATE PRE-CERTIFIED AREA AND COMPACT IN ACCORDANCE WITH SECTION 02206 AS NEEDED TO MEET SURROUNDING GRADE.

NOTES:

1. AS DIRECTED BY THE CONSTRUCTION MANAGER, PENDING SOIL PAD PHYSICAL SAMPLING RESULTS, RE-EXCAVATE AT TRENCH LOCATIONS DESIGNATED BY THE CONSTRUCTION MANAGER TO REMOVE ADDITIONAL IMPACTED MATERIAL. THE CONSTRUCTION MANAGER CERTIFIES THE BACKFILLED TRENCH AND SURROUNDING AREA.

* THE TERM "PIPE" IS USED AS A GENERIC REFERENCE TO UNDERGROUND UTILITIES.

METHOD 2
TRENCHING NON-PROCESS PIPING BELOW THE DESIGN SURFACE

000083

90% ISSUE

GENERAL NOTES

1. ALL UNDERGROUND UTILITY PIPING LOCATIONS ARE SHOWN ON THE GRADING PLAN DRAWINGS 99X-1099-G-00072 THRU 99X-1900-G-00075. LEGEND SYMBOLS DIFFERENTIATE BETWEEN UTILITIES REMOVED DURING GRADING AND UTILITIES BEYOND DESIGN SURFACE TO BE REMOVED BY TRENCHING.
2. PROCESS PIPES ARE DESIGNATED AS CE, FT, SL, AND SN LINES ON GRADING DRAWINGS (SEE DRAWING NUMBERS IN NOTE 1) OR MAY BE DESIGNATED IN THE FIELD BY THE CONSTRUCTION MANAGER.

KEYED NOTES

2890

REF DWG NO.	DRAWING TITLE

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	DATE	REV. BY	APPR.
D	ISSUED FOR 90% EPA REVIEW	31MAR00		
C	ISSUED FOR 90% DOE REVIEW	28JAN00		
B	JANUARY 2000 COORDINATION PACKAGE	11JAN00		
A	DECEMBER 1999 COORDINATION PACKAGE	15DEC99		

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
LOCKWOOD GREENE

PROJECT NAME: SDFP REMEDIATION OF AREAS 3A/4A - PKG. II

DRAWING TITLE: UTILITY REMOVAL METHODS

DRAWN BY: C. COX	DATE: 07DEC99	TECHNICAL LEAD: J. ALCORN	DATE: 07DEC99	CHECKED BY: D. MORGAN	DATE: 20JAN00
PLANT/BLDG. NO.: FEMP		FLOOR: NONE		SCALE: NONE	CLASS: U
SUBMITTED FOR 3rd GBLE: TECH LEAD: NONE	DATE: NONE	SUBMITTED FOR 1st GBLE: TECH LEAD: NONE	DATE: NONE	SUBMITTED FOR 1st GBLE: TECH LEAD: W.W. CLARK	DATE: 28JAN00
F.S. NUMBER: L-010	PROJECT NO.: 20800	DRAWING INDEX CODE NO.: 99X-1900-G-00107		SHEET NO.: 44	REV. NO.: D
LST PROJECT NO.: 300-008919.01	FILENAME: CPKG3059.DGN				