Fluor Fernald, Inc.
P.O. Box 538704
Cincinnati, OH 45253-8704

(513) 648-3000

- 57.00

FLUOR

October 5, 2004

Fernald Closure Project
Letter No. C:DSDP:2004-0114

Mr. Mohammed Islam, P.E.
Hamilton County Department of Public Works
138 East Court Street, Room 800
Cincinnati, Ohio 45202

Dear Mr. Islam:

CONTRACT DE-AC24-01OH20115, ADDITIONAL PART TWO DRAWINGS FOR PERMIT APPLICATIONS FOR THE REMEDIATION OF THE ABANDONED OUTFALL LINE

Enclosed for your information are the Part Two drawings for remediation of the Abandoned Outfall Line located at 7218 Willey Road, Crosby Township, Ohio, for Permit No. PWFL040033.

These drawings supplement the package sent to Hamilton County Public Works as noted in the reference above. Please return one set to Charles Van Arsdale as an approved document. If you have questions or concerns regarding these applications, please contact Charles Van Arsdale at 648-5116. Thanks for your cooperation.

Sincerely,

for M. D. Powell, Project Director
Demolition, Soil and Disposal Project

MDP:CCV:jkp
Enclosures

c: With Enclosures

Uday Kumthekar, MS64
Don Pfister, DOE-OH
Johnny Reising, DOE-OH
Administrative Record, MS78
File Record Subject – Abandoned Outfall Line
Project Number 21140, ECDC, MS52-7

Without Enclosures

Terri Binau, DOE Contracting Officer DOE-OH
Jyh-Dong Chiou, MS64
Ralph Holland, DOE Contracting Officer, DOE-OH/FCP
Warren Hooper, MS60
Jack McCormack, MS60
Con Murphy, MS01
Chris Neumann, MS64
Dennis Nixon, MS01
Rex Norton, MS02
M. D. Powell, MS64
Adam Rector, Fluor Fernald, Inc. Prime Contract, MS02
Charles Van Arsdale, MS64
DSDP Letterlog, MS64

REMEDIATION OF ABANDONED OUTFALL LINE

5700

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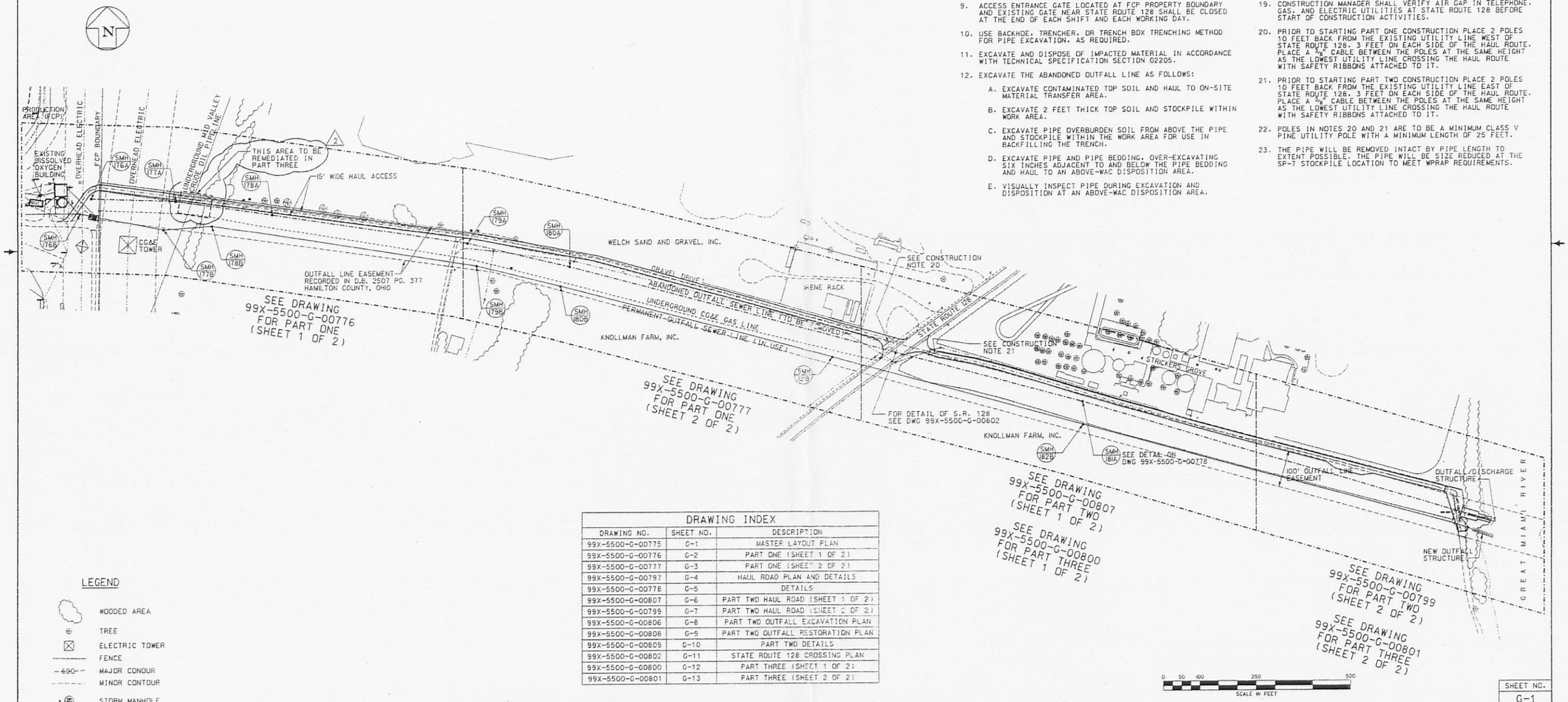
GENERAL NOTES

1. HORIZONTAL CONTROLS SHOWN ARE BASED UPON NORTH AMERICAN DATUM 1983 (NAD 83).
2. VERTICAL CONTROLS SHOWN ARE BASED UPON NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29).
3. DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALED DIMENSIONS.
4. PROTECT UNDERGROUND AND OVERHEAD UTILITIES DURING EXCAVATION OF THE ABANDONED OUTFALL LINE.
5. TECHNICAL SPECIFICATIONS GOVERNING THIS ACTIVITY ARE THE LATEST REVISION OF TECHNICAL SPECIFICATIONS FOR SOIL AND DISPOSAL FACILITY PROJECT - EXCAVATION FOR REMEDIATION (DOCUMENT NO. 20300-TS-0001) AND OSDF PHASE V TECHNICAL SPECIFICATIONS (DOCUMENT NO. 20105-TS-0001).
6. EXISTING SURFACE ELEVATIONS WILL NOT BE RAISED WITHIN THE 100 YEAR FLOOD PLAIN OF THE GREAT MIAMI RIVER.

CONSTRUCTION NOTES

1. GALVANIZED WOVEN WIRE FABRIC CONSTRUCTION FENCE MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH OSDF TECHNICAL SPECIFICATION 02200. LOCATE CONSTRUCTION FENCE AS SHOWN ON THE DRAWINGS.
2. SOIL EROSION AND SEDIMENT CONTROL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH OSDF TECHNICAL SPECIFICATION 02270.
3. BEFORE START OF EXCAVATION, PLUG DOWNSTREAM SIDE OF MANHOLE SMH181A WITH MECHANICAL PLUG AND CONCRETE TO CONTROL CONSTRUCTION WATER FROM UPSTREAM PHASE I EXCAVATION AND PREVENT BACKFLOW FROM GREAT MIAMI RIVER. SEE DRAWING FOR PLUG DETAIL.
4. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO SITE PREPARATION ACTIVITES.
5. ESTABLISH CONSTRUCTION SIGNAGE IN APPROPRIATE LOCATION. SIGNAGE IN RIGHT-OF-WAY OF STATE ROUTE 128 SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION.
6. IMPROVE EXISTING HAUL ROAD ROUTE ADJACENT TO TRENCHING AREA AS SHOWN ON DRAWINGS.
7. PROTECT MID VALLEY PIPELINE COMPANY CRUDE OIL PIPELINE WITH RAMP AS SHOWN ON DRAWINGS.
8. EXISTING UNDERGROUND TELEPHONE CONDUIT AT TRENCH CROSSING MAY BE REMOVED AND REPLACED AS NECESSARY.
9. ACCESS ENTRANCE GATE LOCATED AT FCP PROPERTY BOUNDARY AND EXISTING GATE NEAR STATE ROUTE 128 SHALL BE CLOSED AT THE END OF EACH SHIFT AND EACH WORKING DAY.
10. USE BACKHOE, TRENCHER, OR TRENCH BOX TRENCHING METHOD FOR PIPE EXCAVATION, AS REQUIRED.
11. EXCAVATE AND DISPOSE OF IMPACTED MATERIAL IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 02205.
12. EXCAVATE THE ABANDONED OUTFALL LINE AS FOLLOWS:
    - A. EXCAVATE CONTAMINATED TOP SOIL AND HAUL TO ON-SITE MATERIAL TRANSFER AREA.
    - B. EXCAVATE 2 FEET THICK TOP SOIL AND STOCKPILE WITHIN WORK AREA.
    - C. EXCAVATE PIPE OVERBURDEN SOIL FROM ABOVE THE PIPE AND STOCKPILE WITHIN THE WORK AREA FOR USE IN BACKFILLING THE TRENCH.
    - D. EXCAVATE PIPE AND PIPE BEDDING. OVER-EXCAVATING SIX INCHES ADJACENT TO AND BELOW THE PIPE BEDDING AND HAUL TO AN ABOVE-WAC DISPOSITION AREA.
    - E. VISUALLY INSPECT PIPE DURING EXCAVATION AND DISPOSITION AT AN ABOVE-WAC DISPOSITION AREA.
    - F. AFTER EXCAVATION, PERFORM REAL TIME AND CERTIFICATION SAMPLING AT APPROXIMATELY 25 FOOT INTERVALS ALONG THE TRENCH BOTTOM. BASED ON RESULTS FROM REAL TIME SAMPLING, IF TRENCH BOTTOM FOUND CONTAMINATED, PERFORM SUPPLEMANTAL OVER-EXCAVATION AND PERFORM REAL TIME AND CERTIFICATION SAMPLING.
    - G. USING STOCKPILED OVERBURDEN SOIL AND TOP SOIL, BACKFILL THE TRENCH EXCAVATION AS SHOWN IN TYPICAL TRENCH DETAIL.
13. DO NOT EXCAVATE ABANDONED OUTFALL LINE OVERBURDEN SOIL DIRECTLY BELOW THE MIDVALLEY OIL PIPELINE SHOWN.
14. DO NOT STAGE CONSTRUCTION EQUIPMENT WITHIN 10 FEET OF THE TOP OF THE TRENCH EXCAVATION.
15. PERFORM SUPPLEMENTAL OVEREXCAVATION AS DIRECTED BY THE CONSTRUCTION MANAGER.
16. DISTURBED AREAS WILL BE RESTORED TO ORIGINAL ELEVATIONS PRIOR TO SEEDING ACTIVITIES.
17. VEGETATE THE DISTURBED AREAS USING SEED MIX AS APPROVED BY PROPERTY LAND OWNER.
18. GROUT USED TO SEAL ABANDONED OUTFALL LINE IN DESIGNATED AREAS SHALL BE IN ACCORDANCE WITH ODOT 705.22 OR APPROVED EQUAL.
19. CONSTRUCTION MANAGER SHALL VERIFY AIR GAP IN TELEPHONE, GAS, AND ELECTRIC UTILITIES AT STATE ROUTE 128 BEFORE START OF CONSTRUCTION ACTIVITIES.
20. PRIOR TO STARTING PART ONE CONSTRUCTION PLACE 2 POLES 10 FEET BACK FROM THE EXISTING UTILITY LINE WEST OF STATE ROUTE 128, 3 FEET ON EACH SIDE OF THE HAUL ROUTE. PLACE A 3/8" CABLE BETWEEN THE POLES AT THE SAME HEIGHT AS THE LOWEST UTILITY LINE CROSSING THE HAUL ROUTE WITH SAFETY RIBBONS ATTACHED TO IT.
21. PRIOR TO STARTING PART TWO CONSTRUCTION PLACE 2 POLES 10 FEET BACK FROM THE EXISTING UTILITY LINE EAST OF STATE ROUTE 128, 3 FEET ON EACH SIDE OF THE HAUL ROUTE. PLACE A 3/8" CABLE BETWEEN THE POLES AT THE SAME HEIGHT AS THE LOWEST UTILITY LINE CROSSING THE HAUL ROUTE WITH SAFETY RIBBONS ATTACHED TO IT.
22. POLES IN NOTES 20 AND 21 ARE TO BE A MINIMUM CLASS V PINE UTILITY POLE WITH A MINIMUM LENGTH OF 25 FEET.
23. THE PIPE WILL BE REMOVED INTACT BY PIPE LENGTH TO EXTENT POSSIBLE. THE PIPE WILL BE SIZE REDUCED AT THE SP-7 STOCKPILE LOCATION TO MEET WPRAP REQUIREMENTS.



DRAWING INDEX

DRAWING NO.	SHEET NO.	DESCRIPTION
99X-5500-G-00775	G-1	MASTER LAYOUT PLAN
99X-5500-G-00776	G-2	PART ONE (SHEET 1 OF 2)
99X-5500-G-00777	G-3	PART ONE (SHEET 2 OF 2)
99X-5500-G-00797	G-4	HAUL ROAD PLAN AND DETAILS
99X-5500-G-00778	G-5	DETAILS
99X-5500-G-00807	G-6	PART TWO HAUL ROAD (SHEET 1 OF 2)
99X-5500-G-00799	G-7	PART TWO HAUL ROAD (SHEET 2 OF 2)
99X-5500-G-00806	G-8	PART TWO OUTFALL EXCAVATION PLAN
99X-5500-G-00808	G-9	PART TWO OUTFALL RESTORATION PLAN
99X-5500-G-00805	G-10	PART TWO DETAILS
99X-5500-G-00802	G-11	STATE ROUTE 128 CROSSING PLAN
99X-5500-G-00800	G-12	PART THREE (SHEET 1 OF 2)
99X-5500-G-00801	G-13	PART THREE (SHEET 2 OF 2)

LEGEND

- WOODED AREA
- TREE
- ELECTRIC TOWER
- FENCE
- MAJOR CONDUR
- MINOR CONTOUR
- STORM MANHOLE
- VALVE
- FIRE HYDRANT
- RAILROAD
- EASEMENT LINE

NO.	REVISIONS	DATE	DWN. BY	APPD.
2	ADDED MANHOLE NUMBERS TO ABANDONED AND NEW OUTFALL LINES, REVISED PHASE I, II AND III TO PART ONE, PART TWO AND PART THREE, REVISED PART TWO AND THREE LIMITS AND DRAWING INDEX	5/21/04	RML	
1	REVISED NOTE 12 AND ADDED NOTE 23.	1/2/04	RML	GEP
0	ISSUED CERTIFIED FOR CONSTRUCTION	5/7/04	RML	GEP

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — EXISTING STRUCTURES OR COMPONENTS MAY BE AFFECTED. FOLLOW CONFIGURATION MANAGEMENT CONTROL SEE NOTES.

C. VAN ARSDALE 6/24/04 — COGNIZANT ENGINEER — DATE

APPROVALS					
CIVIL & STR.	L. SHEKA	6/24/04	SAFETY ENC.	C. JOHNSON	6/24/04
ELECTRICAL			MAINTENANCE		
ENGINEER			FIRE PROTECT.		
INSTRUMENT			WASTE MANAGE.		
MECHANICAL			SECURITY	B. ALMS	6/24/04
W&D	D. BAILOR	7/2/04	PROJECTS		
CHECKED	D. GUNTHERUS	6/24/04	CONSTRUCTION	R. ZIEMKS	6/24/04
APPROVED	C.J. PAUL	6/25/04	CHARACTERIZATION	T. MILLER	6/24/04
			QA	W. SOMERS	6/24/04

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
MASTER LAYOUT PLAN

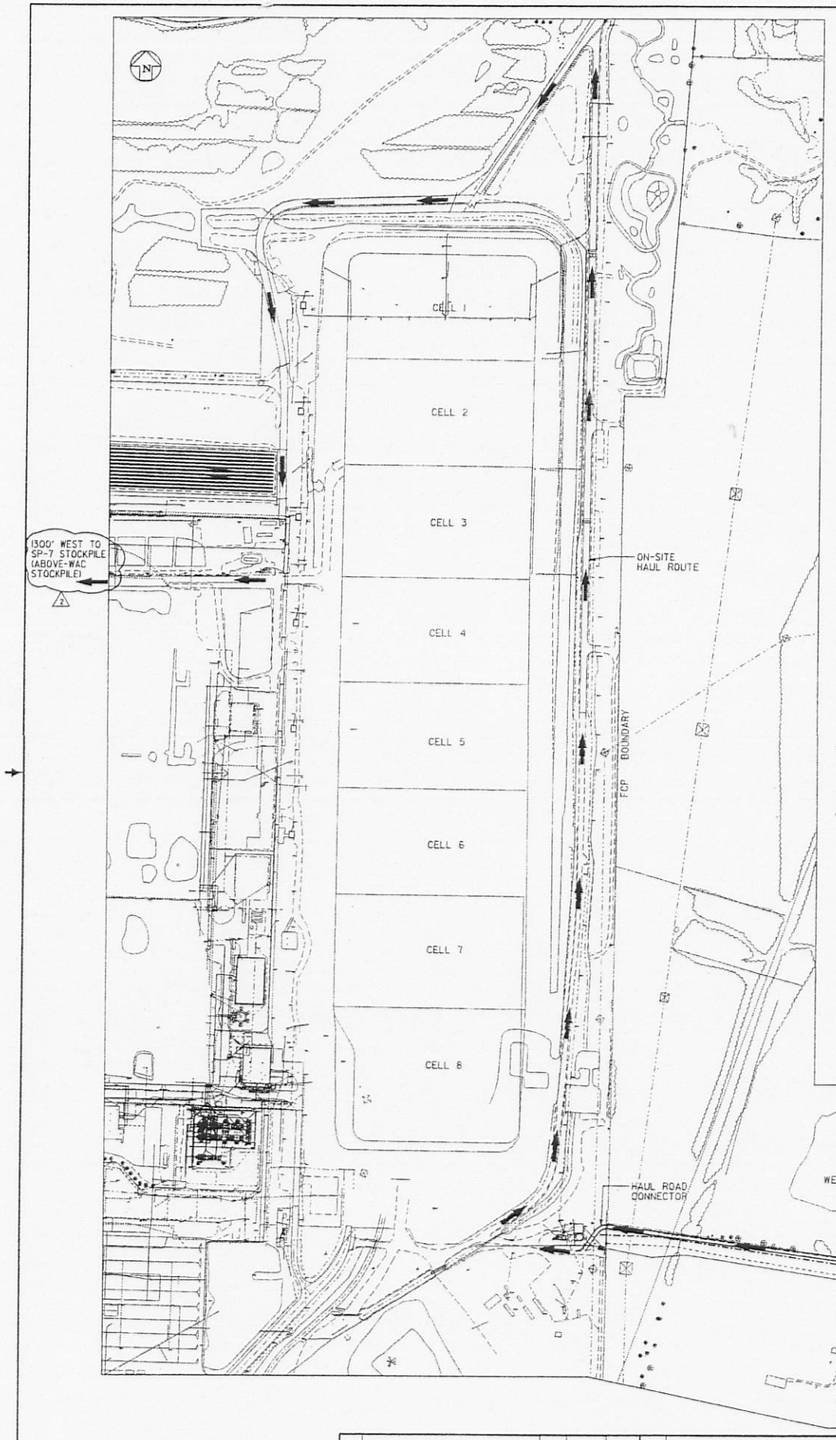
PROJECT 2920			
DATE	5/18/2004	99X-5500-G-00775	2
DRAWN	R.M. LINDGREN		

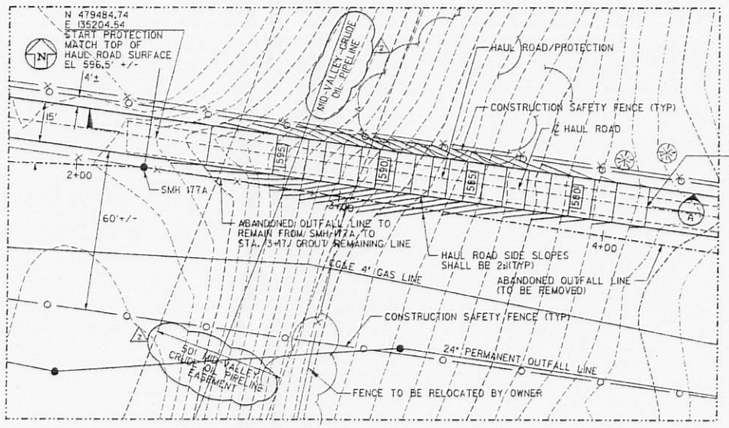
SHEET NO. G-1

FDPSJOB 5/30/03

FILE NAME: /osdf/Project2120/99xg0775.cgn

5100

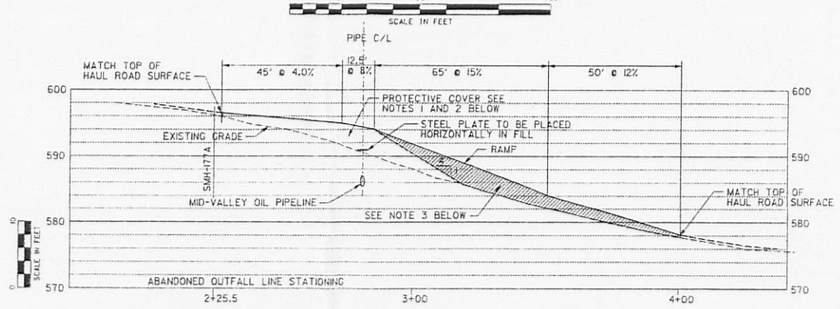




PROTECTION OVER MID-VALLEY CRUDE OIL PIPELINE

PLAN VIEW

0 10 20 50 100
SCALE IN FEET

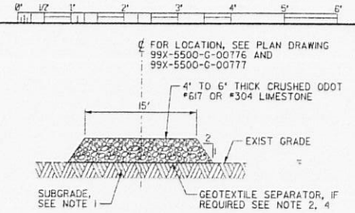


0 10 20 50 100
SCALE IN FEET

PROFILE A

NOTES:

1. PRIOR TO TRENCH EXCAVATION, CONSTRUCT PROTECTIVE COVER OVER MID-VALLEY CRUDE OIL PIPELINE. PROTECTIVE COVER SHALL BE CONSTRUCTED IN ACCORDANCE WITH MID-VALLEY PIPELINE COMPANY REQUIREMENTS.
2. FILL MATERIAL FOR PROTECTIVE COVER SHALL BE #57 CRUSHED ANGULAR STONE UNLESS APPROVED OTHERWISE BY MID-VALLEY PIPELINE COMPANY.
3. CONSTRUCT RAMP AFTER REMOVAL OF ABANDONED OUTFALL LINE AND BACKFILL OF TRENCH FROM APPROXIMATELY STATION 3+17 TO STATION 4+00.



TYPICAL HAUL ROAD CROSS SECTION

NOTES:

1. USE ODOT TYPE "D" DUMPED ROCK OR AASHTO #2 STONE TO IMPROVE UNSUITABLE EXISTING SUBGRADE.
2. GEOTEXTILE SEPARATOR SHALL BE IN ACCORDANCE WITH OSDF TECHNICAL SPECIFICATION 02716.
3. CROSS SECTION APPLIES TO HAUL ROAD ACCESS DRIVE, CONNECTOR, AND TRUCK TURN AROUND.
4. GEOTEXTILE SEPARATOR MAY BE USED IN AREAS WHEN WARRANTED BY SUBGRADE CONDITIONS.

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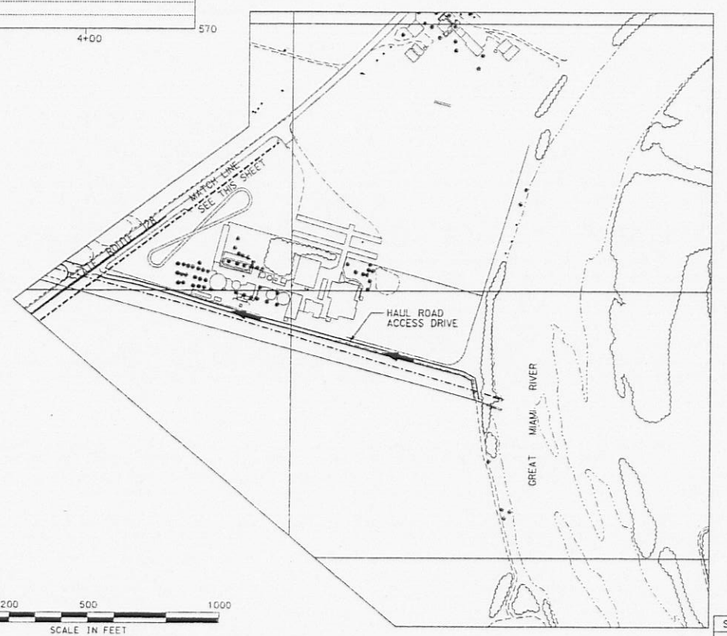


NO.	REVISIONS	DATE	DWN. BY	APPD.
2	REVISED MID-VALLEY FUEL OIL PIPELINE TO MID-VALLEY CRUDE OIL PIPELINE, REVISED NOTE AT END.	5/21/04	RML	[illegible]
1	REVISED HAUL ROAD CROSS SECTION, NOTE AT END.	1/7/04	RML	GEP
0	ISSUED CERTIFIED FOR CONSTRUCTION	6/24/04	RML	GEP

NOTE: FLUOR FERNALD CADD DRAWING. DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — SEE / DO NOT SEE

SYSTEMS, STRUCTURES OR COMPONENTS CONSIDERED FOR CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

C. VAN ARSDALE 6/24/04
COGNIZANT ENGINEER DATE

APPROVALS

CIVIL & STR.	L. SHEEK	6/24/04	SAFETY ENG.	C. JOHNSON	6/24/04
ELECTRICAL			MAINTENANCE		
ENGINEER			FIRE PROTECT.		
INSTRUMENT			WASTE MANAGE.		
MECHANICAL			SECURITY	G. KLYS	6/24/04
WAC	L. BARTOW	1/30/04	PROJECTS		
CHECKED	G. EBERSOLE	6/24/04	CONSTRUCTION	G.E. ROOPE	6/24/04
APPROVED	E.J. PAUL	6/25/04	CHARACTERIZATION	V. MILLER	6/24/04
			QUALITY CONTROL	M. SCHEIER	6/24/04

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
HAUL ROAD PLAN AND DETAIL

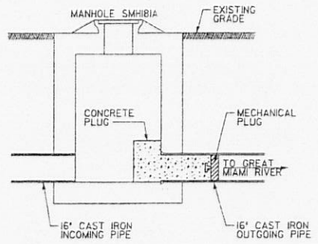
PROJECT 2120 | DATE 5/27/2004 | DRAWN R.M. LINDGREN

99X-5500-G-00797 | 2

SHEET NO. G-4

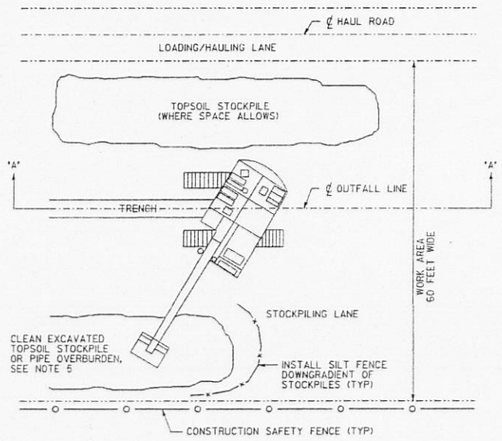
FCPS.DGN 6/30/03

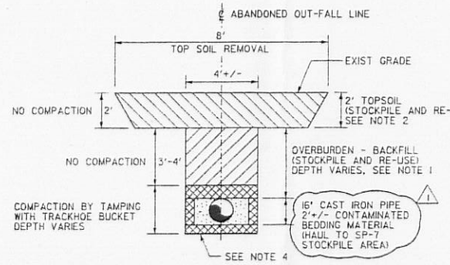
FILE NAME: /osdf/Project2120/99xg0797.dgn



MECHANICAL PLUG

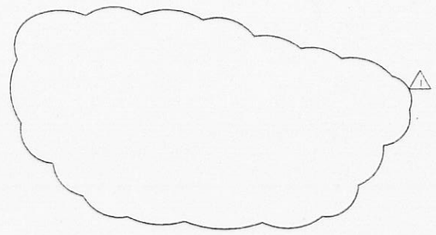
NOT TO SCALE





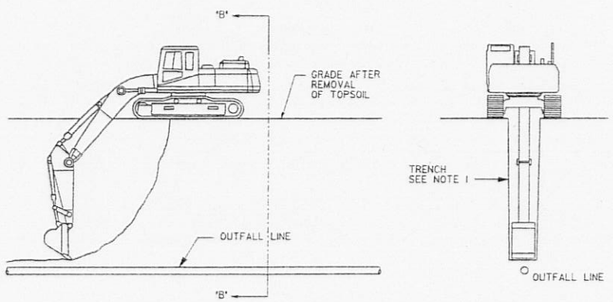
TYPICAL TRENCHING AND BACKFILL DETAIL

NOT TO SCALE



NOTES:

1. AFTER PRELIMINARY ANALYSIS OF SOIL SAMPLES AND REAL-TIME SCANNING OF THE EXCAVATION HAS BEEN PERFORMED, THE SOIL STOCKPILED WITHIN THE WORK AREA (NOT INCLUDING TOPSOIL) WILL BE USED AS BACKFILL FOR THE TRENCH EXCAVATION AND COMPACTED AT DEPTHS BELOW 5 TO 6 FEET. ADDITIONAL TRENCH BACKFILL REQUIRED TO REPLACE REMOVED MATERIAL WILL BE PURCHASED FROM A COMMERCIAL VENDOR.
2. THE STOCKPILED TOPSOIL WILL BE BACKFILLED IN THE TOP TWO FOOT OF THE WORK AREA. ADDITIONAL TOPSOIL AS REQUIRED WILL BE PURCHASED FROM A COMMERCIAL VENDOR. TOPSOIL WILL BE SPREAD AND ROLLED USING THE CONSTRUCTION EQUIPMENT WITH NO COMPACTION IN ACCORDANCE WITH THE LAND OWNERS REQUIREMENTS. TOPSOIL WILL BE GRADED TO MATCH THE EXISTING ADJACENT GRADES.
3. ALL AREAS OUTSIDE THE CROP AREA SHALL BE RESTORED TO ORIGINAL CONDITIONS.
1. 4. OVEREXCAVATE 6 INCHES OF SOIL BELOW AND ALONG SIDES OF BEDDING MATERIAL AND HAUL TO SP-7 STOCKPILE AREA.
5. EXCAVATE TOP 6 INCHES OF TOPSOIL AT LOCATION OF PIPE OVERBURDEN STOCKPILE, REPLACE TOPSOIL WHEN STOCKPILE IS DEPLETED.



SECTION "A-A"

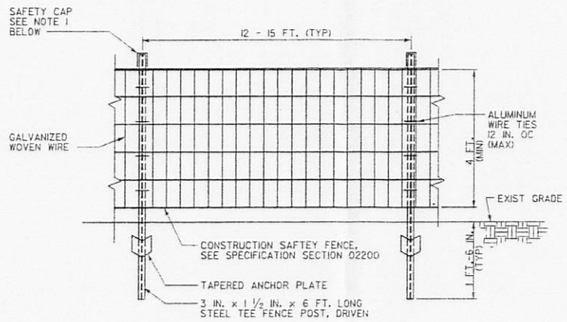
SECTION "B-B"

TYPICAL WORKING AREA DETAIL

NOT TO SCALE

NOTES:

1. A TRENCH BOX MAY BE USED AS NECESSARY.

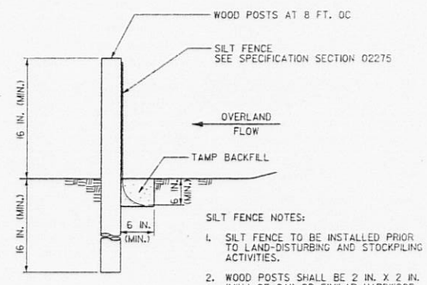


NOTES:

1. INSTALL SAFETY CAPS ON T-POSTS THAT ARE LESS THAN 4 FEET IN HEIGHT ABOVE-GRADE.

CONSTRUCTION SAFETY FENCE DETAIL

NOT TO SCALE



SILT FENCE NOTES:

1. SILT FENCE TO BE INSTALLED PRIOR TO LAND-DISTURBING AND STOCKPILING ACTIVITIES.
2. WOOD POSTS SHALL BE 2 IN. X 2 IN. (MIN.) OF OAK OR SIMILAR HARDWOOD.
3. BACKFILL MATERIAL IN ACCORDANCE WITH SPECIFICATION SECTION 02200.

SILT FENCE DETAIL

NOT TO SCALE

NO.	REVISIONS	DATE	DWN. BY	APPD.
1	REVISE NOTE 4, REVISE TRENCHING AND BACKFILL DETAIL, REMOVE PIPE GROUTING DETAIL.	7/7/04	RML	GEP
0	ISSUED CERTIFIED FOR CONSTRUCTION	6/24/04	RML	GEP

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — SYSTEMS, STRUCTURES OR COMPONENTS SHOWN ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

C. VAN ARSDALE 6/24/04
COGNIZANT ENGINEER DATE

APPROVALS

			SAFETY ENG.	C. JOHNSON	6/24/04
CIVIL & STR.	A. SHEIK	6/24/04	MAINTENANCE		
ELECTRICAL			FIRE PROTECT.		
ENGINEER			WASTE MANAGE.		
INSTRUMENT			SECURITY		
MECHANICAL			PROJECTS		
WAC	L. BARLOW	7/2/04	CONSTRUCTION	D.R. HOOPER	6/24/04
CHECKED	D. HUNTSMAN	6/24/04	CHARACTERIZATION	F. MILLER	6/24/04
APPROVED	K.J. PAUL	6/25/04	QUALITY CONTROL	M. SCHEPER	6/24/04

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
DETAILS

PROJECT: 2120	99X-5500-G-00778 | 1
DATE: 5/20/2004	
DRAWN: RM LINDGREN	

SHEET NO. G-5

FCPSJDGN 5/30/03

FILE NAME: /osdf/Project2120/99xg0778.dgn

5700

GENERAL NOTES

1. SEE DRAWING 99X-5500-G-00775 FOR GENERAL AND CONSTRUCTION NOTES.
2. SEE DRAWING 99X-5500-G-00797 FOR HAUL ROAD CROSS SECTION, ROUTE AND DETAILS.
3. LOCATION OF OPENING IN CONSTRUCTION SAFETY FENCE TO BE SELECTED BY THE ADJACENT LANDOWNER.
4. CONSTRUCTION SAFETY FENCE SHALL BE LOCATED SOUTH OF MINIATURE RAILROAD TRACK RAIL AND AS CLOSE TO EDGE OF HAUL ROAD ACCESS DRIVE AS POSSIBLE.
5. INSTALL STOP SIGN IN ACCORDANCE WITH REQUIREMENTS OF OHIO DEPARTMENT OF TRANSPORTATION.

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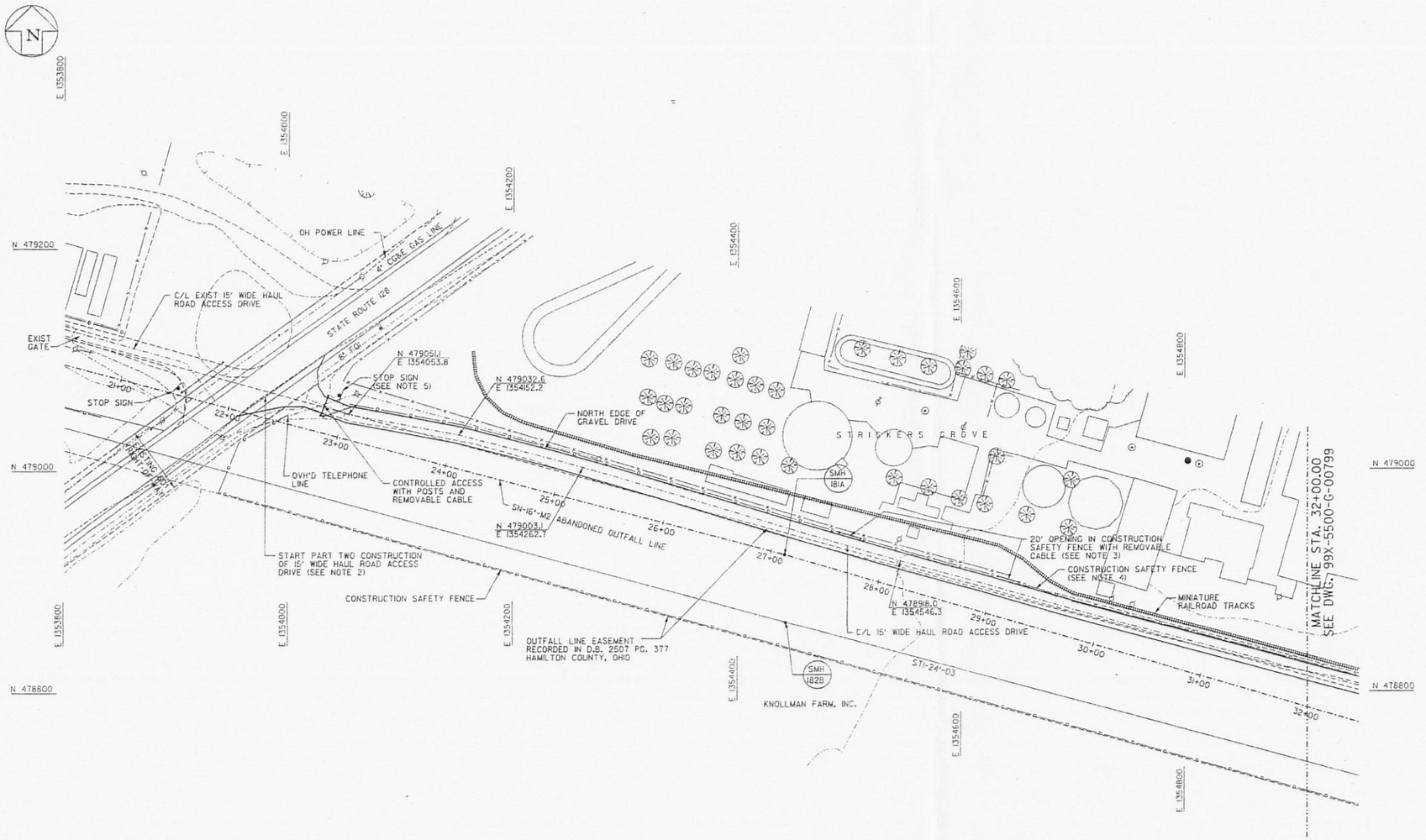


SCALE: 1"=40'

0 20 40 100 200

SCALE IN FEET

SHEET NO. G-6

NO.	REVISIONS	DATE	DWN. BY	APP'D.
0	ISSUED CERTIFIED FOR CONSTRUCTION	9/24/04	RML	[illegible]

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — NCI

SYSTEMS, STRUCTURES OR COMPONENTS DESIGNATED AS NCI ARE CONFIGURATION MANAGEMENT CONTROL SEE NOTES.

COGNIZANT ENGINEER — DATE 9/24/04

APPROVALS

CIVIL & STR.	[illegible] 9/21/04	SAFETY ENG.	[illegible] 9/21/04
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT	
INSTRUMENT		WASTE MANAGE	[illegible] 9/20/04
MECHANICAL	N/A	SECURITY	
PROJECT ENG.	[illegible] 9/21/04	PROJECTS	
CHECKED	[illegible] 9/21/04	CONSTRUCTION	[illegible] 9/21/04
APPROVED	[illegible] 9/21/04	QUALITY CHARACTERISTICS	[illegible] 9/21/04

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III

REMEDIATION OF ABANDONED OUTFALL LINE PART TWO HAUL ROAD (SHEET 1 OF 2)

PROJECT: 2120 | DATE: 7/29/2004 | DRAWN: | 99X-5500-G-00807 | 0

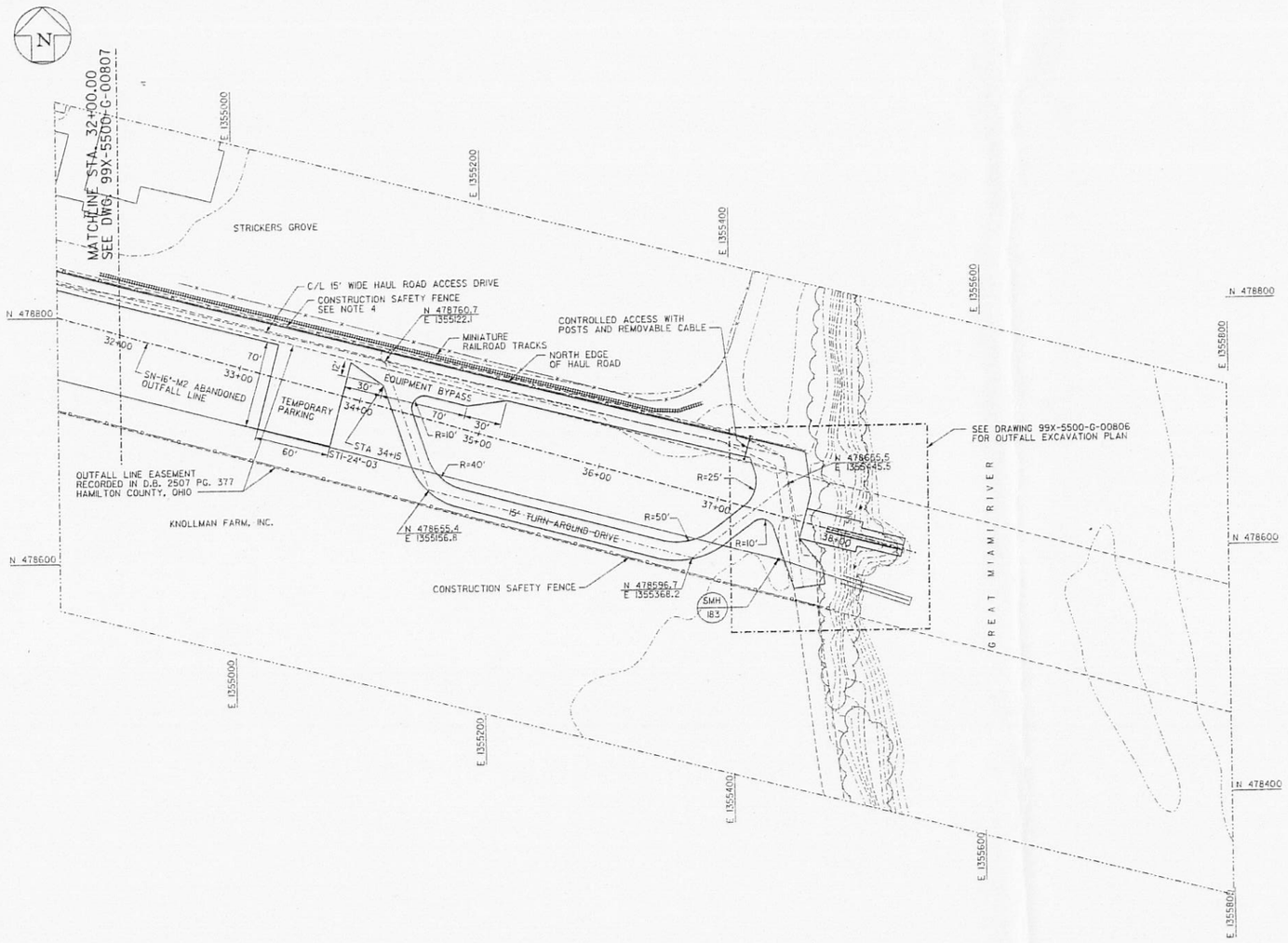
FDPS.DGN 5/30/03

FILE NAME: /osdf/Project2120/99xg0807.dgn

GENERAL NOTES

1. SEE DRAWING 99X-5500-G-00775 FOR GENERAL AND CONSTRUCTION NOTES.
2. SEE DRAWING 99X-5500-G-00778 FOR WORKING AREA AND TRENCHING DETAILS.
3. SEE DRAWING 99X-5500-G-00797 FOR HAUL ROAD CROSS SECTION, ROUTE AND DETAILS.
4. CONSTRUCTION SAFETY FENCE SHALL BE LOCATED SOUTH OF MINIATURE RAILROAD TRACK RAIL AND AS CLOSE TO EDGE OF HAUL ROAD ACCESS DRIVE AS POSSIBLE.
5. MATERIALS AND THICKNESSES FOR CONSTRUCTION OF THE EQUIPMENT BY-PASS, TEMPORARY PARKING AND 15' TURN- AROUND DRIVE SHALL BE IN ACCORDANCE WITH TYPICAL HAUL ROAD CROSS SECTION DETAIL ON DRAWING 99X-5500-G-00797.

186



SCALE: 1"=40'

0 20 40 100 200

SCALE IN FEET

SHEET NO. G-7

NO.	REVISIONS	DATE	DWN. BY	APPD.
0	ISSUED CERTIFIED FOR CONSTRUCTION	5/13/04	RML	Hes

NOTE: FLUOR FERNALD CADD DRAWING. DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — YES / NO

SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL.

COGNIZANT ENGINEER — DATE 5/24/04

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT.	
INSTRUMENT		WASTE MANAGE	
MECHANICAL		SECURITY	
QA		PROJECTS	
CHECKED		CONSTRUCTION	
APPROVED		CHARACTERIZATION	

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
PART TWO HAUL ROAD (SHEET 2 OF 2)

PROJECT: 2120 | DATE: 6/14/2004 | DRAWN:

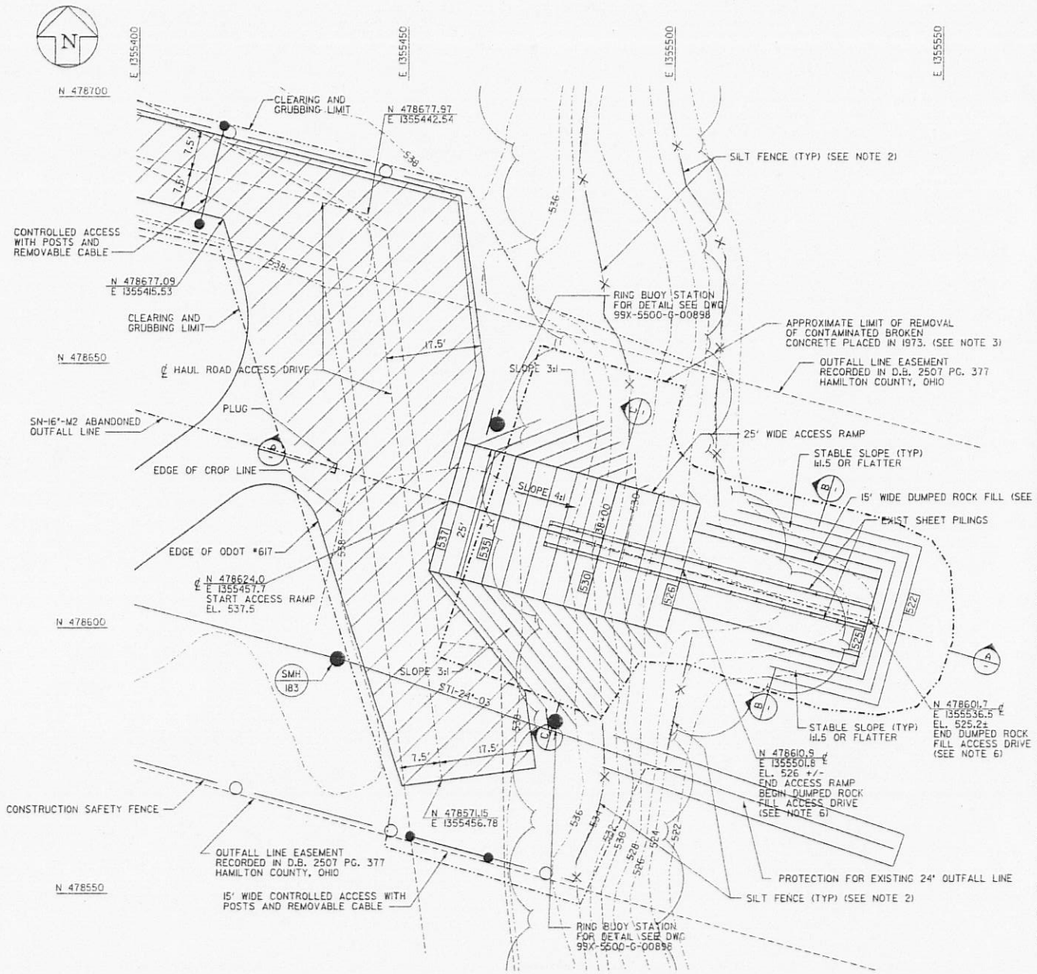
99X-5500-G-00799 | 0

REF. DWG. NO.

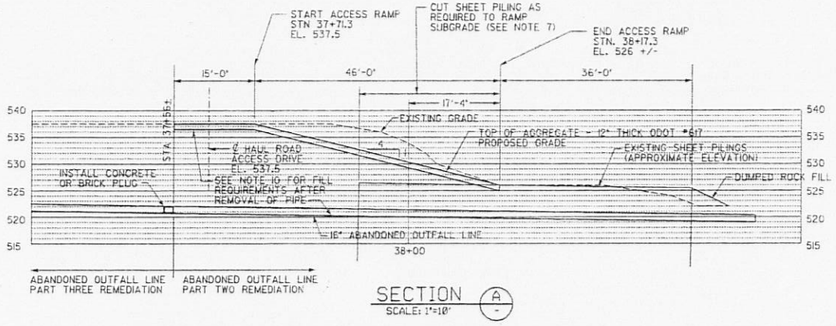
FILE NAME: /osdf/Project2120/99xg00799.dgn

FORM.DGN 5/30/03

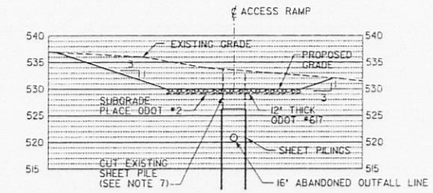
5700



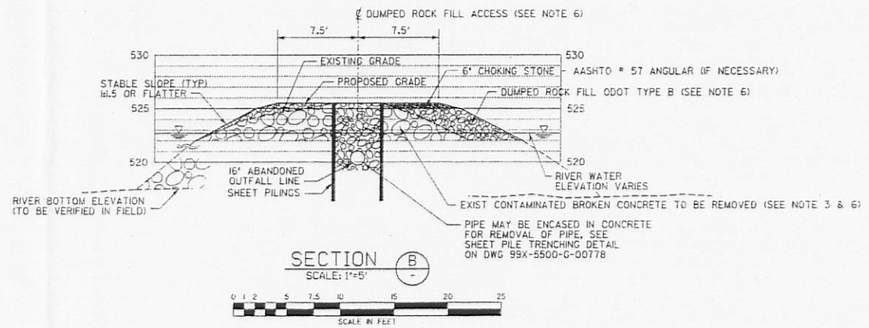
PLAN
SCALE: 1"=10'



SECTION A
SCALE: 1"=10'



SECTION C
SCALE: 1"=10'



SECTION B
SCALE: 1"=5'

SCALE IN FEET

EXCAVATION SEQUENCING

1. PERFORM CLEARING AND GRUBBING IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 02110.
2. INSTALL SILT FENCE AT LOCATIONS SHOWN ON PLAN AND DETAIL AS SHOWN ON DWG. 99X-5500-G-00778. SURFACE WATER MANAGEMENT AND EROSION CONTROL SHALL BE IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 02275.
3. REMOVE CONTAMINATED BROKEN CONCRETE (HEREAFTER CALLED AS " BROKEN CONCRETE") WITHIN THE LIMITS SHOWN ON PLAN AND ABOVE THE RIVER WATER ELEVATION. VERIFY LIMITS OF BROKEN CONCRETE IN THE FIELD AND ADJUST IF NECESSARY. HAUL TO THE FCP FOR PROPER DISPOSAL. BROKEN CONCRETE MAY BE REMOVED IN PHASES TO SUPPORT THE CONSTRUCTION SEQUENCE:
4. AFTER REMOVAL OF BROKEN CONCRETE, PERFORM REAL-TIME MONITORING OF THE EXPOSED SURFACE AND CERTIFICATION SAMPLING.
5. AFTER REAL-TIME MONITORING AND SAMPLING, IMMEDIATELY PLACE DUMPED ROCK FILL AS SHOWN ON THE RESTORATION PLAN DRAWING 99-5500-G-00808 EXCEPT IN THE ACCESS RAMP AREA. PLACE DUMPED ROCK FILL IN THE ACCESS RAMP AREA AFTER REMOVAL OF THE 16 INCH ABANDONED OUTFALL PIPELINE AND THE RE-ESTABLISHMENT OF THE BANK
6. CONSTRUCT 15-FT WIDE DUMPED ROCK FILL ACCESS, IF REQUIRED, TO SUPPORT REMOVAL OF THE 16 INCH ABANDONED OUTFALL LINE AND REMOVAL OF BROKEN CONCRETE RELATED TO THE ABANDONED OUTFALL LINE FROM THE RIVERBED. DUMPED ROCK FILL ACCESS, IF REQUIRED, SHALL BE CONSTRUCTED AFTER REMOVAL OF BROKEN CONCRETE EXCEPT BROKEN CONCRETE FROM THE RIVERBED. BROKEN CONCRETE FROM THE RIVERBED MAY BE REMOVED AFTER CONSTRUCTION OF DUMPED ROCK FILL ACCESS.
7. CUT EXISTING SHEET PILE AT THE SUBGRADE ELEVATION TO CONSTRUCT THE ACCESS RAMP. CUT ADDITIONAL SHEET PILE HEIGHT, AS REQUIRED, TO EXCAVATE THE 16 INCH ABANDONED OUTFALL LINE.
8. EXCAVATE THE 16 INCH ABANDONED OUTFALL LINE UNDER THE HAUL ROAD ACCESS DRIVE AND ACCESS RAMP IN ACCORDANCE WITH THE TYPICAL TRENCHING DETAIL AND IN DUMPED ROCK FILL ACCESS AREA IN ACCORDANCE WITH SHEET PILE TRENCHING DETAIL SHOWN ON DWG. 99X-5500-G-00778.
9. HAUL BROKEN CONCRETE, PIPE, BEDDING MATERIAL AND SOIL UNDER BEDDING MATERIAL TO THE ON-SITE SP-7 STOCKPILE AREA FOR OFF-SITE DISPOSAL AS SHOWN ON TRENCHING DETAIL. REUSE EXCAVATED OVERBURDEN MATERIAL AS TRENCH BACKFILL.
10. PLACE TRENCH BACKFILL IN 8 INCH +/- 1 INCH LOOSE LIFTS AND COMPACT EACH LIFT TO AT LEAST 90 PERCENT STANDARD PROCTOR MAXIMUM DRY UNIT WEIGHT AS DETERMINED BY ASTM D 698. COMPACT BACKFILL WITHIN A MOISTURE CONTENT +/- 3 PERCENTAGE POINTS OF STANDARD PROCTOR OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 698. PERFORM BACKFILL PERFORMANCE TESTING ON COMPACTED BACKFILL AT A MINIMUM FREQUENCY OF 2 TESTS PER 100 CUBIC YARDS TO CONFIRM COMPLIANCE WITH THE COMPACTION REQUIREMENT.
11. REMOVE ABANDONED OUTFALL LINE DEBRIS FROM THE MIDDLE OF THE RIVER. IF ACCESS IS REQUIRED OUTSIDE OF THE OUTFALL LINE EASEMENT, THEN THE ARMY CORP OF ENGINEERS MUST BE NOTIFIED OF THE SCOPE OF WORK.

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SCALE IN FEET

SHEET NO. G-8

NO.	REVISIONS	DATE	DWN. BY	APPD.
0	ISSUED CERTIFIED FOR CONSTRUCTION	9/01/04	RML	

NOTE: FLUOR FERNALD CADD DRAWING. DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING

SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES:

COGNIZANT ENGINEER — DATE

APPROVALS

CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT.	
INSTRUMENT		WASTE MANAG.	
MECHANICAL		SECURITY	
DESIGNED		PROJECTS	
CHECKED		CONSTRUCTION	
APPROVED		CHARACTERIZATION	

Fernald Closure Project

FLUOR FERNALD, INC.

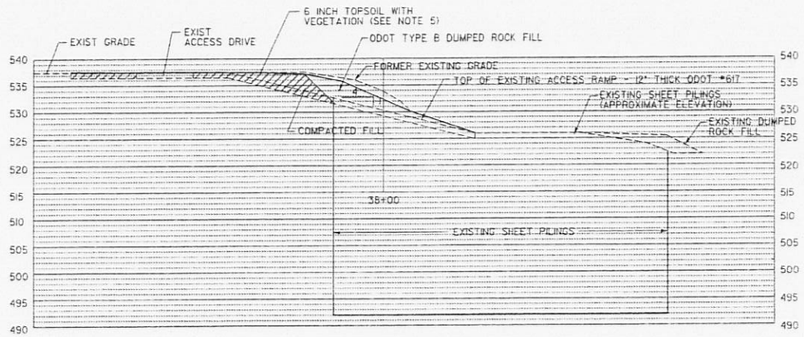
U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
PART TWO OUTFALL EXCAVATION PLAN

PROJECT: 2620 | DATE: 7/14/2004 | DRAWN: | 99X-5500-G-00806 | 0

FDPS.DGN 5/30/03

FILE NAME: /osdf/Project2ll20/99xg0806.dgn



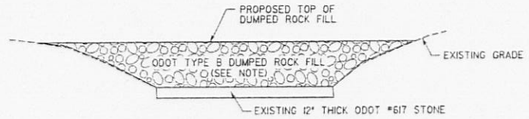
TYPICAL ACCESS PROFILE (A)

SCALE: 1"=10'

GENERAL NOTES

1. ODOT TYPE B DUMPED ROCK FILL SHALL BE IN ACCORDANCE WITH ODOT 703.19(B)(2).
2. PLACE ROCK FILL ON RIVER BANK, ODOT TYPE B IN ACCORDANCE WITH ODOT 601.08.
3. DUMPED ROCK FILL SHALL BE PLACED WITHIN LIMITS SHOWN ON DRAWING.
4. DUMPED ROCK FILL SHALL NOT BE PLACED ABOVE ELEVATION OF EXISTING SURFACE PRIOR TO CONSTRUCTION OF ACCESS HAUL ROAD IN ACCORDANCE WITH HAMILTON COUNTY DEPARTMENT OF PUBLIC WORKS.
5. VEGETATED DISTURBED SOIL AREAS WITH SEED MIX AS APPROVED BY THE PROPERTY LAND OWNER.
6. RESTORE ACCESS DRIVE TO ITS ORIGINAL WIDTH (12 FT) AND LOCATION.
7. REMOVE CONSTRUCTION SAFETY FENCE AFTER COMPLETION OF RESTORATION ACTIVITY.

186



TYPICAL DUMPED ROCK FILL AND ACCESS RAMP DETAIL

NTS

NOTE: FILL DUMPED ROCK FILL TO ELEVATION SHOWN ON PLAN.

0 5 10 25 50

SCALE IN FEET

SHEET NO. G-9

NO.	REVISIONS	DATE	DWN.	BY	APP'D.
0	ISSUED CERTIFIED FOR CONSTRUCTION	5/2/01	RWL		

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — SYSTEMS, STRUCTURES OR COMPONENTS DESIGNATED AS CM DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

COGNIZANT ENGINEER — DATE 5/2/01

APPROVALS

CIVIL & STR.		SAFETY ENG.		
ELECTRICAL		MAINTENANCE		
ENGINEER		FIRE PROTECT.		
INSTRUMENT		WASTE MANAGE		
MECHANICAL		SECURITY		
PROJECT MGR.		PROJECTS		
CHECKED		CONSTRUCTION		
APPROVED		CHARACTERIZATION		

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
PART TWO OUTFALL RESTORATION PLAN

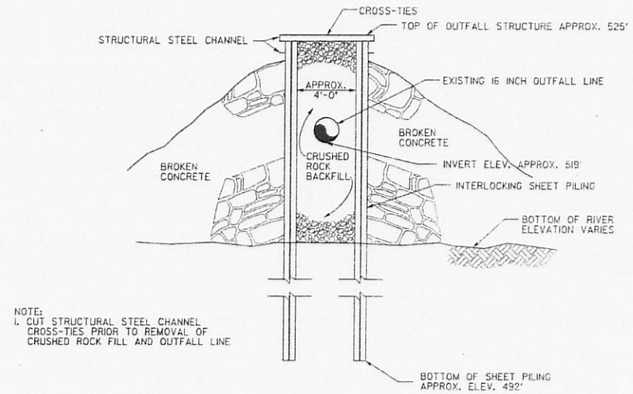
PROJECT: 2120 | DATE: 7/26/2004 | DRAWING: 99X-5500-G-00808 | 0

FCPS.DGN 5/30/03

FILE NAME: /oscf/Project2120/99xg0808.dgn

5700

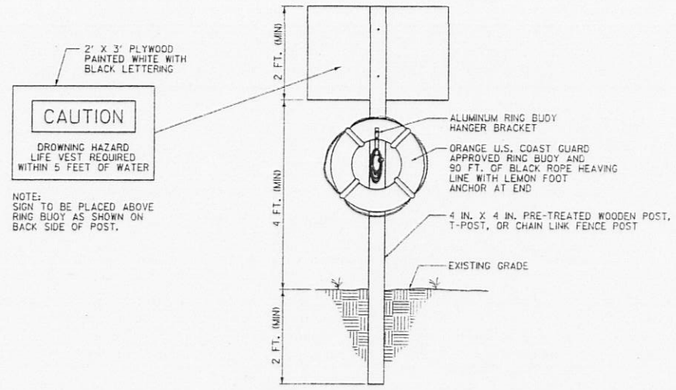
186



NOTE:
1. CUT STRUCTURAL STEEL CHANNEL CROSS-TIES PRIOR TO REMOVAL OF CRUSHED ROCK FILL AND OUTFALL LINE

TYPICAL SHEETPILE TRENCHING DETAIL

NOT TO SCALE



NOTE:
SIGN TO BE PLACED ABOVE RING BUOY AS SHOWN ON BACK SIDE OF POST.

TYPICAL RING BUOY STATION DETAIL

NOT TO SCALE

NO.	REVISIONS	DATE	DWN. BY	APPD.
0	ISSUED CERTIFIED FOR CONSTRUCTION	9/23/04	RML	

NOTE: FLUOR FERNALD CADD DRAWING. DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING

SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL.

COGNIZANT ENGINEER — DATE 9/24/04

APPROVALS

CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT.	
INSTRUMENT		WASTE MANAGE	
MECHANICAL		SECURITY	
W.O.		PROJECTS	
CHECKED		CONSTRUCTION	
APPROVED		CHARACTERIZATION	
		QUALITY MGMT.	

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
PART TWO DETAILS

PROJECT: 2820
DATE: 8/09/2004
DRAWN: RM LINDOREN

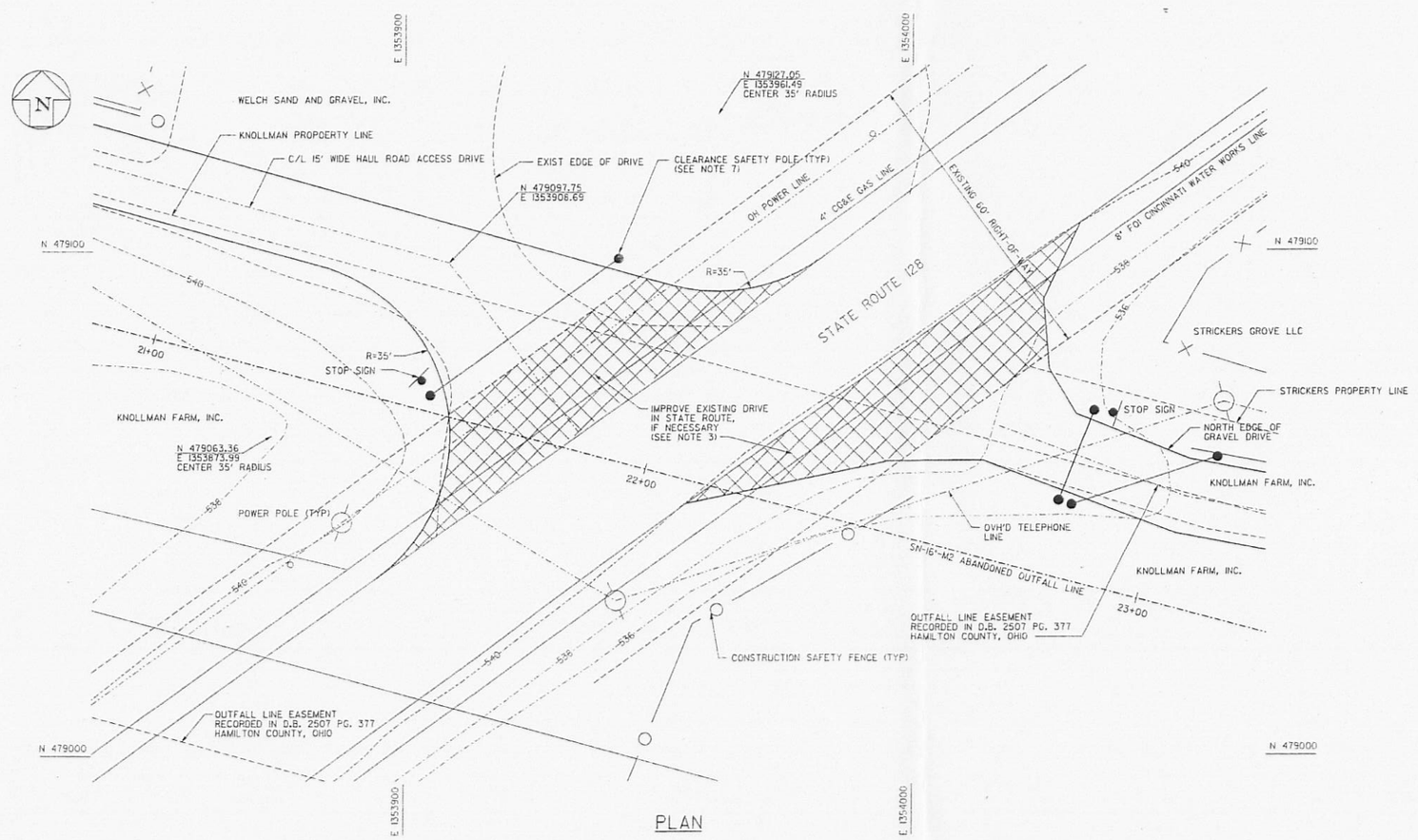
99X-5500-G-00809 | 0

SHEET NO. G-10

FDF5.06N 5/30/03

FILE NAME: /osdf/Project2120/99x00809.dgn

5700



PLAN

GENERAL NOTES

1. SEE DRAWING 99X-5500-G-00775 FOR GENERAL AND CONSTRUCTION NOTES.
2. SEE DRAWING 99X-5500-G-00778 FOR WORKING AREA AND TRENCHING DETAILS.
3. SEE DRAWING 99X-5500-G-00797 FOR HAUL ROAD CROSS SECTION, ROUTE AND DETAILS.
4. DO NOT OPERATE TRACK EQUIPMENT ON STATE ROUTE. CROSS STATE ROUTE WITH TRACK EQUIPMENT AFTER ROAD PROTECTION MEASURES (PLYWOOD, RUBBER MATTING, ETC.) ARE PLACED OVER THE ROAD.
5. INSTALL TRAFFIC SIGNS "ROAD WORK AHEAD" AND "TRUCK CROSSING" ALONG STATE ROUTE 128 BOTH DIRECTIONS AT 1000 FEET AND 500 FEET RESPECTIVELY FROM THE HAUL ROAD CROSSING. COVER OR TAKE DOWN SIGNS NIGHTLY AFTER EACH DAYS WORK.
6. EQUIPMENT WHICH MAY CROSS STATE ROUTE 128 INCLUDE:
   - 30 TON ARTICULATING TRUCK
   - ROLL-OFF BOX TRUCK
   - CAT 330 TRACK HOE OR EQUAL
   - CAT D6 BULLDOZER
   - CAT 1125 LOADER
   - 2000-3000 GALLON WATER TRUCK
7. INSTALL SAFETY POLES WITH WIRE PLACED ACROSS POLES AT A MINIMUM CLEARANCE HEIGHT OF 16.30 FEET. INSTALL STRINGERS ON WIRE.
8. FLAGGER SHALL BE UTILIZED TO STOP HIGHWAY TRAFFIC IN BOTH DIRECTIONS. TRUCKS CARRYING CONTAMINATED MATERIALS CROSS STATE ROUTE 128.

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SCALE: 1"=10'
0 5 10 25 50
SCALE IN FEET

SHEET NO. G-11

NO.	REVISIONS	DATE	DWN. BY	APPD.
0	ISSUED CERTIFIED FOR CONSTRUCTION	9/2/04	RML	[illegible]

NO.	REVISIONS	DATE	DWN. BY	APPD.

REF. DWG. NO.

NOTE: FLUOR FERNALD CADD DRAWING. DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — YES / NO
SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.
COGNIZANT ENGINEER 9/2/04 DATE

APPROVALS

CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT.	
INSTRUMENT		WASTE MANAGE	
MECHANICAL		SECURITY	
QUALITY ASSURANCE		PROJECTS	
CHECKED		CONSTRUCTION	
APPROVED		CHARACTERIZATION	

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
ST. RT. 128 ROAD CROSSING TRAFFIC PLAN

PROJECT: 2830
DATE: 6/21/2004
DRAWN: R.M. LINDGREN

99X-5500-G-00802 | 0

FCPS.DGN 5/30/03

FILE NAME: /cdsf/Project2120/99xg0802.dgn