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**COMPLIANCE WITH PERMIT RELATED SUBSTANTIVE REGULATORY
REQUIREMENTS - ADVANCED WASTEWATER TREATMENT - MULTI-MEDIA
FILTER PROJECT**

12/06/96

DOE-0218-97

DOE-FEMP

EPAS

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Department of Energy

Ohio Field Office
Fernald Area Office

P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155



DEC 6 1996

DOE-0218-97

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HSF-5J
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

COMPLIANCE WITH PERMIT RELATED SUBSTANTIVE REGULATORY REQUIREMENTS - ADVANCED WASTEWATER TREATMENT - MULTI-MEDIA FILTER PROJECT

Enclosed is a Permit Information Summary for the Advanced Wastewater Treatment Facility Multi-Media Filter Project. The project involves the installation of three new multi-media filters for the Advanced Wastewater Treatment (AWWT) Phase II 400-GPM System; modification of three existing activated carbon filters on the AWWT Phase II 400-GPM System to provide a more durable under drain assembly and backwash capabilities; conversion of five existing activated carbon filters on the AWWT Phase I 700-GPM System to multi-media filters; and installation of a common backwash system for the multi-media filtration systems and the existing 400-GPM activated carbon filters. As part of a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response action, the AWWT Multi-Media Filter Project is exempt from the requirement to obtain formal permit approval under CERCLA 121(e), 40 CFR 300.400(e) and Paragraph XII A of the Amended Consent Agreement.

Section XIII of the Amended Consent Agreement requires the Department of Energy (DOE) to identify those permits that would otherwise be required, along with the standards, requirements, criteria, or limitations that would have had to have been met to obtain each permit. The enclosed Permit Information Summary satisfies this requirement. Please note that the Piping and Instrumental Diagrams, identified as Enclosure 1 in the enclosed Permit Information Summary, are being supplied only to the U.S. Environmental Protection Agency (U.S. EPA) and Ohio Environmental Protection Agency (OEPA) as well as their subcontractors.

If you have any questions concerning the enclosed summary, please contact Mr. John Kappa at (513) 648-3149.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Kappa

Enclosure: As Stated

cc w/enc:

S. Fauver, EM-425/GTN
L. Griffin, EM-425/GTN
G. Jablonowski, USEPA-V, 5HRE-8J
R. Beaumier, TPSS/DERR, OEPA-Columbus
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J. Harmon, FDF/90
F. Johnston, FDF/50
T. Walsh/FDF65-2
AR Coordinator/78

cc w/o enc:

C. Little, FDF/2
EDC, FDF/52-7

PERMIT INFORMATION SUMMARY
OPERABLE UNIT 5
ADVANCED WASTEWATER TREATMENT FACILITY
MULTI-MEDIA FILTERS

1.0 INTRODUCTION

This permit information summary documents substantive permitting requirements for the AWWT Multi-Media Filter Project. The scope of work for the project involves the installation of three new multi-media filters for the AWWT Phase II 400-GPM System; modification of three existing activated carbon filters on the AWWT Phase II 400-GPM System to provide a more durable under drain assembly and backwash capabilities; conversion of five existing activated carbon filters on the AWWT Phase I 700-GPM System to multimedia filters; and installation of a common backwash system for the multi-media filtration systems and the existing 400-GPM activated carbon filters. As part of a CERCLA response action, the AWWT Multi-Media Filter Project is exempt from the requirement to obtain formal permit approval under CERCLA 121(e), 40 CFR 300.400(e) and Paragraph XIII A of the Amended Consent Agreement.

Although exempt from administrative permitting requirements, Paragraph XIII.B of the Amended Consent Agreement requires DOE to supply specific information regarding the permits that would have been required for the project in the absence of the CERCLA permitting exemption described above. Pursuant to Paragraph XIII.B of the Amended Consent Agreement, the following information is required:

1. Identification of each permit that would be required in absence of the CERCLA 121(e) permitting exemption;
2. Identification of the standards, requirements, criteria, or limitations that would have had to have been met to obtain the permits; and
3. Explanation of how the response action will meet the substantive requirements, criteria, or limitations identified in item 2, above.

2.0 INFORMATION REQUIRED BY PARAGRAPH XIII.B OF THE AMENDED CONSENT AGREEMENT

The following sections of this enclosure have been prepared to address the requirements described above and to provide a detailed description of how substantive permitting requirements for the AWWT Multi-Media Filter Project will be addressed.

1. Identification of Each Permit That Would Otherwise be Required.

PERMIT TO INSTALL A DISPOSAL SYSTEM - Ohio Administrative Code (OAC) 3745-31-02 (A): Unless exempted by OAC 3745-31-03, no person shall cause, permit or allow the installation of a new disposal system or cause, permit, or allow the modification of a disposal system without first obtaining a Permit to Install.

2. Identification of the Standards, Requirements, Criteria, or Limitations That Would Have to be Met to Obtain Each Permit.

PERMIT TO INSTALL A DISPOSAL SYSTEM - Pursuant to 3745-31-05, the Director of OEPA will issue a permit to install a disposal system provided the installation will not prevent or interfere with the attainment or maintenance of applicable ambient water quality standards and will not result in the violation of an effluent standard adopted by the director or administrator of USEPA. Pursuant to 3745-31-05, the disposal system must employ best available technology.

3. Explanation of How the Response Action Will Meet the Standard, Requirements, Criteria, or Limitations Identified in Item 2 Above.

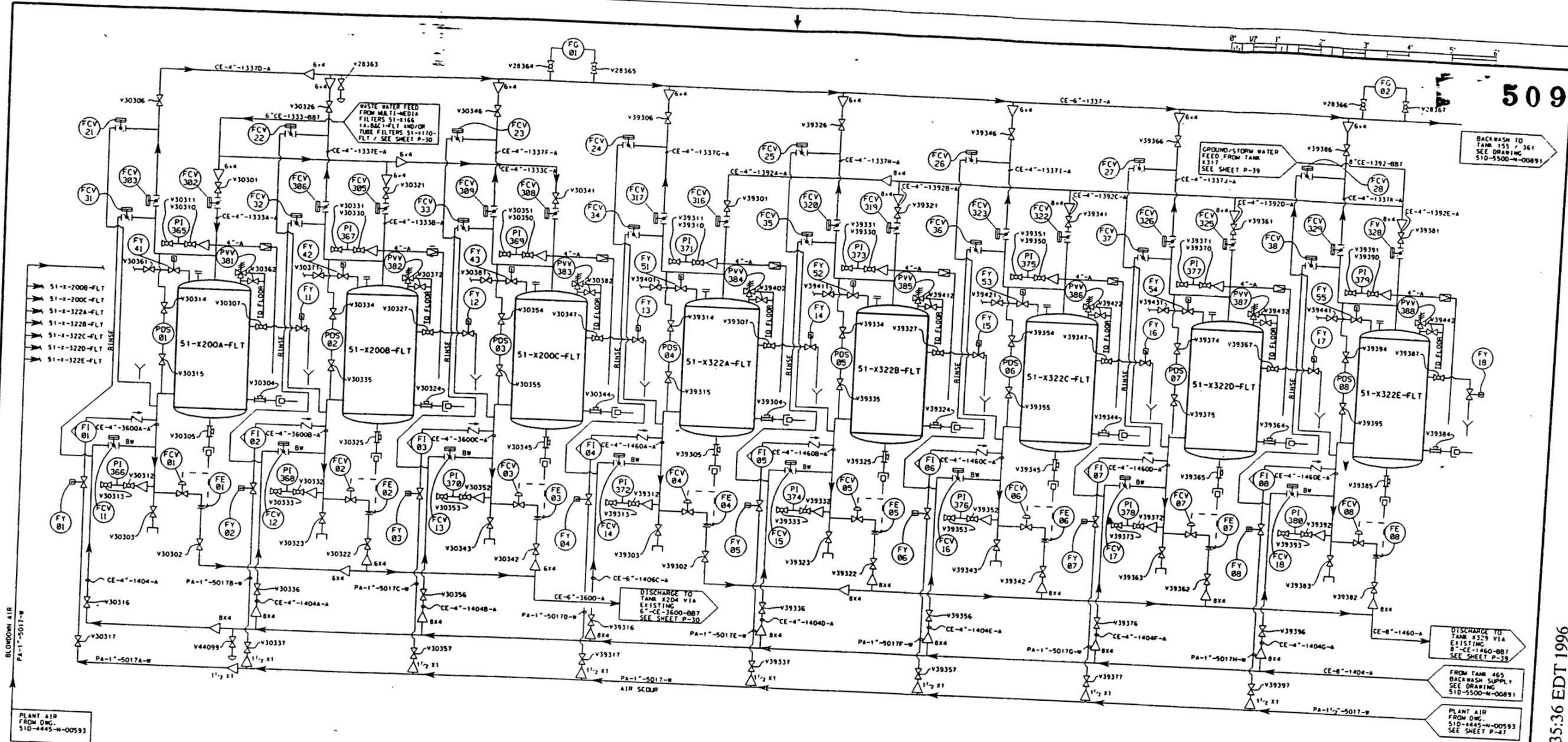
PERMIT TO INSTALL A DISPOSAL SYSTEM - The AWWT Multi-Media Filter Project involves the installation of three new multi-media filters for the AWWT Phase II 400-GPM System; modification of three existing activated carbon filters on the AWWT Phase II 400-GPM System to provide a more durable under drain assembly and backwash capabilities; conversion of five existing activated carbon filters on the AWWT Phase I 700-GPM System to multimedia filters; and installation of a common backwash system for the multi-media filtration system and the existing Phase II 400-GPM activated carbon filters. The newly installed and/or modified backwash systems associated with the AWWT Multi-Media Filter Project will make use of existing tanks already installed at the AWWT Facility.

Backwash from the carbon and multi-media filters associated with the AWWT Multi-Media Filter Project will be collected and combined with clarifier underflow in the existing waste slurry surge tank at the AWWT and will be pumped to the new Slurry Dewatering Facility for conditioning, thickening, and dewatering via automated plate and frame filter presses. These combined waste streams will produce approximately 5.8 lbs of uranium/day which will be processed through the AWWT Slurry Dewatering Facility. The Slurry Dewatering Facility does not result in a direct discharge of wastewater to a water of the state. The filtrate water from the filter press operation at the Slurry Dewatering Facility (approximately 40 gallons/min) is returned to the headworks of the AWWT system.

Enclosure 1 contains the following Piping and Instrumentation Diagram's (P&ID) showing modifications associated with the AWWT Multi-Media Filter Project:

- Dwg. 51D-5500-N-00890 - P&ID For Filters X200A, B, C & 322A-3
(New piping configuration for existing filters)
- Dwg. 51D-5500-E-00891 - P&ID for Filters X166, A, B, & C
(New filters and piping)
- Dwg. 51D-5500-P-00895 - Backwash Supply Piping
- Dwg. 51D-5500-P-00896 - Process Water Lines, Influent - 400 gpm
- Dwg. 51D-5500-P-00897 - Process Water Lines, Influent - 700 gpm
- Dwg. 51D-5500-P-00898 - Backwash Effluent Piping
- Dwg. 51D-5500-N-00900 - Typical Existing Filter Modifications

PERMIT INFORMATION SUMMARY
OPERABLE UNIT 5
ADVANCED WASTEWATER TREATMENT FACILITY
MULTI-MEDIA FILTERS
ENCLOSURE 1



LEGEND

	• STRAINER (SINGLE BASKET)		• SIGHT GLASS
	• PINCH VALVE		• PNEUMATIC ACTUATED BUTTERFLY VALVE
	• RUPTURE DISC		• BALL VALVE
	• QUICK DISCONNECT		• MANUAL GATE VALVE
	• CHECK VALVE		• VACUUM AND PRESSURE VALVE
	• TRENCH		
	• 2 WAY SOLENOID VALVE		
	• CONCENTRIC REDUCER		

**EDC
CONTROLLED
CERTIFIED**

EDC

NOTE:
 1. ALL PIPING CONFIGURATIONS SHOWN ON THIS DRAWING ARE FOR DEMONSTRATION PURPOSES ONLY. SUBCONTRACTOR TO SUBMIT ACTUAL DESIGN FOR APPROVAL BEFORE INITIATING CONSTRUCTION.
 2. BACKWASH MODIFICATIONS TO CARBON FILTERS X200A, B, & C TO INCLUDE REPLACEMENT OF INTERNAL MANIFOLD SYSTEM.
 3. SEE DRAWING 510-5500-N-00900 FOR TYPICAL MODIFICATIONS TO EXISTING CARBON FILTERS.

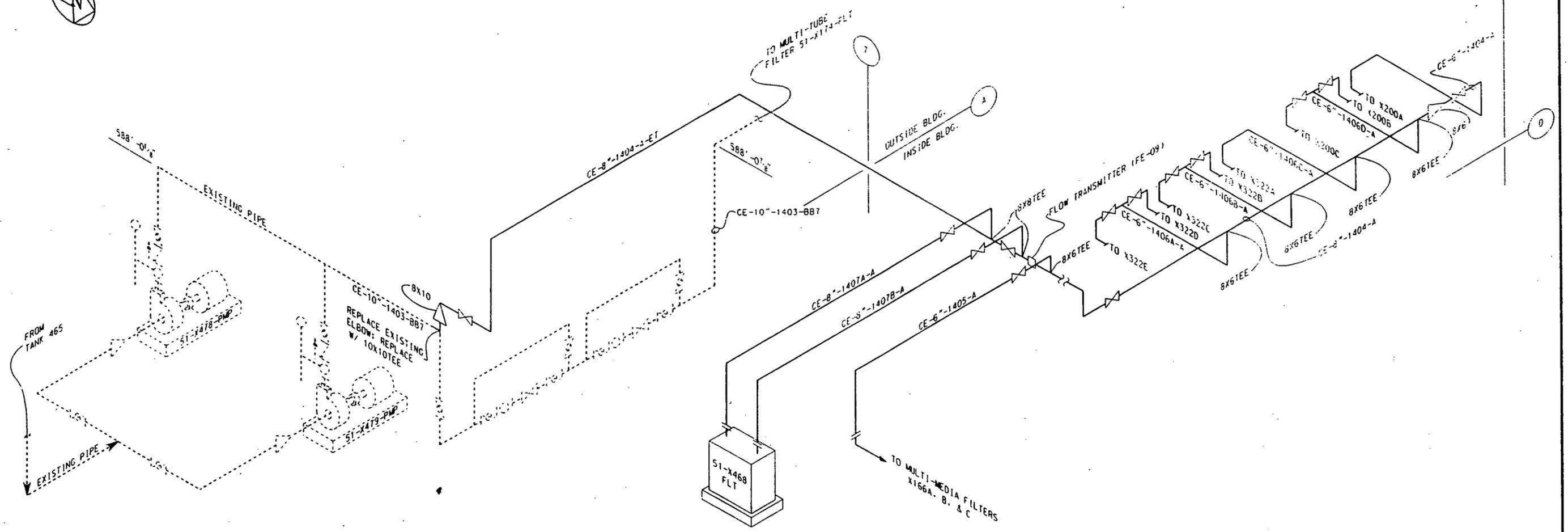
NO.	REVISIONS	DATE	BY	APPD.	NO.	REVISIONS	DATE	BY	APPD.
3	AS-BUILT PER DCN-1685-006 AND 017 PER RES3081								
2	ADDED NOTE 3 & REFERENCE DRAWING NUMBER								
1	GENERAL REVISIONS								
0	ISSUE CFC								

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

PERFORMANCE GRADE	1	2	3	4	5
DATE					

FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION
 Environmental Management Project
 U.S. DEPARTMENT OF ENERGY

AWWT FACILITY
 AWWT MULTI-MEDIA FILTER PROJECT
 P&ID
 FOR FILTERS X200A, B, & C / X322A, B, C, D, & E
 RES 2109
 DATE 8-21-90
 DRAWN J.W.P./ATANIA
 510-5500-N-00890 3



LEGEND

	= STRAINER (SINGLE BASKET)
	= CHECK VALVE
	= MANUAL GATE VALVE
	= BUTTERFLY VALVE
	= CONCENTRIC REDUCER

NOTES:

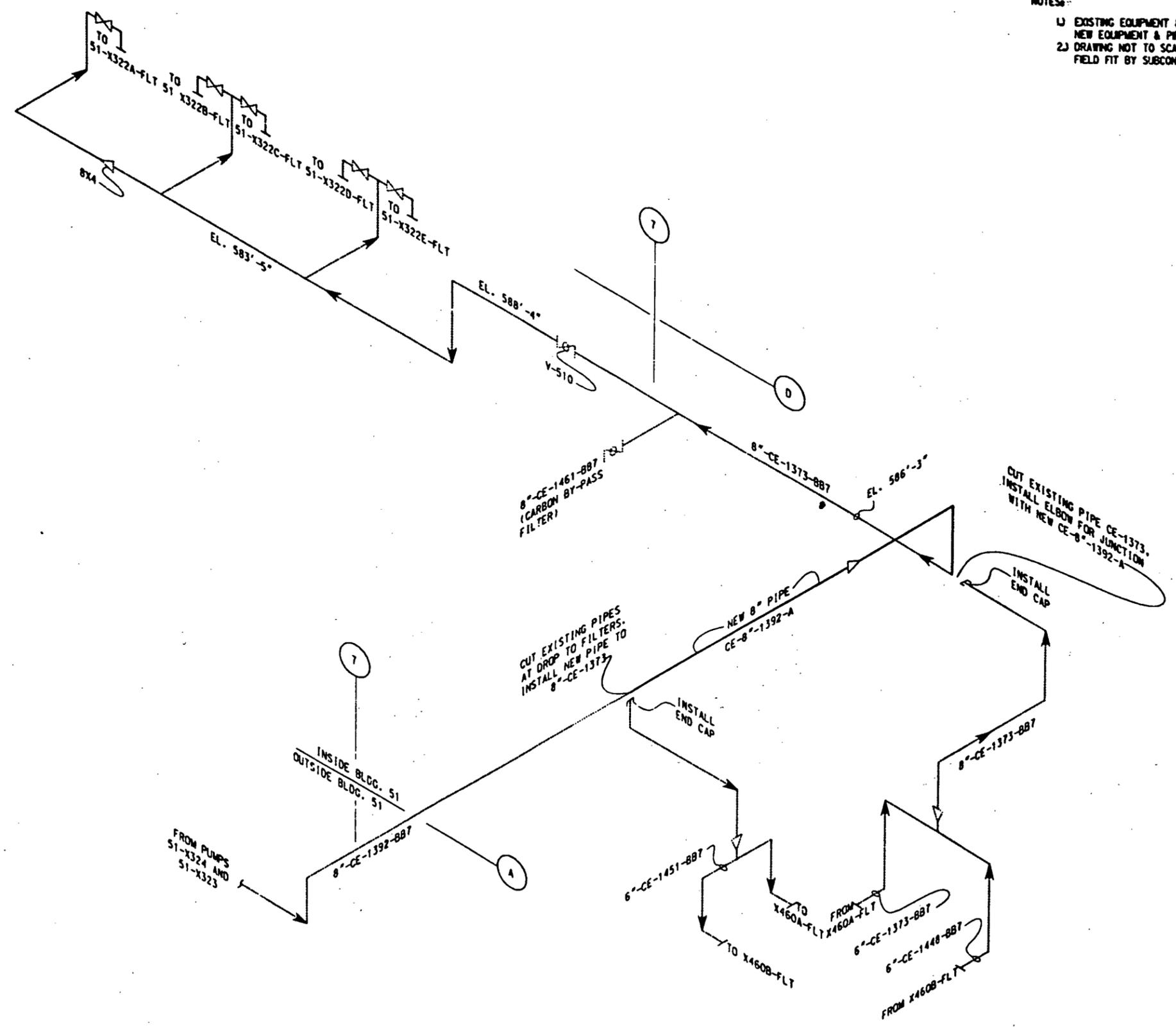
- EXISTING EQUIPMENT & PIPING SHOWN AS DOTTED LINES. NEW EQUIPMENT & PIPING SHOWN AS SOLID LINES.
- DRAWING NOT TO SCALE. ACTUAL PIPE ROUTE TO BE FIELD FIT BY SUBCONTRACTOR.

NOTE: FERMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">PERFORMANCE GRADE</th> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td></td> </tr> </table>		PERFORMANCE GRADE		1	2	3	4	5		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">APPROVALS</th> </tr> <tr> <td>SAFETY ENG.</td> <td></td> </tr> <tr> <td>MAINTENANCE</td> <td></td> </tr> <tr> <td>CIVIL & STR. ENGINEER</td> <td></td> </tr> <tr> <td>ELECTRICAL ENGINEER</td> <td></td> </tr> <tr> <td>INSTRUMENT MECHANICAL</td> <td></td> </tr> <tr> <td>CHECKED</td> <td>GEP</td> </tr> <tr> <td>APPROVED</td> <td>G.E. PAUL 9/12/95</td> </tr> </table>		APPROVALS		SAFETY ENG.		MAINTENANCE		CIVIL & STR. ENGINEER		ELECTRICAL ENGINEER		INSTRUMENT MECHANICAL		CHECKED	GEP	APPROVED	G.E. PAUL 9/12/95	<p>FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION</p> <p>Environmental Management Project</p> <p>U.S. DEPARTMENT OF ENERGY</p>		<p>AWWT FACILITY</p> <p>AWWT MULTI-MEDIA FILTER PROJECT</p> <p>BACKWASH SUPPLY PIPING</p>	
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RES 2709	DATE 0-29-05	51D-5500-P-00895	0																																

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NOTES:
 1) EXISTING EQUIPMENT & PIPING SHOWN AS DOTTED LINES.
 2) DRAWING NOT TO SCALE. ACTUAL PIPE ROUTE TO BE FIELD FIT BY SUBCONTRACTOR.

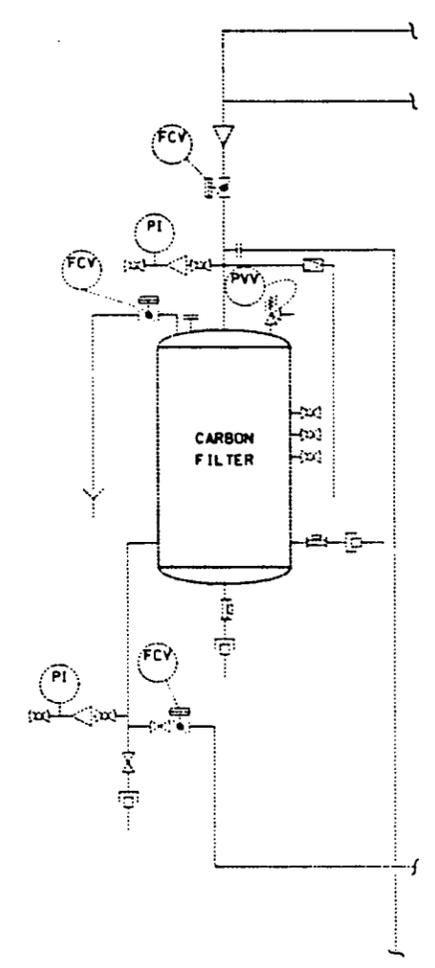
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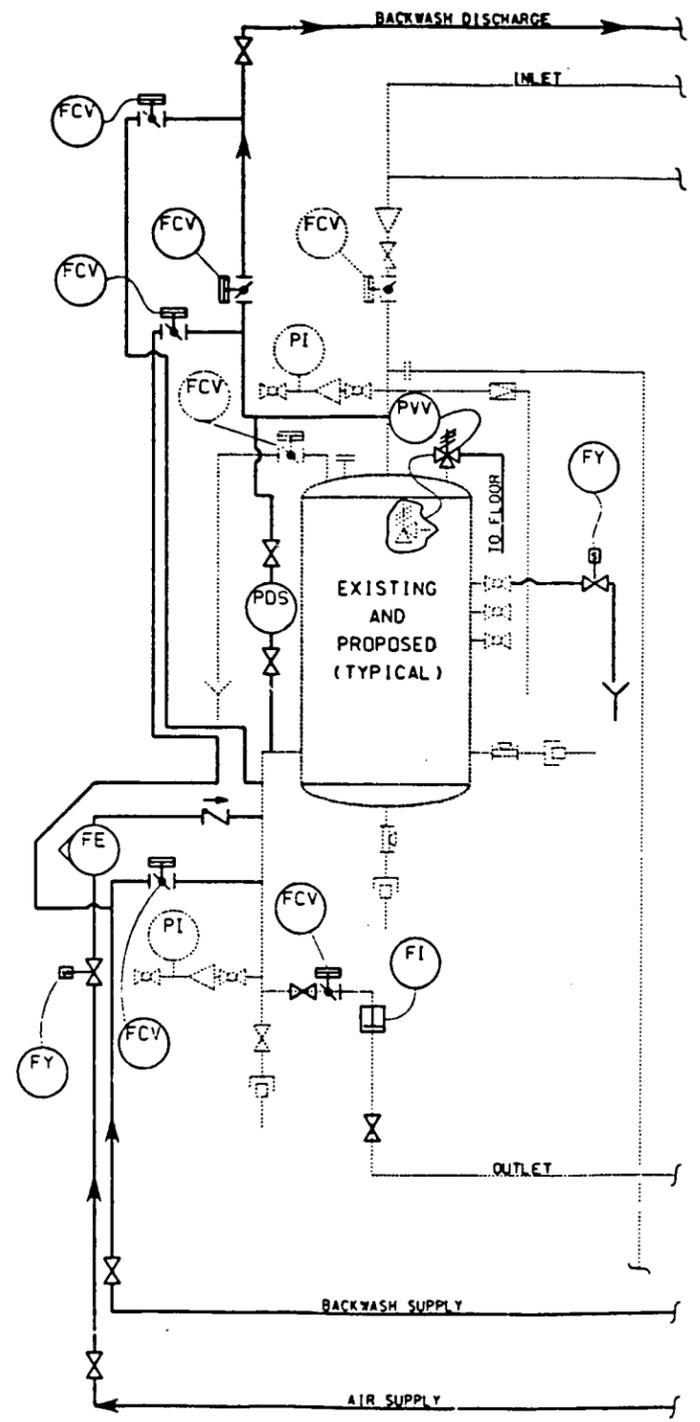
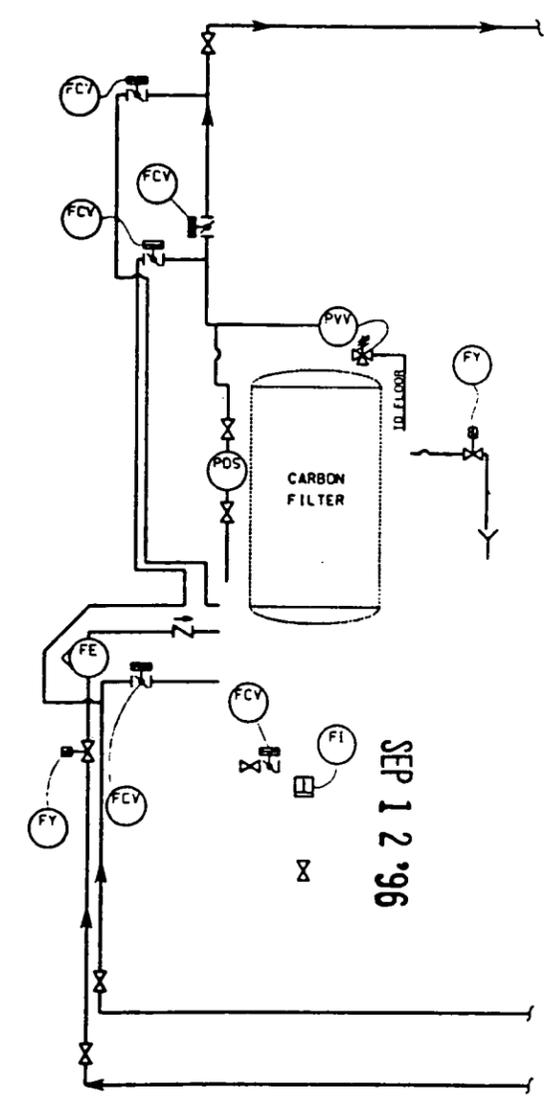
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0 ISSUE CFC				57-4445-N-00588						CIVIL & STR. _____ ELECTRICAL _____ ENGINEER _____ INSTRUMENT _____ MECHANICAL _____ CHECKED <i>REP</i> APPROVED <i>J.P. Paul</i>		SAFETY ENG. _____ MAINTENANCE _____ O.A. _____ FIRE PROTECT. _____ WASTE MANAGE. _____ SECURITY _____ CRU _____		10		510-5500-P-00897 0	

EXISTING & PROPOSED CARBON FILTER LAYOUT

EXISTING CARBON FILTER LAYOUT



PROPOSED CARBON FILTER LAYOUT



LEGEND	
	• PINCH VALVE
	• RUPTURE DISC
	• QUICK DISCONNECT
	• CHECK VALVE
	• TRENCH
	• 2-WAY SOLENOID VALVE
	• CONCENTRIC REDUCER
	• FLOW METER (NON-ELEC.)
	• PNEUMATIC ACTUATED BUTTERFLY VALVE
	• BALL VALVE
	• NEEDLE VALVE
	• MANUAL GATE VALVE
	• AIR/VACUUM RELEASE
	• CARBON FILL (TYP)

EDC

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PROPOSED _____
EXISTING _____

NO.		REVISIONS	DATE/EN. BY/APPD.	NO.	REVISIONS	DATE/EN. BY/APPD.	REF. CIRC. NO.	NOTE: FERMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY	PERFORMANCE GRADE 1 2 3 4 5	APPROVALS SAFETY ENG. MAINTENANCE O.A. FIRE PROTECT. WASTE MANAGE. SECURITY CRUS	FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION FERNALD Environmental Management Project U.S. DEPARTMENT OF ENERGY	AWWT FACILITY AWWT MULTI-MEDIA FILTER PROJECT P&ID / TYPICAL (of 8) EXISTING FILTER MODIFICATIONS	RES. 2103 DATE: 11-21-95 DRAWN: J.W.P./A.M.A.	SID-5500-N-00900	0
		0	ISSUE CFC							CHECKED: 1/28/96 APPROVED: 1/28/96					