



## **Volume II - Photos & Drawings, Volume III - Hydrogeologic**

### **Hazardous Waste Management Facility Operating License Renewal Application**

***Petro-Chem Processing Group of Nortru, LLC (Petro-Chem)  
MID 980 615 298; Waste Data Systems Number 399102  
421 Lycaste Street, Detroit, Michigan***

Prepared for  
Petro-Chem Processing Group of Nortru, LLC (Petro-Chem)

June 2022

Proj. No. 22821113.05

# Hazardous Waste Management Facility Operating License Renewal Application

*Petro-Chem Processing Group of Nortru, LLC (Petro-Chem)  
MID 980 615 298; Waste Data Systems Number 399102  
421 Lycaste Street, Detroit, Michigan*

June 2022

## VOLUME I – General

- Section 1 – Part A Application (A0)
- Section 2 – Chemical & Physical Analyses (A2)
- Section 3 – Waste Analysis Plan (A3)
- Section 4 – Inspection Plan (A5)
- Section 5.1 – Preparedness Plans (A6)
- Section 5.2 – Contingency Plan (A7)
- Section 6 – Training Plan (A10)
- Section 7 – Closure & Postclosure Plan (A11 & A12)
- Section 8 – Corrective Action (B2)

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- Section 2 – Drawings

## VOLUME III - Hydrogeologic

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## VOLUME IV – Environmental Assessment & Monitoring

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- Section 2 – Environmental Monitoring (B5)

## VOLUME V – Waste Management Systems

- Section 1 – Use and Management of Containers (C1)
- Section 2 – Tank Systems (C2)
- Section 3 – Subpart AA\_BB Air Emissions (C11)
- Section 4 – Subpart CC Air Emissions (C11)
- Section 5 – Process Descriptions
- Section 6 – Treatment (C4)

## Section 1

### Photos

# Petro-Chem Facility Photographs

Note: The dates of photos range from 2008 to 2021.  
Outside photos are a mix of 2008 thru 2021. CMB  
photos are from 2008 as they better show the areas  
inside the building .



Dock 2 East View



Dock 3 East View



Dock 4 South View



SBS Container Storage Area



SBS Dock Storage Area



SBS Solids Storage Area



Tank System 1



Tank System 2





Tank System 3 – Removed from service



Tank System 3 Transfer Pad 3 TS3



Transfer Pad 4 TS4



QAQC Area



Transfer Pad 1 TS1



Transfer Pad 2 TS2



Transfer Pad 3 TS3



Transfer Pad 4 TS4

## CMB Photographs



CMB Lab Pack Hoods East View.



CMB Lab Pack Hoods South View.



Container Storage Area 7



Container Storage Area 5



CMB Main Staging Area



Pump Room





Container Storage Area



Staging Area NE View

## Section 2

### Drawings

## **Original Facility Drawings**

**PETRO-CHEM ENGINEERING DRAWINGS - ORIGINAL ACTIVE WMU'S**

<b>DRAWING NUMBER</b>	<b>DRAWING DESCRIPTION</b>
PCPI-35	PCPG Drum Doc #1 Apron
PCPI-40	PCPG West Tank Farm - Piping Layout
PCPI-44A	PCPG West Tank Farm - Piping Elevations
PCPI-44B	PCPG West Tank Farm - Piping Elevations
PCPI-44C	PCPG Weat Tank Farm - Piping Elevations
PCPI-45	Existing Back Tank Farm Piping Layout - Plan View
PCPI-46	PCPG West Tank Farm -Piping Elevations - Tanks 16 - 20
PCPI-47A	PCPG West Tank Farm Piping Elevations - 4" Load Lines
PCPI-47B	PCPG West Tank Farm Piping Elevations - Isometric - 3" Unload Lines
PCPI-48A	PCPG West Tank Farm Piping Elevations - Isometric
PCPI-49	PCPG West Tank Farm Piping Elevations - Elevations
PCPI-50	Petro-Chem P and ID
PCPI-51	Tank Farm Piping Plan
PCPI-52	Piping Plan and Details - Bulk Transfer System
PCPI-53	Piping Details
PCPI-54	PCPG West Tank Farm Vapor Balance System
PCPI-55	Control Panel - Tanks 16 - 30
PCPI-57	Back Tank Farm Vapor Balance/Vapor Recovery Piping Layout - Plan View
PCPI-58	PCPG West Tank Farm Concrete Plan
PCPI-58B	PCPG West Tank Farm Containment Upgrade
PCPI-58C	PCPG West Tank Farm Spray protection and Tank Reinforcement Plan
PCPI-59	West Loading/Unloading Pad Concrete Plan
PCPI-60	PCPG West Tank Farm Loading Pad - Concrete Sections and Details
PCPI-63	PCPG/SDG Truck Pad Layout
PCPI-63B	PCPG/SDG Truck Pad Containment Calculations

**PETRO-CHEM ENGINEERING DRAWINGS - ORIGINAL ACTIVE WMU'S**

<b>DRAWING NUMBER</b>	<b>DRAWING DESCRIPTION</b>
PCPI-79	30,000 Gallon C.S. Vertical Storage - Tanks 16-30
PCPI-91	SBS Load/Unload Pad Concrete and Details
PCPI-116B	PCPG Northwest Tank Farm Existing Pump and Proposed Loading Pad Layout
PCPI-151	Proposed Dock Apron No. 3
PCPI-153	PCPG Drum Dock No. 3
PCPI-154	Drum Dock No. 3 Elevation Views
PCPI-174	PCPG West Tank Farm Tank Orientation and Ladder Assembly Detail
PCPI-190C	New SDI Tank Farm Electrical Diagram Sheet #2
PCPI-191	8020 Gallon Vertical Storage Tanks s-61 - S-68
PCPI-192	10,000 Gallon SDG Vertical Storage Tanks S-71, S-72
PCPI-193	13,000 Gallon SDI Vertical Storage Tanks - Tanks S-69, S-70
PCPI-194	Tank Spray Shields Plan and Details, SDG Waste Tanks
PCPI-195	SDG Waste Tank Farm Grounding Plan and Details
PCPI-196B	SDG Waste Tank Farm and Details
PCPI-197	Vapor Balance System
PCPI-198	SDG Waste Tank Farm Piping Plan and Details
PCPI-198A	SDG Waste Tank Farm Piping Plan - SH.2
PCPI-199	SDG Waste Farm Catwalk Layout Plan View
PCPI-314A	PCPG P and ID West Tank Farm - 16 - 20
PCPI-314B	PCPG P and ID West Tank Farm - Tanks 21 - 25
PCPI-314C	PCPG P and ID West Tank Farm - Tanks 26 - 30
PCPI-315	PCPG P and ID West Tank Farm - Load/Unload Pad
PCPI-316	PCPG P and ID West Tank Farm - Load/Unload Pad
PCPI-317	PCPG P and ID - Northwest Tanks 35-39
PCPI-339A	PCPG P and ID - Northwest Tanks 35-40

**PETRO-CHEM ENGINEERING DRAWINGS - ORIGINAL ACTIVE WMU'S**

<b>DRAWING NUMBER</b>	<b>DRAWING DESCRIPTION</b>
PCPI-339B	PCPG P and ID - Northwest Tank Farm Pump Pad
	PCPG West Tank Farm - Tanks 16 - 30, 35 - 40 Probs Sensitivity Calculations
PCPI-572A	PCPG Northwest Tank Farm

Confidential Material Redacted



SCALE: 1/2" = 1'-0"	APPROVED BY: <i>[Signature]</i>	DRAWN BY: LMB
DATE: 24MAY89		REVISED: 3-1-98

**PCPG DRUM DOCK #1 APRON**

THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PHILIP SERVICES CORP. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PHILIP SERVICES CORP. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.

DRAWING NUMBER  
**PCPI-35**

Confidential Material Redacted



*Petro-Chem*  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 22JAN93		REVISED:

**PCPG WEST TANK FARM PIPING LAYOUT - PLAN VIEW**

<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF NORTRU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM NORTRU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-40</b>
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Confidential Material Redacted



**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 28MAR93		REVISED:

**PCPG WEST TANK FARM PIPING ELEVATIONS - TANKS 16 THRU 20**

THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF HORTIVA, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM HORTIVA, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.

DRAWING NUMBER  
**PCPI-44A**

Confidential Material Redacted



**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 26MAR93		REVISED:

PCPG WEST TANK FARM PIPING ELEVATIONS - TANKS 21 THRU 25

THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF NORTRU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM NORTRU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.

DRAWING NUMBER  
PCPI-44B

Confidential Material Redacted



**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: 1/2" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 26MARG3		REVISED:

**PCPG WEST TANK FARM PIPING ELEVATIONS - TANKS 28 THRU 30**

<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF NORTRU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM NORTRU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-44C</b>
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Confidential Material Redacted

FILE: PCPI45 .DGN


*Petro-Chem*  
**PROCESSING, INC.**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 04FEB93		REVISED:

**EXISTING BACK TANK FARM PIPING LAYOUT - PLAN VIEW**

<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PETRO-CHEM PROCESSING, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PETRO-CHEM PROCESSING, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-45</b>
--	----------------------------------

Confidential Material Redacted

 <b>Petro-Chem</b> PROCESSING GROUP <small>Specializing in Hydrocarbon Processing and Reuse</small>		
SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 04FEB93		REVISED:
<b>PCPG WEST TANK FARM PIPING ELEVATIONS</b>		
<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF WORTHU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM WORTHU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>		DRAWING NUMBER <b>PCPI-46</b>

Confidential Material Redacted



**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: NONE	APPROVED BY:	DRAWN BY: LMB
DATE: 01/14/93		REVISED:

**PCPG WEST TANK FARM PIPING ISOMETRIC - 4" LOAD LINES**

<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF NORTRU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM NORTRU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-47A</b>
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Confidential Material Redacted



SCALE: NONE	APPROVED BY:	DRAWN BY: LMB
DATE: 01MAR93		REVISED:

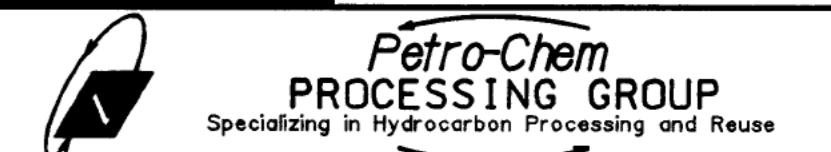
**PCPG WEST TANK FARM PIPING ISOMETRIC - 3" UNLOAD LINES**

THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF NORTRU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM NORTRU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.

DRAWING NUMBER  
**PCPI-47B**

Confidential Material Redacted

FILE: PCPI48 .DGN



SCALE: NONE	APPROVED BY:	DRAWN BY: LMB
DATE: 03/14/93		REVISED:

<b>PCPG WEST TANK FARM PIPING ISOMETRIC</b>	
<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF HORTLU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM HORTLU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-48A</b>



Confidential Material Redacted

FILE: PCPI49 .DGN



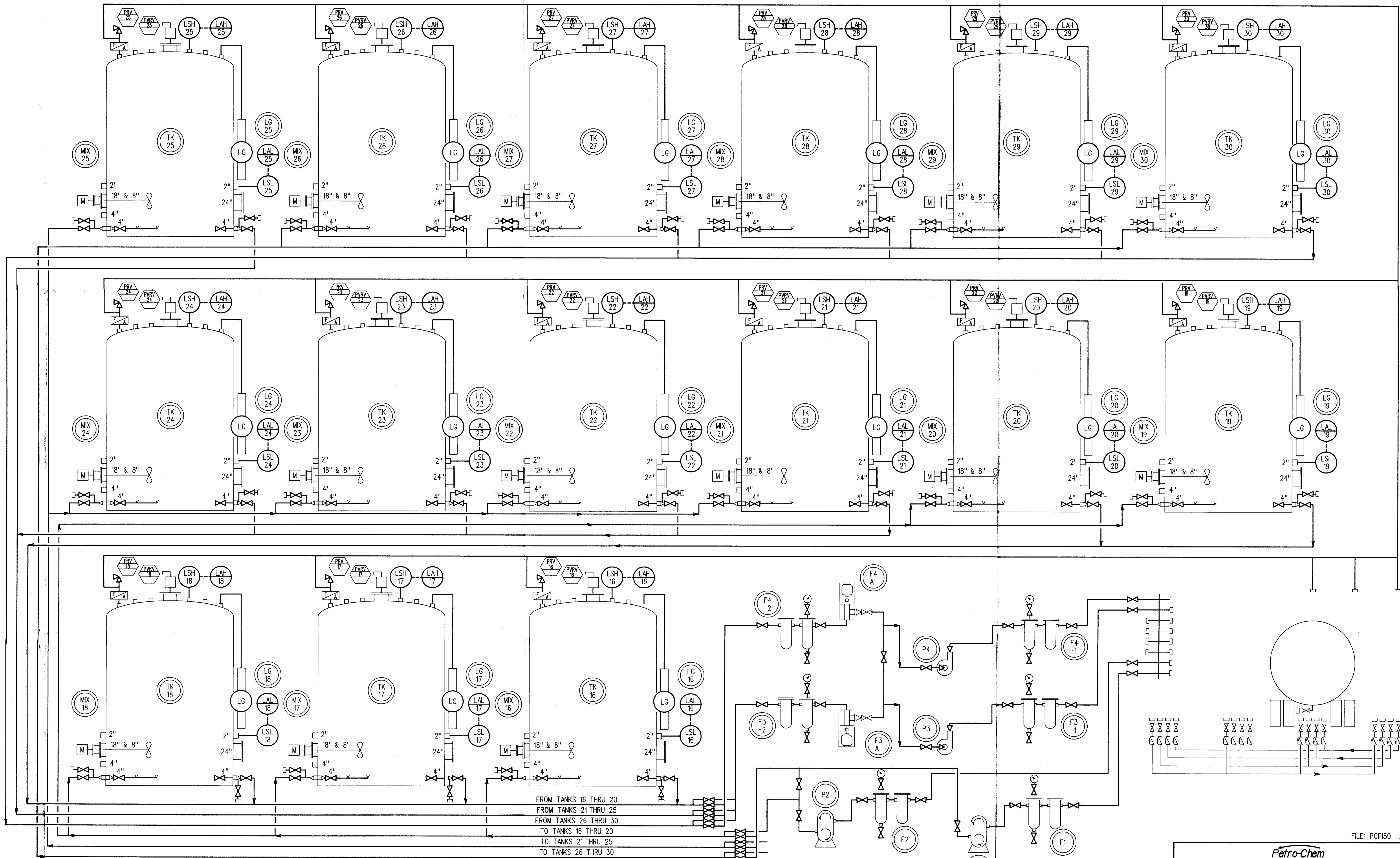
**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: 1/2" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 10MAR93		REVISED:

**PCPG WEST TANK FARM PIPING ELEVATIONS**

THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF MONTRIO, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM MONTRIO, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.

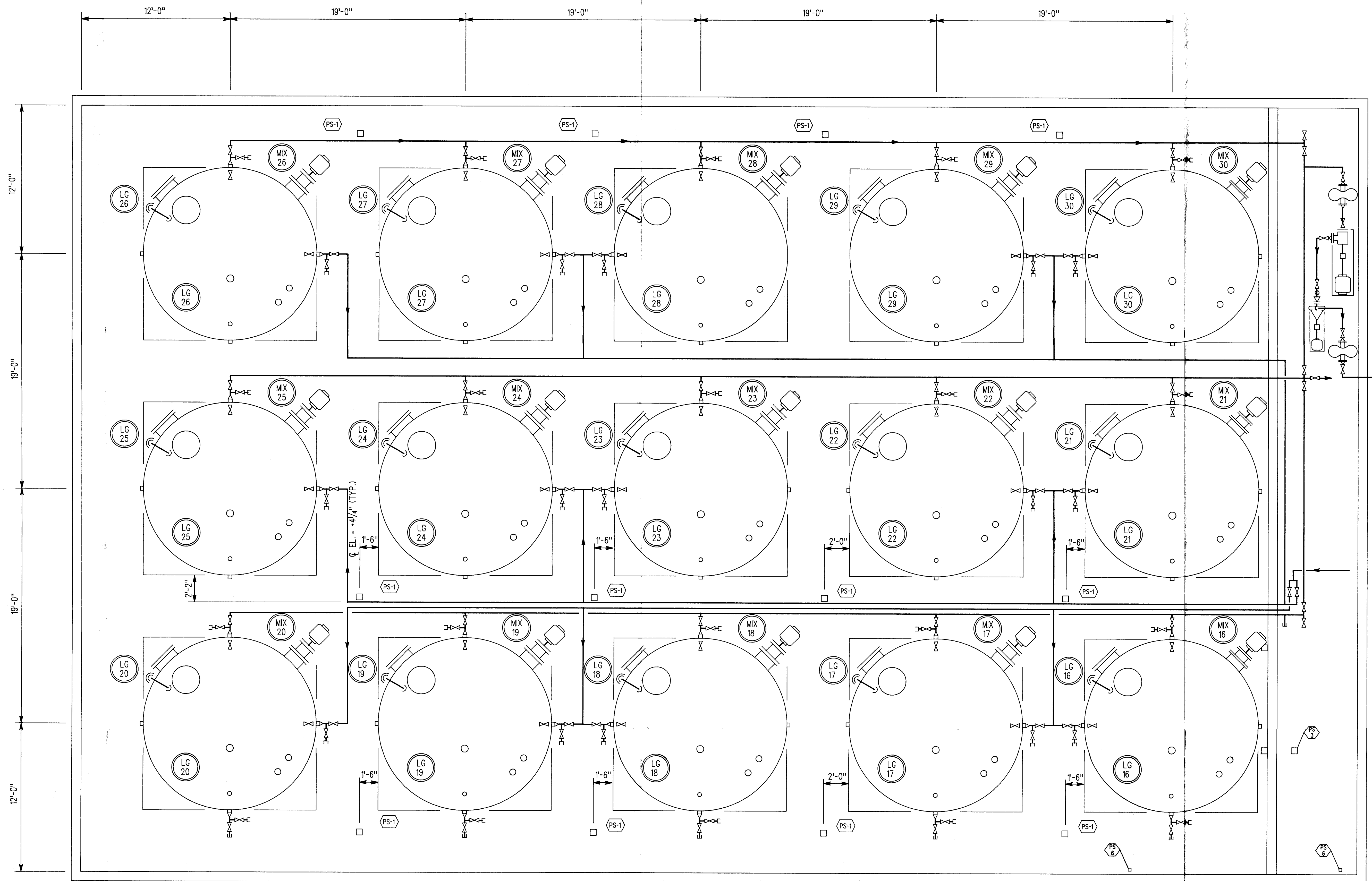
DRAWING NUMBER  
**PCPI-49**



FILE: PCPI50 .DGN

**Petro-Chem**  
**PROCESSING, INC.**  
 Specializing in Hydrocarbon Processing and Reuse

SCALE: NONE	APPROVED BY: <i>[Signature]</i>	DRAWN BY: LMB
DATE: 25APR89		REVISED:
PETRO-CHEM P&ID		DRAWING NUMBER PCPI-50



NOTE:  
ALL DIMENSIONS & ELEVATIONS ARE  
DIAGRAMATIC AND ARE TO BE  
VERIFIED IN FIELD.

		SCALE: AS NOTED	APPROVED BY: <i>[Signature]</i>	DRAWN BY: LMB
		DATE: 23AUG88		REVISED:
TANK FARM PIPING PLAN				DRAWING NUMBER
				PCPI-51

SES

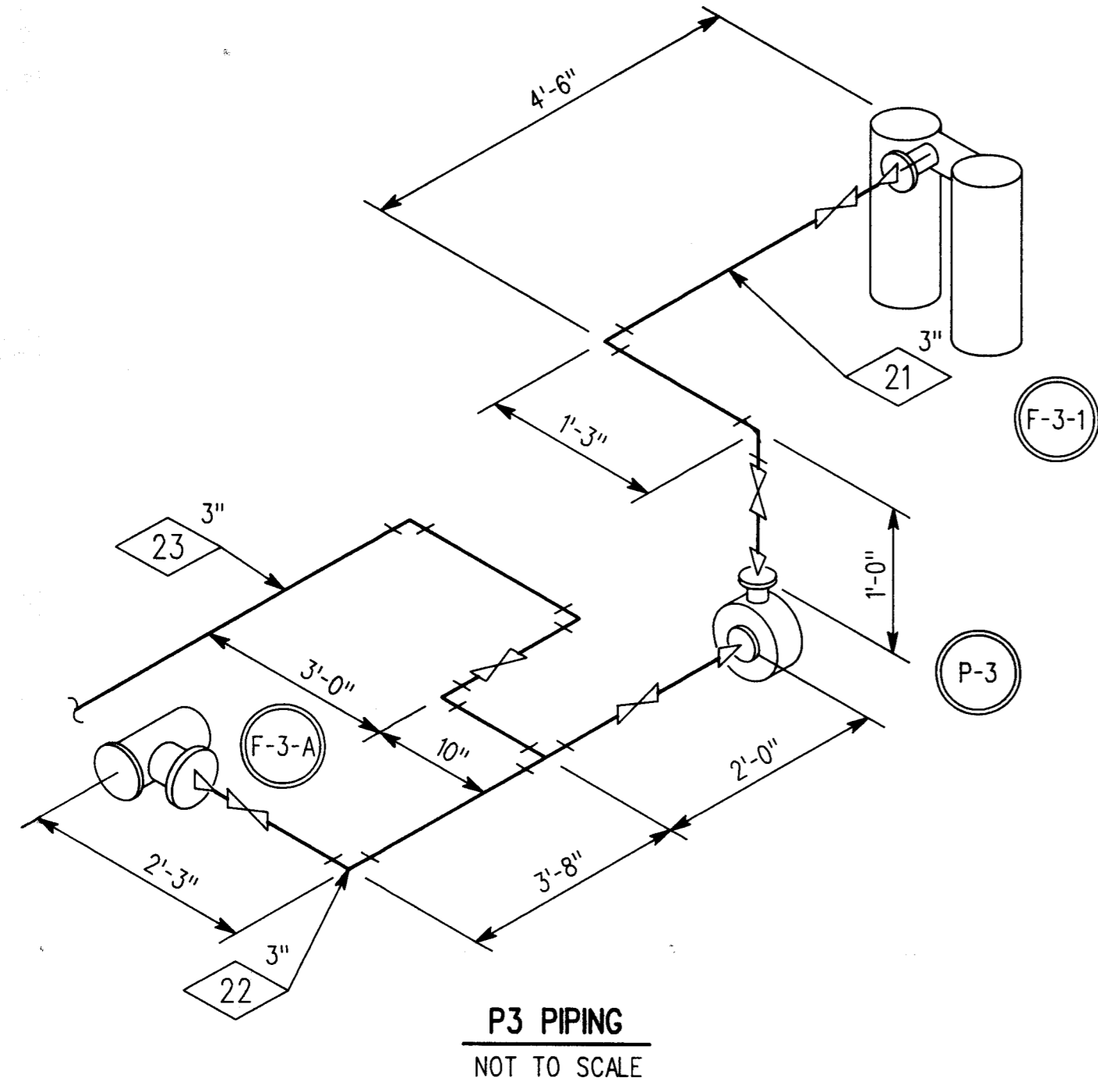
Confidential Material Redacted

FILE: PCPI52.DGN

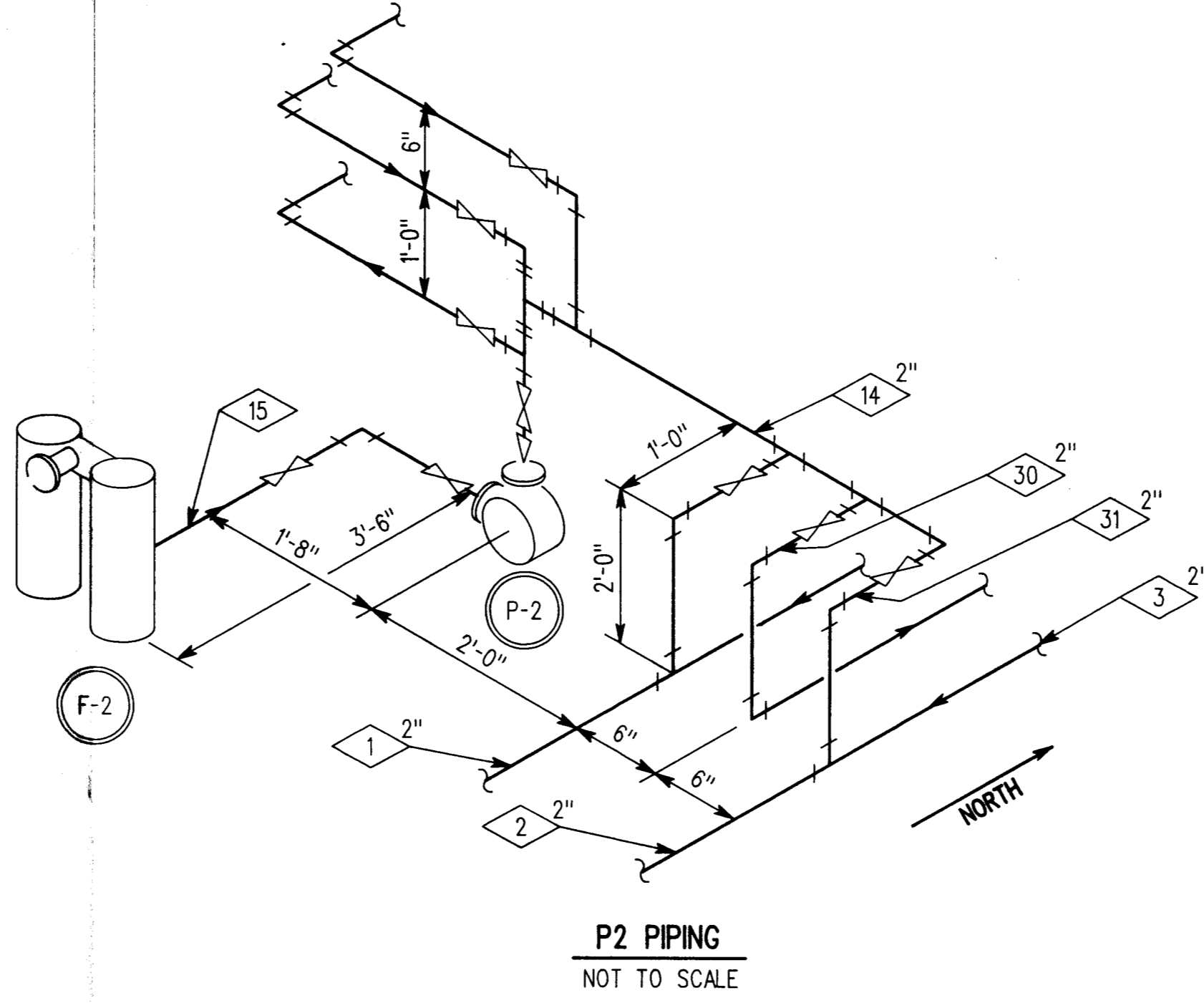


SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 08DEC88		REVISED:

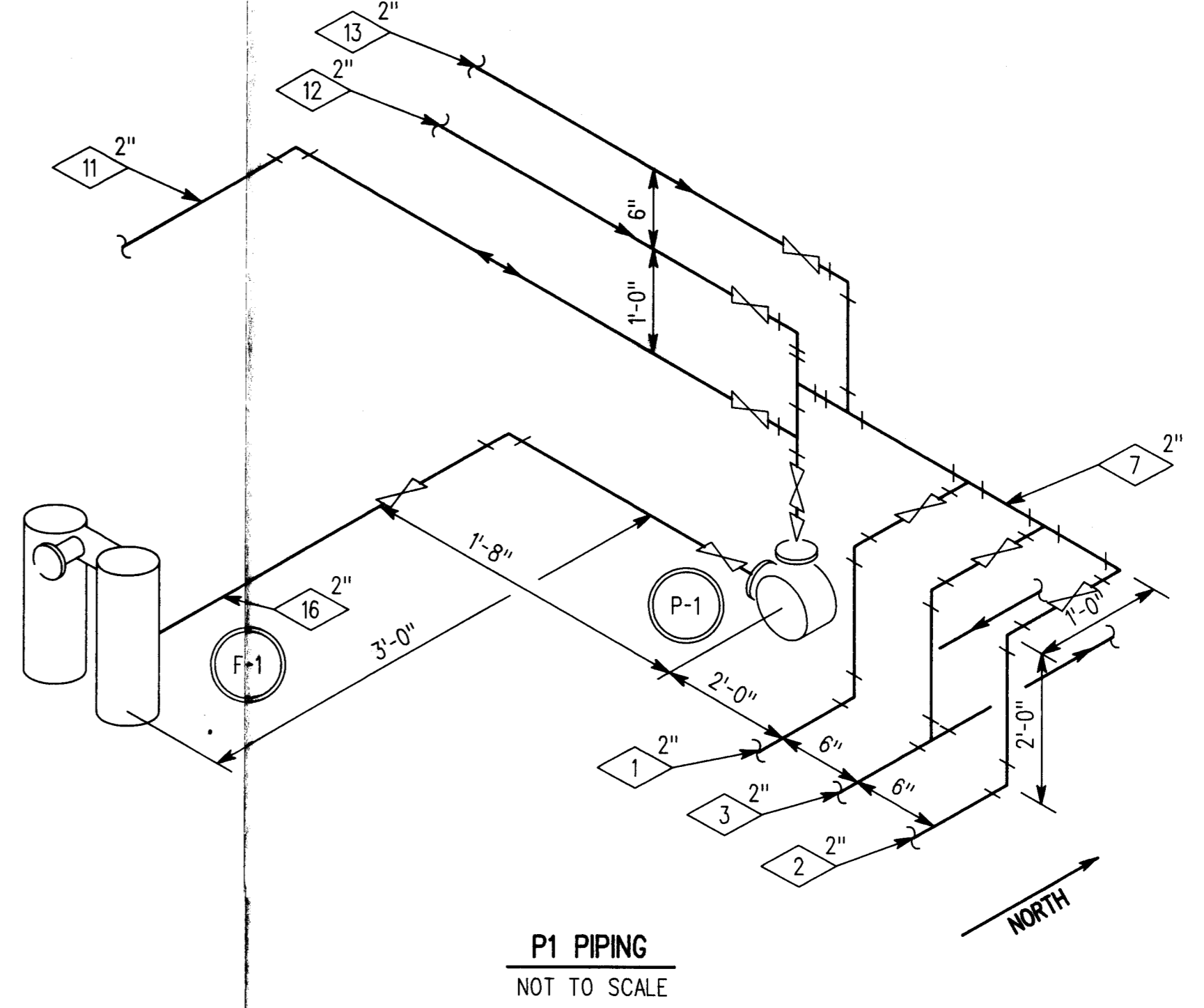
PIPING PLAN AND DETAILS - BULK TRANSFER SYSTEMS		DRAWING NUMBER
<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF MORTRUI, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM MORTRUI, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>		PCPI-52



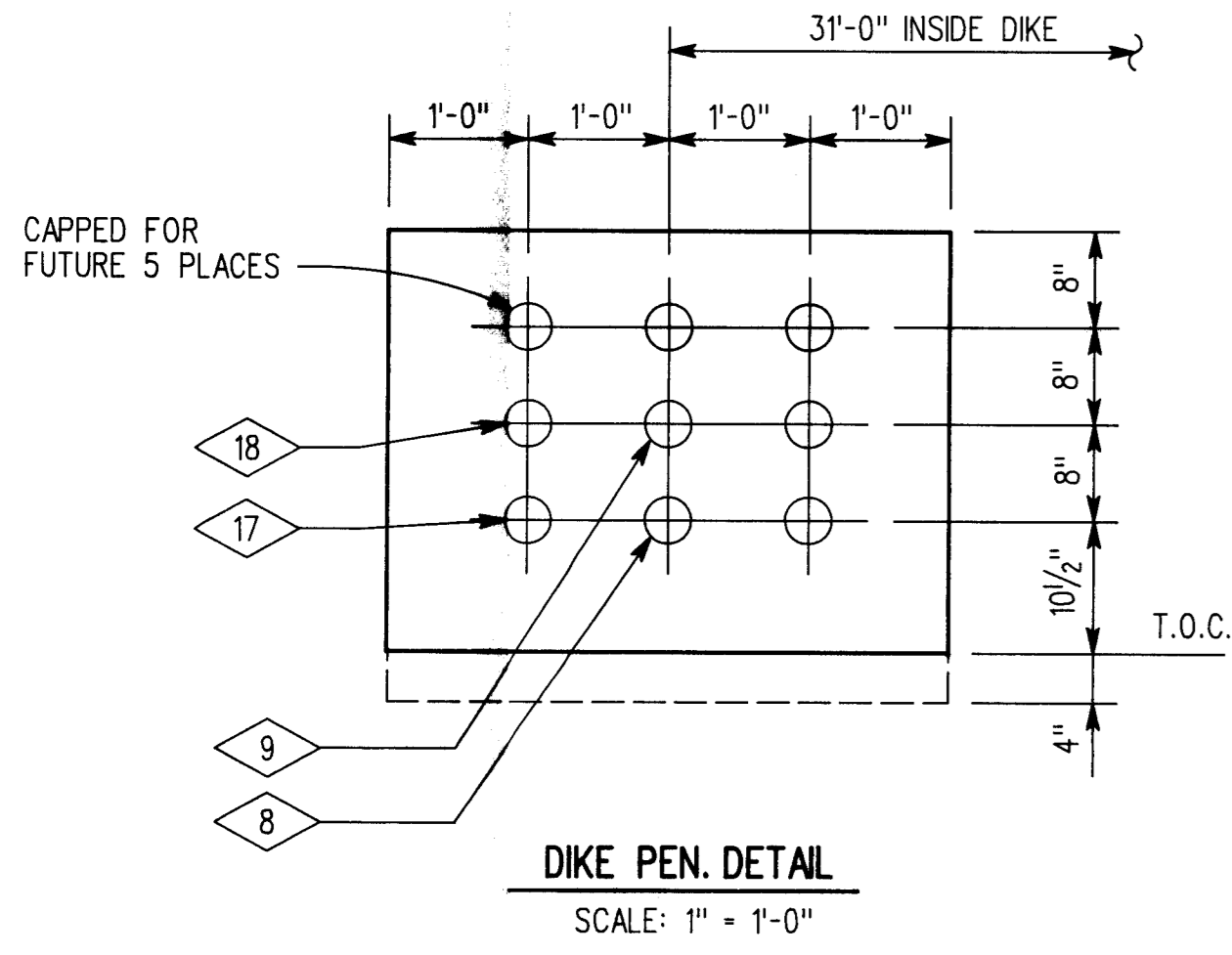
P3 PIPING  
NOT TO SCALE



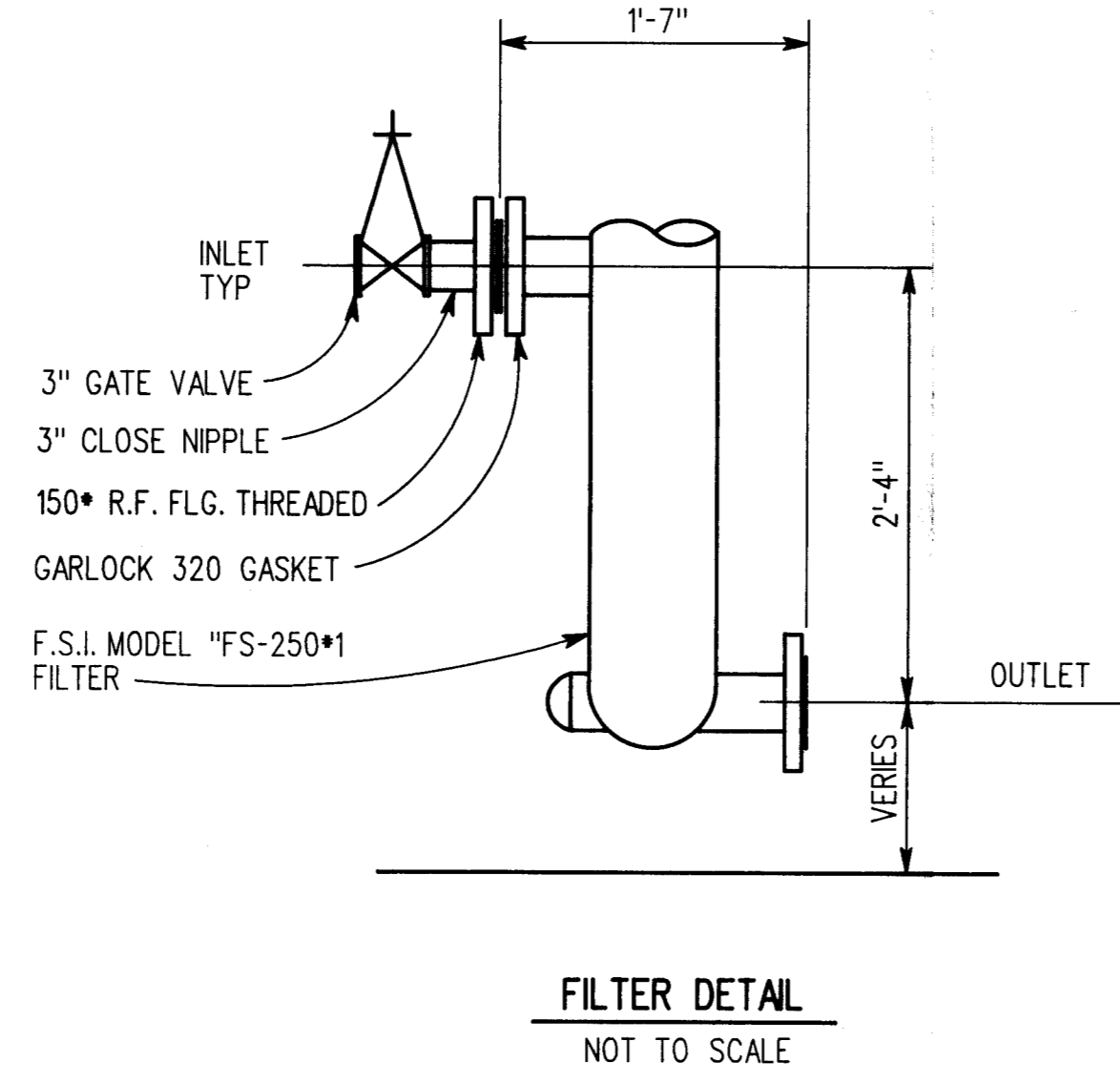
P2 PIPING  
NOT TO SCALE



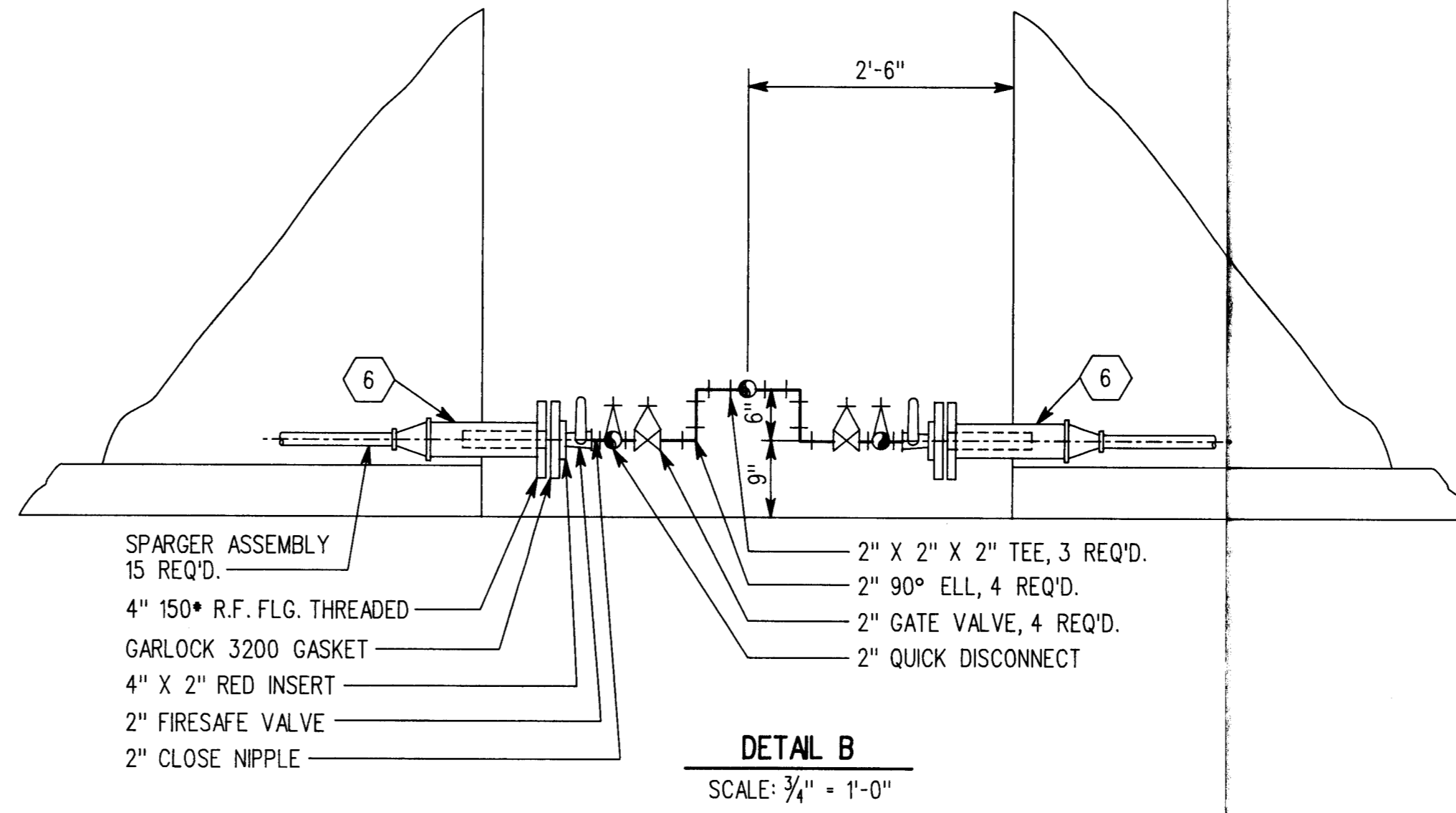
P1 PIPING  
NOT TO SCALE



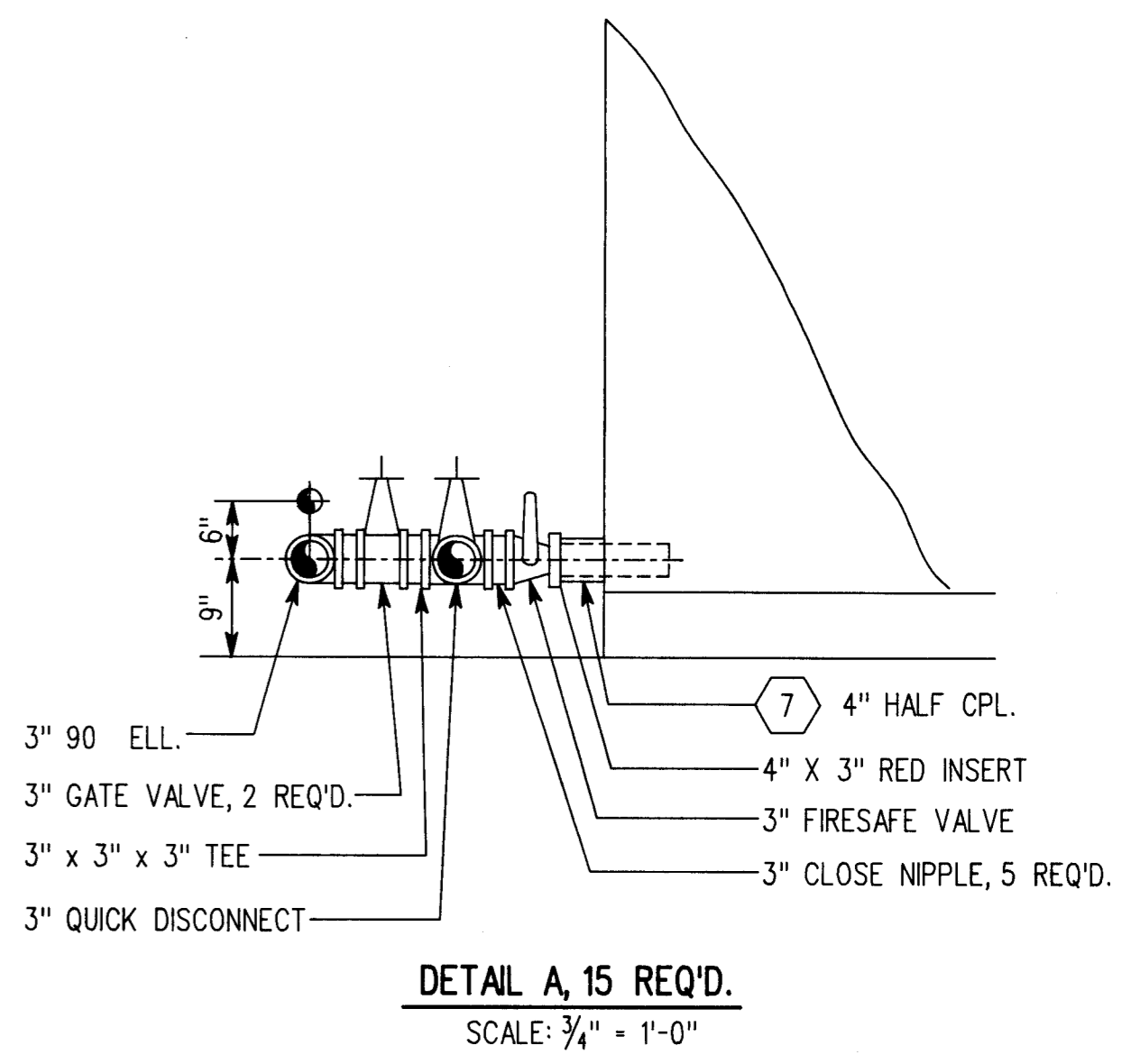
DIKE PEN. DETAIL  
SCALE: 1" = 1'-0"



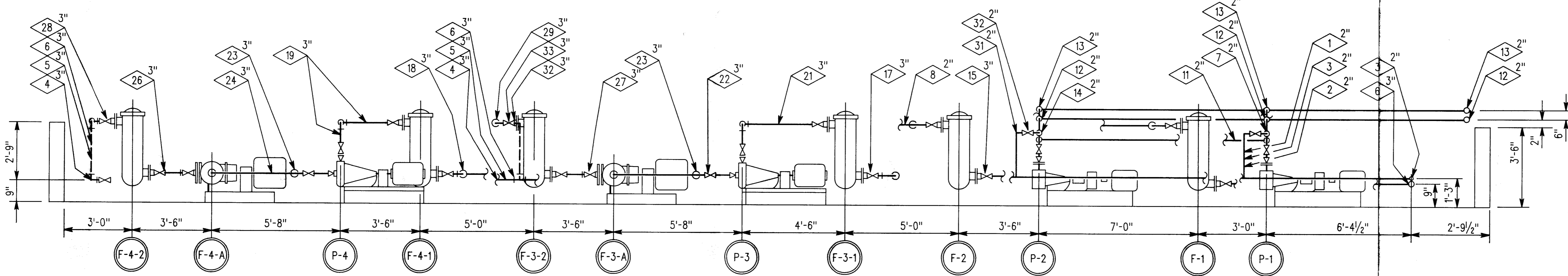
FILTER DETAIL  
NOT TO SCALE



DETAIL B  
SCALE: 3/4" = 1'-0"




DETAIL A, 15 REQ'D.  
SCALE: 3/4" = 1'-0"

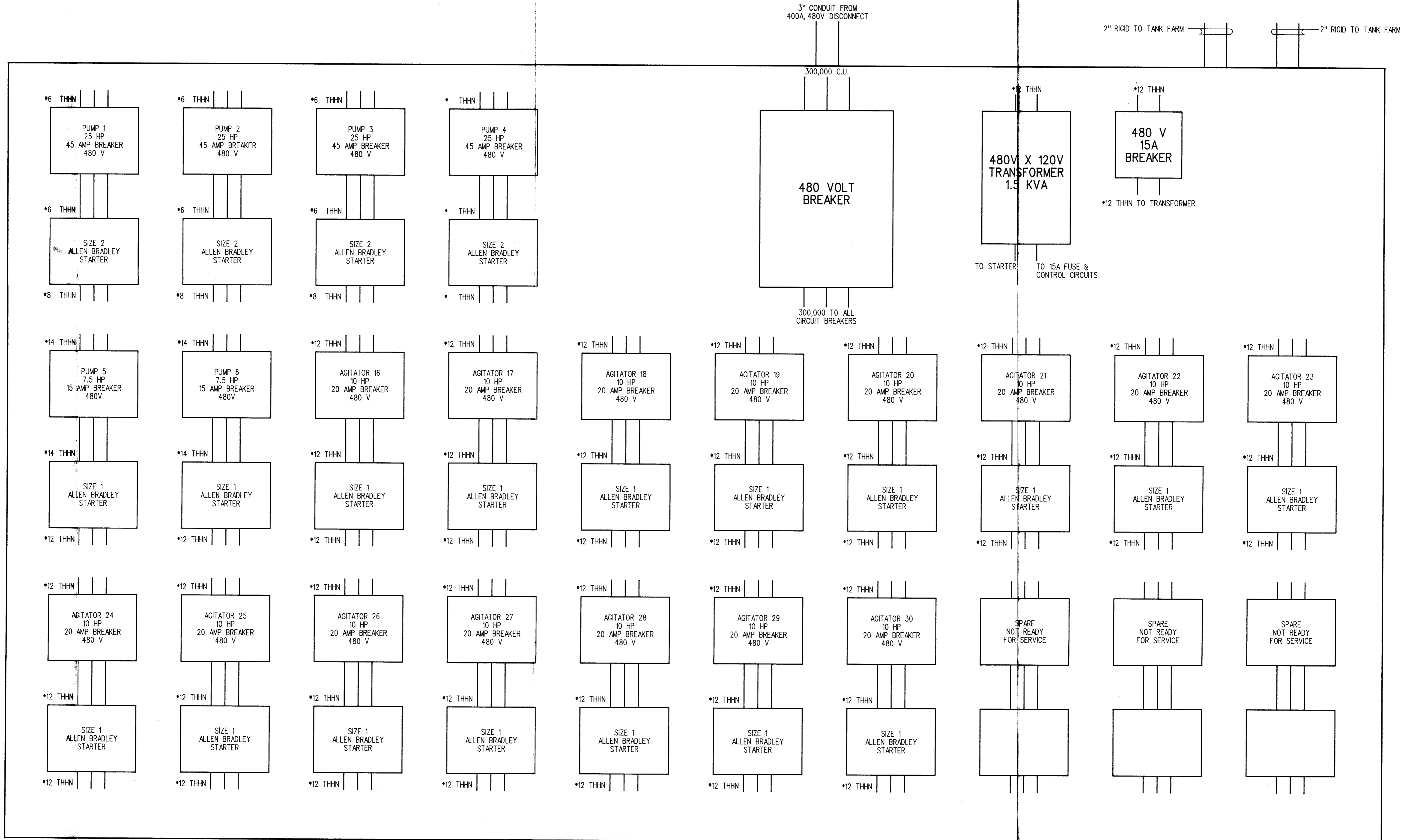


SECTION A-A  
SCALE: 3/8" = 1'-0"

<b>Petro-Chem</b> <b>PROCESSING, INC.</b> <small>Specializing in Hydrocarbon Processing and Reuse</small>			
SCALE: AS NOTED	APPROVED BY: <i>Richard J. [Signature]</i>	DRAWN BY: LMB	
DATE: 17SEP88		REVISED:	
PIPING DETAILS			DRAWING NUMBER PCPI-53

Confidential Material Redacted

				<b>Petro-Chem</b> <b>PROCESSING GROUP</b> <small>Specializing in Hydrocarbon Processing and Reuse</small>
SCALE: AS NOTED	APPROVED BY:			DRAWN BY: LMB
DATE: 26APR89				REVISED:
<b>PCPG WEST TANK FARM VAPOR BALANCE SYSTEM</b>				
THE DISCLOSURE AND COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION OF THIS COMPANY WILL BE CONSIDERED AS A BREACH OF CONFIDENTIALITY AND THE COMPANY WILL BE CONSIDERED AS A VIOLATOR OF THIS DRAWING				DRAWING NUMBER <b>PCPI-54</b>



**NOTES:**

1. ALL STARTERS HAVE 3 OVERLOADS
2. ALL STARTERS HAVE 120 VOLT COILS
3. L2 CONTROL WIRE IS \*12 THHN
4. L1 FOR PUMPS 1 THRU 6 COME DIRECTLY FROM TRANSFORMER \*14 THHN.  
L1 FOR AGITATORS 16 THRU 30 GO THRU LEVEL CONTROLS AND BACK TO STARTERS \*14 THHN

SCALE: NONE		APPROVED BY: <i>Richard [Signature]</i>		DRAWN BY: LMB	
DATE: 27APR89		REVISIONS:		REVISED:	
<b>CONTROL PANEL - TANKS 16 THRU 30</b>					
DRAWING NUMBER				PCPI-55	

FILE: PCPI55 .DGN

Confidential Material Redacted



**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 02SEP93		REVISED:
<b>BACK TANK FARM VAPOR BALANCE/VAPOR RECOVERY</b> <b>PIPING LAYOUT - PLAN VIEW</b>		
THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PETRO-CHEM PROCESSING, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PETRO-CHEM PROCESSING, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSIDERED AS AN AGREEMENT TO THE ABOVE.		DRAWING NUMBER PCPI-57



Confidential Material Redacted

<b>PHILIP</b>	
BY-PRODUCTS RECOVERY GROUP	
SCALE: AS NOTED	APPROVED BY:
DATE: 25AUG88	DRAWN BY: LMB
	REVISED:
<b>PCPG WEST TANK FARM CONCRETE PLAN</b>	
<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PHILIP ENVIRONMENTAL, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PHILIP ENVIRONMENTAL, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-58</b>

Confidential Material Redacted



By-Products Services Group

SCALE: AS NOTED	APPROVED BY:	DESIGNED BY:
DATE: 12/14/01		DRAWN BY: LMB

**PCPG WEST TANK FARM CONTAINMENT UPGRADE**

<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PHILIP SERVICES CORP. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PHILIP SERVICES CORP. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-588</b>
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Confidential Material Redacted

FILE: PCPI58C.DGN



By-Products Services Group

SCALE: AS NOTED	APPROVED BY:	DESIGNED BY: KJW
DATE: 17JUL01		DRAWN BY: LMB

**PCPC WEST TANK FARM SPRAY PROTECTION  
AND TANK REINFORCEMENT PLAN**

THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PSC BY-PRODUCTS SERVICES GROUP AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PSC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.

DRAWING NUMBER  
**PCPI-58C**

Confidential Material Redacted

FILE: PCPI59 .DGN

**PHILIP**

BY-PRODUCTS RECOVERY GROUP

SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 24FEB99		REVISED:

WEST LOADING/UNLOADING PAD CONCRETE PLAN

THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PHILIP ENVIRONMENTAL, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PHILIP ENVIRONMENTAL, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.

DRAWING NUMBER  
PCPI-59

Confidential Material Redacted

FILE: PCPI60 .DGN




SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 24APR89		REVISED:

**PCPG WEST TANK FARM LOADING PAD - CONCRETE SECTIONS & DETAILS**

<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF NORTRU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM NORTRU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSIDERED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-60</b>
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Confidential Material Redacted

FILE: PCP163 .DGN		
 By-Products Services Group		
SCALE: AS NOTED	APPROVED BY:	DESIGNED BY: AY
DATE: 04JUN02		DRAWN BY: LMB
<b>PCPG/SDG TRUCK PAD LAYOUT</b>		
THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PSC BY-PRODUCTS SERVICES GROUP AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PSC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.		DRAWING NUMBER <b>PCP1-63</b>

Confidential Material Redacted

NO.	TITLE	PROJECT	DATE	SCALE	DRAWN BY	CHECKED BY	DATE
				<b>PSC</b>			
				SCALE: N.T.S.	APPROVED BY:	DESIGNED BY: N.T.	
				DATE: 01/01/02		DRAWN BY: DAB	
<b>POPC/SDC TRUCK PAD CONTAINMENT CALCULATIONS</b>							
<small>THE ACCURACY AND CONTENTS OF THIS DRAWING ARE SOLELY THE RESPONSIBILITY OF THE DESIGNER. THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION PROVIDED HEREON FOR HIS PROJECT.</small>							
							DRAWING NUMBER <b>PCPI-63</b>

Confidential Material Redacted



SCALE: $\frac{3}{8}$ " = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 28JUL88		REVISED:
<b>30,000 GALLON C.S. VERTICAL STORAGE TANK - TANKS 16 - 30</b>		
THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PHILIP SERVICES CORP. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PHILIP SERVICES CORP. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.		DRAWING NUMBER <b>PCPI-79</b>



Confidential Material Redacted

FILE: PCPI91 .DGN



SCALE: AS NOTED	APPROVED BY: <i>[Signature]</i>	DRAWN BY: LMB
DATE: 3/19/95		REVISED: 3-19-95

**SBS LOAD/UNLOAD PAD CONCRETE PLAN AND DETAILS**

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Confidential Material Redacted

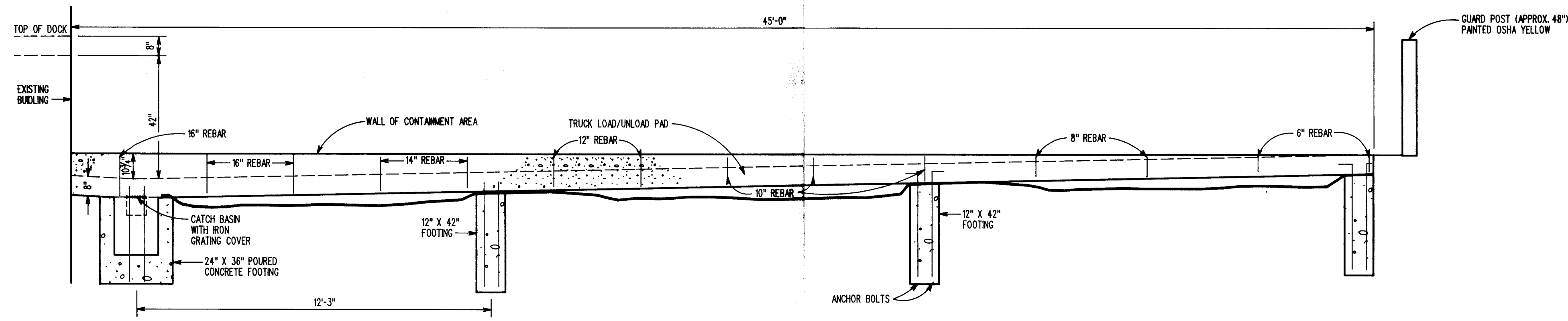
FILE: PCP116B.DGN



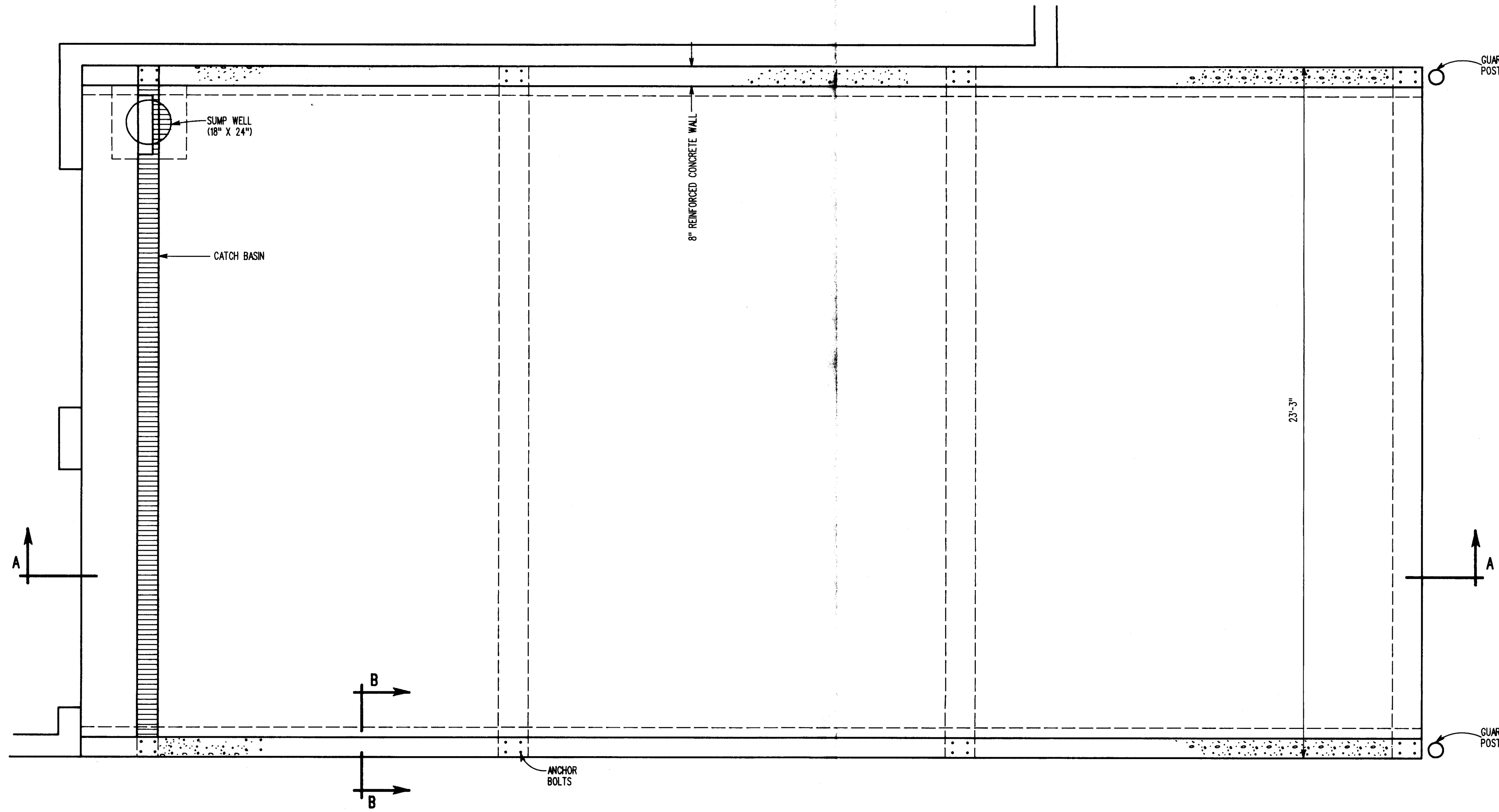
SCALE: 1/8" = 1'-0"	APPROVED BY:	DESIGNED BY: AV
DATE: 10OCT97		DRAWN BY: LMB

**PCPG NORTHWEST TANK FARM EXISTING PUMP PAD AND PROPOSED LOADING PAD LAYOUT**

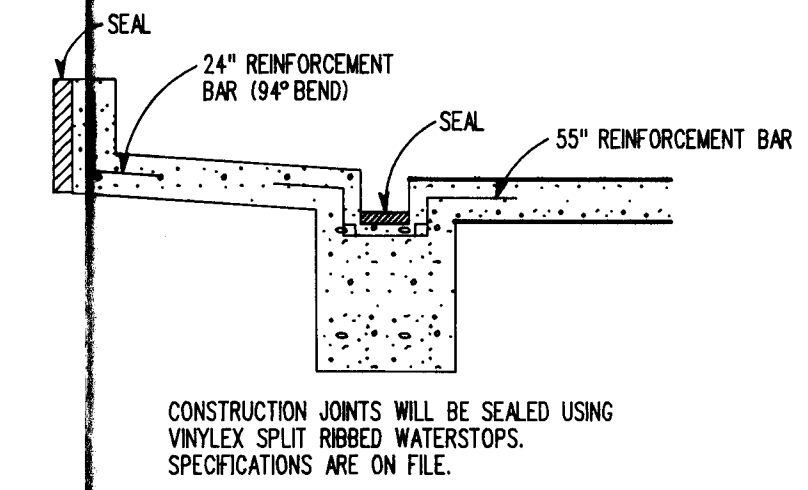
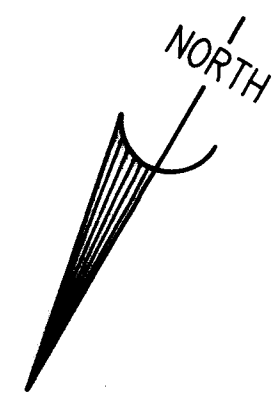
<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PHILIP SERVICES CORP. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PHILIP SERVICES CORP. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-116B</b>
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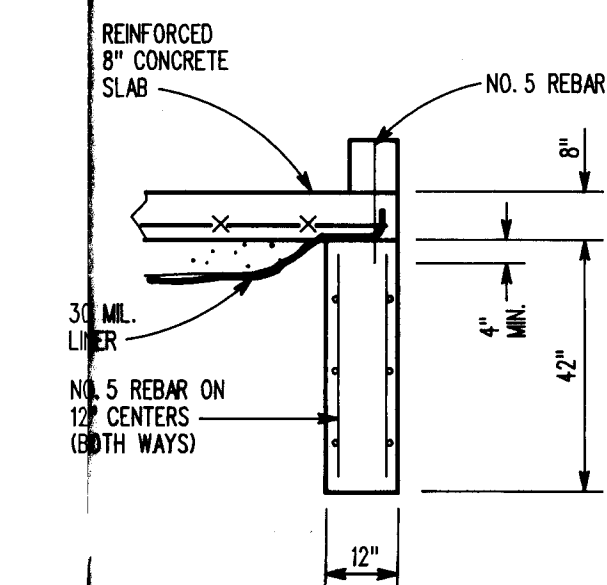
SECTION A-A - ELEVATION VIEW



PLAN VIEW



FOOTING DETAIL



SECTION B-B

**NOTES:**

1. REBAR SPLICING PER ACI-318-83 CHAPTER 7
2. MINIMUM COVER FOR REBAR PER ACI-318-83 CHAPTER 7
3. HOT WEATHER CONCRETE PLACING PER ACI-305R-89
4. FIELD BENDING OF REBAR PER ACI-318-83 CHAPTER 7.3
5. WATER STOPS AND MEMBRANE COMPATIBLE WITH TYPE OF MATERIAL STORED.
6. STANDARD ANCHOR BOLTS AND EMBEDMENTS PER ACI-318-83 CHAPTER 7.7.1
7. ALL CURBED OR DIKED AREAS, INCLUDING SUMPS, SEALED WITH 18 MIL COATING, RESISTANT TO ALL MATERIALS STORED.

**SPECIFICATION FOR FILL SAND**  
 - CLASS 1 GRANULAR FILL  
 - PLACED IN A MINIMUM OF 2 LIFTS

**VERTICAL REBARS IN CONTAINMENT WALLS AND BEAMS**  
 - 0.5 IN. DIA. REBARS LOCATED AT 36 IN. INTERVALS IN 60 FT. LENGTH WALLS.  
 - A TOTAL OF 40 REBARS (OF VARYING LENGTH) USED IN THE WALLS.  
 - 0.5 IN. STEEL REBARS USED IN THE FOOTINGS PLACED AT 36 IN. INTERVALS.

**CONCRETE MIX SHALL BE A 6-BAG MIX, CONTINUOUS POUR, NOT BLOCK.**  
 ALL CONCRETE SHOWN SHALL CONTAIN STEEL REINFORCEMENT MESH WITH 6 IN. X 6 IN. WIRE MESH SPACING, OR THE EQUIVALENT.

**BASIC PREPARATION FOR THE PAD**  
 - 2 FEET OF FILL SAND

**FOOTINGS (CONCRETE BEAMS)**  
 - THERE SHALL BE 5 REINFORCED FOOTINGS RUNNING THE WIDTH OF THE STRUCTURE.  
 - FOUR OF THE BEAMS ARE SHOWN ON THE DRAWING.  
 - FOUR OF THE BEAMS WILL MEASURE 12" X 36" X 23'-3"  
 - ONE BEAM (CLOSEST TO THE DOCK) WILL MEASURE 12" X 36" X 52'-10" PLUS 30" X 36" X 38" FOR AN OVERALL LENGTH OF 58'-0"  
 - A SUMP WELL WILL BE CONSTRUCTED IN THE SHORTER SECTION OF THIS BEAM.

<p style="text-align: center;"><b>Petro-Chem</b>  <b>PROCESSING, INC.</b>          Specializing in Hydrocarbon Processing and Reuse</p>		SCALE: 3/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
		DATE: 7/17/90	REVISOR:	REVISOR:
<p style="text-align: center;"><b>PROPOSED DOCK APRON NO. 3</b></p>		<p style="text-align: center;">DRAWING NUMBER  <b>PCPI-151</b></p>		FILE: PC0003.DGN
				<p style="text-align: right;">PCPI-151          FILE: PC0003.DGN</p>

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FILE: PCPI153 .DGN



SCALE: 1/4" = 1'-0"	APPROVED BY: <i>[Signature]</i>	DRAWN BY: LMB
DATE: 03JAN92		REVISED: 3/11/92

PCPG/SDG DRUM DOCK NO. 3

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FILE: PCPI154 .DGN



**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 08AUG82		REVISED:


**DRUM DOCK NO. 3 ELEVATION VIEWS**

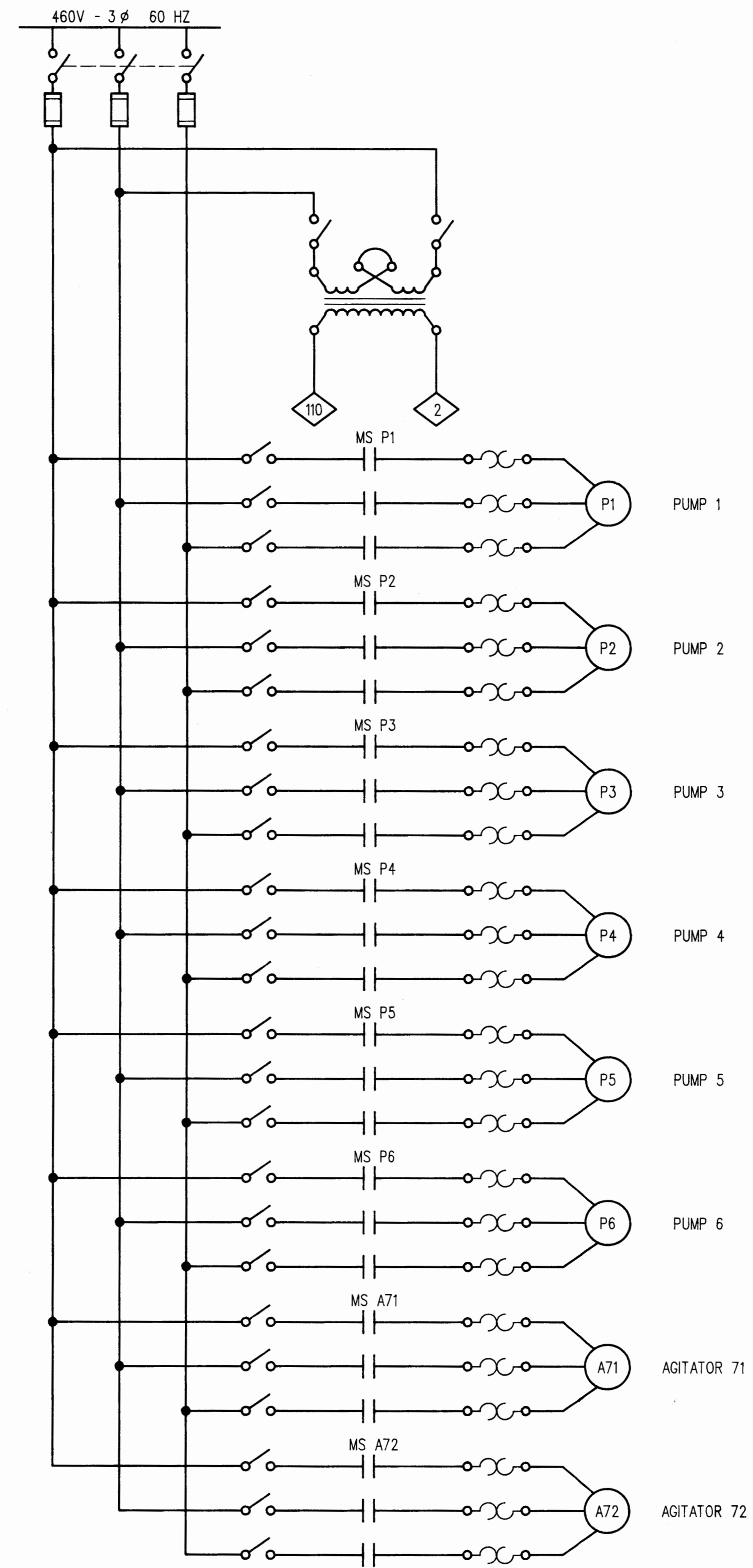
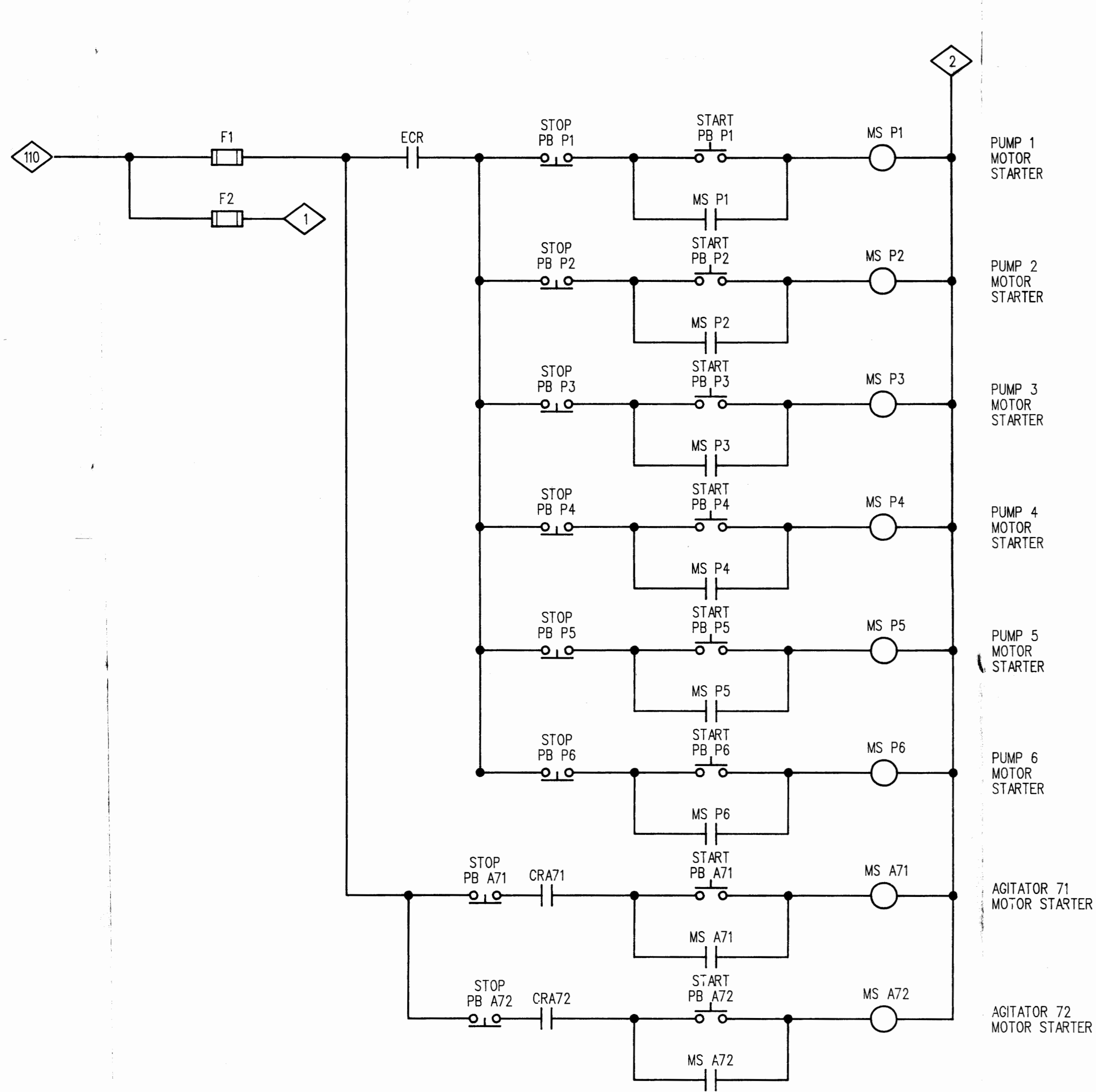
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DRAWING NUMBER  
**PCPI-154**

Confidential Material Redacted

FILE: PCP174 .DGN

 <b>Petro-Chem</b> PROCESSING GROUP <small>Specializing in Hydrocarbon Processing and Reuse</small>		
SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 10DEC90		REVISED:
PCPG WEST TANK FARM TANK ORIENTATION & LADDER ASSEMBLY DETAIL		
<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE INCLUSIVE PROPERTY OF HORTHAL INC AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM HORTHAL INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSIDERED AS AN AGREEMENT TO THE ABOVE.</small>		DRAWING NUMBER: PCPI-174

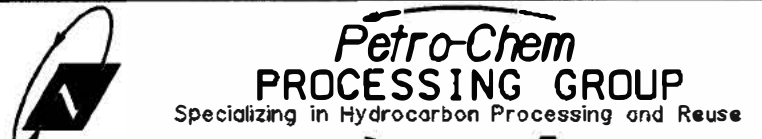


FILE: PCSDIEL2.DGN

LMB	17SEP91	REVISED PER ENGINEERING COMMENTS	 Specializing in Hydrocarbon Processing and Reuse	
SCALE:	NONE	APPROVED BY:	DRAWN BY:	LMB
DATE:	16SEP91		REVISED:	17SEP91
<b>NEW SDI TANK FARM ELECTRICAL DIAGRAM SHEET #2</b>				
				DRAWING NUMBER
				PCPI-190C

Confidential Material Redacted

FILE: PCPI191.DGN



SCALE: 1/2" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 19NOV90		REVISED: 12FEB91

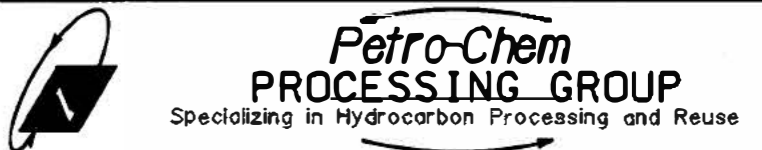
8,020 GALLON VERTICAL STORAGE TANKS - S-61 - S-68

<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF PETRO-CHEM PROCESSING, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM PETRO-CHEM PROCESSING, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSIDERED AS AN AGREEMENT TO THE ABOVE.</small>	DRAWING NUMBER <b>PCPI-191</b>
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FILE: PCPI192 .DGN



SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 18NOV90		REVISED: 13FEB91

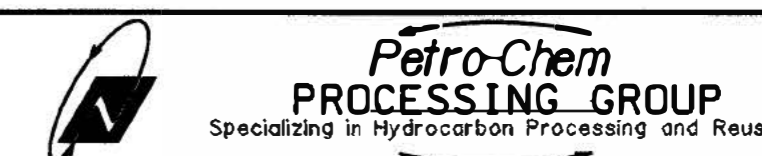
10,000 GALLON SDG VERTICAL STORAGE TANKS - TANKS S-71, S-72

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DRAWING NUMBER  
PCPI-192

Confidential Material Redacted

FILE: PCPI193 .DGN



SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 13FEB91		REVISED: 23APR91

13,000 GALLON SDI VERTICAL STORAGE TANKS - TANKS S-69, S-70

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DRAWING NUMBER  
PCPI-193

Confidential Material Redacted

FILE: PCPI194.DGN



**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMS
DATE: 11/20/91		REVISED:

**TANK SPRAY SHIELDS PLAN AND DETAILS, SDG WASTE TANKS**

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Confidential Material Redacted



SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 14JUN91		REVISED:

**SDG WASTE TANK FARM GROUNDING PLAN AND DETAILS**

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DRAWING NUMBER  
**PCPI-195**

Confidential Material Redacted

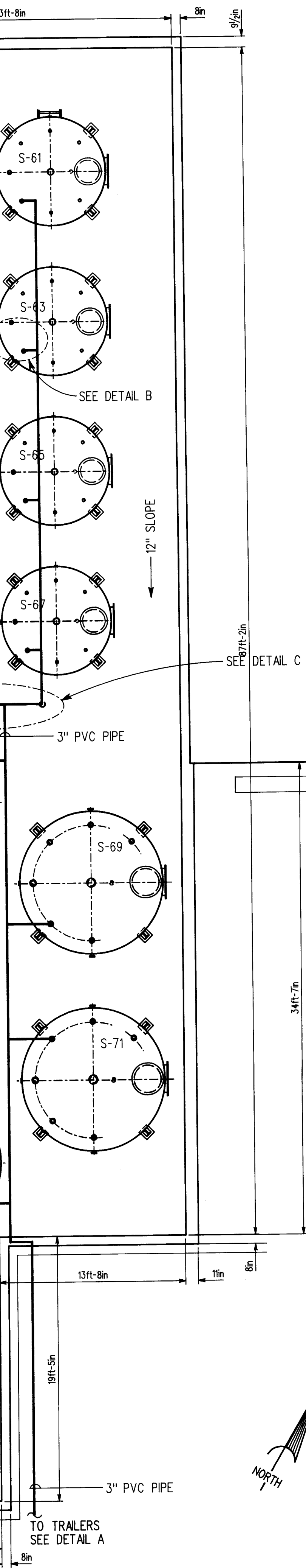


SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 18JAN01		REVISED: 20JAN01

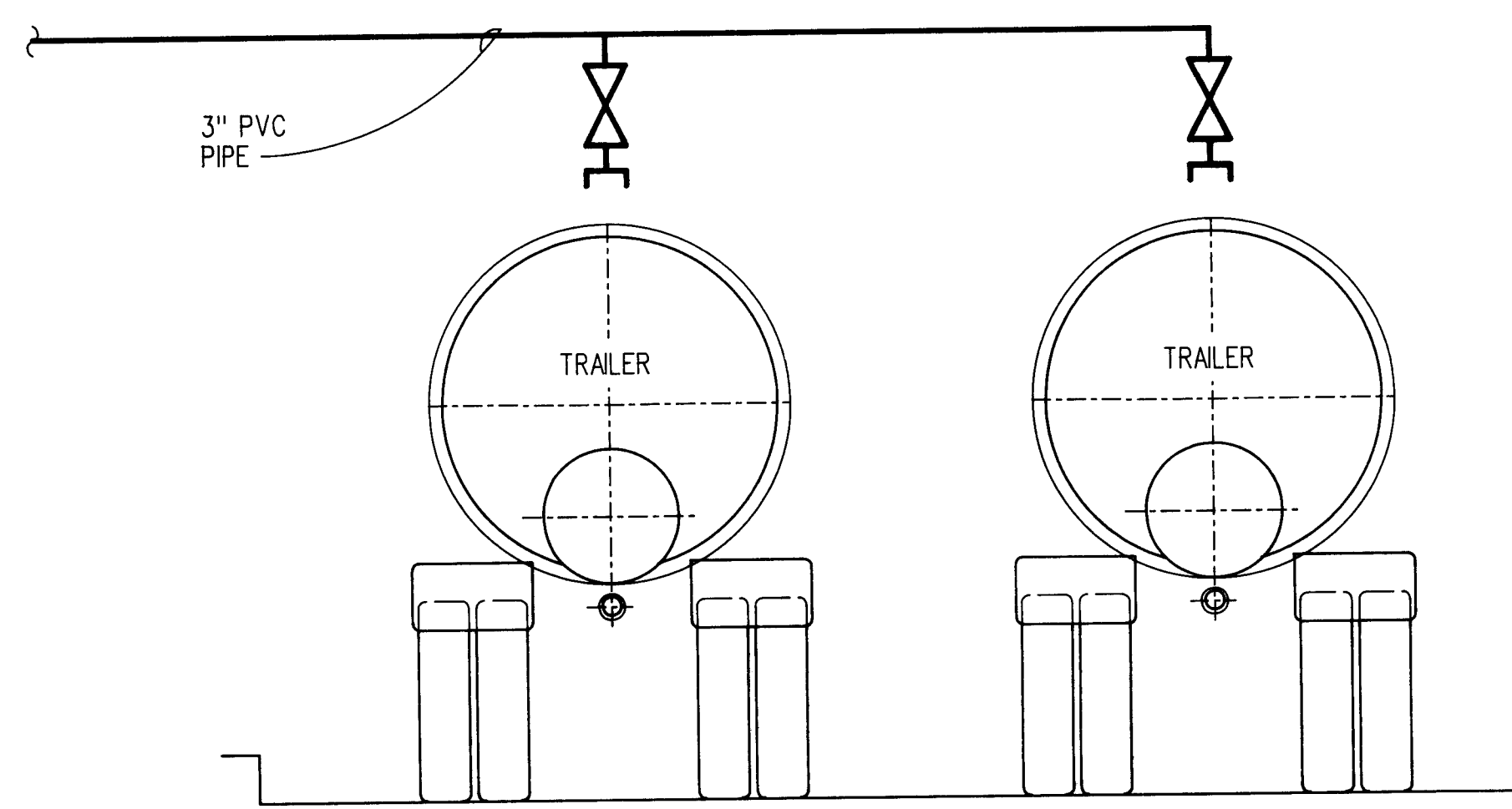
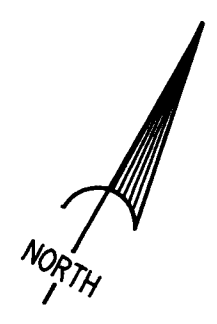
**SDG WASTE TANK FARM CONCRETE PLAN AND DETAILS**

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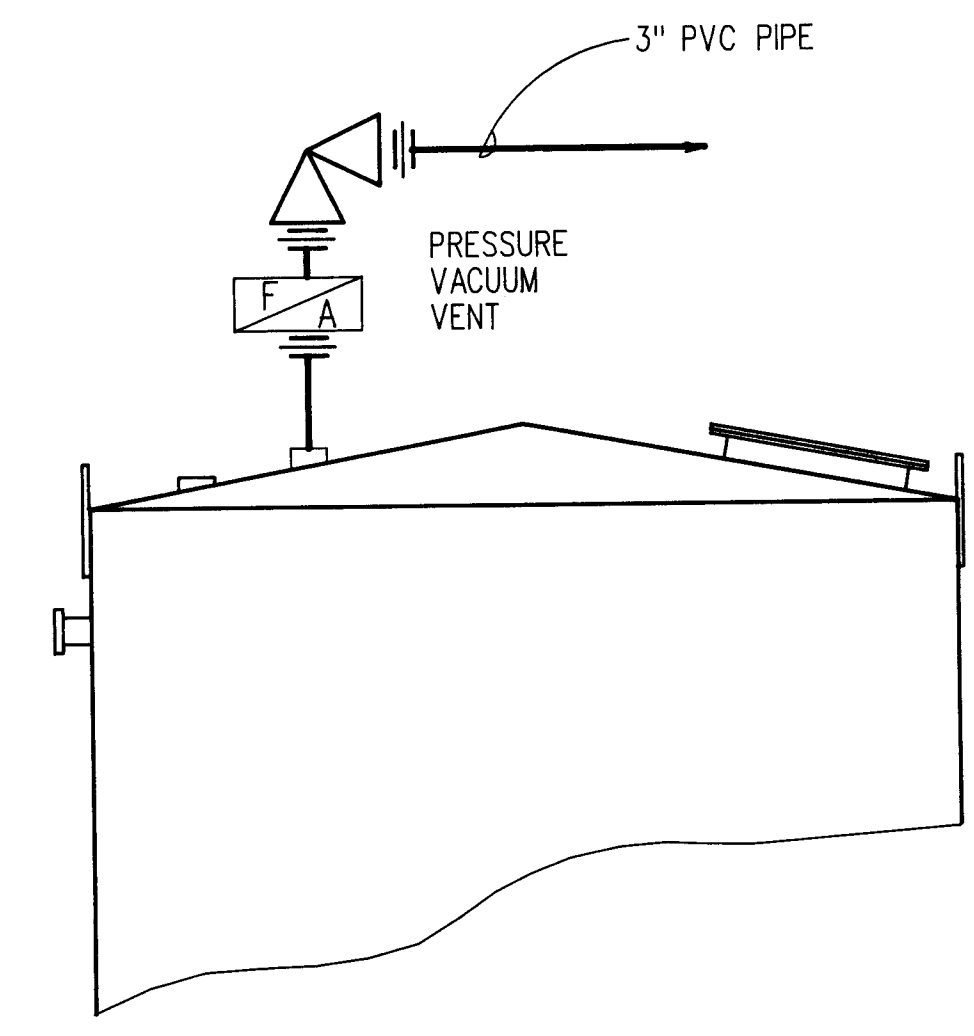
DRAWING NUMBER  
**PCPI-196B**



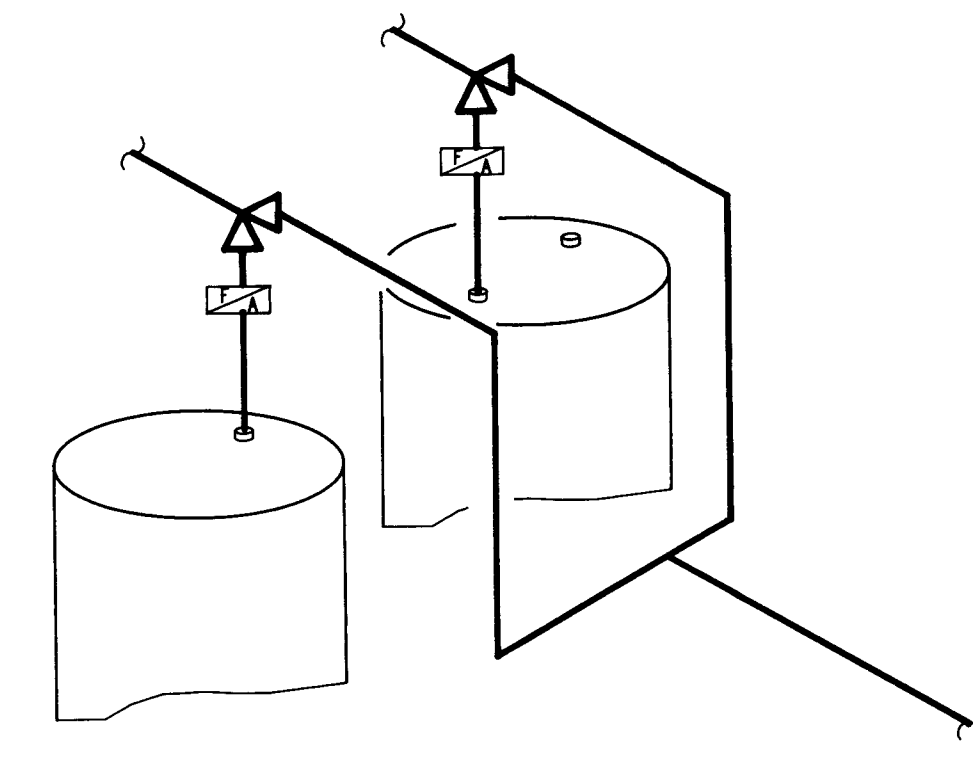
**PLAN VIEW**  
SCALE: 3/16" = 1'-0"



**DETAIL A**  
NOT TO SCALE



**DETAIL B**  
TYPICAL ALL TANKS  
NOT TO SCALE



**DETAIL C**  
NOT TO SCALE


**NOTES:**

1. 3" PVC PIPE SCH. 80 ASTM D-1784
2. 3" PVC FITTINGS SCH. 80 ASTM D-2467

FILE: PCPI97.DGN

ADM	23APR91	REVISED P/V'S & ADDED NOTES	 Specializing in Hydrocarbon Processing and Reuse	
LMB	03FEB92	REVISED CONCRETE AND DIKE WALLS TO REFLECT AS-BUILT CONDITIONS		
SCALE: AS NOTED		APPROVED BY:	DRAWN BY: LMB	
DATE: 07FEB91			REVISED: 23APR91	
<b>PROPOSED SDI TANK FARM - VAPOR BALANCE SYSTEM</b>				
				DRAWING NUMBER
				<b>PCPI-197</b>

Confidential Material Redacted

 <b>Petro-Chem</b> <b>PROCESSING GROUP</b> <small>Specializing in Hydrocarbon Processing and Reuse</small>		
SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 27FEB91	REVISIONS:	REVISED:
<b>SDG WASTE TANK FARM PIPING PLAN AND DETAILS</b>		
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FILE: PCPI198A.DGN



**Petro-Chem**  
**PROCESSING GROUP**  
Specializing in Hydrocarbon Processing and Reuse

SCALE: 1/4" = 1'-0"  
DATE: 09APR91

APPROVED BY:

DRAWN BY: LMB

REVISID: 10APR91

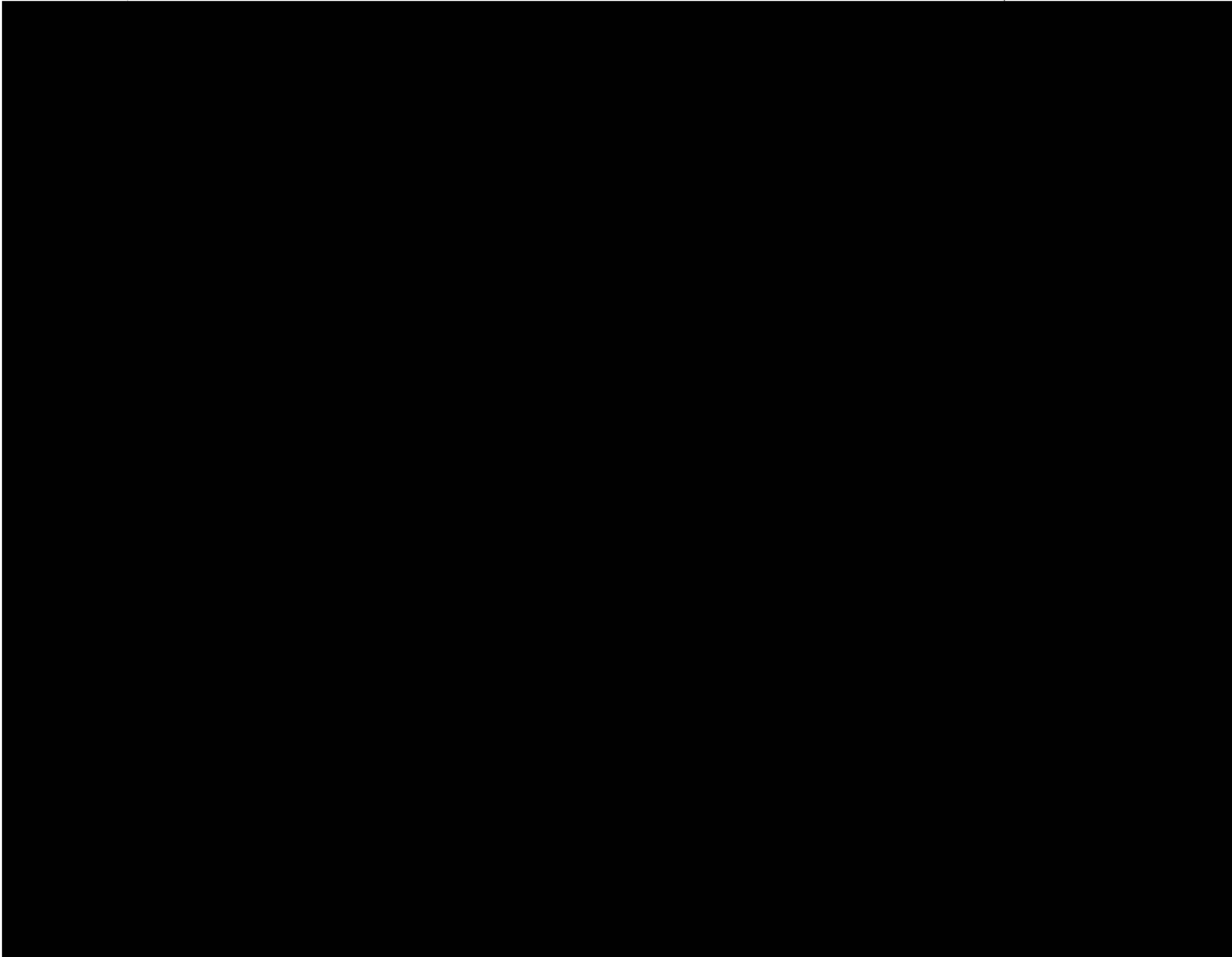
REVISID: 10APR91

**SDG WASTE TANK FARM PIPING PLAN - SH. 2**

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DRAWING NUMBER  
**PCPI-198A**





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FILE: PCPI99.DGN



SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: LMB
DATE: 12/18/91		REVISED:

SDG WASTE TANK FARM CATWALK LAYOUT PLAN VIEW

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DRAWING NUMBER  
PCPI-199

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FILE: PCPI314 .DGN



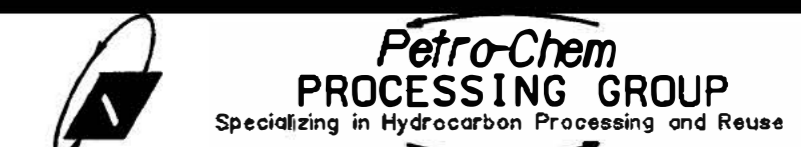
SCALE: NONE	APPROVED BY: <i>[Signature]</i>	DRAWN BY: LMB
DATE: 2/24/01		REVISED: 3-11-00

PCPG P & ID - WEST TANK FARM TANKS 16 - 20

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DRAWING NUMBER  
PCPI-314A

Confidential Material Redacted



SCALE: NONE	APPROVED BY:	DRAWN BY: LMB
DATE: 20AUG03		REVISED:

PCPG P & ID - WEST TANK FARM TANKS 21- 25

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Confidential Material Redacted

FILE: PCPI314C.DGN



**Petro-Chem**  
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Specializing in Hydrocarbon Processing and Reuse

SCALE: NONE	APPROVED BY:	DRAWN BY: LMB
DATE: 20AUG93		REVISED:

PCPG P & ID - WEST TANK FARM TANKS 26 - 30

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Confidential Material Redacted

FILE: PCPI315 .DGN



SCALE: NONE	APPROVED BY: <i>[Signature]</i>	DRAWN BY: LMB
DATE: 30/09/01		REVISED: 2/1/05

PCPG P & ID - WEST TANK FARM LOAD/UNLOAD PAD

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DRAWING NUMBER  
**PCPI-315**

Confidential Material Redacted

FILE: PCPI316 .DGN



SCALE: NONE	APPROVED BY: <i>[Signature]</i>	DESIGNED BY:
DATE: 30JUN91		DRAWN BY: JLM

PCPG P & ID - WEST TANK FARM LOAD/UNLOAD PAD

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DRAWING NUMBER  
PCPI-316

Confidential Material Redacted

FILE: PCPI339ADGN



SCALE: NONE	APPROVED BY: <i>[Signature]</i>	DRAWN BY: LME
DATE: 3/02/94		REVISED: 3-11-98

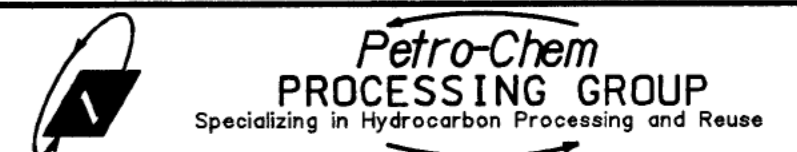
PCPG P & ID - NORTHWEST TANK FARM TANKS 35 - 40

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DRAWING NUMBER  
PCPI-339A

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FILE: PCPI339B.DGN



SCALE: NONE	APPROVED BY:	DRAWN BY: LMB
DATE: 0NOV94		REVISED:

<b>PCPG P &amp; ID - NORTHWEST TANK FARM PUMP PAD</b>		DRAWING NUMBER
<small>THE DISCLOSURE AND CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND THE EXCLUSIVE PROPERTY OF NORTRU, INC. AND IS NOT TO BE COPIED OR PRODUCED WITHOUT WRITTEN PERMISSION FROM NORTRU, INC. ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN AGREEMENT TO THE ABOVE.</small>		<b>PCPI-339B</b>



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Industrial Services Group

SCALE: AS NOTED	APPROVED BY:	DRAWN BY: LMB
DATE: 29OCT93		REVISED:

**PCPG NORTHWEST TANK FARM 30,000 GALLON TANKS 35 - 40**

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DRAWING NUMBER  
**PCPI-572A**

# TANKS 16 - 30, 35 - 40 PROBES SENSITIVITY CALCULATIONS

14' DIA. TANK VOLUME 96 GAL. PER 1"  
THEREFORE OLD PROBE TRIPS AT  
15.75" X 96 GAL. = 1,512 GAL./INCH

WORKING CAPACITY 28,488 GAL., OR  

$$\frac{30,000 - 1,512}{30,000} \times 100\% \approx 95\%$$

NEW PROBES ARE 24" LONG  
LENGTH BELOW TOP WELD IS 21"  
THEREFORE NEW PROBE TRIPS AT  
21" X 96 = 2,016 GALS.

WORKING CAPACITY 27,984 GALS. OR  

$$\frac{30,000 - 2,016}{30,000} \times 100\% = 92.8\%$$

