



April 7, 2022

Mr. Bradley Buselli  
Environmental Specialist III  
Florida Department of Environmental Protection  
Hazardous Waste Program and Permitting  
Post Office Box 3070  
Tallahassee, FL 32315-3070

RE: Transmittal of RCRA Permit Modification As-Built Certification and Drawings  
Perma-Fix of Florida, Inc.  
1940 NW 67<sup>th</sup> Place, Gainesville, Florida 32653  
Facility I.D. Number: FLD 980711071  
Hazardous Waste Treatment and Storage Facility Operating Permit Number: 17680-012-HO

Dear Mr. Buselli:

On behalf of Perma-Fix of Florida, Inc. (PFF), Trihydro Corporation (Trihydro) hereby submits the attached as-built certification statement and documentation associated with recent RCRA permit modification for the replacement of their existing thermal desorption and/or chemical oxidation/reduction waste treatment unit (Perma-Fix II [PF-II<sup>®</sup>] process). This replacement PF-II<sup>®</sup> process unit is installed inside the Quonset Hut located within the Treatment and Operations Building (TOB) at the PFF facility located at 1940 NW 67th Place in Gainesville, Florida.

As noted in the certification, the construction activities for this project were inspected on Thursday March 24, 2022. The modified hazardous waste facility utilizing the PF-II<sup>®</sup> process equipment for treatment, meet all the performance and regulatory requirements, and is therefore ready to operate, pending final Florida Department of Environmental Protection (FDEP) approval.

PFF appreciates the agency's review and acceptance of this as-built certification. If you have any questions, comments, or concerns related to this matter, please contact Mr. Randy Self (Perma-Fix of Florida, Inc.) at (352) 395-1368 or Mr. Brad Pekas (Trihydro Corporation) at (904) 513-9748.

Sincerely,  
Trihydro Corporation

A handwritten signature in blue ink, appearing to read "Bradley S. Pekas", is written over a horizontal line.

Bradley S. Pekas, P.E., P.G.  
Project Manager  
FL P.E. # 46867  
Trihydro Engineering COA #30659

62Q-023-001

Enclosures

cc: Randy Self, Perma-Fix of Florida, Inc.  
Waste and Air Resources Management Administrator, FDEP Northeast District  
Brian Bastek, EPA Region 4  
William Kelly, PG - Trihydro



Transmittal of RCRA Permit Modification As-Built Certification and Drawings  
Perma-Fix of Florida, Inc.  
Gainesville, FL  
Facility ID Number: FLD 980711071  
HW T&S Facility Operating Permit Number: 17680-012-HO  
April 7, 2022  
Page 2

## **PERMA-FIX PF-II® PROCESS EQUIPMENT SYSTEM INSPECTION AND AS-BUILT CERTIFICATION**

### **INTRODUCTION**

Trihydro Corporation's (Trihydro's) Jacksonville Florida office has been supporting Perma-Fix of Florida, Inc. (PFF) with their Resource Conservation and Recovery Act (RCRA) Part B Minor Permit Modification to perform an in-kind replacement of their Perma-Fix II (PF-II®) process equipment. Related to these efforts, Trihydro was requested to perform an inspection of the PFF facility located in Gainesville, Florida, and specifically the new PF II® process equipment.

The purpose of this inspection was to confirm component inventory and certify the as-built construction of the in-kind replacement PF II® process equipment. Several tasks were performed in the course of completing these efforts including, (1) inspecting and comparing the installed equipment with vendor information submitted to PFF for individual components or component systems for compliance and verification of materials of construction, (2) measuring, confirming, and recording the equipment dimensions for the preparation of as-built drawings that would properly describe the general design and relative location of the replacement PF-II® process equipment, and (3) preparing updated schematics and as-built drawings that describe the process flow through the PF II® treatment unit.

### **DOCUMENTATION**

To assist with the review of this certification document and as-built drawings, the thermal desorber unit photograph (Photo 21) in Appendix I-A Photographic Log of the RCRA Permit has been replaced to reflect the new PF-II® process equipment (**Attachment A**). A total of eight (8) schematics and drawings depicting various elements of the PF-II® process equipment design and layout, previously identified as "Proposed" in the recent RCRA Part B Minor Permit Modification, are updated, revised, and provided as "As-Built" drawings in **Attachment B**.

### **PF-II® SYSTEM AS-BUILT DRAWINGS**

FIGURE I-6-B: AS-BUILT PART I – TREATMENT AND OPERATIONS BUILDING  
FIGURE I-7-B: AS-BUILT PART I – PF-I & PF-II PROCESS FLOW DIAGRAM  
FIGURE I-11-B: AS-BUILT PART I – PROCESS SCHEMATIC  
FIGURE I-24-B: AS-BUILT PART I – EQUIPMENT LAYOUT FOR PF-I & PF-II (PLAN VIEW)  
FIGURE I-25-B: AS-BUILT PART I – EQUIPMENT LAYOUT FOR PF-I & PF-II (X-SECTION)  
FIGURE I-26-B: AS-BUILT PART I – EQUIPMENT LAYOUT FOR PF-I & PF-II (DETAIL - PLAN)  
FIGURE II-I-1-B: AS-BUILT PART II – PF-II LAYOUT  
FIGURE II-I-2-B: AS-BUILT PART II – PROCESS FLOW DIAGRAM PF-I & PF-II PROCESSES



Transmittal of RCRA Permit Modification As-Built Certification and Drawings  
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April 7, 2022  
Page 3

Figures I-6-B, I-24-B, I-26-B, and II-I-1-B provide plan view illustrations of the treatment and operation building, the quonset hut, and the PF II® process equipment. These figures show the different features and structures of the building as well as those in the immediate vicinity of PF II® process equipment within the quonset hut. Several of these key features include the receiving dock, drum/sample storage areas, the drum conveyors/tunnels, the PF II® process equipment, the drying area and the chem lab.

Figures I-7-B, I-11-B, I-25-B, and II-I-2-B provide several equipment drawings and process flow schematics for the PF II® process equipment. The primary equipment components include the thermal desorber, the condensers, top and bottom accumulator tanks, an aftercooler tower, an air filter, and a series of vacuum pumps.

All volatilized gases liberated by the thermal (external electrically heated) desorption process are vented into a series of water-cooled, condenser tubes (Figures I-7-B and I-26-B). All internal construction components in contact with the PF II® process stream, specifically the tubes and tube sheets, are constructed from T316L SS. The gases enter at the top flanged port and condensed liquids and gases exit at the bottom side flanged port entering into the top accumulator tank. Cooling water for the condensers enters the outer shell at the bottom of condenser unit 2 and exits at the top of condenser unit 1 (Figure I-7-B).

Gases and condensed liquids that exit the thermal desorber unit as volatile gases through the condenser tubes collect in the top stainless steel accumulator tank, which is positioned above the bottom accumulator tank. The bottom accumulator tank includes a bottom drain valve for liquids removal. All process lines and both accumulator tanks are constructed from T304SS.

Vapor and gas flow exit the top accumulator tank into the aftercooling tower and through an air filter via the vacuum pumping system. Following the vacuum pumping system, the remaining vapors/gases are routed through a HEPA filter and to the RTO unit. Table II-11 (**Attachment C**) provides a summary list for the process equipment that is in vacuum service (40 CFR 264.1050(e)).

## CONCLUSIONS

1. Trihydro conducted an inspection of the physical layout of the in-kind replacement PF II® process equipment located within the Quonset hut inside the TOB and updated the applicable figures to reflect the final as-built configuration. In addition, based upon the vendor information and specifications reviewed and documented in updated Table II-11, the Appendix I-A Photographic Log, and the eight as-built drawings referenced above, indicate that the in-kind replacement PF II® process system, as currently constructed, complies with the materials specified for all components and component



Transmittal of RCRA Permit Modification As-Built Certification and Drawings

Perma-Fix of Florida, Inc.

Gainesville, FL

Facility ID Number: FLD 980711071

HW T&S Facility Operating Permit Number: 17680-012-HO

April 7, 2022

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systems, and that the equipment is physically connected with respect to process streams and utilities as indicated in the attached drawings.

2. All of the PF II<sup>®</sup> gas transfer and wetted system piping and components are constructed from either T304 or T316L stainless steel. Cooling water piping and component hardware are constructed typically with carbon steel piping and ductile iron fittings.
3. It is the opinion of the undersigned engineer that the documentation provided in this as-built certification for the modified process equipment accurately describes the equipment as installed.

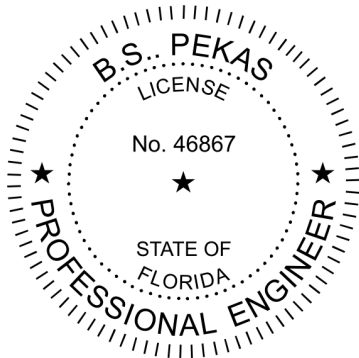


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## CERTIFICATION

As required by EPA 40 CFR 270.11 (d):

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief true accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*



Bradley S. Pekas, P.E., P.G.  
Project Engineer  
FL P.E. # 46867  
Trihydro Engineering COA #30659

April 7, 2022  
Date

Attachment A – Appendix I-A Photographic Log  
Attachment B – As-Built Schematics & Drawings  
Attachment C – Table II – 11 Vacuum Equipment List

**ATTACHMENT A**

**APPENDIX I-A PHOTOGRAPHIC LOG**



**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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Photo 1. Sign at Main Entrance (09/2019)



Photo 2. Main Entrance (09/2019)



**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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Photo 3. East Gate (09/2019)

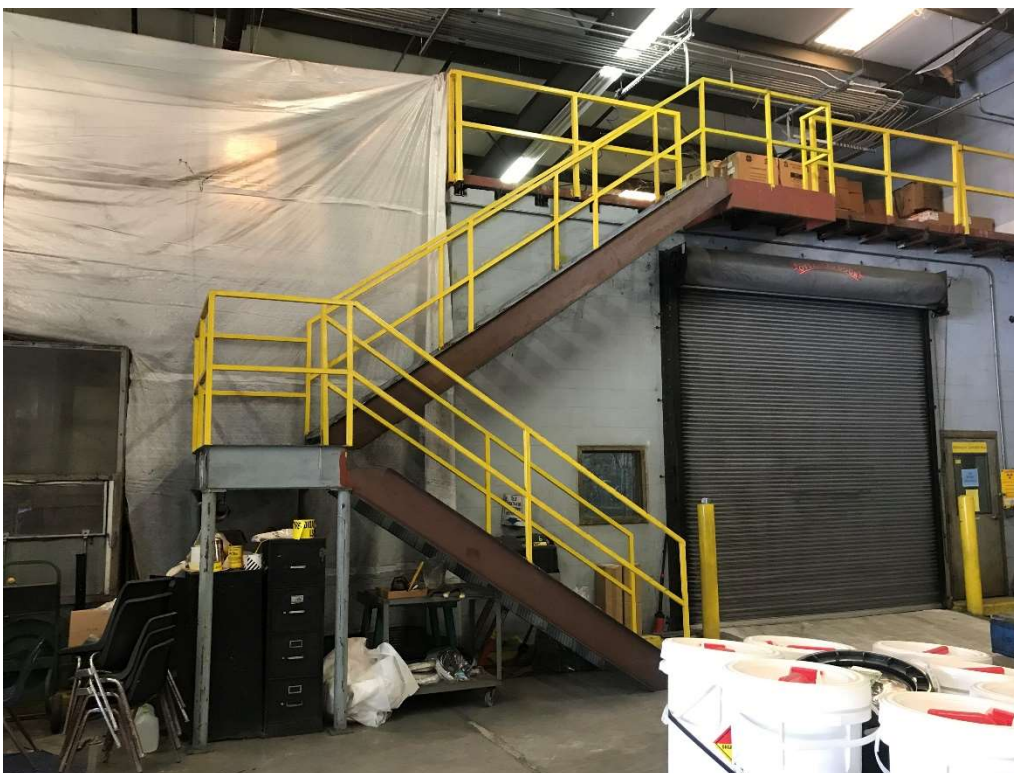


Photo 4. Dry Room (09/2019)



**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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Photo 5. Regenerative Thermal Oxidizer (RTO) (09/2019)



Photo 6. East Loading Dock (12/2014)

**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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Photo 7. TOB Loading Dock (12/2014)



Photo 8. PSB Zone 1 Tanker Loading (12/2014)



**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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Photo 9. PSB Southeast Corner (12/2014)



Photo 10. PSB Zone 2 Drum Storage (12/2014)

**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**



Photo 11. PSB Zone 3 Drum Storage (12/2014)



Photo 12. PSB Southwest Corner (12/2014)



**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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Photo 13. PSB 3,000-Gallon Storage Tank (12/2014)

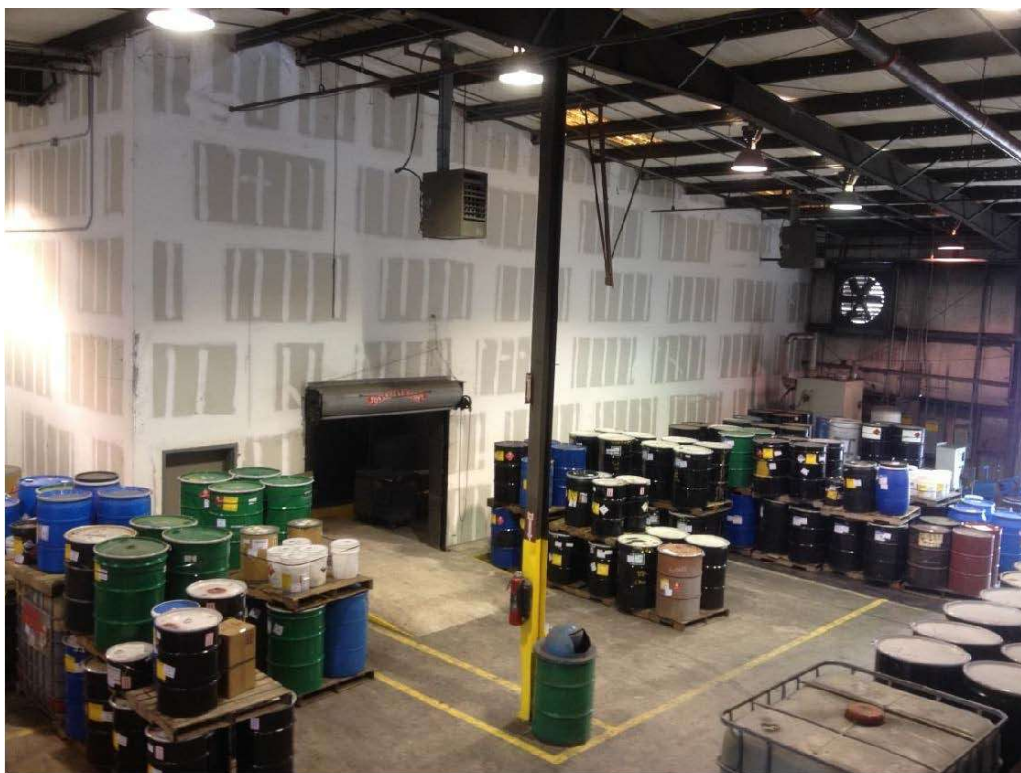


Photo 14. LSV Storage Area (12/2014)

**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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Photo 15. Debris Wash Unit (12/2014)



Photo 16. LSV Processing (12/2014)



**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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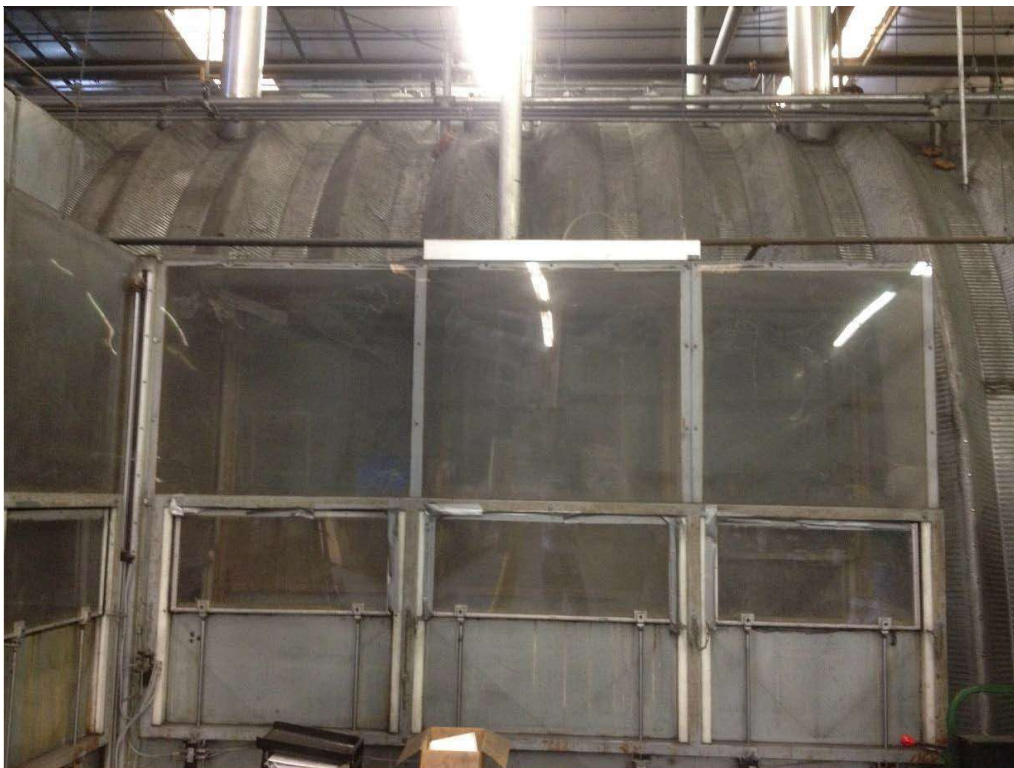


Photo 17. Exterior View of Quonset Hut (12/2014)



Photo 18. Mixed Waste Sampling Room (12/2014)

**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**

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Photo 19. Quonset Hub Jib Crane (12/2014)



Photo 20. PF-I Treatment Room (12/2014)



**APPENDIX I-A. PHOTOGRAPHIC LOG, RCRA PERMIT RENEWAL APPLICATION  
PERMA-FIX FLORIDA, 1940 NW 67<sup>TH</sup> PLACE, GAINESVILLE, FLORIDA**



Photo 21. PF-II Thermal Desorber (03/2022)

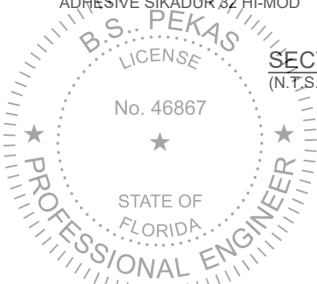
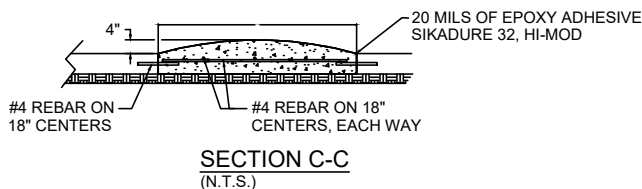
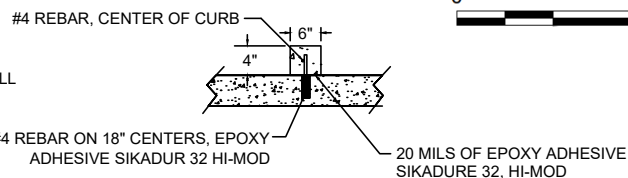
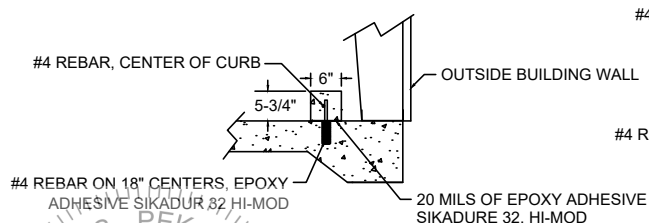
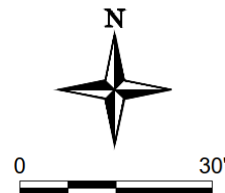
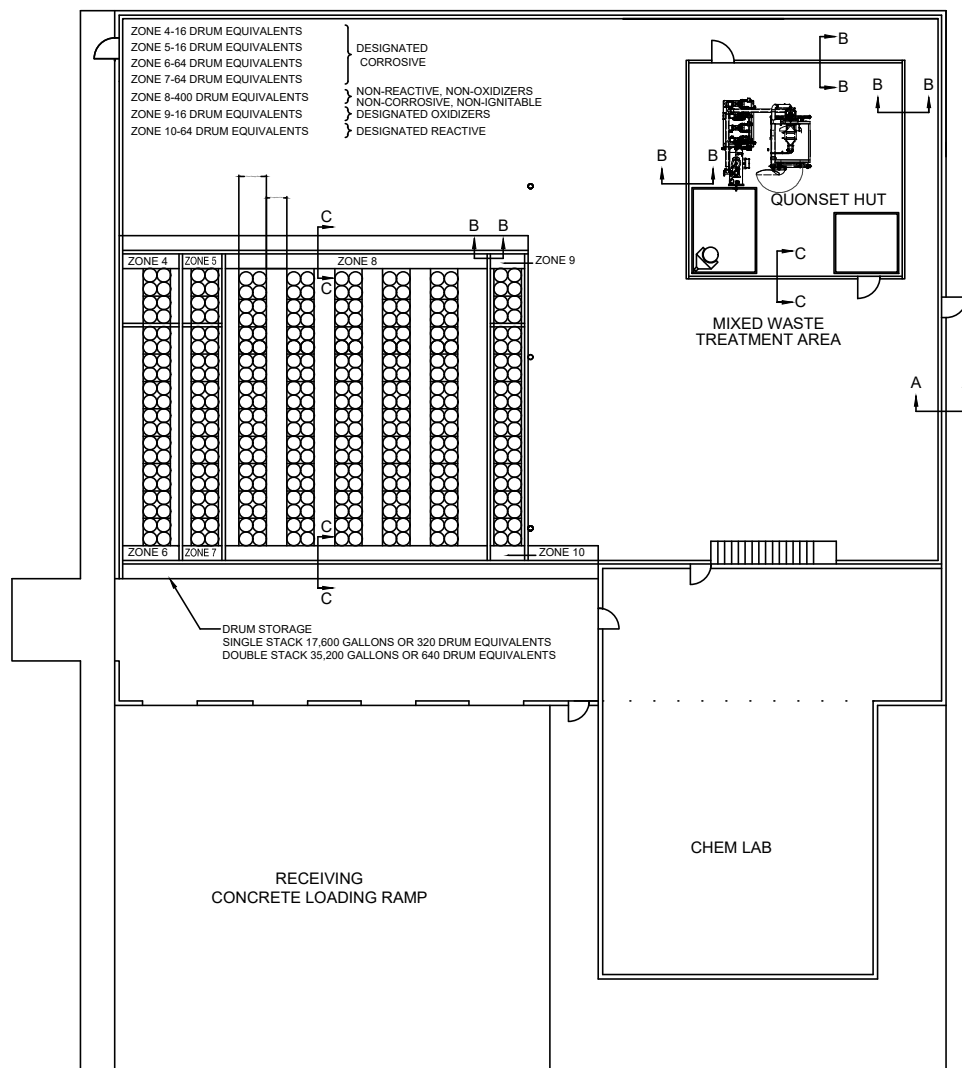


Photo 22. TOB Drum Storage Area (12/2014)

**ATTACHMENT B**

**AS-BUILT SCHEMATICS & DRAWINGS**

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BRADLEY S. PEKAS, PG, PE  
SR. GEOLOGIST/ENGINEER  
FL PE NO. 46867

04/07/22

TRIHYDRO CORPORATION  
37540 ST. JOHNS BLUFF, SUITE 14  
JACKSONVILLE, FL 32224  
PHONE: 800-359-0251  
FL ENGINEERING COA #30659

Source: Perma-Fix, 2022

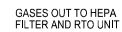


FIGURE I-6-B

AS-BUILT PART I  
TREATMENT AND OPERATIONS BUILDING

PERMA-FIX OF FLORIDA, INC.  
1940 NW 67TH PLACE  
GAINESVILLE, FLORIDA

Drawn By: KML Checked By: BP Scale: 1" = 30' Date: 4/1/2022 File: 61A-PR-PTI-TREATOPRBLDG-B



BRADLEY S. PEKAS, PG, PE  
SR. GEOLOGIST/ENGINEER  
FL PE NO. 46867

DATE \_\_\_\_\_

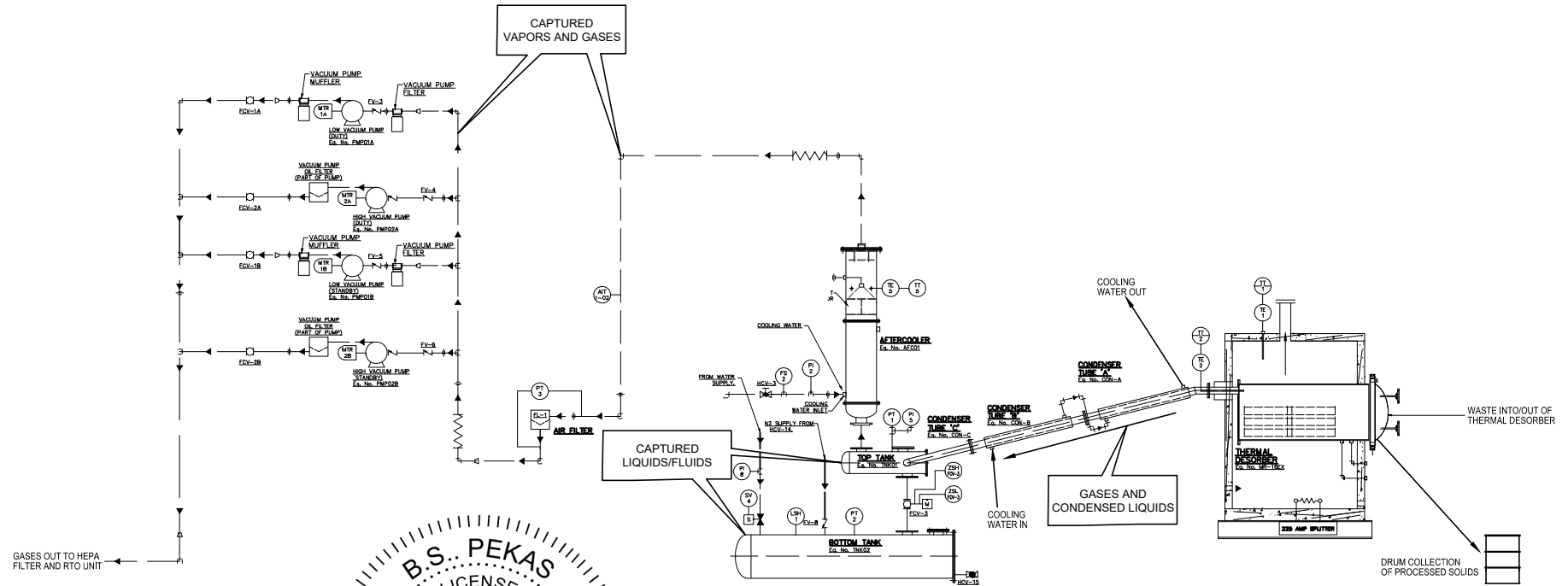
(P) 307/745.7474 (F) 307/745.7729

**PROCESS FLOW DIAGRAM**  
**PERMA-FIX OF FLORIDA, INC.**

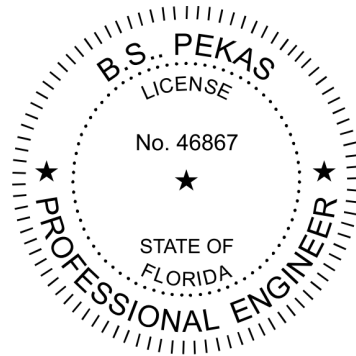
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GASES OUT TO HEPA FILTER AND RTO UNIT



*Bradley S. Pekas*

TRIHYDRO CORPORATION  
3740 ST. JOHNS BLUFF, SUITE 14  
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PHONE: 800-359-0251  
FL ENGINEERING COA #30659

BRADLEY S. PEKAS, PG, PE  
SR. GEOLOGIST/ENGINEER  
FL PE NO. 46867

04/07/22  
DATE

**Trihydro**  
CORPORATION  
1252 Commerce Drive  
Laramie, Wyoming 82070  
www.trihydro.com  
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FIGURE I-11-B

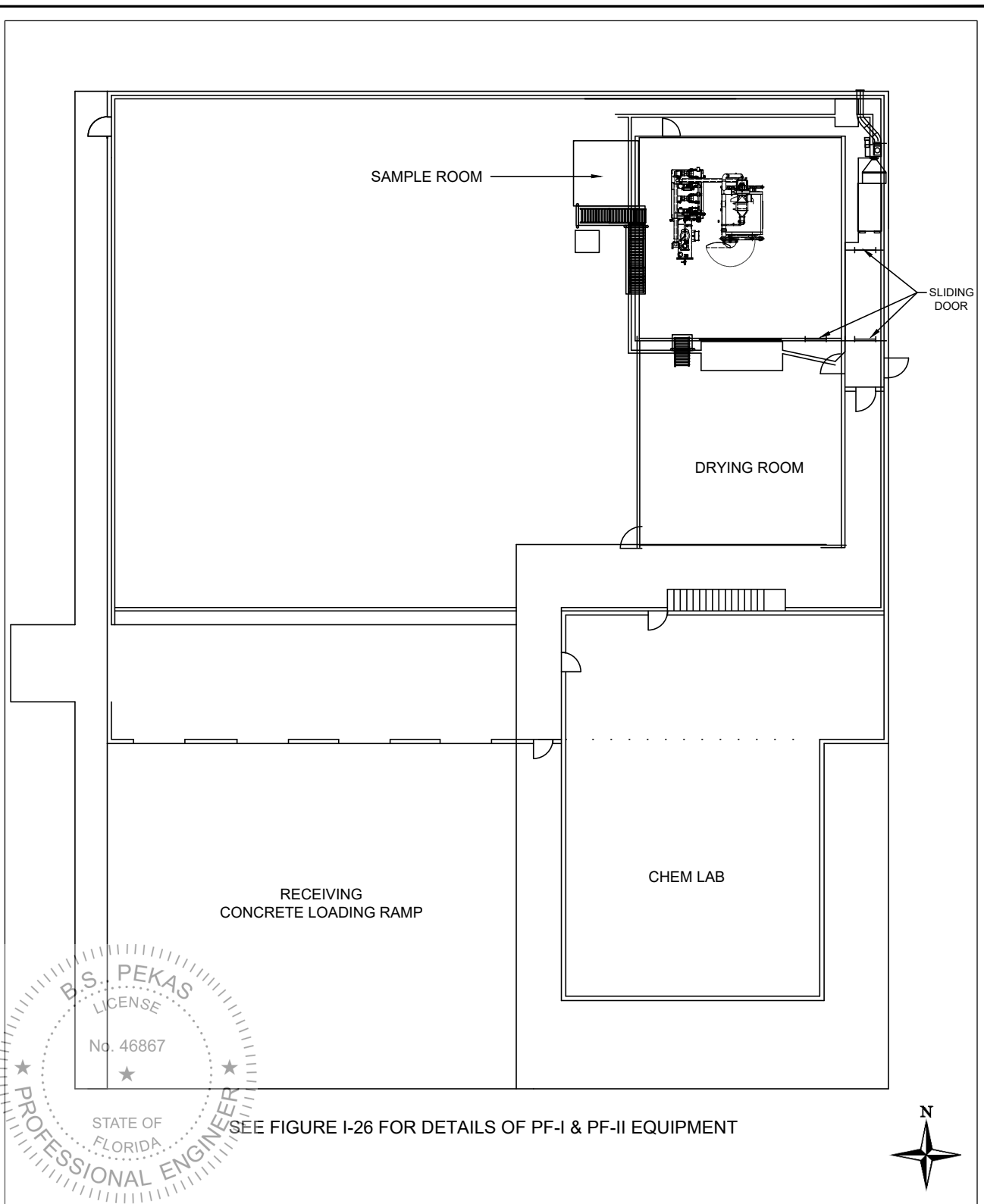
AS-BUILT PART I  
PROCESS SCHEMATIC

PERMA-FIX OF FLORIDA, INC.  
1940 NW 67TH PLACE  
GAINESVILLE, FLORIDA

Source: Perma-Fix, 2022

Drawn By: KML	Checked By: BP	Scale: NONE	Date: 4/6/2022	File: 61A-PR-PTI-PROCSCH-B
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*Bradley S. Pekas*

BRADLEY S. PEKAS, PG, PE  
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FL PE NO. 46867

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**FIGURE I-24-B  
AS-BUILT PART I  
EQUIPMENT LAYOUT FOR PF-I AND PF-II  
(PLAN VIEW)**

**PERMA-FIX OF FLORIDA, INC.  
1940 NW 67TH PLACE  
GAINESVILLE, FLORIDA**

Source: Perma-Fix, 2022

Drawn By: KML

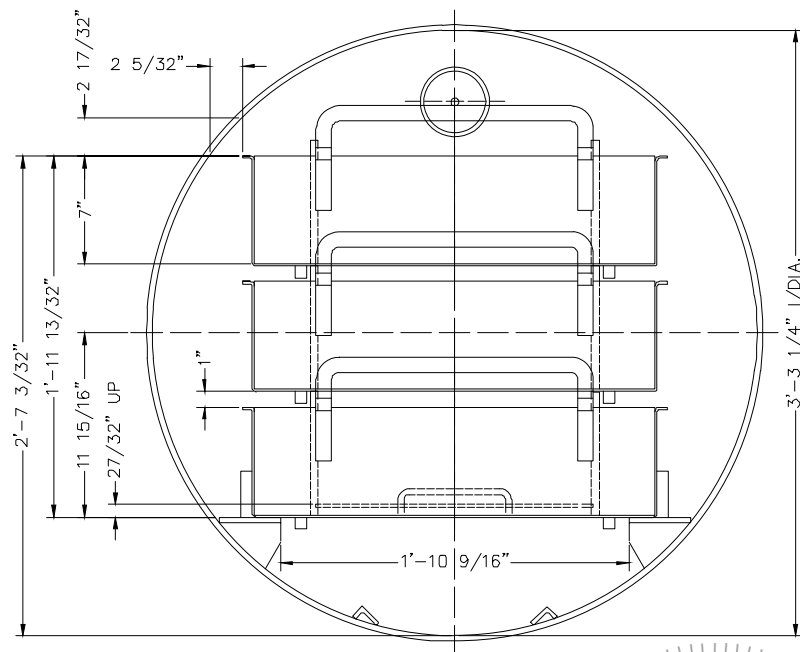
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Date: 4/6/2022

File: 61A-PR-PTI-EQLAY-PF-PLANVIEW-B

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**1** VIEW 'A-A'  
SCALE: NONE

*Bradley S. Pekas*

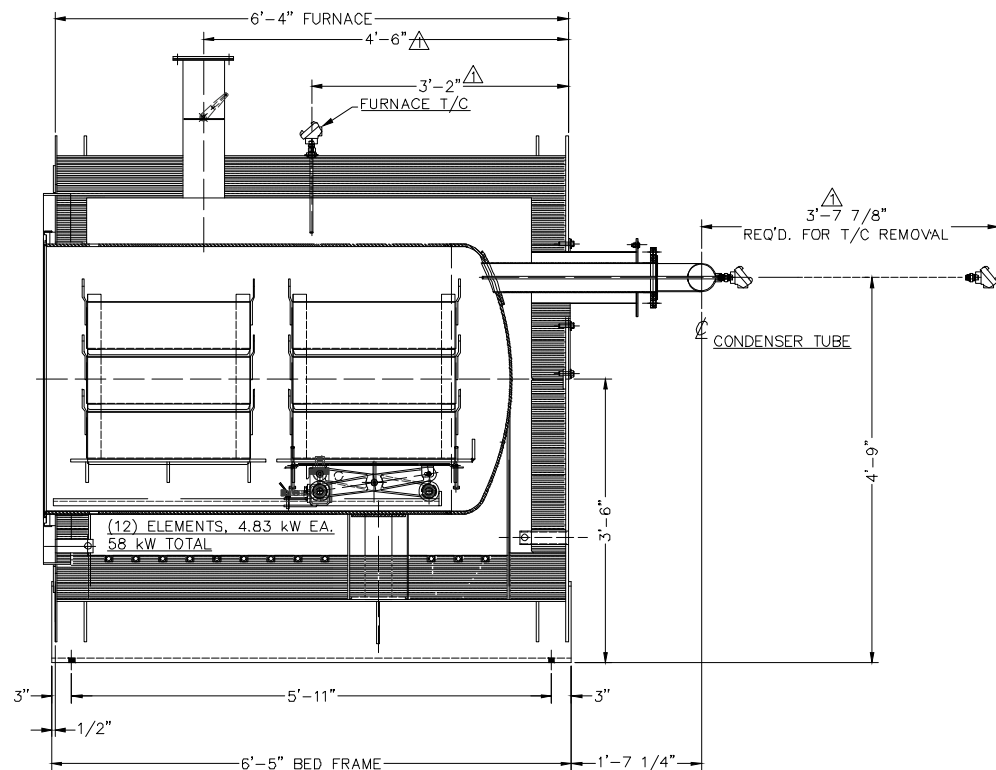
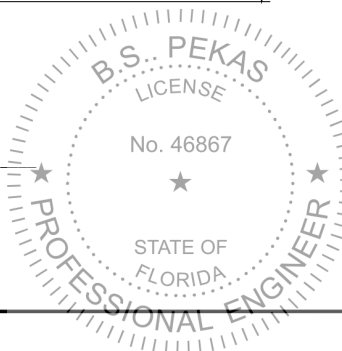
TRIHYDRO CORPORATION  
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BRADLEY S. PEKAS, PG, PE  
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FL PE NO. 46867

04/07/22

DATE

Source: Perma-Fix, 2022



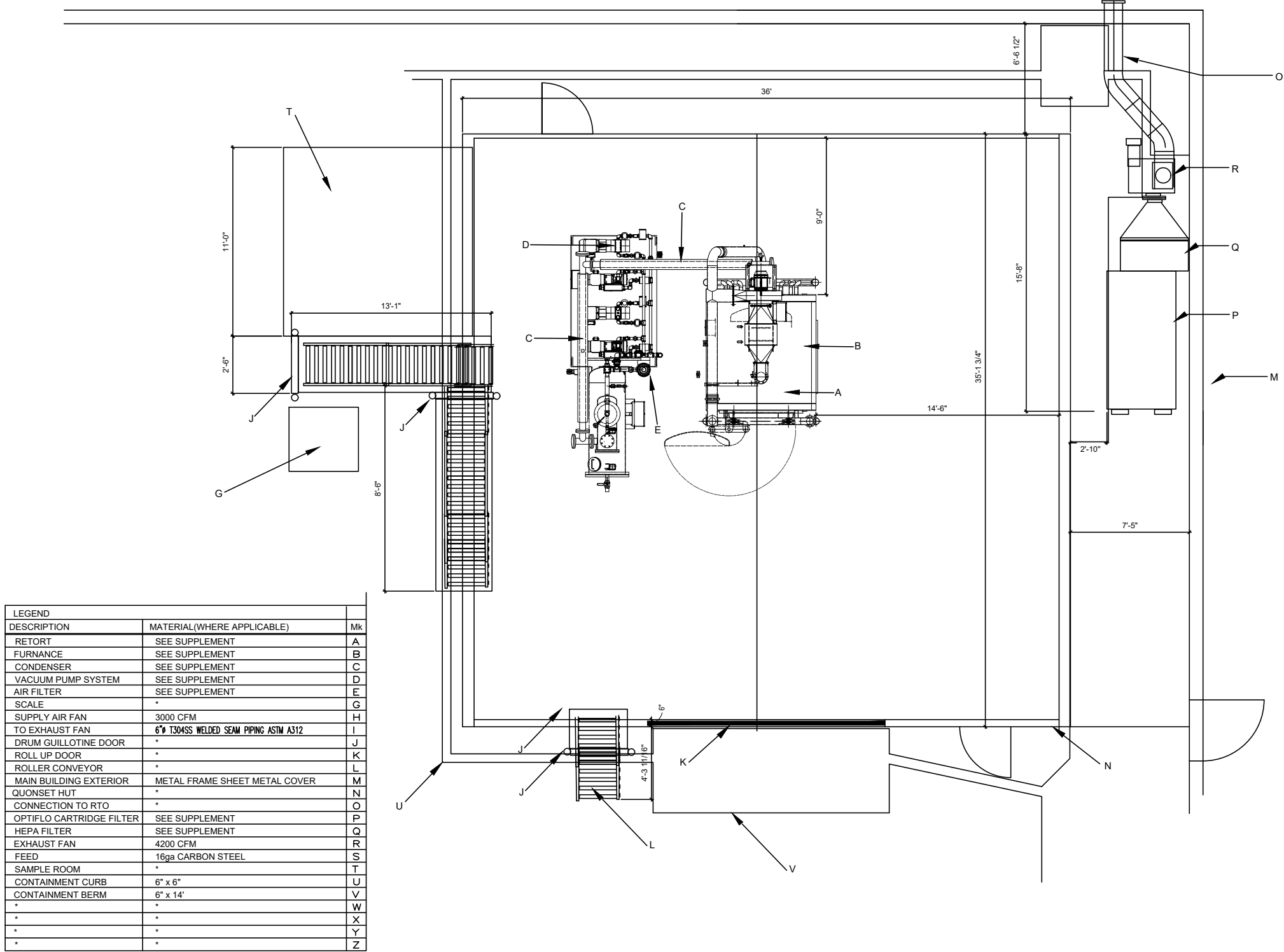
**2** SECTIONAL VIEW  
SCALE: NONE

**Trihydro**  
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**FIGURE I-25-B**  
**AS-BUILT PART I**  
**EQUIPMENT LAYOUT FOR PF-I AND PF-II PROCESS**  
**(X-SECTION)**

**PERMA-FIX OF FLORIDA, INC.**  
**1940 NW 67TH PLACE**  
**GAINESVILLE, FLORIDA**

Drawn By: KML	Checked By: BP	Scale: NONE	Date: 4/6/2022	File: 61A-PR-PTI-EQLAY-PF-XSEC-B
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*Bradley S. Pekas*  
BRADLEY S. PEKAS, PG, PE  
SR. GEOLOGIST/ENGINEER  
FL PE NO. 46867  
04/07/22  
DATE

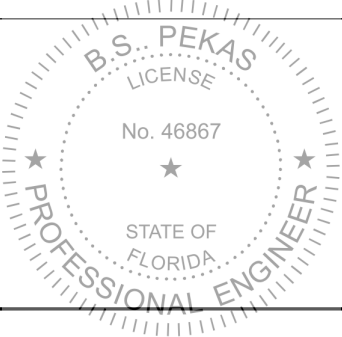
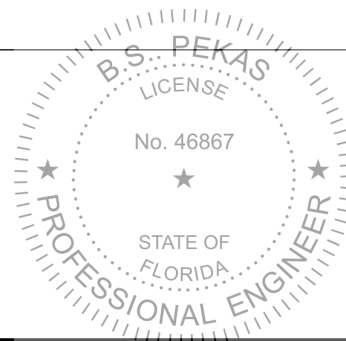
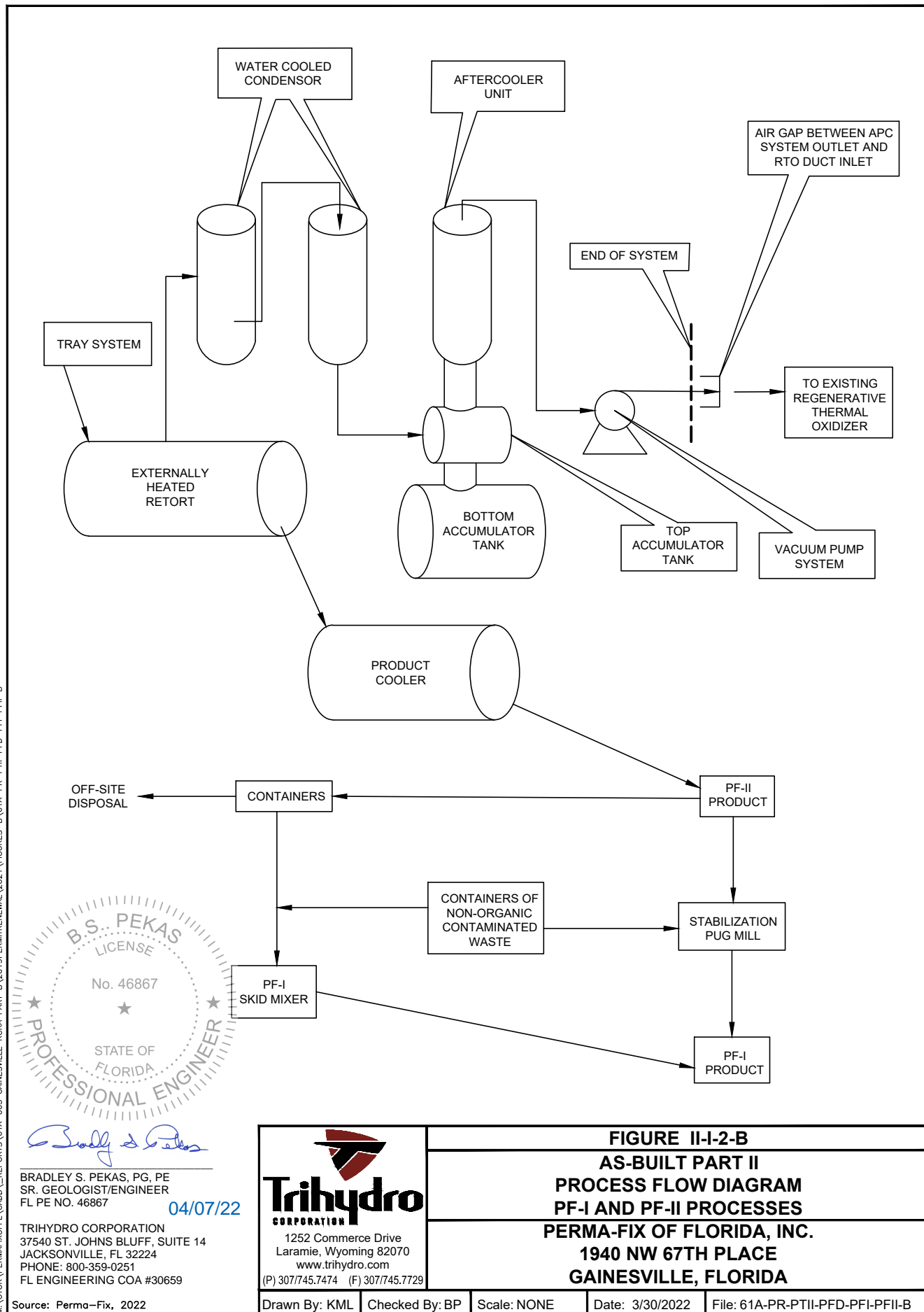


FIGURE I-26-B  
AS-BUILT PART I  
EQUIPMENT LAYOUT FOR PF-I AND PF-II  
(DETAIL - PLAN)  
PERMA-FIX OF FLORIDA, INC.  
1940 NW 67TH PLACE  
GAINESVILLE, FLORIDA





Drawn By: REP	Checked By: CE	Scale: NONE	Date: 10/4/2019	File: 61A-PR-PTII-PROP-PFII-LAYOUT-B
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**ATTACHMENT C**

**TABLE II-11 EQUIPMENT LIST – PF-II VACUUM EQUIPMENT**



TABLE II-11 EQUIPMENT LIST - PF-II VACCUM EQUIPMENT  
RCRA PERMIT RENEWAL APPLICATION  
PERMAFIX FLORIDA, 1940 NW 67TH PLACE, GAINESVILLE, FLORIDA

ITEM NO./ EQUIP. NO.	QTY	DESCRIPTION	PART NUMBER	COMMENTS	APPLICABLE REGULATION
FCV—1A	1	BALL VALVE, VACUUM PUMP OUTLET	HOWELL #H3DM—SS—IP—R—114—SD4B—528	1 1/4" NPT., c/w ACTUATION KIT & POSITION SW.	40 CFR 264.1050(e)
FCV—1B	1	BALL VALVE, VACUUM PUMP OUTLET	HOWELL #H3DM—SS—IP—R—114—SD4B—52S	1 1/4" NPT., c/w ACTUATION KIT & POSITION SW.	40 CFR 264.1050(e)
FCV—2A	1	BALL VALVE, VACUUM PUMP OUTLET	HOWELL #H3DM—SS—IP—R—114—SD4B—528	1 1/4" NPT., c/w ACTUATION KIT & POSITION SW.	40 CFR 264.1050(e)
FCV—2B	1	BALL VALVE, VACUUM PUMP OUTLET	HOWELL #H3DM—SS—IP—R—114—SD4B—52S	1 1/4" NPT., c/w ACTUATION KIT & POSITION SW.	40 CFR 264.1050(e)
FCV—3	1	BALL VALVE, TOP TANK DRAIN	HOWELL #H3DM-SS-FL-R-2MR4B-F07ZS	2"-150# FLG., c/w ACTUATION KIT & POSITION SW.	40 CFR 264.1050(e)
FL-1	1	AIR INTAKE FILTER #1	SOLBERG MODEL #5169K87	2" FNPT, ELEMENT #5169K93 5 MICRON FILTER.	40 CFR 264.1050(e)
FV-3	1	CHECK VALVE, VACUUM PUMP INLET	GRINNELL OR EQ.	1" NPT, 200 WOG, T316L, SS	40 CFR 264.1050(e)
FV—4	1	CHECK VALVE, VACUUM PUMP INLET	GRINNELL OR EQ.	1 1/4" NPT.	40 CFR 264.1050(e)
FV—5	1	CHECK VALVE, VACUUM PUMP INLET	GRINNELL OR EQ.	1" NPT, 200 WOG, T316L, SS	40 CFR 264.1050(e)
FV-6	1	CHECK VALVE, VACUUM PUMP INLET	GRINNELL OR EQ.	1 1/4" NPT.	40 CFR 264.1050(e)
FV—7	1	CHECK VALVE, VACUUM PUMP BYPASS	GRINNELL OR EQ.	2" NPT, 200 WOG, T316L, SS	40 CFR 264.1050(e)
HCV-6	1	BALL VALVE, AIR FILTER DRAIN	GRINNELL OR EQ.	1" NPT, 1000#, FULL PORT, T316L, SS	40 CFR 264.1050(e)
HCV-15	1	BALL VALVE, BOTTOM TANK DRAIN	GRINNELL OR EQ.	2" NPT, 1000#, FULL PORT, T316L, SS	40 CFR 264.1050(e)
MTR-1A	1	MOTOR, LOW VACUUM PUMP (DUTY)	WEG #HT005404NPW22 5	5 HP, 1760 RPM, TEFC, 460/3/60, FR. 182/4T, 6.45 FLA	40 CFR 264.1050(e)
MTR-1B	1	MOTOR, LOW VACUUM PUMP (STANDBY)	WEG #HT005404NPW22 5	5 HP, 1760 RPM, TEFC, 460/3/60, FR. 182/4T, 6.45 FLA	40 CFR 264.1050(e)
MTR-2A	1	MOTOR, HIGH VACUUM PUMP (DUTY)	PART OF VACUUM PUMP	2 HP, 1800 RPM, TEFC, 460/3/60, FR. 145TC, 2.7 FLA	40 CFR 264.1050(e)
MTR-2B	1	MOTOR, HIGH VACUUM PUMP (STANDBY)	PART OF VACUUM PUMP	2 HP, 1800 RPM, TEFC, 460/3/60, FR. 145TC, 2.7 FLA	40 CFR 264.1050(e)
PI-5	1	VACUUM GAUGE, TOP TANK	WEKSLER BY12WC4LW	O to -30" Hg, 1/4" NPT, BOTTOM MOUNT, SS.	40 CFR 264.1050(e)
PI-8	1	WATER PRESS GAUGE, BOTTOM TANK	WEKSLER BY12YPE4LW c/w SNUBBER	0—60 psi, 1/4" NPT, BOTTOM MOUNT, SS. clw SW42	40 CFR 264.1050(e)
PMP01A	1	LOW VACUUM PUMP, OIL-LESS VANE TYPE	GAST 6066-V103	0.875" SHAFT, 0.1875" SQ. KEY.	40 CFR 264.1050(e)
	1	VACUUM PUMP DRIVE COUPLING	GAST #AE544B	0.875" BORE x 1.125" BORE.	40 CFR 264.1050(e)
	1	VACUUM PUMP FILTER	GAST #AD560	1" NPT, c/w GLASS BOTTLE	40 CFR 264.1050(e)
	1	VACUUM PUMP MUFFLER	GAST #AD560B	1" NPT, c/w GLASS BOTTLE	40 CFR 264.1050(e)
PMP01B	1	LOW VACUUM PUMP, OIL-LESS VANE TYPE	GAST 6066-V103	0.875" SHAFT, 0.1875" SQ. KEY.	40 CFR 264.1050(e)
	1	VACUUM PUMP DRIVE COUPLING	GAST #AE544B	0.875" BORE x 1.125" BORE.	40 CFR 264.1050(e)
	1	VACUUM PUMP FILTER	GAST #AD560	1" NPT, c/w GLASS BOTTLE	40 CFR 264.1050(e)
	1	VACUUM PUMP MUFFLER	GAST #AD560B	1" NPT, c/w GLASS BOTTLE	40 CFR 264.1050(e)
PMP02A	1	HIGH VACUUM PUMP, OIL-LUBR., VANE TYPE	BUSCH #R5 RA 0040 F	27.6 cfm, 0.003" Hg	40 CFR 264.1050(e)
		c/w BUILT IN CHECK VALVE, EXHAUST GAS		c/w 2 HP, 1800 RPM MOTOR, 460/3/60	40 CFR 264.1050(e)
		OIL SEPARATOR			40 CFR 264.1050(e)
PMP02B	1	HIGH VACUUM PUMP, OIL-LUBR., VANE TYPE	BUSCH #R5 RA 0040 F	27.6 cfm, 0.003" Hg	40 CFR 264.1050(e)
		c/w BUILT IN CHECK VALVE, EXHAUST GAS		c/w 2 HP, 1800 RPM MOTOR, 460/3/60	40 CFR 264.1050(e)
		OIL SEPARATOR			40 CFR 264.1050(e)
SV-4	1	SOLENOID VALVE, BOTTOM TANK WATER SUPPLY	ASCO # 8210G088, NORMALLY CLOSED	3/4" NPT, 5/8" PORT, 120 V, 17.1W, SS.	40 CFR 264.1050(e)
SV-5	1	SOLENOID VALVE, VACUUM PUMP BYPASS	ASCO # 8210G133, NORMALLY OPEN	2" NPT, 1 3/4" PORT, 120 V, 16.1W, SS.	40 CFR 264.1050(e)
AFC 01	1	AFTERCOOLER	MR-15EX-AFC01		40 CFR 264.1050(e)
TNK 01	1	COLLECTOR - TOP TANK (ACCUMULATOR)	MR-15EX-TNK01		40 CFR 264.1050(e)
TNK 02	1	COLLECTOR - BOTTOM TANK (ACCUMULATOR)	MR-15EX-TNK02		40 CFR 264.1050(e)
CON A	1	CONDENSOR TUBE "A"	MR-15EX-CON-A		40 CFR 264.1050(e)
CON B	1	CONDENSOR TUBE "B"	MR-15EX-CON-B		40 CFR 264.1050(e)
CON C	1	CONDENSOR TUBE "C"	MR-15EX-CON-C		40 CFR 264.1050(e)
MR-15EX	1	THERMAL DESORBER			40 CFR 264.1050(e)

**Notes:**

**VACUUM SERVICE:**

40 CFR264.1050(e) Equipment that is in vacuum service is excluded from the requirements of Sec. 264.1052 to Sec. 264.1050 if it is identified as required in Sec. 264.1064(g)(5).

40 CFR264.1064(g) The following information pertaining to all equipment subject to the requirements in Secs. 264.1052 through 264.1060 shall be recorded in a log that is kept in the facility operating record:

40 CFR264.1064(g)(5) A list of identification numbers for equipment in vacuum service.

Source: Perma-Fix 2022, and Trihydro 2022