

Quarter Ending: June 30, 2020

24590-LAW-PCN-ENV-19-010

RCRA Operating record number: R605

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**Hanford Facility RCRA Permit Modification Notification Form**  
**Part III, Operating Unit 10**  
**Waste Treatment and Immobilization Plant**

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Index

Page 2 of 6: Hanford Facility RCRA Permit, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant  
This PCN updates the revisions of fourteen LAW Facility LAW Melter Process System P&IDs in Appendix 9.2 of the WTP Dangerous Waste Permit

Submitted by Co-Operator:

*Robert Haggard*

05/08/2020

Robert D. Haggard

Date

Reviewed by ORP Program Office:

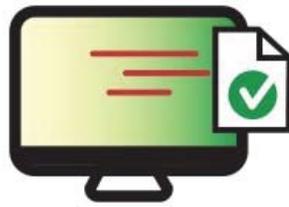
*Thomas W. Fletcher*

Digitally signed by Thomas W. Fletcher  
Date: 2020.06.02 11:19:51 -0700

Thomas W. Fletcher

06/02/2020

Date



**E-SIGN**  
**ELECTROSIGN**

24590-LAW-PCN-ENV-19-010

This document has been digitally signed using the Electrosign process.

## Document for Signature

**Document Number:** 24590-LAW-PCN-ENV-19-010 **Rev:** 0

Participants	Signature	Completed	Status	Result	Comments
<b>Signers</b> 5/8/2020 9:48 AM					
Haggard, Robert		5/8/2020 10:34 AM	Completed	Approve	
<b>Final Approver</b> 5/8/2020 10:34 AM					
Casey, Dianne		5/8/2020 11:06 AM	Completed	Approve	

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<b>Hanford Facility RCRA Permit Modification Notification Form</b>			
Unit: <b>Waste Treatment and Immobilization Plant</b>		Permit Part: <b>Part III, Operating Unit 10</b>	
<u>Description of Modification:</u> The purpose of this Class 1 prime modification is to replace the following Piping and Instrument Diagram in Appendix 9.2 of the DWP:			
<b>Appendix 9.2</b>			
Replace:	24590-LAW-M6-LMP-00007001, Rev 0	With:	24590-LAW-M6-LMP-00007001, Rev 1
Replace:	24590-LAW-M6-LMP-00007002, Rev 0	With:	24590-LAW-M6-LMP-00007002, Rev 2
Replace:	24590-LAW-M6-LMP-00008001, Rev 0	With:	24590-LAW-M6-LMP-00008001, Rev 2
Replace:	24590-LAW-M6-LMP-00010001, Rev 0	With:	24590-LAW-M6-LMP-00010001, Rev 2
Replace:	24590-LAW-M6-LMP-00012001, Rev 0	With:	24590-LAW-M6-LMP-00012001, Rev 1
Replace:	24590-LAW-M6-LMP-00013002, Rev 0	With:	24590-LAW-M6-LMP-00013002, Rev 2
Replace:	24590-LAW-M6-LMP-00033001, Rev 0	With:	24590-LAW-M6-LMP-00033001, Rev 1
Replace:	24590-LAW-M6-LMP-00037001, Rev 0	With:	24590-LAW-M6-LMP-00037001, Rev 1
Replace:	24590-LAW-M6-LMP-00037002, Rev 0	With:	24590-LAW-M6-LMP-00037002, Rev 1
Replace:	24590-LAW-M6-LMP-00038001, Rev 0	With:	24590-LAW-M6-LMP-00038001, Rev 2
Replace:	24590-LAW-M6-LMP-00040001, Rev 0	With:	24590-LAW-M6-LMP-00040001, Rev 2
Replace:	24590-LAW-M6-LMP-00042001, Rev 0	With:	24590-LAW-M6-LMP-00042001, Rev 1
Replace:	24590-LAW-M6-LMP-00043002, Rev 0	With:	24590-LAW-M6-LMP-00043002, Rev 2
Replace:	24590-LAW-M6-LMP-00003001, Rev 0	With:	24590-LAW-M6-LMP-00003001, Rev 1
This modification requests Ecology approval and incorporation into the permit the specific changes to the Piping and Instrument Diagram (P&ID).			
(24590-LAW-M6-LMP-00007001, Rev 1) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 1 Glass Pouring and Monitoring Instrumentation, are summarized below:			
<ul style="list-style-type: none"> <li>• Note 7: updated the high high level from the thermal imaging system automatically shuts down the melter discharge.</li> <li>• Note 9: deleted</li> <li>• Note 11: deleted</li> <li>• New Note 12: Discrete output to the LMP-LT-1511 indicating container present (LPH-WE-4005A/B) and in pour position (LPH-ZS-4001). Reference 24590-LAW-M7-LPH-00001009.</li> <li>• New Note 13: Discrete output to LMP-LT-1511 indicating glass is pouring when LMP-YV-1047 valve is commanded open.</li> <li>• New Note 14: PCV has integral indicator</li> <li>• New Note 15: Revision 1 has incorporated 24590-LAW-M6N-LMP-M80T-00016, 24590-LAW-M6N-LMP-00090, -00094, and -00105. Deleted PSUP and note 11 in response to 24590-WTP-FC-E-18-0536. Updated reference 1 and ADR revision.</li> <li>• Hold/open items have been deleted</li> <li>• Reference has been updated as described above in Note 15</li> </ul>			
(24590-LAW-M6-LMP-00007002, Rev 2) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 1 Glass Pouring and Monitoring Instrumentation, are summarized below:			
<ul style="list-style-type: none"> <li>• Note 7: Revision 1 updated the high high level from the thermal image system automatically shuts down the melter discharge.</li> <li>• Note 9: deleted with revision 1</li> <li>• Note 11: deleted</li> </ul>			

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- New Note 12: Discrete output to LMP-LT-1466 indicating container present (LPH-WE-3505A/B) and in pour position (LPH-ZS-3501). Reference 24590-LAW-M7-LPH-00001007.
- New Note 13: Discrete output to LMP-LT-1466 indicating glass is pouring when LMP-YV-1125 valve is commanded open.
- New Note 14: PCV has integral indicator
- New Note 15: Revision 1 incorporated 24590-WTP-FC-P-17-0209, 25490-LAW-M6N-M80T-00016, 24590-LAW-M6N-LMP-00090, -00094, and -00105. Deleted PSUP and note 11 in response to 24590-WTP-FC-E-18-0536. Updated reference 1 and ADR revision
- Hold/open items have been deleted
- Reference has been updated

(24590-LAW-M6-LMP-00008001, Rev 2) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 1 Discharge Heaters, Power Controls (1-4) and Air Lift – Eastside, are summarized below:

- Note 11: Revision 1 updated the high high container weight (LPH-WE-4005A/b) closes valve LMP-YV-1047 to stop pour and prevent container overflow. Container weight (LPH-WE-4005A/B) and position (LPH-ZS-4001) prevents glass pouring when a container is not in pouring position. Reference drawing 24560-LAW-M7-LPH-00001009.
- Note 18: added with revision 1 to incorporate 24590-LAW-M6N-LMP-00089, -00104, and -00105. Updated reference 1 and ADR revision.
- New note 19: Revision 2 added ball valves to align with vendor drawings.
- Reference 1: changed to 24590-LAW-3ZD-LMP-00001, system description for the low-activity waste melter process system design description.

(24590-LAW-M6-LMP-00010001, Rev 2) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 1 Discharge Heaters, Power Controls (1-4) and Air Lift – Westside, are summarized below:

- Note 11: Revision 1 updated the high high container weight (LPH-WE-3505A/B) closes valve LMP-YV-1125 to stop pour and prevent container overflow. Container weight (LPH-WE-3505A/B) and position (LPH-ZS-3501) prevents glass pouring when a container is not in pouring position. Reference drawing 24590-LAW-M7-LPH-00001007.
- Note 17: added with revision 1 to incorporate 24590-LAW-M6N-LMP-00089, -00104, and -00105. Updated reference 1 and ADR revision.
- New Note 18: revision 2 added ball valves to align with vendor drawings.
- Reference 1: 24590-LAW-3ZD-LMP-00001, low-activity waste melter process (LMP) system design description.
- Drawing index was updated to 24590-LAW-M6-LMP-00010001 LAW melter process system melter 1 discharge heaters, power controls (1-4) and air lift-westside.

(24590-LAW-M6-LMP-00012001, Rev 1) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 1 Feed Nozzles Cooling System and Feed Nozzles, are summarized below:

- Note 5: updated valve setting shall limit flow to melt pool in the event of a breach in the cooling jacket of the feed nozzle. Valves shall be set for prescribed flow rate then administratively controlled in this position. Valve is purchased by mechanical systems per 24590-CM-MRA-PV21-00004.
- Note 10: revision 1 incorporated 24590-LAW-M6N-LMP-00109 and added Bechtel/Vendor boundary. Updated off sheet connectors, ADR revision, drawing index, Reference 1, and note 5.
- Reference 1: updated to 24590-LAW-3ZD-LMP-00001, Low-activity waste melter process (LMP) system design description
- Drawing index was updated to 24590-LAW-M6-LMP-00012001 LAW melter process system melter 1 feed nozzles cooling system and feed nozzles.

(24590-LAW-M6-LMP-00013002, Rev 2) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 1 Lid Cooling Loop, are summarized below:

- Note 5: deleted

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- Note 6: revision 1 added, setpoint and physical location of PSV prevents overpressure in gas barrier lid cooling department
- Note 7: deleted in revision 1
- Note 10: revision 1 added, construction shall field route tubing from indicated location on pipe to flush port on vendor supplied pump shaft seal. Refer to mechanical systems tubing detail 24590-WTP-M0-50-00083
- Note 11: revision 1 added, distance from heat exchanger nozzle to branch for PSV not to exceed 3 feet
- Note 12: revision 1 incorporated 24590-LAW-M6N-LMP-00081, -00091, -00103, 24590-WTP-FC-M-14-0036, 24590-WTP-FC-P-15-0062, and 24590-LAW-EIE-NS-17-0001 Rev 0. Changes associated with 24590-LAW-EIE-NS-17-0001 Rev 0 were overcome by DSA driven changes contained in 24590-LAW-M6N-LMP-00103. Revised references and ADR revision number.
- Note 13: revision 2 deleted note 5 in response to 24590-WTP-FC-P-18-0173. Deleted PP from LMP-PMP-00001 and LMP-PMP-00002, which corrected omission from 24590-WTP-FC-P-15-0062 in previous revision.
- Reference 1: updated to 24590-LAW-3ZD-LMP-00001, Low-activity waste melter process system design description.

(24590-LAW-M6-LMP-00033001, Rev 1) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 2 Walls and Floor Panels Cooling System, are summarized below:

- Note 4: updated to remove spring from piston check valve and install in horizontal piping
- Note 9: updated note with new documentation that the following 24590-WTP-M0-50-00074 drawing will define routing
- Note 11: revision 1 incorporated 24590-LAW-M6N-LMP-00055 and -00102. Updated reference, ADR revision and off sheet connectors
- Reference 1: updated to 24590-LAW-3ZD-LMP-00001, Low-activity waste melter process system design description

(24590-LAW-M6-LMP-00037001, Rev 1) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 2 Glass Pouring and Monitoring Instrumentation, are summarized below:

- Note 7: updated the high high level from the thermal image system automatically shuts down the melter discharge
- Note 9: deleted
- Note 11: deleted
- Note 12: added discrete output to LMP-LT-2511 indicating container present (LPH-WE-5205A/B) and in pour position (LPH-ZS-5201). Reference 24590-LAW-M7-LPH-00001013.
- Note 13: added discrete output to LMP-LT-2511 indicating glass is pouring when LMP-YV-2047 valve is commanded open
- Note 14: added PCV had integral indicator
- Note 15: revision 1 incorporated 24590-LAW-M6N-LMP-M80T-00016, 24590-LAW-M6N-LMP-M80T-00083, -00090, -00094 and -000105. Deleted PSUP and note 11 in response to 24590-WTP-FC-E-18-0536. Updated reference 1 and ADR revision
- Hold/Open items: deleted
- Reference 1: updated to 24590-LAW-3ZD-LMP-00001, Low-activity waste melter process (LMP) system design description.

(24590-LAW-M6-LMP-00037002, Rev 1) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 2 Glass Pouring and Monitoring Instrumentation, are summarized below:

- Note 7: updated the high high level from the thermal image system automatically shuts down the melter discharge
- Note 9: deleted
- Note 11: deleted
- Note 12: added the discrete output to LMP-LT-2466 indicating container present (LPH-WE-4605A/B) and in pour position (LPH-ZS-4601). Reference 24590-LAW-M7-LPH-00001011

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- Note 13: added the discrete output to LMP-LT-2466 indicating glass is pouring when LMP-YV-2125 valve is commanded open
- Note 14: PCV has integral indicator
- Note 15: revision 1 incorporated 24590-LAW-M6N-LMP-M80T-00016, 24590-WTP-FC-SU-18-0115, 24590-LAW-M6N-LMP-00090, -00094, and -00105. Deleted PSUP and note 11 in response to 24590-WTP-FC-E-18-0536. Updated reference 1 and ADR revision
- Hold/Open items: deleted
- Reference 1: updated to 24590-LAW-3ZD-LMP-00001, Low-activity waste melter process (LMP) system design description
- Reference 2: updated to 24590-LAW-M7-LPH-00001011, LAW vitrification system LPH mechanical handling diagram container pour handling system.

(24590-LAW-M6-LMP-00038001, Rev 2) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 2 Discharge Heaters, Power Controls (1-4) and Air Lift – Eastside, are summarized below:

- Note 11: revision 1 updated to high high container weight (LPH-WE-5205A/B) closes valve LMP-YV-2047 to stop pour and prevent container overflow. Container weight (LPH-WE-5205A/B) and position (LPH-ZS-5201) prevent glass pouring when a container is not in pouring position. Reference drawing 24590-LAW-M7-LPH-00001013
- Note 18: revision 1 incorporated 24590-LAW-M6N-LMP-00089, -00104, and -00105 updated reference 1, ADR revision, and equipment tag number
- Reference 1: revision 1 updated to 24590-LAW-3ZD-LMP-00001, low-activity waste melter process (LMP) system design description.
- Note 19: revision 2 added ball valves to align with vendor drawings

(24590-LAW-M6-LMP-00040001, Rev 2) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 2 Discharge Heaters, Power Controls (1-4) and Air Lift – Westside, are summarized below:

- Note 11: revision 1 updated to high high container weight (LPH-WE-4605A/B) closes valve LMP-YV-2125 to stop pour and prevent container overflow. Container weight (LPH-WE-4605A/B) and position (LPH-ZS-4601) prevents glass pouring when a container is not in pouring position. Reference drawing 24590-LAW-M7-LPH-00001011.
- Note 17: revision 1 incorporated 24590-LAW-M6N-LMP-00089, -00104, and -00105. Updated reference 1, drawing index, and ADR revision
- Reference 1: revision 1 updated to 24590-LAW-3ZD-LMP-00001, low-activity waste melter process (LMP) system design description
- Note 18: revision 2 added ball valves to align with the vendor drawings
- Drawing index was updated to 24590-LAW-M6-LMP-00040001, LAW melter process system melter 2 discharge heaters, power controls (1-4) and air-lift – westside
- The draw number shows 224590 on the document. This typo will be notified to Engineering to correct in the next revision.

(24590-LAW-M6-LMP-00042001, Rev 1) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 2 Feed Nozzles Cooling System and Feed Nozzles, are summarized below:

- Note 5: revision 1 updated, valve setting shall limit flow to melt pool in the event of a breach in the cooling jacket of the feed nozzle. Valves shall be set for prescribed flow rate then administratively controlled in this position. Valve is purchased by mechanical systems per 24590-CM-MRA-PV21-00004.
- Note 10: revision 1 incorporated 24590-LAW-M6N-LMP-00109 and added Bechtel/vendor boundary. Updated off sheet connectors, ADR revision, drawing index, reference 1, and note 5.
- Reference 1 updated to 24590-LAW-3ZD-LMP-00001, low-activity waste melter process (LMP) system design description
- Drawing index updated to 24590-LAW-M6-LMP-00042001, LAW melter process system melter 2 feed nozzles cooling system and feed nozzles

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(24590-LAW-M6-LMP-00043002, Rev 2) Changes to the Piping and Instrument Diagram for the LAW Melter Process System, Melter 2 Melter Lid Cooling Loop, are summarized below:

- Note 5: deleted in revision 2
- Note 6: revision 1 updated setpoint and physical location of PSV prevents overpressure in gas barrier lid cooling compartment
- Note 7: revision 1 deleted
- New Note 10: revision 1 added construction shall field route tubing from indicated location on pipe to flush port on vendor supplied pump shaft seal. Refer to mechanical systems tubing detail 24590-WTP-M0-50-00083
- New Note 11: revision 1 added distance from heat exchanger nozzle to branch for PSV not to exceed 3 feet
- New Note 12: revision 1 incorporated 24590-LAW-M6N-LMP-00081, -00091, -00097, -00103, 24590-WTP-FC-P-15-0062, and 24590-LAW-EIE-NS-17-0001 Rev 0. Changes associated with 24590-LAW-EIE-NS-17-0001 Rev 0 were overcome by DSA driven changes contained in 24590-LAW-M6N-LMP-00103. Revised reference and ADR revision number.
- Reference 1: revision 1 updated 24590-LAW-3ZD-LMP-00001, Low-activity waste melter process system design description
- New Note 13: revision 2 deleted note 5 in response to 24590-WTP-FC-P-18-0173. Deleted PP from LMP-PMP-00003 and LMP-PMP-00004, which corrected omission from 24590-WTP-FC-P-15-0062 in previous revision

(24590-LAW-M6-LMP-00003001, Rev 1) Changes to the Piping and Instrument Diagram for the LAW Melter Process System Melter 1 Walls and Floor Panels Cooling System, are summarized below:

- Note 4: updated to remove spring from piston check valve and install in horizontal piping
- Note 9: revision 1 updated construction shall field route tubing from PSV sensing line port to cooling water supply piping near connection CLG08. Mechanical systems connection detail series 24590-WTP-M0-50-00074 drawing will define routing
- Note 11: revision 1 incorporated 24590-LAW-M6N-LMP-00055 and -00102. Updated reference 1 and off sheet connectors
- Reference 1 updated to 24590-LAW-3ZD-LMP-00001, Low-activity waste melter process system design description

WAC 173-303-830 Modification Class:	Class 1	Class 11	Class 2	Class 3
Please mark the Modification Class:		X		

Enter relevant WAC 173-303-830, Appendix I Modification citation number: A.3  
 Enter wording of WAC 173-303-830, Appendix I Modification citation: Equipment replacement or upgrading with functionality equivalent components (e.g., pipes, valves, pumps, conveyors, controls).

Modification Approved/Concur: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Denied (state reason below) Reason for denial:	Reviewed by Ecology:  <b>Schleif, Stephanie (ECY)</b> Digitally signed by Schleif, Stephanie (ECY) Date: 2020.07.09 14:54:31 -07'00' S. Schleif _____ Date _____
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Attachment 2  
20-ECD-0030

Piping and Instrumentation Diagrams

24590-LAW-M6-LMP-00007001 Rev 1  
24590-LAW-M6-LMP-00007002 Rev 2  
24590-LAW-M6-LMP-00008001 Rev 2  
24590-LAW-M6-LMP-00010001 Rev 2  
24590-LAW-M6-LMP-00012001 Rev 1  
24590-LAW-M6-LMP-00013002 Rev 2  
24590-LAW-M6-LMP-00033001 Rev 1  
24590-LAW-M6-LMP-00037001 Rev 1  
24590-LAW-M6-LMP-00037002 Rev 1  
24590-LAW-M6-LMP-00038001 Rev 2  
24590-LAW-M6-LMP-00040001 Rev 2  
24590-LAW-M6-LMP-00042001 Rev 1  
24590-LAW-M6-LMP-00043002 Rev 2  
24590-LAW-M6-LMP-00003001 Rev 1

(15 Pages Including Cover Sheet)

NOTES:

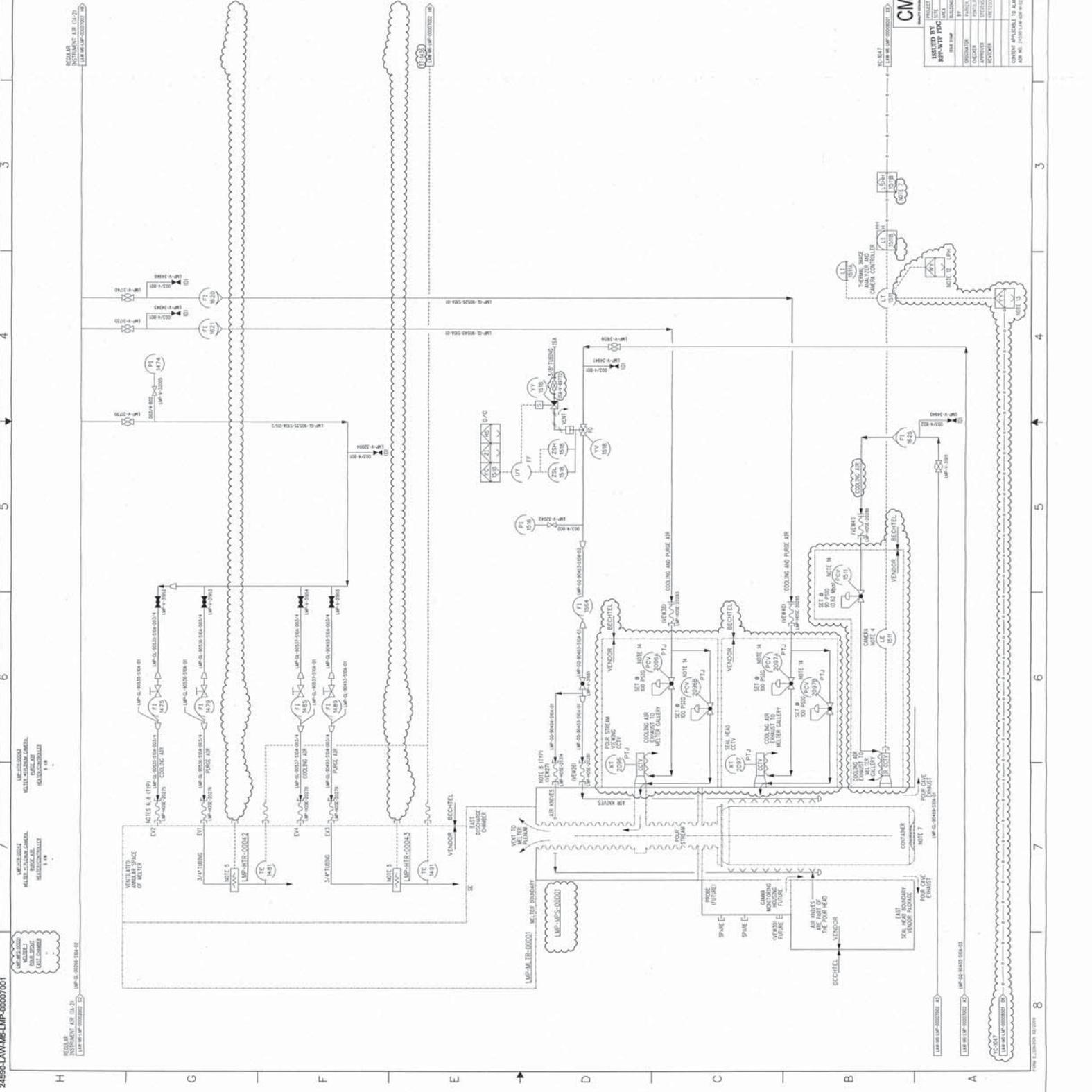
- 1. SEE DRAWINGS 24590-WTP-MP-50-00001 THROUGH 24590-WTP-MP-50-00004 FOR P&ID, INSTRUMENTS AND LEGEND, AND GENERAL SCOPE REQUIREMENTS AFFECTING.
- 2. CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT REQUIREMENTS.
- 3. DRAWINGS ARE FOR INFORMATION ONLY. THE DRAWING IS QUALITY LEVEL "A" AND BEING CAUTIONED TO UNLESS OTHERWISE NOTED.
- 4. REGION ONION FALLS.
- 5. AIR PRE-HEATER FOR FUTURE CCTV VENTSPORT.
- 6. AIR FOR FUTURE PLUM CCTV.
- 7. AUTOMATICALLY SHUTS DOWN THE MELTER DURING SERVICE TIME OF AREA CONNECTION IS FEMALE CAMELOCK BY THE MELTER OPERATOR.
- 8. MELTER OPERATOR MUST BE PRESENT TO START MELTER.
- 9. MELTER OPERATOR MUST BE PRESENT TO STOP MELTER.
- 10. MELTER OPERATOR MUST BE PRESENT TO START MELTER.
- 11. MELTER OPERATOR MUST BE PRESENT TO STOP MELTER.
- 12. DISCRETE OUTPUT TO LAMP-11501 INDICATING CONTAINER PRESENT.
- 13. DISCRETE OUTPUT TO LAMP-11502 INDICATING GLASS IS POURING WHEN LAMP-YV-247 VALVE IS COMMANDED OPEN.
- 14. PCV HAS INTEGRAL INDICATOR.
- 15. REVISION 1 INCORPORATED 24590-LAWH6-LMP-00007001. REVISION 2 INCORPORATED 24590-LAWH6-LMP-00007001. REVISION 3 INCORPORATED 24590-LAWH6-LMP-00007001.

HOLD/OPEN ITEMS:

C-30010

REFERENCES:

24590-LAWH6-LMP-00007001



NO.	DATE	DESCRIPTION	BY	CHKD BY
1	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ
2	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ

NO.	DATE	DESCRIPTION	BY	CHKD BY
1	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ
2	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ

NO.	DATE	DESCRIPTION	BY	CHKD BY
1	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ
2	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ

NO.	DATE	DESCRIPTION	BY	CHKD BY
1	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ
2	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ

NO.	DATE	DESCRIPTION	BY	CHKD BY
1	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ
2	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ

NO.	DATE	DESCRIPTION	BY	CHKD BY
1	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ
2	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ

NO.	DATE	DESCRIPTION	BY	CHKD BY
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2	03/14/04	ISSUED FOR CONSTRUCTION	WJ	WJ

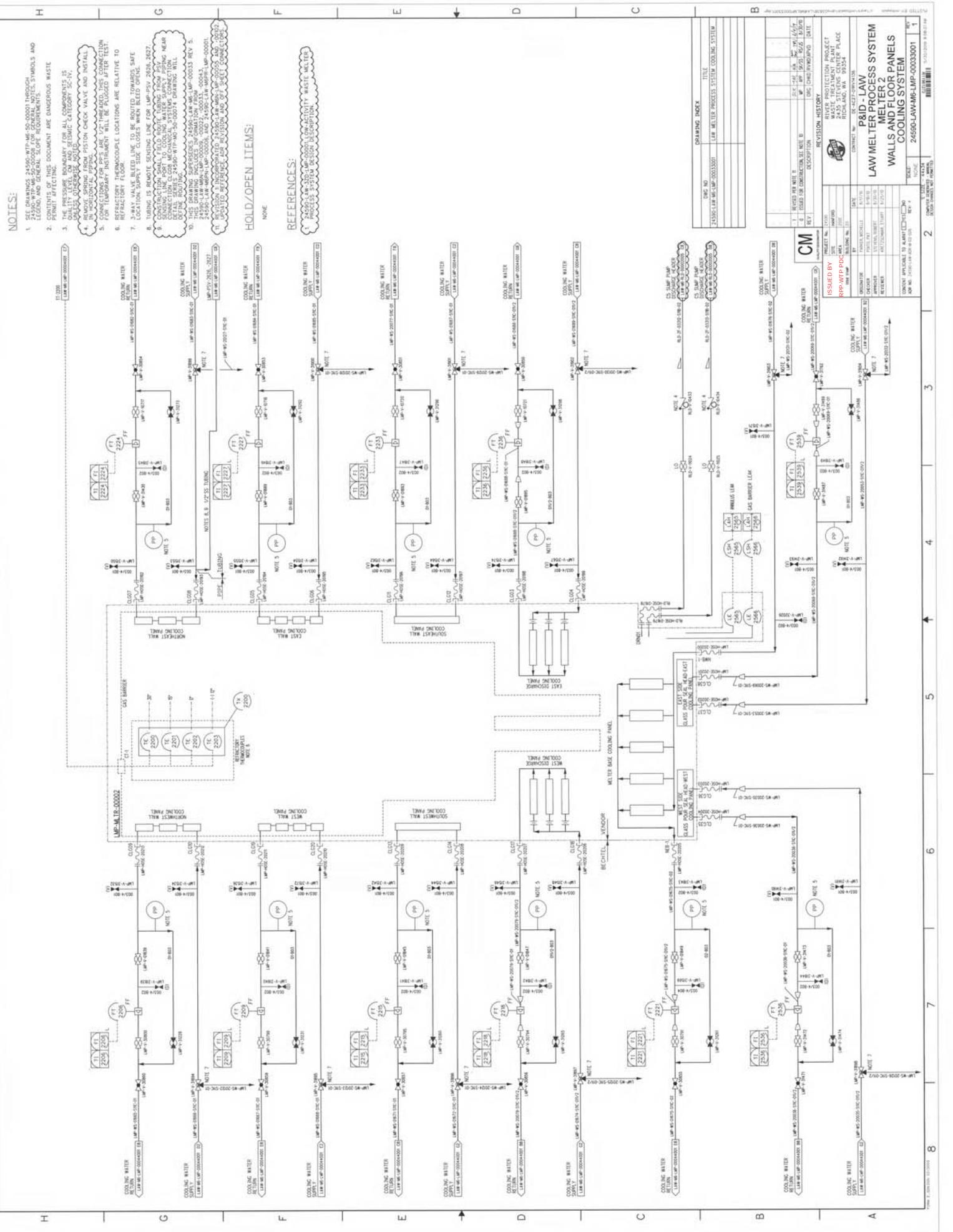












NOTES:

1. THIS DRAWING IS SUBJECT TO THE 2000 ASME CODES, STANDARDS AND REGULATIONS, AND GENERAL SCOPE REQUIREMENTS.
2. THE PRESENT BOUNDARY FOR ALL COMPONENTS IS QUALITY LEVEL OF AND SEISMIC CATEGORY 5C-1.
3. THE PRESENT BOUNDARY FOR ALL COMPONENTS IS QUALITY LEVEL OF AND SEISMIC CATEGORY 5C-1.
4. ALL INSTRUMENTATION SHALL BE INSTALLED IN A NON-HAZARDOUS LOCATION.
5. CONNECTIONS FOR PPS ARE V27-1-0000, THIS CONNECTION FOR TEMPORARY PPS WILL BE PLUGGED AFTER TEST.
6. REFRACTORY THERMOCOUPLE LOCATIONS ARE RELATIVE TO LOCATION, SUPPLY SIDE CLOSURES WHEN BLEED OFFLINE.
7. 3-WAY VALVE BLEED LINE TO BE ROUTED TOWARDS SAFE LOCATION, SUPPLY SIDE CLOSURES WHEN BLEED OFFLINE.
8. TUBING IS REMOTE SENSING LINE FOR LMP-PPV 2026, 2027.
9. CONNECTION SHALL BE MADE TO TUBING FROM PPS TO NEAR CONNECTION, CLON, MECHANICAL SYSTEM CONNECTION, DEFINING ROUTING.
10. THIS DRAWING SUPERSEDES 24590-LAW-M6-LMP-00033 REV. 5.
11. REVISIONS ARE AS FOLLOWS: 24590-LAW-M6-LMP-00033 REV. 5.
12. 24590-LAW-M6-LMP-00033 REV. 5.
13. 24590-LAW-M6-LMP-00033 REV. 5.
14. 24590-LAW-M6-LMP-00033 REV. 5.
15. 24590-LAW-M6-LMP-00033 REV. 5.
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17. 24590-LAW-M6-LMP-00033 REV. 5.
18. 24590-LAW-M6-LMP-00033 REV. 5.
19. 24590-LAW-M6-LMP-00033 REV. 5.
20. 24590-LAW-M6-LMP-00033 REV. 5.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

- 1. 24590-LAW-M6-LMP-00033 REV. 5.
- 2. 24590-LAW-M6-LMP-00033 REV. 5.
- 3. 24590-LAW-M6-LMP-00033 REV. 5.
- 4. 24590-LAW-M6-LMP-00033 REV. 5.
- 5. 24590-LAW-M6-LMP-00033 REV. 5.
- 6. 24590-LAW-M6-LMP-00033 REV. 5.
- 7. 24590-LAW-M6-LMP-00033 REV. 5.
- 8. 24590-LAW-M6-LMP-00033 REV. 5.
- 9. 24590-LAW-M6-LMP-00033 REV. 5.
- 10. 24590-LAW-M6-LMP-00033 REV. 5.
- 11. 24590-LAW-M6-LMP-00033 REV. 5.
- 12. 24590-LAW-M6-LMP-00033 REV. 5.
- 13. 24590-LAW-M6-LMP-00033 REV. 5.
- 14. 24590-LAW-M6-LMP-00033 REV. 5.
- 15. 24590-LAW-M6-LMP-00033 REV. 5.
- 16. 24590-LAW-M6-LMP-00033 REV. 5.
- 17. 24590-LAW-M6-LMP-00033 REV. 5.
- 18. 24590-LAW-M6-LMP-00033 REV. 5.
- 19. 24590-LAW-M6-LMP-00033 REV. 5.
- 20. 24590-LAW-M6-LMP-00033 REV. 5.

DWG NO	TITLE
24590-LAW-M6-LMP-00033001	LAW MELTER PROCESS SYSTEM COOLING SYSTEM

NO	REVISION	DESCRIPTION	DATE
1	REVISED PER NOTE 8		
2	ISSUED FOR CONSTRUCTION		
3	ISSUED FOR CONSTRUCTION		
4	ISSUED FOR CONSTRUCTION		
5	ISSUED FOR CONSTRUCTION		
6	ISSUED FOR CONSTRUCTION		
7	ISSUED FOR CONSTRUCTION		
8	ISSUED FOR CONSTRUCTION		
9	ISSUED FOR CONSTRUCTION		
10	ISSUED FOR CONSTRUCTION		
11	ISSUED FOR CONSTRUCTION		
12	ISSUED FOR CONSTRUCTION		
13	ISSUED FOR CONSTRUCTION		
14	ISSUED FOR CONSTRUCTION		
15	ISSUED FOR CONSTRUCTION		
16	ISSUED FOR CONSTRUCTION		
17	ISSUED FOR CONSTRUCTION		
18	ISSUED FOR CONSTRUCTION		
19	ISSUED FOR CONSTRUCTION		
20	ISSUED FOR CONSTRUCTION		

ISSUED BY  
RPA-WPP-POC

PROJECT NO. 24590  
PROJECT NAME  
PROJECT LOCATION  
PROJECT START DATE  
PROJECT END DATE  
ISSUED DATE  
ISSUED BY  
ISSUED BY TITLE  
ISSUED BY DEPARTMENT  
ISSUED BY PHONE NO.  
ISSUED BY FAX NO.  
ISSUED BY EMAIL  
ISSUED BY ADDRESS  
ISSUED BY CITY  
ISSUED BY STATE  
ISSUED BY ZIP

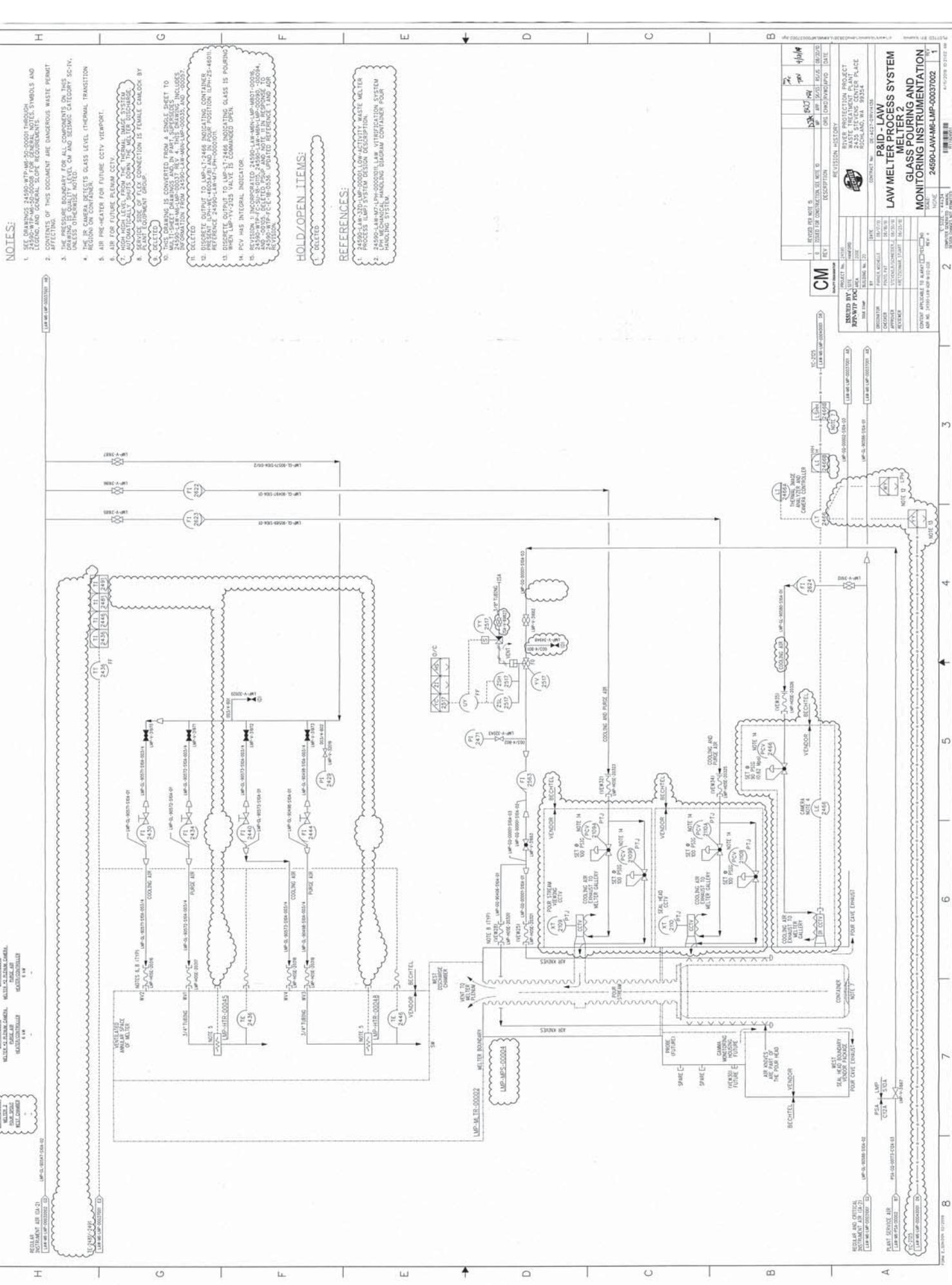
REVISION HISTORY  
PROJECT NO. 24590  
PROJECT NAME  
PROJECT LOCATION  
PROJECT START DATE  
PROJECT END DATE  
ISSUED DATE  
ISSUED BY  
ISSUED BY TITLE  
ISSUED BY DEPARTMENT  
ISSUED BY PHONE NO.  
ISSUED BY FAX NO.  
ISSUED BY EMAIL  
ISSUED BY ADDRESS  
ISSUED BY CITY  
ISSUED BY STATE  
ISSUED BY ZIP

CONTRACT APPLICABLE TO: 24590-LAW-M6-LMP-00033001  
REV. 1

DATE: 08/11/2009 10:00:00 AM  
SCALE: AS SHOWN  
SHEET NO. 1  
TOTAL SHEETS: 1

24590-LAW-M6-LMP-00033001  
LAW MELTER PROCESS SYSTEM  
WALLS AND FLOOR PANELS  
COOLING SYSTEM





**NOTES:**

- SEE DRAWINGS 24590-LAV-ME-000001 THROUGH 24590-LAV-ME-000008 FOR DIMENSIONS, LEVEL SYMBOLS AND LEGEND AND GENERAL SAFETY REQUIREMENTS.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- THE RESPONSIBILITY FOR THE ACCURACY OF THE DRAWINGS IS SOLELY THAT OF THE DESIGNER. THE DESIGNER IS NOT RESPONSIBLE FOR THE CONSTRUCTION OF THE SYSTEM UNLESS OTHERWISE NOTED.
- INCLUDE CAMERA FEEDS TO CLASS LEVEL THERMAL TRANSITION.
- AIR PRE-HEATER FOR FUTURE CCTV VIEWPORT.
- AIR FOR FUTURE PLANNED CCTV.
- VERIFY ALL INSTRUMENTS FROM THE SUPPLIER'S DATA SHEET AND AUTOMATICALLY CHECK DOWN THE WATER DISCHARGE.
- SERVICE CONNECTION OF FLECK CONNECTION IS FEMALE CALLOUT BY EQUIPMENT GROUP.
- ALL TO BE
- VERIFY ALL INSTRUMENTS FROM THE SUPPLIER'S DATA SHEET AND AUTOMATICALLY CHECK DOWN THE WATER DISCHARGE.
- VERIFY ALL INSTRUMENTS FROM THE SUPPLIER'S DATA SHEET AND AUTOMATICALLY CHECK DOWN THE WATER DISCHARGE.
- DISCREET OUTPUT TO LAMP-1-2466 INDICATING CONTAINER PRESENT. LAMP-1-4000/A AND IN FOUR POSITION (LPH-25-4801).
- DISCREET OUTPUT TO LAMP-1-2466 INDICATING GLASS IS POURING WHEN LPH-1-2466 VALVE IS COMMANDED OPEN.
- PCV HAS INTEGRAL INDICATOR.
- REVISION 1: INCORPORATED 24590-LAV-ME-LMP-0001-0006, 24590-LAV-ME-LMP-0001-0007 AND NOTE IN RESPONSE TO 24590-LAV-ME-LMP-0001-0008. UPDATED REFERENCE LUMP AND REVISED.

**HOLD/OPEN ITEMS:**

- 24590-LAV-ME-LMP-0001-0006

**REFERENCES:**

- 24590-LAV-ME-LMP-0001-0001: LAW MELTER PROCESS SYSTEM HANDLING DIAGRAM INCLUDING DIAGRAM CONTAINER POUR
- 24590-LAV-ME-LMP-0001-0002: LAW MELTER PROCESS SYSTEM DESIGN DESCRIPTION

ISSUED BY		REVISION HISTORY	
DATE	DESCRIPTION	REV	DESCRIPTION
11/11/2020	ISSUED FOR CONSTRUCTION	01	ISSUED FOR CONSTRUCTION
11/11/2020	ISSUED FOR CONSTRUCTION	02	ISSUED FOR CONSTRUCTION

PROJECT INFORMATION		CONTRACT INFORMATION	
PROJECT NO.	DATE	CONTRACT NO.	DATE
24590-LAV-ME-LMP-00037002	11/11/2020	24590-LAV-ME-LMP-00037002	11/11/2020

DESIGNER		CHECKER		REVIEWER	
NAME	DATE	NAME	DATE	NAME	DATE
DESIGNER		CHECKER		REVIEWER	

CONTROL AVAILABLE TO		REV	
CONTROL	DATE	REV	DATE
CONTROL AVAILABLE TO	11/11/2020	01	11/11/2020

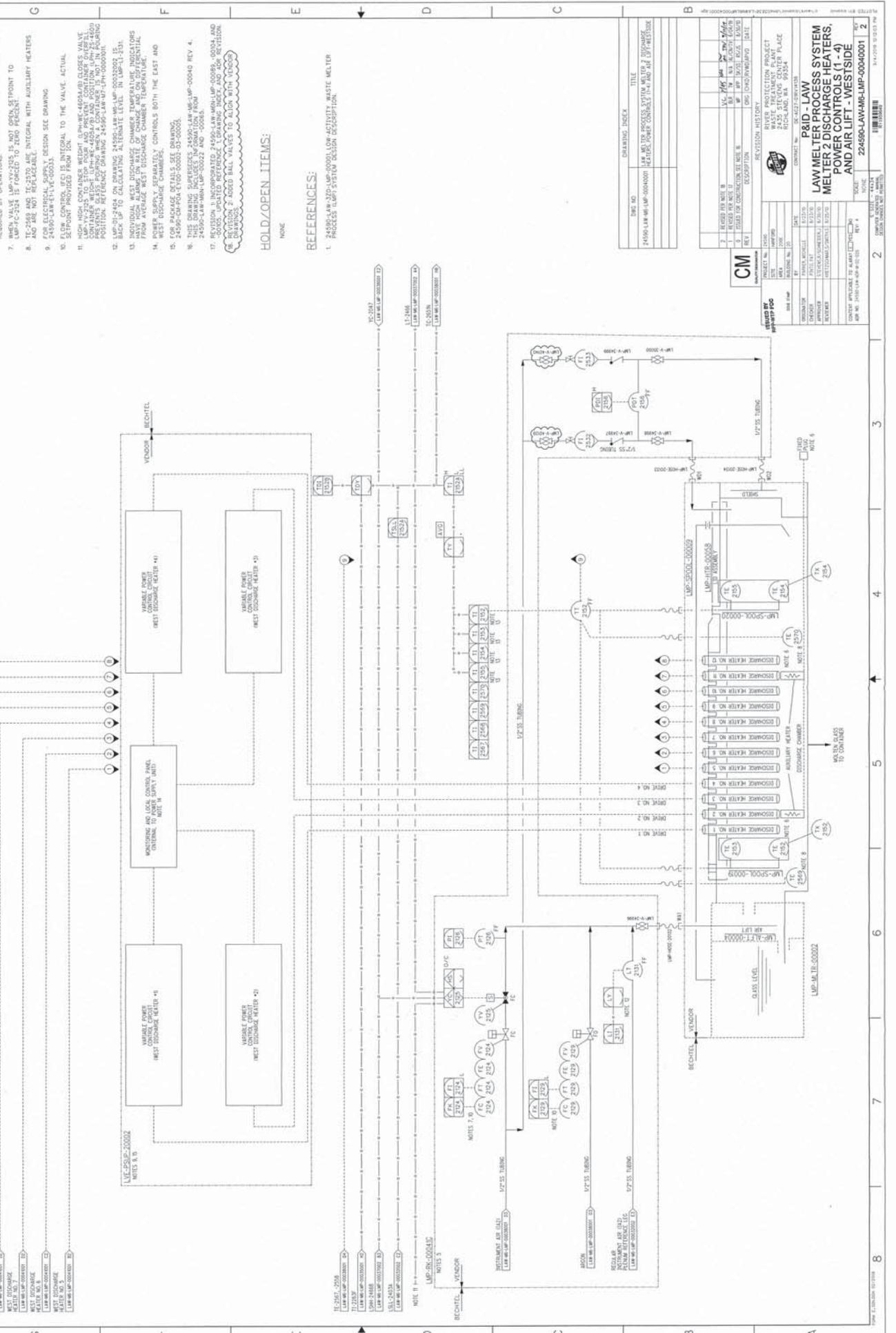


- NOTES:**
1. SEE DRAWING 24590-LAW-M6-LMP-00040000 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SCOPE REQUIREMENTS.
  2. THE PRESSURE HEADLINE FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL CM AND SEISMIC CATEGORY SC-IV.
  3. ALL INSTRUMENTS AND VALVING FOR AIR LIFT SHOULD BE REDUCE LINE CAPACITANCE AND AIR LIFT SIZING SHOULD BE DETERMINED BY OPERATIONS.
  4. DISCHARGE AUXILIARY HEATERS PREPARED TO PLUG FOR USE AS REQUIRED BY OPERATIONS.
  5. LMP-2-2324 IS FORCED TO 2000 PRESSURE POINT TO BACK UP TO CALCULATING ALTERNATE LEVEL IN LMP-L1-231.
  6. TC-2549 AND TC-2570 ARE INTEGRAL WITH AUXILIARY HEATERS AND ARE NOT REPLACEABLE.
  7. FOR ELECTRICAL SUPPLY DESIGN SEE DRAWING 24590-LAW-M6-LMP-00040000.
  8. FOR CONTROL LOGIC IS INTEGRAL TO THE VALVE. ACTUAL SETPOINT PROVIDED FROM ION.
  9. HIGH-HIGH CONTAINER WEIGHT (LPH-WE-4600LAB) CLOSES VALVE CONTAINER WEIGHT (LPH-WE-4620) AND POSITION (LPH-WE-1400) POSITION REFERENCE DRAWING 24590-LAW-M6-LMP-00040000.
  10. LMP-01-2404 ON DRAWING 24590-LAW-M6-LMP-00040000 IS INDIVIDUAL WEIGHT RATE OF CHANGE (WOC) INDICATOR FROM AVERAGE WEST DISCHARGE CHAMBER TEMPERATURE.
  11. RESET SUPPLY SEPARATELY CONTROLS BOTH THE EAST AND WEST DISCHARGE CHAMBERS.
  12. FOR PACKAGE DETAILS SEE DRAWING 24590-LAW-M6-LMP-00040000.
  13. THIS DRAWING SUPERSEDES 24590-LAW-M6-LMP-00040000, 24590-LAW-M6-LMP-00040001, AND 24590-LAW-M6-LMP-00040002.
  14. REVISION 3 INCORPORATED 24590-LAW-M6-LMP-000999-0004, AND 24590-LAW-M6-LMP-000999-0005.
  15. REVISION 2 ADDED BALL VALVES TO A-LIFT WITH 24590-LAW-M6-LMP-00040001.

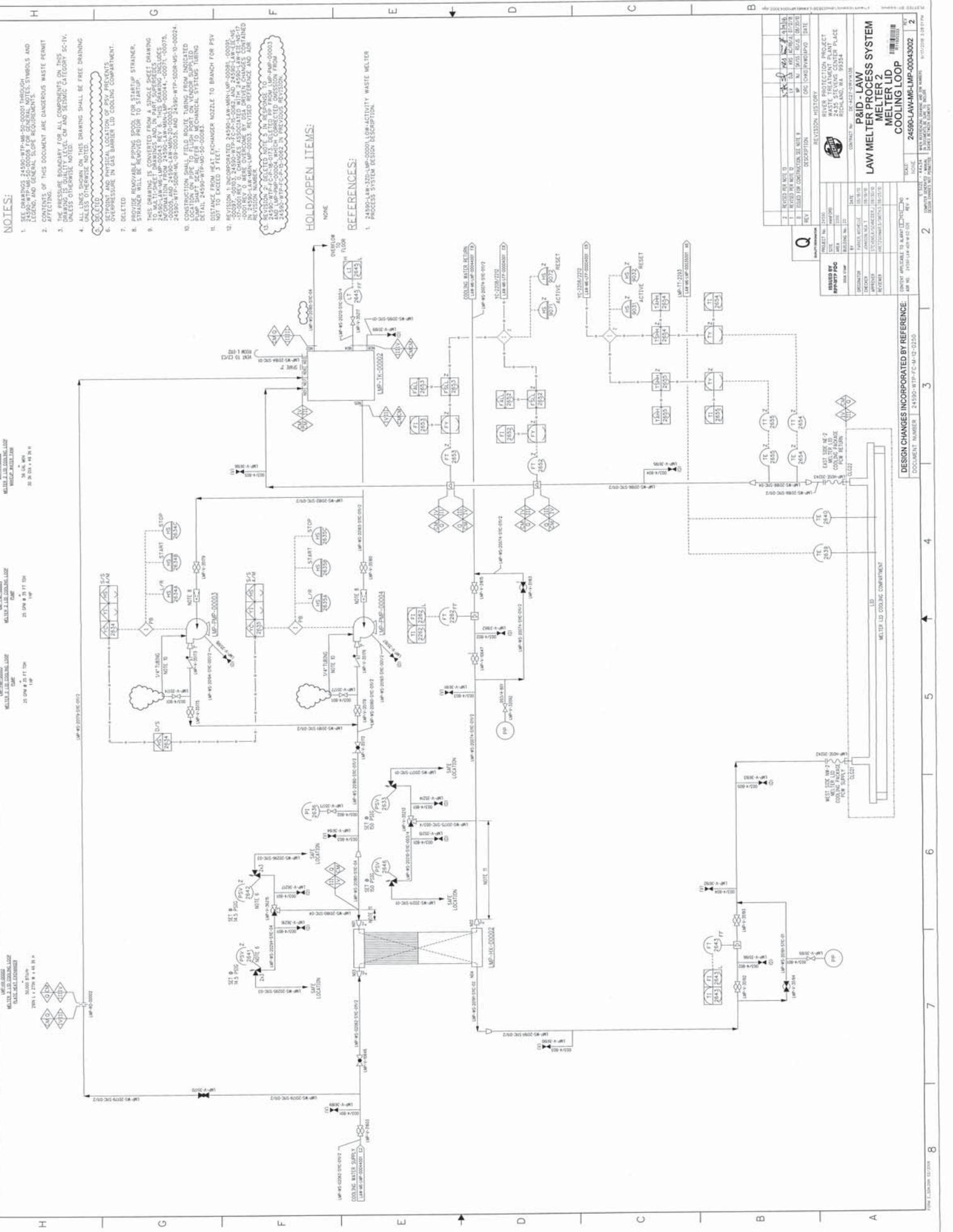
**HOLD/OPEN ITEMS:**  
NONE

**REFERENCES:**

1. 24590-LAW-M6-LMP-00040000, WASTE MELTER, PROCESS WMP SYSTEM DESIGN DESCRIPTION.







- NOTES:**
1. THIS DRAWING IS A PART OF THE PROJECT AND SHALL BE KEPT IN THE PROJECT OFFICE AND GENERAL SCOPE REQUIREMENTS.
  2. THE PRESSURE BARRIER FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL CM AND SEISMIC CATEGORY SC-IV, UNLESS OTHERWISE NOTED. DRAWING SHALL BE FREE DRAWING.
  3. UNLESS OTHERWISE NOTED, DRAWING SHALL BE FREE DRAWING.
  4. UNLESS OTHERWISE NOTED, DRAWING SHALL BE FREE DRAWING.
  5. UNLESS OTHERWISE NOTED, DRAWING SHALL BE FREE DRAWING.
  6. SETPOINT AND PHYSICAL LOCATION OF PSV PREVENTS.
  7. DELETED
  8. PROVIDE REMOVAL BE BLOWDOWN ROOM TO STARTUP STRAINER.
  9. THIS DRAWING IS CONVERTED FROM A SINGLE SHEET DRAWING TO MULTI-SHEET DRAWING AND IS PART OF THE PROJECT INFORMATION FROM 24590-LAW-MELTER-00044-00075, 24590-LAW-MELTER-00044-00076, 24590-LAW-MELTER-00044-00077, 24590-LAW-MELTER-00044-00078, 24590-LAW-MELTER-00044-00079, 24590-LAW-MELTER-00044-00080, 24590-LAW-MELTER-00044-00081, 24590-LAW-MELTER-00044-00082, 24590-LAW-MELTER-00044-00083, 24590-LAW-MELTER-00044-00084, 24590-LAW-MELTER-00044-00085, 24590-LAW-MELTER-00044-00086, 24590-LAW-MELTER-00044-00087, 24590-LAW-MELTER-00044-00088, 24590-LAW-MELTER-00044-00089, 24590-LAW-MELTER-00044-00090, 24590-LAW-MELTER-00044-00091, 24590-LAW-MELTER-00044-00092, 24590-LAW-MELTER-00044-00093, 24590-LAW-MELTER-00044-00094, 24590-LAW-MELTER-00044-00095, 24590-LAW-MELTER-00044-00096, 24590-LAW-MELTER-00044-00097, 24590-LAW-MELTER-00044-00098, 24590-LAW-MELTER-00044-00099, 24590-LAW-MELTER-00044-00100.
  10. CONSTRUCTION SHALL FIELD ROUTE TUBING FROM INDICATED PUMP START POINT TO MECHANICAL SYSTEMS TUBING DETAIL 24590-LAW-ME-00-00083.
  11. NOT TO EXCEED 5 FEET.
  12. REVISION 1 INCORPORATED 24590-LAW-ME-LMP-00043-00001, 24590-LAW-ME-LMP-00043-00002, 24590-LAW-ME-LMP-00043-00003, 24590-LAW-ME-LMP-00043-00004, 24590-LAW-ME-LMP-00043-00005, 24590-LAW-ME-LMP-00043-00006, 24590-LAW-ME-LMP-00043-00007, 24590-LAW-ME-LMP-00043-00008, 24590-LAW-ME-LMP-00043-00009, 24590-LAW-ME-LMP-00043-00010, 24590-LAW-ME-LMP-00043-00011, 24590-LAW-ME-LMP-00043-00012, 24590-LAW-ME-LMP-00043-00013, 24590-LAW-ME-LMP-00043-00014, 24590-LAW-ME-LMP-00043-00015, 24590-LAW-ME-LMP-00043-00016, 24590-LAW-ME-LMP-00043-00017, 24590-LAW-ME-LMP-00043-00018, 24590-LAW-ME-LMP-00043-00019, 24590-LAW-ME-LMP-00043-00020, 24590-LAW-ME-LMP-00043-00021, 24590-LAW-ME-LMP-00043-00022, 24590-LAW-ME-LMP-00043-00023, 24590-LAW-ME-LMP-00043-00024, 24590-LAW-ME-LMP-00043-00025, 24590-LAW-ME-LMP-00043-00026, 24590-LAW-ME-LMP-00043-00027, 24590-LAW-ME-LMP-00043-00028, 24590-LAW-ME-LMP-00043-00029, 24590-LAW-ME-LMP-00043-00030, 24590-LAW-ME-LMP-00043-00031, 24590-LAW-ME-LMP-00043-00032, 24590-LAW-ME-LMP-00043-00033, 24590-LAW-ME-LMP-00043-00034, 24590-LAW-ME-LMP-00043-00035, 24590-LAW-ME-LMP-00043-00036, 24590-LAW-ME-LMP-00043-00037, 24590-LAW-ME-LMP-00043-00038, 24590-LAW-ME-LMP-00043-00039, 24590-LAW-ME-LMP-00043-00040, 24590-LAW-ME-LMP-00043-00041, 24590-LAW-ME-LMP-00043-00042, 24590-LAW-ME-LMP-00043-00043, 24590-LAW-ME-LMP-00043-00044, 24590-LAW-ME-LMP-00043-00045, 24590-LAW-ME-LMP-00043-00046, 24590-LAW-ME-LMP-00043-00047, 24590-LAW-ME-LMP-00043-00048, 24590-LAW-ME-LMP-00043-00049, 24590-LAW-ME-LMP-00043-00050, 24590-LAW-ME-LMP-00043-00051, 24590-LAW-ME-LMP-00043-00052, 24590-LAW-ME-LMP-00043-00053, 24590-LAW-ME-LMP-00043-00054, 24590-LAW-ME-LMP-00043-00055, 24590-LAW-ME-LMP-00043-00056, 24590-LAW-ME-LMP-00043-00057, 24590-LAW-ME-LMP-00043-00058, 24590-LAW-ME-LMP-00043-00059, 24590-LAW-ME-LMP-00043-00060, 24590-LAW-ME-LMP-00043-00061, 24590-LAW-ME-LMP-00043-00062, 24590-LAW-ME-LMP-00043-00063, 24590-LAW-ME-LMP-00043-00064, 24590-LAW-ME-LMP-00043-00065, 24590-LAW-ME-LMP-00043-00066, 24590-LAW-ME-LMP-00043-00067, 24590-LAW-ME-LMP-00043-00068, 24590-LAW-ME-LMP-00043-00069, 24590-LAW-ME-LMP-00043-00070, 24590-LAW-ME-LMP-00043-00071, 24590-LAW-ME-LMP-00043-00072, 24590-LAW-ME-LMP-00043-00073, 24590-LAW-ME-LMP-00043-00074, 24590-LAW-ME-LMP-00043-00075, 24590-LAW-ME-LMP-00043-00076, 24590-LAW-ME-LMP-00043-00077, 24590-LAW-ME-LMP-00043-00078, 24590-LAW-ME-LMP-00043-00079, 24590-LAW-ME-LMP-00043-00080, 24590-LAW-ME-LMP-00043-00081, 24590-LAW-ME-LMP-00043-00082, 24590-LAW-ME-LMP-00043-00083, 24590-LAW-ME-LMP-00043-00084, 24590-LAW-ME-LMP-00043-00085, 24590-LAW-ME-LMP-00043-00086, 24590-LAW-ME-LMP-00043-00087, 24590-LAW-ME-LMP-00043-00088, 24590-LAW-ME-LMP-00043-00089, 24590-LAW-ME-LMP-00043-00090, 24590-LAW-ME-LMP-00043-00091, 24590-LAW-ME-LMP-00043-00092, 24590-LAW-ME-LMP-00043-00093, 24590-LAW-ME-LMP-00043-00094, 24590-LAW-ME-LMP-00043-00095, 24590-LAW-ME-LMP-00043-00096, 24590-LAW-ME-LMP-00043-00097, 24590-LAW-ME-LMP-00043-00098, 24590-LAW-ME-LMP-00043-00099, 24590-LAW-ME-LMP-00043-00100.
  13. REVISION 2 DELETED NOTES IN RESPONSE TO 24590-LAW-ME-LMP-00043-00001, 24590-LAW-ME-LMP-00043-00002, 24590-LAW-ME-LMP-00043-00003, 24590-LAW-ME-LMP-00043-00004, 24590-LAW-ME-LMP-00043-00005, 24590-LAW-ME-LMP-00043-00006, 24590-LAW-ME-LMP-00043-00007, 24590-LAW-ME-LMP-00043-00008, 24590-LAW-ME-LMP-00043-00009, 24590-LAW-ME-LMP-00043-00010, 24590-LAW-ME-LMP-00043-00011, 24590-LAW-ME-LMP-00043-00012, 24590-LAW-ME-LMP-00043-00013, 24590-LAW-ME-LMP-00043-00014, 24590-LAW-ME-LMP-00043-00015, 24590-LAW-ME-LMP-00043-00016, 24590-LAW-ME-LMP-00043-00017, 24590-LAW-ME-LMP-00043-00018, 24590-LAW-ME-LMP-00043-00019, 24590-LAW-ME-LMP-00043-00020, 24590-LAW-ME-LMP-00043-00021, 24590-LAW-ME-LMP-00043-00022, 24590-LAW-ME-LMP-00043-00023, 24590-LAW-ME-LMP-00043-00024, 24590-LAW-ME-LMP-00043-00025, 24590-LAW-ME-LMP-00043-00026, 24590-LAW-ME-LMP-00043-00027, 24590-LAW-ME-LMP-00043-00028, 24590-LAW-ME-LMP-00043-00029, 24590-LAW-ME-LMP-00043-00030, 24590-LAW-ME-LMP-00043-00031, 24590-LAW-ME-LMP-00043-00032, 24590-LAW-ME-LMP-00043-00033, 24590-LAW-ME-LMP-00043-00034, 24590-LAW-ME-LMP-00043-00035, 24590-LAW-ME-LMP-00043-00036, 24590-LAW-ME-LMP-00043-00037, 24590-LAW-ME-LMP-00043-00038, 24590-LAW-ME-LMP-00043-00039, 24590-LAW-ME-LMP-00043-00040, 24590-LAW-ME-LMP-00043-00041, 24590-LAW-ME-LMP-00043-00042, 24590-LAW-ME-LMP-00043-00043, 24590-LAW-ME-LMP-00043-00044, 24590-LAW-ME-LMP-00043-00045, 24590-LAW-ME-LMP-00043-00046, 24590-LAW-ME-LMP-00043-00047, 24590-LAW-ME-LMP-00043-00048, 24590-LAW-ME-LMP-00043-00049, 24590-LAW-ME-LMP-00043-00050, 24590-LAW-ME-LMP-00043-00051, 24590-LAW-ME-LMP-00043-00052, 24590-LAW-ME-LMP-00043-00053, 24590-LAW-ME-LMP-00043-00054, 24590-LAW-ME-LMP-00043-00055, 24590-LAW-ME-LMP-00043-00056, 24590-LAW-ME-LMP-00043-00057, 24590-LAW-ME-LMP-00043-00058, 24590-LAW-ME-LMP-00043-00059, 24590-LAW-ME-LMP-00043-00060, 24590-LAW-ME-LMP-00043-00061, 24590-LAW-ME-LMP-00043-00062, 24590-LAW-ME-LMP-00043-00063, 24590-LAW-ME-LMP-00043-00064, 24590-LAW-ME-LMP-00043-00065, 24590-LAW-ME-LMP-00043-00066, 24590-LAW-ME-LMP-00043-00067, 24590-LAW-ME-LMP-00043-00068, 24590-LAW-ME-LMP-00043-00069, 24590-LAW-ME-LMP-00043-00070, 24590-LAW-ME-LMP-00043-00071, 24590-LAW-ME-LMP-00043-00072, 24590-LAW-ME-LMP-00043-00073, 24590-LAW-ME-LMP-00043-00074, 24590-LAW-ME-LMP-00043-00075, 24590-LAW-ME-LMP-00043-00076, 24590-LAW-ME-LMP-00043-00077, 24590-LAW-ME-LMP-00043-00078, 24590-LAW-ME-LMP-00043-00079, 24590-LAW-ME-LMP-00043-00080, 24590-LAW-ME-LMP-00043-00081, 24590-LAW-ME-LMP-00043-00082, 24590-LAW-ME-LMP-00043-00083, 24590-LAW-ME-LMP-00043-00084, 24590-LAW-ME-LMP-00043-00085, 24590-LAW-ME-LMP-00043-00086, 24590-LAW-ME-LMP-00043-00087, 24590-LAW-ME-LMP-00043-00088, 24590-LAW-ME-LMP-00043-00089, 24590-LAW-ME-LMP-00043-00090, 24590-LAW-ME-LMP-00043-00091, 24590-LAW-ME-LMP-00043-00092, 24590-LAW-ME-LMP-00043-00093, 24590-LAW-ME-LMP-00043-00094, 24590-LAW-ME-LMP-00043-00095, 24590-LAW-ME-LMP-00043-00096, 24590-LAW-ME-LMP-00043-00097, 24590-LAW-ME-LMP-00043-00098, 24590-LAW-ME-LMP-00043-00099, 24590-LAW-ME-LMP-00043-00100.

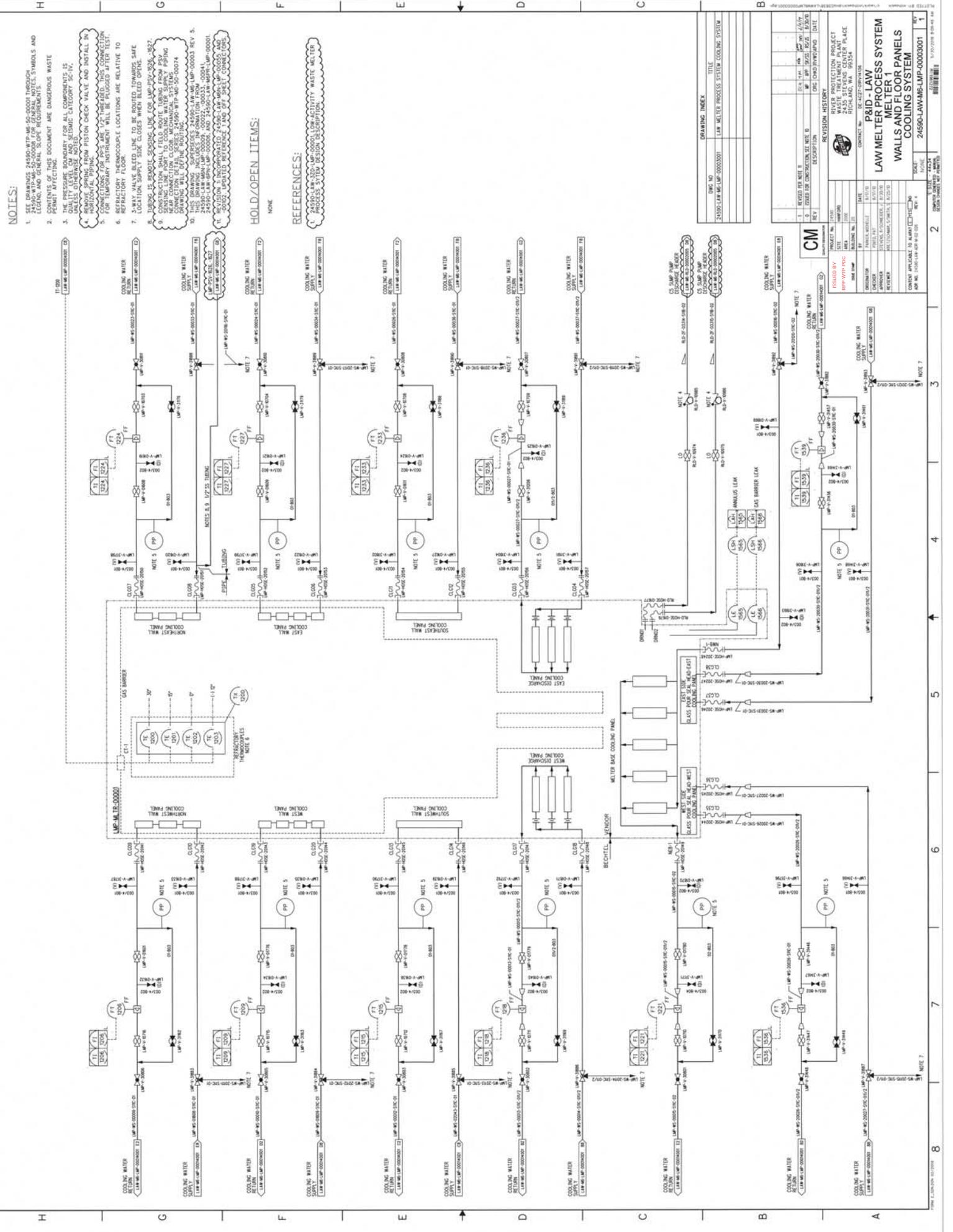
**HOLD/OPEN ITEMS:**  
NONE

**REFERENCES:**  
1. PROCESS SYSTEM DESIGN DESCRIPTION.

REVISION HISTORY		DATE	
1	ISSUED FOR CONSTRUCTION SET WITH 1	11/13/2018	11/13/2018
2	ISSUED FOR CONSTRUCTION SET WITH 2	11/13/2018	11/13/2018
3	ISSUED FOR CONSTRUCTION SET WITH 3	11/13/2018	11/13/2018
4	ISSUED FOR CONSTRUCTION SET WITH 4	11/13/2018	11/13/2018
5	ISSUED FOR CONSTRUCTION SET WITH 5	11/13/2018	11/13/2018
6	ISSUED FOR CONSTRUCTION SET WITH 6	11/13/2018	11/13/2018
7	ISSUED FOR CONSTRUCTION SET WITH 7	11/13/2018	11/13/2018
8	ISSUED FOR CONSTRUCTION SET WITH 8	11/13/2018	11/13/2018

DESIGN CHANGES INCORPORATED BY REFERENCE	
DOCUMENT NUMBER	24590-LAW-ME-LMP-00-00083
REV	4



NOTES:

- SEE DRAWING 24590-LMP-M6-00001 THROUGH 24590-LMP-M6-00010 FOR SYMBOLS AND LEGEND AND GENERAL REQUIREMENTS.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- QUALITY LEVEL CM AND SEISMIC CATEGORY SC-1V.
- ALL INSTRUMENTATION SHALL BE INSTALLED AND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE CONNECTIONS AND WIRING DIAGRAMS AND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE CONNECTIONS AND WIRING DIAGRAMS.
- FOR TEMPORARY INSTRUMENTATION WILL BE PLUGGED AFTER TEST.
- REFRACTORY FURNACE LINE TO BE INSTALLED IN SAFE LOCATION. SUPPLY SIDE CLOSURES WHEN FLEED UP.
- TEMPERATURE LOCATIONS ARE RELATIVE TO THE LOCATION OF THE INSTRUMENTATION.
- CONSTRUCTION SHALL FIELD ROUTE TUBING FROM PUMP HEAD TO THE PROCESS. ALL TUBING SHALL BE INSTALLED IN ACCORDANCE WITH THE CONNECTIONS AND WIRING DIAGRAMS.
- CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE CONNECTIONS AND WIRING DIAGRAMS.
- THIS DRAWING INCLUDES THE INFORMATION FROM 24590-LAW-M6-LMP-00001, 24590-LAW-M6-LMP-00002, AND 24590-LAW-M6-LMP-00003 REV. 5.
- REVISION 1 IS INCORPORATED IN 24590-LAW-M6-LMP-00001, 24590-LAW-M6-LMP-00002, AND 24590-LAW-M6-LMP-00003 REV. 5.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

- 1. WASTE TREATMENT PLANT PROCESS SYSTEM DESIGN DESCRIPTION

DWG NO	TITLE
24590-LAW-M6-LMP-00003001	LAW MELTER PROCESS SYSTEM COOLING SYSTEM

**CM**  
 PROJECT NO. 24590  
 PROJECT NAME: RIVER PROTECTION PROJECT  
 CLIENT: WASTE TREATMENT PLANT  
 LOCATION: RICHMOND, VA 23134  
 CONTRACT NO. DC-1627-03VWALW

**ISSUED BY:** BOB VITO  
**DESIGNED BY:** BOB VITO  
**CHECKED BY:** BOB VITO  
**APPROVED BY:** BOB VITO

**DATE:** 10/15/2010  
**SCALE:** AS SHOWN  
**PROJECT NO.:** 24590  
**PROJECT NAME:** RIVER PROTECTION PROJECT  
**CLIENT:** WASTE TREATMENT PLANT  
**LOCATION:** RICHMOND, VA 23134

**P&ID - LAW MELTER PROCESS SYSTEM WALLS AND FLOOR PANELS COOLING SYSTEM**  
 24590-LAW-M6-LMP-00003001

DATE: 10/15/2010  
 DRAWN BY: BOB VITO  
 CHECKED BY: BOB VITO  
 APPROVED BY: BOB VITO