



ISSUED BY
RPP-WTP PDC

Supplier Deviation Disposition Request Engineering Disposition

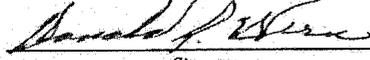
Page 7 of 7

PROJECT: River Protection Project Waste Treatment Plant JOB NO.: 24590 SDDR: 24590-WTP-SDDR-MS-11-00199 Rev. N/A

Title of SDDR: LAW Carbon Bed Adsorber Process Piping Deviation; Welded Pipe

Supplier Acknowledgement:

The Supplier accepts the RPP-WTP's disposition herein and agrees to implement the RPP-WTP's disposition accordingly. Return the signed SDDR to the RPP-WTP Project Document Control (PDC).

17. Supplier	<u>Donald R. Wern, Proj Mgr</u> <i>Print/Type Supplier Representative Name and Position</i>	<u></u> <i>Signature</i>	<u>11/1/11</u> <i>Date</i>
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Please note that source, special nuclear, and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA) are regulated at the U. S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts that pursuant to AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

**RPP-WTP
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BY PDC**

NOTES:

1. Complete instructions provided at end of form.
2. Items 1 through 9 and 17 to be completed by Supplier
3. Items 10 through 16 to be completed by RPP-WTP.

4. Non applicable items to be marked "N/A"
5. Attach additional information whenever necessary
6. RPP-WTP must be notified within 5 days after detection of deviation
7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.

Yes No THIS DOCUMENT CONTAINS EXPORT CONTROLLED INFORMATION, SEE BASE DOCUMENT FOR FULL LABEL AND RESTRICTIONS



Supplier Deviation Disposition Request

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PROJECT: River Protection Project Waste Treatment Plant

JOB No.: 24590

FOR RPP-WTP USE			
RPP-WTP SDDR No. 24590-WTP-SDDR-MS-11-00199	Rev. N/A	DATE RECEIVED 9/22/11	
FOR SUPPLIER USE			
SUPPLIER SDDR No. 910040-IDR-035		DATE SUBMITTED 9/21/2011	
1. Supplier Name IONEX Research Corporation	Address PO Box 70	City & State Lafayette, CO	Zip 80026
2. Supplier's Order No. 910040	3. RPP-WTP P.O. or SC 24590-QL-POA-MWK0-00001		Rev 24
4. Deviation Description (Attach extra sheets, photographs, sketches, etc. as necessary and identify quantity and serial numbers as applicable) <p>The piping for the LAW CBA units does not match Bechtel Piping Material Classification, 24590-WTP-3PB-P000-TS11N Rev. 10, and therefore also deviates from Bechtel Engineering Specification 24590-WTP-3PS-MWK0-T0001 Rev. 4 Section 4.4.1.</p> <p>Section 4.4.1 of the Engineering Specification states: "All applicable materials used for piping and related appurtenances shall be in accordance with the requirements of the MDSs and Buyer specification...24590-WTP-3PB-P000-TS11N Piping Material Classification Pipe Class S11N, for LAW."</p> <p>The Piping Material Classification lists schedule 40S as the largest pipe schedule and indicates that pipe sizes of four inches and smaller are to be seamless. Some piping used on LAW does not meet these requirements for pipe schedule and/or seamless pipe.</p>			
4a. Was an NCR issued? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Number:			
5. Supplier's Proposed Disposition: <input type="checkbox"/> Use As-Is <input type="checkbox"/> Repair <input checked="" type="checkbox"/> Modify RPP-WTP Requirement			
6. Supplier's Estimated Cost Impact: N/A		7. Supplier's Estimated Schedule Impact: N/A	
8. Proposed Disposition and Technical Justification (plus Cost/Schedule if applicable): (Attach extra sheets, sketches, etc., as necessary.) <p>Proposed Disposition: Review and approve the use of pipe that is a heavier schedule than that listed in the Bechtel referenced documents, and approve welded piping on pipe sizes greater than 1/2 inch diameter.</p> <p>Technical Justification: The majority of pipe used on LAW CBA units is schedule 80S. This heavier pipe was used due to ASME Section VIII Division 1 requirements to satisfy corrosion effects and maintain allowable stresses due to nozzle load requirements. The schedule 80S pipe is in compliance with ASME Section VIII Division 1 and ASME B31.3 code requirements. Refer to IONEX documents 910040-CAL-214 & 910040-CAL-233 for code compliance.</p> <p>The only seamless piping used on the LAW CBA units is 1/2 inch diameter. All other piping used on the units is welded. The pipe is in accordance with ASME SA-312 material requirements and meets ASME Section VIII Division 1 and ASME B31.3 code compliance. Appropriate weld efficiencies and reduced allowables have been applied within design calculations to account for welded piping (Reference 910040-CAL-214 & 910040-CAL-233). All piping used on the units</p>			

NOTES:

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- Items 10 through 16 to be completed by RPP-WTP.

- Non applicable items to be marked "N/A"
- Attach additional information whenever necessary
- RPP-WTP must be notified within 5 days after detection of deviation
- RPP-WTP selects "Yes", if the SDDR contains or references ECI documents.



Supplier Deviation Disposition Request Engineering Disposition

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PROJECT: River Protection Project Waste Treatment Plant JOB NO.: 24590 SDDR: 24590-WTP-SDDR-MS-11-00199 Rev. N/A

8. Proposed Disposition and Technical Justification (plus Cost/Schedule if applicable): (Attach extra sheets, sketches, etc., as necessary.) has been CGD'd to ensure the safety function for primary confinement of offgas has been met. CGD requirements include seam weld testing.	
Approval of this SDDR is necessary to maintain ASME Section VIII Division 1 compliance for the LAW CBA Units.	
9. Supplier's Authorized Representative Mindy Meals	Signature <i>Mindy Meals</i>
Title Engineering Supervisor	Date 9/21/11
10. RPP-WTP Engineering Action <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved <input checked="" type="checkbox"/> See Below	

Distribution: Procurement & Subcontracts Construction



Supplier Deviation Disposition Request Engineering Disposition

PROJECT: River Protection Project Waste Treatment Plant JOB NO.: 24590 SDDR: 24590-WTP-SDDR-MS-11-00199 Rev. N/A

Title of SDDR: LAW Carbon Bed Adsorber Process Piping Deviation; Welded Pipe

13. Part of DCP?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	DCP Number:	Rev
14. ACA Needed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	ACA Number:	Rev
15. RPP-WTP Final Disposition Statement (Attach extra sheets, sketches, etc., as necessary).			
See provisional disposition above. Is the final disposition the same as the provisional disposition? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<p>Bechtel accepts IONEX's Proposed disposition as stated in Item 8 above to use welded (or seamed) pipe. Modify Section Section 4.4.1 of 24590-WTP-3PS-MWK0-T0001, Rev. 5 as follows:</p> <p>All applicable materials used for piping and related appurtenances shall be in accordance with the requirements of the MDSs and Buyer specification 24590-WTP-3PB-P000-TS11V <i>Piping Material Classification Pipe Class S11V</i>, for HLW, and Buyer specification 24590-WTP-3PB-P000-TS11N <i>Piping Material Classification Pipe Class S11N</i>, for LAW. Welded piping greater than 1/2 inch is allowed for LAW.</p> <p>The use of Schedule 80 piping in 18 inch diameter is being considered under a separate SDDR. This disposition affects a Q specification. Per 24590-WTP-GPP-SREG-002 E&NS screening is required.</p>			
RPP-WTP Justification (Attach extra sheets, sketches, etc., as necessary).			
<p>Piping material Classification 24590-WTP-3PB-P000-TS11N, Rev 10 (referenced by 24590-WTP-3PS-MWK0-T0001, Section 4.4.1) requires pipe sizes four inches and smaller to be seamless. The use of welded pipe greater than 1/2 inch is in compliance with ASME B31.3 and Boiler and Pressure Vessel Code, Section VIII, Division 1. This piping is not located in a Black Cell, or hard to reach area. It is accessible for maintenance.</p> <p>The piping systems for the LAW CBAs operate at low pressures (negative pressure during normal operations) and provide confinement of the LA W melter offgas. The design pressures of the CBAs are +4 psig to full vacuum with a BNI supplied rupture disc set at +4 psig to eliminate the possibility of over pressurization. The CBAs, including the pipe, are tested to +5 psig and -12.1 psig per procedure 910040-PRO-008 sections 5.5 and 5.6. Seam welds are mechanically tested per IONEX's CGD Plan 24590-QL-POA-MWK0-00001-16-00022, Rev I. By calculation in ASME B 16.9 the design pressure for 18" Schedule 80S pipe is approximately 3,300 psi which gives a safety factor of approximately 845. The 18" pipe fittings are the lower limit of the safety factors determined for the LAW CBA pipe fitting sizes.</p> <p>Approval of this SDDR does not affect form, fit or function.</p>			
REQUIREMENTS REVIEW			
Client Approval Required*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	E&NS Screening Required	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Interface Resolution Required*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
*Address these "yes" answers in the RPP-WTP Disposition Statement (above).			
Affected RPP-WTP Documents:			

NOTES:

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Complete instructions provided at end of form. 2. Items 1 through 9 and 17 to be completed by Supplier 3. Items 10 through 16 to be completed by RPP-WTP. | <ol style="list-style-type: none"> 4. Non applicable items to be marked "N/A" 5. Attach additional information whenever necessary 6. RPP-WTP must be notified within 5 days after detection of deviation 7. RPP-WTP selects "Yes", if the SDDR contains or references ECI documents. |
|--|--|



Supplier Deviation Disposition Request Engineering Disposition

PROJECT: River Protection Project Waste Treatment Plant JOB NO.: 24590 SDDR: 24590-WTP-SDDR-MS-11-00199 Rev. N/A

Title of SDDR: LAW Carbon Bed Adsorber Process Piping Deviation; Welded Pipe

13. Part of DCP?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	DCP Number:		Rev
14. ACA Needed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	ACA Number:		Rev

15. RPP-WTP Final Disposition Statement (Attach extra sheets, sketches, etc., as necessary).
See provisional disposition above. Is the final disposition the same as the provisional disposition? Yes No N/A

Bechtel accepts IONEX's Proposed disposition as stated in Item 8 above to use welded (or seamed) pipe. Allow the use of welded pipe for sizes greater than 1/2 inch in diameter for use on the LAW Carbon Bed Adsorbers. The use of Schedule 80 piping in 18 inch diameter is being considered under a separate SDDR. This disposition affects a Q specification. Per 24590-WTP-GPP-SREG-002 E&NS screening is required.

RPP-WTP Justification (Attach extra sheets, sketches, etc., as necessary).
 Piping material Classification 24590-WTP-3PB-P000-TS11N, Rev 10 (referenced by 24590-WTP-3PS-MWK0-T0001, Section 4.4.1) requires pipe sizes four inches and smaller to be seamless. The use of welded pipe greater than 1/2 inch is in compliance with ASME B31.3 and Boiler and Pressure Vessel Code, Section VIII, Division 1. This piping is not located in a Black Cell, or hard to reach area. It is accessible for maintenance.

The piping systems for the LAW CBAs operate at low pressures (negative pressure during normal operations) and provide confinement of the LAW melter offgas. The design pressures of the CBAs are +4 psig to full vacuum with a BNI supplied rupture disc set at +4 psig to eliminate the possibility of over pressurization. The CBAs, including the pipe, are tested to +5 psig and -12.1 psig per procedure 910040-PRO-008 sections 5.5 and 5.6. Seam welds are mechanically tested per IONEX's CGD Plan 24590-QL-POA-MWK0-00001-16-00022, Rev I. By calculation in ASME B 16.9 the design pressure for 18" Schedule 80S pipe is approximately 3,300 psi which gives a safety factor of approximately 845. The 18" pipe fittings are the lower limit of the safety factors determined for the LAW CBA pipe fitting sizes.

Approval of this SDDR does not affect form, fit or function.

REQUIREMENTS REVIEW

Client Approval Required* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	E&NS Screening Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Interface Resolution Required* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

*Address these "yes" answers in the RPP-WTP Disposition Statement (above).

Affected RPP-WTP Documents:

Document Number	Rev	Remarks	Specification Retroactive?		Incorporation by	
			Yes	No	Design Change	Reference
24590-WTP-3PS-MWK0-00001-T0001 <i>11/20</i>	<i>5 A</i>	Section 4.4.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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PROJECT: River Protection Project Waste Treatment Plant JOB NO.: 24590 SDDR: 24590-WTP-SDDR-MS-11-00199 Rev. N/A

Title of SDDR: LAW Carbon Bed Adsorber Process Piping Deviation; Welded Pipe

Affected Supplier Submittals:			
Document Number	Rev	Document Number	Rev
N/A			
Reference Documents:			
Document Number	Rev	Document Number	Rev
N/A ^{2106Tel} SEE ATTACHMENT A	N/A	N/A	

16. RPP-WTP Disposition Approval:

RE/Originator:	Grant Goolsby <small>Print/Type Name</small>	 <small>Signature</small>	29 OCT 11 <small>Date</small>
Checker:	Ryan Rickenbach <small>Print/Type Name</small>	 <small>Signature</small>	10/31/2011 <small>Date</small>
Reviewer(s):	John Disney (MET) <small>Print/Type Name</small>	 <small>Signature</small>	10-27-11 <small>Date</small>
Reviewer:	N/A JERRY SUTTON <small>Print/Type Name</small>	 <small>Signature</small>	10-31-11 <small>Date</small>
Reviewer:	N/A <small>Print/Type Name</small>	 <small>Signature</small>	 <small>Date</small>
Reviewer:	N/A <small>Print/Type Name</small>	 <small>Signature</small>	 <small>Date</small>
E&NS Review (when required):	Dwight Krahn <small>Print/Type Name</small>	 <small>Signature</small>	10-27-11 <small>Date</small>
Procurement & Subcontracts Representative:	Debra Hanigan <small>Print/Type Name</small>	 <small>Signature</small>	10/31/11 <small>Date</small>
Approver(s):	Dave Wilsey <small>Print/Type Name</small>	 <small>Signature</small>	10/31/11 <small>Date</small>
Approver:	N/A <small>Print/Type Name</small>	 <small>Signature</small>	 <small>Date</small>

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Supplier Acknowledgement:

The Supplier accepts the RPP-WTP's disposition herein and agrees to implement the RPP-WTP's disposition accordingly. Return the signed SDDR to the RPP-WTP Project Document Control (PDC).

17. Supplier

Print/Type Supplier Representative Name and Position

Signature

Date

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SDDR 24590-WTP-SDDR-MS-11-00199 Attachment A

Reference Documents:		
Document Number (WTP)	Revision	Document Number (lonex)
24590-QL-POA-MWK0-00001-12-00002	00O	910040-CAL-214
24590-QL-POA-MWK0-00001-10-00020	00K	910040-CAL-233
24590-QL-POA-MWK0-00001-16-00022	00J	910040-CGD-028
24590-QL-POA-MWK0-00001-13-00005	00M	910040-PRO-008